

(19) 日本国特許庁(JP)

(12) 公開特許公報(A)

(11) 特許出願公開番号

特開2004-302179

(P2004-302179A)

(43) 公開日 平成16年10月28日(2004.10.28)

(51) Int. Cl. ⁷	F 1	テーマコード (参考)
GO9F 9/00	GO9F 9/00 312	5B020
GO6F 3/023	GO9F 9/00 347A	5C006
GO9F 9/40	GO9F 9/00 366A	5C080
GO9G 3/20	GO9F 9/00 366G	5C082
GO9G 3/34	GO6F 3/023 340Z	5C094
審査請求 未請求 請求項の数 22 O L (全 16 頁) 最終頁に続く		

(21) 出願番号 特願2003-95476 (P2003-95476)
 (22) 出願日 平成15年3月31日(2003.3.31)

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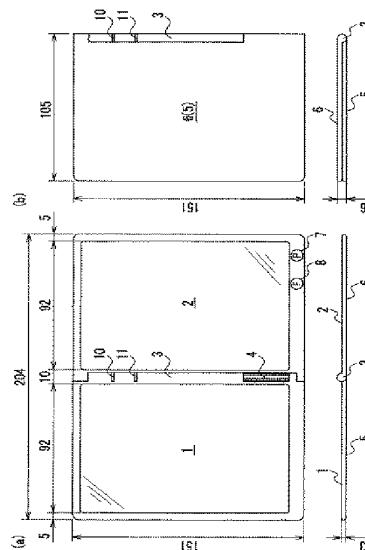
(54) 【発明の名称】 携帯情報機器及び画像表示方法

(57) 【要約】

【課題】 活字品質の高精細表示を行う表示デバイスを用い、かつ、人間工学を意識したコンポーネント配置を行うことにより、操作性の改善と使い勝手の向上を図った携帯情報機器及び画像表示方法を提供する。

【解決手段】 携帯情報機器において、活字品質の高精細表示を行うメインディスプレイ1、2を持つ表示デバイスが実装されているフレーム5、6は、結合部3において開閉自在に軸支されている。結合部3は、ヒンジ機構で構成され、結合部3を支点にメインディスプレイ1、2を見開き状態に設定して使用し、結合部3を支点にメインディスプレイ1、2を重ねて二つ折りに閉じて携帯できる。ジョグダイヤル4の回転によって、メインディスプレイ1、2に表示される画像を変更できる。フレーム6端部に、必要なスイッチ類である電源スイッチ7及びファンクションスイッチ8が実装される。

【選択図】 図1



【特許請求の範囲】

【請求項1】

2つの表示デバイスと、
前記2つの表示デバイスをそれぞれ実装する2つのフレームと、
それらのフレームを結合する結合部とを有し、
それぞれの前記表示デバイスは、階調のない画像表示を行う場合は127 μ m以下の画素サイズの画像表示を行う表示面を有し、
前記2つのフレームは、前記結合部によって開閉自在に軸支され、
前記2つのフレームを閉じたとき、前記結合部を支点に2つの表示部が重なって二つ折り状態になり、開いたとき、前記結合部を支点に2つの表示面が見開き状態になることを特徴とする携帯情報機器。

【請求項2】

2つの表示デバイスと、
前記2つの表示デバイスをそれぞれ実装する2つのフレームと、
それらのフレームを結合する結合部とを有し、
それぞれの前記表示デバイスは、階調のある画像表示を行う場合は84.7 μ m以下の画素サイズの画像表示を行う表示面を有し、
前記2つのフレームは、前記結合部によって開閉自在に軸支され、
前記2つのフレームを閉じたとき、前記結合部を支点に2つの表示部が重なって二つ折り状態になり、開いたとき、前記結合部を支点に2つの表示面が見開き状態になることを特徴とする携帯情報機器。

【請求項3】

2つの表示デバイスと、
前記2つの表示デバイスをそれぞれ実装する2つのフレームと、
それらのフレームを結合する結合部とを有し、
それぞれの前記表示デバイスは、42.3 μ m以下の画素サイズの画像表示を行う表示面を有し、
前記2つのフレームは、前記結合部によって開閉自在に軸支され、
前記2つのフレームを閉じたとき、前記結合部を支点に2つの表示部が重なって二つ折り状態になり、開いたとき、前記結合部を支点に2つの表示面が見開き状態になることを特徴とする携帯情報機器。

【請求項4】

前記結合部は、前記表示面に電子書籍を表示した場合、前記電子書籍の頁をめくる頁めくり機能を有することを特徴とする請求項1乃至請求項3のいずれか1項に記載の携帯情報機器。

【請求項5】

前記結合部の長手方向、下部に横回転する回転部を有することを特徴とする請求項1乃至請求項3のいずれか1項に記載の携帯情報機器。

【請求項6】

2つの表示デバイスと、
前記2つの表示デバイスをそれぞれ実装する2つのフレームと、
それらのフレームを結合する結合部とを有し、
それぞれの前記表示デバイスは表示面を有し、
前記結合部は長手方向、下部に横回転する回転部を有し、
前記2つのフレームは、前記結合部によって開閉自在に軸支され、
前記2つのフレームを閉じたとき、前記結合部を支点に2つの表示部が重なって二つ折り状態になり、開いたとき、前記結合部を支点に2つの表示面が見開き状態になることを特徴とする携帯情報機器。

【請求項7】

前記回転部は、結合部の長手方向、中央下部に横回転する縦長の回転部であり、

前記回転部の回転によって、前記表示面に表示される画像が変更されることを特徴とする請求項5又は請求項6に記載の携帯情報機器。

【請求項8】

前記2つのフレームのいずれか一方の端部に、前記携帯情報機器を操作するために必要なスイッチを有することを特徴とする請求項5又は請求項6に記載の携帯情報機器。

【請求項9】

2つの前記表示面を重ねて二つ折りに収納した状態で、前記スイッチが実装されない他方のフレームの、前記スイッチが実装されるフレームと重なる位置に、サブディスプレイを有することを特徴とする請求項8に記載の携帯情報機器。

【請求項10】

前記結合部は、電源の状態を表示するインジケータを有し、
前記インジケータは、前記2つの表示面を重ねて二つ折りに収納した状態であっても外部から視認できることを特徴とする請求項1乃至請求項3のいずれか1項に記載の携帯情報機器。

【請求項11】

2つの表示デバイスと、
前記2つの表示デバイスをそれぞれ実装する2つのフレームと、
それらのフレームを結合する結合部とを有し、
前記2つの表示デバイスは、所定の解像度の画像表示を行う第1の表示面と、前記第1の表示面より高い解像度で活字表示を行う第2の表示面とを有し、
前記2つのフレームは、前記結合部によって開閉自在に軸支され、
前記2つのフレームを閉じたとき、前記結合部を支点に前記第1の表示面と前記第2の表示面が重なって二つ折り状態になり、開いたとき、前記結合部を支点に前記第1の表示面と前記第2の表示面とが見開き状態になることを特徴とする携帯情報機器。

【請求項12】

前記第1の表示面を有する表示デバイスが実装されるフレームの一部に太陽電池を有することを特徴とする請求項11に記載の携帯情報機器。

【請求項13】

表示面を有する表示デバイスが実装されるフレームと、
前記表示デバイスの表示面を保護する蓋と、
前記フレームと前記蓋を結合する結合部とを有し、
前記表示デバイスは、84.7 μ m以下の画素サイズで画像表示可能な表示面を有し、
前記フレームと前記蓋とは、前記結合部によって開閉自在に軸支され、
前記蓋が前記フレームを保護するとき、前記結合部を支点に前記蓋を回転させて前記フレーム内の前記表示面を覆い、前記フレーム内の表示面を視認するとき、前記結合部を支点に前記蓋を回転させて表示面を露出することを特徴とする携帯情報機器。

【請求項14】

前記表示面に表示する情報を無線通信により受信可能な通信部と、
前記表示面に表示された情報を操作するためのペンを格納する格納部と、
前記表示面に表示された情報を操作するためのスイッチと、
を有することを特徴とする請求項13に記載の携帯情報機器。

【請求項15】

前記表示面に表示された画像を横長又は縦長に変更可能な手段を有することを特徴とする請求項13に記載の携帯情報機器。

【請求項16】

前記フレームの長手方向の長さは、前記蓋の長手方向の長さより大きいことを特徴とする請求項13に記載の携帯情報機器。

【請求項17】

前記蓋と前記フレームとが閉じた状態において、前記蓋で覆われていない前記フレームの一部にサブディスプレイを有することを特徴とする請求項16に記載の携帯情報機器。

【請求項18】

前記蓋と前記フレームとが閉じた状態において、前記蓋で覆われていない前記フレームの一部に太陽電池を有することを特徴とする請求項16に記載の携帯情報機器。

【請求項19】

請求項5に記載の携帯情報機器における画像表示方法であって、前記見開き状態の前記2つの表示面に電子書籍を表示し、前記回転部を操作することで前記電子書籍の頁めくりを行うことを特徴とする画像表示方法。

【請求項20】

請求項9に記載の携帯情報機器における画像表示方法であって、前記見開き状態の前記2つの表示面に電子書籍を表示し、前記回転部を操作することで前記電子書籍の頁めくりを行い、前記頁めくりに対応して前記表示面に表示された電子書籍の頁位置を含む書誌情報を前記サブディスプレイに表示することを特徴とする画像表示方法。

【請求項21】

請求項11に記載の携帯情報機器における画像表示方法であって、前記第1の表示面にWeb画面を表示し、前記第2の表示面に電子書籍を表示することを特徴とする画像表示方法。

【請求項22】

請求項17に記載の携帯情報機器における画像表示方法であって、前記サブディスプレイに、前記表示面に表示されている画像の内容を示唆する情報を表示することを特徴とする画像表示方法。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】

本発明は、携帯情報機器及びその携帯情報機器における画像表示方法に関する。

【0002】

【従来の技術】

書籍等の印刷メディアから得られる画像情報の品質を損なわず、書籍が持つ特性である携帯性も兼ね備えた見開き表示のブック型ディスプレイが提案されている（特許文献1参照）。また、文庫本サイズの電子書籍において、表示品質を良くして見やすくするために、2つの液晶ディスプレイ（LCD：Liquid Crystal Display）パネルから構成され、見開き可能な、画素あるいは画素間ピッチを200 μ m以下にした電子書籍のディスプレイも提案されている（特許文献2参照）。

【0003】

【特許文献1】

特開平9-26769号公報（段落[0029]～[0036]、図2～図4参照）

【特許文献2】

特開平6-138839号公報（段落[0006]～[0009]、図1参照）

【0004】

【発明が解決しようとする課題】

しかしながら、前記従来の技術によれば、いずれも表示デバイスとしてLCDが用いられており、解像度という観点から言えば、書籍に替わる役割を果たしていない。それは、現在のLCD技術における表示品質の限界が見えているためである。

また、従来の携帯情報機器には、本来携帯情報機器が持つべき機動性を意識したユーザインタフェースが備わっておらず、操作性や使い勝手の面で不都合があった。

【0005】

本発明は、上記事情に鑑みてなされたものであり、活字品質の高精細表示を行う表示デバイスを用い、かつ、人間工学を意識したコンポーネント配置を行うことにより、操作性の改善と使い勝手の向上を図った携帯情報機器及び画像表示方法を提供することを目的とする。

【0006】

【課題を解決するための手段】

前記課題を解決するために本発明は、活字品質の高精細表示を行うデバイス（例えば、電気泳動技術を用いた電子ペーパー）を表示デバイスとして用い、その表示デバイスに、カードメディアに保存された電子書籍や、Web（World Wide Web）画面や、無線インタフェースを介して入手される新聞やカタログを表示し、かつ、人間工学を意識したスイッチ等のコンポーネント配置を行うことにより、操作性の改善と使い勝手の向上を図った携帯情報機器及び画像表示方法を提供することができる。

なお、請求項における表示面の画素サイズによる記載内容は、発明の実施の形態においては、表示面の解像度により記載するものとする。以下に、その画素サイズと解像度との関係について示す。

- ・画素サイズ 127.0 μm 以下 → 解像度200 ppi以上
- ・画素サイズ 84.7 μm 以下 → 解像度300 ppi以上
- ・画素サイズ 42.3 μm 以下 → 解像度600 ppi以上

【0007】

【発明の実施の形態】

以下、図面を参照しながら本発明の実施の形態について説明する。

【0008】

《第1の実施の形態》

図1は、本発明の第1の実施の形態に係る携帯情報機器を示す図であり、携帯情報機器の表示面を開閉したときのそれぞれの正面図と平面図が示されている。

図1に示す携帯情報機器によれば、活字品質の高精細画像表示を行う表示面（以下、「メインディスプレイ1、2」という）を持つ表示デバイスが実装されているフレーム5、6は、結合部3において開閉自在に軸支されている。結合部3は、ヒンジ機構（蝶番）で構成され、結合部3を支点にメインディスプレイ1、2を見開き状態にして使用し（図1（a）参照）、結合部3を支点にメインディスプレイ1、2を重ねて二つ折りに収納して閉じて、携帯することができる（図1（b）参照）。なお、結合部3は、左側のフレーム5と右側のフレーム6とを接続する部分を含めて、左側のフレーム5と右側のフレーム6とが重なる部分を指す。

活字品質の高精細画像表示を行う表示面としては、階調のない200 ppi以上の解像度を持つもの、階調のある300 ppi以上の解像度を持つもの、又は、望ましくは600 ppi以上の解像度を持つものがあげられる。その定義や根拠等については後記する。

【0009】

図2に示すように、見開き状態にしたメインディスプレイ1、2に電子書籍が表示され、結合部3の長手方向、中央下部に、横回転する縦長、円筒形の回転部4が実装されており、回転部4の操作を頁めくりの操作と関連付けることによって、頁めくりが行われる。なお、回転部4は、例えば、ジョグダイヤル（R）等である。

回転部4の操作によって得られる機械的な変化は、基本的に2方向（左右）の回転、2方向（上下）の変位及び押し込み変位という要素からなるが、それ以外に、各方向での回転量やその回転量に基づく演算によって各回転方向での回転速度も得ることができる。これによれば、回転部4の操作に伴う変化を頁めくりの操作と関連付けることにより、使い勝手の向上を図ることができる。

【0010】

このことにより、ユーザは、書籍の頁をめくる感覚と同じ横方向に回転部4を操作でき、また、回転部4は、ユーザが携帯情報機器を片手で持ったときに操作し易い縦長構造となっており、かつ、滑り止めの縦筋が入っているため、操作性が良い。更に言えば、回転部4の回転によって、メインディスプレイ1、2に表示される画像を変更することができるわけであり、その使い方には十分工夫の余地がある。

【0011】

また、メインディスプレイ1、2を持つ表示デバイスは、それぞれフレーム5、6に実装

され、メインディスプレイ2の表示デバイスが実装される一方のフレーム6端部の空き位置に、当該携帯情報機器を操作するために必要なスイッチ類である電源スイッチ7及びファンクションスイッチ8が実装される。これらのスイッチ類は、操作したときに、メインディスプレイ1、2に表示された内容の視認を妨げないような位置、図2では、画面下の中央右位置に実装される。

更に、メインディスプレイ1、2を重ねて二つ折りに収納した状態で、スイッチ類が実装されない他方のフレーム5の、スイッチ類が実装されるフレーム6と重なる位置に、書籍のタイトル、著者、頁位置を含む書誌情報を表示するサブディスプレイ9が実装される（図2参照）。

【0012】

図2では、右利きのユーザは右手でスイッチ類を操作するため、スイッチ類を右下に配置し、サブディスプレイ9を左下に配置する例を示したが、左利きのユーザ向けには、スイッチ類を左下に配置し、サブディスプレイ9を右下に配置することも考えられる。このように、スイッチ類、サブディスプレイ9の配置を人間工学的な見地で決定することにより、操作性の一層の向上が図れる。

スイッチ類については、単独でオン、オフされる以外に、そのスイッチが押されている時間等を監視することにより、それらの組み合わせで多くの機能を定義できることとする。また、表示サイズを大きくするために、フレーム全体にメインディスプレイ1、2を実装し、その画面端部にタッチパネルを表示することによるソフトウェア・キーボード入力を行なってもよい。この場合、サブディスプレイ9はフレーム前面に実装される。なお、ソフトウェア・キーボード以外に、リモコンや携帯電話等を用いた無線（Bluetooth(R)、赤外線等）によるキー入力も考えられる。

【0013】

一方、結合部3には、LED（Light Emitting Diode）から構成され、電源のオン、オフ状態を表示する電源インジケータ10及びアクセスインジケータ11も実装されており、見開き状態においては勿論のこと、メインディスプレイ1、2を重ねて二つ折りに収納して閉じた状態においても外部からそれらのインジケータを視認することが可能になっている。

ちなみに、本発明の実施の形態に係る携帯情報機器については、その収納時は、151mm×105mm×6mmの文庫本サイズ、その使用時は、151mm×204mm×3mmのサイズでフレーム5、6が設計される。使用時、片手で持ち操作するためには厚さ3mmが最適であり、重量200g未満が好適である。

なお、前記実施の形態によれば、見開き状態にしたメインディスプレイ1、2のそれぞれに電子書籍が表示されるとしたが、所定のスイッチ操作又はソフトウェア・キーボード入力により、一方のメインディスプレイ1（2）に電子辞書が表示されてもよい。また、電子書籍が表示された場合には、スイッチ類やサブディスプレイ9を利用した、付箋やしおりに代わるマーキングの機能が付加され、利用者に利便性を提供するための配慮がなされるものとする。

【0014】

図3は、他の表示事例であり、メインディスプレイ1に、通常の精細度でWeb画面が表示され、メインディスプレイ2に、そのWeb画面とは異なる活字品質の精細度で電子書籍が表示されている。

ここでは、Web画面をカラー200ppi（pixel per inch：1インチあたりの画素数）の解像度で、電子書籍を600ppiの解像度で表示するものとする。メインディスプレイ1、2に、解像度が異なる別々の内容を表示するためには、表示コントローラ及び表示メモリをそれぞれに独立して持てば容易に制御できるが、ここでは、省電力上、共通の表示コントローラを用い、また、共通の表示メモリを区画割りして制御することとする。カラー画像を含むWeb画面をメインディスプレイ1に表示したり、文字情報である電子書籍をメインディスプレイ2に表示したりする、表示データの表示面への振り分けは、解像度に応じて自動的に行われるものとする。なお、省電力化を一層進める

ために、主メモリ中表示メモリを割付け、CPUに表示コントローラの機能を実行させても良い。携帯情報機器の内部構成等の詳細は後記するものとする。

なお、Web画面が表示されるメインディスプレイ1の表示デバイスが実装されるフレーム5の一部に太陽電池12を実装することもできる。この場合、太陽電池12は補助電源として使用し、主電源としては、リチウムイオン電池やポリマー電池を使用する。

前記実施の形態では、1画面にWeb画面を表示する例について示したが、Web画面として左右2画面を割り当ててもよく、一方に専用サイトを表示し、他方にコンテンツを表示する左右非対称型と、左右交互に見たいコンテンツを表示する左右対称型が考えられる。特に、左右対称型については、画面分割し、左画面に表示された内容の続きを右画面に表示させる等のバリエーションも可能である。また、2画面を上下に配置して使用し、上下にスクロールさせることも考えられる。なお、いずれも画面のスクロールは2画面間で連動して行われるものとする。また、前記実施の形態ではメインディスプレイが2つある構成を説明したが、これは3つ以上のメインディスプレイを持つ構成でもよく、例えば、ヒンジ機構にて構成される結合部を2つ設けて3つのメインディスプレイを結合し、三つ折で収納するような構成でもよい。

【0015】

図4は、更に他の表示事例であり、メインディスプレイ1、2に、通信部(図示せず)を介してネットワークから送信されてきたコンテンツ、ここでは電子新聞が表示されている。メインディスプレイ1には200ppiで見出しが表示され、見出しを選択し、例えば、後記する入力ペンをを用いてクリックすることにより、本文を入手することができ、その本文がメインディスプレイ2に600ppiの解像度で白黒表示がなされる。

【0016】

《表示デバイスの表示原理》

ここで、本発明の実施の形態に係る携帯情報機器に使用される表示デバイスについて簡単に説明する。ここでは、溶媒中の電荷を帯びた粒子が電界によって移動する電気泳動技術を用いたシートディスプレイが表示デバイスとして使用される。

図8に、その基本構造が示されている。すなわち、今、軟らかな透明カプセルを縦横密に並べて薄い透明フィルムとパネル基板で挟んだ状態を仮定する。このように並んだカプセルの内部は、滑らかなオイルで満たされ、そこに黒と白の微粒子が大量に入っている。本実施の形態では、透明フィルム側の電極は一定(例えば、0V)とし、対向するパネル基板側電極の電圧をプラス又はマイナスに変動させることによって粒子を移動させる。例えば、黒い粒はマイナス、白い粒はプラスの電荷を帯びている場合、スイッチを入れるとパネルに電流が流れ、ある場所にはプラス、別の場所にはマイナスの電圧が生じるようになっていて、次の瞬間、カプセル内の黒い粒と白い粒がオイルの中を泳ぐように透明フィルム面に引き寄せられる。プラスの場所に黒い粒が、マイナスの場所に白い粒が張り付く。これを透明フィルムの表側から見た状態(図中、目マーク)がシートディスプレイに刷られた文字とその余白ということになる。

【0017】

ところで、電気を切っても静電気の働きで暫く文字は剥がれない。書替えるときのみ、また電圧を印加する必要がある。このことにより、微粒子群が一斉に剥がれ、オイルの中を再び泳ぐように移動して別の場所に張り付く。この働きを電気泳動という。

パネル基板は、アクティブマトリクスと称し、画素単位で細かに電圧が印加される仕組みになっている。基本的には液晶ディスプレイ等と同様にTFT(Thin Film Transistor、薄膜トランジスタ)等で構成される。光が突き抜ける透過型ディスプレイと異なり、反射型であるため、バックライトが不要という利点があり、また、書替え時のみ駆動電力が必要となるため、バッテリー容量が少なくて済み、従って、携帯情報機器を薄く、軽く設計できる。また、カラーフィルタを重ねることによりカラー化が実現される。

【0018】

《第2の実施の形態》

図5は、本発明の第2の実施の形態に係る携帯情報機器を示す図であり、携帯情報機器を開閉したときのそれぞれの正面図と断面図が示されている。

図1に示す第1の実施の形態との差異は、フレーム両面に表示デバイスが実装されることなく、メインディスプレイ1の表示デバイスのみ実装されている点と、そのサイズにある。ここでは、A4サイズのメインディスプレイ1の表示デバイスが一方のフレームに実装され、他方のフレームは、携帯情報機器を携帯するときにメインディスプレイ1を覆って保護する蓋14になっている。ちなみに、表示デバイスが実装されているフレーム5は、297mm×230mm×5mm（蓋無しサイズ）で設計され、蓋14付きの場合は厚さが6mmになる。

図5に示す携帯情報機器によれば、活字品質の高精細表示を行うメインディスプレイ1を持つ表示デバイスが実装されるフレーム5は、その結合部3において蓋14と回動自在に軸支されている。結合部3は、ヒンジ機構（蝶番）で構成され、結合部3を支点にメインディスプレイ1を見開き状態にして視認しながら使用し（図5（a）参照）、結合部3を支点にメインディスプレイ1と蓋14を重ねて閉じて、フレーム5を保護した状態で携帯することができる（図5（b）参照）。

【0019】

また、メインディスプレイ1が実装されるフレーム5と、蓋14の長手方向のサイズが、一方は297mmであるのに対し、他方は275mmとなっており、このサイズ差に相当するメインディスプレイ1のフレーム部分にサブディスプレイ9が収納され、外部から視認可能となっている。なお、サブディスプレイ9の代わりに図3における太陽電池12が実装されてもよい。

このことにより、蓋14が閉じられた状態であっても、サブディスプレイ9に表示された内容を確認することができ、また、太陽電池12による充電が可能になる。

【0020】

それぞれの実装例を図6に示す。図6（a）がサブディスプレイ9の実装例、図6（b）が太陽電池12の実装例である。ここでは、メインディスプレイ1に、例えば、無線LAN（Local Area Network）を介して入手される新聞が表示される。図6（a）に示したサブディスプレイ9には、その新聞の見出しや現在の時刻が表示され、外部から視認可能となっている。これによれば、蓋14が閉じられた状態であっても、サブディスプレイ9を見ることによって、そのときメインディスプレイ1に表示されているコンテンツの概要やその他の情報を知ることができる。また、図6（b）に示す太陽電池12は、蓋14を閉じた状態にあっても外部に晒されるため、太陽光を取り込んで充電することが可能になり、補助電源として主電源のポリマ電池を補助することができる。

なお、メインディスプレイ1に表示されるコンテンツとしては、他に、展覧会や展示会において配布されるカタログ等も考えられる。この場合、例えば、ユーザは、展示会場の入口のゲートを通過すると、展示製品のカタログ類のデータが、近距離無線通信によってそのユーザが持っている携帯情報機器にダウンロードされるので、必要に応じてそのカタログ類のデータを閲覧することができる。

また、この携帯情報機器は、図1に示す携帯情報機器と同様に、回転部による頁めくり機能の実装を可能とし、その他に、表示の拡大縮小、コンテンツ蓄積、選択を行うためのユーザインタフェースを持つことができる。また、検索速度向上のために、お気に入りや履歴機能等、コンテンツのソート・ディレクトリ構造を作り込むために、リスト構造をパソコン等により編集した後、この携帯情報機器に転送することができる。

【0021】

図5に説明を戻すと、メインディスプレイ1の表示デバイスが実装されるフレーム5の左端面には25mm程度の空きスペースがあって、ここに、メインディスプレイ1に表示された内容を操作するために必要な入力ペン13の収納スペースが確保される。また、電源スイッチ7やファンクションスイッチ8等のスイッチ類も実装されている。

入力ペン13は、利き手に応じて、入力ペン13を取りやすく収納し易い位置に、また、スイッチ類は、携帯情報機器を持ったときに操作しやすい位置に実装される。ここでは、

フレーム5の左端面は手持ち位置としても活用され、持ち歩き易いようにメインディスプレイ1に向かいスロープが施されている(図5の丸棒A)。また、携帯するために蓋14を閉めたときは、フレーム表面がフラットになるように(図5の丸棒B)、使用するために蓋14を開いたときは、メインディスプレイ1の表示デバイスが実装されるフレーム5の背面にフラットフィットするように(図5の丸棒C)、蓋14は結合部3を軸に360°回転する。

なお、ここでは右利き用の配置が示されており、左利きの場合は左右反転した位置となる。

【0022】

図7は、いずれも資料ビューアとしての表示事例を示したものであり、図7(a)は、PowerPoint(登録商標)で作成した文書等の表示用である横長対応型の表示事例、図7(b)は、PDF(Portable Document Format)文書等の表示用である縦長対応型の表示事例を示す。

前者は、画面下のフレームに入力ペン13及びスイッチ類が、また、画面左のフレームに太陽電池12が実装されている。後者は、画面左のフレームに入力ペン13及びスイッチ類が、また、画面上のフレームに太陽電池12が実装されている。換言すれば、図7(a)と(b)は、同じ携帯情報機器の図であるが、前者は、横長の文書を表示した状態、後者は、縦長の文書を表示した状態を示している。なお、同じ画像データを横長、縦長の両方の表示をすることができ、また、その表示切換を行うこともできるものとする。

ここで、入力装置について補足説明を行なう。前記実施の形態では、入力装置として、回転部4、スイッチ類、入力ペン13が例示されているが、必要に応じて、タッチパネル、ローラ、タブレット等を付加することが考えられる。すなわち、タッチパネルによるURL入力、ローラによる前後画面への移動やウィンドウ間の移動操作、タブレットによるポインティング等により入力操作を補助するものである。なお、回転部4については、電子書籍のめくり以外にリンクの順次選択用にも使用可能である。

【0023】

《携帯情報機器の内部構成と動作》

図9は、本発明の実施の形態に係る携帯情報機器の内部構成を示すブロック図である。本発明の携帯情報機器は、CPU21、主メモリ22、フラッシュメモリ23、無線LANコントローラ24、描画/表示コントローラ25、表示メモリ26、認識LSI27、カードコントローラ28、入出力コントローラ29で構成され、それぞれアドレス、データ、コントロールのためのラインが複数本で構成される内部バス30を介して接続される。なお、主電源はポリマ電池とし、太陽電池を補助電源として用いる(図示せず)。また、図9において、図1～図7に示す符号と同一符号が付されたブロックは、図1～図7に示すものと同一とする。

【0024】

まず、携帯情報機器に電子書籍を表示するために、ユーザは、電子書籍が格納されたカード50をカードコントローラ28に挿入する。CPU21は、主メモリ22に記録されたプログラムに基づき、カードコントローラ28、内部バス30を介してその電子書籍を取り込み、主メモリ22の作業領域に格納する。

次に、描画/表示コントローラ25は、CPU21のコントロールの下、電子書籍を主メモリ22から読み込んで表示メモリ26に展開する。描画/表示コントローラ25は、更に、表示メモリ26に展開された電子書籍を表示デバイスの表示タイミングに従って読み出し、メインディスプレイ1、2に表示する。

なお、ここでは、簡単のために、表示メモリ26は、2頁分の画面容量を持ち、メインディスプレイ1、2の画面にそれぞれ対応しているものとする。

本実施の形態は主メモリと表示メモリを個別に設けた構成であるが、これらはシートディスプレイが大型化する要因を持つ。これを避ける1つの手段としては、主メモリと表示メモリを統合したユニファイドメモリを備えることがある。この構成によって、小型化、薄型化が可能になるという効果を奏する。つまり、CPUが処理するプログラムと表示デー

タとを1つのメモリに格納するものである。このように1つに統合したメモリを用いる場合、このメモリに対するアクセスが競合しバスをどちらかで占有するという事態が生じることがあるが、これはバス調停機能を備えることによって解消することができる。

【0025】

ユーザが回転部4を操作することにより頁めくりの指示があったとき、CPU21は、入出力コントローラ29、内部バス30を介してその指示を取り込む。そして、新たに表示する頁の内容を主メモリ22から読み出して、描画/表示コントローラ25を介して表示メモリ26を更新し、その更新した内容をメインディスプレイ1、2に供給する。これにより、「頁めくり後」の頁がメインディスプレイ1、2に表示される。

回転部4を横回転させることによって、その回転量が計測され、その回転方向及び回転量により、現在メインディスプレイ1、2に表示されている頁を基準に、新たに表示すべき頁が特定されるように、回転部4の回転量と頁数との対応関係が予め定義されている。また、例えば、回転部4に回転抵抗を付与することによって頁をめくる臨場感を持たせてもよいし、スピーカーをフレーム5、6に付加することによって頁をめくるときに効果音が出るようにして臨場感を持たせてもよい。更に、頁めくり機能としては、左右に回転して頁をめくるジョグダイヤル(R)等の回転部の他に、マウスパッドを有し、その上を指で左右に動かすことで頁をめくるようなものであってもよい。

【0026】

なお、スイッチ類のユーザ操作による指示についても、CPU21によって入出力コントローラ29及び内部バス30を介して取り込まれ、予めスイッチ類毎に定義されたプログラムの実行が行われる。

また、インジケータ表示については、CPU21が、主メモリ22に記録されたプログラムに基づいて処理した結果によって、例えば、アクセスインジケータ11をオンする命令を生成し、その命令を内部バス30及び入出力コントローラ29経由でアクセスインジケータ11に出力することで、アクセスインジケータ11を点灯させることができる。

【0027】

一方、携帯情報機器にWeb画面を表示するために、ユーザは、ファンクションスイッチ8を押下することによりWebアクセスを指示する。このことにより、無線LANコントローラ24は、CPU21によるコントロールの下でサイトアクセスを実行し、そのサイトから必要なコンテンツを入手して主メモリ22又はフラッシュメモリ23に取り込む。CPU21は、主メモリ22又はフラッシュメモリ23からそのコンテンツを読み出し、Web画面として生成して描画/表示コントローラ25を起動する。描画/表示コントローラ25は、主メモリ22からWeb画面情報を読み込んで表示メモリ26へ展開し、更に、表示メモリ26に展開されたWeb画面情報を表示デバイスの表示タイミングに従って読み出し、メインディスプレイ1、2に供給し、表示する。

【0028】

なお、ファンクションスイッチ8の押下によりサイト単位のアクセスメニュー一覧が表示され、ユーザがその中からアクセスすべきサイトを選択するものとする。また、図3に示す画面表示例では、異なる内容を、それぞれ解像度が異なる状態で表示しているが、これは、異なる解像度に対応する描画/表示コントローラ25を別々に備えるか、又は、高解像度で描画及び表示可能なコントローラを用い、低い解像度で表示する画面を生成するときに内部で解像度を落とす処理を行うことにより実現される。

【0029】

次に、入力ペン13による操作指示があった場合の動作について、図4に示す画面を例示して説明する(適宜図9参照)。図4の携帯情報機器の左側の画面(メインディスプレイ2)には電子新聞が表示されている。一方の画面(メインディスプレイ1)には見出しが表示されており、ユーザは、この見出しの中から詳細を知りたい見出しを選択し、入力ペン13でその見出しをポインティングすることにより、他方の画面(メインディスプレイ2)にその本文を表示することができる。

すなわち、入力ペン13でポインティングされた座標は、認識LSI27が演算すること

により認識し、CPU 21に通知される。CPU 21で、その座標と表示内容との対応が調べられ、見出しに対応する本文がフラッシュメモリ 23又は無線LANコントローラ 24経由で外部から取り込まれ、メインディスプレイ 2に表示される。

【0030】

《その他の実施の形態》

以上本発明について好適な実施の形態について示したが、本発明は前記実施の形態に限定されず、本発明の趣旨を逸脱しない範囲で適宜変更が可能である。例えば、図面において、サイズ（長さや厚さ等）を示している箇所があるが、本発明は、それらのサイズに限定されるものではなく、他のサイズであってもよい。

図2、図6に、サブディスプレイ9が表示され、そのサブディスプレイ9には、タイトル、頁、時間等のデータが表示されているが、その内容は、予め電子書籍に格納されているものでもよいし、その都度CPU 21が生成するものであってもよい。ここでは、サブディスプレイ9のための表示メモリ領域が主メモリ22内に割り付けられてあるものとし、その領域にサブディスプレイ9の表示内容が書き込まれ、更に、その表示内容が読み出されてサブディスプレイ9に供給されるものとする。

【0031】

メインディスプレイ1、2に表示される内容については、独立した表示メモリ26を用意し、描画/表示コントローラ25によって表示内容が書き込まれ、更に、読み出されて表示されるものとして説明したが、サブディスプレイ9同様、主メモリ22の一部領域に表示メモリ領域を割り付け、CPU 11が表示内容を書き込み、かつ、読み出してメインディスプレイ1、2へ供給するようにしてもよい。この場合、CPU 11の負担は増えるが、軽薄短小化を目指す実装上の制限及び省電力化の観点からこの方が望ましい。

また、前記実施の形態によれば、表示デバイスとして、電気泳動技術を用いて高精細表示を行うシートディスプレイを示したが、これに制限されることなく、カラー表示で200ppi以上、白黒表示で300ppi以上、望ましくは白黒表示で600ppi以上の解像度を持ち、厚さがフレームも含めて3mm程度で実現できる表示デバイスであれば、液晶ディスプレイ、有機EL（Electroluminescence）等でも代用できる。

【0032】

《活字品質の高精細表示について》

ここで、「活字品質の高精細表示」について定義付けを行うと共に、その解像度の根拠について説明する。

まず、図10に、活字品質の高精細画像表示のための解像度を明らかにするために行った主観評価実験結果を示す。本実験では、文庫本を模擬して文字サイズ約3.5mmの漢字かな混じりの和文を各種解像度により印刷し、その印刷物を評価したものである。図10では、階調表示可能なディスプレイにおいて中間調を活用して視覚的に文字を滑らかに表示させる、いわゆるアンチエリアスを用いた表示（階調のある画像表示）を模擬した「8bit階調プリント」と、階調のない画像表示を模擬した「1bitモノクロプリント」とを併記した。

主観評価の被験者は、10人（男性8人、女性2人）で、いずれも画像デバイス研究に従事している研究者である。実験手法としては、二重刺激劣化尺度法という、参照画像を基準としてテスト画像に評価点数を付け画質の良さを評価するものである。その評価を、画質の悪さに関して、「非常に気になる」、「気になる」、「やや気になる」、「判るが気にならない」及び「判らない」の5段階で行った。

評価値が「判るが気にならない」と「やや気になる」との間である活字品質に必要な解像度許容値は「8bit階調プリント」で200ppi、「1bitモノクロプリント」で300ppiとなっており、これ以上の解像度において活字品質の高精細画像表示となる。ここで、階調のない画像表示を行う場合、画像を保持するいわゆるメモリ性を付与することが容易となる。ディスプレイにおけるメモリ性は電気泳動、液晶等の表示部において持たせてもよいし、各画素回路部に容量、スイッチ等により付与することも可能である

。
【0033】

次に、活字がはっきり表示できる解像度について説明する。

低解像度で画数の多い難しい漢字を表示する場合、文字を省略しての表示が行われており、人間が正確な漢字を忘れてしまう問題がある。そのためにも省略されていない漢字表示が可能な高精細画像表示が必要となる。画数の多い文字としては、例えばJIS漢字コードの第二水準漢字の中にあるようなものがある。具体的には、図11に示すように、「鬱」のAA'及び「鬱」のBB'の切線における横線及び斜め線の数は、それぞれ11本及び13本であり、これらの文字を省略なく表示するため線数の2倍+1以上の画素数が必要となる。これを文庫本等で常用されている3.5mm程度の文字サイズで表示する場合、画素ピッチ130μm以下で概ね200ppi以上の解像度が必要である。さらに、図11からも判るように文字表示において、黒線より白部が広い方が好ましく、このために白部を線数の倍とすると文字表示に必要な画素数は線数の3倍+1以上となり、これを文庫本等で常用されている3.5mm程度の文字サイズで表示する場合、画素サイズ84.7μm以下で概ね300ppi以上の解像度が必要となる。

つまり、表示デバイスの表示面を画素サイズが84.7μm以下とする、または300ppi以上の解像度にする事で第二水準漢字にあるような画数の多い漢字を含んだ場合でもすべて省略せずに表示することができる。

【0034】

【発明の効果】

以上の説明のように、本発明によれば、活字品質の高精細表示を行う表示デバイスを用い、かつ、人間工学を意識したコンポーネント配置を行うことにより、操作性の改善と使い勝手の向上を図った携帯情報機器及び画像表示方法を提供することができる。

【図面の簡単な説明】

【図1】本発明の第1の実施の形態に係る携帯情報機器を示す図である。

【図2】図1の表示事例を示す図である。

【図3】図1の表示事例を示す図である。

【図4】図1の表示事例を示す図である。

【図5】本発明の第2の実施の形態に係る携帯情報機器を示す図である。

【図6】図5の表示事例を示す図である。

【図7】図5の表示事例を示す図である。

【図8】本発明の実施の形態に係るシートディスプレイの表示原理を示す図である。

【図9】本発明の実施の形態に係る携帯情報機器の内部構成を示すブロック図である。

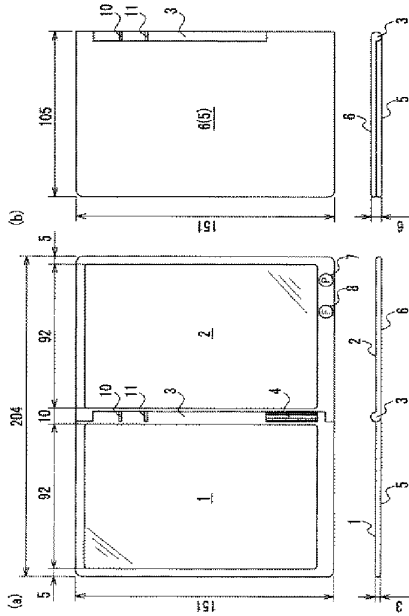
【図10】本発明の実施の形態に係る活字品質の高精細表示の解像度と主観評価の関係を示す図である。

【図11】本発明の実施の形態に係る活字品質の高精細表示の解像度を説明する図である。

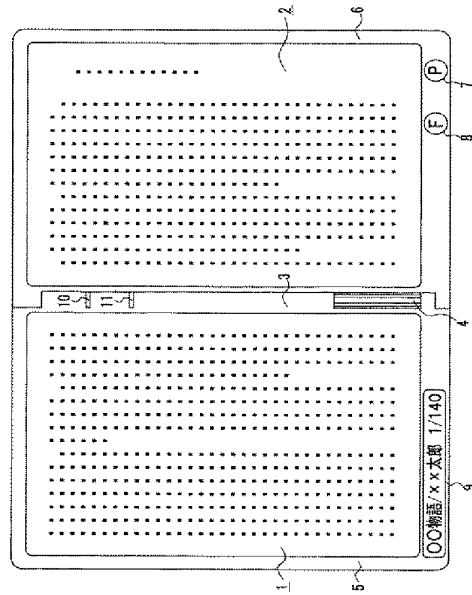
【符号の説明】

- 1、2…メインディスプレイ
- 3…結合部
- 4…回転部
- 5、6…フレーム
- 7…電源スイッチ
- 8…ファンクションスイッチ
- 9…サブディスプレイ
- 10、11…インジケータ(LED)
- 12…太陽電池
- 13…入力ペン
- 14…蓋

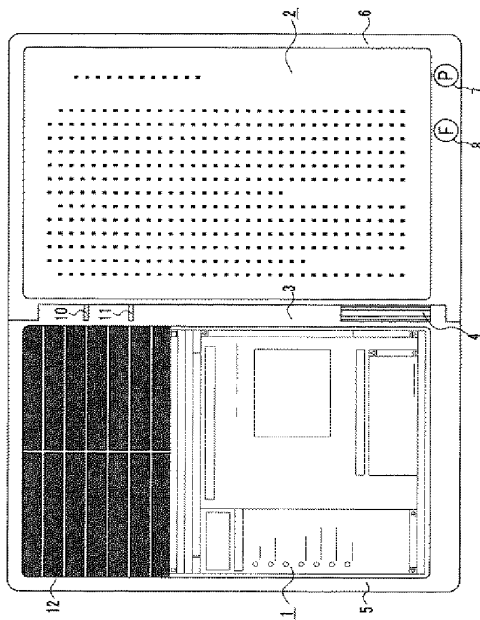
【図1】



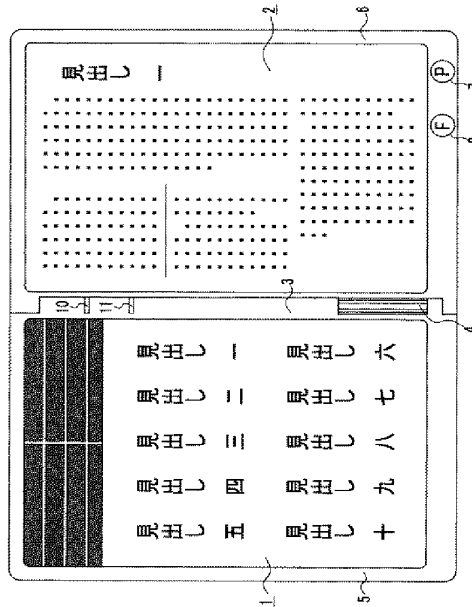
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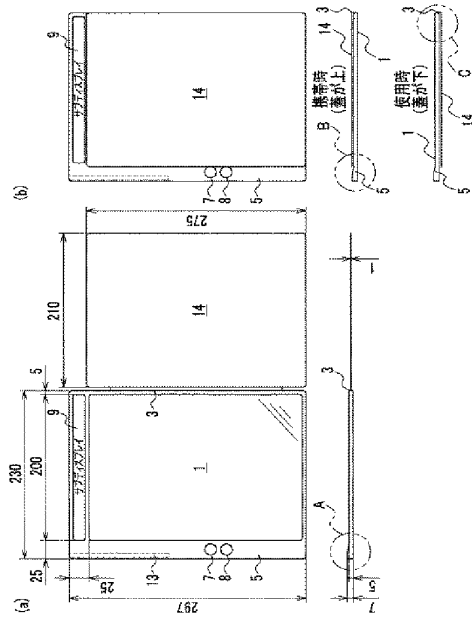
【図3】



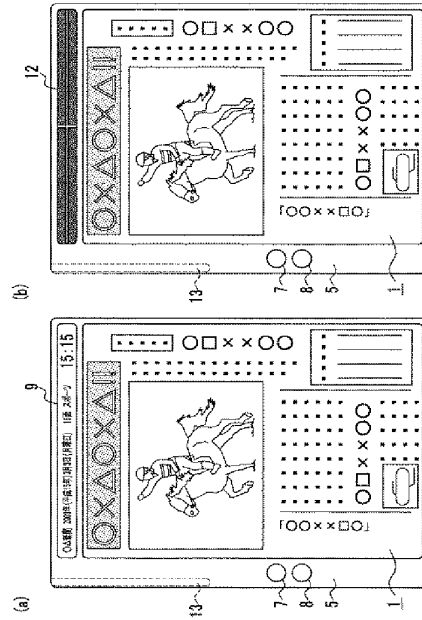
【図4】



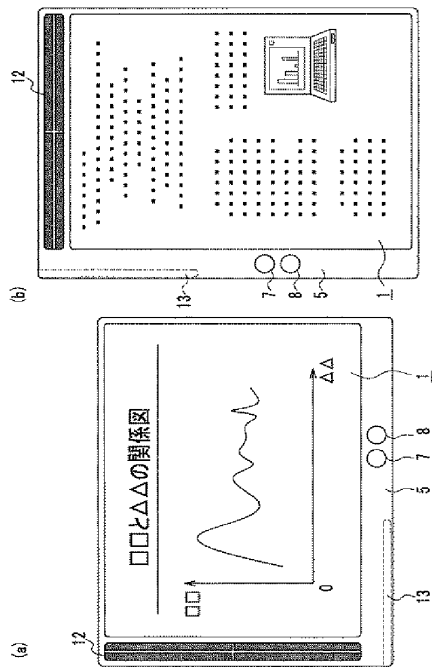
【図5】



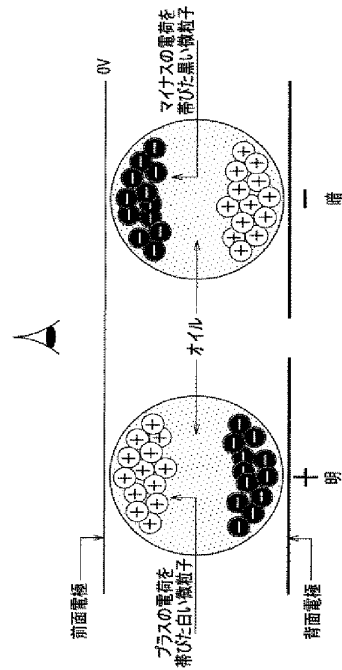
【図6】



【図7】



【図8】



(51)Int. Cl. ⁷	F I	テーマコード (参考)
G 0 9 G 3/36	G 0 9 F 9/40	3 0 1
G 0 9 G 5/00	G 0 9 G 3/20	6 1 2 C
	G 0 9 G 3/20	6 2 1 K
	G 0 9 G 3/20	6 3 3 K
	G 0 9 G 3/20	6 3 3 L
	G 0 9 G 3/20	6 6 0 F
	G 0 9 G 3/20	6 8 0 D
	G 0 9 G 3/20	6 8 0 T
	G 0 9 G 3/20	6 9 1 B
	G 0 9 G 3/20	6 9 1 C
	G 0 9 G 3/34	C
	G 0 9 G 3/36	
	G 0 9 G 5/00	5 1 0 H
	G 0 9 G 5/00	5 1 0 V
	G 0 9 G 5/00	5 3 0 T

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F ターム (参考)	5B020	AA15	CC12	GG51							
	5C006	AA02	AA11	AA21	AF34	AF38	AF47	AF51	AF69	BB16	BB28
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		FA56									
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	5C094	AA01	AA05	AA22	AA48	AA51	AA54	AA56	BA75	BA76	CA19
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	5G435	AA01	AA18	BB11	CC09	CC12	CC13	DD02	EE02	EE05	EE13
		EE16	EE36	EE49	GG43	LL07					

No documents available for this priority number.



Espacenet

Bibliographic data: JP2004302179 (A) — 2004-10-28

PORTABLE INFORMATION EQUIPMENT AND PICTURE DISPLAY METHOD

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Classification: - **international:** G06F1/16; G06F3/023; G09F9/00; G09F9/40; G09G3/20; G09G3/34; G09G3/36; G09G5/00; G06F3/14; G06F3/147; (IPC1-7): G06F3/023; G09F9/00; G09F9/40; G09G3/20; G09G3/34; G09G3/36; G09G5/00
- **cooperative:** G06F1/162; G06F1/1626; G06F1/1635; G06F1/1637; G06F1/1647; G06F1/165; G06F1/1677; G06F1/1684; G06F2200/1632; G06F2200/1634; G06F3/1423; G06F3/147; G09G2340/14

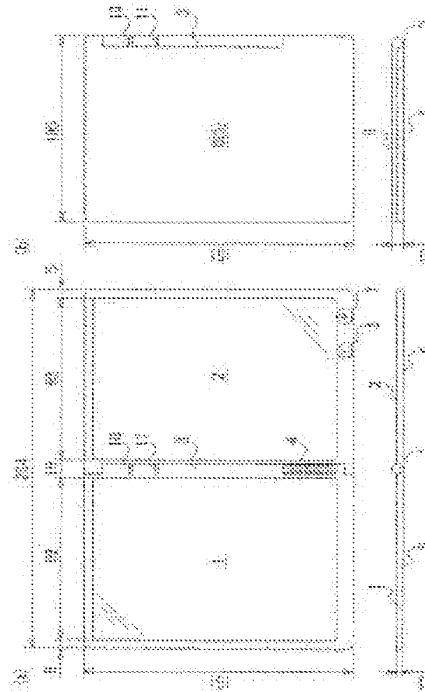
Application number: JP20030095476 20030331

Priority number(s): JP20030095476 20030331

Also published as: US2004207568 (A1)

Abstract of JP2004302179 (A)

PROBLEM TO BE SOLVED: To provide portable information equipment and a picture display method with which operability is improved and handleability enhanced by using a display device performing high definition display of type quality and performing a component arrangement conscious of human engineering. ; SOLUTION: In the portable information equipment, frames 5, 6 on which the display device having main displays 1, 2 performing the high definition display of type quality is mounted are supported freely openably and closably on a connection part 3. The connection part 3 is constituted with a hinge mechanism, the main displays 1, 2 are set in the spread space state and are used by making the connection part 3 a fulcrum and the main displays 1, 2 are overlapped, closed, and folded in two by making the connection part 3 the fulcrum, and can be carried. By rotating a jog dial 4, pictures displayed on the main displays 1, 2 can be changed. A power source switch 7 and a function switch 8 as the necessary switches are mounted on the end part of the frame 6. ; COPYRIGHT: (C)2005,JPO&NCIP)



Last updated: 19.12.2012 Worldwide Database 5.3.4: 93p

PATENT ABSTRACTS OF JAPAN



(11)Publication number : 11-296259
 (43)Date of publication of application : 29.10.1999

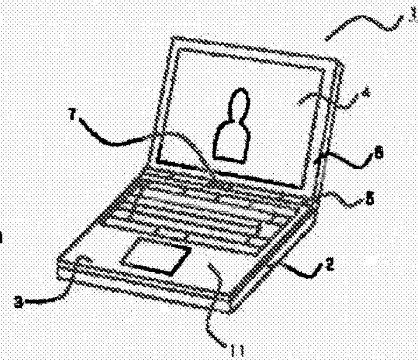
(51)Int.Cl. G06F 1/16
 G06F 1/26
 G09F 9/00

(21)Application number : 10-114380 (71)Applicant : CANON INC
 (22)Date of filing : 10.04.1998 (72)Inventor : UEHARA MAKOTO

(54) PORTABLE PERSONAL COMPUTER**(57)Abstract:**

PROBLEM TO BE SOLVED: To provide a portable personal computer constituted so that a keyboard and a display panel can be optionally arranged in accordance with an operating condition.

SOLUTION: The portable personal computer is provided with a display panel 4 for displaying characters, graphics, etc., a body 2 connected to the panel 4 through hinges and including electronic parts and electronic circuits necessary for data processing, image processing and communication processing, and a data inputting keyboard 3 separable from the body 2, wherein the panel 4 can be turned back and forth around the body 2 more than 180° and an inverted V shape is formed between the panel 4 and the body 2. A connection part 5 formed on the hinge part is provided with a sensor 6 for detecting whether the panel 4 is in a normal state or upside-down. The up and down of the contents of a screen on the panel 4 are inverted in accordance with the detection state of the sensor 6 so that the contents of the screen are always properly observed from the operator side.



1.This document has been translated by computer and provided by JPO and INPIT. So the translation may not reflect the original precisely.

2.**** shows the word which can not be translated.

3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1]A display panel in which a character, graphics, etc. are displayed, and a main part in which this display panel was hinged and electronic parts and an electronic circuit required for data processing, an image processing, and communications processing were built, In a portable personal computer which comprises this main part by having a disengageable keyboard for data input,

A portable personal computer comprising:

A connecting part by which an attachment-by-hinges part of the aforementioned display panel provides, and the aforementioned display panel enables rotation of 180 degree or more, and order is equipped with it to the aforementioned main part.

A detection means by which an installation condition of the aforementioned display panel detects a normal use state or a position state which carried out the top-and-bottom inversion.

A control means which carries out the up-and-down inversion of the display information displayed on the aforementioned display panel according to a detecting state of this detection means.

[Claim 2]The portable personal computer according to claim 1 when it separates [the aforementioned keyboard] from the aforementioned main part, wherein it uses infrared light communication for a means of communication with the aforementioned main part.

[Claim 3]The portable personal computer according to claim 2, wherein the aforementioned keyboard incorporates a cell.

[Claim 4]The portable personal computer according to claim 1 when the aforementioned keyboard is [a cell to incorporate] a rechargeable battery, wherein it charges the aforementioned cell in response to current supply from the aforementioned main device.

[Claim 5]The portable personal computer according to claim 1, wherein a code is used for the aforementioned keyboard as a connecting means accompanying communication with the aforementioned main part.

[Claim 6]The portable personal computer according to claim 1, wherein the aforementioned cable is stored by storage space provided by the aforementioned main part at the time of non-use.

[Claim 7]The portable personal computer according to claim 1 with which the aforementioned display panel is characterized by equipping a back face with at least one plane loudspeaker.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]The present invention relates a keyboard to the portable personal computer of disengageable composition from the main frame in detail about a portable personal computer.

[0002]

[Description of the Prior Art]In recent years, the weight saving and the miniaturization are proceeding the portable personal computer called a notebook type personal computer (henceforth a "personal computer"), a subnotebook computer, a palmtop type personal computer, etc. by technical innovation. As a result, to whose using form fixed at the office or the home having been in use, it walks around with a personal computer easily, and can be conventionally used now in a movement destination.

[0003]

[Problem to be solved by the invention]However, in this kind of portable personal computer, since the keyboard device was united with the personal computer body, there was a case where free arrangement doubled with the operating environment of the operator could not be performed, but the keyboard and display device like a common desktop PC were hard to be used.

[0004]For example, when it installs before the desk 25 so that the operator 22 which sat on the chair 21 may tend to operate the keyboard 24 of the portable personal computer 23 as shown in Fig.5, the head of the operator 22 which looks at the display panel 26 will come to incline forward, and where a burden is placed on a head, it will be operated. In order to have seen the display panel 26 in the natural state, as shown in Fig.6, the portable personal computer 23 needed

to be installed in the position which is separated from the operator 22, therefore there was a problem of becoming difficult to operate the keyboard 24.

[0005]An object of the present invention is to provide a keyboard and the portable personal computer which can arrange a main part freely in accordance with the operating environment of an operator in view of an above-mentioned problem.

[0006]

[Means for solving problem]The composition which realizes the purpose of invention concerning this application like the description to Claim 1, The display panel in which a character, graphics, etc. are displayed, and the main part in which this display panel was hinged and electronic parts and an electronic circuit required for data processing, an image processing, and communications processing were built, In the portable personal computer which comprises this main part by having a disengageable keyboard for data input, the attachment-by-hinges part of the aforementioned display panel provides, and. The connecting part by which the aforementioned display panel enables rotation of 180 degree or more, and order is equipped with it to the aforementioned main part, The installation condition of the aforementioned display panel is in a portable personal computer provided with a detection means to detect a normal use state or the position state which carried out the top-and-bottom inversion, and the control means which carries out the up-and-down inversion of the display information displayed on the aforementioned display panel according to the detecting state of this detection means.

[0007]When it becomes the arrangement in which the posture condition of a main part and a display panel, i.e., a display panel, carries out an up-and-down inversion to a normal use state when a keyboard is separated from a main part according to this composition, according to the inversion of the upper and lower sides of a display panel, a screen content is automatically reversed. Therefore, even if it changes the combination state of a portable personal computer so that it may be easy to operate it, since a picture state is always set up properly, its operativity improves. The free way (arrangement) of placing of a main part and a keyboard becomes possible, and operativity can be improved similarly. By making rotating extent of a display panel into 180 degree or more, and installing in a desk etc. in the shape of a reverse V character especially, an angle, distance, etc. of a display panel and a keyboard can be united with the operating environment of an operator, and can be arranged freely, and it can be operated now with the feeling using a desktop PC.

[0008]Like the description to Claim 2 in the specific composition which realizes the purpose of invention concerning this application, the aforementioned keyboard is in the portable personal computer using infrared light communication for a means of communication with the aforementioned main part, when it separates from the aforementioned main part.

[0009]Since the signal accompanying the alter operation of a keyboard is transmitted to a main part at wireless according to this composition, even if it separates a keyboard from a main part, connection work becomes unnecessary, and usability improves.

[0010]Like the description to Claim 3 in the specific composition which realizes the purpose of invention concerning this application, the aforementioned keyboard is in the portable personal computer incorporating a cell.

[0011]Although the keyboard separated from the main part needs to supply a power supply to the circuit for transmitting data to a main part, it becomes unnecessary according to this composition, to receive current supply from a main part and to connect the cable for power supplies by making a cell build in in a keyboard. Therefore, also in combination like a portable personal computer throat, connection work is unnecessary and its operativity improves.

[0012]Like the description to Claim 4 in the specific composition which realizes the purpose of invention concerning this application, the aforementioned keyboard is in the portable personal computer charging the aforementioned cell in response to current supply from the aforementioned main device, when the cell to incorporate is a rechargeable battery.

[0013]If it is used where a keyboard is separated from a main part according to this composition, consumption of the cell in a keyboard will advance and it will become use impossible after predetermined time. Then, when the cell in a keyboard is a rechargeable battery, it enables it to charge, and a dead battery is prevented.

[0014]The aforementioned keyboard has the specific composition which realizes the purpose of invention concerning this application like the description to Claim 5 in the portable personal computer using a code as a connecting means accompanying communication with the aforementioned main part.

[0015]It becomes unnecessary to incorporate a cell in the keyboard side by performing the data communications from a keyboard to a main part via a cable according to this composition. The weight saving of a keyboard becomes possible.

[0016]Like the description to Claim 6 in the specific composition which realizes the purpose of invention concerning this application, the aforementioned cable is in the portable personal computer being stored by the storage space provided by the aforementioned main part at the time of non-use.

[0017]According to this composition, can store the cable which is easy to lose on a main part, and it becomes unnecessary to convey with a cable simple substance or to keep it, and it becomes possible to prevent loss of a cable.

[0018]Like the description to Claim 7 in the specific composition which realizes the purpose of invention concerning this application, the aforementioned display panel is in a portable personal computer, wherein the back face is equipped with at least one plane loudspeaker.

[0019]According to this composition, the plane loudspeaker with which the back face of the display panel was equipped, Since a plane loudspeaker is faced and the back face of a main part is arranged with a predetermined angle when the main part and the display panel have been arranged to reverse V type, the back face of a main part functions as a sound reflecting board, it becomes easy to reflect a reproduced sound in the operator side, and sound performance improves.

[0020]

[Mode for carrying out the invention]Hereafter, an embodiment of the invention is described based on Drawings.

[0021](First embodiment) Fig.1 is an outline view of the portable personal computer in which the first embodiment of the present invention is shown. the keyboard 3 with which the main part 2 and the upper surface of this main part 2 were equipped with the portable personal computer 1 as shown in Fig.1 -- The rear side part of the main part 2 is equipped with the sensor (or switch) 6 which distinguishes the installation condition (direction of top and bottom) of the display panel 4 rotatable 180 degree or more and the display panel 4 forward and backward via the connecting part 5 (the transfer optical window 7 for infrared communication is provided), and it is constituted. The sensor 6 is built in the display panel 4.

[0022]The using forms of the portable personal computer 1 which carried out the angle between the keyboard 3 and the display panel 4 just over or below 100 degree as shown in Fig.1 are the general directions for use common to other portable personal computers. When a rechargeable battery is used for the cell 11 incorporated in the keyboard 3, a power supply is supplied from the main part 2, and charge may make it possible.

[0023]Next, the directions for use in the state where the keyboard which is the characteristics of the present invention was separated are described below.

[0024]Fig.2 shows the first example of use at the time of separating a keyboard from the main part of the portable personal computer of Fig.1, and the perspective view showing the state where (a) removed the keyboard from the main part, and (b) are the perspective views showing the state where the main part and the keyboard were bent in the shape of a reverse V character.First, the keyboard 3 is made to separate from the main part 2 completely, as shown in (a) of Fig.2. Then, if the display panel 4 is rotated back, and the display panel 4 and the main part 2 are installed in the shape of a reverse V character as shown in (b) of Fig.2, The sensor 6 in the display panel 4 detects this posture change, and screen control (CPU in the main part 2, a chip set, and a video accelerator are performed by the control means made into the subject) is

performed so that the top and bottom of the contents of a screen display may be reversed. Signal transduction of the keyboard 3 and the main part 2 is performed by infrared light communication by the transfer optical window 7 and the transfer optical window 8 arranged in the end face of a keyboard. Therefore, since the main part 2, the display panel 4, and both the keyboard 3 construct, **** is united with the operating environment of an operator and it can carry out freely, usability improves like a desktop PC.

[0025]As shown in (a) of Fig.2, the portable personal computer 1 is usable also where the keyboard 3 is separated from the main part 2, and signal transduction of the keyboard 3 and the main part 2 is performed by infrared light communication by Hazama of the transfer optical window 7 and the transfer optical window 8 also in this case.

[0026]Fig.3 is in the portable personal computer of the present invention, and the 2nd example of the communication configuration at the time of separating the main part 2 and the keyboard 3 is shown. (a) shows among a figure the state where the keyboard 3 was removed from the main part 2 of the state of Fig.1, and (b) shows the state where the main part 2 and the keyboard 3 were bent in the shape of a reverse V character. This example is made to perform communication of Hazama of the main part 2 and the keyboard 3 using the flexible cable 9. In order that this cable 9 may prevent loss, it secures storage space in the main part 2, and it is stored at the time of non-use and kept to storage space. In the installation method according to an anticipated-use form, (a) makes the cable 9 the composition linked to the connector 2a provided by the side surface of the main part 2. (b) shows the composition which uses the cable 9 and connects the main part 2 with the keyboard 3, when it is used where the main part 2 and the keyboard 3 are bent in the shape of a reverse V character. Since the lead for power supplies is included in the cable 9, neither of the cases needs to incorporate the cell 11 in the keyboard 3.

[0027]It describes about (a second embodiment), next the second embodiment of the present invention.

[0028]Fig.4 is an outline view showing the second embodiment of the portable personal computer of the present invention. (a) is the figure seen from the transverse plane among a figure, and (b) is the figure seen from the back face. In a second embodiment, about the same thing as a first embodiment, identical codes are attached and the description is omitted.

[0029]As shown in (a) of Fig.4, the portable personal computer 1, Via the keyboard 3 and the connecting part 5 in which it was equipped on the main part 2 and this main part 2, and the cell 11 was built. the main part 2 -- being rotatable (before or after 180 degree or more) -- it has the sensor (or switch) 6 which is provided in the connected display panel 4 and the display panel 4, and distinguishes the installation condition (direction of top and bottom) of the display panel 4, and is constituted. The transfer optical window 7 for infrared communication is provided by the connecting part 5. The setting position of this transfer optical window 7 is not limited to the

connecting part 5, and if it is near the display panel 4, it is good anywhere. As shown in (b) of Fig.4, the plane loudspeaker (flat speaker) 10 is built in the back face of the display panel 4.

[0030]The same usage as a common portable personal computer is possible for the portable personal computer 1 made into the posture condition of Fig.4. When the storage battery 11 which can charge the keyboard 3 is built in at this time, a power supply is supplied from the main part 2, and charge may make it possible.

[0031]In the portable personal computer of the composition of Fig.4, the method in the case of using it from the main part 2, separating the keyboard 3 is as having described by Fig.2 and Fig.3. Therefore, the description which overlaps here is omitted. In this embodiment, when the display panel 4 and the main part 2 are installed in the shape of a reverse V character like Fig.3, there is an advantage that the sound from the plane loudspeaker 10 built in the back face of the display panel 4 reflects in the main part 2, and OPERETAHE-****-comes to be easy. The plane loudspeaker 10 can build in the thing of size equivalent to the display panel 4, and since it becomes possible to incorporate the bigger plane loudspeaker 10 than any places other than the back face of the display panel 4, it can obtain a high-quality sound reproduced sound easily with a portable personal computer.

[0032][Correspondence of invention and an embodiment] In an above embodiment, the sensor 6 is equivalent to a detection means, and CPU in the main part 2, a chip set, a video accelerator, etc. are equivalent to a control means.

[0033]

[Effect of the Invention]As described above, according to the invention according to claim 1 concerning this application, the attachment-by-hinges part of a display panel provides, and. The connecting part by which the aforementioned display panel enables rotation of 180 degree or more, and order is equipped with it to a main part, Since the installation condition of the aforementioned display panel had composition provided with a detection means to detect a normal use state or the position state which carried out the top-and-bottom inversion, and the control means which carries out the up-and-down inversion of the display information displayed on the aforementioned display panel according to the detecting state of this detection means, If a display panel becomes arrangement of an up-and-down inversion, the screen content of a display panel will be automatically reversed, and since a picture state is always set up properly, its operativity improves. An angle, distance, etc. of a display panel and a keyboard can be united with the operating environment of an operator, and can be arranged freely.

[0034]According to the invention according to claim 2 concerning this application, when a keyboard is separated from a main part, by using infrared light communication for the communication to a main part from a keyboard, even if it separates a keyboard from a main part, connection work becomes unnecessary, and usability improves.

[0035]Since the cell was made to build in a keyboard according to the invention according to claim 3 concerning this application, it is not necessary to receive current supply from the main part side, the necessity of connecting the cable for power supplies becomes, and operativity improves.

[0036]According to the invention according to claim 4 concerning this application, since the keyboard was made to charge the aforementioned cell in response to current supply from the main device when the cell to incorporate was a rechargeable battery, it can charge the rechargeable battery in a keyboard and prevents a dead battery.

[0037]Since the code was used for the connecting means in the case of communication between a keyboard and a main part according to the invention according to claim 5 concerning this application, the data communications from a keyboard to a main part are performed via a cable, and it becomes unnecessary to incorporate a cell in the keyboard side. The weight saving of a keyboard becomes possible.

[0038]According to the invention according to claim 6 concerning this application, since the cable was stored to the storage space provided by the main part at the time of the non-use of a cable, it becomes unnecessary to convey with a cable simple substance or to keep it, and it becomes possible to prevent loss.

[0039]Like the description to Claim 7, since the specific composition which realizes the purpose of invention concerning this application equipped the back face with at least one plane loudspeaker at the display panel, it can operate the back face of a main part as a sound reflecting board, and its sound performance (reproducing characteristics) improves.

TECHNICAL FIELD

[Field of the Invention] The present invention relates a keyboard to the portable personal computer of disengageable composition from the main frame in detail about a portable personal computer.

PRIOR ART

[Description of the Prior Art]In recent years, the weight saving and the miniaturization are proceeding the portable personal computer called a notebook type personal computer (henceforth a "personal computer"), a subnotebook computer, a palmtop type personal computer, etc. by

technical innovation. As a result, to whose using form fixed at the office or the home having been in use, it walks around with a personal computer easily, and can be conventionally used now in a movement destination.

[0003]

EFFECT OF THE INVENTION

[Effect of the Invention]As described above, according to the invention according to claim 1 concerning this application, the attachment-by-hinges part of a display panel provides, and. The connecting part by which the aforementioned display panel enables rotation of 180 degree or more, and order is equipped with it to a main part, Since the installation condition of the aforementioned display panel had composition provided with a detection means to detect a normal use state or the position state which carried out the top-and-bottom inversion, and the control means which carries out the up-and-down inversion of the display information displayed on the aforementioned display panel according to the detecting state of this detection means, If a display panel becomes arrangement of an up-and-down inversion, the screen content of a display panel will be automatically reversed, and since a picture state is always set up properly, its operativity improves. An angle, distance, etc. of a display panel and a keyboard can be united with the operating environment of an operator, and can be arranged freely.

[0034]According to the invention according to claim 2 concerning this application, when a keyboard is separated from a main part, by using infrared light communication for the communication to a main part from a keyboard, even if it separates a keyboard from a main part, connection work becomes unnecessary, and usability improves.

[0035]Since the cell was made to build in a keyboard according to the invention according to claim 3 concerning this application, it is not necessary to receive current supply from the main part side, the necessity of connecting the cable for power supplies becomes, and operativity improves.

[0036]According to the invention according to claim 4 concerning this application, since the keyboard was made to charge the aforementioned cell in response to current supply from the main device when the cell to incorporate was a rechargeable battery, it can charge the rechargeable battery in a keyboard and prevents a dead battery.

[0037]Since the code was used for the connecting means in the case of communication between a keyboard and a main part according to the invention according to claim 5 concerning this application, the data communications from a keyboard to a main part are performed via a cable,

and it becomes unnecessary to incorporate a cell in the keyboard side. The weight saving of a keyboard becomes possible.

[0038]According to the invention according to claim 6 concerning this application, since the cable was stored to the storage space provided by the main part at the time of the non-use of a cable, it becomes unnecessary to convey with a cable simple substance or to keep it, and it becomes possible to prevent loss.

[0039]Like the description to Claim 7, since the specific composition which realizes the purpose of invention concerning this application equipped the back face with at least one plane loudspeaker at the display panel, it can operate the back face of a main part as a sound reflecting board, and its sound performance (reproducing characteristics) improves.

TECHNICAL PROBLEM

[Problem to be solved by the invention]However, in this kind of portable personal computer, since the keyboard device was united with the personal computer body, there was a case where free arrangement doubled with the operating environment of the operator could not be performed, but the keyboard and display device like a common desktop PC were hard to be used.

[0004]For example, when it installs before the desk 25 so that the operator 22 which sat on the chair 21 may tend to operate the keyboard 24 of the portable personal computer 23 as shown in Fig.5, the head of the operator 22 which looks at the display panel 26 will come to incline forward, and where a burden is placed on a head, it will be operated. In order to have seen the display panel 26 in the natural state, as shown in Fig.6, the portable personal computer 23 needed to be installed in the position which is separated from the operator 22, therefore there was a problem of becoming difficult to operate the keyboard 24.

[0005]An object of the present invention is to provide a keyboard and the portable personal computer which can arrange a main part freely in accordance with the operating environment of an operator in view of an above-mentioned problem.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]It is an outline view showing the first embodiment of the portable personal computer concerning the present invention.

[Drawing 2]The first example of use at the time of separating a keyboard from the main part of the portable personal computer of Fig.1 is shown, and the perspective view showing the state where (a) removed the keyboard from the main part, and (b) are the perspective views showing the state where the main part and the keyboard were bent in the shape of a reverse V character.

[Drawing 3]The second example of use at the time of separating a keyboard from the main part of the portable personal computer of Fig.1 is shown, and the perspective view showing the state where (a) removed the keyboard from the main part, and (b) are the perspective views showing the state where the main part and the keyboard were bent in the shape of a reverse V character.

[Drawing 4]It is an outline view showing the second embodiment of the portable personal computer of the present invention, and (a) is the perspective view seen from the transverse plane, and the perspective view which looked at (b) from the back face.

[Drawing 5]It is an explanatory view showing the using form of the conventional portable personal computer.

[Drawing 6]In Fig.5, when a display panel is made legible, it is an explanatory view showing that the operativity of a keyboard worsens.

[Explanations of letters or numerals]

1 Portable personal computer

2 Main part

3 Keyboard

4 Display panel

5 Connecting part

6 Sensor

7 and 8 Transfer optical window

9 Flexible cable

10 Plane loudspeaker

11 Cell

(19) 日本国特許庁(JP)

(12) 公開特許公報(A)

(11) 特許出願公開番号

特開2006-227409
(P2006-227409A)

(43) 公開日 平成18年8月31日(2006.8.31)

(51) Int. Cl.	F I	テーマコード (参考)
G09G 5/00 (2006.01)	G09G 5/00 550C	5C082
G06F 3/048 (2006.01)	G09G 5/00 530A	5E501
G06F 1/16 (2006.01)	G06F 3/00 656A	
	G06F 1/00 312G	
	G06F 1/00 312F	

審査請求 未請求 請求項の数 6 O L (全 12 頁)

(21) 出願番号 特願2005-42626 (P2005-42626)
(22) 出願日 平成17年2月18日 (2005.2.18)

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Fターム(参考) 5C082 AA01 AA25 BA02 BA12 BA26
BD02 CA11 CA33 CA81 CA82
CB03 DA86 MM08
5E501 AA04 BA03 FB03

(54) 【発明の名称】 表示装置

(57)、

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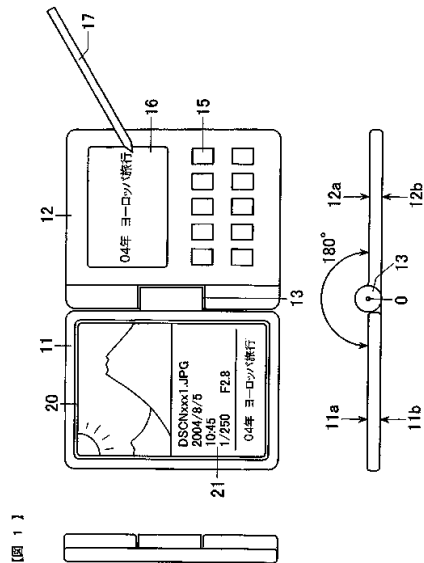


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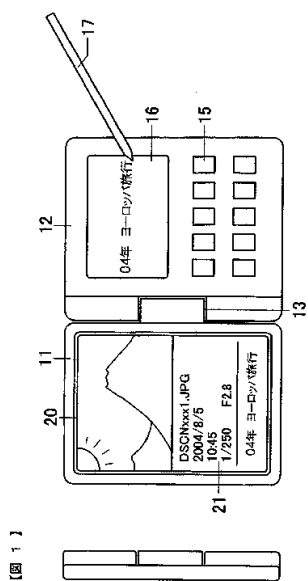
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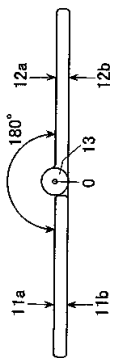
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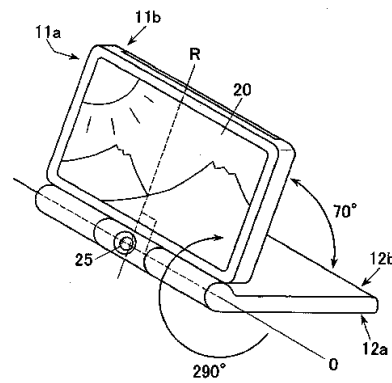
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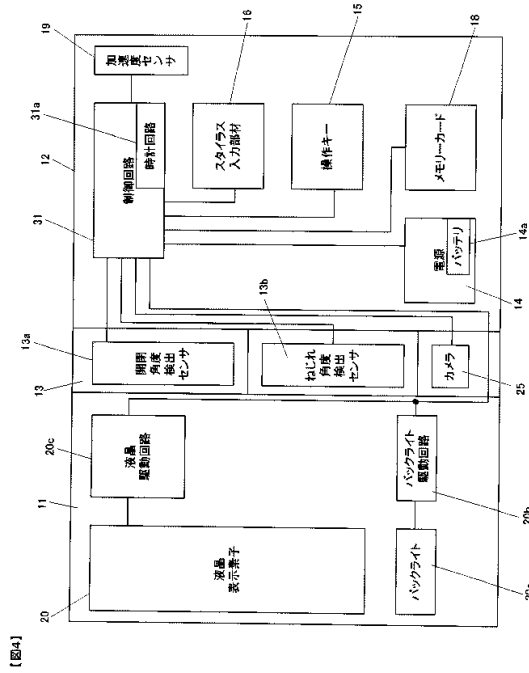
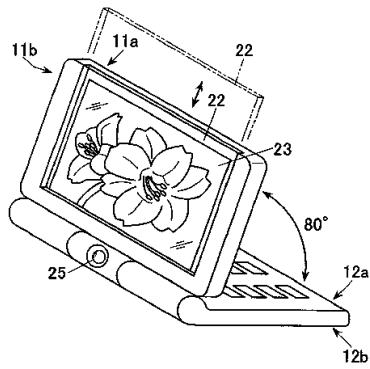
【図 1】



【図 2】

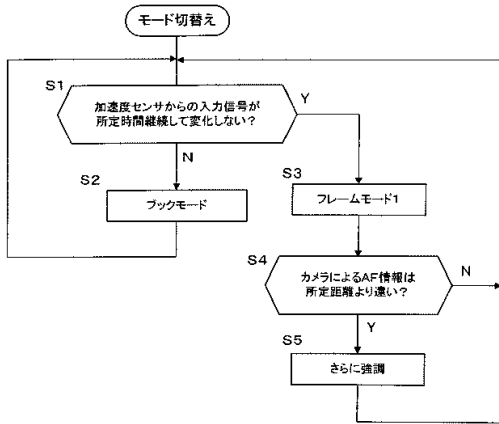


【図3】

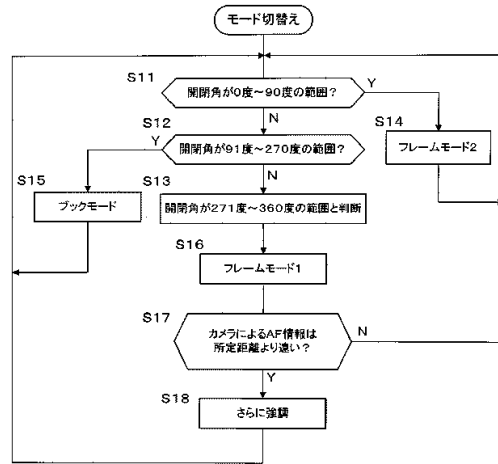


【図4】

【図5】



【図6】



PATENT ABSTRACTS OF JAPAN

13

(11)Publication number : 2006-227409

(43)Date of publication of application : 31.08.2006

(51)Int.Cl. G09G 5/00 (2006. 01)
 G06F 3/048 (2006. 01)
 G06F 1/16 (2006. 01)

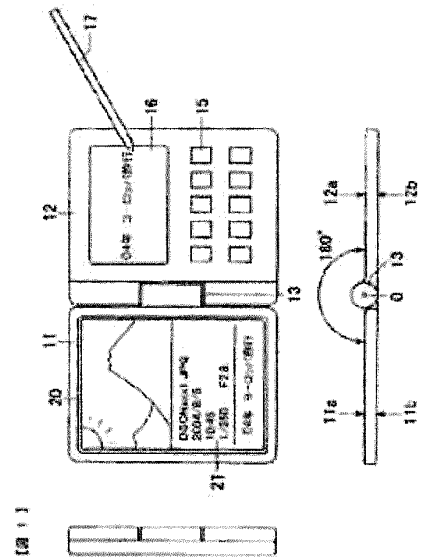
(21)Application number : 2005-042626 (71)Applicant : NIKON CORP
 (22)Date of filing : 18.02.2005 (72)Inventor : FUJINAWA NOBUHIRO

(54) DISPLAY DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain display forms appropriate for the case an observer operates a display device while viewing display contents and a case the observer places the display device and observes the display contents, respectively.

SOLUTION: The image display device automatically switches the display mode to a book mode when it is regarded to be in a standby state or in an operation state by the decision based on the detection signal from an acceleration sensor 19 and automatically switches the mode to a frame mode 1 when it is regarded to be in a placed state. In the book mode, a reproduced image is displayed on a liquid crystal display element 20 as a vertically long screen and Exif information incidental to the image data is displayed in a margin region 21. In the frame mode 1, the display of the Exif information is omitted and the reproduced image is highlighted on a large scale at a full size as large as the screen of the liquid crystal display element 20 as a horizontally long screen.



No documents available for this priority number.



Espacenet

Bibliographic data: JP6090200 (A) — 1994-03-29

PORTABLE RADIO TELEPHONE SET

Inventor(s): NISHIYAMA TAKANORI; YANAGISAWA KAZUNORI; ITAKURA SAKAE ± (NISHIYAMA TAKANORI, ; YANAGISAWA KAZUNORI, ; ITAKURA SAKAE)

Applicant(s): HITACHI LTD ± (HITACHI LTD)

Classification: - **international:** G06F3/023; G06F3/033; H04M1/00; H04M1/02; H04M1/03; H04M1/247; H04M1/2745; H04M1/725; H04Q7/32; H01H25/00; H01H3/16; (IPC1-7): H04B7/26; H04M1/03
- **cooperative:** G06F3/0236; G06F3/0362; H04M1/0214; H04M1/0218; H04M1/0247; H04M1/233; H04M1/274525; H04M1/274558; H04M1/72519; H04M1/72583; H01H2019/146; H01H2223/05; H01H25/008; H01H3/162; H04M1/725; H04M2250/70

Application number: JP19920239735 19920908

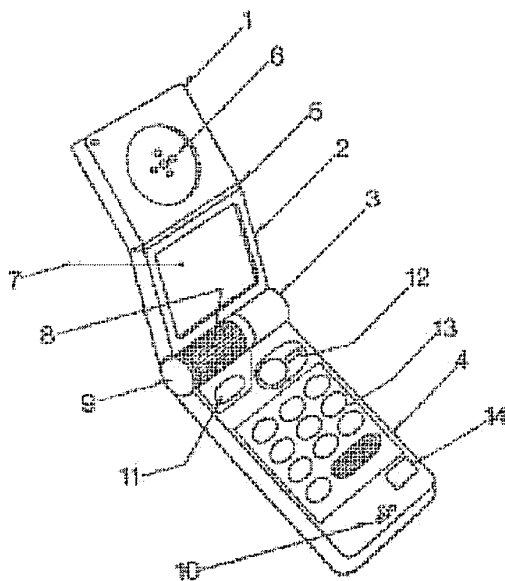
Priority number(s): JP19920239735 19920908

Also published as: JP3268467 (B2) EP0588210 (A1) EP0588210 (B1) US2002025830 (A1) US6628970 (B2) more

Abstract of JP6090200 (A)

PURPOSE:To facilitate various operations especially required for radio call with the finger of a single hand whil holding a telephone set itself with the single hand.
CONSTITUTION:A functional selection dial 8 which functions as the one for reception voice sound volume adjustment in a radio call state and functions as the one to select every kind of set in a non-radio call state is provided in such a way that it can freely be turned in a vertical direction at a joint part 3 for housing/folding so as to easily enable access with the finger of the single hand in a state where it is hold with the single hand. Also, when the telephone set is provided so as to be operated from internal and external sides, the reception voice sound volume adjustment in the radio call state can be performed.

Last updated: 19.12.2012 Worldwide
Database 5.8.4; 93p



(19)日本国特許庁 (J P)

(12) 公開特許公報 (A)

(11)特許出願公開番号

特開平6-90200

(43)公開日 平成6年(1994)3月29日

(51)Int.Cl. ⁵	識別記号	庁内整理番号	F I	技術表示箇所
H 0 4 B 7/26		V 9297-5K		
H 0 4 M 1/03		A 9077-5K		

審査請求 未請求 請求項の数8(全 8 頁)

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		(72)発明者	柳澤 和典 東京都国分寺市東恋ヶ窪一丁目280番地 日立製作所デザイン研究所内
		(72)発明者	板倉 栄 神奈川県横浜市戸塚区戸塚町216番地 株 式会社日立製作所情報通信事業部内
		(74)代理人	弁理士 秋本 正実

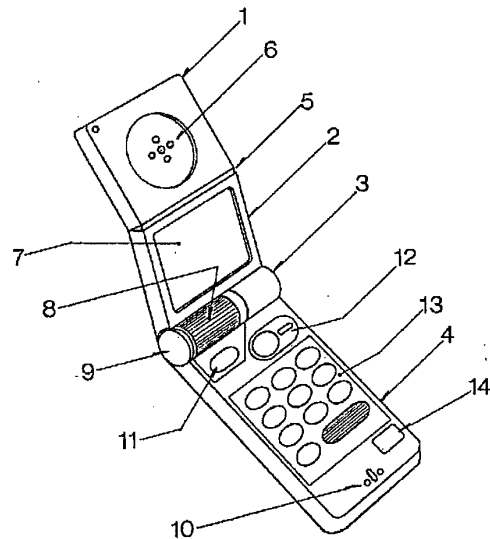
(54)【発明の名称】 携帯用無線電話機

(57)【要約】

【目的】 それ自体が片手で把持されつつ、しかもその手の指で、特に無線通話を行う上で必要とされる各種操作を容易に行うこと。

【構成】 片手把持状態でその手の指から容易にアクセス可として、収納折畳み用のヒンジ部3に、無線通話状態では受信音声音量調整用として機能し、非無線通話状態では各種機を選択するためのものとして機能する機能選択ダイヤル8が縦方向に回動自在として、且つ内外両面からダイヤル操作可として具備せしめられる場合は、内外両面から機能選択を始めて、無線通話状態での受信音声音量調整を行い得るものである。

【図1】



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【特許請求の範囲】

【請求項1】 無線通話機能および電子手帳機能を少なくとも具備してなる携帯用無線電話機であって、収納折畳み用のヒンジ部に、各種機能選択用の機能選択ダイヤルが、縦方向に回動自在として具備されてなる携帯用無線電話機。

【請求項2】 無線通話機能および電子手帳機能を少なくとも具備してなる携帯用無線電話機であって、収納折畳み用のヒンジ部に、無線通話状態では受信音声音量調整用として機能し、非無線通話状態では各種機を選択するためのものとして機能する機能選択ダイヤルが、縦方向に回動自在として、且つ内外両面からダイヤル操作可として具備されてなる携帯用無線電話機。

【請求項3】 無線通話機能および電子手帳機能を少なくとも具備してなる携帯用無線電話機であって、収納折畳み用のヒンジ部に、各種機能選択用の機能選択ダイヤルがカーソル位置をも制御可として、縦方向には回動自在として、且つヒンジ軸方向にはスライド自在として具備されてなる携帯用無線電話機。

【請求項4】 無線通話機能および電子手帳機能を少なくとも具備してなる携帯用無線電話機であって、収納折畳み用のヒンジ部に、各種機能選択用の機能選択ダイヤルが縦方向に回動自在として具備される一方、該機能選択ダイヤルのヒンジ軸方向近傍には、カーソル位置制御用ダイヤルが縦方向には回動自在として、且つヒンジ軸方向にはスライド自在として具備されてなる携帯用無線電話機。

【請求項5】 無線通話機能および電子手帳機能を少なくとも具備してなる携帯用無線電話機であって、収納折畳み用のヒンジ部の側端に収納折畳み制御機構が具備される一方、該ヒンジ部に各種機能選択用の機能選択ダイヤルが、縦方向に回動自在として具備されてなる携帯用無線電話機。

【請求項6】 無線通話機能および電子手帳機能を少なくとも具備してなる携帯用無線電話機であって、収納折畳み用のヒンジ部に、各種機能選択用の機能選択ダイヤルが縦方向に回動自在として具備される一方、片手で把持された状態では、親指の指リンク運動範囲内には各種操作釦が配列されてなる携帯用無線電話機。

【請求項7】 無線通話機能および電子手帳機能を少なくとも具備してなる携帯用無線電話機であって、収納折畳み用のヒンジ部の側端に収納折畳み制御機構が具備される一方、収納折畳み用のヒンジ部に、無線通話状態では受信音声音量調整用として機能し、非無線通話状態では各種機を選択するためのものとして機能する機能選択ダイヤルが、縦方向に回動自在として、且つ内外両面からダイヤル操作可として具備されてなる携帯用無線電話機。

【請求項8】 無線通話機能および電子手帳機能を少なくとも具備してなる携帯用無線電話機であって、収納折

2

畳み用のヒンジ部の側端に収納折畳み制御機構が具備される一方、収納折畳み用のヒンジ部に、各種機能選択用の機能選択ダイヤルがカーソル位置をも制御可として、縦方向には回動自在として、且つヒンジ軸方向にはスライド自在として具備され、片手で把持された状態では、親指の指リンク運動範囲内には各種操作釦が配列されてなる携帯用無線電話機。

【発明の詳細な説明】

【0001】

10 【産業上の利用分野】本発明は、無線通話機能、電子手帳機能等が具備されてなる携帯用無線電話機に係わり、特に収納折畳み用のヒンジ部に、収納折畳み制御機構や、各種機能選択用の機能選択ダイヤルが縦方向に回動自在として具備されるなど、使用状態での片手操作が容易とされた携帯用無線電話機に関するものである。

【0002】

【従来の技術】これまでの携帯用無線電話機（以下、単に電話機と称す）では、送受信時に、例えばそれ自体が衣服のポケット等より取り出された上、必要な操作が行われ後は情報交換（具体的には音声による通話等）が行われるようになっており、その後、相手側との情報交換が終了した場合には、再びポケット等に収納されるものとなっている。ところで、これまでの電話機一般は無線通話機能を始めとして、電子手帳機能等、多機能なものとして構成されており、必要とされる機能を実際に機能せしめるためには、複雑な操作を所定順に行わなければならないものとなっている。例えば相手側を呼び出して無線通話を行う場合を想定すれば、電話機自体はポケット等から取り出され、必要とされる一連の呼出し操作が行われた後は、通話可能状態となるべく必要に応じ持ち変えられた上、それ自体が送受話器、あるいはハンドセットであるかの如く、口や耳付近に移動される必要があるものとなっている。その際、受信音声の音量を必要に応じ調整するには、通話は一旦中断された上、この中断状態で音量調整用の釦が操作される必要があるものとなっている。また、複数ある機能のうち、何れかを選択する場合や、表示画面上に、予め記憶されている所望の相手先電話番号を呼び出して表示する場合には、必要な釦操作や画面表示の目視確認、所望のものが選択、あるいは表示された場合での確認釦操作等、各種の釦操作が所定順に行われる必要があるものである。なお、この種の機器に関するものとしては、雑誌「DIME」（1991年10月17日、小学館発行、頁82、83）に記載のもの（折り畳み式のものを含む）が知られている。

【0003】

【発明が解決しようとする課題】ところで、これまでの電話機一般では、特に無線通話が行われる際の片手操作がある程度は配慮されているにしても、それ自体が片手で把持されつつ、しかもその手の指で無線通話を行う上

50 上で必要とされる各種操作を容易に行い得るものは少な

3

く、實際上、片手操作は困難となっているのが実情である。

【0004】本発明の目的は、それ自体が片手で把持されつつ、しかもその手の指で、特に無線通話を行う上で必要とされる各種操作が容易に行われ得る電話機を供するにある。

【0005】

【課題を解決するための手段】上記目的は、収納折畳み用のヒンジ部に、無線通話状態では受信音音量調整用として機能し、非無線通話状態では各種機を選択するためのものとして機能する機能選択ダイヤルを、縦方向に回動自在として、且つ内外両面からダイヤル操作可として具備せしめたり、あるいは収納折畳み用のヒンジ部に、各種機能選択用の機能選択ダイヤルをカーソル位置をも制御可として、縦方向には回動自在として、且つヒンジ軸方向にはスライド自在として具備せしめたり、あるいはまた、収納折畳み用のヒンジ部の側端に収納折畳み制御機構を具備せしめる一方、該ヒンジ部に各種機能選択用の機能選択ダイヤルを縦方向に回動自在として具備せしめたり、収納折畳み用のヒンジ部に、各種機能選択用の機能選択ダイヤルを縦方向に回動自在として具備せしめる一方、片手で把持された状態では、親指の指リンク運動範囲内に各種操作鈕を配列せしめるべく構成することで達成される。

【0006】

【作用】片手持持状態でその手の指から容易にアクセス可として、収納折畳み用のヒンジ部に、無線通話状態では受信音音量調整用として機能し、非無線通話状態では各種機を選択するためのものとして機能する機能選択ダイヤルが縦方向に回動自在として、且つ内外両面からダイヤル操作可として具備せしめられる場合は、内外両面から機能選択を始めとして、無線通話状態での受信音音量調整を行い得るものである。また、機能選択ダイヤルがカーソル位置をも制御可として、縦方向には回動自在として、且つヒンジ軸方向にはスライド自在として具備せしめるか、あるいは片手持持状態でその手の指から容易にアクセス可として、収納折畳み用のヒンジ部に、カーソル位置制御用ダイヤルが縦方向には回動自在として、且つヒンジ軸方向にはスライド自在として具備される場合には、表示画面上でのカーソル位置制御を容易に行い得るものである。更に、収納折畳み用のヒンジ部の側端に収納折畳み制御機構を具備せしめられる場合には、片手持持状態でその手の指で収納折畳みを容易に制御し得るものである。更にまた、親指の指リンク運動範囲内に各種操作鈕を配列せしめられる場合は、片手持持状態でその手の指から容易にそれら各種操作鈕を容易に操作し得るものである。

【0007】

【実施例】以下、本発明を図1から図8により説明する。先ず本発明による電話機の使用状態での外観につい

4

て説明すれば、図1はその一例での外観斜視状態を示したものである。図示のように、電話機本体がその収納折畳み状態からその折畳み状態が解除され、使用状態におかれた場合での全体外観斜視状態が示されたものとなっている。これによる場合、レシーバ部1と表示部2はヒンジ5を介し自在に屈曲係合された上、これらはまた、収納折畳み回動用のジョイント部3を介し操作部4と係合されるべく構成されたものとなっている。さて、レシーバ部1の中央部にはレシーバ（受信音声出力用スピーカ）6が具備された上、無線通話時にこれに耳が当てられことで、通話相手からの音声聴取され得るものである。その無線通話状態では、ヒンジ5は図示の如くくの字状に屈曲されることで、操作性や使い勝手が向上せしめられているものである。また、ジョイント部3は電話機本体の折畳み収納状態から回動展開された状態、即ち、使用状態を維持するとともに、機能選択操作のダイヤル8や、回動操作機構およびプッシュボタン9が具備せしめられるものとなっている。更に、操作部4には情報の記憶/検索や入出力操作のセットボタン11や通話開始用の発信(再発信)ボタン12、テンキー部13、通話終了用等の終了ボタン14が具備された上、その先端部にはマイクロフォン10が内蔵されるようになっている。以上の構成によりダイヤル8によって無線通話機能が選択された場合には、恰も通常の電話機一般におけるハンドセットの如く、耳にレシーバ6を当て、マイクロフォン10には口を接近せしめた状態で、相手側との間で無線通話を行い得るものである。なお、表示部2中央部に具備されている液晶表示画面7上にはキー入力された情報や、記憶されている情報のうちから、必要が情報が呼び出し表示されるものとなっている。

【0008】図2はまた、片手（本例では左手）で把持された状態でのその電話機の使用状態を示したものである。電話機本体が折畳み収納状態にある場合に、ジョイント部3の左右両端部を親指aと人指指bで挟み持ち、親指aでプッシュボタン9を押圧操作すれば、ジョイント部3を介し表示部2およびレシーバ部1が回動され、安定な使用状態に移行されるものとなっている。さて、電話機本体は基本的には親指球cと残り3つの指dで把持されることから、親指aや人指指bを電話機本体より離しても、電話機本体が手から落下する、といった不都合は生じないものである。したがって、そのように電話機本体が把持されている状態では、液晶表示画面7上での表示を確認しつつ、親指aでダイヤル8や操作部4上の各種操作ボタンを操作し得るものである。

【0009】図3は無線通話状態にある電話機本体を外側（背面）側よりみた使用斜視状態を示したものである。図示のように、レシーバ6に耳が当てられ、マイクロフォン10には口を接近させた状態での電話機を、電話機を把持している片手の背後よりみた状態として示し

5

たものである。図示のように、人指指bはジョイント部3の一端部より離され、その人指指bによりダイヤル8が操作されているが、このことは、ダイヤル8は内面側からは親指aによって、その外面側からは人指指bによって操作可能であることを示唆したものとなっている。したがって、ダイヤル8が非無線通話状態では各種機能（具体的には、送信/受信、電話番号、シークレット、入力、出力、記憶、計算、時刻、リモコン、スケジュール、コール（呼出し）、クリヤー、カレンダー、辞書、地図、文字、数字等）を選択するためのものとして、また、無線通話状態では受信音声音量調整用として機能すべく、縦方向に回転自在として、且つ内外両面からダイヤル操作可としてジョイント部3に具備されている場合には、無線通話状態での受信音声の音量調整が通話を中断することなく行い得るものである。

【0010】図4は電話機が片手で把持されている状態での片手操作方法を示したものである。図示のように、電話機本体は操作部4のその左右両側端が親指球cと3つの指dで挾持された状態で、親指aがプッシュボタン9を押圧操作すれば、それまで折り畳み収納状態にあった本電話機本体は、レシーバ部1および表示部2はジョイント部3を介し回転されることで、安定な使用状態に移行されるものとなっている。この使用状態で、例えば無線通話が行われるものとしてその操作を説明すれば、先ずダイヤル8が親指位置fで操作されれば、液晶表示画面7には予め入力記録されている氏名とその電話番号が検索表示されるものとなっている。その後、相手先電話番号を確認し親指位置gでセットボタン11を押圧操作した上、親指位置hで発信（再発信）ボタン12を押圧操作すれば、公知の技術により無線通話が開始されるものとなっている。やがて、無線通話が終了すると、親指位置iで終了ボタン14が押圧操作されることで、無線通話に必要とされる一連の操作は完了されるものである。即ち、液晶表示画面7の視認とダイヤル8や発信（再発信）ボタン12、終了ボタン14に対する親指aの操作運動領域範囲は、図に示す破線A、Bで囲まれている範囲とされ、その範囲内では親指aは必要な操作を容易に行い得るものであり、その範囲は、とりもなおさず親指aの生体指骨構成の付け根を中心とした間接eでの複合した回転や回転、進退屈曲運動による範囲でもある。したがって、破線A、Bで囲まれている範囲に、無線通話を行う上で必要とされるダイヤル8や各種ボタンが配置される場合には、片手操作でそれらダイヤル8や各種ボタンが操作され得、片手操作性が向上され得るものである。

【0011】図5は本発明に係るジョイント部3の一例での部分断面を示したものである。これによる場合、ジョイント部3を構成しているケース15とボタン軸19は操作部4に固定されており、ケース15の中心端面部に形成されているボス軸16には回転自在に中空フランジ18が係合されるものとなっている。ボタン軸19に

6

形成されているスリーブ軸22にも回転自在にスリーブフランジ20が係合されるものとなっている。回転自在な中空フランジ18とスリーブフランジ20はシャシ17で固定されており、シャシ17は表示部2の内部で安定に固着されようになっている。したがって、操作部4と表示部2はジョイント部3を介し相互に折畳み可として自在に係合されているものである。

【0012】また、ボタン軸19の端面からはプッシュボタン9が進退自在に挿入されるが、プッシュボタン9に形成されているシャンク23はスリーブ軸22内側に摺動可能に嵌合係合されるものとなっている。そのシャンク23にはまた、ストッパーピース24が具備された上、スリーブ軸22とスリーブフランジ20の端面に形成された切欠き25、26各々に係合されるようになっている。これにより、スリーブフランジ20の回転は停止され、したがって、表示部2の回転も安定に停止安定され得るものである。なお、スリーブ軸22の切欠き26はプッシュボタン9の軸方向の最大ストロークに対してもストッパーピース24が係合を解除することはない。それに対し、スリーブフランジ20の切欠き25は係合が解除され自由に回転し得るものである。このスリーブフランジ20の切欠き25は電話機が使用状態にある場合での開位置と、収納折畳み状態にある場合での収納位置（図示せず）とに形成されているものである。

【0013】更に、ケース15内部にはねじりコイルバネ21が具備されており、その一端はケース15に結合固定され、他端はケース15より突出されて中空フランジ18に形成されたバネ穴に係合されている。これにより、プッシュボタン9が押圧操作されれば、ストッパーピース24が収納時切欠き25（図示せず）での停止を開放し、ねじりコイルバネ21の弾性力が開放される結果、中空フランジ18が回転され、したがって、レシーバ部1および表示部2が回転され使用状態に至らしめられるものである。その使用状態での組込結合でも、ねじりコイルバネ21にはまだ残留弾性力が残されていることから、引続き開方向への回転力が与えられたものとなっている。このことは、電話機が使用状態にある場合での不要ながたつきがその回転力により防止されていることを示唆している。

【0014】更に、ダイヤル8が係合されているダイヤル軸28がその機械的位置読取り上、その軸方向に移動可とされる場合には、シャンク23の端面がストッパとしてのストロークの停止位置となり、シャンク23とシャフト27との圧入結合は、ダイヤル軸28に作用する操作力程度では解除されないものとなっている。ダイヤル軸28とシャフト27は同一軸上で軸方向スライドとその軸周りに回転可とされているが、シャフト27はダイヤル軸28内部で摺動、且つ回転自在な状態として支持された上、その他端はジョイスティック29に至らしめられるものとなっている。そのジョイスティック29

7

内にはシャフト27に連動する電源スイッチ(図示せず)が具備されており、外部よりプッシュボタン9が操作されることによって、電話機が収納折畳み状態から使用状態へと移行せしめられるとともに、電話機には電源が投入され得るものである。また、ジョイスティック29内部にはボリューム(受信音声音量調整用等)やセンサ(機能選択用等)が具備された上、ダイヤル軸28の動きに応じて感応動作せしめられるものとなっている。ダイヤル軸28はジョイント部3の中央付近まで延ばされた上、先端部分にダイヤル8が圧入固定されているが、ダイヤル8は他の部品に接触することなく円滑に軸方向でのスライド、その軸周りでの回転が可能とされているものである。また、ジョイスティック29内部のセンサは操作部4の各種の機能ボタンの操作によっても、必要な機能が切替えにより選択されるものとなっている。このようにして選択された機能はコードEを介し表示処理回路(図示せず)に至らしめられた上、その機能が実行される上で必要とされる各種表示が行われるものである。なお、本例でのダイヤル8はカーソル位置制御用としても機能するが、ダイヤル8とは別にその近傍にカーソル位置制御専用ダイヤルを具備せしめるようにしてもよいものである。

【0015】図6はまた、ジョイント部3やレシーバ部1および表示部2を含む部分断面を示したものである。図示のように、操作部4に固定されたジョイント部3の一部としての摺動リング30に沿って表示部2が回転可とされているが、その表示部2の内部には細いスライドピン31の一端が摺動リング30に絶えず押しつけられるべく状態で組み込まれたものとなっている。そのスライドピン31の他端はまた、表示部2、レシーバ部1間を屈曲可能としたヒンジ5に連動するヒンジピース32に回転自在に係合されたものとなっている。そのヒンジピース32には伸縮可能なバネ33が固定され他端はレシーバ部1内部に形成されたバネ座34に固定されるようになっている。電話機の使用状態では、図示の如くに、レシーバ部1はバネ33の作用により実線表示の屈曲位置で安定しているが、レシーバ部1に対し不要な力が作用した場合には、レシーバ部1は破線表示の如くに回転されることで、電話機自体が保護されるばかりか、無線通話状態では、レシーバ部1は耳に弾力性を以て接触されることから、接触状態良好にして受信音声を聴取し得るものである。また、電話機の収納折り畳み状態時には、ジョイント部3に介し破線表示の如くに、レシーバ部1と表示部2は折畳まれるが、その際、スライドピン31が摺動リング30の電話機収納位置に形成されている切欠き35に係合されるから、安定した状態でレシーバ部1と表示部2は折畳まれるものとなっている。その折畳の際には、スライドピン31に連動したヒンジピース32が表示部2内部に引き込まれ、したがって、それまで表示部2に対し屈曲状態にあったレシーバ部1

8

は、表示部2に沿うべく直線状に伸ばされた状態で折畳まれるものとなっている。

【0016】図7は同じく電話機が収納折り畳み状態にある場合での部分断面斜視状態を示したものである。図示のように、収納折畳み状態では、ジョイント部(摺動リング30と同等)3の外周の一部に形成されている切欠き35には、表示部2内部に組み込まれているスライドピン31に係合されることで、収納折畳み状態は安定化されたものとなっている。この収納折畳み状態で、プッシュボタン9が操作されれば、使用状態に移行すべくレシーバ部1および表示部2は回転され、スライドピン31は切欠き35よりスライド離脱されることで、レシーバ部1は表示部2に対し屈曲した状態におかれるものである。

【0017】最後に、ダイヤル8によるカーソル位置制御について説明すれば、図8はその際でのダイヤル操作方法を示したものである。図示のように、ジョイント部3に具備されているダイヤル8は液晶表示7画面上での着目表示位置、即ち、カーソル37位置を更新するのに用いられており、その更新の際には、親指aがダイヤル8上の任意位置jに接触せしめられた状態で、親指aがA矢視の左右方向か、B矢視の上下方向に任意に操作されるものとなっている。即ち、ダイヤル8が自由状態にある場合には、ダイヤル8は左右方向にそれぞれ同一大きさのクリアランス36b、36aを維持して安定しているが、A矢視方向への親指aによる操作は、それらクリアランス36a、36bの大きさを変更するもので、この変更はジョイスティック29内のセンサによって感知されることで、例えばダイヤル8が右方向へ操作されれば、液晶表示画面7上でカーソル37は右方向位置に移動されるものである。親指aをダイヤル8より開放すれば、ダイヤル8は自動的に中央位置に復元されるものである。また、ダイヤル8の親指aによる上下方向操作はダイヤル8を上下方向に回転せしめるが、その際での回転方向および回転量はジョイスティック29内のボリューム、あるいはセンサによって感知されることで、カーソル37は液晶表示画面7上で上下方向に移動可とされているものである。ダイヤル8とは別にその近傍にカーソル位置制御専用ダイヤルが具備せしめられている場合には、そのカーソル位置制御専用ダイヤルが同様に操作されることで、カーソル37の位置が制御され得るものである。

【0018】したがって、例えば液晶表示画面7上に必要な文字や数字、記号等を全て表示せしめた状態で、カーソル37を所望の位置に順次移動せしめるようにすれば、移動位置での文字等が入力対象として順次選択された上、入力処理され得るものである。また、例えばカーソル37を所望文字位置に移動させた状態で、操作部4上でセットボタン11が操作される場合には、液晶表示画面7上段には、例えば氏名および電話番号の部分覧が

9

表示され得るものである。これまでにあっては、専ら必要回数に亘るテンキー操作によって所望の文字列等が組立てられる、といった具合に、煩雑、且つ複雑で、しかも操作回数が多いキー処理が要されていたが、以上の如くに表示処理等が行われる場合は、そのような不具合は軽減化され得るものである。

【0019】

【発明の効果】以上、説明したように、請求項1~8による場合には、それ自体が片手で把持されつつ、しかもその手の指で、特に無線通話を行う上で必要とされる各種操作が容易に行われ得るものとなっている。

【図面の簡単な説明】

【図1】図1は、本発明による電話機の一例での外観斜視状態を示す図

【図2】図2は、片手で把持された状態でのその電話機の使用状態を示す図

【図3】図3は、無線通話状態にあるその電話機を外

10

(背面)側よりみた使用斜視状態を示す図

【図4】図4は、その電話機が片手で把持されている状態での片手操作方法を説明するための図

【図5】図5は、本発明に係るジョイント部の部分断面を示す図

【図6】図6は、そのジョイント部やレシーバ部および表示部を含む部分断面を示す図

【図7】図7は、同じく電話機が収納折り畳み状態にある場合での部分断面斜視状態を示す図

10 【図8】図8は、本発明に係るダイヤル操作によるカーソル位置制御方法を示す図

【符号の説明】

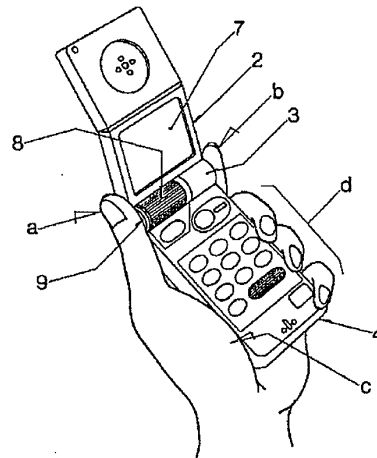
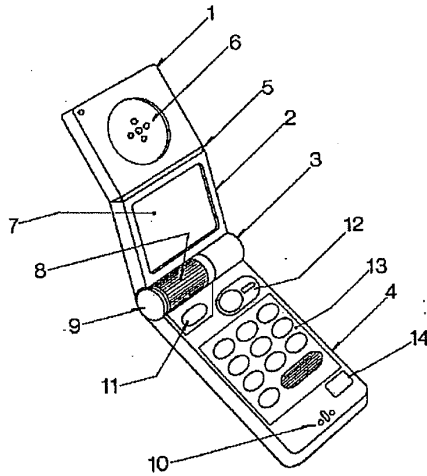
1…レシーバ部、2…表示部、3…ジョイント部、4…操作部、5…ヒンジ、6…レシーバ、7…液晶表示画面、8…ダイヤル、9…プッシュボタン、10…マイクロフォン、11…セットボタン、12…発信(再発信)ボタン、13…テンキー部、14…終了ボタン

【図1】

【図2】

【図1】

【図2】

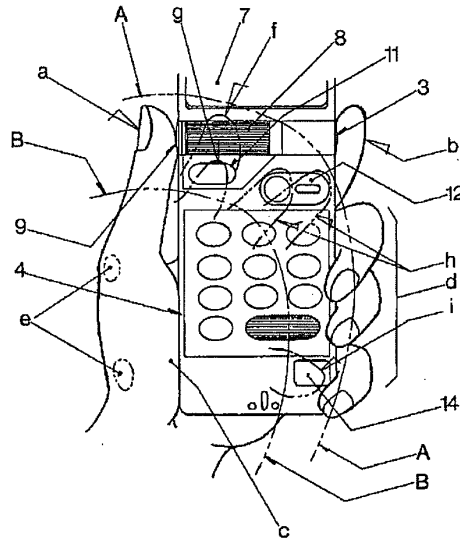
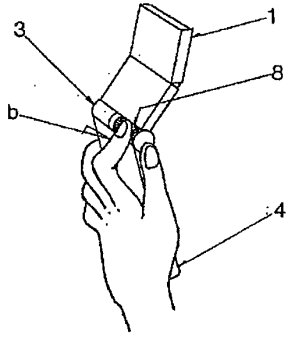


【図3】

【図4】

【図3】

【図4】

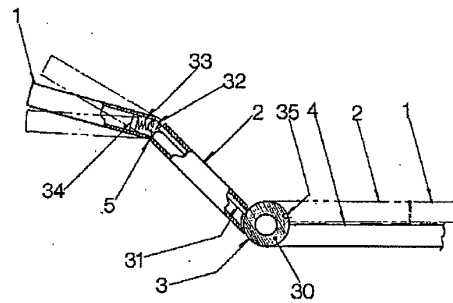
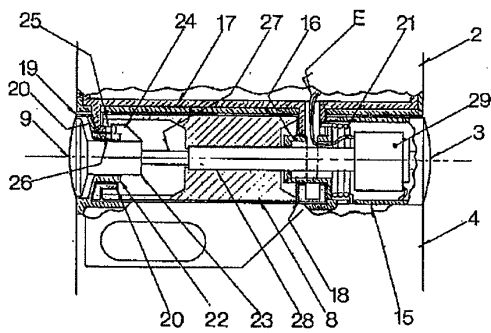


【図5】

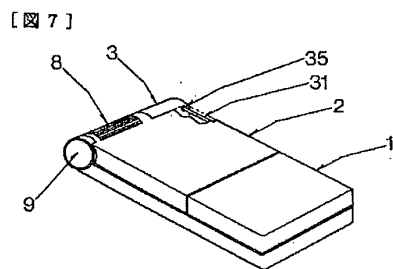
【図6】

【図5】

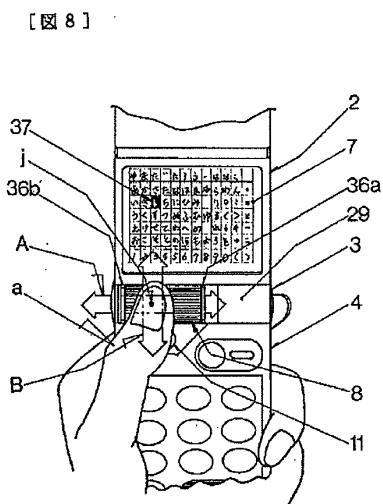
【図6】



【図7】



【図8】



【公報種別】特許法第17条の2の規定による補正の掲載
【部門区分】第7部門第3区分
【発行日】平成12年11月30日(2000.11.30)

【公開番号】特開平6-90200
【公開日】平成6年3月29日(1994.3.29)
【年通号数】公開特許公報6-902
【出願番号】特願平4-239735
【国際特許分類第7版】
H04B 7/26
H04M 1/03
【FI】
H04M 1/03 A

【手続補正書】
【提出日】平成11年8月12日(1999.8.12)

【手続補正1】
【補正対象書類名】明細書
【補正対象項目名】発明の名称
【補正方法】変更
【補正内容】
【発明の名称】 電話機
【手続補正2】
【補正対象書類名】明細書
【補正対象項目名】特許請求の範囲
【補正方法】変更
【補正内容】
【特許請求の範囲】

【請求項1】 収納折畳み用のヒンジ部を備える電話機において、前記電話機の各種機能を選択するための選択手段を前記ヒンジ部に備えることを特徴とする電話機。

【請求項2】 収納折畳み用のヒンジ部を備える電話機において、通話の際には受信音声音量調整用として機能し、非通話の際には各種機能を選択するための選択手段として機能する手段を前記ヒンジ部に備えることを特徴とする電話機。

【請求項3】 収納折畳み用のヒンジ部を備える電話機において、前記電話機の有する各種機能を選択するための選択手段と、前記選択手段を支持する軸と、を備え、前記選択手段は、前記軸周りの第1の運動と、前記軸に沿った第2の運動とにより前記機能の選択をすることを特徴とする電話機。

【請求項4】 請求項1乃至3のいずれかに記載の電話機において、前記収納折畳み用のヒンジ部の側端に収納折畳み機構を備えることを特徴とする電話機。

【請求項5】 請求項1乃至3のいずれかに記載の電話機において、前記電話機を把持する手の親指の指リンク運動範囲内に、各種操作釦を配列することを特徴とする電話機。

【請求項6】 請求項1乃至3のいずれかに記載の電話機において、前記選択手段を前記電話機の両面から操作可能なように配置したことを特徴とする電話機。

【請求項7】 請求項1乃至3のいずれかに記載の電話機において、前記選択手段で選択する機能を表示する表示装置を備えることを特徴とする電話機。

【請求項8】 請求項3に記載の電話機において、前記第2の運動において前記選択手段の前記軸上における位置に応じて該選択手段で選択する機能を表示する表示装置を備えることを特徴とする電話機。

【請求項9】 請求項1乃至3のいずれかに記載の電話機において、さらに、カーソルを表示する表示装置を備え、前記表示装置は、前記選択手段の操作量に連動してカーソルの表示位置を変更することを特徴とする電話機。

【請求項10】 収納折畳み用のヒンジ部を備える電話機において、発信すべき相手の候補となる氏名を予め入力記憶する記憶手段と、前記記憶手段に予め入力記憶されている氏名を表示する表示装置と、前記ヒンジ手段に設けられ前記表示装置に表示された氏名から発信すべき相手を選択する選択手段と、を備えることを特徴とする電話機。

【請求項11】 請求項10に記載の電話機において、前記表示装置は氏名とともに該氏名に対応する電話番号を表示することを特徴とする電話機。

【手続補正3】
【補正対象書類名】明細書
【補正対象項目名】0001
【補正方法】変更
【補正内容】
【0001】

【産業上の利用分野】本発明は、操作性に優れた電話機に係わり、特に、収納折畳み用のヒンジ部に、各種機能

選択用の機能選択手段を備えるなど、片手持持状態における操作性に優れた携帯用無線電話機に関するものである。

【手続補正4】

【補正対象書類名】明細書

【補正対象項目名】0004

【補正方法】変更

【補正内容】

【0004】本発明の目的は、それ自身が片手で把持されつつ、しかもその手の指で、特に通話を行う上で必要とされる機能選択等の各種操作を容易に行い得る操作性に優れた電話機を提供することにある。

【手続補正5】

【補正対象書類名】明細書

【補正対象項目名】0005

【補正方法】変更

【補正内容】

【0005】

【課題を解決するための手段】上記目的を達成するため、本発明に係る電話機は、収納折畳み用のヒンジ部を備える電話機において、前記電話機の各種機能を選択するための選択手段を前記ヒンジ部に備えることを第1の特徴としている。また、本発明に係る電話機は、収納折畳み用のヒンジ部を備える電話機において、通話の際には受信音声音量調整用として機能し、非通話の際には各種機能を選択するための選択手段として機能する手段を前記ヒンジ部に備えることを第2の特徴としている。また、本発明に係る電話機は、収納折畳み用のヒンジ部を備える電話機において、前記電話機の有する各種機能を選択するための選択手段と、前記選択手段を支持する軸とを備え、前記選択手段は、前記軸周りの第1の運動と、前記軸に沿った第2の運動とにより前記機能の選択をすることを第3の特徴としている。また、本発明に係る電話機は、前記第1～第3のいずれかの特徴を有する電話機において、前記収納折畳み用のヒンジ部の側端に収納折畳み機構を備えることを特徴としている。また、本発明に係る電話機は、前記第1～第3のいずれかの特徴を有する電話機において、前記電話機を把持する手の親指の指リング運動範囲内に、各種操作釦を配列することを特徴としている。また、本発明に係る電話機は、前記第1～第3のいずれかの特徴を有する電話機において、前記選択手段を前記電話機の両面から操作可能なように配置したことを特徴としている。また、本発明に係る電話機は、前記第1から第3のいずれかの特徴を有する電話機において、前記選択手段で選択する機能を表示する表示装置を備えることを特徴としている。また、本発明に係る電話機は、前記第3の特徴を有する電話機において、前記第2の運動において前記選択手段の前記軸上における位置に応じて該選択手段で選択する機能を表示する表示装置を備えることを特徴としている。また、

本発明に係る電話機は、前記第1～第3のいずれかの特徴を有する電話機において、さらに、カーソルを表示する表示装置を備え、前記表示装置は、前記選択手段の操作量に連動してカーソルの表示位置を変更することを特徴としている。また、本発明に係る電話機は、収納折畳み用のヒンジ部を備える電話機において、発信すべき相手の候補となる氏名を予め入力記憶する記憶手段と、前記記憶手段に予め入力記憶されている氏名を表示する表示装置と、前記ヒンジ手段に設けられ前記表示装置に表示された氏名から発信すべき相手を選択する選択手段とを備えることを第4の特徴としている。また、本発明に係る電話機は、前記第4の特徴を有する電話機において、前記表示装置は氏名とともに該氏名に対応する電話番号を表示することを特徴としている。

【手続補正6】

【補正対象書類名】明細書

【補正対象項目名】0006

【補正方法】変更

【補正内容】

【0006】

【作用】本発明に係る電話機においては、収納折畳み用のヒンジ部に電話機の各種機能を選択する選択手段を備えており、片手持持状態でその手の指から各種機能選択を容易に行い得る。また、本発明に係る電話機においては、通話の際には音量調整手段として、非通話の際には機能選択手段として機能する選択手段を収納折畳み用のヒンジ部において操作できるので、通話状態における音量調節操作又は非通話状態における各種機能選択操作を、片手持持状態でその手の指から容易に行い得る。また、本発明に係る電話機においては、軸支された選択手段を、その軸周りの第1の運動とその軸に沿った第2の運動とで操作することにより、前記機能の選択操作を容易に行い得る。また、本発明に係る電話機においては、ヒンジ部の側端の収納折畳み機構により収納折畳みができると、片手持持状態でその手の指で収納折畳みを容易に制御し得る。また、本発明に係る電話機においては、各種操作釦の操作は、当該電話機を把持する手の親指の指リング運動範囲内に配列されており、片手持持状態でその手の指からそれら各種操作釦を容易に操作し得るものである。また、本発明に係る電話機においては、前記電話機の両面から前記選択手段を操作し得る。また、本発明に係る電話機においては、前記選択手段により選択する機能を、前記表示装置で表示することにより、これを視認して容易に選択操作し得る。また、本発明に係る電話機においては、軸支された前記選択手段のその軸に沿った前記第2の運動において、前記選択手段のその軸上における位置に応じて該選択手段により選択する機能を、前記表示装置で表示することにより、これを視認して容易に選択操作し得る。また、本発明に係る電話機においては、表示装置で表示されるカーソルの表

示位置を、前記選択手段を操作してその操作量により容易に変更し得る。また、本発明に係る電話機においては、記憶手段に入力記憶した発信すべき相手の候補となる氏名を、前記表示装置で表示し、これを視認して発信すべき相手を前記選択手段で選択操作することで、選択した当該相手に対して容易に発信し得る。また、本発明に係る電話機においては、前記氏名とともにこれに対応する電話番号も前記表示装置に表示し得るので、視認する情報が増えて操作の確実性を高め得る。

【手続補正 7】

【補正対象書類名】明細書

【補正対象項目名】0007

【補正方法】変更

【補正内容】

【0007】

【実施例】以下、本発明を図1から図8により説明する。先ず本発明による電話機の使用状態での外観について説明すれば、図1はその一例での外観斜視状態を示したものである。図示のように、電話機本体がその収納折り畳み状態からその折畳み状態が解除され、使用状態におかれた場合での全体外観斜視状態が示されたものとなっている。これによる場合、レシーバ部1と表示部2はヒンジ5を介し自在に屈曲係合された上、これらはまた、収納折り畳み回動用のジョイント部3を介し操作部4と係合されるべく構成されたものとなっている。さて、レシーバ部1の中央部にはレシーバ(受信音声出力用スピーカ)6が具備された上、無線通話時にこれに耳が当てられることで、通話相手からの音声聴取され得るものである。その無線通話状態では、ヒンジ5は図示の如くくの字状に屈曲されることで、操作性や使い勝手性が向上せしめられているものである。また、ジョイント部3は電話機本体の折畳み収納状態から回動展開された状態、即ち、使用状態を維持するとともに、機能選択操作のダイヤル8や、回動操作機構およびプッシュボタン9が具備せしめられるものとなっている。更に、操作部4には情報の記憶/検索や入出力操作のセットボタン11や通話開始用の発信(再発信)ボタン12、テンキー部13、通話終了用等の終了ボタン14が具備された上、その先端部にはマイクロフォン10が内蔵されるようになっている。以上の構成によりダイヤル8によって無線通話機能が選択された場合には、恰も通常の電話機一般におけるハンドセットの如く、耳にレシーバ6を当て、マイクロフォン10には口を接近せしめた状態で、相手側との間で無線通話を行い得るものである。なお、表示部2中央部に具備されている液晶表示画面7上にはキー入力された情報や、記憶されている情報のうちから、必要な情報が呼び出し表示されるものとなっている。

【手続補正 8】

【補正対象書類名】明細書

【補正対象項目名】0008

【補正方法】変更

【補正内容】

【0008】図2はまた、片手(本例では左手)で把持された状態でのその電話機の使用状態を示したものである。電話機本体が折畳み収納状態にある場合に、ジョイント部3の左右両端部を親指aと人指し指bで挟み持ち、親指aでプッシュボタン9を押圧操作すれば、ジョイント部3を介し表示部2およびレシーバ部1が回動され、安定な使用状態に移行されるものとなっている。さて、電話機本体は基本的には親指球cと残り3つの指dで把持されることから、親指aや人指し指bを電話機本体より離しても、電話機本体が手から落下する、といった不都合は生じないものである。したがって、そのように電話機本体が把持されている状態では、液晶表示画面7上での表示を確認しつつ、親指aでダイヤル8や操作部4上の各種操作ボタンを操作し得るものである。

【手続補正 9】

【補正対象書類名】明細書

【補正対象項目名】0009

【補正方法】変更

【補正内容】

【0009】図3は無線通話状態にある電話機本体を外側(背面)側よりみた使用斜視状態を示したものである。図示のように、レシーバ6に耳が当てられ、マイクロフォン10には口を接近させた状態での電話機を、電話機を把持している片手の背後よりみた状態として示したものである。図示のように、人指し指bはジョイント部3の一端部より離され、その人指し指bによりダイヤル8が操作されているが、このことは、ダイヤル8は内側側からは親指aによって、その外側側からは人指し指bによって操作可能であることを示唆したものである。したがって、ダイヤル8が非無線通話状態では各種機能(具体的には、送信/受信、電話番号、シークレット、入力、出力、記憶、計算、時刻、リモコン、スケジュール、コール(呼出し)、クリアー、カレンダー、辞書、地図、文字、数字等)を選択するための手段として、また、無線通話状態では受信音声音量調整手段として機能すべく、縦方向に回動自在として、且つ内外両面からダイヤル操作可としてジョイント部3に具備されている場合には、無線通話状態での受信音声の音量調整が通話を中断することなく行い得るものである。

【手続補正 10】

【補正対象書類名】明細書

【補正対象項目名】0017

【補正方法】変更

【補正内容】

【0017】最後に、ダイヤル8によるカーソル位置制御について説明すれば、図8はその際のダイヤル操作方法を示したものである。図示のように、ジョイント部

3に具備されているダイヤル8は液晶表示7画面上での着目表示位置、即ち、カーソル37位置を更新するのに用いられており、その更新の際には、親指aがダイヤル8上の任意位置jに接触せしめられた状態で、親指aがA矢視の左右方向か、B矢視の上下方向に任意に操作されるものとなっている。即ち、ダイヤル8が自由状態にある場合には、ダイヤル8は左右方向にそれぞれ同一大きさのクリアランス36b、36aを維持して安定しているが、A矢視方向への親指aによる操作は、それらクリアランス36a、36bの大きさを変更するもので、この変更はジョイスティック29内のセンサによって感知されることで、例えばダイヤル8が右方向へ操作されれば、液晶表示画面7上でカーソル37は右方向位置に移動されるものである。親指aをダイヤル8より開放すれば、ダイヤル8は自動的に中央位置に復元されるものである。また、ダイヤル8の親指aによる上下方向操作はダイヤル8を上下方向に回転せしめるが、その際の回転方向および回転量はジョイスティック29内のボリ

ューム、あるいはセンサによって感知されることで、カーソル37は液晶表示画面7上で上下方向に移動可とされているものである。ダイヤル8とは別にその近傍にカーソル位置制御専用ダイヤルが具備せしめられている場合には、そのカーソル位置制御専用ダイヤルが同様に操作されることで、カーソル37の位置が制御され得るものである。

【手続補正11】

【補正対象書類名】明細書

【補正対象項目名】0019

【補正方法】変更

【補正内容】

【0019】

【発明の効果】以上、説明したように、本発明に係る電話機は、それ自体が片手で把持されつつ、しかもその手の指で、特に無線通話を行う上で必要とされる各種操作が容易に行われ得るものとなっており、操作性に優れている。

Electronic Patent Application Fee Transmittal

Application Number:	12170951
Filing Date:	10-Jul-2008
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Filer:	Matthew H. Grady
Attorney Docket Number:	L2039-700111

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 2 months with \$0 paid	1252	1	600	600

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
Total in USD (\$)				780

Electronic Acknowledgement Receipt

EFS ID:	16204513
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Matthew H. Grady
Filer Authorized By:	
Attorney Docket Number:	L2039-700111
Receipt Date:	01-JUL-2013
Filing Date:	10-JUL-2008
Time Stamp:	15:41:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$780
RAM confirmation Number	2644
Deposit Account	502762
Authorized User	

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Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

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Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		Amendment_in_Response_to_Non-Final_Office_Action_Under_37_CFR_1111_1.pdf	112425 5a11d1b7f4ef8521609f29e513131103ec5a9c1d	yes	17
Multipart Description/PDF files in .zip description					
		Document Description	Start	End	
		Amendment/Req. Reconsideration-After Non-Final Reject	1	1	
		Claims	2	7	
		Applicant Arguments/Remarks Made in an Amendment	8	17	
Warnings:					
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2	Non Patent Literature	L2039-700120-JP-OA-12-4-2012_2.PDF	191452 faaa358d3772a08df1f23960d043a46b6c22f595	no	4
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10	Non Patent Literature	English_Translation_of_L2039-7001JP_Office_Action_10.PDF	38875 3347880cbe40f2a6c4adc28f2fb972e215a743bd	no	3
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Total Files Size (in bytes):			12633826		
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875			Application or Docket Number 12/170,951	Filing Date 07/10/2008	<input type="checkbox"/> To be Mailed
ENTITY: <input checked="" type="checkbox"/> LARGE <input type="checkbox"/> SMALL <input type="checkbox"/> MICRO					
APPLICATION AS FILED – PART I					
(Column 1)		(Column 2)			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A		
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A		
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A		
TOTAL CLAIMS <small>(37 CFR 1.16(j))</small>	minus 20 =	*	X \$ =		
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =		
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>					
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL		

APPLICATION AS AMENDED – PART II							
(Column 1)		(Column 2)		(Column 3)			
AMENDMENT	07/01/2013	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 23	Minus	** 23	= 0	X \$80 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X \$420 =	0
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))						
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	0

(Column 1)		(Column 2)		(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))						
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/Theresa Dawkins/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes fields for EXAMINER (ABEBE, SOSINA), ART UNIT (2692), and DELIVERY MODE (ELECTRONIC).

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@LALaw.com
gengelso@LALaw.com

Applicant-Initiated Interview Summary	Application No. 12/170,951	Applicant(s) BEHAR ET AL.	
	Examiner SOSINA ABEBE	Art Unit 2692	

All participants (applicant, applicant's representative, PTO personnel):

(1) SOSINA ABEBE. (3) Matthew Grady.
(2) LunYi Lao (SPE). (4) _____.

Date of Interview: 06 June 2013.

Type: Telephonic Video Conference
 Personal [copy given to: applicant applicant's representative]

Exhibit shown or demonstration conducted: Yes No.
If Yes, brief description: _____.

Issues Discussed 101 112 102 103 Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 1 and 22.

Identification of prior art discussed: Schweizer (US 7,061,472) and Nishiyama (5,436,954).

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Discussed the rejections of claims 1 & 22 and the proposed amendment. Applicant's argued that Schweizer fails to teach easel mode (fig. 4) as recited in claim 1 and frame mode (fig. 26) as recited in claim 22. The examiner respectfully disagrees with applicant's argument because Schweizer teaches easel mode (fig. 2). For instance the keyboard (1) can replace into display screen (5) and rotate the display 220 degree and the keyboard oriented away from the user. claim 1 should add claim 22 limitation and define the keyboard facing down into surface and the display screen is facing out to a viewer in order to overcome Schweizer reference. Agreement was not reached.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Attachment

/S. A./ Examiner, Art Unit 2692	/LUN-YI LAO/ Supervisory Patent Examiner, Art Unit 2692
------------------------------------	--

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.



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docketing@LALaw.com
gengelso@LALaw.com

Office Action Summary	Application No.	Applicant(s)	
	12/170,951	BEHAR ET AL.	
	Examiner	Art Unit	
	SOSINA ABEBE	2692	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10/09/2012.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
- 4) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) Claim(s) 1-8 and 10-24 is/are pending in the application.
 - 5a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 6) Claim(s) _____ is/are allowed.
- 7) Claim(s) 1-8 and 10-24 is/are rejected.
- 8) Claim(s) _____ is/are objected to.
- 9) Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

- 10) The specification is objected to by the Examiner.
- 11) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 10/09/2012.
- 3) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 4) Other: _____.

DETAILED ACTION

This is in response to applicant's communication filed on 09 October 2012, wherein: claims 1 – 8 and 10 - 24 are currently pending. Claim 7 has been amended. Claim 9 has been cancelled.

Response to Arguments

Applicant's arguments filed on October 09, 2012 with respect to claims 1 – 8 and 10 - 24 have been fully considered but are moot in view of the new ground(s) of rejection.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 – 8 and 10 – 24 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 - 32 of U.S. Patent No. 8,289,688 in view of Nishiyama “5,436,954”.

The Patent No. 8289688 fails to disclose a scroll wheel.

However, Nishiyama discloses a scroll wheel (scroll wheel is equivalent to selector 8 in fig. 1) disposed at least partially within the base and rotatable about the longitudinal axis, the scroll wheel (8) configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen. (col. 4; lines 21 – 26)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Behar (8,289,688) into Nishiyama so as to allow the user easily select or view information.

Claim 1 of Current Application 12/170,951	Claim 19 of Application US Patent No. 8,289,688
a portable computer comprising: a base including a keyboard; a single display component rotatably	A portable computer comprising: a base unit comprising an integrated keyboard; a single display unit including a single

<p>coupled to the base such that the single display component and the base are rotatable with respect to one another about a longitudinal axis running along an interface between the display component and the base to transition between at least a laptop mode, and an easel mode the single display component including a display screen, wherein</p> <p>the laptop mode is configured to display to a user on the single display component a first content mode having a first content display orientation with the single display component oriented towards the user and the keyboard oriented to receive input from the user;</p> <p>an easel mode is configured to display to the user on the single display component a second content mode having a second content display orientation with the single display component oriented</p>	<p>display screen configured to display content;</p> <p>an orientation sensor which detects a physical orientation of the single display unit relative to the base unit; and</p> <p>a display orientation module which orients the content displayed on the single display screen responsive to the physical orientation detected by the orientation sensor between at least a first content display orientation and a second content display orientation, the second content display orientation being 180 degrees relative to the first content display orientation;</p> <p>wherein the display orientation module is further configured to detect a change between a laptop mode, an easel mode, and a frame mode based on the detected physical orientation of the single display unit relative to the base unit, and wherein the display orientation module is further</p>
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<p>towards the user and the keyboard oriented away from the user, wherein the first and second content display orientations are 180 degrees relative to each other; and</p> <p>a scroll wheel disposed at least partially within the base and rotatable about the longitudinal axis, the scroll wheel configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen.</p>	<p>configured to:</p> <p>trigger a display inversion from one of the first and second content display orientations to the other of the first and second content display orientations responsive to the orientation sensor detecting the change between the laptop mode and the easel mode,</p> <p>trigger a display inversion from one of the first and second content display orientations to the other of the first and second content display orientations responsive to the orientation sensor detecting the change between the easel mode and the frame mode.</p>
<p>Claim 7, A portable computer configurable between a plurality of display modes including a laptop mode and an easel mode, the portable computer comprising:</p>	<p>Claim 12, A portable computer configurable between a plurality of modes including a laptop mode and an easel mode, the portable computer comprising:</p> <p>a single display component;</p>

<p>a base including a keyboard;</p> <p>a single display component rotatably coupled to the base and including a screen which displays content;</p> <p>a hinge assembly disposed at least partially within the base and the display component that defines an axis of rotation about which both the base and the display component are rotatable to transition the portable computer between the laptop mode and the easel mode, wherein;</p> <p>the laptop mode is configured to display to a user on the single display component a first content mode having a first content display orientation with the single display component oriented towards the user and the keyboard oriented to receive input from the user;</p> <p>the easel mode is configured to display to a user on the single display component</p>	<p>a base including an integrated keyboard;</p> <p>a hinge assembly configured to rotatably couple the single display component to the base, wherein the hinge assembly is at least partially housed within the base and the single display component, and defines a longitudinal axis running along an interface between the single display component and the base;</p> <p>wherein the hinge assembly is configured to permit the rotation of the single display component and the base about the longitudinal axis to configure the portable computer between a laptop mode and an easel mode;</p> <p>wherein in the easel mode the single display component is oriented facing the</p>
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<p>a second content mode having a second content display orientation with the single display component oriented towards the user and the keyboard oriented away from the user, wherein the first and second content display orientations are 180 degrees relative to each other; and</p> <p>a scroll wheel accessible in each of the plurality of display modes and configured to permit a user to manipulate at least one of operating parameters of the portable computer and the content displayed on the screen.</p>	<p>operator with the keyboard oriented away from the operator; and</p> <p>at least one integrated navigation hardware control configured to control features and manipulate content displaced on the portable computer, wherein at least one of the least one integrated navigation hardware control is accessible in each of the plurality of modes including when the keyboard is inaccessible or oriented away from the user.</p>
<p>Claim 13, a portable computer comprising:</p> <p>a base including a keyboard;</p> <p>a single display component including a screen configured to display content;</p>	<p>Claim 29, A method of managing user interaction with content displayed on a portable computer having a plurality of display modes, the portable computer comprising a body, the body having: a single display component including a</p>

<p>a hinge assembly disposed at least partially within the base configured to rotatably couple the display component to the base, the hinge assembly defining a longitudinal axis running along an interface between the display component and the base about which the display component and the base are rotatable to transition the portable computer between at least a laptop mode and an easel mode, wherein</p> <p>the laptop mode is configured to display to a user on the single display component a first content mode having a first content display orientation with the single display component oriented towards the user and the keyboard oriented to receive input from the user;</p> <p>an easel mode is configured to display to the user on the single display component a second content mode having a second content display orientation with</p>	<p>display screen, a base including a keyboard, and a hinge assembly, the method comprising:</p> <p>manipulating a physical configuration of the single display component relative to the base to transition the portable computer between a plurality of display modes, wherein the act of manipulating includes an act of rotating the single display component of the portable computer about a longitudinal axis running along an interface between the single display component and the base of the body of the portable computer to transition the portable computer to transition the portable computer between the plurality of display modes, including a laptop mode and an easel mode;</p> <p>wherein the plurality of modes includes at least the laptop mode wherein the single display component and the keyboard are oriented towards an operator and the</p>
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<p>the single display component oriented towards the user and the keyboard oriented away from the user, wherein the first and second content display orientations are 180 degrees relative to each other; and</p> <p>a scroll wheel disposed at least partially about the longitudinal axis.</p>	<p>easel mode wherein the single display component is oriented towards an operator and the keyboard is oriented away from the operator;</p> <p>determining a display mode responsive to the physical configuration of the single display component relative to the base;</p> <p>configuring a content orientation, relative to the longitudinal axis, of a visual display on the display screen of the single display component responsive to the display mode, wherein configuring the content orientation includes:</p> <p>displaying the visual display in a first content orientation of the content for the laptop mode, and</p> <p>displaying the visual display in a second content orientation for the easel mode, the second content orientation being at 180 degrees relative to the first orientation.</p>
<p>Claim 10, a first navigation button user-accessible in each of the laptop mode and</p>	<p>Claim 23, at least one integrated navigation hardware control, wherein at</p>

<p>the easel mode, and configured to permit the user to manipulate selected content displayed on the screen.</p> <p>Claim 11, wherein the first navigation button is configured to permit the user to select for display one of the plurality of modes of content.</p>	<p>least one integrated navigation hardware control accessible in at least the laptop and easel modes, and wherein the integrated navigation hardware can be operated by a user to control features and manipulate content displayed on the portable computer, including any mode wherein the keyboard is inaccessible or oriented away from the user.</p>
<p>Claim 22, wherein the plurality of modes includes a frame mode in which the single display component is oriented towards the operator, the base contacts a substantially horizontal surface, and the keyboard is directed towards the substantially horizontal surface.</p>	<p>Claim 24, wherein the plurality of modes includes a frame mode in which the single display component is oriented towards the operator, the base contacts a substantially horizontal surface, and the keyboard is directed towards the substantially horizontal surface.</p>
<p>Claim 23, wherein the frame mode is configured to display to a user on the single display component the first content mode having the first content display</p>	<p>Claim 31, wherein the act of configuring the content orientation include an act of displaying the visual display in the first content orientation of the content for the</p>

orientation.	frame mode.
Claim 24 , wherein the portable computer is configured to prevent the portable computer from responding to keyboard input when the portable computer is in the fame mode.	Claim 26 , a protection module configured to prevent keyboard operation when the portable computer is configured in the frame mode.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in **Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966)**, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: (***See MPEP Ch. 2141***)

- a. Determining the scope and contents of the prior art;
- b. Ascertaining the differences between the prior art and the claims in issue;
- c. Resolving the level of ordinary skill in the pertinent art; and
- d. Evaluating evidence of secondary considerations for indicating obviousness or nonobviousness.

3. Claims 1 – 8 and 10 - 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schweizer “US 7,061,472” in view of Nishiyama “5,436,954”.

Re-Claim 1, Schweizer teaches a portable computer comprising: (fig. 1)

a base (4) including a keyboard (1);

a single display component (2) rotatably coupled to the base (4) such that the single display component (2) and the base (4) are rotatable with respect to one another about a longitudinal axis (hinge assembly 3 is equivalent to a longitudinal axis) running along an interface between the display component (2) and the base (4) to transition between at least a laptop mode (figs. 1), and an easel mode (fig. 2) the single display component including a display screen (2), wherein

the laptop mode (figs. 1) is configured to display to a user on the single display (2) component a first content mode (fig. 1) having a first content display orientation with the single display component oriented towards the user and the keyboard oriented to receive input from the user; (see fig. 1 and col. 4; lines 40 – 43)

an easel mode (fig. 2) is configured to display to the user on the single display (2) component a second content mode (fig. 4) having a second content display orientation (column 4, lines 65-67) with the single display (2) component oriented towards the user and the keyboard (1) oriented away from the user (see fig. 4), wherein the first and

second content display orientations are 180 degrees relative to each other; and (col. 2; lines 63 – 67, col. 3; lines 5 - 14 and col. 5; lines 4 - 15)

Schweizer fails to teach a scroll wheel disposed at least partially within the base and rotatable about the longitudinal axis, the scroll wheel configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen.

However Nishiyama discloses a scroll wheel (scroll wheel is equivalent to selector 8 in fig. 1) disposed at least partially within the base and rotatable about the longitudinal axis, the scroll wheel (8) configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen. (col. 4; lines 21 – 26)

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the plurality of display modes of Schweizer into the scroll wheel of Nishiyama so as to allow the user easily select or view information.

Re-claim 2, Schweizer and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, where the scroll wheel (fig. 1; 8) is configured to permit the user to adjust a volume of sound produced by the portable computer. (col. 4; lines 27 – 29)

Re-Claim 3, Schweizer and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, a first navigation button (fig. 1: 11) disposed on one of the base (4) and the display component (2) and configured to permit the user to manipulate selected content displayed on the screen (7). (col. 5; lines 23 – 28)

Re-Claim 4, Schweizer and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, wherein the screen is configured to display at least one of a plurality of modes of content; and wherein the navigation button is configured to permit the user to select for display one of the plurality of modes of content. (col. 4; lines 42 – 68)

Re-Claim 5, Schweizer and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, a second navigation button (fig. 1; 9); wherein the first navigation button (11) is disposed on a major surface of the base (4); and wherein the second navigation button (9) is disposed on a minor surface of the base. (see fig. 1)

Re-Claim 6, Schweizer and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, wherein the scroll wheel (fig. 3; 8) is configured

to permit the user to select a mode of content for display by the portable computer. (col. 5; lines 34 – 39)

Re-Claim 7, Schweizer teaches a portable computer configurable between a plurality of display modes (figs. 1 & 4) including a laptop mode and an easel mode (fig. 2), the portable computer comprising: (fig. 1)

a base (4) including a keyboard (1);

a single display component (2) rotatably coupled to the base (4) and including a screen (2) which displays content; (col. 4; lines 57 – 60)

a hinge (3) assembly disposed at least partially within the base (4) and the display component (2) that defines an axis of rotation about which both the base (4) and the display component (2) are rotatable to transition the portable computer between at least the laptop mode (fig. 1) and the easel mode (fig. 2), wherein (col. 1; lines 54 – 64)

the laptop mode (fig. 1) is configured to display to a user on the single display (2) component a first content mode (fig. 1) having a first content display orientation (column 4, lines 65-67) with the single display component oriented towards the user and the keyboard (1) oriented to receive input from the user; (as shown in fig. 1 laptop mode)

an easel mode (fig. 2) is configured to display to the user on the single display (2) component a second content mode (column 4, lines 65-67) having a second content

display orientation (col. 5; lines 4 - 15) with the single display (2) component oriented towards the user and the keyboard (1) oriented away from the user (see fig. 4), wherein the first and second content display orientations are 180 degrees relative to each other; and (col. 2; lines 63 – 67, col. 3; lines 5 - 14 and col. 5; lines 4 - 15)

the plurality of display modes (figs. 1 - 4)

Schweizer fails to teach a scroll wheel accessible and configured to permit a user to manipulate at least one of operating parameters of the portable computer and the content displayed on the screen.

However Nishiyama discloses a scroll wheel (fig. 1; 8) accessible and configured to permit a user to manipulate at least one of operating parameters of the portable computer and the content displayed on the screen. (col. 4; lines 21 – 26)

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the plurality of display modes of Schweizer into the scroll wheel of Nishiyama so as to allow the user easily select or view information.

Re-Claim 8, the combination of Schweizer and Nishiyama as a whole further teach wherein the scroll wheel (Nishiyama, fig. 3; 8) is disposed at least partially about the axis of rotation (Nishiyama, fig. 8 and col. 8; lines 33 – 57) of the display component (2) relative to the base (4).

Re-Claim 10, the combination of Schweizer and Nishiyama as a whole further teach first navigation button (Nishiyama; fig. 1; 11) user-accessible in each of the laptop mode (Schweizer, fig. 1) and the easel mode (Schweizer, fig. 4), and configured to permit the user to manipulate selected content displayed on the screen. (Nishiyama, col. 5; lines 23 – 68 through col. 6; lines 1 – 4)

Re-Claim 11, is rejected as applied to claim 4 above because the scope and contents of the recited limitations are substantially the same.

Re-Claim 12, the combination of Schweizer and Nishiyama as a whole further teach a second navigation button (Nishiyama, fig. 1; 9) that is not user-accessible when the portable computer is in the easel mode (Schweizer, fig. 2).

Re-Claim 13, is rejected as applied to claims 1 and 7 above because the scope and contents of the recited limitations are substantially the same.

Re-Claim 14, the combination of Schweizer and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, wherein the scroll wheel (fig. 3; 8) is configured to permit a user to manipulate the content displayed on the screen. (col. 4; lines 55 - 61)

Re-Claim 15, is rejected as applied to claim 2 above because the scope and contents of the recited limitations are substantially the same.

Re-Claim 16, the combination of Schweizer and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, wherein the scroll wheel (fig. 1; 8) is disposed at least partially within the hinge (3) assembly. (see fig. 1)

Re-Claim 17, is rejected as applied to claim 3 above because the scope and contents of the recited limitations are substantially the same.

Re-Claim 18, the combination of Schweizer and Nishiyama as a whole teach all the limitations of claim 1, Schweizer further discloses, wherein rotating either the display component (fig. 1; 2) or the base (4) about the longitudinal axis (3) up to

approximately 180 degrees from a closed mode (fig. 5) in which the display screen (2) is disposed substantially against the base configures the portable computer into the laptop mode (figs. 1); and

Wherein rotating either the display component (2) or the base (4) about the longitudinal axis (3) beyond approximately 180 degrees from the closed mode (fig. 5) configures the portable computer into the easel mode (fig. 2).

Re-Claim 19, the combination of Schweizer and Nishiyama as a whole teach all the limitations of claim 1, Schweizer further discloses, wherein an operating display mode is selected from the plurality of display modes (figs. 1 & 4) based on a physical orientation of the portable computer. (col. 2; lines 63 – 67, col. 3; lines 5 – 14, col. 5; lines 13 – 15 and column 4, lines 65-67)

Re-Claim 20, the combination of Schweizer and Nishiyama as a whole further teach wherein an operating display mode is selected from the plurality of display modes (Schweizer, figs. 1 & 4) in response to operation of the scroll wheel (8). (Nishiyama, col. 5; lines 34 – 39)

Re-Claim 21, the combination of Schweizer and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, wherein the scroll wheel (item 8) provides a default action which effects manipulation of the at least one of the operating parameters of the portable computer, wherein the default action is defined differently responsive to a display mode of the portable computer. (col. 4; lines 42 – 61 and col. 5; lines 34 - 66)

Re-Claim 22, the combination of Schweizer and Nishiyama as a whole teach all the limitations of claim 1, Schweizer further discloses, wherein the plurality of modes includes a frame mode in which the single display (fig. 1; 2) component is oriented towards the operator (see fig. 1), the base (4) contacts a substantially horizontal surface, and the keyboard (1) is directed towards the substantially horizontal surface. (see fig. 1 and col. 4; lines 40 - 43)

Re-Claim 23, the combination of Schweizer and Nishiyama as a whole teach all the limitations of claim 1, Schweizer further discloses, wherein the frame mode (fig. 4) is configured to display to a user on the single display (2) component the first content mode (fig. 1) having the first content display orientation. (fig. 1)

Re-Claim 24, the combination of Schweizer and Nishiyama as a whole teach all the limitations of claim 1, Schweizer further discloses, wherein the portable computer (fig. 1) is configured to prevent the portable computer from responding to keyboard input when the portable computer is in the frame mode (fig. 4). (col. 4; lines 63 – 67)

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sosina Abebe whose telephone number is (571) 270-7929. The examiner can normally be reached on Mon-Thurs from 9:00-5:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, LunYi Lao can be reached on (571) 272-7671. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 12/170,951
Art Unit: 2692

Page 22

/S. A./

Examiner, Art Unit 2692

/LUN-YI LAO/

Supervisory Patent Examiner, Art Unit 2692

Notice of References Cited	Application/Control No. 12/170,951	Applicant(s)/Patent Under Reexamination BEHAR ET AL.	
	Examiner SOSINA ABEBE	Art Unit 2692	Page 1 of 1

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*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
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	B US-			
	C US-			
	D US-			
	E US-			
	F US-			
	G US-			
	H US-			
	I US-			
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FOREIGN PATENT DOCUMENTS

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NON-PATENT DOCUMENTS

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Search Notes 	Application/Control No. 12170951	Applicant(s)/Patent Under Reexamination BEHAR ET AL.
	Examiner SOSINA ABEBE	Art Unit 2629

CPC- SEARCHED		
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CPC COMBINATION SETS - SEARCHED		
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US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
345	169,184	03/24/11	SA
	updated the above searches	10/13/11	SA
345	168-169,184	05/21/12	SA
361	679.3,679.21,679.26-679.27	05/21/12	SA
	Updated the above searches	01/18/13	SA

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor name search	03/24/11	SA
East Search	03/24/11	SA
Consulted with SPE LunYi Lao	10/13/11	SA
Updated East Search	10/13/11	SA
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Consulted with Primary Grant Sitta	05/22/12	SA
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Receipt date: 10/09/2012

12170951 - GAI: 2692

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	
	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit		2629	
	Examiner Name	S. Abebe		
	Attorney Docket Number		L2039-700111	

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	1	6693652		2004-02-17	Barrus et al.	
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	1	20050210399		2005-09-22	Filner et al.	
	2	20070240076		2007-10-11	Astala et al.	
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	Filing Date		2008-07-10		
	First Named Inventor		Yves Behar		
	Art Unit		2629		
	Examiner Name		S. Abebe		
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	5	20080235594		2008-09-25	Bhumkar et al.	
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	Filing Date		2008-07-10		
	First Named Inventor		Yves Behar		
	Art Unit		2629		
	Examiner Name		S. Abebe		
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S4	76	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:12
S5	34	Morenstein near Joshua.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:12
S6	19	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:13
S7	14	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:13
S8	17	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:13
S10	83	("20020005818" "20020021258" "20030048595" "20030109232" "20040203535" "20040228076" "20050018396" "20050041378" "20050063145" "20050128695" "20050146845" "20050210399" "20050210399" "20050257400" "20050282596" "20060126284" "20060264243" "20060268500" "20070138806" "20070182663" "20080042987" "20080062625" "20080284738" "20090244832" "20090275366" "20090300511" "20090303676" "20090322790" "20100174993" "3468576" "4939514" "5200913" "5268817" "5515345" "5547698" "5712760" "5790371" "5793355" "5796575" "5825352" "5841631" "5900848" "5949643" "5987704" "5987704" "6005767" "6005767" "6067224" "6222507" "6223393" "6262885" "6266236" "6266236" "6275376" "6275376" "6295038" "6302612" "6323846" "6327482" "6343006" "6343006" "6377444" "6464195" "6510049" "6628267" "6628267" "6642909" "6659516" "6659516" "6661426" "6661426" "6665175" "6697055" "6771494" "6771494" "6788527" "6819304" "6829140" "6829140" "6859219" "6944012" "6963485" "7061472" "7061472" "7072179" "7138962" "7239508" "7250207" "7428142" "7522946" "D333636" "D391927" "D392944" "D395868" "D399526" "D416003" "D452238" "D462069" "D463797" "D476326" "D479708" "D491177" "D491936" "D494162" "D495674" "D495694" "D504128" "D512997"	USPAT	OR	ON	2011/03/22 19:16

		"D513509" "D516552" "D517541" "D518042" "D523429" "D528541" "D528993" "D534531" "D535292" "D544846" "D581371" "D593085" "D593086" "D593091" "D605635").PN.				
S11	5	"12170951"	US-PGPUB; USPAT	OR	ON	2011/03/22 19:17
S13	11	345/169.ccls. and (rotat\$4 near scroll near wheel)	US-PGPUB; USPAT	OR	ON	2011/03/22 19:28
S16	3	(rotat\$4 near display) same (scroll near wheel) with base	US-PGPUB; USPAT	OR	ON	2011/03/22 19:31
S19	15	(rotat\$4 near display) and (scroll and wheel) same base	US-PGPUB; USPAT	OR	ON	2011/03/22 19:34
S21	76	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 19:40
S22	2	"20060264243"	US-PGPUB; USPAT	OR	ON	2011/03/22 19:43
S23	1	"6295038".pn.	US-PGPUB; USPAT	OR	ON	2011/03/22 19:57
S25	1	345/184.ccls. and (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/24 11:34
S30	1	"4481382".pn.	USPAT	OR	ON	2011/03/24 12:45
S34	7	(laptop) with (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/24 16:43
S35	1	"6184867".pn.	US-PGPUB; USPAT	OR	ON	2011/03/24 16:45
S39	11	345/184.ccls. and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/25 15:38
S41	1	"455"/\$.ccls. and (second near navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/25 16:01
S48	1	"11606556"	US-PGPUB; USPAT	OR	ON	2011/03/25 17:32
S51	5	(PDA or laptop or cellular) with (two near navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/25 18:40
S53	1	"20050246327"	US-PGPUB; USPAT	OR	ON	2011/03/25 20:11
S54	1	"7467356".pn.	US-PGPUB; USPAT	OR	ON	2011/03/26 19:50
S55	2	"20040001049"	US-PGPUB; USPAT	OR	ON	2011/10/11 12:57
S56	1	"20020010707"	US-PGPUB; USPAT	OR	ON	2011/10/11 12:57
S58	12	("20040001049" "20020010707" "5926364" "6144358" "6341061" "6437974" "6492974" "6882335" "6295038" "7698407" "20050221865" "20080024465").pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 13:08
S59	1	"6040822".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 14:59
S60	2	"20010016508"	US-PGPUB; USPAT	OR	ON	2011/10/11 15:00
S73	9	(laptop) same (frame near mode) or (stand near mode) same (longitudinal	US-PGPUB; USPAT	OR	ON	2011/10/11 15:50

		near axis)				
S75	86	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/10/11 15:56
S78	1	"7061472".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:10
S80	1	"6341061".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:20
S81	1	"6304431".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:22
S82	1	"6295038".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:23
S83	1	"6297752".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:24
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S87	1	"6144358".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:42
S88	1	"6341061".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:43
S89	1	"6437974".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:43
S91	1	"6492974".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:50
S92	1	"6882335".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:50
S94	106	(laptop) same (rotat\$3 near axis)	US-PGPUB; USPAT	OR	ON	2011/10/11 16:54
S96	18	(laptop) same (rotat\$3 near axis) same (frame)	US-PGPUB; USPAT	OR	ON	2011/10/11 16:55
S97	319	(laptop or mobile) same (rotat\$3 near axis) same (frame)	US-PGPUB; USPAT	OR	ON	2011/10/11 16:58
S99	26	(laptop) same (longitudinal near axis) same (rotat\$3)	US-PGPUB; USPAT	OR	ON	2011/10/11 17:04
S101	14	345/169.ccls. and (longitudinal near axis) same (rotat\$3)	US-PGPUB; USPAT	OR	ON	2011/10/11 17:07
S103	1	"6040822".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 17:14
S104	2	"20040001049"	US-PGPUB; USPAT	OR	ON	2011/10/11 17:18
S106	4	"10185154"	US-PGPUB; USPAT	OR	ON	2011/10/12 13:52
S112	2	"20040001049"	US-PGPUB; USPAT	OR	ON	2011/10/12 16:11
S113	1	"20050221865"	US-PGPUB; USPAT	OR	ON	2011/10/12 16:21
S131	18	"455"/\$.ccls. and (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/12 17:51

EAST Search History

S132	2	345/169.ccls. and (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/12 17:53
S133	23	(laptop or cellular or mobile) with (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/12 17:55
S134	7	(laptop) with (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/12 17:55
S135	1	"20010016508".pn.	US-PGPUB; USPAT	OR	ON	2011/10/12 18:03
S136	69	(laptop) with (scroll near wheel)	US-PGPUB; USPAT	OR	ON	2011/10/12 18:04
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S143	117	(laptop) same (scroll near wheel)	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 10:07
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S148	1	"7330923".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 10:17
S151	1	"20050221865"	US-PGPUB; USPAT	OR	ON	2011/10/13 14:48
S152	2	"20010016508"	US-PGPUB; USPAT	OR	ON	2011/10/13 14:51
S154	86	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:08
S157	1	"6266236".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 15:17
S158	2	"20040001049"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 15:31
S159	40	Morenstein near Joshua.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34
S160	21	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34
S161	16	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34
S162	18	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34
S169	54	345/169.ccls. and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/14 12:36
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S171	8	(laptop) with (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/14 12:40
S196	1	"20060264243"	USPAT	OR	OFF	2011/10/14 15:29

EAST Search History

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S200	153	(laptop) same (scroll near wheel)	US-PGPUB; USPAT	OR	ON	2011/10/14 16:25
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S238	305	(scroll near wheel) same (laptop or cellular)	US-PGPUB; USPAT	OR	OFF	2011/10/17 10:13
S240	117	(scroll near wheel) same (laptop)	US-PGPUB; USPAT	OR	OFF	2011/10/17 10:13
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S282	2	"20060264243"	US-PGPUB; USPAT	OR	ON	2011/10/18 09:30
S328	1	"7084919".pn.	US-PGPUB; USPAT	OR	ON	2012/05/21 13:23
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S330	1	"20050272462"	US-PGPUB; USPAT	OR	ON	2012/05/21 13:23
S331	1	"5436954".pn.	US-PGPUB; USPAT	OR	ON	2012/05/21 13:24
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S338	43	Morenstein near Joshua.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08
S339	22	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08
S340	23	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08
S341	19	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08
S342	9	S337 and S338 and S339 and S340 and S341	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08

S343	2	"20040001049"	US-PGPUB; USPAT	OR	ON	2012/05/21 16:13
S345	14	("20050018396" "20050041378" "6067224" "D395868" "D452238" "D463797" "D476326" "D491177" "D491936" "D494162" "D513509" "D516552" "D523429").PN. OR ("D593085").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 16:20
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S347	43	Morenstein near Joshua.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:59
S348	22	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:59
S349	23	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:59
S350	19	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:59
S351	9	S346 and S347 and S348 and S349 and S350	US-PGPUB; USPAT	OR	ON	2012/05/21 17:00
S352	4	("20070242421" "20080024388" "20080158795" "20090190295").PN.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:01
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S354	1739765	sensor or detector	US-PGPUB; USPAT	OR	ON	2012/05/21 17:08
S355	325998	laptop or "notebook computer" or "portable computer"	US-PGPUB; USPAT	OR	ON	2012/05/21 17:08
S356	37894	S353 and S354	US-PGPUB; USPAT	OR	ON	2012/05/21 17:09
S357	89456	S354 and S355	US-PGPUB; USPAT	OR	ON	2012/05/21 17:09
S358	349331	hinge	US-PGPUB; USPAT	OR	ON	2012/05/21 17:09
S359	4988	S358 and S357	US-PGPUB; USPAT	OR	ON	2012/05/21 17:10
S360	3370	S359 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 17:10
S361	6728	flip with image	US-PGPUB; USPAT	OR	ON	2012/05/21 17:11
S362	46	S361 and S359	US-PGPUB; USPAT	OR	ON	2012/05/21 17:11
S363	32	S362 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 17:11
S364	2400838	rotate or rotatable or rotating	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 17:15
S365	40	S362 and S364	US-PGPUB; USPAT	OR	ON	2012/05/21 17:16
S366	2214	345/169.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:17
S367	2966	361/679.21,679.26,679.27.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:17

S368	4137	455/575.1-575.2.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:19
S369	3238	345/168.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:21
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S379	2	"20060264243"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/22 15:56
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S382	1	"5436954".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/22 16:51
S413	1	"6492974".pn.	US-PGPUB; USPAT	OR	OFF	2012/05/29 14:24
S414	1	"11559763"	US-PGPUB; USPAT	OR	ON	2012/05/29 17:57
S419	17	("20030048595" "20040228076" "20050063145" "20050128695" "5712760" "5847698" "6464195" "6642909" "6665175" "D399526" "D495694" "D528541" "D535292").PN. OR ("D593091").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/30 14:49
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S442	63	("4243986" "4749364" "5038301" "5115229" "5307055" "5335192" "5384579" "5537127" "5539658" "5568603" "5590021" "5659361" "5856819").PN. OR	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/14 10:37

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S451	49	Morenstein near Joshua.inv.	US-PGPUB; USPAT	OR	ON	2013/01/14: 16:42
S452	24	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2013/01/14: 16:43
S453	24	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2013/01/14: 16:43
S454	21	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2013/01/14: 16:43
S455	10	(S450 and S451 and S452 and S453 and S454)	US-PGPUB; USPAT	OR	ON	2013/01/14: 16:44
S456	5	S455 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/14: 16:44
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S458	1	"5436954".pn.	US-PGPUB; USPAT	OR	ON	2013/01/18: 09:51
S459	3193	345/169,184.ccls.	US-PGPUB; USPAT	OR	ON	2013/01/18: 11:52
S460	6206	345/168-169,184.ccls.	US-PGPUB; USPAT	OR	ON	2013/01/18: 11:53
S461	814	345/184.ccls.	US-PGPUB; USPAT	OR	ON	2013/01/18: 11:53
S462	3180	361/679.21,679.26,679.27.ccls.	US-PGPUB; USPAT	OR	ON	2013/01/18: 11:54
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EAST Search History (Interference)

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EAST Search History

1/ 18/ 2013 2:19:09 PM

C:\Users\sabebe\Documents\EAST\Workspaces\12170951.wsp

<i>Index of Claims</i> 	Application/Control No. 12170951	Applicant(s)/Patent Under Reexamination BEHAR ET AL.
	Examiner SOSINA ABEBE	Art Unit 2629

✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE							
Final	Original	03/24/2011	10/13/2011	05/29/2012	01/14/2013				
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	2	✓	✓	✓	✓				
	3	✓	✓	✓	✓				
	4	✓	✓	✓	✓				
	5	✓	✓	✓	✓				
	6	✓	✓	✓	✓				
	7	✓	✓	✓	✓				
	8	✓	✓	✓	✓				
	9	✓	-	-	-				
	10	✓	✓	✓	✓				
	11	✓	✓	✓	✓				
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	13	✓	✓	✓	✓				
	14	✓	✓	✓	✓				
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	20		✓	✓	✓				
	21		✓	✓	✓				
	22			✓	✓				
	23			✓	✓				
	24			✓	✓				

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with 37 CFR § 1.6(a)(4).

Dated: November 19, 2012
Electronic Signature for Matthew H. Grady: /Matthew H. Grady/

Docket No.: L2039-700111
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Yves Behar et al.

Application No.: 12/170,951

Confirmation No.: 2004

Filed: July 10, 2008

Art Unit: 2629

For: PORTABLE COMPUTER WITH MULTIPLE
DISPLAY CONFIGURATIONS

Examiner: S. Abebe

INTERVIEW SUMMARY

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Madam:

Further to the Examiner Interview Summary mailed October 23, 2012, and to the telephonic interview conducted on October 11, 2012, Applicant(s) respectfully presents the following remarks and the substance of the follow up conversation on October 26, 2012.

REMARKS

Applicants thank Examiner Abebe and Examiner Tillman for their time and courtesy during the telephone conference conducted on October 11, 2012 with the Applicant's representative Matthew Grady. Applicant(s) wish to clarify the summary of the telephone conference provided by the Examiner on October 23, 2012.

In particular, Applicant's Representative discussed with Examiners Abebe and Tillman how Fig. 19 does not teach an easel mode as recited in the claims. Applicant's

1452224.1

Representative presented the enclosed exhibits, illustrating in broad view Figs. 1, 2, and 3 of Aarras, with intermediary positions generated and illustrated for demonstration purposes.

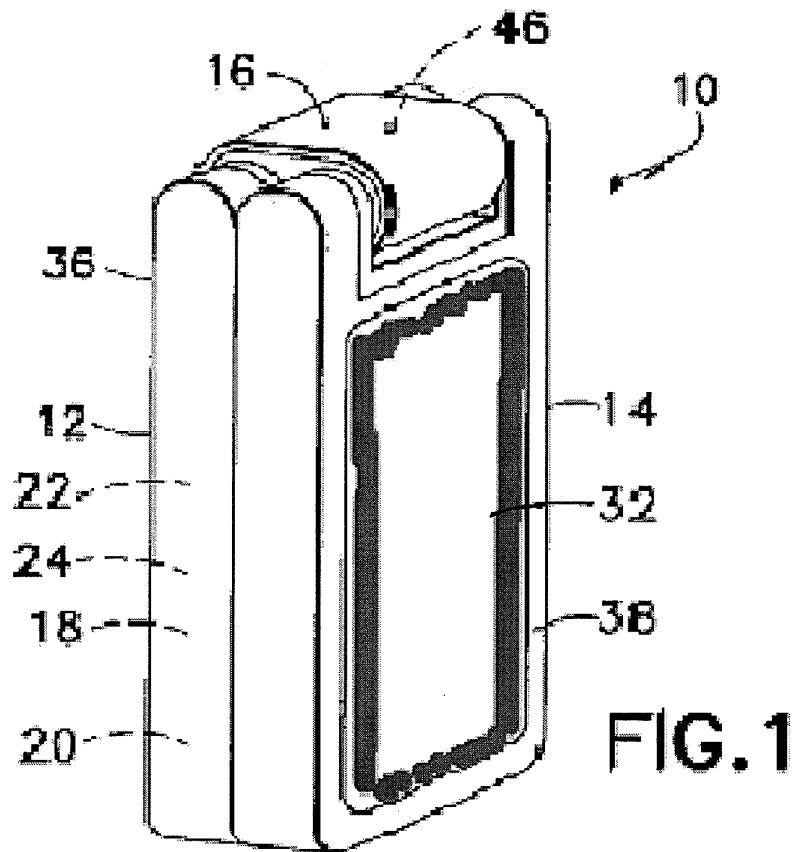
In the subsequent phone call with Examiner Abebe, on October 26, 2012, it was further discussed and agreed that Fig. 19 of Aarras illustrates two display screens oriented in the same direction, which cannot read on the claims as alleged. Examiner Abebe indicated that further review of the Aarras reference and the rejection would be required.

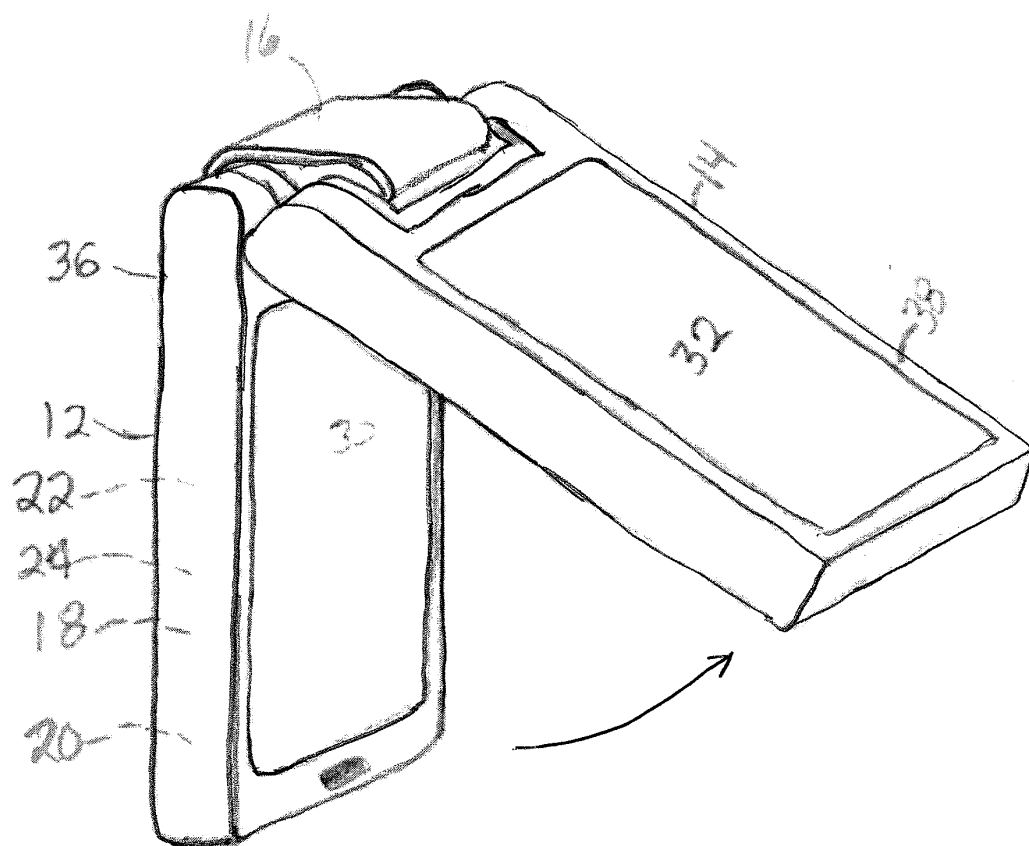
In the event the U.S. Patent and Trademark Office determines that an extension is required, applicants petition for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 50/2762 referencing docket no. L2039-700111.

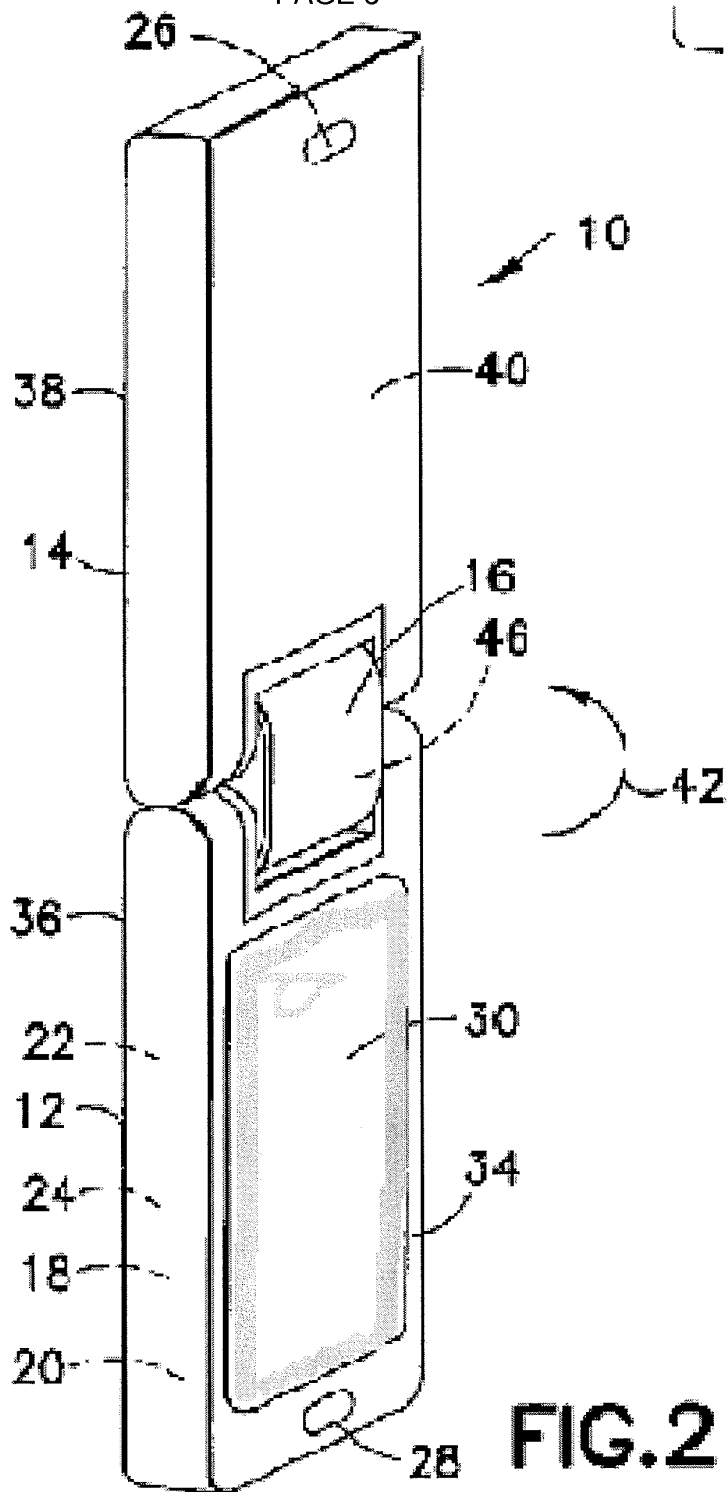
Dated: November 19, 2012

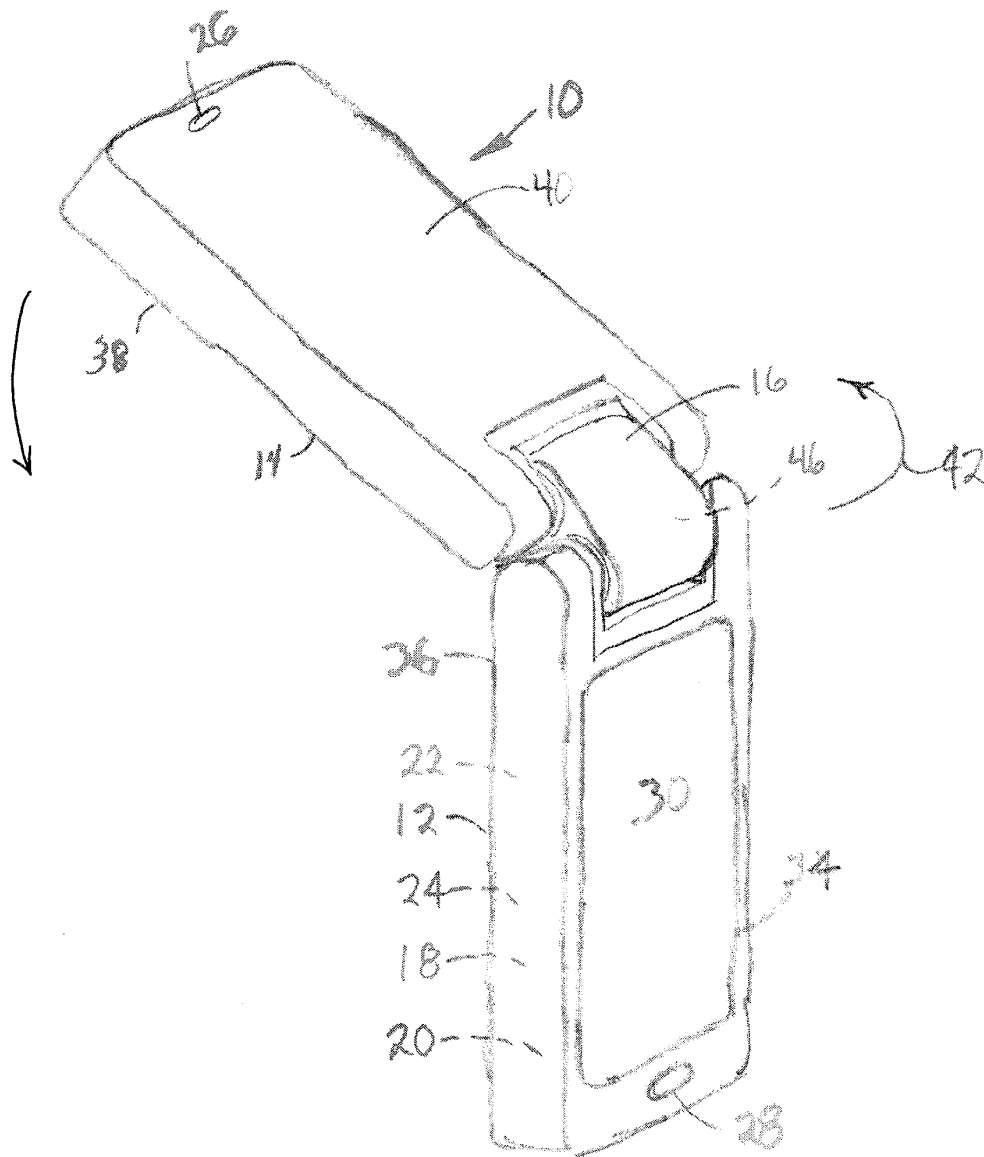
Respectfully submitted,

Electronic signature: /Matthew H. Grady/
Matthew H. Grady
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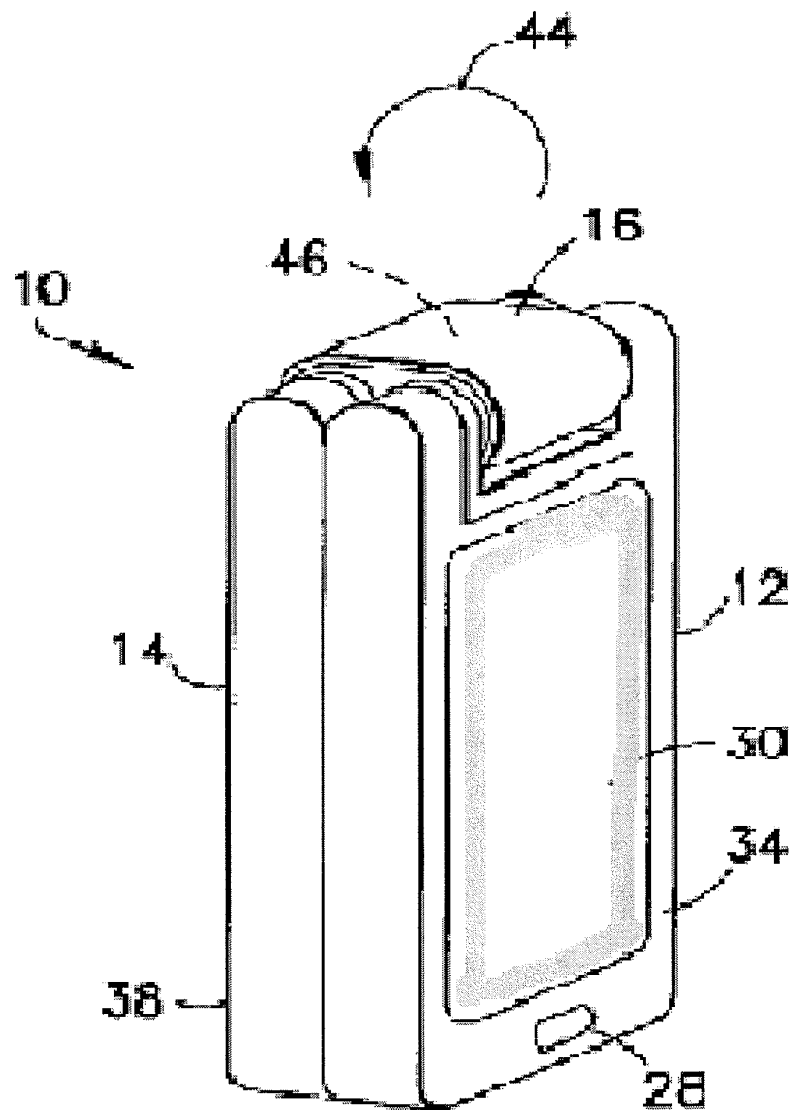
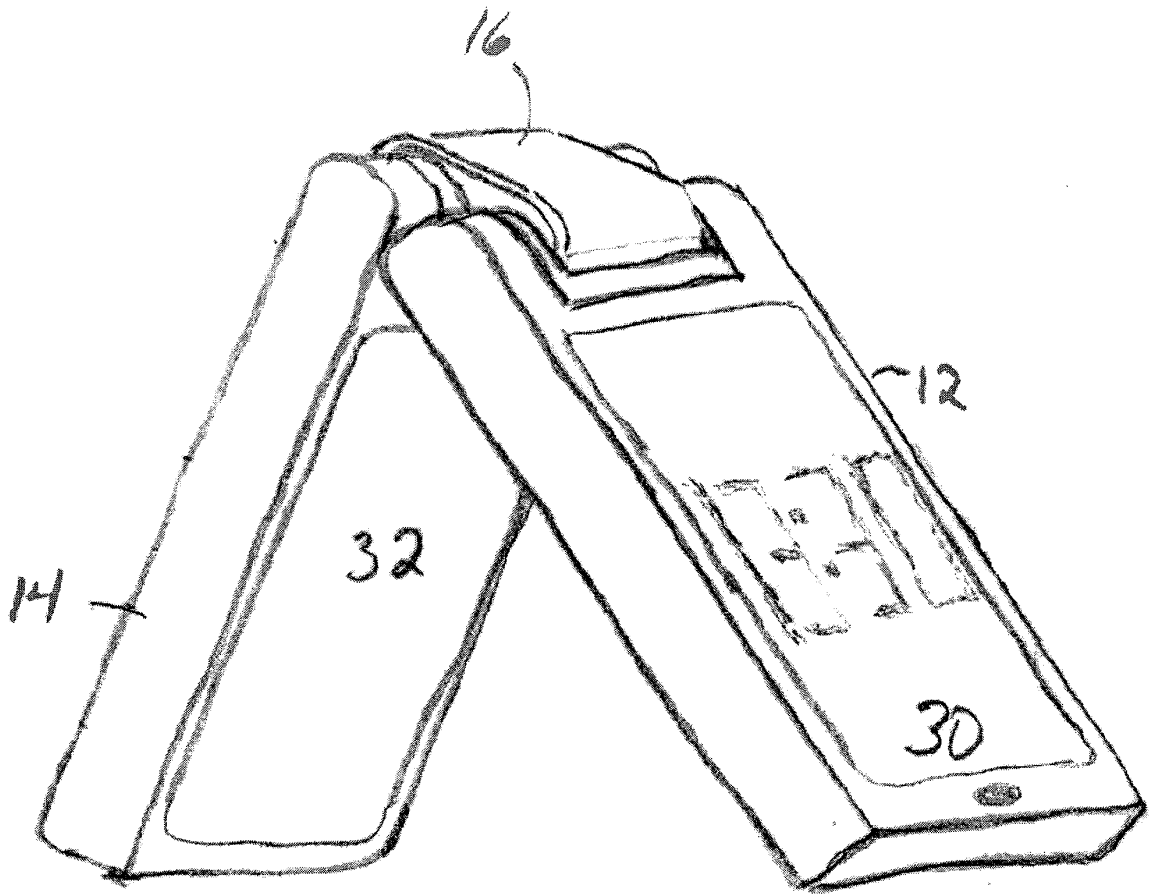


FIG. 3



Electronic Acknowledgement Receipt

EFS ID:	14259830
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Matthew H. Grady
Filer Authorized By:	
Attorney Docket Number:	L2039-700111
Receipt Date:	19-NOV-2012
Filing Date:	10-JUL-2008
Time Stamp:	17:11:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	L2039-700111_- _Interview_Summary_1.PDF	307347 <small>dbd2e890676cfa4eb596e0aa450d22e141d2846a</small>	no	8

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Total Files Size (in bytes):

307347

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes details for application 12/170,951 filed 07/10/2008 by Yves Behar, attorney L2039-700111, examiner ABEBE, SOSINA, art unit 2692, notification date 10/23/2012, and delivery mode ELECTRONIC.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@LALaw.com
gengelso@LALaw.com

Applicant-Initiated Interview Summary	Application No. 12/170,951	Applicant(s) BEHAR ET AL.	
	Examiner SOSINA ABEBE	Art Unit 2692	

All participants (applicant, applicant's representative, PTO personnel):

(1) SOSINA ABEBE. (3) Matthew H. Grady (52,957).
(2) Gregory Tryder. (4) _____.

Date of Interview: 11 October 2012.

Type: Telephonic Video Conference
 Personal [copy given to: applicant applicant's representative]

Exhibit shown or demonstration conducted: Yes No.
If Yes, brief description: _____.

Issues Discussed 101 112 102 103 Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 1.

Identification of prior art discussed: Nobuchi (US 6,492,974), Aarras (US 2006/0264243), Nishiyama (5,436,954).

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Discussed the rejection of claim 1 and Nobuchi, Aarras and Nishiyama. The applicant's representative argued that Nobuchi and Aarras as a whole fail to teach a longitudinal axis running along an interface between the display component and the base to transition between at least a laptop mode and an easel mode. However, the examiner respectfully disagrees with the applicant's argument because Nobuchi teaches a longitudinal axis running along an interface between the display component (3) and the base (1) to transition between at least a laptop mode (first mode fig. 1 and second mode figs. 2 & 8). And Aarras teaches an easel mode fig. 19. Agreement was not reached.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Attachment

/S. A./
Examiner, Art Unit 2692

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with 37 CFR § 1.6(a)(4).

Dated: October 9, 2012
Electronic Signature for Matthew H. Grady: /Matthew H. Grady/

Docket No.: L2039-700111
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Yves Behar et al.

Application No.: 12/170,951

Confirmation No.: 2004

Filed: July 10, 2008

Art Unit: 2629

For: PORTABLE COMPUTER WITH MULTIPLE
DISPLAY CONFIGURATIONS

Examiner: S. Abebe

**AMENDMENT IN RESPONSE TO NON-FINAL OFFICE ACTION UNDER 37 C.F.R.
1.111**

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Madam:

INTRODUCTORY COMMENTS

In response to the Office Action dated June 7, 2012, please amend the above-identified U.S. patent application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 7 of this paper.

1411507.1

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Previously Presented) A portable computer comprising:
 - a base including a keyboard;
 - a single display component rotatably coupled to the base such that the single display component and the base are rotatable with respect to one another about a longitudinal axis running along an interface between the display component and the base to transition between at least a laptop mode and an easel mode, the single display component including a display screen, wherein
 - the laptop mode is configured to display to a user on the single display component a first content mode having a first content display orientation with the single display component oriented towards the user and the keyboard oriented to receive input from the user;
 - the easel mode is configured to display to the user on the single display component a second content mode having a second content display orientation with the single display component oriented towards the user and the keyboard oriented away from the user, wherein the first and second content display orientations are 180 degrees relative to each other; and
 - a scroll wheel disposed at least partially within the base and rotatable about the longitudinal axis, the scroll wheel configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen.
2. (Original) The portable computer of claim 1, where the scroll wheel is configured to permit the user to adjust a volume of sound produced by the portable computer.
3. (Original) The portable computer of claim 1, further comprising a first navigation button disposed on one of the base and the display component and configured to permit the user to manipulate selected content displayed on the screen.
4. (Original) The portable computer of claim 3, wherein the screen is configured to display at least one of a plurality of modes of content; and

wherein the navigation button is configured to permit the user to select for display one of the plurality of modes of content.

5. (Original) The portable computer of claim 3, further comprising a second navigation button;

wherein the first navigation button is disposed on a major surface of the base; and

wherein the second navigation button is disposed on a minor surface of the base.

6. (Original) The portable computer of claim 1, wherein the scroll wheel is configured to permit the user to select a mode of content for display by the portable computer.

7. (Currently Amended) A portable computer configurable between a plurality of display modes including a laptop mode and an easel mode, the portable computer comprising:

a base including a keyboard;

a single display component rotatably coupled to the base and including a screen which displays content;

a hinge assembly disposed at least partially within the base and the display component that defines an axis of rotation about which both the base and the display component are rotatable to transition the portable computer between at least the laptop mode and the easel mode, wherein

the laptop mode is configured to display to a user on the single display component a first content mode having a first content display orientation with the single display component oriented towards the user and the keyboard oriented to receive input from the user;

the easel mode is configured to display to the user on the single display component a second content mode having a second content display orientation with the single display component oriented towards the user and the keyboard oriented away from the user, wherein the first and second content display orientations are 180 degrees relative to each other; and

a scroll wheel accessible in each of the plurality of display modes and configured to permit a user to manipulate at least one of operating parameters of the portable computer and the content displayed on the screen.

8. (Previously Presented) The portable computer of claim 7; wherein the scroll wheel is disposed at least partially about the axis of rotation of the display component relative to the base.

9. (Cancelled)

10. (Original) The portable computer of claim 7, further comprising a first navigation button user-accessible in each of the laptop mode and the easel mode, and configured to permit the user to manipulate selected content displayed on the screen.

11. (Original) The portable computer of claim 10, wherein the screen is configured to display at least one of a plurality of modes of content; and
wherein the first navigation button is configured to permit the user to select for display one of the plurality of modes of content.

12. (Previously Presented) The portable computer of claim 10, further comprising a second navigation button that is not user-accessible when the portable computer is in the easel mode.

13. (Previously Presented) A portable computer comprising:
a base including a keyboard;
a single display component including a screen configured to display content;
a hinge assembly disposed at least partially within the base configured to rotatably couple the display component to the base, the hinge assembly defining a longitudinal axis running along an interface between the display component and the base about which the display component and the base are rotatable to transition the portable computer between at least a laptop mode and an easel mode, wherein
the laptop mode is configured to display to a user on the single display component a first content mode having a first content display orientation with the single display component oriented towards the user and the keyboard oriented to receive input from the user;
the easel mode is configured to display to the user on the single display component a second content mode having a second content display orientation with the single display

component oriented towards the user and the keyboard oriented away from the user, wherein the first and second content display orientations are 180 degrees relative to each other; and
a scroll wheel disposed at least partially about the longitudinal axis.

14. (Original) The portable computer of claim 13, wherein the scroll wheel is configured to permit a user to manipulate the content displayed on the screen.

15. (Original) The portable computer of claim 13, wherein the scroll wheel is configured to permit a user to control a volume of sound played by the portable computer.

16. (Original) The portable computer of claim 13, wherein the scroll wheel is disposed at least partially within the hinge assembly.

17. (Original) The portable computer of claim 13, further comprising at least one navigation button disposed on one of the base and the display component.

18. (Previously Presented) The portable computer of claim 1, wherein rotating either the display component or the base about the longitudinal axis up to approximately 180 degrees from a closed mode in which the display screen is disposed substantially against the base configures the portable computer into the laptop mode; and
wherein rotating either the display component or the base about the longitudinal axis beyond approximately 180 degrees from the closed mode configures the portable computer into the easel mode.

19. (Previously Presented) The portable computer of claim 7, wherein an operating display mode is selected from the plurality of display modes based on a physical orientation of the portable computer.

20. (Previously Presented) The portable computer of claim 7, wherein an operating display mode is selected from the plurality of display modes in response to operation of the scroll wheel.

21. (Previously Presented) The portable computer of claim 8, wherein the scroll wheel provides a default action which effects manipulation of the at least one of the operating parameters of the portable computer, wherein the default action is defined differently responsive to a display mode of the portable computer.

22. (Previously Presented) The portable computer of claim 1, wherein the plurality of modes includes a frame mode in which the single display component is oriented towards the operator, the base contacts a substantially horizontal surface, and the keyboard is directed towards the substantially horizontal surface.

23. (Previously Presented) The portable computer of claim 22, wherein the frame mode is configured to display to a user on the single display component the first content mode having the first content display orientation.

24. (Previously Presented) The portable computer of claim 22, wherein the portable computer is configured to prevent the portable computer from responding to keyboard input when the portable computer is in the frame mode.

REMARKS

Claims 1-8 and 10-24 were previously pending in this application. Claim 7 has been amended. As a result claims 1-8 and 10-24 are pending for examination with claims 1, 7, and 13 being independent claims. No new matter has been added. The application as presented is believed to be in condition for allowance.

Double Patenting

The Office Action provisionally rejected claims 7, 10-11, and 22-24 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13, 26, 27, 29 and 34 of copending Application No. 12/170,939. Without acceding to the correctness of the rejection, Applicant respectfully requests the rejection be held in abeyance until patentable subject matter is identified in this Application.

Rejections Under 35 U.S.C. §103

The Office Action rejected claims 1-8 and 10-24 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,492,974 to Nobuchi et al. (Nobuchi) in view of U.S. Publication No. 2006/0264243 to Aarras (Aarras) and in further view of U.S. Patent No. 5,436,954 to Nishiyama et al. (Nishiyama). In response, Applicant respectfully submits the following remarks traversing the rejection.

As discussed and not addressed in the prior responses, the proposed combination of Aarras in view of Nishiyama *is not proper*. The Office Action continues to rely on this combination (now in combination with Nobuchi) without addressing the Applicant's arguments or the deficiencies of the prior art references. Applicant respectfully incorporates the Response of March 22, 2012, describing the deficiencies of Aarras, Nishiyama, and their alleged combination.

Regardless of the prior arguments, the alleged combination of Nobuchi, Aarras, and Nishiyama does not teach or suggest the claims. As admitted by the Examiner, Nobuchi does not teach or suggest "an easel mode" "configured to display to a user on the single display component a second content mode." (Office Action p. 9). Applicant agrees that Nobuchi does not teach or suggest the claimed "easel mode." Further, as Nobuchi does not teach or suggest the claimed easel mode, Nobuchi cannot teach or suggest "a longitudinal axis running along an

interface between the display component and the base *to transition between at least a laptop mode and an easel mode,*” as recited in claim 1.

The Office Action relies on Aarras to teach an “easel mode,” however, the Office Action *does not* allege that Aarras supplies the missing claim limitation including a device rotatable about a: “longitudinal axis running along an interface between the display component and the base *to transition between at least a laptop mode and an easel mode.*” Thus, the Office Action fails to establish a prima facie showing of obviousness, even assuming the alleged combination proper.

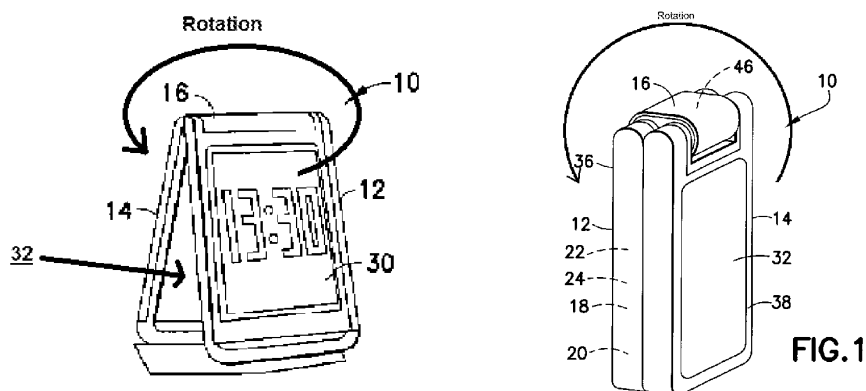
Additionally, Aarras does not teach an easel mode, nor does Aarras teach “a longitudinal axis longitudinal axis running along an interface between the display component and the base *to transition between at least a laptop mode and an easel mode,*” as recited in claim 1.

The Office Action relies on Fig. 8 and 19, as well as par. 39 and 50 to allegedly teach an easel mode - and presumably a transition between a laptop and easel mode. (Please see Office Action, p. 9). Fig. 8 shows the Aarras device having two display screens 32 & 30, both display screens are oriented in the same direction, towards the operator of the Aarras device. (Please see Fig. 8 and para. 40 describing Fig. 8, see also Fig. 9 illustrating the position of display screen 30 with respect to display screen 32). Fig. 19 likewise shows an embodiment where both display screens 32 and 30 are oriented in the same direction, towards the operator of the device. Neither Figure nor related description teaches or suggests an easel mode.

As recited in Aarras:

Referring also to FIG. 19, another application is shown. In this application the device **10** comprises an alarm clock mode/application. A user could select the application from the second display **32** shown in FIG. 1 and rotate the first and second sections **12, 14** relative to each other into the position shown in FIG. 19. – Aarras para. 0050

For purposes of illustration Figs. 1 & 19 (from issued Pat. No. 7,460,893 to Aarras) are shown below:



Added for purposes of clarity are the rotation lines about the hinge 16 (following rotation lines 42 and 44 of Figs. 2 and 3) disclosed in Aarras and the identification of the second display screen 32 in Fig. 19. Although Fig. 19 does not label the second display 32, as can be seen from Fig. 1-3 the second display 32 would be configured with the same orientation as the first display 30. (Please see e.g., Figs. 1-3 – “in the folded configurations shown in FIGS. 1 and 3, the displays 30, 32 *face the same direction.*” (Para. 0037)(Emphasis supplied).

Aarras does not teach or suggest a transition between the claimed laptop mode and easel mode wherein “the laptop mode” has “a first content display orientation with the single display component oriented towards the user and the keyboard oriented to receive input from the user” and the “easel mode” has “a second content display orientation with the single display component oriented towards the user and the keyboard oriented away from the user”: (1) there is no change in a display orientation triggered by the disclosed rotation of the displays 30 and 32 of Aarras about hinge 16 and (2) there is no change in the physical orientation of either section when rotating about hinge 16 with respect to a user and the respective displays are oriented in the same direction. Thus, Aarras does not teach an “easel mode” nor a base and a display “rotatable with respect to one another about a longitudinal axis running along an interface between the display component and the base to transition between at least a laptop mode and an easel mode,” as recited in claim 1.

The Office Action also relies on para. 39, which recites in “an alternate embodiment, the connection section could comprise a rotatable section to allow the two sections 12, 14 to be rotated 180° relative to each other *orthogonal to the path of rotation illustrated in FIGS. 1-3.* Thus, the first sides 34, 38 could face each other, such as for storage or transport in a pocket, purse or business case.” (Emphasis supplied). This disclosure does not teach or suggest a base

and a display “rotatable with respect to one another about a longitudinal axis running along an interface between the display component and the base to transition between at least a laptop mode and an easel mode, the single display component including a display screen,” as recited in claim 1, nor a transition between a laptop mode and an easel mode. Rather, as described in Aarras such a rotation would occur opposite (i.e., “orthogonal”) to the claimed rotation from a laptop to easel mode. In addition, para. 39 does not teach or suggest a change in display orientation of *any kind*, as is required by claim 1. For example, as recited by “the easel mode” “having a second content display orientation” where “the first and second content display orientations are 180 degrees relative to each other.” Last, the disclosure makes clear that the Aarras device is not intended to be operated in such a configuration, rather, such a configuration is intended for transport or storage. (See para. 0039). Thus, it would not be obvious to the person of ordinary skill to modify a reference to include a configuration intended for storage as an operating mode.

Therefore, the allegations in the Office Action, that Figs. 8 and 19 and paras. 39 and 50 teach an easel mode are not correct. Further, the Office Action fails to address the claim language requiring a transition between at least a laptop and an easel mode, which Aarras likewise fails to teach. Even assuming for the purposes of argument the combination proper, the proposed combination would not result in the invention as claimed.

Further Combination with Nishiyama

Nishiyama discloses a telephone set with a rotary selector configurable between a closed position and an open position about a single axis joint portion. The single axis joint portion includes the structures for the rotary selector, which are configured to lock the sections of Nishiyama device into the open telephone configuration, and prevent rotation of the sections of Nishiyama past the telephone configuration. (Please see Col. 2, lines 18-22; Col. 4, lines 1-4; Col. 5, lines 12-13; Col. 7, line 54 – Col. 8, line 2; and Fig. 5). Thus, Nishiyama does not teach or suggest an easel mode, and cannot cure the deficiencies discussed above with respect to Nobuchi and Aarras.

Further, Nobuchi and Aarras both describe a device with sections completely rotatable around each other. (Please see Nobuchi Fig. 1 and Fig. 2; Aarras paras. 0010, 0038, and 0047-49). Nobuchi and Aarras accomplish their rotation using a dual axis hinge (Nobuchi item 5, Fig. 1 and Aarras hinge 16). Nishiyama discloses a selector (alleged to read on the claimed scroll

wheel) integral with a single axis hinge including structures that are configured to prevent rotation past a telephone configuration. It would not be obvious to the person of ordinary skill to combine a telephone device (Nishiyama) having a single axis hinge, selector, and a stopper that prevents the device from rotating with the device of either Nobuchi or Aarras, taken alone or in combination.

Both Nobuchi and Aarras require complete rotation about dual axis hinges. These teachings and the structures disclosed are not compatible with the single axis hinge/selector that incorporates a stop position. Modifying either Nobuchi or Aarras, alone or in combination, to include the teaching of Nishiyama's joint portion and selector would result in the Nobuchi and/or Aarras device's rotation being stopped at an open position. Thus, the combination alleged would either render Nobuchi/Aarras inoperable by preventing complete rotation, or change the nature of their operation, both are improper. (Please see M.P.E.P. §2143.03 Sec. V & VI). Due to the stop position disclosed in Nishiyama, the telephone device of Nishiyama *cannot* be transitioned from a laptop mode to an easel mode, thus, claim 1 would not be obvious in light of any of Nishiyama, Aarras, and Nobuchi, alone or in combination with the other.

Last, as recited in claim 1, the "scroll wheel" is "rotatable about **the longitudinal axis.**" (Emphasis supplied). Nishiyama teaches a device with a "selector 8" that rotates about a single axis. There is nothing in Nishiyama to teach or suggest how to modify a selector rotatable about a single axis for devices that require dual axes, such that the introduced selector is "rotatable about the longitudinal axis," as recited in claim 1.

None of Nobuchi, Aarras, and Nishiyama teach or suggest the claimed easel mode, nor a base and a display "rotatable with respect to one another about a longitudinal axis running along an interface between the display component and the base to transition between at least a laptop mode and an easel mode," as recited in claim 1. Thus, even if the combination of Nobuchi, Aarras, and Nishiyama is assumed proper, the combination does not teach or suggest claim 1. Claims 2-6 depend from claim 1 and are allowable for at least the same reasons. Accordingly, withdrawal of the rejection is respectfully requested.

Independent claims 7 (as amended) and 13 also recite rotation of a base and display about an axis "to transition the portable computer between at least a laptop mode and an easel mode." As discussed above with respect to claim 1, the Examiner admits that Nobuchi does not

teach or suggest an easel mode, thus Nobuchi cannot teach or suggest a transition “between at least a laptop mode and an easel mode.” Likewise, Aarras does not teach or suggest an easel mode, nor a transition “between at least a laptop mode and an easel mode.” Nishiyama discloses a stopper that prevents the disclosed device from rotating past a telephone configuration. Thus, none of Nobuchi, Aarras, and Nishiyama teach or suggest an easel mode, and none teach or suggest the transition “between at least a laptop mode and an easel mode.”

As discussed above, it is not obvious to modify Nobuchi, Aarras, and Nishiyama as a matter of law. Further, none of the references teach the recited transition “between the laptop mode and the easel mode.” Thus, even assuming for the purposes of argument the combination proper, the combination does not teach or suggest at least one element of independent claims 7 and 13.

Accordingly withdrawal of the rejections of claims 7 and 13 are respectfully requested. Claims 8, 9-12, and 14-21 depend from independent claims 7 and 13 respectively, and are allowable for at least the same reasons.

Dated: October 9, 2012

Respectfully submitted,

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Electronic Patent Application Fee Transmittal

Application Number:	12170951
Filing Date:	10-Jul-2008
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Filer:	Matthew H. Grady/Matthew Grady
Attorney Docket Number:	L2039-700111

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 1 month with \$0 paid	1251	1	150	150

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
Total in USD (\$)				330

Electronic Acknowledgement Receipt

EFS ID:	13939102
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Matthew H. Grady/Matthew Grady
Filer Authorized By:	Matthew H. Grady
Attorney Docket Number:	L2039-700111
Receipt Date:	09-OCT-2012
Filing Date:	10-JUL-2008
Time Stamp:	14:02:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$330
RAM confirmation Number	249
Deposit Account	502762
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)					
Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)					
Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	L2039-700111_-_Information_Disclosure_Statement_Fillable_PDF_2.pdf	612246 0d0e5885e2be5c0701e0e44ef22ba1fa220c3b34	no	4
Warnings:					
Information:					
2		1.pdf	97366 234948899bfd9a068cfd1216ceea635ed3f502	yes	12
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment/Req. Reconsideration-After Non-Final Reject		1	1	
	Claims		2	6	
Applicant Arguments/Remarks Made in an Amendment		7	12		
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32473 04a3d99e2405afb209a8fab6e242fa8f5fa8797d	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			742085		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	
	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit		2629	
	Examiner Name	S. Abebe		
	Attorney Docket Number		L2039-700111	

U.S.PATENTS							Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	
	1	6693652		2004-02-17	Barrus et al.		
	2	7756928		2010-07-13	Meenan et al.		
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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	
	1	20050210399		2005-09-22	Filner et al.		
	2	20070240076		2007-10-11	Astala et al.		
	3	20090150826		2009-06-11	Lyndersay et al.		
	4	20010032320		2001-10-18	Abdelnur et al.		

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	
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	Examiner Name	S. Abebe		
	Attorney Docket Number		L2039-700111	

	5	20080235594		2008-09-25	Bhumkar et al.	
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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
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EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12170951
	Filing Date	2008-07-10
	First Named Inventor	Yves Behar
	Art Unit	2629
	Examiner Name	S. Abebe
	Attorney Docket Number	L2039-700111

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Matthew H. Grady/	Date (YYYY-MM-DD)	2012-10-09
Name/Print	Matthew H. Grady	Registration Number	52957

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 12/170,951	Filing Date 07/10/2008	<input type="checkbox"/> To be Mailed					
APPLICATION AS FILED – PART I					OTHER THAN SMALL ENTITY							
(Column 1)		(Column 2)			SMALL ENTITY <input type="checkbox"/>		OR					
FOR	NUMBER FILED	NUMBER EXTRA			RATE (\$)	FEE (\$)	RATE (\$)	FEE (\$)				
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A			N/A		N/A					
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A			N/A		N/A					
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A			N/A		N/A					
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	minus 20 =	*			X \$ =		OR	X \$ =				
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*			X \$ =		OR	X \$ =				
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).											
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>												
* If the difference in column 1 is less than zero, enter "0" in column 2.												
APPLICATION AS AMENDED – PART II					OTHER THAN SMALL ENTITY							
(Column 1)		(Column 2)		(Column 3)			SMALL ENTITY		OR	SMALL ENTITY		
AMENDMENT	10/09/2012	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)	
	Total <small>(37 CFR 1.16(i))</small>	* 23	Minus	** 20	= 3		X \$ =		OR	X \$62=	186	
	Independent <small>(37 CFR 1.16(h))</small>	* 3	Minus	***3	= 0		X \$ =		OR	X \$250=	0	
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>											
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>											
							TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	186	
(Column 1)		(Column 2)		(Column 3)			SMALL ENTITY		OR	SMALL ENTITY		
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)	ADDITIONAL FEE (\$)		RATE (\$)	ADDITIONAL FEE (\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=		X \$ =		OR	X \$ =		
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=		X \$ =		OR	X \$ =		
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>											
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>											
							TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.												
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".												
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".												
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.												
							Legal Instrument Examiner: /CHRISTINE V. MOORE/					

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
12/170,951 07/10/2008 Yves Behar L2039-700111 2004

37462 7590 06/07/2012
LANDO & ANASTASI, LLP
ONE MAIN STREET, SUITE 1100
CAMBRIDGE, MA 02142

Table with 1 column: EXAMINER

ABEBE, SOSINA

Table with 2 columns: ART UNIT, PAPER NUMBER

2629

Table with 2 columns: NOTIFICATION DATE, DELIVERY MODE

06/07/2012

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@LALaw.com
gengelso@LALaw.com

Office Action Summary	Application No.	Applicant(s)	
	12/170,951	BEHAR ET AL.	
	Examiner	Art Unit	
	SOSINA ABEBE	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 22 March 2012.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
- 4) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) Claim(s) 1-8 and 10-24 is/are pending in the application.
 - 5a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 6) Claim(s) _____ is/are allowed.
- 7) Claim(s) 1-8 and 10-24 is/are rejected.
- 8) Claim(s) _____ is/are objected to.
- 9) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 10) The specification is objected to by the Examiner.
- 11) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 05/18/2012.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 22, 2012 has been entered.

Response to Arguments

This is in response to applicant's communication filed on 22 March 2012, wherein: claims 1 – 8 and 10 - 21 are currently pending. Claims 1, 7, 8, 13, 18 and 21 have been amended. Claims 22 - 24 have been added. Claim 9 has been cancelled.

Applicant's arguments filed on March 22, 2012 with respect to claims 1 – 8 and 10 - 24 have been fully considered but are moot in view of the new ground(s) of rejection.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

Art Unit: 2629

1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 7, 10 -11 and 22 - 24 of Application No. 12/170,951 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13, 26, 27, 29 and 34 of copending Application No. 12/170,939.

Claim 7 of Current Application 12/170,951	Claim 13 of Application 12/170,939
<p>A portable computer configurable between a plurality of display modes including a laptop mode and an easel mode, the portable computer comprising:</p> <ul style="list-style-type: none"> a base including a keyboard; a single display component rotatably coupled to the base and including a screen which displays content; 	<p>A portable computer configurable between a plurality of modes including a laptop mode and an easel mode, the portable computer comprising:</p> <ul style="list-style-type: none"> a single display component; a base including an integrated keyboard;
<ul style="list-style-type: none"> a hinge assembly disposed at least 	<ul style="list-style-type: none"> a hinge assembly configured to rotatably couple the single display component to the

<p>partially within the base and the display component that defines an axis of rotation about which both the base and the display component are rotatable to transition the portable computer between the laptop mode and the easel mode, wherein;</p> <p>the laptop mode is configured to display to a user on the single display component a first content mode having a first content display orientation with the single display component oriented towards the user and the keyboard oriented to receive input from the user;</p>	<p>base, wherein the hinge assembly is at least partially housed within the base and the single display component, and defines a longitudinal axis running along an interface between the single display component and the base;</p> <p>wherein the hinge assembly is configured to permit the rotation of the single display component and the base about the longitudinal axis to configure the portable computer between a laptop mode and an easel mode;</p>
<p>the easel mode is configured to display to a user on the single display component a second content mode having a second content display orientation with the single display component oriented towards the user and the keyboard oriented away from the user, wherein the</p>	<p>wherein in the easel mode the single display component is oriented facing the operator with the keyboard oriented away from the operator; and</p>

<p>first and second content display orientations are 180 degrees relative to each other; and</p>	
<p>a scroll wheel accessible in each of the plurality of display modes and configured to permit a user to manipulate at least one of operating parameters of the portable computer and the content displayed on the screen.</p>	<p>at least one integrated navigation hardware control configured to control features and manipulate content displaced on the portable computer, wherein at least one of the least one integrated navigation hardware control is accessible in each of the plurality of modes including when the keyboard is inaccessible or oriented away from the user.</p>
<p>Claim 10, a first navigation button user-accessible in each of the laptop mode and the easel mode, and configured to permit the user to manipulate selected content displayed on the screen.</p> <p>Claim 11, wherein the first navigation button is configured to permit the user to select for display one of the plurality of modes of content.</p>	<p>Claim 26, at least one integrated navigation hardware control, wherein at least one integrated navigation hardware control accessible in at least the laptop and easel modes, and wherein the integrated navigation hardware can be operated by a user to control features and manipulate content displayed on the portable computer, including any mode wherein the keyboard is inaccessible or</p>

	oriented away from the user.
Claim 22, wherein the plurality of modes includes a frame mode in which the single display component is oriented towards the operator, the base contacts a substantially horizontal surface, and the keyboard is directed towards the substantially horizontal surface.	Claim 27, wherein the plurality of modes includes a frame mode in which the single display component is oriented towards the operator, the base contacts a substantially horizontal surface, and the keyboard is directed towards the substantially horizontal surface.
Claim 23, wherein the frame mode is configured to display to a user on the single display component the first content mode having the first content display orientation.	Claim 34, wherein the act of configuring the content orientation include an act of displaying the visual display in the first content orientation of the content for the frame mode.
Claim 24, wherein the portable computer is configured to prevent the portable computer from responding to keyboard input when the portable computer is in the fame mode.	Claim 29, a protection module configured to prevent keyboard operation when the portable computer is configured in the frame mode.

Copending Application No. 12/170,939 rejected with **Nishiyama** “**5,436,954**”. Nobuchi and Aarras as a whole fail to teach Application No. 12/170,951 claims 1, 7 and 13, a scroll wheel disposed at least partially within the base and rotatable about the longitudinal axis, the scroll wheel configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen.

However, Nishiyama discloses a scroll wheel (scroll wheel is equivalent to selector 8 in fig. 1) disposed at least partially within the base and rotatable about the longitudinal axis, the scroll wheel (8) configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen. (col. 4; lines 21 – 26)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display orientation of Nobuchi and the easel mode taught in figures 8 & 19 of Aarras to further include the scroll wheel of Nishiyama to allow the user easily select or view information.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2629

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in **Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966)**, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: (*See MPEP Ch. 2141*)

- a. Determining the scope and contents of the prior art;
- b. Ascertaining the differences between the prior art and the claims in issue;
- c. Resolving the level of ordinary skill in the pertinent art; and
- d. Evaluating evidence of secondary considerations for indicating obviousness or nonobviousness.

4. Claims 1 - 8, 10 - 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nobuchi “US 6,492,974” in view of Aarras “US 2006/0264243” and further in view of Nishiyama “5,436,954”.

Re-Claim 1, Nobuchi teaches a portable computer comprising: (fig. 1)

a base (fig. 1; 1) including a keyboard (2);

a single display component (3) rotatably coupled to the base (1) such that the single display component (3) and the base (1) are rotatable with respect to one another about a longitudinal axis (5) running along an interface between the display component (3) and the base (1) to transition between at least a laptop mode (figs. 1 & 16(a)), the single display component including a display screen (3), wherein

the laptop mode (figs. 1 & 16 (a)) is configured to display to a user on the single display (3) component a first content mode (fig. 16(a)) having a first content display

Art Unit: 2629

orientation with the single display component oriented towards the user and the keyboard oriented to receive input from the user; (fig. 16(a)) and col. 1; lines 31 – 34)

Nobuchi fails to teach an easel mode is configured to display to a user on the single display component a second content mode.

However Aarras teaches an easel mode (figs. 8 & 19) is configured to display to the user on the single display (30 in fig.19) component a second content mode (fig. 19) having a second content display orientation (par. 50; lines 7 – 10) with the single display (30) component oriented towards the user and the keyboard (14) oriented away from the user (see figs. 8 & 19), wherein the first and second content display orientations are 180 degrees relative to each other; and (par. 39; lines 3 – 6)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display orientation of Nobuchi and the easel mode taught in figures 8 & 19 of Aarras to allow a user to select the image from the display as shown in FIG. 8. (Aarras, par. 40) **Neither Nobuchi nor Aarras expressly disclose** a scroll wheel.

However Nishiyama discloses a scroll wheel (scroll wheel is equivalent to selector 8 in fig. 1) disposed at least partially within the base and rotatable about the longitudinal axis, the scroll wheel (8) configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen. (col. 4; lines 21 – 26)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display orientation of Nobuchi and the easel mode taught in figures 8 & 19 of Aarras to further include the scroll wheel as disclosed by Nishiyama to allow the user easily select or view information.

Re-claim 2, Nobuchi, Aarras and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, where the scroll wheel (fig. 1; 8) is configured to permit the user to adjust a volume of sound produced by the portable computer. (col. 4; lines 27 – 29)

Re-Claim 3, Nobuchi, Aarras and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, a first navigation button (fig. 1; 9) disposed on one of the base (4) and the display component (2) and configured to permit the user to manipulate selected content displayed on the screen (7). (col. 5; lines 23 – 28)

Re-Claim 4, Nobuchi, Aarras and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, wherein the screen is configured to display at least one of a plurality of modes of content; and wherein the navigation button is configured to permit the user to select for display one of the plurality of modes of content. (col. 4; lines 42 – 68)

Re-Claim 5, Nobuchi, Aarras and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, a second navigation button (fig. 1; 11); wherein the first navigation button (item 9) is disposed on a major surface of the base (4); and wherein the second navigation button (11) is disposed on a minor surface of the base. (see fig. 1)

Re-Claim 6, Nobuchi, Aarras and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, wherein the scroll wheel (fig. 3; 8) is configured to permit the user to select a mode of content for display by the portable computer. (col. 5; lines 34 – 39)

Re-Claim 7, Nobuchi teaches a portable computer configurable between a plurality of display modes including a laptop mode (figs. 1 & 16(a)), the portable computer comprising:

a base (fig. 1; 1) including a keyboard (2);

a single display component (3) rotatably coupled to the base (1) and including a screen (3) which displays content;(col. 1; lines 28 – 30)

a hinge (5) assembly disposed at least partially within the base (1) and the display component (3) that defines an axis of rotation about which both the base and the display component are rotatable (see fig. 2) to transition the portable computer between the laptop mode (figs. 1 & 16(a)), wherein

the laptop mode (figs. 1 & 16 (a)) is configured to display to a user on the single display (3) component a first content mode (fig. 16(a)) having a first content display orientation with the single display component oriented towards the user and the keyboard oriented to receive input from the user; (fig. 16(a)) and col. 1; lines 31 – 34)

Nobuchi fails to teach an easel mode is configured to display to a user on the single display component a second content mode.

However Aarras teaches an easel mode (figs. 8 & 19) is configured to display to the user on the single display (30 in fig.19) component a second content mode (fig. 19) having a second content display orientation (par. 50; lines 7 – 10) with the single display (30) component oriented towards the user and the keyboard (14) oriented away from the user (see figs. 8 & 19), wherein the first and second content display orientations are 180 degrees relative to each other; and (par. 39; lines 3 – 6)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display orientation of Nobuchi and the easel mode taught in figures 8 & 19 of Aarras to allow a user to select the image from the display as shown in FIG. 8. (Aarras, par. 40)

Neither Nobuchi nor Aarras expressly disclose a scroll wheel.

However Nishiyama discloses a scroll wheel (8 in fig. 1) accessible in each of the plurality of display modes and configured to permit a user to manipulate at least one of operating parameters of the portable computer and the content displayed on the screen. (col. 4; lines 21 – 26)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display orientation of Nobuchi and the easel mode taught in figures 8 & 19 of Aarras to further include the scroll wheel as disclosed by Nishiyama to allow the user easily select or view information.

Re-Claim 8, the combination of **Nobuchi, Aarras and Nishiyama as a whole teach further teach** wherein the scroll wheel (Nishiyama, fig. 3; 8) is disposed at least partially about the axis of rotation of the display component (3) relative to the base (1) (Nobuchi, col. 1; lines 28 – 30).

Re-Claim 10, the combination of **Nobuchi, Aarras and Nishiyama as a whole further teach** first navigation button (Nishiyama; 9 in fig. 1) user-accessible in each of the laptop mode (Nobuchi, figs. 1 & 2) and the easel mode (Aarras, figs. 8 & 19), and configured to permit the user to manipulate selected content displayed on the screen. (Nishiyama, col. 5; lines 23 – 68 through col. 6; lines 1 – 4)

Re-Claim 11, is rejected as applied to claim 4 above because the scope and contents of the recited limitations are substantially the same.

Re-Claim 12, the combination of Nobuchi, Aarras and Nishiyama as a whole further teach a second navigation button (Nishiyama, fig. 1; 11) that is not user-accessible when the portable computer is in the easel mode (Aarras, figs. 8 & 19).

Re-Claim 13, is rejected as applied to claims 1 and 7 above because the scope and contents of the recited limitations are substantially the same.

Re-Claim 14, Nobuchi, Aarras and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, wherein the scroll wheel (fig. 3; 8) is configured to permit a user to manipulate the content displayed on the screen. (col. 4; lines 55 - 61)

Re-Claim 15, is rejected as applied to claim 2 above because the scope and contents of the recited limitations are substantially the same.

Re-Claim 16, Nobuchi, Aarras and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, wherein the scroll wheel (fig. 1; 8) is disposed at least partially within the hinge (3) assembly. (see fig. 1)

Re-Claim 17, is rejected as applied to claim 3 above because the scope and contents of the recited limitations are substantially the same.

Re-Claim 18, the combination of Nobuchi, Aarras and Nishiyama as a whole further teach wherein rotating either the display component (Nishiyama, 3 in fig. 1) or the base (1) about the longitudinal axis (5) up to approximately 180 degrees from a closed mode (Nobuchi, fig. 8) in which the display screen is disposed substantially against the base configures the portable computer into the laptop mode (Nobuchi, figs. 1 & 16(a)); and

Wherein rotating either the display component or the base (1) about the longitudinal axis (5) beyond approximately 180 degrees from the closed mode (fig. 8) (Nobuchi, col. 1; lines 28 - 30) configures the portable computer into the easel mode (Aarras, figs. 8 & 19).

Re-Claim 19, Nobuchi, Aarras and Nishiyama as a whole teach all the limitations of claim 1, Nobuchi further discloses, wherein an operating display

Art Unit: 2629

mode (fig. 1) is selected from the plurality of display modes based on a physical orientation of the portable computer. (col. 2; lines 49 – 59)

Re-Claim 20, the combination of Nobuchi, Aarras and Nishiyama as a whole further teach wherein an operating display mode is selected from the plurality of display modes (Nobuchi, col. 2; lines 49 – 59) in response to operation of the scroll wheel (8). (Nishiyama, col. 5; lines 34 – 39)

Re-Claim 21, Nobuchi, Aarras and Nishiyama as a whole teach all the limitations of claim 1, Nishiyama further discloses, wherein the scroll wheel (item 8) provides a default action which effects manipulation of the at least one of the operating parameters of the portable computer, wherein the default action is defined differently responsive to a display mode of the portable computer. (col. 4; lines 42 – 61 and col. 5; lines 34 - 66)

Re-Claim 22, Nobuchi, Aarras and Nishiyama as a whole teach all the limitations of claim 1, Nobuchi further discloses, wherein the plurality of modes includes a frame mode in which the single display (3 in fig. 14) component is oriented towards the operator, the base (1 in fig. 14) contacts a substantially horizontal surface, and the keyboard is directed towards the substantially horizontal surface. (see fig. 14)

Re-Claim 23, Nobuchi, Aarras and Nishiyama as a whole teach all the limitations of claim 1, Nobuchi further discloses, wherein the frame mode (fig. 14) is configured to display to a user on the single display (3) component the first content mode having the first content display orientation (fig. 16(a)).

Re-Claim 24, Nobuchi, Aarras and Nishiyama as a whole teach all the limitations of claim 1, Nobuchi further discloses, wherein the portable computer is configured to prevent the portable computer from responding to keyboard input when the portable computer is in the frame mode (fig. 14).

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sosina Abebe whose telephone number is (571) 270-7929. The examiner can normally be reached on Mon-Thurs from 9:00-5:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, LunYi Lao can be reached on (571) 272-7671. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for

Art Unit: 2629

unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/S. A./

Examiner, Art Unit 2629

/Grant D Sitta/

Primary Examiner, Art Unit 2629

Notice of References Cited	Application/Control No. 12/170,951	Applicant(s)/Patent Under Reexamination BEHAR ET AL.	
	Examiner SOSINA ABEBE	Art Unit 2629	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-6,492,974	12-2002	Nobuchi et al.	345/156
	B US-			
	C US-			
	D US-			
	E US-			
	F US-			
	G US-			
	H US-			
	I US-			
	J US-			
	K US-			
	L US-			
	M US-			


FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N				
	O				
	P				
	Q				
	R				
	S				
	T				

NON-PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)				
	U				
	V				
	W				
	X				

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.


Search Notes 	Application/Control No. 12170951	Applicant(s)/Patent Under Reexamination BEHAR ET AL.
	Examiner SOSINA ABEBE	Art Unit 2629

SEARCHED			
Class	Subclass	Date	Examiner
345	169,184	03/24/11	SA
	updated the above searches	10/13/11	SA
345	168-169,184	05/21/12	SA
361	679.3,679.21,679.26-679.27	05/21/12	SA

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor name search	03/24/11	SA
East Search	03/24/11	SA
Consulted with SPE LunYi Lao	10/13/11	SA
Updated East Search	10/13/11	SA
Updated East Search	05/21/12	SA
Consulted with Primary Grant Sitta	05/22/12	SA

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

/S. A. Examiner.Art Unit 2629	
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<i>Index of Claims</i> 	Application/Control No. 12170951	Applicant(s)/Patent Under Reexamination BEHAR ET AL.
	Examiner SOSINA ABEBE	Art Unit 2629

✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE							
Final	Original	03/24/2011	10/13/2011	05/29/2012					
	1	✓	✓	✓					
	2	✓	✓	✓					
	3	✓	✓	✓					
	4	✓	✓	✓					
	5	✓	✓	✓					
	6	✓	✓	✓					
	7	✓	✓	✓					
	8	✓	✓	✓					
	9	✓	-	-					
	10	✓	✓	✓					
	11	✓	✓	✓					
	12	✓	✓	✓					
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	21		✓	✓					
	22			✓					
	23			✓					
	24			✓					

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L19	312	361/679.3.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/31 12:18
L20	260	L19 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/31 12:18
L21	757	345/184.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/31 12:19
L22	622	L21 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/31 12:19
S4	76	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:12
S5	34	Morenstein near Joshua.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:12
S6	19	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:13
S7	14	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:13
S8	17	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:13
S10	83	("20020005818" "20020021258" "20030048595" "20030109232" "20040203535" "20040228076" "20050018396" "20050041378" "20050063145" "20050128695" "20050146845" "20050210399" "20050210399" "20050257400" "20050282596" "20060126284" "20060264243" "20060268500" "20070138806" "20070182663" "20080042987" "20080062625" "20080284738" "20090244832" "20090275366" "20090300511" "20090303676" "20090322790" "20100174993" "3468576" "4939514" "5200913" "5268817" "5515345" "5547698" "5712760" "5790371" "5793355" "5796575" "5825352" "5841631" "5900848" "5949643" "5987704" "5987704" "6005767" "6005767" "6067224" "6222507" "6223393" "6262885" "6266236" "6266236" "6275376" "6275376" "6295038" "6302612" "6323846" "6327482" "6343006" "6343006" "6377444" "6464195" "6510049" "6628267" "6628267" "6642909" "6659516" "6659516" "6661426" "6661426" "6665175" "6697055" "6771494" "6771494")	USPAT	OR	ON	2011/03/22 19:16

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S16	3	(rotat\$4 near display) same (scroll near wheel) with base	US-PGPUB; USPAT	OR	ON	2011/03/22 19:31
S19	15	(rotat\$4 near display) and (scroll and wheel) same base	US-PGPUB; USPAT	OR	ON	2011/03/22 19:34
S21	76	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 19:40
S22	2	"20060264243"	US-PGPUB; USPAT	OR	ON	2011/03/22 19:43
S23	1	"6295038".pn.	US-PGPUB; USPAT	OR	ON	2011/03/22 19:57
S25	1	345/184.ccls. and (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/24 11:34
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S39	11	345/184.ccls. and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/25 15:38
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S48	1	"11606556"	US-PGPUB; USPAT	OR	ON	2011/03/25 17:32
S51	5	(PDA or laptop or cellular) with (two near navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/25 18:40
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S54	1	"7467356".pn.	US-PGPUB; USPAT	OR	ON	2011/03/26 19:50
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S56	1	"20020010707"	US-PGPUB; USPAT	OR	ON	2011/10/11 12:57
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S73	9	(laptop) same (frame near mode) or (stand near mode) same (longitudinal near axis)	US-PGPUB; USPAT	OR	ON	2011/10/11 15:50
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S80	1	"6341061".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:20
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S82	1	"6295038".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:23
S83	1	"6297752".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:24
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S97	319	(laptop or mobile) same (rotat\$3 near axis) same (frame)	US-PGPUB; USPAT	OR	ON	2011/10/11 16:58
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S113	1	"20050221865"	US-PGPUB; USPAT	OR	ON	2011/10/12 16:21
S131	18	"455"/\$.ccls. and (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/12 17:51
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S143	117	(laptop) same (scroll near wheel)	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 10:07
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S151	1	"20050221865"	US-PGPUB; USPAT	OR	ON	2011/10/13 14:48
S152	2	"20010016508"	US-PGPUB; USPAT	OR	ON	2011/10/13 14:51
S154	86	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:08
S157	1	"6266236".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 15:17
S158	2	"20040001049"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 15:31
S159	40	Morenstein near Joshua.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34
S160	21	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34
S161	16	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34
S162	18	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34

EAST Search History

S169	54	345/169.ccls. and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/14 12:36
S170	51	S169 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/14 12:36
S171	8	(laptop) with (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/14 12:40
S196	1	"20060264243"	USPAT	OR	OFF	2011/10/14 15:29
S197	69	(laptop) with (scroll near wheel)	US-PGPUB; USPAT	OR	ON	2011/10/14 16:08
S198	50	S197 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/14 16:08
S200	153	(laptop) same (scroll near wheel)	US-PGPUB; USPAT	OR	ON	2011/10/14 16:25
S201	95	S200 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/14 16:25
S225	1	"5767842".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/15 14:00
S238	305	(scroll near wheel) same (laptop or cellular)	US-PGPUB; USPAT	OR	OFF	2011/10/17 10:13
S240	117	(scroll near wheel) same (laptop)	US-PGPUB; USPAT	OR	OFF	2011/10/17 10:13
S250	2	"5436954".pn.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/10/17 14:02
S252	1	"6295038".pn.	US-PGPUB; USPAT	OR	ON	2011/10/17 14:12
S282	2	"20060264243"	US-PGPUB; USPAT	OR	ON	2011/10/18 09:30
S328	1	"7084919".pn.	US-PGPUB; USPAT	OR	ON	2012/05/21 13:23
S329	2	"20040198460"	US-PGPUB; USPAT	OR	ON	2012/05/21 13:23
S330	1	"20050272462"	US-PGPUB; USPAT	OR	ON	2012/05/21 13:23
S331	1	"5436954".pn.	US-PGPUB; USPAT	OR	ON	2012/05/21 13:24
S334	1	"09979897"	US-PGPUB; USPAT	OR	ON	2012/05/21 14:02
S335	28	("5719799" "5982429" "6069648" "6510325" "6697117" "6750848").FN. OR ("7084919").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 14:36
S336	75	("4120038" "5442512" "5475441" "5488558").FN. OR ("5719799").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 16:01
S337	103	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08
S338	43	Morenstein near Joshua.inv.	US-PGPUB;	OR	ON	2012/05/21

			USPAT			16:08
S339	22	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08
S340	23	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08
S341	19	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08
S342	9	S337 and S338 and S339 and S340 and S341	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08
S343	2	"20040001049"	US-PGPUB; USPAT	OR	ON	2012/05/21 16:13
S345	14	("20050018396" "20050041378" "6067224" "D395868" "D452238" "D463797" "D476326" "D491177" "D491936" "D494162" "D513509" "D516552" "D523429").PN. OR ("D593085").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 16:20
S346	103	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:59
S347	43	Morenstein near Joshua.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:59
S348	22	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:59
S349	23	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:59
S350	19	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:59
S351	9	S346 and S347 and S348 and S349 and S350	US-PGPUB; USPAT	OR	ON	2012/05/21 17:00
S352	4	("20070242421" "20080024388" "20080158795" "20090190295").PN.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:01
S353	117737	configuration with display	US-PGPUB; USPAT	OR	ON	2012/05/21 17:08
S354	1739765	sensor or detector	US-PGPUB; USPAT	OR	ON	2012/05/21 17:08
S355	325998	laptop or "notebook computer" or "portable computer"	US-PGPUB; USPAT	OR	ON	2012/05/21 17:08
S356	37894	S353 and S354	US-PGPUB; USPAT	OR	ON	2012/05/21 17:09
S357	89456	S354 and S355	US-PGPUB; USPAT	OR	ON	2012/05/21 17:09
S358	349331	hinge	US-PGPUB; USPAT	OR	ON	2012/05/21 17:09
S359	4988	S358 and S357	US-PGPUB; USPAT	OR	ON	2012/05/21 17:10
S360	3370	S359 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 17:10
S361	6728	flip with image	US-PGPUB; USPAT	OR	ON	2012/05/21 17:11
S362	46	S361 and S359	US-PGPUB; USPAT	OR	ON	2012/05/21 17:11
S363	32	S362 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 17:11

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S364	2400838	rotate or rotatable or rotating	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 17:15
S365	40	S362 and S364	US-PGPUB; USPAT	OR	ON	2012/05/21 17:16
S366	2214	345/169.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:17
S367	2966	361/679.21,679.26,679.27.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:17
S368	4137	455/575.1-575.2.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:19
S369	3238	345/168.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:21
S370	2620	S369 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 17:22
S371	1855	S366 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 17:22
S378	1	"6492974".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/22 15:10
S379	2	"20060264243"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/22 15:56
S381	5	"12170939"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/22 16:48
S382	1	"5436954".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/22 16:51
S413	1	"6492974".pn.	US-PGPUB; USPAT	OR	OFF	2012/05/29 14:24
S414	1	"11559763"	US-PGPUB; USPAT	OR	ON	2012/05/29 17:57
S419	17	("20030048595" "20040228076" "20050063145" "20050128695" "5712760" "5847698" "6464195" "6642909" "6665175" "D399526" "D495694" "D528541" "D535292").PN. OR ("D593091").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/30 14:49
S421	1	"5436954".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/30 14:50

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5/ 31/ 2012 12:25:13 PM

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12170951 - GAU: 2629

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

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	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit	2629		
	Examiner Name	S. Abebe		
	Attorney Docket Number	L2039-700111		

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	3	20080158795		2008-07-03	Aoki et al.			
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	Examiner Name	S. Abebe		
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	Art Unit	2629		
	Examiner Name	S. Abebe		
	Attorney Docket Number	L2039-700111		

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- See attached certification statement.
- The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.
- A certification statement is not submitted herewith.

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Signature	/Matthew H. Grady/	Date (YYYY-MM-DD)	2012-05-18
Name/Print	Matthew H. Grady	Registration Number	52957

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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	First Named Inventor	Yves Behar		
	Art Unit	2629		
	Examiner Name	S. Abebe		
	Attorney Docket Number	L2039-700111		

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Signature	/Matthew H. Grady/	Date (YYYY-MM-DD)	2012-05-18
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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	12814752
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Matthew H. Grady
Filer Authorized By:	
Attorney Docket Number:	L2039-700111
Receipt Date:	18-MAY-2012
Filing Date:	10-JUL-2008
Time Stamp:	15:23:13
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	L2039-700111_-_Information_Disclosure_Statement_Fillable_PDF_1.pdf	611781 <small>58b05bd4119f794ea7d21f60b8e193c91a5e3701</small>	no	4

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL (Submitted Only via EFS-Web)							
Application Number	12170951	Filing Date	2008-07-10	Docket Number (if applicable)	L2039-700111	Art Unit	2629
First Named Inventor	Yves Behar			Examiner Name	S. Abebe		
<p>This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application. Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV</p>							
SUBMISSION REQUIRED UNDER 37 CFR 1.114							
<p>Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).</p>							
<p><input checked="" type="checkbox"/> Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> Consider the arguments in the Appeal Brief or Reply Brief previously filed on <u>2012-02-28</u></p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> Other <u>Please do not enter the amendments filed on 2/28/2012. Please entered the amendments as enclosed</u></p> <p><input checked="" type="checkbox"/> Enclosed</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> Amendment/Reply</p> <p style="margin-left: 40px;"><input type="checkbox"/> Information Disclosure Statement (IDS)</p> <p style="margin-left: 40px;"><input type="checkbox"/> Affidavit(s)/ Declaration(s)</p> <p style="margin-left: 40px;"><input type="checkbox"/> Other _____</p>							
MISCELLANEOUS							
<p><input type="checkbox"/> Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)</p> <p><input type="checkbox"/> Other _____</p>							
FEES							
<p>The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.</p> <p><input checked="" type="checkbox"/> The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No <u>50/2762</u></p>							
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED							
<p><input checked="" type="checkbox"/> Patent Practitioner Signature</p> <p><input type="checkbox"/> Applicant Signature</p>							

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)

Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/Matthew H. Grady/	Date (YYYY-MM-DD)	2012-03-22
Name	Matthew H. Grady	Registration Number	52957

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Docket No.: L2039-700111

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yves Behar
Serial No: 12/170,951
Confirmation No: 2004
Filed: July 10, 2008
For: PORTABLE COMPUTER WITH MULTIPLE DISPLAY
CONFIGURATIONS
Examiner: ABEBE, SOSINA
Art Unit: 2629

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being electronically filed in accordance with 37 C.F.R. §1.6(a)(4) on the 22nd day of March, 2012.

/Matthew H. Grady/
Matthew H. Grady, Reg. No. 52,957

Commissioner for Patents

AMENDMENT

Sir:

In further response to the Office Action mailed October 28, 2011, the Advisory Action of March 16, 2012, and accompanying a Request for Continued Examination, please amend the above-identified application as follows. Changes to the Claims are shown by strike through (for deleted matter) and underlining (for added matter). Please do not enter the Amendments submitted February 28, 2012.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 7 of this paper.

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A portable computer comprising:
a base including a keyboard;
a single display component rotatably coupled to the base such that the single display component and the base are rotatable with respect to one another about a single longitudinal axis running along an interface between the display component and the base to transition between at least a laptop mode and an easel mode, the single display component including a display screen, wherein
the laptop mode is configured to display to a user on the single display component a first content mode having a first content display orientation with the single display component oriented towards the user and the keyboard oriented to receive input from the user;
the easel mode is configured to display to the user on the single display component a second content mode having a second content display orientation with the single display component oriented towards the user and the keyboard oriented away from the user, wherein the first and second content display orientations are 180 degrees relative to each other; and
a scroll wheel disposed at least partially within the base and rotatable about the single longitudinal axis, the scroll wheel configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen.
2. (Original) The portable computer of claim 1, where the scroll wheel is configured to permit the user to adjust a volume of sound produced by the portable computer.
3. (Original) The portable computer of claim 1, further comprising a first navigation button disposed on one of the base and the display component and configured to permit the user to manipulate selected content displayed on the screen.

4. (Original) The portable computer of claim 3, wherein the screen is configured to display at least one of a plurality of modes of content; and
wherein the navigation button is configured to permit the user to select for display one of the plurality of modes of content.
5. (Original) The portable computer of claim 3, further comprising a second navigation button;
wherein the first navigation button is disposed on a major surface of the base; and
wherein the second navigation button is disposed on a minor surface of the base.
6. (Original) The portable computer of claim 1, wherein the scroll wheel is configured to permit the user to select a mode of content for display by the portable computer.
7. (Currently Amended) A portable computer configurable between a plurality of display modes including a laptop mode and an easel mode, the portable computer comprising:
a base including a keyboard;
a single display component rotatably coupled to the base and including a screen which displays content;
a hinge assembly disposed at least partially within the base and the display component that defines ~~a single~~ an axis of rotation about which both the base and the display component are rotatable to transition the portable computer between the laptop mode and the easel mode,
wherein
the laptop mode is configured to display to a user on the single display component a first content mode having a first content display orientation with the single display component oriented towards the user and the keyboard oriented to receive input from the user;
the easel mode is configured to display to the user on the single display component a second content mode having a second content display orientation with the single display component oriented towards the user and the keyboard oriented away from the user, wherein the first and second content display orientations are 180 degrees relative to each other; and

a scroll wheel accessible in each of the plurality of display modes and configured to permit a user to manipulate at least one of operating parameters of the portable computer and the content displayed on the screen.

8. (Currently Amended) The portable computer of claim 7; wherein the scroll wheel is disposed at least partially about the ~~single~~ axis of rotation of the display component relative to the base.

9. (Cancelled)

10. (Original) The portable computer of claim 7, further comprising a first navigation button user-accessible in each of the laptop mode and the easel mode, and configured to permit the user to manipulate selected content displayed on the screen.

11. (Original) The portable computer of claim 10, wherein the screen is configured to display at least one of a plurality of modes of content; and
wherein the first navigation button is configured to permit the user to select for display one of the plurality of modes of content.

12. (Previously Presented) The portable computer of claim 10, further comprising a second navigation button that is not user-accessible when the portable computer is in the easel mode.

13. (Currently Amended) A portable computer comprising:
a base including a keyboard;
a single display component including a screen configured to display content;
a hinge assembly disposed at least partially within the base configured to rotatably couple the display component to the base, the hinge assembly defining a ~~single~~ longitudinal axis running along an interface between the display component and the base about which the display component and the base are rotatable to transition the portable computer between at least a laptop mode and an easel mode, wherein

the laptop mode is configured to display to a user on the single display component a first content mode having a first content display orientation with the single display component oriented towards the user and the keyboard oriented to receive input from the user;

the easel mode is configured to display to the user on the single display component a second content mode having a second content display orientation with the single display component oriented towards the user and the keyboard oriented away from the user, wherein the first and second content display orientations are 180 degrees relative to each other; and

a scroll wheel disposed at least partially about the longitudinal axis.

14. (Original) The portable computer of claim 13, wherein the scroll wheel is configured to permit a user to manipulate the content displayed on the screen.
15. (Original) The portable computer of claim 13, wherein the scroll wheel is configured to permit a user to control a volume of sound played by the portable computer.
16. (Original) The portable computer of claim 13, wherein the scroll wheel is disposed at least partially within the hinge assembly.
17. (Original) The portable computer of claim 13, further comprising at least one navigation button disposed on one of the base and the display component.
18. (Currently Amended) The portable computer of claim 1, wherein rotating either the display component or the base about the ~~single~~ longitudinal axis up to approximately 180 degrees from a closed mode in which the display screen is disposed substantially against the base configures the portable computer into the laptop mode; and
wherein rotating either the display component or the base about the ~~single~~ longitudinal axis beyond approximately 180 degrees from the closed mode configures the portable computer into the easel mode.

19. (Previously Presented) The portable computer of claim 7, wherein an operating display mode is selected from the plurality of display modes based on a physical orientation of the portable computer.
20. (Previously Presented) The portable computer of claim 7, wherein an operating display mode is selected from the plurality of display modes in response to operation of the scroll wheel.
21. (Currently Amended) The portable computer of claim 8, wherein the scroll wheel provides a default action which effects manipulation of the at least one of the operating parameters of the portable computer, wherein the default action[s] is defined differently responsive to a display mode of the portable computer.
22. (New) The portable computer of claim 1, wherein the plurality of modes includes a frame mode in which the single display component is oriented towards the operator, the base contacts a substantially horizontal surface, and the keyboard is directed towards the substantially horizontal surface.
23. (New) The portable computer of claim 22, wherein the frame mode is configured to display to a user on the single display component the first content mode having the first content display orientation.
24. (New) The portable computer of claim 22, wherein the portable computer is configured to prevent the portable computer from responding to keyboard input when the portable computer is in the frame mode.

REMARKS

Claims 1-8 and 10-21 were previously pending in this application. Claims 1, 7-8, 13, 18, and 21 have been amended herein. Claims 22-24 have been added. As a result claims 1-8 and 10-24 are pending for examination with claims 1, 7, and 13 being independent claims. No new matter has been added. The application as presented is believed to be in condition for allowance.

Rejections Under 35 U.S.C. §103

The Office Action rejected claims 1-2, 6-9, 11, and 13-17 under 35 U.S.C. §103(a) as being unpatentable over Nishiyama (hereinafter Nishiyama) in view of U.S. Publication No. 2006/0264243 to Aarras (hereinafter Aarras). In response, Applicant has amended the independent claims to be more clear and respectfully submits the following remarks traversing the rejection.

As discussed and not addressed in the prior response, the proposed combination of Aarras in view of Nishiyama *and* Nishiyama in view of Arras is not proper. Even assuming for the purposes of argument the combination proper, the proposed combination would not result in the invention as claimed.

Nishiyama discloses a portable telephone radio set which includes a rotary selector which turns to select various functions. (Abstract; see also Col. 2, lines 18-23). The telephone set includes sections “engaged via joint portion 3 by which the telephone set is folded and rotated so as to be housed.” (Col. 4, lines 1-4). As discussed, “the selector 8 is provided in the joint portion 3 so as to select various functions.” (Col. 5, lines 12-13). The joint portion includes a “stopper 24” for stopping rotation of the joint portion. (Please see Col. 7, line 54 – Col. 8, line 2; and Fig. 5). “The notch 25” within the joint portion “is formed at an open position where the telephone is being used and at a housing position ... where it is folded and housed. (Col. 8 lines 8-11). The notch 26 does not allow “the engagement of the stopper piece 24 to be released.” (Col. 8, lines 2-5). In summary, Nishiyama discloses a telephone set with a rotary selector configurable between a closed position and an open position about a single axis joint portion, wherein the joint portion with selector locks the sections of Nishiyama device into a telephone configuration, and prevents rotation of the sections of Nishiyama past the telephone configuration.

One cannot change Nishiyama to operate in an “easel mode” as recited in the instant application without changing the principle of operation disclosed. Nishiyama disclosed a telephone device that is prevented from rotating past the telephone configuration. As the M.P.E.P. instructs there is no prima facie case of obviousness where a proposed modification changes the principle of operation of the reference. (M.P.E.P. §2143.03 Sec V.) Specifically, Nishiyama discloses that the joint portion includes a “stopper 24” “disposed in the shank 23 which is engaged with notches 25 and 26 and as a result rotation of the sleeve 20 is stopped. (Please see Col. 7, line 54 – Col. 8, line 2; and Fig. 5). The notch 26 *cannot be disengaged*, representing a position beyond which the telephone set *cannot be rotated*. (Please see Col. 8, lines 2-5).

Aarras describes a device with sections completely rotatable around each other to accomplish the disclosed book metaphor. (Please see paras. 0010, 0038, and 0047-49). It would not be obvious to the person of ordinary skill to combine a telephone device (Nishiyama) with a built in stopper that prevents the device from rotating with device of Aarras that operates by completely rotating around the disclose hinge. These teachings and the structures disclosed are not compatible. Modifying Nishiyama to include the teaching of Aarras would eliminate the disclosed stop position for operation of the telephone device which would be improper, and modifying Aarras with Nishiyama’s joint portion and scroll wheel would result in the Aarras device’s rotation being stopped at an open position (defeating the disclosed book metaphor) which would also be improper. (Please see M.P.E.P. §2143.03 Sec. V & VI). Due to the stop position disclosed in Nishiyama, the telephone device of Nishiyama *cannot* be transitioned from a laptop mode to an easel mode, thus, claim 1 would not be obvious in light of either Nishiyama or Aarras in combination with the other.

To further prosecution, Applicant has also submitted amendments to further clarify Applicant’s contribution to the art.

As admitted in the Office Action, Nishiyama does not teach or suggest a portable computer having “a single display component rotatably coupled to the base such that the single display component and the base are rotatable with respect to one another about a longitudinal axis running along an interface between the display component and the base to transition between ... a laptop mode and an easel mode,” as recited in claim 1, as amended. Aarras does

not cure this deficiency. In particular, Aarras does not teach or suggest “a single display component rotatably coupled to the base” such that they are “rotatable with respect to one another about a longitudinal axis running along an interface between the display component and the base to transition between ... a laptop mode and an easel mode.”

Aarras does not disclose a transition from a laptop mode and an easel mode responsive to a rotation of a base and a display component about a longitudinal axis. Aarras discloses a device with the two sections connected by a dual axis hinge. (See e.g., section 16, in Fig. 1-3). The dual axis hinge of Aarras enables the device to present displays on the first and second sections according to a book metaphor. (Please see paras. 0010, 0038, and 0047-49). One completely flips the first section around the second to reveal a display on the second section. Aarras does not teach or suggest a transition between the claimed laptop mode and easel mode - there is no change in display orientation triggered by the rotation of the sections of Aarras about the longitudinal axis. As shown in Figs. 8 and 9 (relied on by the Examiner), the display orientation does not change as the sections of Aarras are rotated, thus Aarras does not teach the claimed easel mode. Indeed, if one were to change the orientation of one of the displayed sections shown in Figs. 8 and 9 as claimed, the display for Aarras would be oriented upside down for a viewer, which is not reasonable.

The only change in a content orientation disclosed in Aarras occurs in a dual display embodiment, where a display orientation is rotated from a first portrait type orientation to a second landscape type orientation in response to a second portion 94 of one section 90 changing from a first position to a second position relative to the first portion 92 of the same one section 90. (See para. 0059, and Figs. 31-33). Thus, any positional/orientation change of the displayed content disclosed in Aarras is 90 degrees and not 180 degrees as claimed. Further, the transition occurs as a result of rotation of two portions of *one section* of the Aarras device, not as part of a transition from a laptop mode to an easel mode.

Thus even assuming the combination of the systems of Nishiyama and Aarras proper, for the purposes of argument, the combination does not teach or suggest claim 1, as amended, as neither references teaches or suggests “a single display component rotatably coupled to the base such that the single display component and the base are rotatable with respect to one another about a longitudinal axis running along an interface between the display component and the base to transition between ... a laptop mode and an easel mode,” as recited in claim 1, as amended.

Accordingly, withdrawal of the rejection is respectfully requested. Claims 2-6 and new claims 22-24 depend from claim 1 and are allowable for at least the same reasons.

Independent claims 7 and 13 also recite “transition the portable computer between the laptop mode and the easel mode.” As discussed above, it is not obvious to modify Nishiyama with Aarras as a matter of law. Further, neither reference teaches the recited “transition the portable computer between the laptop mode and the easel mode.” Thus, assuming for the purposes of argument the combination proper, the combination does not teach or suggest at least one element of independent claims 7 and 13.

Accordingly withdrawal of the rejections of claims 7 and 13 are respectfully requested. Claims 8, 9-12, and 14-21 depend from independent claims 7 and 13 respectively, and are allowable for at least the same reasons.

CONCLUSION

In view of the foregoing amendments and remarks, reconsideration is respectfully requested. This application should now be in condition for allowance; a notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant’s attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an accompanying payment, please charge any deficiency to Deposit Account No. 50/2762.

Respectfully submitted,

Yves Behar, Applicant

By: Matthew H. Grady/

Matthew H. Grady, Reg. No. 52,957
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Docket No.: L2039-700111

Date: March 22, 2012

Electronic Patent Application Fee Transmittal				
Application Number:	12170951			
Filing Date:	10-Jul-2008			
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS			
First Named Inventor/Applicant Name:	Yves Behar			
Filer:	Matthew H. Grady			
Attorney Docket Number:	L2039-700111			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	1202	1	60	60
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Request for continued examination	1801	1	930	930
Total in USD (\$)				990

Electronic Acknowledgement Receipt

EFS ID:	12371628
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Matthew H. Grady
Filer Authorized By:	
Attorney Docket Number:	L2039-700111
Receipt Date:	22-MAR-2012
Filing Date:	10-JUL-2008
Time Stamp:	21:41:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$990
RAM confirmation Number	7436
Deposit Account	502762
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)					
Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)					
Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	L2039-700111_- _Request_for_Continued_Exa mination_Fillable_PDF_2.pdf	697818	no	3
			1f5e3305327a3613bc8d3b639e6d00c761e95c9d		
Warnings:					
Information:					
2		L2039-700111_RCE_AMEND. pdf	47264	yes	11
			dd39f5fdad6d5fbd6922e850c994b2183f613755		
Multipart Description/PDF files in .zip description					
Document Description			Start	End	
Amendment Submitted/Entered with Filing of CPA/RCE			1	1	
Claims			2	6	
Applicant Arguments/Remarks Made in an Amendment			7	11	
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32309	no	2
			d02fd147db474a4700605d1a696e2e199a63b02e		
Warnings:					
Information:					
Total Files Size (in bytes):			777391		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/170,951	07/10/2008	Yves Behar	L2039-700111	2004
37462	7590	03/16/2012	EXAMINER	
LANDO & ANASTASI, LLP ONE MAIN STREET, SUITE 1100 CAMBRIDGE, MA 02142			ABEBE, SOSINA	
			ART UNIT	PAPER NUMBER
			2629	
			NOTIFICATION DATE	DELIVERY MODE
			03/16/2012	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@LALaw.com
gengelso@LALaw.com

Advisory Action Before the Filing of an Appeal Brief	Application No. 12/170,951	Applicant(s) BEHAR ET AL.
	Examiner SOSINA ABEBE	Art Unit 2629

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 28 February 2012 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.
NO NOTICE OF APPEAL FILED

1. The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance;
(2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

a) The period for reply expires 4 months from the mailing date of the final rejection.

b) The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

c) A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires _____ months from the mailing date of the prior *Advisory Action* or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.

Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because

a) They raise new issues that would require further consideration and/or search (see NOTE below);

b) They raise the issue of new matter (see NOTE below);

c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

d) They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. Applicant's reply has overcome the following rejection(s): _____.

6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. For purposes of appeal, the proposed amendment(s): (a) will not be entered, or (b) will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. The request for reconsideration has been considered but does NOT place the application in condition for allowance because: they raise new issues that would require further search.

12. Note the attached Information *Disclosure Statement(s)*. (PTO/SB/08) Paper No(s). _____

13. Other: _____.

STATUS OF CLAIMS

14. The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: 1-8 and 10-21.

Claim(s) withdrawn from consideration: _____

/LUN-YI LAO/ Supervisory Patent Examiner, Art Unit 2629	/S. A./ Examiner, Art Unit 2629
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- 1 -

Docket No.: L2039-700111

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yves Behar
Serial No: 12/170,951
Confirmation No: 2004
Filed: July 10, 2008
For: PORTABLE COMPUTER WITH MULTIPLE DISPLAY
CONFIGURATIONS
Examiner: ABEBE, SOSINA
Art Unit: 2629

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being electronically filed in accordance with 37 C.F.R. §1.6(a)(4) on the 28th day of February, 2012.

/Matthew H. Grady/
Matthew H. Grady, Reg. No. 52,957

Commissioner for Patents

AMENDMENT AFTER FINAL ACTION UNDER 37 C.F.R. 1.116

Sir:

In response to the Office Action mailed October 28, 2011, please amend the above-identified application as follows. Changes to the Claims are shown by strike through (for deleted matter) and underlining (for added matter).

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 7 of this paper.

Docket No.: L2039-700111

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yves Behar
Serial No: 12/170,951
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/Matthew H. Grady/
Matthew H. Grady, Reg. No. 52,957

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Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 7 of this paper.

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A portable computer comprising:
a base including a keyboard;
a single display component rotatably coupled to the base such that the single display component and the base are rotatable with respect to one another about a single longitudinal axis running along an interface between the display component and the base to transition between a plurality of display modes, wherein the plurality of display modes include a laptop mode and an easel mode, the single display component including a display screen, wherein
the laptop mode is configured to display to a user on the single display component a first content mode having a first content display orientation with the single display oriented towards the user and the keyboard oriented to receive input from the user;
the easel mode is configured to display to the user on the single display component a second content mode having a second content display orientation with the single display oriented towards the user and the keyboard oriented away from the user, wherein the first and second content display orientations are 180 degrees relative to each other; and
a scroll wheel disposed at least partially within the base and rotatable about the single longitudinal axis, the scroll wheel configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen.
2. (Original) The portable computer of claim 1, where the scroll wheel is configured to permit the user to adjust a volume of sound produced by the portable computer.
3. (Original) The portable computer of claim 1, further comprising a first navigation button disposed on one of the base and the display component and configured to permit the user to manipulate selected content displayed on the screen.

4. (Original) The portable computer of claim 3, wherein the screen is configured to display at least one of a plurality of modes of content; and
wherein the navigation button is configured to permit the user to select for display one of the plurality of modes of content.
5. (Original) The portable computer of claim 3, further comprising a second navigation button;
wherein the first navigation button is disposed on a major surface of the base; and
wherein the second navigation button is disposed on a minor surface of the base.
6. (Original) The portable computer of claim 1, wherein the scroll wheel is configured to permit the user to select a mode of content for display by the portable computer.
7. (Currently Amended) A portable computer configurable between a plurality of display modes including a laptop mode and an easel mode, the portable computer comprising:
a base including a keyboard;
a single display component rotatably coupled to the base and including a screen which displays content;
a hinge assembly disposed at least partially within the base and the display component that defines ~~a single~~ an axis of rotation about which both the base and the display component are rotatable to transition the portable computer between the laptop mode and the easel mode,
wherein
the laptop mode is configured to display to a user on the single display component a first content mode having a first content display orientation with the single display oriented towards the user and the keyboard oriented to receive input from the user;
the easel mode is configured to display to the user on the single display component a second content mode having a second content display orientation with the single display oriented towards the user and the keyboard oriented away from the user, wherein the first and second content display orientations are 180 degrees relative to each other; and

a scroll wheel accessible in each of the plurality of display modes and configured to permit a user to manipulate at least one of operating parameters of the portable computer and the content displayed on the screen.

8. (Currently Amended) The portable computer of claim 7; wherein the scroll wheel is disposed at least partially about the ~~single~~ axis of rotation of the display component relative to the base.

9. (Cancelled)

10. (Original) The portable computer of claim 7, further comprising a first navigation button user-accessible in each of the laptop mode and the easel mode, and configured to permit the user to manipulate selected content displayed on the screen.

11. (Original) The portable computer of claim 10, wherein the screen is configured to display at least one of a plurality of modes of content; and
wherein the first navigation button is configured to permit the user to select for display one of the plurality of modes of content.

12. (Previously Presented) The portable computer of claim 10, further comprising a second navigation button that is not user-accessible when the portable computer is in the easel mode.

13. (Currently Amended) A portable computer comprising:
a base including a keyboard;
a single display component including a screen configured to display content;
a hinge assembly disposed at least partially within the base configured to rotatably couple the display component to the base, the hinge assembly defining a ~~single~~ longitudinal axis running along an interface between the display component and the base about which the display component and the base are rotatable to transition the portable computer between a laptop mode and an easel mode, wherein

the laptop mode is configured to display to a user on the single display component a first content mode having a first content display orientation with the single display oriented towards the user and the keyboard oriented to receive input from the user;

the easel mode is configured to display to the user on the single display component a second content mode having a second content display orientation with the single display oriented towards the user and the keyboard oriented away from the user, wherein the first and second content display orientations are 180 degrees relative to each other; and

a scroll wheel disposed at least partially about the longitudinal axis.

14. (Original) The portable computer of claim 13, wherein the scroll wheel is configured to permit a user to manipulate the content displayed on the screen.
15. (Original) The portable computer of claim 13, wherein the scroll wheel is configured to permit a user to control a volume of sound played by the portable computer.
16. (Original) The portable computer of claim 13, wherein the scroll wheel is disposed at least partially within the hinge assembly.
17. (Original) The portable computer of claim 13, further comprising at least one navigation button disposed on one of the base and the display component.
18. (Currently Amended) The portable computer of claim 1, wherein rotating either the display component or the base about the ~~single~~ longitudinal axis up to approximately 180 degrees from a closed mode in which the display screen is disposed substantially against the base configures the portable computer into the laptop mode; and
wherein rotating either the display component or the base about the ~~single~~ longitudinal axis beyond approximately 180 degrees from the closed mode configures the portable computer into the easel mode.

19. (Previously Presented) The portable computer of claim 7, wherein an operating display mode is selected from the plurality of display modes based on a physical orientation of the portable computer.
20. (Previously Presented) The portable computer of claim 7, wherein an operating display mode is selected from the plurality of display modes in response to operation of the scroll wheel.
21. (Currently Amended) The portable computer of claim 8, wherein the scroll wheel provides a default action which effects manipulation of the at least one of the operating parameters of the portable computer, wherein the default action[s] is defined differently responsive to a display mode of the portable computer.
22. (New) The portable computer of claim 1, wherein the plurality of modes includes a frame mode in which the single display component is oriented towards the operator, the base contacts a substantially horizontal surface, and the keyboard is directed towards the substantially horizontal surface.
23. (New) The portable computer of claim 22, wherein the frame mode is configured to display to a user on the single display component the first content mode having the first content display orientation.

REMARKS

Claims 1-8 and 10-21 were previously pending in this application. Claims 1, 7-8, 13, 18, and 21 have been amended herein. Claims 22-23 have been added. As a result claims 1-8 and 10-23 are pending for examination with claims 1, 7, and 13 being independent claims. No new matter has been added. The application as presented is believed to be in condition for allowance.

Rejections Under 35 U.S.C. §103

The Office Action rejected claims 1-2, 6-9, 11, and 13-17 under 35 U.S.C. §103(a) as being unpatentable over Nishiyama (hereinafter Nishiyama) in view of U.S. Publication No. 2006/0264243 to Aarras (hereinafter Aarras). In response, Applicant has amended the independent claims to be more clear and respectfully submits the following remarks traversing the rejection.

As discussed and not addressed in the prior response, the proposed combination of Aarras in view of Nishiyama *and* Nishiyama in view of Arras is not proper. Even assuming for the purposes of argument the combination proper, the proposed combination would not result in the invention as claimed.

Nishiyama discloses a portable telephone radio set which includes a rotary selector which turns to select various functions. (Abstract; see also Col. 2, lines 18-23). The telephone set includes sections “engaged via joint portion 3 by which the telephone set is folded and rotated so as to be housed.” (Col. 4, lines 1-4). As discussed, “the selector 8 is provided in the joint portion 3 so as to select various functions.” (Col. 5, lines 12-13). The joint portion includes a “stopper 24” for stopping rotation of the joint portion. (Please see Col. 7, line 54 – Col. 8, line 2; and Fig. 5). “The notch 25” within the joint portion “is formed at an open position where the telephone is being used and at a housing position ... where it is folded and housed. (Col. 8 lines 8-11). The notch 26 does not allow “the engagement of the stopper piece 24 to be released.” (Col. 8, lines 2-5). In summary, Nishiyama discloses a telephone set with a rotary selector configurable between a closed position and an open position about a single axis joint portion, wherein the joint portion with selector locks the sections of Nishiyama device into a telephone configuration, and prevents rotation of the sections of Nishiyama past the telephone configuration.

One cannot change Nishiyama to operate in an “easel mode” as recited in the instant application without changing the principle of operation disclosed. Nishiyama disclosed a telephone device that is prevented from rotating past the telephone configuration. As the M.P.E.P. instructs there is no prima facie case of obviousness where a proposed modification changes the principle of operation of the reference. (M.P.E.P. §2143.03 Sec V.) Specifically, Nishiyama discloses that the joint portion includes a “stopper 24” “disposed in the shank 23 which is engaged with notches 25 and 26 and as a result rotation of the sleeve 20 is stopped. (Please see Col. 7, line 54 – Col. 8, line 2; and Fig. 5). The notch 26 *cannot be disengaged*, representing a position beyond which the telephone set *cannot be rotated*. (Please see Col. 8, lines 2-5).

Aarras describes a device with sections completely rotatable around each other to accomplish the disclosed book metaphor. (Please see paras. 0010, 0038, and 0047-49). It would not be obvious to the person of ordinary skill to combine a telephone device (Nishiyama) with a built in stopper that prevents the device from rotating with device of Aarras that operates by completely rotating around the disclose hinge. These teachings and the structures disclosed are not compatible. Modifying Nishiyama to include the teaching of Aarras would eliminate the disclosed stop position for operation of the telephone device which would be improper, and modifying Aarras with Nishiyama’s joint portion and scroll wheel would result in the Aarras device’s rotation being stopped at an open position (defeating the disclosed book metaphor) which would also be improper. (Please see M.P.E.P. §2143.03 Sec. V & VI). Due to the stop position disclosed in Nishiyama, the telephone device of Nishiyama *cannot* be transitioned from a laptop mode to an easel mode, thus, claim 1 would not be obvious in light of either Nishiyama or Aarras in combination with the other.

To further prosecution, Applicant has also submitted amendments to further clarify Applicant’s contribution to the art.

As admitted in the Office Action, Nishiyama does not teach or suggest a portable computer having “a single display component rotatably coupled to the base such that the single display component and the base are rotatable with respect to one another about a longitudinal axis running along an interface between the display component and the base to transition between ... a laptop mode and an easel mode,” as recited in claim 1, as amended. Aarras does

not cure this deficiency. In particular, Aarras does not teach or suggest “a single display component rotatably coupled to the base” such that they are “rotatable with respect to one another about a longitudinal axis running along an interface between the display component and the base to transition between ... a laptop mode and an easel mode.”

Aarras does not disclose a transition from a laptop mode and an easel mode responsive to a rotation of a base and a display component about a longitudinal axis. Aarras discloses a device with the two sections connected by a dual axis hinge. (See e.g., section 16, in Fig. 1-3). The dual axis hinge of Aarras enables the device to present displays on the first and second sections according to a book metaphor. (Please see paras. 0010, 0038, and 0047-49). One completely flips the first section around the second to reveal a display on the second section. Aarras does not teach or suggest a transition between the claimed laptop mode and easel mode - there is no change in display orientation triggered by the rotation of the sections of Aarras about the longitudinal axis. As shown in Figs. 8 and 9 (relied on by the Examiner), the display orientation does not change as the sections of Aarras are rotated, thus Aarras does not teach the claimed easel mode. Indeed, if one were to change the orientation of one of the displayed sections shown in Figs. 8 and 9 as claimed, the display for Aarras would be oriented upside down for a viewer, which is not reasonable.

The only change in a content orientation disclosed in Aarras occurs in a dual display embodiment, where a display orientation is rotated from a first portrait type orientation to a second landscape type orientation in response to a second portion 94 of one section 90 changing from a first position to a second position relative to the first portion 92 of the same one section 90. (See para. 0059, and Figs. 31-33). Thus, any positional/orientation change of the displayed content disclosed in Aarras is 90 degrees and not 180 degrees as claimed. Further, the transition occurs as a result of rotation of two portions of *one section* of the Aarras device, not as part of a transition from a laptop mode to an easel mode.

Thus even assuming the combination of the systems of Nishiyama and Aarras proper, for the purposes of argument, the combination does not teach or suggest claim 1, as amended, as neither references teaches or suggests “a single display component rotatably coupled to the base such that the single display component and the base are rotatable with respect to one another about a longitudinal axis running along an interface between the display component and the base to transition between ... a laptop mode and an easel mode,” as recited in claim 1, as amended.

Accordingly, withdrawal of the rejection is respectfully requested. Claims 2-6 and new claims 22-23 depend from claim 1 and are allowable for at least the same reasons.

Independent claims 7 and 13 also recite “transition the portable computer between the laptop mode and the easel mode.” As discussed above, it is not obvious to modify Nishiyama with Aarras as a matter of law. Further, neither reference teaches the recited “transition the portable computer between the laptop mode and the easel mode.” Thus, assuming for the purposes of argument the combination proper, the combination does not teach or suggest at least one element of independent claims 7 and 13.

Accordingly withdrawal of the rejections of claims 7 and 13 are respectfully requested. Claims 8, 9-12, and 14-21 depend from independent claims 7 and 13 respectively, and are allowable for at least the same reasons.

CONCLUSION

In view of the foregoing amendments and remarks, reconsideration is respectfully requested. This application should now be in condition for allowance; a notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant’s attorney at the telephone number listed below.

Serial No.: 12/170,951

- 11 -

Art Unit: 2629

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an accompanying payment, please charge any deficiency to Deposit Account No. 50/2762.

Respectfully submitted,

Yves Behar, Applicant

By: Matthew H. Grady/

Matthew H. Grady, Reg. No. 52,957
Edward J Russavage, Reg. No. 43,069
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Docket No.: L2039-700111

Date: February 28, 2012

1119201.1

Electronic Patent Application Fee Transmittal				
Application Number:	12170951			
Filing Date:	10-Jul-2008			
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS			
First Named Inventor/Applicant Name:	Yves Behar			
Filer:	Matthew H. Grady/Matthew Grady			
Attorney Docket Number:	L2039-700111			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	1202	2	60	120
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 1 month with \$0 paid	1251	1	150	150
Miscellaneous:				
Total in USD (\$)				270

Electronic Acknowledgement Receipt

EFS ID:	12180481
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Matthew H. Grady/Matthew Grady
Filer Authorized By:	Matthew H. Grady
Attorney Docket Number:	L2039-700111
Receipt Date:	28-FEB-2012
Filing Date:	10-JUL-2008
Time Stamp:	16:17:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$270
RAM confirmation Number	3654
Deposit Account	502762
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)
 Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)
 Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		L2039-700111_Amendment_S hell_1.PDF	57085 <small>856a2b2f79d3c58b6f6a0b05049212f297c0d723</small>	yes	11

Multipart Description/PDF files in .zip description			
Document Description	Start	End	
Amendment After Final	1	1	
Claims	2	6	
Applicant Arguments/Remarks Made in an Amendment	7	11	

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	32527 <small>151c469ce9372a61d89681502c973951bc59089f</small>	no	2
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Warnings:

Information:

Total Files Size (in bytes):	89612
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New International Application Filed with the USPTO as a Receiving Office

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/170,951	07/10/2008	Yves Behar	L2039-700111	2004
37462	7590	10/28/2011	EXAMINER	
LANDO & ANASTASI, LLP ONE MAIN STREET, SUITE 1100 CAMBRIDGE, MA 02142			ABEBE, SOSINA	
			ART UNIT	PAPER NUMBER
			2629	
			NOTIFICATION DATE	DELIVERY MODE
			10/28/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	12/170,951	BEHAR ET AL.	
	Examiner	Art Unit	
	SOSINA ABEBE	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 01 July 2011.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
- 4) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) Claim(s) 1-8 and 10-21 is/are pending in the application.
 - 5a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 6) Claim(s) _____ is/are allowed.
- 7) Claim(s) 1-8 and 10-21 is/are rejected.
- 8) Claim(s) _____ is/are objected to.
- 9) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 10) The specification is objected to by the Examiner.
- 11) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 07/01/2011.09/28/2011.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

This is in response to applicant's communication filed on 01 July 2011, wherein: claims 1 – 8 and 10 - 21 are currently pending. Claims 1, 7, 8, 12 and 13 have been amended. Claims 18 - 21 have been added. Claim 9 has been cancelled.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in **Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966)**, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: (*See MPEP Ch. 2141*)

- a. Determining the scope and contents of the prior art;
 - b. Ascertaining the differences between the prior art and the claims in issue;
 - c. Resolving the level of ordinary skill in the pertinent art; and
 - d. Evaluating evidence of secondary considerations for indicating obviousness or nonobviousness.
2. **Claims 1 - 8, 10 - 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiyama "5,436,954" in view of Aarras "US 2006/0264243".**

Re-Claim 1, Nishiyama teaches a portable computer comprising:

a base (fig. 1; item 4 (operation section));

a display component (item 2) rotatably coupled to the base (item 4) such that the display component (item 2) and the base (item 4) are rotatable with respect to one another about a single longitudinal axis (item 3) running along an interface between the display component (item 2) and the base (item 4) to transition between a laptop mode (figs. 1 & 2), the display component (item 2) including a display screen (item 7); and

a scroll wheel (scroll wheel is equivalent to selector fig. 1, item 8) disposed at least partially within the base and rotatable about the longitudinal axis (item 3 and col. 3; lines 37 – 42), the scroll wheel (item 8) configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen (item 7). (col. 4; lines 21 – 26)

Nishiyama fails to teach an easel mode. However Aarras teaches an easel mode (see figs. 8, 19)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Nishiyama into Aarras to allow the user easily select or view information.

Re-claim 2, Nishiyama teaches where the scroll wheel (fig. 1; item 8) is configured to permit the user to adjust a volume of sound produced by the portable computer. (col. 4; lines 27 – 29)

Re-Claim 3, Nishiyama teaches a first navigation button (fig. 1; item 9) disposed on one of the base (item 4) and the display component (item 2) and configured to permit the user to manipulate selected content displayed on the screen (item 7). (col. 5; lines 23 – 28)

Re-Claim 4, the combination of Nishiyama and Aarras as a whole further teach wherein the screen is configured to display at least one of a plurality of modes of content; and wherein the navigation button is configured to permit the user to select for display one of the plurality of modes of content. (Nishiyama, col. 4; lines 42 – 68) and (Aarras, par. [0056])

Re-Claim 5, the combination of Nishiyama and Aarras as a whole further teach a second navigation button (fig. 1; item 11); wherein the first navigation button (item 9) is disposed on a major surface of the base (item 4); and wherein the second navigation button (item 11) is disposed on a minor surface of the base. (see fig. 1) Aarras teaches navigation key (fig. 29; item 78)

Re-Claim 6, Nishiyama teaches wherein the scroll wheel (fig. 3; item 8) is configured to permit the user to select a mode of content for display by the portable computer. (col. 5; lines 34 – 39)

Re-Claim 7, Nishiyama teaches a portable computer configurable between a plurality of display modes including a laptop mode (figs. 1 & 2), the portable computer comprising:

a base (fig. 1; item 4 (operation selection));

a display component (item 2) rotatably coupled to the base (item 4) and including a screen (item 7) which displays content;

a hinge (item 3) assembly disposed at least partially within the base (item 4) and the display component (item 2) that defines a single axis of rotation about which both the base and the display component are rotatable to transition the portable computer between the laptop mode (figs. 1 & 2); (col. 4; lines 12 – 23)

a scroll wheel (fig. 1; item 8) accessible in each of the plurality of display modes and configured to permit a user to manipulate at least one of operating parameters of the portable computer and the content displayed on the screen. (col. 4; lines 21 – 26)

Nishiyama fails to teach an easel mode however Aarras teaches an easel mode (see fig. 8)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Nishiyama into Aarras to allow the user easily select or view information.

Re-Claim 8, Nishiyama teaches wherein the scroll wheel (fig. 3; item 8) is disposed at least partially about the single axis of rotation (item 3) of the display component (item 2) relative to the base (item 4).

Re-Claim 10, the combination of Nishiyama and Aarras as a whole further teach first navigation button (item 9) user-accessible in each of the laptop mode (figs. 1 & 2) and the easel mode (Aarras, fig. 8), and configured to permit the user to manipulate selected content displayed on the screen. (fig. 9 and col. 5; lines 23 – 68 to col. 6; lines 1 – 4)

Re-Claim 11, is rejected as applied to claim 4 above because the scope and contents of the recited limitations are substantially the same.

Re-Claim 12, the combination of Nishiyama and Aarras as a whole further teach a second navigation button (Nishiyama, item 11) that is not user-accessible when the portable computer is in the easel mode (Aarras, fig. 8).

Re-Claim 13, is rejected as applied to claims 1 and 7 above because the scope and contents of the recited limitations are substantially the same.

Re-Claim 14, Nishiyama teaches wherein the scroll wheel (fig. 3; item 8) is configured to permit a user to manipulate the content displayed on the screen. (col. 4; lines 55 - 61)

Re-Claim 15, is rejected as applied to claim 2 above because the scope and contents of the recited limitations are substantially the same.

Re-Claim 16, Nishiyama teaches wherein the scroll wheel (item 8) is disposed at least partially within the hinge (item 3) assembly. (see fig. 1)

Re-Claim 17, is rejected as applied to claim 3 above because the scope and contents of the recited limitations are substantially the same.

Re-Claim 18, the combination of Nishiyama and Aarras as a whole further teach wherein rotating either the display component (fig. 1; item 2) or the base (item 2) about the single longitudinal axis (item 3) up to approximately 180 degrees (fig. 8) from a closed mode in which the display screen is disposed substantially against the base configures the portable computer into the laptop mode (figs. 1 & 2); and

Wherein rotating either the display component or the base about the single longitudinal axis beyond approximately 180 degrees (fig. 8) from the closed mode configures the portable computer into the easel mode (Aarras, fig. 8).

Re-Claim 19, the combination of Nishiyama and Aarras as a whole further teach wherein an operating display mode is selected from the plurality of display modes based on a physical orientation of the portable computer. (Aarras, figs. 7 - 19)

Re-Claim 20, Nishiyama teaches wherein an operating display mode is selected from the plurality of display modes in response to operation of the scroll wheel (item 8). (col. 5; lines 34 – 39)

Re-Claim 21, Nishiyama teaches wherein the scroll wheel (item 8) provides a default action which effects manipulation of the at least one of the operating parameters of the portable computer, wherein the default actions is defined responsive to a display mode of the portable computer. (col. 4; lines 42 – 61)

Response to Arguments

3. Applicant's arguments filed on June 01, 2011 with respect to claims 1 – 8 and 10 - 21 have been fully considered but they are not persuasive.

With respect to claims 1, 7 and 13, applicant alleges that Nishiyama fails to teach or suggest that “a display component rotatably coupled to the base such that the display component and the base are rotatable with respect to one another about a single longitudinal axis running along an interface between the display component and the base to transition between a laptop mode and an easel mode, the display component including a display screen; and

a scroll wheel disposed at least partially within the base and rotatable about the longitudinal axis, the scroll wheel configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen”.

The examiner respectfully disagrees with applicant's argument; because Nishiyama teaches a display component (item 2) rotatably coupled to the base (item 4) such that the display component (item 2) and the base (item 4) are rotatable with respect to one another about a single longitudinal axis (item 3) running along an interface between the display component (item 2) and the base (item 4) to transition between a laptop mode (figs. 1 & 2), the display component (item 2) including a display screen (item 7); and

a scroll wheel (fig. 1, item 8) disposed at least partially within the base and rotatable about the longitudinal axis (item 3 and col. 3; lines 37 – 42), the scroll

wheel (item 8) configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen (item 7). (col. 4; lines 21 – 26)

Aarras teaches an easel mode (fig. 8).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sosina Abebe whose telephone number is (571) 270-7929. The examiner can normally be reached on Mon-Thurs from 9:00-5:00 If attempts to reach the examiner by telephone are unsuccessful, the

Art Unit: 2629

examiner's Supervisor, LunYi Lao can be reached on (571) 272-7671. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/S. A./

Examiner, Art Unit 2629

/LUN-YI LAO/

Supervisory Patent Examiner, Art Unit 2629

Notice of References Cited	Application/Control No. 12/170,951	Applicant(s)/Patent Under Reexamination BEHAR ET AL.	
	Examiner SOSINA ABEBE	Art Unit 2629	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-5,436,954	07-1995	Nishiyama et al.	455/566
*	B US-2006/0264243	11-2006	Aarras, Mikko	455/566
*	C US-7,035,665	04-2006	Kido et al.	455/566
*	D US-2006/0238439	10-2006	Fuller et al.	345/001.1
*	E US-2003/0107603	06-2003	Clapper, Edward O.	345/784
*	F US-7,869,834	01-2011	Seol et al.	455/567
*	G US-6,437,974	08-2002	Liu, Fusheng	361/679.27
*	H US-5,796,575	08-1998	Podwalny et al.	361/679.27
*	I US-2005/0083642	04-2005	Senpuku et al.	361/681
*	J US-			
*	K US-			
*	L US-			
*	M US-			


FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
*	N				
*	O				
*	P				
*	Q				
*	R				
*	S				
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NON-PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)			
*	U				
*	V				
*	W				
*	X				

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.


Search Notes 	Application/Control No. 12170951	Applicant(s)/Patent Under Reexamination BEHAR ET AL.
	Examiner SOSINA ABEBE	Art Unit 2629

SEARCHED			
Class	Subclass	Date	Examiner
345	169,184	03/24/11	SA
	updated the above searches	10/13/11	SA

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor name search	03/24/11	SA
East Search	03/24/11	SA
Consulted with SPE LunYi Lao	10/13/11	SA
Updated East Search	10/13/11	SA

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

/S. A./ Examiner.Art Unit 2629	
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<i>Index of Claims</i> 	Application/Control No. 12170951	Applicant(s)/Patent Under Reexamination BEHAR ET AL.
	Examiner SOSINA ABEBE	Art Unit 2629

✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE							
Final	Original	03/24/2011	10/13/2011						
	1	✓	✓						
	2	✓	✓						
	3	✓	✓						
	4	✓	✓						
	5	✓	✓						
	6	✓	✓						
	7	✓	✓						
	8	✓	✓						
	9	✓	-						
	10	✓	✓						
	11	✓	✓						
	12	✓	✓						
	13	✓	✓						
	14	✓	✓						
	15	✓	✓						
	16	✓	✓						
	17	✓	✓						
	18		✓						
	19		✓						
	20		✓						
	21		✓						

Receipt date: 09/28/2011

12170951 - GAI: 2629

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951
	Filing Date		2008-07-10
	First Named Inventor	Yves Behar	
	Art Unit		2629
	Examiner Name	S. Abebe	
	Attorney Docket Number		L2039-700111

U.S. PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	5926364		1999-07-20	Karidis	
	2	6144358		2000-11-07	Narayanaswamy et al.	
	3	6341061		2002-01-22	Eisbach et al.	
	4	6437974		2002-08-20	Liu	
	5	6492974		2002-12-10	Nobuchi et al.	
	6	6882335		2005-04-19	Saarinen	
	7	6295038		2001-09-25	Rebeske	
	8	7698407		2010-04-13	Mattox, Jr. et al.	
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	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit	2629		
	Examiner Name	S. Abebe		
	Attorney Docket Number	L2039-700111		

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	1	20050221865		2005-10-06	Nishiyama et al.		
	2	20080024465		2008-01-31	Hawkins et al.		

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	1	Miller, M., "Creating a Digital Home Entertainment System with Windows Media Center" , Apr 2006, Que.		<input type="checkbox"/>

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EXAMINER SIGNATURE			
Examiner Signature	/S.A./	Date Considered	10/13/2011

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	12170951 - GAU: 2629
	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit	2629		
	Examiner Name	S. Abebe		
	Attorney Docket Number	L2039-700111		

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	12170951 - GAU: 2629	
	Filing Date		2008-07-10		
	First Named Inventor		Yves Behar		
	Art Unit		2629		
	Examiner Name		S. Abebe		
	Attorney Docket Number		L2039-700111		

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Matthew H. Grady/	Date (YYYY-MM-DD)	2011-09-28
Name/Print	Matthew H. Grady	Registration Number	52957

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /S.A./

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	"20060264243"	US-PGPUB; USPAT	OR	ON	2011/10/18 09:30
S4	76	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:12
S5	34	Morenstein near Joshua.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:12
S6	19	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:13
S7	14	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:13
S8	17	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:13
S9	9	S4 and S5 and S6 and S7 and S8	US-PGPUB; USPAT	OR	ON	2011/03/22 16:14
S10	83	"20020005818" "20020021258" "20030048595" "20030109232" "20040203535" "20040228076" "20050018396" "20050041378" "20050063145" "20050128695" "20050146845" "20050210399" "20050210399" "20050257400" "20050282596" "20060126284" "20060264243" "20060268500" "20070138806" "20070182663" "20080042987" "20080062625" "20080284738" "20090244832" "20090275366" "20090300511" "20090303676" "20090322790" "20100174993" "3468576" "4939514" "5200913" "5268817" "5515345" "5547698" "5712760" "5790371" "5793355" "5796575" "5825352" "5841631" "5900848" "5949643" "5987704" "5987704" "6005767" "6005767" "6067224" "6222507" "6223393" "6262885" "6266236" "6266236" "6275376" "6275376" "6295038" "6302612" "6323846" "6327482" "6343006" "6343006" "6377444" "6464195" "6510049" "6628267" "6628267" "6642909" "6659516" "6659516" "6661426" "6661426" "6665175" "6697055" "6771494" "6771494" "6788527" "6819304" "6829140" "6829140" "6859219" "6944012" "6963485" "7061472" "7061472" "7072179" "7138962" "7239508" "7250207" "7428142" "7522946" "D333636" "D391927" "D392944" "D395868"	USPAT	OR	ON	2011/03/22 19:16

		"D399526" "D416003" "D452238" "D462069" "D463797" "D476326" "D479708" "D491177" "D491936" "D494162" "D495674" "D495694" "D504128" "D512997" "D513509" "D516552" "D517541" "D518042" "D523429" "D528541" "D528993" "D534531" "D535292" "D544846" "D581371" "D593085" "D593086" "D593091" "D605635").PN.				
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S13	11	345/169.ccls. and (rotat\$4 near scroll near wheel)	US-PGPUB; USPAT	OR	ON	2011/03/22 19:28
S16	3	(rotat\$4 near display) same (scroll near wheel) with base	US-PGPUB; USPAT	OR	ON	2011/03/22 19:31
S19	15	(rotat\$4 near display) and (scroll and wheel) same base	US-PGPUB; USPAT	OR	ON	2011/03/22 19:34
S21	76	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 19:40
S22	2	"20060264243"	US-PGPUB; USPAT	OR	ON	2011/03/22 19:43
S23	1	"6295038".pn.	US-PGPUB; USPAT	OR	ON	2011/03/22 19:57
S25	1	345/184.ccls. and (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/24 11:34
S30	1	"4481382".pn.	USPAT	OR	ON	2011/03/24 12:45
S34	7	(laptop) with (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/24 16:43
S35	1	"6184867".pn.	US-PGPUB; USPAT	OR	ON	2011/03/24 16:45
S39	11	345/184.ccls. and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/25 15:38
S41	1	"455"/\$.ccls. and (second near navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/25 16:01
S48	1	"11606556"	US-PGPUB; USPAT	OR	ON	2011/03/25 17:32
S51	5	(PDA or laptop or cellular) with (two near navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/25 18:40
S53	1	"20050246327"	US-PGPUB; USPAT	OR	ON	2011/03/25 20:11
S54	1	"7467356".pn.	US-PGPUB; USPAT	OR	ON	2011/03/26 19:50
S55	2	"20040001049"	US-PGPUB; USPAT	OR	ON	2011/10/11 12:57
S56	1	"20020010707"	US-PGPUB; USPAT	OR	ON	2011/10/11 12:57
S58	12	("20040001049" "20020010707" "5926364" "6144358" "6341061" "6437974" "6492974" "6882335" "6295038" "7698407" "20050221865" "20080024465").pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 13:08
S59	1	"6040822".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 14:59
S60	2	"20010016508"	US-PGPUB;	OR	ON	2011/10/11

			USPAT			15:00
S73	9	(laptop) same (frame near mode) or (stand near mode) same (longitudinal near axis)	US-PGPUB; USPAT	OR	ON	2011/10/11 15:50
S75	86	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/10/11 15:56
S78	1	"7061472".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:10
S80	1	"6341061".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:20
S81	1	"6304431".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:22
S82	1	"6295038".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:23
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S84	1	"5966284".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:25
S86	1	"5926364".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:42
S87	1	"6144358".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:42
S88	1	"6341061".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:43
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S91	1	"6492974".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:50
S92	1	"6882335".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:50
S94	106	(laptop) same (rotat\$3 near axis)	US-PGPUB; USPAT	OR	ON	2011/10/11 16:54
S96	18	(laptop) same (rotat\$3 near axis) same (frame)	US-PGPUB; USPAT	OR	ON	2011/10/11 16:55
S97	319	(laptop or mobile) same (rotat\$3 near axis) same (frame)	US-PGPUB; USPAT	OR	ON	2011/10/11 16:58
S99	26	(laptop) same (longitudinal near axis) same (rotat\$3)	US-PGPUB; USPAT	OR	ON	2011/10/11 17:04
S101	14	345/169.ccls. and (longitudinal near axis) same (rotat\$3)	US-PGPUB; USPAT	OR	ON	2011/10/11 17:07
S103	1	"6040822".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 17:14
S104	2	"20040001049"	US-PGPUB; USPAT	OR	ON	2011/10/11 17:18
S106	4	"10185154"	US-PGPUB; USPAT	OR	ON	2011/10/12 13:52
S112	2	"20040001049"	US-PGPUB; USPAT	OR	ON	2011/10/12 16:11
S113	1	"20050221865"	US-PGPUB; USPAT	OR	ON	2011/10/12 16:21

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S132	2	345/169.ccls. and (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/12 17:53
S133	23	(laptop or cellular or mobile) with (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/12 17:55
S134	7	(laptop) with (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/12 17:55
S135	1	"20010016508".pn.	US-PGPUB; USPAT	OR	ON	2011/10/12 18:03
S136	69	(laptop) with (scroll near wheel)	US-PGPUB; USPAT	OR	ON	2011/10/12 18:04
S142	305	(laptop or cellular) same (scroll near wheel)	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 10:07
S143	117	(laptop) same (scroll near wheel)	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 10:07
S146	77	S143 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 10:08
S147	1	"20060284787"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 10:16
S148	1	"7330923".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 10:17
S151	1	"20050221865"	US-PGPUB; USPAT	OR	ON	2011/10/13 14:48
S152	2	"20010016508"	US-PGPUB; USPAT	OR	ON	2011/10/13 14:51
S154	86	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:08
S157	1	"6266236".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 15:17
S158	2	"20040001049"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 15:31
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S160	21	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34
S161	16	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34
S162	18	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34
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S171	8	(laptop) with (navigat\$3 near button)	US-PGPUB;	OR	ON	2011/10/14

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S198	50	S197 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/14: 16:08
S200	153	(laptop) same (scroll near wheel)	US-PGPUB; USPAT	OR	ON	2011/10/14: 16:25
S201	95	S200 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/14: 16:25
S222	1	"5374787".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/15: 13:33
S225	1	"5767842".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/15: 14:00
S238	305	(scroll near wheel) same (laptop or cellular)	US-PGPUB; USPAT	OR	OFF	2011/10/17: 10:13
S240	117	(scroll near wheel) same (laptop)	US-PGPUB; USPAT	OR	OFF	2011/10/17: 10:13
S250	2	"5436954".pn.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/10/17: 14:02
S252	1	"6295038".pn.	US-PGPUB; USPAT	OR	ON	2011/10/17: 14:12

EAST Search History (Interference)

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10/ 18/ 2011 12:27:28 PM

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Receipt date: 07/01/2011

12170951 - GAI: 2629

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	
	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit	2629		
	Examiner Name	Abebe, Sosina		
	Attorney Docket Number	L2039-700111		

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	1	20040001049		2004-01-01	Oakley		
	2	20020010707		2002-01-24	CHANG et al.		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	12170951 - GAU: 2629	
	Filing Date		2008-07-10		
	First Named Inventor		Yves Behar		
	Art Unit		2629		
	Examiner Name		Abebe, Sosina		
	Attorney Docket Number		L2039-700111		

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
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	Filing Date		2008-07-10
	First Named Inventor	Yves Behar	
	Art Unit		2629
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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	5926364		1999-07-20	Karidis	
	2	6144358		2000-11-07	Narayanaswamy et al.	
	3	6341061		2002-01-22	Eisbach et al.	
	4	6437974		2002-08-20	Liu	
	5	6492974		2002-12-10	Nobuchi et al.	
	6	6882335		2005-04-19	Saarinen	
	7	6295038		2001-09-25	Rebeske	
	8	7698407		2010-04-13	Mattox, Jr. et al.	
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	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit		2629	
	Examiner Name	S. Abebe		
	Attorney Docket Number		L2039-700111	

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	1	20050221865		2005-10-06	Nishiyama et al.		
	2	20080024465		2008-01-31	Hawkins et al.		

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	1	Miller, M., "Creating a Digital Home Entertainment System with Windows Media Center" , Apr 2006, Que.		<input type="checkbox"/>

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Application Number	12170951
Filing Date	2008-07-10
First Named Inventor	Yves Behar
Art Unit	2629
Examiner Name	S. Abebe
Attorney Docket Number	L2039-700111

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	First Named Inventor	Yves Behar	
	Art Unit		2629
	Examiner Name	S. Abebe	
	Attorney Docket Number		L2039-700111

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

- See attached certification statement.
- The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.
- A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Matthew H. Grady/	Date (YYYY-MM-DD)	2011-09-28
Name/Print	Matthew H. Grady	Registration Number	52957

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	12170951
Filing Date:	10-Jul-2008
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Filer:	Matthew H. Grady/Matthew Grady
Attorney Docket Number:	L2039-700111

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
Total in USD (\$)				180

Electronic Acknowledgement Receipt

EFS ID:	11067364
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Matthew H. Grady/Matthew Grady
Filer Authorized By:	Matthew H. Grady
Attorney Docket Number:	L2039-700111
Receipt Date:	28-SEP-2011
Filing Date:	10-JUL-2008
Time Stamp:	14:06:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$180
RAM confirmation Number	351
Deposit Account	502762
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)
 Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)
 Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	L2039-700111_- _Information_Disclosure_Statement_Fillable_PDF_1.pdf	612169 8f9847072aaaf4c8f2a4019f3e3e9a6dc39b92273	no	5

Warnings:

Information:

2	Non Patent Literature	L2039-700431_- _Creating_a_Digital_Home_Entertainment_System_2.pdf	2168268 3ac14bc9affa4d8f8ef2e75025ea914c9c718d9d	no	28
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Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	30691 15709ce82441c2e33c3b482e732fb001a85bda8f	no	2
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Warnings:

Information:

Total Files Size (in bytes): 2811128

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Docket No.: L2039-700111

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yves Behar
Serial No: 12/170,951
Confirmation No: 2004
Filed: July 10, 2008
For: PORTABLE COMPUTER WITH MULTIPLE DISPLAY
CONFIGURATIONS
Examiner: ABEBE, SOSINA
Art Unit: 2629

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being electronically filed in accordance with 37 C.F.R. §1.6(a)(4) on the 1st day of July, 2011.

/Matthew H. Grady/
Matthew H. Grady, Reg. No. 52,957

Commissioner for Patents

AMENDMENT

Sir:

In response to the Office Action mailed April 4, 2011, please amend the above-identified application as follows. Changes to the Claims are shown by strike through (for deleted matter) and underlining (for added matter).

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 6 of this paper.

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A portable computer comprising:
 - a base;
 - a display component rotatably coupled to the base such that the display component and the base are rotatable with respect to one another about a single longitudinal axis running along an interface between the display component and the base to transition between a laptop mode and an easel mode, the display component including a display screen; and
 - a scroll wheel disposed at least partially within the base and rotatable about the single longitudinal axis, the scroll wheel configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen.
2. (Original) The portable computer of claim 1, where the scroll wheel is configured to permit the user to adjust a volume of sound produced by the portable computer.
3. (Original) The portable computer of claim 1, further comprising a first navigation button disposed on one of the base and the display component and configured to permit the user to manipulate selected content displayed on the screen.
4. (Original) The portable computer of claim 3, wherein the screen is configured to display at least one of a plurality of modes of content; and
 - wherein the navigation button is configured to permit the user to select for display one of the plurality of modes of content.
5. (Original) The portable computer of claim 3, further comprising a second navigation button;
 - wherein the first navigation button is disposed on a major surface of the base; and

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wherein the second navigation button is disposed on a minor surface of the base.

6. (Original) The portable computer of claim 1, wherein the scroll wheel is configured to permit the user to select a mode of content for display by the portable computer.
7. (Currently amended) A portable computer configurable between a plurality of display modes including a laptop mode and an easel mode, the portable computer comprising:
 - a base;
 - a display component rotatably coupled to the base and including a screen which displays content;
 - a hinge assembly disposed at least partially within the base and the display component that defines a single axis of rotation about which both the base and the display component are rotatable to transition the portable computer between the laptop mode and the easel mode; and
 - a scroll wheel accessible in each of the plurality of display modes and configured to permit a user to manipulate at least one of operating parameters of the portable computer and the content displayed on the screen.
8. (Currently Amended) The portable computer of claim 7; wherein the scroll wheel is disposed at ~~leas~~ least partially about the single an axis of rotation of the display component relative to the base.
9. (Cancelled)
10. (Original) The portable computer of claim 7, further comprising a first navigation button user-accessible in each of the laptop mode and the easel mode, and configured to permit the user to manipulate selected content displayed on the screen.
11. (Original) The portable computer of claim 10, wherein the screen is configured to display at least one of a plurality of modes of content; and
 - wherein the first navigation button is configured to permit the user to select for display one of the plurality of modes of content.

12. (Currently Amended) The portable computer of claim 10, further comprising a second navigation button that is not ~~user-accessible~~ user-accessible when the portable computer is in the ~~laptop~~ easel mode.
13. (Currently amended) A portable computer comprising:
a base;
a display component including a screen configured to display content;
a hinge assembly disposed at least partially within the base configured to rotatably couple the display component to the base, ~~the hinge assembly defining and to permit rotation of the display component and the~~ about a single longitudinal axis running along an interface between the display component and the base about which the display component and the base are rotatable to transition the portable computer between a laptop mode and an easel mode; and
a scroll wheel disposed at least partially about the longitudinal axis.
14. (Original) The portable computer of claim 13, wherein the scroll wheel is configured to permit a user to manipulate the content displayed on the screen.
15. (Original) The portable computer of claim 13, wherein the scroll wheel is configured to permit a user to control a volume of sound played by the portable computer.
16. (Original) The portable computer of claim 13, wherein the scroll wheel is disposed at least partially within the hinge assembly.
17. (Original) The portable computer of claim 13, further comprising at least one navigation button disposed on one of the base and the display component.
18. (New) The portable computer of claim 1, wherein rotating either the display component or the base about the single longitudinal axis up to approximately 180 degrees from a closed mode in which the display screen is disposed substantially against the base configures the portable computer into the laptop mode; and

wherein rotating either the display component or the base about the single longitudinal axis beyond approximately 180 degrees from the closed mode configures the portable computer into the easel mode.

19. (New) The portable computer of claim 7, wherein an operating display mode is selected from the plurality of display modes based on a physical orientation of the portable computer.

20. (New) The portable computer of claim 7, wherein an operating display mode is selected from the plurality of display modes in response to operation of the scroll wheel.

21. (New) The portable computer of claim 8, wherein the scroll wheel provides a default action which effects manipulation of the at least one of the operating parameters of the portable computer, wherein the default actions is defined responsive to a display mode of the portable computer.

REMARKS

Claims 1-17 were previously pending in this application. Claim 9 has been cancelled without prejudice or disclaimer. Claims 1, 7, 8, 12, and 13 have been amended herein. New claims 18-21 have been added. As a result claims 1-8 and 10-21 are pending for examination with claims 1, 7, and 13 being independent claims. No new matter has been added. The application as presented is believed to be in condition for allowance.

Examiner Interview

Applicant wishes to thank Examiner Abebe for the courtesies extended to Applicant's Representative during the telephone interview conducted on June 20, 2011. In the Interview, Applicant's Representative proposed amendments to independent claim 1, and discussed how the proposed amendments distinguish the claims over the present rejections. In particular, Applicant's Representative explained how U.S. Publication No. 2006/0264243 to Aarras (hereinafter Aarras) describes a device that requires a dual axis hinge (see e.g. 16 Figs. 1-3) to operate according to the manner described (the "book" metaphor), and that Aarras therefore does not disclose a "single longitudinal axis" as recited in claim 1, as amended. Exemplary embodiments of the claimed axis (e.g. as shown in Fig. 1 at 101) were also discussed, as well as examples of transitions between "laptop" (shown by example in Fig. 1) mode and "easel" (shown by way of example in Fig. 4) mode.

Examiner Abebe agreed to consider the proposed amendments upon submission. Accordingly, the present amendments and remarks are submitted for consideration and favorable action is respectfully requested.

Rejections Under 35 U.S.C. §103

The Office Action rejected claims 1-2, 6-9, 11, and 13-17 under 35 U.S.C. §103(a) as being unpatentable over Aarras in view of EP0588210 to Nishiyama (hereinafter Nishiyama). In response, Applicant has amended the claims to further distinguish over the proposed combination, and submits the following remarks.

Aarras discloses "a portable electronic device ... including a first section having a first display on a first side of the first section; and a second section pivotably connected to the first section." (Para. 0007). The two sections are connected by a *dual axis* hinge, section 16, in Fig.

1-3. The dual axis hinge enables the device to present displays on the first and second sections according to a book metaphor. (Paras. 0010, 0038, and 0047-49). According to Aarras using the dual axis hinge permits “[t]he first and second sections ... to be repeatedly flipped forwards or backwards relative to each other similar to a top wirebound steno book or memo book.” (Para. 0037). Thus, Aarras is directed to a portable electronic device that permits the sections of the device to be flipped like pages of a book via a bi-axial (dual-axis) hinge section 16. (Please see para. 0007, 0010, 0044, 0047, and Figs. 1-3).

Independent Claim 1

The combination of Aarras and Nishiyama proposed in the office action does not teach or suggest all the elements of claim 1, as amended. Claim 1, as amended, recites a “display component rotatably coupled to the base such that the display component and the base are rotatable with respect to one another about a single longitudinal axis running along an interface between the display component and the base to transition between a laptop mode and an easel mode.” In contrast, as discussed above, Aarras teaches and *requires* a dual axis about which the two sections of the portable electronic device rotate to accomplish the disclosed “book” metaphor. (Figs. 1-3, section 16, and related description – e.g. Para. 0007, 0010, 0044, and 0047).

Nishiyama discloses a portable telephone radio set which includes a rotary selector which turns to select various functions. (Abstract; see also Col. 2, lines 18-23). The telephone set includes sections “engaged via joint portion 3 by which the telephone set is folded and rotated so as to be housed.” (Col. 4, lines 1-4). As discussed, “the selector 8 is provided in the joint portion 3 so as to select various functions.” (Col. 5, lines 12-13). The joint portion includes a “stopper 24” for stopping rotation of the joint portion. (Please see Col. 7, line 54 – Col. 8, line 2; and Fig. 5). “The notch 25” within the joint portion “is formed at an open position where the telephone is being used and at a housing position ... where it is folded and housed. (Col. 8 lines 8-11). The notch 26 does not allow “the engagement of the stopper piece 24 to be released.” (Col. 8, lines 2-5). In summary, Nishiyama discloses a telephone set with a rotary selector configurable between a closed position and an open position about a single axis joint portion.

It would not have been obvious to modify Aarras in view of Nishiyama to provide a single axis of rotation as recited in claim 1, as amended. As discussed above, Aarras *requires* a

dual axis hinge in order perform the disclosed “book metaphor.” Replacing the dual axis hinge in Aarras with a single axis hinge as disclosed in Nishiyama, would render Aarras unsuitable for its intended purpose. Therefore, according to the M.P.E.P., this modification would not have been obvious. (Please see M.P.E.P. §2143.01 Sec. V – “[i]f proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification”). Aarras’ intended purpose includes providing for “[t]he first and second sections ... to be repeatedly flipped forwards or backwards relative to each other similar to a top wirebound steno book or memo book” to accomplish the disclosed “book metaphor” using a dual axis hinge.(Para. 0037 and 0047). Modifying Aarras to operate via Nishiyama’s single axis joint portion would prevent operation of the Aarras device via the disclosed book metaphor. Thus, there can be no suggestion or motivation to combine the references in this manner.

Modifying Aarras to use the single axis disclosed in Nishiyama would also change the principal of operation of Aarras’ device and therefore would not have been obvious for this additional reason. (Please see M.P.E.P. §2143.01 Sec. VI - “[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.”). Aarras establishes its principal of operation includes rotation of the two sections of the device about a dual axis hinge so the sections can be flipped like pages over and over again. (Please see 0037, 0047, and 0057). Nishiyama operates via a single axis joint portion. Modifying Aarras to operate via Nishiyama’s single axis joint portion instead of the disclosed dual axis would change the principal of operation of the Aarras device.

In addition, Nishiyama discloses that the joint portion includes a “stopper 24” “disposed in the shank 23 which is engaged with notches 25 and 26” as a result rotation of the sleeve 20 is stopped. (Please see Col. 7, line 54 – Col. 8, line 2; and Fig. 5). The notch 26 cannot be disengaged, representing a position beyond which the telephone set cannot be rotated. (Please see Col. 8, lines 2-5). Aarras describes a device with sections completely rotatable around each other. These teachings are not compatible. Modifying Aarras with Nishiyama’s joint portion and scroll wheel would result in the Aarras device’s rotation being stopped at an open position (defeating the book metaphor) and modifying Nishiyama to include the teaching of Aarras would eliminate the disclosed stop position for operation of the telephone device which would also be

improper. (Please see M.P.E.P. §2143.03 Sec. V & VI). Due to the stop position disclosed in Nishiyama, Nishiyama cannot be transitioned from a laptop mode to an easel mode, thus, claim 1 would not be obvious in light of either Aarras or Nishiyama in combination with the other, for that reason as well.

Furthermore, even if one were to combine Aarras and Nishiyama as proposed in the Office Action, one would not arrive at the claimed invention. Even if one were to modify Aarras to include a scroll wheel as disclosed in Nishiyama, Aarras does not disclose or suggest a single axis hinge, and as discussed above, it would not have been obvious to modify Aarras to use a single axis hinge, as doing so would render Aarras unsuitable for its intended purpose or change the nature of its operation. Aarras discloses and relies on a dual axis hinge. Accordingly, even if Aarras were to be modified based on Nishiyama to include a scroll wheel, that modification does not and cannot result in “a scroll wheel disposed at least partially within the base and rotatable about the single longitudinal axis,” (emphasis added) as recited in Applicant’s claim 1, as amended.

In view of the foregoing, the proposed combination of Aarras and Nishiyama is improper and even if the references were combined as proposed in the Office Action, the result does not disclose or suggest several limitations recited in claim 1. Accordingly withdrawal of the rejection of claim 1 is respectfully requested.

Claims 2 and 6 depend from claim 1 and are allowable for at least the same reasons as claim 1. Accordingly, withdrawal of the rejection of claims 2 and 6 is respectfully requested.

Independent Claim 7

Claim 7, as amended recites “a hinge assembly disposed at least partially in the base and the display component that defines *a single axis of rotation* about which both the base and the display component are rotatable to transition the portable computer between the laptop mode and the easel mode” (emphasis added). As discussed above, the combination of Aarras and Nishiyama proposed in the Office Action does not teach or suggest this element. In particular, Aarras relies on a dual axis hinge to provide its book metaphor, and it therefore would not have been obvious to modify Aarras to have “*a single axis of rotation* about which both the base and the display component are rotatable to transition the portable computer between the laptop mode

and the easel mode,” as claimed in claim 7. Accordingly withdrawal of the rejection of claim 7 is respectfully requested.

Claims 9 and 11 depend from claim 7 and are allowable for at least the same reasons as claim 7. Accordingly, withdrawal of the rejection of claims 9 and 11 is respectfully requested.

Dependent Claims 11 and 17

Dependent claims 11 and 17 stand rejected over Aarras and Nishiyama, however, the rejections of 11 and 17 reference the rejection of claims 4 and 3 respectively. Claims 4 and 3 stand rejected over Aarras, Nishiyama, *and* Orsley. If the rejection is intended to include Orsley, then the reasoning with respect to dependent claims 3-5 and 10 discussed below applies, and claims 11 and 17 are allowable for at least the same reasons discussed below. Accordingly, in this instance, withdrawal of the rejection of claims 11 and 17 is respectfully requested. If Applicant’s interpretation of the intended rejection is incorrect, Applicant respectfully requests clarification of the rejection of claims 11 & 17.

Independent Claim 13

Claim 13, as amended recites “a hinge assembly disposed at least partially within the base configured to rotatably couple the display component to the base, wherein the hinge assembly defines a single longitudinal axis running along an interface between the display component and the base about which the display component and the base rotate to transition between a laptop mode and an easel mode.” As discussed above, the proposed combination of Aarras and Nishiyama is improper, and even in combination, the references do not teach or suggest this element. Rather, Aarras relies on a dual axis hinge to provide its book metaphor. (Please see Para. 0037, 0047, and 0057). Nishiyama discloses a single axis joint portion which includes a scroll wheel and cannot transition from a laptop mode to easel mode. (See Col. 7, line 54 – Col. 8, line 2; and Fig. 5). As discussed above, the respective teachings of Aarras and Nishiyama cannot be combined without rendering one or the other unsuited for its intended purpose or changing the nature of operation of the reference. Since both of these results are improper (see M.P.E.P. §2143.03 Sec. V & VI), the combination is *prima facie* not obvious. Furthermore, even if one were to combine the references as proposed in the Office Action, the combination does not and cannot result in a hinge assembly that “defines a single longitudinal

axis running along an interface between the display component and the base about which the display component and the base rotate to transition between a laptop mode and an easel mode” and “a scroll wheel disposed at least partially about the longitudinal axis,” as recited in Applicant’s claim 13 since Aarras discloses and requires a dual axis hinge. .

Accordingly, withdrawal of the rejection of claim 13 is respectfully requested. Claims 14-17 depend from claim 13 and are therefore allowable for at least the same reasons as claim 13. Accordingly, withdrawal of the rejection of claims 14-17 is respectfully requested.

Dependent Claims 3-5 and 10

The Office Action rejected claims 3-5 and 10 under 35 U.S.C. §103(a) as being unpatentable over Aarras in view of Nishiyama and further in view of U.S. Publication No. 2007/0247466 to Orsley (hereinafter Orsley). Applicant respectfully traverses the rejection.

As discussed above, the proposed combination of Aarras and Nishiyama is improper. Orsley therefore cannot be used to modify an improper combination. Furthermore, Orsley does not cure the deficiencies discussed above with respect to independent claims 1 and 7 from which claims 3-5 and 10 depend, as the modification of Aarras to include the claimed “single longitudinal axis” of claim 1 or the “single axis of rotation” of claim 7 would be improper. As discussed above, Aarras teaches and relies on a dual axis hinge, and modifying Aarras to include a single axis would result in Aarras being unsuited for intended purpose and would change the nature of operation disclosed, both of which render the proposed modification *prima facie* not obvious. (Please see M.P.E.P. §2143.01 Sec. V, VI). Thus, the combination of Arras, Nishiyama and Orsley is improper and does not render claims 1 or 7 obvious. As claims 3-5 and 10 depend from claims 1 and 7 respectively, they are allowable for at least the same reasons, and withdrawal of the rejection of claims 3-5 and 10 is respectfully requested.

Dependent Claim 12

The Office Action rejected claim 12 under 35 U.S.C. §103(a) as being unpatentable over Aarras, Nishiyama in view of Orsley and further in view of U.S. Patent No. 7,467,356 to Gettman (hereinafter Gettman). Applicant respectfully traverses the rejection.

As discussed above, the proposed combination of Aarras, Nishiyama, and Orsley is improper. Gettman cannot be used to modify an improper combination. Furthermore, Gettman

cannot cure the deficiencies discussed above with respect to independent claim 7 from which claim 12 depends, as the modification of Aarras to include the claimed “single axis of rotation” of claim 7 would be improper. As discussed above, Aarras teaches and relies on a dual axis hinge, and modifying Aarras to include a single axis would result in Aarras being unsuited for intended purpose and would change the nature of operation disclosed, both of which render the proposed modification *prima facie* not obvious. (Please see M.P.E.P. §2143.01 Sec. V, VI). Thus, the combination of Arras, Nishiyama, Orsley, and Gettman is improper and does not render claim 7 obvious. As claim 12 depends from claim 7, claim 12 is allowable for at least the same reasons, and withdrawal of the rejection of claims 12 is respectfully requested.

Newly Added Claims

New claims 18-21 have been added to further define Applicant’s contribution to the art. New claims 18-21 are supported by the specification as originally filed. With respect to claim 18 please see, for example, page 3, lines 7-11. Claim 19 is supported, for example, at page 3, lines 15-20 and page 17, lines 7-9. Claim 20 is supported, for example, at page 4, line 29 – page 5, line 1. Claim 21 is supported, for example, at page 10, line 30 – page 11, line 3, and page, 18 lines 18-21. No new matter has been added.

Claims 18-21 depend from claims 1 and 7. Each of claims 18-21 is therefore allowable for at least the same reasons as its respective base claim.

CONCLUSION

In view of the foregoing amendments and remarks, reconsideration is respectfully requested. This application should now be in condition for allowance; a notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant’s attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an accompanying payment, please charge any deficiency to Deposit Account No. 50/2762.

Serial No.: 12/170,951

- 13 -

Art Unit: 2629

Respectfully submitted,

Yves Behar, Applicant

By: Matthew H. Grady/

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Docket No.: L2039-700111

Date: July 1, 2011

1119201.1

Electronic Patent Application Fee Transmittal

Application Number:	12170951
Filing Date:	10-Jul-2008
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Filer:	Matthew H. Grady
Attorney Docket Number:	L2039-700111

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
Total in USD (\$)				180

Electronic Acknowledgement Receipt

EFS ID:	10438027
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Matthew H. Grady
Filer Authorized By:	
Attorney Docket Number:	L2039-700111
Receipt Date:	01-JUL-2011
Filing Date:	10-JUL-2008
Time Stamp:	20:51:37
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$180
RAM confirmation Number	5528
Deposit Account	502762
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

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Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)					
Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)					
Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	L2039-700111_-_Information_Disclosure_Statement_Fillable_PDF.pdf	612366 42f76803ca9c3fd29704874c241a3d23ca88a64e	no	4
Warnings:					
Information:					
2		L2039-70011_IDS_Rsp_1119201_1.pdf	54042 224132438304b9b06e8c20b1b30fc18687d94755	yes	13
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment/Req. Reconsideration-After Non-Final Reject		1	1	
	Claims		2	5	
	Applicant Arguments/Remarks Made in an Amendment		6	13	
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30659 17ebe0ea1972cc31f41f2115a6c0abf0c5bc8f4d	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			697067		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	
	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit	2629		
	Examiner Name	Abebe, Sosina		
	Attorney Docket Number	L2039-700111		

U.S.PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1							
If you wish to add additional U.S. Patent citation information please click the Add button.							Add	
U.S.PATENT APPLICATION PUBLICATIONS							Remove	
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1	20040001049		2004-01-01	Oakley			
	2	20020010707		2002-01-24	CHANG et al.			
If you wish to add additional U.S. Published Application citation information please click the Add button.							Add	
FOREIGN PATENT DOCUMENTS							Remove	
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² j	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							<input type="checkbox"/>
If you wish to add additional Foreign Patent Document citation information please click the Add button							Add	
NON-PATENT LITERATURE DOCUMENTS							Remove	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951
	Filing Date		2008-07-10
	First Named Inventor	Yves Behar	
	Art Unit	2629	
	Examiner Name	Abebe, Sosina	
	Attorney Docket Number	L2039-700111	

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1		<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button **Add**

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12170951
	Filing Date	2008-07-10
	First Named Inventor	Yves Behar
	Art Unit	2629
	Examiner Name	Abebe, Sosina
	Attorney Docket Number	L2039-700111

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Matthew H. Grady/	Date (YYYY-MM-DD)	2011-07-01
Name/Print	Matthew H. Grady	Registration Number	52957

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 12/170,951		Filing Date 07/10/2008		<input type="checkbox"/> To be Mailed										
APPLICATION AS FILED – PART I					(Column 1)		(Column 2)		SMALL ENTITY <input type="checkbox"/> OR OTHER THAN SMALL ENTITY										
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)		RATE (\$)		FEE (\$)							
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A				N/A									
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A		N/A		N/A				N/A									
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A				N/A									
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =		OR		X \$ =									
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =				X \$ =									
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).																	
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))																			
* If the difference in column 1 is less than zero, enter "0" in column 2.																			
APPLICATION AS AMENDED – PART II					(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY OR OTHER THAN SMALL ENTITY								
AMENDMENT	07/01/2011		CLAIMS REMAINING AFTER AMENDMENT				HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)		RATE (\$)		ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))		* 20		Minus		** 20		= 0		X \$ =				OR		X \$52= 0		
	Independent (37 CFR 1.16(h))		* 3		Minus		***3		= 0		X \$ =				OR		X \$220= 0		
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))																		
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))																		
												TOTAL ADD'L FEE		OR		TOTAL ADD'L FEE		0	
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT				HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)		RATE (\$)		ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))		*		Minus		**		=		X \$ =				OR		X \$ =		
	Independent (37 CFR 1.16(h))		*		Minus		***		=		X \$ =				OR		X \$ =		
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))																		
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))																		
												TOTAL ADD'L FEE		OR		TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.												Legal Instrument Examiner: /BRENDA WEBB/							
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".																			
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".																			
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.																			

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
 If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
12/170,951 07/10/2008 Yves Behar L2039-700111 2004

37462 7590 06/30/2011
LANDO & ANASTASI, LLP
ONE MAIN STREET, SUITE 1100
CAMBRIDGE, MA 02142

Table with 1 column: EXAMINER

ABEBE, SOSINA

Table with 2 columns: ART UNIT, PAPER NUMBER

2629

Table with 2 columns: NOTIFICATION DATE, DELIVERY MODE

06/30/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@LALaw.com
gengelso@LALaw.com

Interview Summary	Application No. 12/170,951	Applicant(s) BEHAR ET AL.	
	Examiner SOSINA ABEBE	Art Unit 2629	

All participants (applicant, applicant's representative, PTO personnel):

- (1) SOSINA ABEBE. (3) Sarah Gates.
(2) Matthew Grady. (4) _____.

Date of Interview: 20 June 2011.

Type: a) Telephonic b) Video Conference
c) Personal [copy given to: 1) applicant 2) applicant's representative]

Exhibit shown or demonstration conducted: d) Yes e) No.
If Yes, brief description: _____.

Claim(s) discussed: 1.

Identification of prior art discussed: Aarras (2006/0264243) and Nishiyama (EP0588210).

Agreement with respect to the claims f) was reached. g) was not reached. h) N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Discussed the rejection of claim 1 and potential amendments to overcome the prior art of record. Agreement was not reached.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

/S. A./
Examiner, Art Unit 2629

/Bipin Shalwala/
Supervisory Patent Examiner, Art Unit 2629

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.



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www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes fields for EXAMINER (ABEBE, SOSINA), ART UNIT (2629), and DELIVERY MODE (ELECTRONIC).

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@LALaw.com
gengelso@LALaw.com

Office Action Summary	Application No.	Applicant(s)	
	12/170,951	BEHAR ET AL.	
	Examiner	Art Unit	
	SOSINA ABEBE	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10 July 2008.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-17 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 10 July 2008 is/are: a) accepted or b) objected to by the Examiner.
 - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 10/09/2008, 12/18/2009, 11/03/2010, 02/25/2011.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in **Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966)**, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: (See MPEP Ch. 2141)

- a. Determining the scope and contents of the prior art;
- b. Ascertaining the differences between the prior art and the claims in issue;
- c. Resolving the level of ordinary skill in the pertinent art; and
- d. Evaluating evidence of secondary considerations for indicating obviousness or nonobviousness.

2. **Claims 1 – 2, 6 – 9, 11, 13 - 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aarras “2006/0264243” in view of Nishiyama “EP0588210”.**

Re-Claim 1, Aarras teaches a portable computer comprising: (par. [0033]; lines 1 - 6)

a base (fig. 2; item 14);

a display component (item 12) rotatably coupled to the base (item 14) such that the display component (item 12) and the base (item 14) are rotatable with respect to one another about a longitudinal axis running along an interface between the display component (item 12) and the base (item 14), the display component (item 12) including a display screen (item 30); and (par. [0039]; lines 1 - 7)

Aarras teaches a sensor 46 to sense when the first and second sections are moved relative to each other **but fails to teach** a scroll wheel disposed at least partially within the base and rotatable about the longitudinal axis, the scroll wheel configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen.

However, Nishiyama discloses a scroll wheel (scroll wheel is equivalent to selector fig. 3; item 8) disposed at least partially within the base and rotatable about the longitudinal axis, the scroll wheel (item 8) configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen (fig. 1; item 7). (col. 5; lines 12 – 17)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Aarras into Nishiyama provided with a display section includes a rotary selector which turns to select various functions. (Nishiyama, Abstract)

Re-claim 2, the combination of Aarras and Nishiyama as a whole further teach where the scroll wheel (fig. 3; item 8 (selector)) is configured to permit the user to adjust a volume of sound produced by the portable computer. (Nishiyama, col. 5; lines 19 - 20)

Re-Claim 6, the combination of Aarras and Nishiyama as a whole further teach wherein the scroll wheel (fig. 3; item 8 (selector)) is configured to permit the user to select a mode of content for display by the portable computer. (Nishiyama, col. 6; lines 43 – 49)

Re-Claim 7, Aarras teaches a portable computer configurable between a plurality of display modes (figures 1 & 2) including a laptop mode (fig. 2) and an easel mode (fig. 1), the portable computer comprising: (par. [0033]; lines 1 - 6)

a base (fig. 2; item 14);

a display component (item 12) rotatably coupled to the base (item 14) and including a screen (item 30) which displays content; and (par. [0039]; lines 1 - 7)

Aarras teaches a sensor 46 to sense when the first and second sections are moved relative to each other **but fails to teach** a scroll wheel accessible in each of the plurality of display modes and configured to permit a user to manipulate at least one of operating parameters of the portable computer and the content displayed on the screen.

However, Nishiyama discloses a scroll wheel (fig. 3; item 8 (selector)) accessible in each of the plurality of display modes and configured to permit a user to manipulate at least one of operating parameters of the portable computer and the content displayed on the screen (fig. 1; item 7). (col. 5; lines 12 – 17)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Aarras into Nishiyama provided with a display section includes a rotary selector which turns to select various functions. (Nishiyama, Abstract)

Re-Claim 8, the combination of Aarras and Nishiyama as a whole further teach wherein the scroll wheel (fig. 3; item 8 (selector)) is disposed at least partially about an axis of rotation of the display component relative to the base. (par. [0039]; lines 3 – 6)

Re-Claim 9, Aarras teaches wherein the axis of rotation runs along an interface between the display component (fig. 2; item 12) and the base (item 14). (par. [0058]; lines 9 - 10)

Re-Claim 11, is rejected as applied to claim 4 above because the scope and contents of the recited limitations are substantially the same.

Re-Claim 13, Aarras teaches a portable computer comprising: (par. [0033]; lines 1 - 6)

a base (fig. 2; item 14);

a display component (item 12) including a screen (item 30) configured to display content;

a hinge assembly (item 16) configured to rotatably couple the display component (item 12) to the base (item 14) and to permit rotation of the display component (item 12) about a longitudinal axis running along an interface between the display component (item 12) and the base (item 14); and (par. [0039]; lines 1 - 7)

Aarras teaches a sensor 46 to sense when the first and second sections are moved relative to each other **but fails to teach** a scroll wheel disposed at least partially about the longitudinal axis. **However, Nishiyama discloses** a scroll wheel (fig. 3; item 8 (selector)) disposed at least partially about the longitudinal axis. (see fig. 3)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Aarras into Nishiyama provided with a display section includes a rotary selector which turns to select various functions. (Nishiyama, Abstract)

Re-Claim 14, the combination of Aarras and Nishiyama as a whole further teach wherein the scroll wheel (fig. 3; item 8 (selector)) is configured to permit a user to manipulate the content displayed on the screen. (Nishiyama, col. 5; lines 50 - 56)

Re-Claim 15, is rejected as applied to claim 2 above because the scope and contents of the recited limitations are substantially the same.

Re-Claim 16, the combination of Aarras and Nishiyama as a whole further teach

wherein the scroll wheel (fig. 3; item 8 (selector)) is disposed at least partially within the hinge assembly. (fig. 1; item 5)

Re-Claim 17, is rejected as applied to claim 3 above because the scope and contents of the recited limitations are substantially the same.

3. Claims 3 – 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aarras “2006/0264243” in view of Nishiyama “EP0588210” and further in view of Orsley “US 2007/0247446”.

Re-Claim 3, Aarras teaches a sensor 46 to sense when the first and second sections are moved relative to each other **but fails to teach** a first navigation button disposed on one of the base and the display component and configured to permit the user to manipulate selected content displayed on the screen.

However, Orsley discloses a first navigation button disposed on one of the base and the display component and configured to permit the user to manipulate selected content displayed on the screen. (par. [0037] – [0040])

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Aarras into Nishiyama and Orsley to provide a navigation button for activating a function of the electronic device.

Re-Claim 4, the combination of Aarras, Nishiyama and Orsley as a whole further teach wherein the screen is configured to display at least one of a plurality of modes of content; and wherein the navigation button is configured to permit the user to select for display one of the plurality of modes of content. (Orsley, par. [0040]; lines 1 – 8)

Re-Claim 5, the combination of Aarras, Nishiyama and Orsley as a whole further teach a second navigation button; wherein the first navigation button is disposed on a major surface of the base; and wherein the second navigation button is disposed on a minor surface of the base. (Orsley, par. [025]; lines 1 – 19)

Re-Claim 10, the combination of Aarras, Nishiyama and Orsley as a whole further teach first navigation button user-accessible in each of the laptop mode (Aarras, fig. 2) and the easel mode (fig. 1), and configured to permit the user to manipulate selected content displayed on the screen. (Orsley, par. [0037] – [0040])

- 4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aarras, Nishiyama in view of Orsley “US 2007/0247446” and further in view of Gettman “US 7,467,356”.**

Re-Claim 12, Aarras teaches a sensor 46 to sense when the first and second sections are moved relative to each other **but fails to teach** a second navigation button that is not user-accessible when the portable computer is in the laptop mode.

However, Gettman discloses a second navigation button that is not user-accessible when the portable computer is in the laptop mode. (col. 30; lines 27 – 29)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Aarras, Nishiyama into Orsley and Gettman, when the browser is displaying the Web View, a plurality of browser navigation buttons 1304 are displayed in a toolbar region 1301 of screen display 1300. (Gettman, col. 30; lines 15 -17)

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sosina Abebe whose telephone number is (571) 270-7929. The examiner can normally be reached on Mon-Thurs from 9:00-5:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Shalwala Bipin H. can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have

Application/Control Number: 12/170,951

Page 10

Art Unit: 2629

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/S. A./

Examiner, Art Unit 2629

/Bipin Shalwala/

Supervisory Patent Examiner, Art Unit 2629

Notice of References Cited	Application/Control No. 12/170,951	Applicant(s)/Patent Under Reexamination BEHAR ET AL.	
	Examiner SOSINA ABEBE	Art Unit 2629	Page 1 of 1

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Receipt date: 11/03/2010

12170951 - GAU: 2629

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951
	Filing Date		2008-07-10
	First Named Inventor	Yves Behar	
	Art Unit		2629
	Examiner Name	HJERPE, RICHARD A	
	Attorney Docket Number		L2039-700111

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	Examiner SOSINA ABEBE	Art Unit 2629

SEARCHED			
Class	Subclass	Date	Examiner
345	169,184	03/24/11	SA

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor name search	03/24/11	SA
East Search	03/24/11	SA

INTERFERENCE SEARCH			
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Receipt date: 02/25/2011

12170951 - GAI: 2629

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

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	Art Unit	2629		
	Examiner Name	Richard A Hjerpe		
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¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	"7467356".pn.	US-PGPUB; USPAT	OR	ON	2011/03/26 19:50
S4	76	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:12
S5	34	Morenstein near Joshua.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:12
S6	19	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:13
S7	14	Edahiro near Naoya. inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:13
S8	17	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 16:13
S9	9	S4 and S5 and S6 and S7 and S8	US-PGPUB; USPAT	OR	ON	2011/03/22 16:14
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EAST Search History

S48	1	"11606556"	US-PGPUB; USPAT	OR	ON	2011/03/25 17:32
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Receipt date: 12/18/2009

12170951 - GAU: 2629

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 08/31/2008. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951
	Filing Date		2008-07-10
	First Named Inventor	Yves Behar	
	Art Unit	2115	
	Examiner Name	Not Yet Assigned	
	Attorney Docket Number	A2029-700111	

U.S. PATENTS							Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	
	1	4939514		1990-07-03	Shinichi Miyazaki		
	2	5200913		1993-04-06	Jeff C. Hawkins et al.		
	3	5268817		1993-12-07	Shigenori Miyagawa et al.		
	4	5796575		1998-08-18	Sergey Gary Podwalny et al.		
	5	5949643		1999-09-07	Jeffrey Batio		
	6	5987704		1999-11-23	John G. Tang		
	7	6005767		1999-12-21	Edmund Ku et al.		
	8	6223393	B1	2001-05-01	Eric Andrew Knopf		

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	12170951 - GAU: 2629
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	First Named Inventor	Yves Behar		
	Art Unit	2115		
	Examiner Name	Not Yet Assigned		
	Attorney Docket Number	A2029-700111		

	9	6262885		2001-07-17	Philip George Emma et al.	
	10	6266236	B1	2001-07-24	Edmund Ku et al.	
	11	6275376		2001-08-14	Joung-Nam Moon	
	12	6343006		2002-01-29	Jerry Moscovitch et al.	
	13	6377444		2003-04-23	Scott D. Price et al.	
	14	6510049	B2	2003-01-21	John B. Rosen	
	15	6628267	B2	2003-09-03	John Peter Karidis et al.	
	16	6697055	B1	2004-02-24	Edward Bullister	
	17	6771494	B2	2004-08-03	Kenji Shimano	
	18	6788527	B2	2004-09-07	Paul J. Doczy et al.	
	19	6829140	B2	2004-12-07	Kenji Shimano et al.	

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	First Named Inventor		Yves Behar			
	Art Unit		2115			
	Examiner Name		Not Yet Assigned			
	Attorney Docket Number		A2029-700111			

	20	6944012	B2	2005-09-13	Paul J. Doczy et al.	
	21	6963485	B2	2005-11-08	Seung-man Hong	
	22	7072179	B1	2006-07-04	Michael A. Curran et al.	
	23	7239508	B2	2007-07-03	David A. Ferrucci	
	24	D416003		1999-11-02	Sonja Sciefer et al.	
	25	7061472	B1	2006-06-13	Schweizer et al.	
	26	6661426	B1	2003-12-09	Jetha et al.	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	20070182663	A1	2007-08-09	Biech	
	2	20050210399	A1	2005-09-22	Filner et al.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	12170951 - GAU: 2629	
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	First Named Inventor		Yves Behar		
	Art Unit		2115		
	Examiner Name		Not Yet Assigned		
	Attorney Docket Number		A2029-700111		

	3	20050257400	A1	2005-11-24	Sommerer	
	4	20090303676	A1	2009-12-10	Behar	
	5	20090300511	A1	2009-12-03	Behar	

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FOREIGN PATENT DOCUMENTS

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	1	0588210	EP	A1	1994-03-23	Hitachi, Ltd.		<input type="checkbox"/>
	2	10-2000-0036647	KR	A	2000-07-05	Icten Communication Co.		<input type="checkbox"/>

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	1	http://laptop.org/en/laptop/start/ebook.shtml accessed on September 29, 2008	<input type="checkbox"/>

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Receipt date: 10/09/2008

12170951 - GAU: 2629

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Doc description: Information Disclosure Statement (IDS) Filed

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	
	1	3468576		1969-09-23	G. E. Beyer et al.		
	2	5825352		1998-10-20	Stephen J. Bisset et al.		
	3	5841631		1998-11-24	Seong S. Shin et al.		
	4	6323846	B1	2001-11-27	Wayne Westerman et al		
	5	6659516	B2	2003-12-09	Shyune-Yang Wang et al.		
	6	7250207	B1	2007-07-31	Gary W. Heal et al.		
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	Filing Date		2008-07-10		
	First Named Inventor		Yves Behar		
	Art Unit		2115		
	Examiner Name		Not Yet Assigned		
	Attorney Docket Number		A2029-700111		

	1	20070138806	A1	2007-06-21	Chris Ligtenberg et al.	
	2	20080042987	A1	2008-02-21	Wayne Westerman et al.	

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BIB DATA SHEET

CONFIRMATION NO. 2004

SERIAL NUMBER 12/170,951	FILING or 371(c) DATE 07/10/2008	CLASS 345	GROUP ART UNIT 2629	ATTORNEY DOCKET NO. L2039-700111	
APPLICANTS Yves Behar, Oakland, CA; Joshua Morenstein, San Francisco, CA; Christopher Hibmacronan, Oakland, CA; Naoya Edahiro, San Francisco, CA; Matthew David Day, San Francisco, CA;					
** CONTINUING DATA ***** This appln claims benefit of 61/041,365 04/01/2008					
** FOREIGN APPLICATIONS *****					
** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 07/23/2008					
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and Acknowledged <u>/SOSINA ABEBE/</u> <small>Examiner's Signature</small>	<input type="checkbox"/> Met after Allowance Initials _____	STATE OR COUNTRY CA	SHEETS DRAWINGS 25	TOTAL CLAIMS 17	INDEPENDENT CLAIMS 3
ADDRESS LANDO & ANASTASI, LLP ONE MAIN STREET, SUITE 1100 CAMBRIDGE, MA 02142 UNITED STATES					
TITLE PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS					
FILING FEE RECEIVED 1220	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

<i>Index of Claims</i> 	Application/Control No. 12170951	Applicant(s)/Patent Under Reexamination BEHAR ET AL.
	Examiner SOSINA ABEBE	Art Unit 2629

✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
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CLAIM		DATE							
Final	Original	03/24/2011							
	1	✓							
	2	✓							
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	17	✓							

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	
	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit	2629		
	Examiner Name	Richard A Hjerpe		
	Attorney Docket Number	L2039-700111		

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear		
	1	6343006	B1	2002-01-29	Moscovitch			
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	1	20050146845	A1	2005-07-07	Moscovitch			
	2	20060126284	A1	2006-06-15	Moscovitch			
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12170951
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	Examiner Name	Richard A Hjerpe
	Attorney Docket Number	L2039-700111

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	First Named Inventor	Yves Behar	
	Art Unit	2629	
	Examiner Name	Richard A Hjerpe	
	Attorney Docket Number	L2039-700111	

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Matthew H. Grady/	Date (YYYY-MM-DD)	2011-02-25
Name/Print	Matthew H. Grady	Registration Number	52957

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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Electronic Acknowledgement Receipt

EFS ID:	9530849
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Matthew H. Grady
Filer Authorized By:	
Attorney Docket Number:	L2039-700111
Receipt Date:	25-FEB-2011
Filing Date:	10-JUL-2008
Time Stamp:	13:25:21
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Filed (SB/08)	L2039-700111_updated_IDS. pdf	612531 <small>7b7f7e68ca953daea684ed0f57ab72b8b6e1e34d</small>	no	4

Warnings:

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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951
	Filing Date		2008-07-10
	First Named Inventor	Yves Behar	
	Art Unit		2629
	Examiner Name	HJERPE, RICHARD A	
	Attorney Docket Number		L2039-700111

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	
	1	6661426	B1	2003-12-09	Jetha		
	2	D593085		2008-03-12	Behar		
	3	D593091		2008-03-13	Behar		
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Attorney Docket Number	L2039-700111

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Examiner Name	HJERPE, RICHARD A
Attorney Docket Number	L2039-700111

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First Named Inventor	Yves Behar
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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	20050210399	A1	2005-09-22	Filner	
	2	20050257400	A1	2005-11-24	Sommerer	
	3	20100174993	A1	2010-07-08	Pennington	
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	8	20050041378		2005-02-24	Hamada	
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First Named Inventor	Yves Behar
Art Unit	2629
Examiner Name	HJERPE, RICHARD A
Attorney Docket Number	L2039-700111

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	Art Unit	2629		
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	Attorney Docket Number	L2039-700111		

	21	20080284738	A1	2008-11-20	Hovden	
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	1	EP0588210	EP		1993-03-23	Hitachi		<input type="checkbox"/>
	2	DE19952486	DE		2001-05-03	Schweizer		<input type="checkbox"/>

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	Examiner Name	HJERPE, RICHARD A	
	Attorney Docket Number		L2039-700111

EXAMINER SIGNATURE			
Examiner Signature			Date Considered
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	Filing Date	2008-07-10
	First Named Inventor	Yves Behar
	Art Unit	2629
	Examiner Name	HJERPE, RICHARD A
	Attorney Docket Number	L2039-700111

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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

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See attached certification statement.

Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Matthew H. Grady/	Date (YYYY-MM-DD)	2010-11-03
Name/Print	Matthew H. Grady	Registration Number	52957

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



EUROPEAN PATENT APPLICATION

Application number: 93114327.5 Int. Cl.⁵: H04M 1/02

Date of filing: 07.09.93

Priority: 08.09.92 JP 239735/92

Date of publication of application:
 23.03.94 Bulletin 94/12

Designated Contracting States:
 DE FR GB

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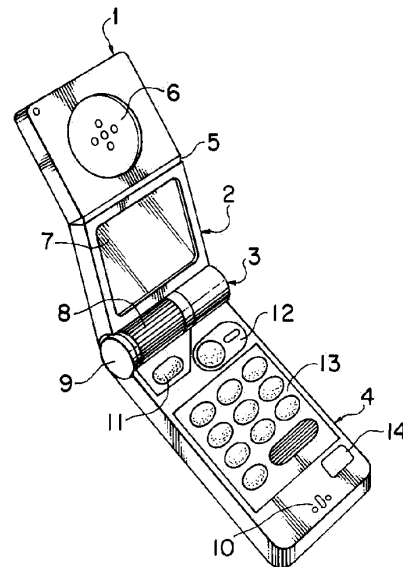
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 Galleiplatz 1
 D-81679 München (DE)

Portable radio telephone set.

A portable radio telephone set provided with a display section includes a rotary selector which turns to select various functions. A menu displayed on the display section is selected by the rotary selector during a non-conversation time and the sound volume can be adjusted during a conversation time. The adjusting operation can be performed from both the front and rear sides of the telephone set. The rotary selector and button keys are arranged within the operation range of the thumb, and ordinary dial functions performed by operating these rotary selector and button keys are provided.

FIG. 1



EP 0 588 210 A1

BACKGROUND OF THE INVENTION

Field of the Invention:

The present invention relates to a portable radio terminal and, more particularly, to a portable radio telephone set having a folding and housing control mechanism and a rotary selector for selecting various functions provided in a hinge section for folding and housing purpose.

Description of the Related Art:

Conventional portable radio telephone sets (hereinafter referred to simply as telephone sets) are not only provided with ordinary telephone functions, but also an electronic telephone directory function by which telephone numbers and names can be registered, a help function for guiding various functions, an incoming call tone selection function for selecting incoming call tone, and the like, thus being formed as a multi-functional terminal. The conventional portable radio telephone set uses function buttons in order to select such functions. The operation of some terminals has been made easier by making the shape of function buttons different from that of dial buttons.

When, for example, the electronic telephone directory function is used, first a telephone set user operates a function button for the electronic telephone directory function in order to call a telephone number stored in the electronic telephone directory on a display section of the portable radio telephone set. Then, the telephone set user operates a function button for selecting the telephone number and a function button for scrolling the registered telephone numbers in order to call the wanted telephone number on the display section from among telephone numbers registered in the electronic telephone directory. When the wanted telephone number is confirmed on the display section by the above operation, the user operates a function button for starting a conversation in order to call the other party.

Though the conventional portable radio telephone set is multi-functional, the operation procedure thereof is complex for a user when the series of operations described above is considered. Furthermore, there is the possibility that the greater the number of buttons, the greater the chances that a button may be depressed erroneously when the button arrangement of a present portable radio telephone set is considered.

That is, in view of the complexity of such an operation procedure, it is not said easy, as regards a conventional telephone set in which functions are selected by function buttons, to operate various buttons with only one hand while holding the tele-

phone set itself in the same hand.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a telephone set which makes it possible to easily perform various operations required particularly for conducting a radio conversation with one hand while the telephone set itself is being held by the same hand.

It is another object of the present invention to simplify the procedure for selecting or operating a plurality of functions of the telephone set.

It is still another object of the present invention to provide a multi-functional telephone set, the number of buttons thereof being reduced as much as possible.

To achieve the above-described objects, a portable radio telephone set in accordance with the present invention is provided, which portable radio telephone set has a display section, comprising a rotary selector which turns to select various functions. A menu of various functions displayed on the display section is selected when the rotary selector is during a non-conversation time, sound volume can be adjusted during a conversation time, the adjusting operation can be performed from both the front and rear sides of the telephone set. The rotary selector and button keys are arranged within the operation range of the thumb, and thus ordinary dial functions, performed by operating the rotary selector and the button keys, are provided.

According to the present invention, since the rotary selector is provided as a telephone terminal, it is possible to easily select a desired function of the telephone terminal with one hand by rotating the selector.

Also, according to the present invention, since the rotary selector is provided in a hinge section of a telephone terminal which is foldable so that it can be housed, it is possible to select a desired function of the telephone terminal by rotating the rotary selector.

Since the rotary selector is provided in the hinge section of the telephone terminal which is foldable so it can be housed, the hinge section can be of any size, and the mechanical strength of the hinge section is strengthened. The provision of the rotary selector results in a reduction of key buttons for performing multiple functions, or the like, making it possible to effectively use the space where the telephone set is arranged.

Also, by arranging the rotary selector provided in a terminal so as to be rotatable longitudinally and slidable along the shaft of the hinge, the rotary selector can be used as a cursor. Further, by moving the cursor on the display section up and down, or from side to side in linkage with the rotary

selector in this way, various functions of a portable telephone set can be performed, and it is made easy to perform an operation with one hand.

The above and further objects and novel features of the invention will more fully appear from the following detailed description when the same is read in connection with the accompanying drawings. It is to be expressly understood, however, that the drawings are for the purpose of illustration only and are not intended as a definition of the limits of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view illustrating the appearance of a portable radio telephone set in accordance with an embodiment of the present invention;

Fig. 2 is a perspective view illustrating a state in which the portable radio telephone set shown in Fig. 1 is used while it is held with one hand;

Fig. 3 is a perspective view illustrating a state in which the portable radio telephone set is used during a radio conversation state as it is seen from the outer side (the rear side) thereof;

Fig. 4 is an illustration of a one-hand operation method in a state in which the radio telephone set is held with one hand;

Fig. 5 is a partial sectional view of a joint portion of the radio telephone set in accordance with the embodiment of the present invention;

Fig. 6 is a partial sectional view of the joint portion and the receiver portion of the radio telephone set, a display section, and the like;

Fig. 7 is a perspective view, partly in cross section, illustrating a state in which the radio telephone set is folded so it is housed;

Fig. 8 is a plan view illustrating a method for controlling the position of a cursor by operating the dials of the radio telephone set in accordance with the present invention; and

Fig. 9 is a flowchart showing a selection of various functions by using a rotary selector of the radio telephone set.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Preferred embodiments of the present invention will be explained below with reference to the accompanying drawings of Fig. 1 through Fig. 9.

The appearance of a telephone set in accordance with the present invention will be explained first. Fig. 1 illustrates in perspective the overall appearance of the main body of the telephone set when the folded state thereof is released and it is placed in a use state. In this case, a receiver section 1 and a display section 2 are freely flexed

and engaged with each other via a hinge 5. These sections are engaged with an operation section 4 via a joint portion 3 by which the telephone set is folded and rotated so as to be housed. A receiver (speaker for outputting received voice sound) 6 is provided in the central portion of the receiver section 1. When this receiver is brought into contact with the ear of a party (user) during a radio conversation, a voice sound from the other party is heard. Since, as shown in the figure, the hinge 5 is flexed to form a V shape, it is easy to operate the telephone set during the radio conversation state. The joint portion 3 maintains the state in which the telephone set is rotated after the main body of the telephone set is folded and housed, that is, the use state, and is provided with a selector 8 for selecting functions, a rotation operation mechanism, and a push-button 9. A set button 11 for storing/retrieving and inputting/outputting information, a call origination (re-origination) button 12 for starting a conversation, a ten-key portion 13, and a termination button 14 for terminating a conversation are provided in the operation section 4, a microphone 10 being contained in the front end portion of the main body. With this construction, when a radio conversation function is selected by the selector 8, a telephone set user brings the receiver 6 into contact with the ear, and the user's mouth is brought close to the microphone 10 as in a handset of a conventional telephone set, a radio conversation with the other party then being conducted. Keypad information and necessary information from among stored information are called and displayed on a liquid-crystal display screen 7 disposed in the central portion of the display section 2.

Fig. 2 illustrates a state in which the telephone set is being used while it is held by one hand (the left hand in this embodiment). The telephone set user grasps both end portions of the joint portion 3 between the thumb "a" and the forefinger "b". The push-button 9 is depressed by the thumb "a" in order to rotate the display section 2 and the receiver section 1 via the joint portion 3, thereby shifting the state of the telephone set from the state in which it is folded and housed to a stable use state. Since the main body of the telephone set is basically held by the thenar "c" and the remaining three fingers "d", an accident, such as the main body of the telephone set falling from the hand, does not occur even if the thumb "a" and the forefinger "b" are separated from the main body of the telephone set. Therefore, if the main body of the telephone set is held as shown in Fig. 2, the telephone set user can operate the selector 8 and various operation buttons on the operation section 4 with the thumb "a" while simultaneously confirming a display on the liquid-crystal display screen 7.

Fig. 3 is a perspective view of the portable radio telephone set as it is seen from the outer side (the rear side) thereof, illustrating a state in which the radio telephone set is used during a radio conversation. As shown in Fig. 3, the forefinger "b" is separated from one end of the joint portion 3, and the selector 8 is operated by the forefinger "b". As a result, the selector 8 can be operated by the thumb "a" from the inner surface thereof, and also by the forefinger "b" from the outer surface thereof.

Therefore, the selector 8 is provided in the joint portion 3 so as to select various functions (to be specific, call origination/reception, telephone number, secrecy, input, output, storage, calculation, time, remote control, schedule, call, clear, calendar, dictionary, map, characters, numerals, or the like) during a non-radio conversation time, and so as to function to adjust the volume of the received voice sound during a radio conversation time. The selector 8 is provided in such a way that the selector 8 is rotatable longitudinally and can be operated from both the inner and outer surfaces.

Fig. 4 illustrates a one-hand operation method in a state in which the radio telephone set is held with one hand. As shown in the figure, in the main body of the telephone set, the right and left ends of the operation section 4 are held by the thenar "c" and the three fingers "d". If the push-button 9 is depressed by the thumb "a", the folded and housed telephone set can be shifted to a stable use state, i.e., a radio conversation state, by rotating the receiver section 1 and the display section 2 via the joint portion 3.

An example of a case in which a radio conversation is conducted in this use state will be explained. First, the telephone set user selects by using the selector 8 a list display function (one function of the telephone set) for displaying a list of names and their telephone numbers. The available selection methods include a method in which a list of functions is displayed beforehand on the liquid-crystal display screen 7 and a cursor which is moved in linkage with the rotation of the selector 8 or the like is moved up and down to identify any one of the functions, a method in which the selector itself is provided with a change-over switch corresponding to multiple functions, the selector being switched to select any one of the functions. The functions can be more easily selected by using the selector 8 in addition to the key buttons. Next, a list of the prestored names and their telephone numbers is displayed on the liquid-crystal display screen 7, and a wanted telephone number is retrieved by scrolling the display screen using the selector 8. In the above display and retrieval method, only the selector 8 needs to be operated. As a result, an operation for switching the selector

8 at a thumb position "f" is possible. Further, when the telephone number of the other party is confirmed, a set button 11 is depressed at a thumb position "g", and a call origination (re-origination) button 12 is operated, allowing a radio conversation to start. When the radio conversation is terminated, a termination button 14 is depressed at a thumb position "i" in order to complete a series of operations necessary for conducting a radio conversation. That is, the range in which the liquid-crystal display screen 7 can be visually confirmed and in which the thumb "a" can be moved to operate the selector 8, the call origination (re-origination) button 12, and the termination button 14 is assumed to be the range defined by the broken lines A and B shown in the figure. In this range, necessary operations can be performed by the thumb "a". In other words, this range is a range in which the thumb "a" is rotated, turned, moved back and forth, and bent in a combined manner at a joint "e" about the base of a human's phalanx in the thumb "a". Therefore, when the selector 8 and various buttons required for a radio conversation are arranged in the range defined by the broken lines A and B, since the selector 8 and the buttons are operated with one hand, the ease with which the telephone set is operated with one hand is enhanced.

An example in which these various functions are selected by the selector 8 will now be explained with reference to the flowchart in Fig. 9. When the telephone set is opened for use from the state in which it is housed because the push-button 9 is depressed by the thumb "a", the power supply is turned on, and the initial screen appears on the liquid-crystal display screen 7, on which screen date, time, and the like are displayed. When the set button 11 is depressed, a function screen appears on the display screen 7. The displayed function setting and the memory dial are cursor-moved by turning the selector 8. Then, a function is selected, and the function is determined by operating the set button 11.

When a function setting is selected in such function selection, functions "Set/Release", "Select", "Adjust", "Command input" and "Display only" are successively displayed as a result of the turning of the selector 8, making scrolling retrieval possible and allowing these selected functions to be confirmed. When these functions are selected and set by the set button 11, call origination restriction is set or released in "Set/Release", turning on/off of number announcement is selected by the cursor movement caused by the turning of the selector 8 and determined by the set button 11, and the screen returns to the initial screen. When the function "Select" is selected and set, the selectable range of ringing tone quality is displayed, and it is possible to select the tone quality by turning

the selector 8 while displaying the current situation. After the tone quality is determined by the set button 11, the screen returns to the initial screen. When the function "Adjust" is selected and set, the selectable range of the receiver tone volume is displayed, and it is possible to select the tone volume by turning the selector 8 while displaying the current situation. After the receiver tone volume is determined by the set button 11, the screen returns to the initial screen. When the function "Command input" is selected and set, a display screen for inputting four digits of a personal identification number appears, making it possible to input the number by using the buttons of a ten-key section 13. The number is set by the set button 11 after it is input, and the screen returns to the initial screen. When the function "Display only" is selected and set, the amount of the remaining memory of the memory dial is displayed, and the screen returns to the initial screen.

When the memory dial is selected in the function selection, "Store", "Update", and "Clear" displayed on the display screen 7 are set by the selector 8 as a result of the turning thereof, and set by the set button 11, making it possible to proceed to the subsequent functions.

Although in the above-described operation, functions are determined by the set button 11, the selector 8 may be moved axially so as to have the same functions as those of the set button 11 as in a joystick 29 which will be described later. In such a case, the ease with which the telephone set is operated with one hand is enhanced even more.

Fig. 5 is a partial sectional view of the joint portion 3 of the radio telephone set in accordance with the present invention. The joint portion 3 is formed of a case 15 and a button shaft 19, and fixed to the operation section 4. A boss shaft 16 is formed in the central end surface portion of the case 15, and the boss shaft 16 and a hollow flange 18 are rotatably engaged with each other. Similarly, a sleeve shaft 22 is formed in the button shaft 19, and the sleeve shaft 22 and a sleeve flange 20 are rotatably engaged with each other. The rotatable hollow flange 18 and the sleeve flange 20 are fixed by a chassis 17 which is stably fixed inside the display section 2. In this way, the operation section 4 and the display section 2 are freely engaged with each other in such a way that they can be folded on one another via the joint portion 3.

The push-button 9 can be movably inserted into the end surface of the button shaft 19. A shank 23 formed in the push-button 9 is slidably fitted into the inside of the sleeve shaft 22. A stopper piece 24 is disposed in the shank 23 which is engaged with notches 25 and 26 formed in the end surfaces of the sleeve shaft 22 and the sleeve flange 20. As a result, the rotation of the sleeve

flange 20 is stopped, and consequently the rotation of the display section 2 is stopped stably. The notch 26 of the sleeve shaft 22 does not allow the engagement of the stopper piece 24 to be released for the maximum axial stroke of the push-button 9. In contrast, the engagement of the notch 25 of the sleeve flange 20 can be released and freely rotated. The notch 25 of the sleeve flange 20 is formed at an open position where the telephone set is being used and at a housing position (not shown) where it is folded and housed.

Further, a torsion coil spring 21 is disposed inside the case 15. One end of the torsion coil spring 21 is connected and fixed to the case 15, and the other end thereof is extended from the case 15 and engaged with a spring hole formed in the hollow flange 18. As a result, if the push-button 9 is depressed, the stopper piece 24 releases the stoppage at the notch 25 (not shown) when it is housed, and the elastic force of the torsion coil spring 21 is released, causing the hollow flange 18 to rotate. Therefore, the receiver section 1 and the display section 2 are rotated, becoming ready for use.

Since some elastic force still remains in the torsion coil spring 21 in the above connection in the use state, a rotational force is given continuously in the direction in which the remaining elastic force is released. This fact indicates that unwanted jarring which may occur when the telephone set is used, is prevented by the rotational force thereof.

Further, when a selector shaft 28 engaging with the selector 8 moves along the axis thereof when the mechanical position thereof is read, the stroke stops at the end surface of the shank 23 so as to serve as a stopper. The press fitting between the shank 23 and a shaft 27 is not released by such an operation force acting on the selector shaft 28. The selector shaft 28 and the shaft 27 are able to slide axially and turn around the shaft thereof on one shaft. The shaft 27 is supported so as to be slidable and turnable inside the selector shaft 28, and the other end reaches the joystick 29. Further, the selector shaft 28 extends close to the center of the joint portion 3, and the selector 8 is press-fitted to the end. The selector 8 is able to smoothly slide axially and turn around the shaft thereof without contacting other components.

Next, the joystick 29 will be explained. Disposed inside the joystick 29 are a power-supply switch (not shown) working with the shaft 27, a volume (for adjusting the receiver tone volume) which operates in response to the movement of the selector shaft 28, a sensor (for selecting functions), and the like. Examples of the sensor are a mechanical sensor, an electrical sensor, or an optical sensor. In short, the sensor detects the rotational position of the selector shaft 28, the sliding opera-

tion along the rotational shaft, and sends a signal to the liquid-crystal display screen 7 so that function selection/setting shown in Fig. 9 is performed and the screen is switched. Examples of methods performed by the power-supply switch are a method in which the position of the selector shaft is detected by the sensor and the power supply is turned on/off, and a method in which simply one end of the selector shaft 28 and the surface which the one end contacts are formed into an electrical contact point, and it is made to work with the depressing of the push-button 9. If the turning on/off of the push-button 9 is made to work in linkage with the turning on/off of the power-supply switch as in these methods, the telephone set user depresses the push-button 9 in order to make the telephone set in a folded and housed state shift to a use state, the power supply of the telephone set can be turned on, making it unnecessary to provide a key button exclusively used for the power-supply switch in the operation section 4. More specifically, when the telephone set is shifted to a state in which it is placed in a use state from the folded and housed state, the power supply of the telephone set can be inevitably turned on without operating a key button exclusively used for the power supply. The sensor inside the joystick 29 works not only with the selector shaft 28, but also with the operation of the function button in the operation section 4, and functions can be selected from the operation section 4.

The functions selected in this way reach a display processing circuit (not shown) via a cord E, and various displays necessary for performing the functions are made. Although in the embodiment the selector 8 works for controlling the position of a cursor, a selector exclusively used for controlling the position of the cursor, in addition to the selector 8, may be disposed near the selector 8.

Fig. 6 is a partial sectional view of the joint portion 3, the receiver section 1, and the display section 2. As shown in the figure, the display section 2 is able to turn along a slide ring 30 which serves as a part of the joint portion 3 fixed to the operation section 4. Inside the display section 2, one end of a fine slide pin 31 is always pressed against and built onto the slide ring 30. The other end of the slide pin 31 is rotatably engaged with a hinge piece 32 which works with the hinge 5 by which the section between the display section 2 and the receiver section 1 is made flexible. An elastic spring 33 is fixed to the hinge piece 32, and the other end is fixed to a spring seat 34 formed inside the receiver section 1. As shown in the figure, the receiver section 1 stabilizes at the flex position as indicated by the solid line by the action of the elastic spring 33. When an unnecessary force acts on the receiver section 1, since the

receiver section 1 is turned as indicated by the broken line, the telephone set itself is protected, and the receiver section 1 contacts the user's ear with elastic properties during a non-radio conversation. Thus, received voice can be heard in a satisfactory contact. When the telephone set is folded and housed, the receiver section 1 and the display section 2 are folded via the joint portion 3 as indicated by the broken line. Since, at that time, the slide pin 31 engages with a notch 35 of the slide ring 30, formed at the position at which the telephone set is housed, the receiver section 1 and the display section 2 are folded stably. At the folded time, the hinge piece 32 which works with the slide pin 31 is retracted into the display section 2. Therefore, the receiver section 1 which is flexed with respect to the display section 2 is folded in a state in which it is spread linearly so as to be along the display section 2.

Fig. 7 is a perspective view, partly in cross section, illustrating a state in which the telephone set is folded so as to be housed. As shown in the figure, since the slide pin 31 built into the display section 2 is engaged with the notch 35 formed in a part of the outer periphery of the joint portion 3 (equivalent to the slide ring 30), the telephone set is stably folded and housed. In this folded and housed state, if the push-button 9 is operated, the receiver section 1 and the display section 2 are turned for use, and the slide pin 31 is slidingly released from the notch 35. As a result, the receiver section 1 is flexed with respect to the display section 2.

Finally, controlling the position of the cursor by using the selector 8 will be explained. Fig. 8 illustrates a method for controlling the position of the cursor. As shown in the figure, the selector 8 disposed in the joint portion 3 is used to update the position of the noticed display on the liquid-crystal display screen 7, i.e., the position of a cursor 37. When that position is updated, the thumb "a" is operated at will from side to side in the direction of the arrow A or up and down in the direction of the arrow B in a state in which the thumb "a" contacts at a position "j" on the selector 8. That is, when the selector 8 is in a free state, the selector 8 stabilizes while maintaining clearances 36a and 36b of the same size toward the right and left, respectively. The operation using the thumb "a" in the direction of the arrow A changes the size of these clearances 36a and 36b. This change is sensed by a sensor inside the above-mentioned joystick 29. If, for example, the selector 8 is operated to the right, the cursor 37 is moved to the right on the liquid-crystal display screen 7. If the thumb "a" is released from the selector 8, the selector 8 is automatically made to return to the central position. The upward and downward opera-

tion of the selector 8 by using the thumb "a" causes the selector 8 to rotate up and down. The direction and the amount of the rotation at that time is sensed by the knob or sensor inside the joystick 29, and the cursor 37 moves up and down on the liquid-crystal display screen 7. What is meant by "sensed by the knob" here is that the amount of the rotation of the selector 8 is determined by voltage, current or the like corresponding to the knob. When a selector exclusively used for controlling the position of the cursor, in addition to the selector 8, is disposed near the selector 8, the selector exclusively used for controlling the position of the cursor is similarly operated, controlling the position of the cursor 37. Therefore, if the cursor 37 is moved successively to a desired position, for example, in a condition in which all necessary characters, numerals, symbols or the like are displayed on the liquid-crystal display screen 7, characters or the like at a moved position are sequentially selected as input subjects, and processed. When the set button 11 is operated on the operation section 4 in a condition in which, for example, the cursor 37 is moved to a desired character position, a list of names and telephone numbers can be displayed in part on the upper portion of the liquid-crystal display screen 7. Up to the present time, desired character strings or the like have been formed solely by operations of ten-keys for a necessary number of times. The operations are troublesome and complex, and key processing requiring a great number of operations is necessary. However, when display processing is performed as described above, such inconveniences as described above are reduced.

According to the embodiment of the present invention, as described above, since the rotary selector is disposed in the hinge section of a telephone set which is folded so as to be housed, the hinge section is made to have a desired size so that the mechanical strength of the hinge section can be strengthened. Since the provision of the rotary selector results in a reduction of key buttons for performing multiple functions, there is an advantage in that the space where the telephone set is arranged can be effectively used.

According to the embodiment of the present invention, there is an advantage in that by using the rotary selector disposed in a terminal, no key buttons exclusively used for controlling the cursor are needed, and the operation with one hand is made easier.

In addition, according to the embodiment of the present invention, the number of necessary key buttons can be reduced since the portable telephone set is provided with a rotary selector, and key buttons and a display of the most appropriate size can be arranged in a telephone set of the

most appropriate size. Furthermore, when the rotary selector is disposed in the hinge section of a folding type portable telephone set, the space where the rotary selector is disposed can be reduced.

According to the embodiment of the present invention, since a rotary selector is disposed in the telephone set, it is possible to easily perform various operations necessary, in particular, for conducting a radio conversation with the fingers of one hand while the telephone set itself is being held with the same hand.

Many different embodiments of the present invention may be constructed without departing from the spirit and scope of the present invention. It should be understood that the present invention is not limited to the specific embodiment described in this specification. To the contrary, the present invention is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the claims. The following claims are to be accorded the broadest interpretation, so as to encompass all such modifications and equivalent structures and functions.

Claims

1. A portable radio telephone set provided with a display section, comprising: a rotary selector which turns to select various functions, said rotary selector being capable of selecting a menu of the various functions displayed on the display section during a non-conversation time, and capable of adjusting the sound volume during a conversation time, the adjusting operation capable of being performed from both the front and rear sides of said telephone set, and button keys being arranged with said rotary selector within the operation range of the thumb so that ordinary dial functions performed by operating said rotary selector and said button keys are provided.
2. A portable radio telephone set according to claim 1, said telephone set being of a folding type so as to be housed, wherein said rotary selector is provided in the foldable hinge section so as to be rotatable in the same direction as that of said hinge section.
3. A portable radio telephone set according to claim 2, wherein a folding and housing control mechanism is disposed in the side end of said hinge section.
4. A portable radio telephone set according to claim 1, wherein said rotary selector is rotat-

able and slidable along the rotational shaft thereof.

- 5. A portable radio telephone set according to one of claims 1 and 4, wherein said rotary selector makes it possible to control the position of a cursor on the display section. 5
- 6. A portable radio telephone set according to claim 1, wherein, when said rotary selector turns to set functions in function selection, it is possible to scroll and retrieve setting and releasing of call origination restriction, ringing tone, receiver tone volume, inputting of a personal identification number or the like, which are functions displayed on said display section, and it is possible to select and set these functions by the rotary selector. 10 15
- 7. A portable radio telephone set which is provided with a display section and of a folding and housing type, said telephone set comprising a rotary selector which turns to select various functions being disposed in a hinge section for folding and housing purpose in such a way that the rotary selector can turn in the same direction as that of said hinge section, and a dial for controlling the position of a cursor being disposed near the shaft of the hinge section of said rotary selector, said dial being capable of turning in the same direction as that of said hinge section and capable of sliding along the shaft of said hinge section. 20 25 30
- 8. A portable radio telephone set according to claim 7, further comprising a folding and housing control mechanism disposed in the side end of said hinge section. 35
- 9. A portable radio telephone set which is provided with a display section and of a folding and housing type, said telephone set comprising a rotary selector which turns to select various functions disposed in a hinge section for folding and housing purpose in such a way that the rotary selector can turn in the same direction as that of said hinge section, said rotary selector selecting a menu displayed on a display section during a non-conversation time and adjusting a sound volume during a conversation time, such adjusting operation capable of being performed from both the front and rear sides of said telephone set, button keys being arranged with said rotary selector within the operation range of the thumb so that ordinary dial functions performed by operating said rotary selector and button keys are provided, and a dial for controlling the position of 40 45 50 55

a cursor being disposed near the shaft of the hinge section of said rotary selector, said dial being capable of turning in the same direction as that of said hinge section and capable of sliding along the shaft of said hinge section.

FIG. 1

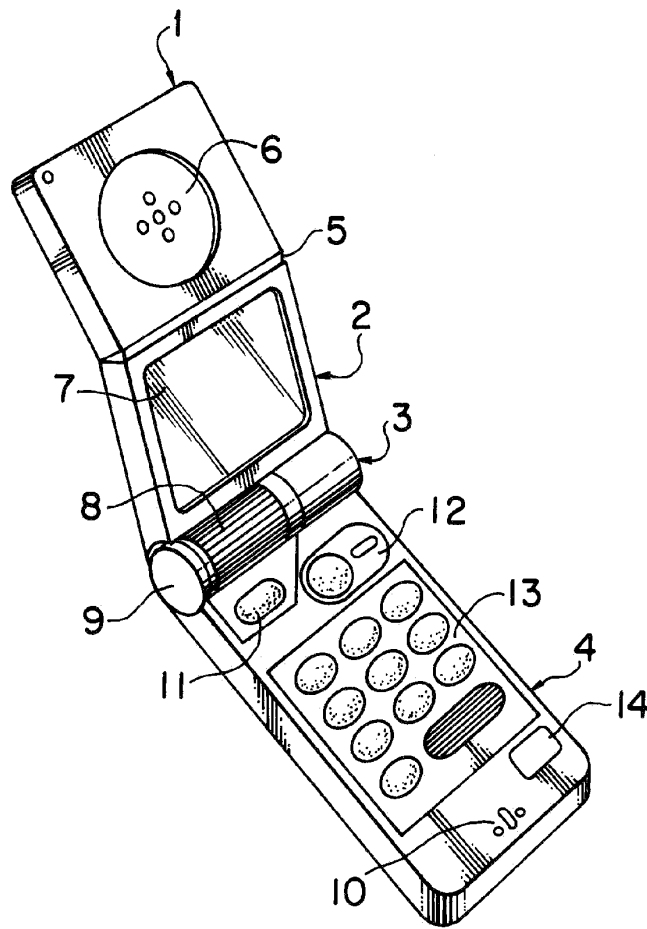


FIG. 2

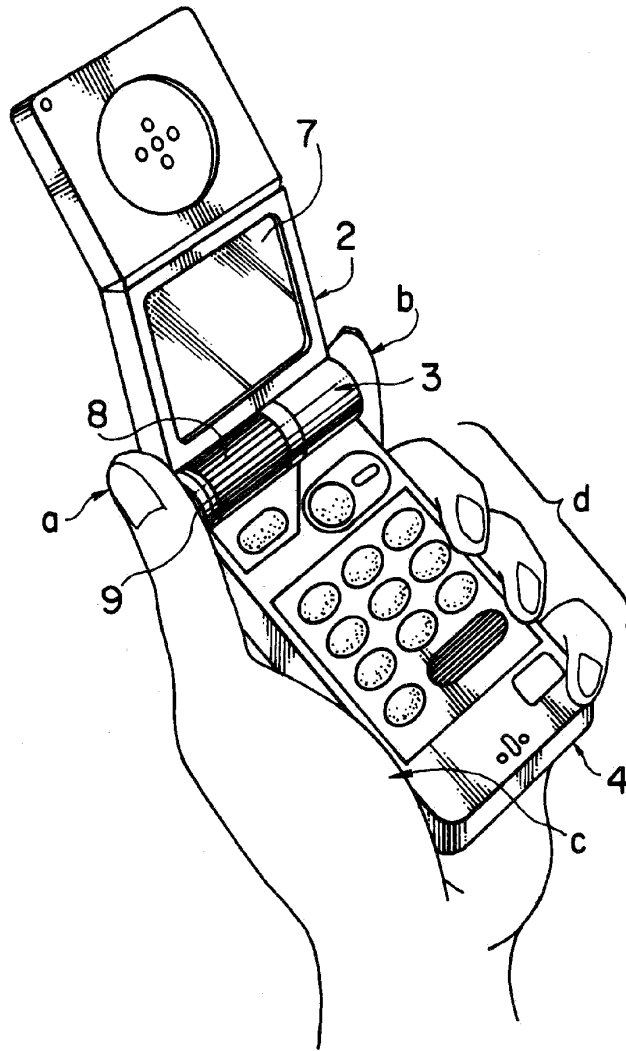


FIG. 4

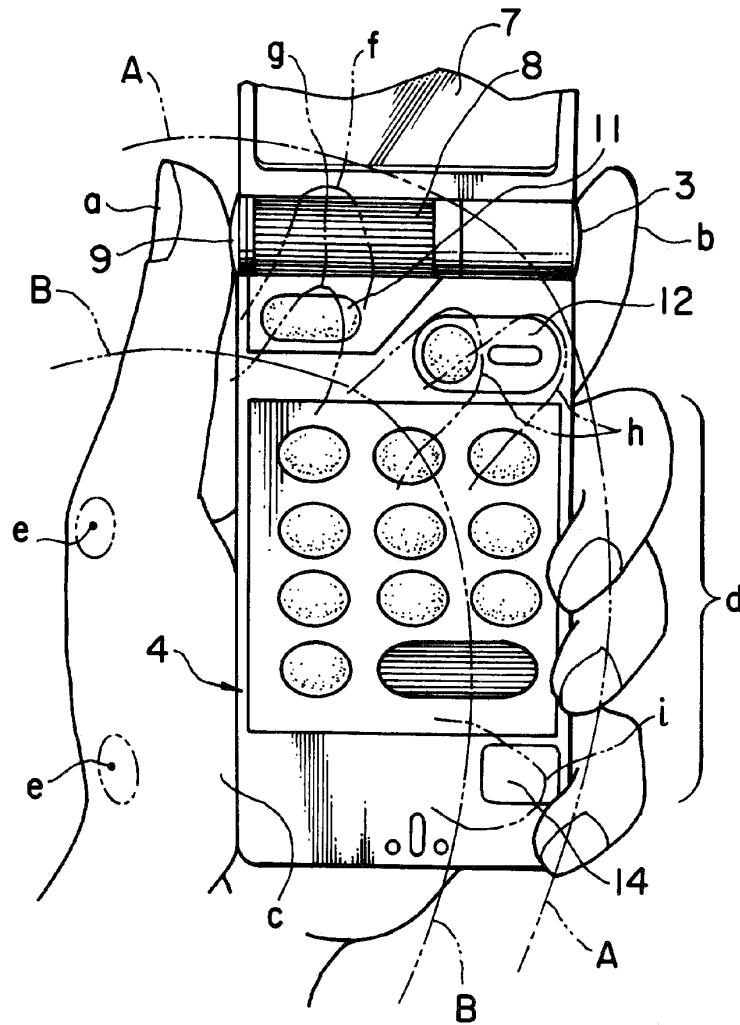


FIG. 3

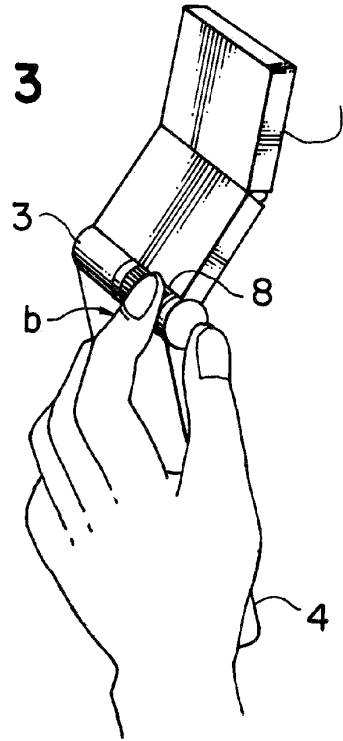


FIG. 5

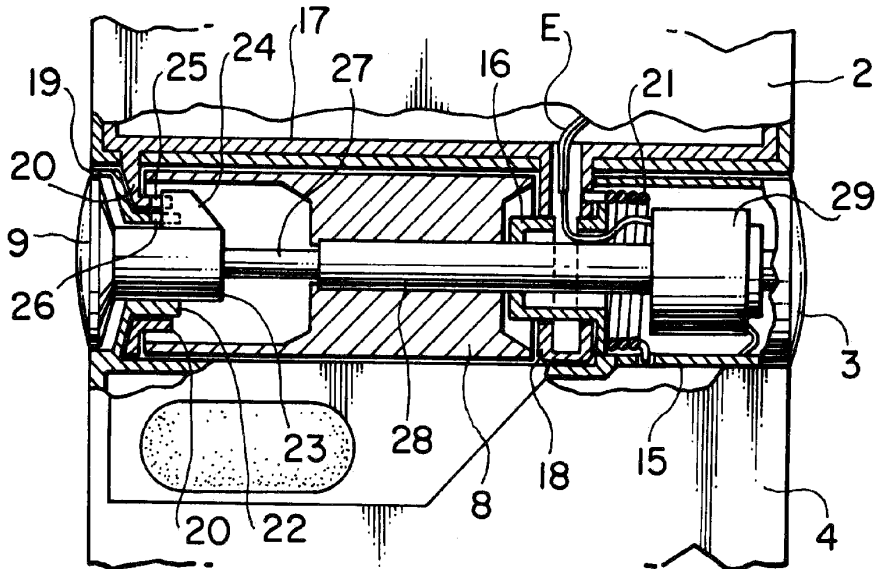


FIG. 6

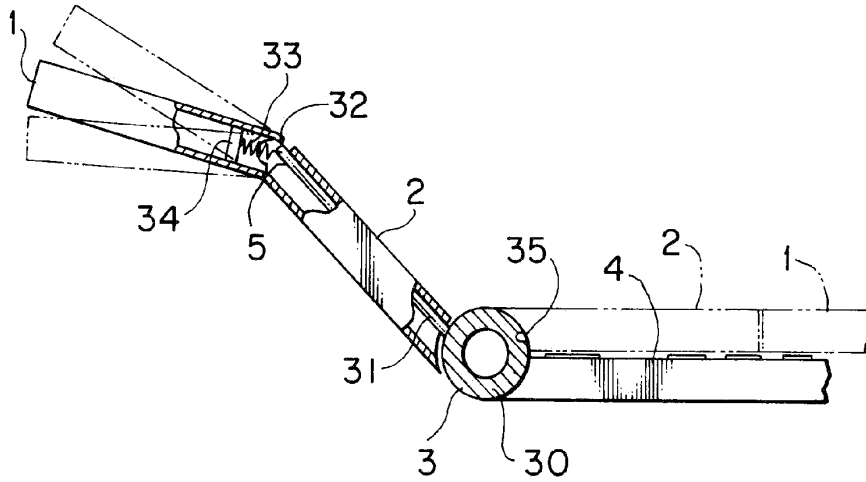


FIG. 7

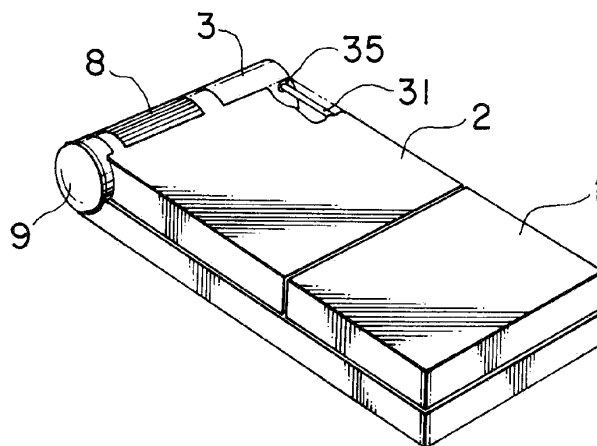
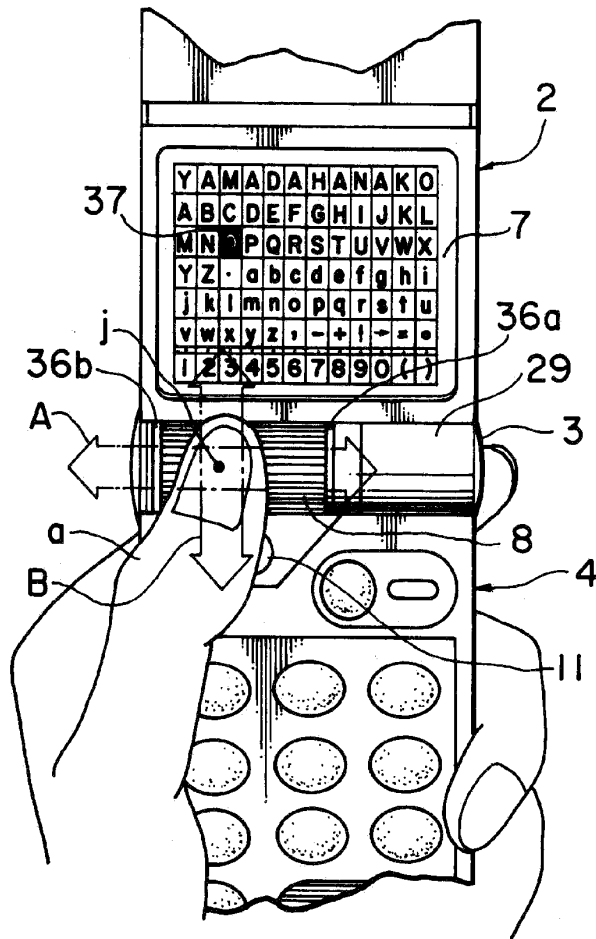
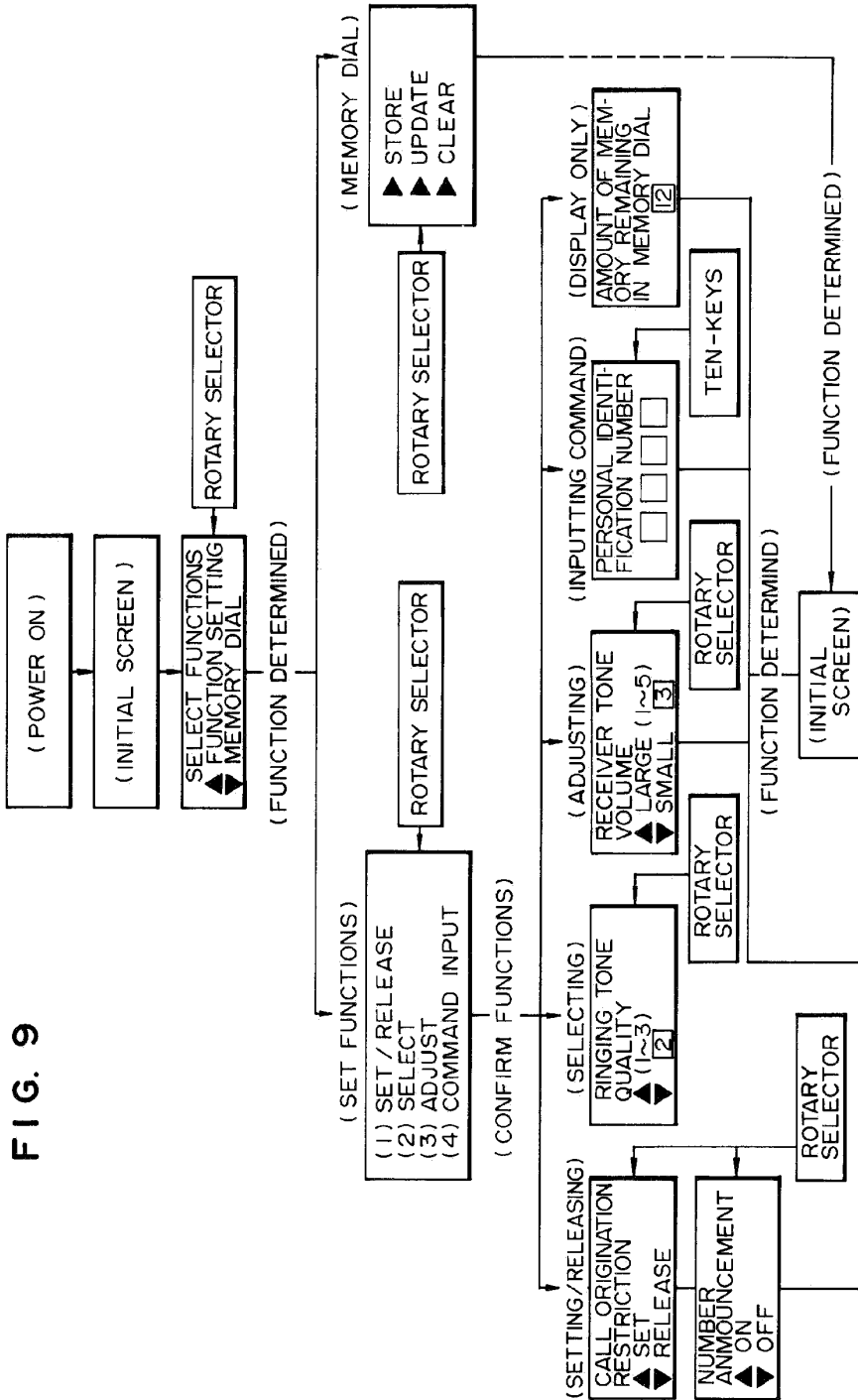


FIG. 8







DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
Y A	EP-A-0 463 856 (NOKIA MOBILE PHONES LTD) * the whole document * ---	1,6 7,9	H04M1/02
Y	DE-A-40 08 598 (PHILIPS PATENTVERWALTUNG GMBH) * column 3, line 15 - column 5, line 34; figures 1-3 * ---	1,6	
A	EP-A-0 373 387 (ROBERT BOSCH GMBH) * column 2, line 40 - column 4, line 35; figures 1,2 * ---	1,5,7,9	
A	US-A-4 481 382 (VILLA-REAL) * column 3, line 10 - column 5, line 65; figures 1-6 * ---	1,7,9	
A	US-A-5 027 394 (ONO ET AL) * column 2, line 55 - column 3, line 30; figures 1-7 * -----	2	
			H04M
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 15 December 1993	Examiner Delangue, P
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

EPO FORM 1503 02.92 (IPMC01)

Electronic Acknowledgement Receipt

EFS ID:	8757340
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Matthew H. Grady
Filer Authorized By:	
Attorney Docket Number:	L2039-700111
Receipt Date:	03-NOV-2010
Filing Date:	10-JUL-2008
Time Stamp:	13:30:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	L2039-700111_IDS_Letter.pdf	33035 <small>e443bee6181fa3029caab5134a68812baa82d433</small>	no	3

Warnings:

Information:

2	NPL Documents	L2039_Search_Report.pdf	13516350 a1bb1638eb29176fbaac48ae62fa74c3e17b82ed	no	12
Warnings:					
Information:					
3	Foreign Reference	DE19952486A1_Plus_Translation.pdf	519019 e8d040c0b4a4fd3d09a78a0ed615fa3de9cd33a	no	9
Warnings:					
Information:					
4	Information Disclosure Statement (IDS) Filed (SB/08)	L2039-700111_updated_IDS_2.pdf	614777 0a1060734122b6ded5c38f8d42890313d4c9a05b	no	12
Warnings:					
Information:					
5	Foreign Reference	EP_0588210.pdf	908269 0391104a3150860e017714968a9e4a2b98168ff2	no	16
Warnings:					
Information:					
Total Files Size (in bytes):			15591450		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yves Behar
Serial No: 12/170,951
Confirmation No: 2004
Filed: July 10, 2008
For: PORTABLE COMPUTER WITH MULTIPLE DISPLAY
CONFIGURATIONS

Examiner: HJERPE, RICHARD A
Art Unit: 2629

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being electronically filed in accordance with 37 C.F.R. §1.6(a)(4) on the 3rd day of November, 2010.

/Matthew H. Grady/
Matthew H. Grady, Reg. No. 52,957

Commissioner for Patents

**INFORMATION DISCLOSURE STATEMENT FILED PURSUANT TO THE DUTY OF
DISCLOSURE UNDER 37 CFR §§1.56, 1.97 AND 1.98**

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicant requests consideration of this Information Disclosure Statement.

PART I: Information Cited

The Applicant hereby makes of record in the above-identified application the information listed on the concurrently filed form PTO/SB/08a.

The order of presentation of the references should not be construed as an indication of the importance of the references.

The Applicant hereby makes the following additional information of record in the above-identified application.

The applicant would like to bring to the Examiner's attention the following co-pending applications that may contain subject matter related to this application:

<u>Serial No.</u>	<u>Filing Date</u>	<u>Inventor(s)</u>	<u>Publication No.</u>
12/170,939	July 10, 2008	Yves Behar	US 2009/0244832 A1
12/416,479	April 1, 2009	Yves Behar	US 2009/0322790 A1
12/611,282	November 3, 2009	Robert Pennington	US 2010-0174993 A1

The Applicant would like to bring to the Examiner's attention the enclosed search report and/or written opinion from corresponding International Application PCT/US2009/038599.

PART II: Explanation of Non-English Language References

The following is a concise explanation of the relevance of each non-English language reference listed on the concurrently filed form PTO/SB/08a:

For the relevance of the listed non-English language reference DE 19952486 A1 published March 05, 2001, the reference was cited in the International Search Report from a corresponding PCT application PCT/US2009/038599, wherein this document was placed in category "X," meaning that, in the opinion of the International Searching Authority, the reference is a document of particular relevance. An English language version of the Abstract is attached, a machine based translation provided through the European Patent Office of the description and claims is provided herewith, and a translation from Thomson Innovation (<http://www.thomsoninnovation.com>), is also provided herewith.

PART III: Remarks

Documents cited anywhere in the Information Disclosure Statement, other than U.S. Patents and U.S. Patent Application Publications listed on a Form PTO/SB/08a, are enclosed unless otherwise indicated. It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. Any concurrently filed form PTO/SB/08a be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;

3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

Respectfully submitted,

Yves Behar, Applicant

By: Matthew H. Grady/

Matthew H. Grady, Reg. No. 52,957

Sarah M. Gates, Reg. No. 60,661

LANDO & ANASTASI, LLP

Riverfront Office Park

One Main Street

Cambridge, Massachusetts 02142

Tel. (617) 395-7000

PATENT COOPERATION TREATY

DOCKETED *da ppe 7m in*

DUE: *15. Search rpt*

PCT

6.3.09
9.3.09

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION *6.10.09*

From the INTERNATIONAL SEARCHING AUTHORITY

To:
LOWRIE, LANDO & ANASTASI, LLP
Attn. Gates, Sarah M.
One Main Street, Eleventh Floor
Cambridge, Massachusetts 02142
ETATS-UNIS D'AMERIQUE

(PCT Rule 44.1)

Date of mailing (day/month/year)	03/06/2009
Applicant's or agent's file reference A2029-7001WO	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/US2009/038599	International filing date (day/month/year) 27/03/2009
Applicant AQUENT, LLC	

1. The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19:
The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally two months from the date of transmittal of the International Search Report.

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 338.82.70

For more detailed instructions, see the notes on the accompanying sheet.

2. The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**


Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO internet site.

Name and mailing address of the International Searching Authority  European Patent Office, P.B. 5818 Patentlaan 2, NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Marja Brouwers
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NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide*, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only (see *PCT Applicant's Guide*, Volume I/A, Annexes B1 and B2).

The attention of the applicant is drawn to the fact that amendments to the claims under Article 19 are not allowed where the International Searching Authority has declared, under Article 17(2), that no international search report would be established (see *PCT Applicant's Guide*, Volume I/A, paragraph 296).

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added."
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments and any accompanying statement, under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the time of filing the amendments (and any statement) with the International Bureau, also file with the International Preliminary Examining Authority a copy of such amendments (and of any statement) and, where required, a translation of such amendments for the procedure before that Authority (see Rules 55.3(a) and 62.2, first sentence). For further information, see the Notes to the demand form (PCT/IPEA/401).

If a demand for international preliminary examination is made, the written opinion of the International Searching Authority will, except in certain cases where the International Preliminary Examining Authority did not act as International Searching Authority and where it has notified the International Bureau under Rule 66.1*bis*(b), be considered to be a written opinion of the International Preliminary Examining Authority. If a demand is made, the applicant may submit to the International Preliminary Examining Authority a reply to the written opinion together, where appropriate, with amendments before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later (Rule 43*bis*.1(c)).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see the *PCT Applicant's Guide*, Volume II.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference A2029-7001WO	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2009/038599	International filing date (day/month/year) 27/03/2009	(Earliest) Priority Date (day/month/year) 01/04/2008
Applicant AQUENT, LLC		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of:

- the international application in the language in which it was filed
 a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. This international search report has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. Certain claims were found unsearchable. (See Box No. II)

3. Unity of invention is lacking (see Box No III)

4. With regard to the title,

- the text is approved as submitted by the applicant
 the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- the text is approved as submitted by the applicant
 the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 4
 as suggested by the applicant
 as selected by this Authority, because the applicant failed to suggest a figure
 as selected by this Authority, because this figure better characterizes the invention
- b. none of the figures is to be published with the abstract

A. CLASSIFICATION OF SUBJECT MATTER
 INV. G06F1/16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
 Minimum documentation searched (classification system followed by classification symbols)
 G06F H04M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
 EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 199 52 486 A1 (SCHWEIZER JOACHIM [DE]; RUETTIGER MAXIMILIAN [DE]; JAENICKE VOLKMAR [D] 3 May 2001 (2001-05-03) column 1, line 56 - column 2, line 60; figures 1,2	1-26
X	US 2007/182663 A1 (BIECH GRANT S [CA]) 9 August 2007 (2007-08-09) paragraphs [0019] - [0071]; figures 1,2	1-26
A	EP 0 588 210 A (HITACHI LTD [JP]) 23 March 1994 (1994-03-23) column 3, line 49 - column 12, line 12; figures 1-5	1, 16, 18, 21, 23

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed
- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search 27 May 2009	Date of mailing of the international search report 03/06/2009
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Arranz, José
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Information on patent family members

International application No
PCT/US2009/038599

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 19952486	A1	03-05-2001	NONE
US 2007182663	A1	09-08-2007	NONE
EP 0588210	A	23-03-1994	DE 69331299 D1 24-01-2002
			DE 69331299 T2 14-08-2002
			JP 3268467 B2 25-03-2002
			JP 6090200 A 29-03-1994
			US 5436954 A 25-07-1995

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)**

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220



FOR FURTHER ACTION
See paragraph 2 below

International application No. PCT/US2009/038599	International filing date (day/month/year) 27.03.2009	Priority date (day/month/year) 01.04.2008
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International Patent Classification (IPC) or both national classification and IPC
INV. G06F1/16

Applicant
AQUENT, LLC

1. This opinion contains indications relating to the following items:
- Box No. I Basis of the opinion
 - Box No. II Priority
 - Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - Box No. IV Lack of unity of invention
 - Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - Box No. VI Certain documents cited
 - Box No. VII Certain defects in the international application
 - Box No. VIII Certain observations on the international application
2. **FURTHER ACTION**
- If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.
- If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
- For further options, see Form PCT/ISA/220.
3. For further details, see notes to Form PCT/ISA/220.

<p>Name and mailing address of the ISA:</p>  <p>European Patent Office P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Fax: +31 70 340 - 3016</p>	<p>Date of completion of this opinion</p> <p>see form PCT/ISA/210</p>	<p>Authorized Officer</p> <p>Arranz, José</p> <p>Telephone No. +31 70 340-4870</p>
		

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2009/038599

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - the international application in the language in which it was filed
 - a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material:
 - on paper
 - in electronic form
 - c. time of filing/furnishing:
 - contained in the international application as filed.
 - filed together with the international application in electronic form.
 - furnished subsequently to this Authority for the purposes of search.
4. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2009/038599

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>6,7,14-24</u>
	No: Claims	<u>1-5,8-13,25,26</u>
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-26</u>
Industrial applicability (IA)	Yes: Claims	<u>1-26</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

1 Reference is made to the following documents:

D1: DE 199 52 486 A1 (SCHWEIZER JOACHIM [DE]; RUETTIGER MAXIMILIAN [DE]; JAENICKE VOLKMAR [D]) 3 May 2001 (2001-05-03)

D2: US 2007/182663 A1 (BIECH GRANT S [CA]) 9 August 2007 (2007-08-09)

D3: EP-A-0 588 210 (HITACHI LTD [JP]) 23 March 1994 (1994-03-23)

2 INDEPENDENT CLAIMS 1,25

2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1 discloses (the references in parentheses applying to this document):

a portable computer configurable between plurality of display modes including a laptop mode and an easel mode (Col.1, line 56 - Col.2, line 24), the portable computer comprising:

a display component including a display screen configured to display content (Fig.1);

a base (Fig.1); and

a hinge assembly configured to rotatably couple the display component to the base (Col.1, line 56 - Col.2, line 24);

wherein the hinge assembly is configured to permit rotation of the display component about a single axis to configure the portable computer between the laptop mode and the easel mode (Col.1, line 56 - Col.2, line 24).

Consequently, D1 discloses all the features of claim 1.

2.2 A corresponding objection as raised in §2.1 applies, mutatis mutandis, to claim 25.

3 DEPENDENT CLAIMS 2-24, 26

Dependent claims 2-24, 26 do not contain any features which, in combination with

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/US2009/038599

the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, see documents D1-D3 and the corresponding passages cited in the search report.

Possible steps after receipt of the international search report (ISR) and written opinion of the International Searching Authority (WO-ISA)

General information

For all international applications filed on or after 01/01/2004 the competent ISA will establish an ISR. It is accompanied by the WO-ISA. Unlike the former written opinion of the IPEA (Rule 66.2 PCT), the WO-ISA is not meant to be responded to, but to be taken into consideration for further procedural steps. This document explains about the possibilities.

Amending claims under Art. 19 PCT

Within 2 months after the date of mailing of the ISR and the WO-ISA the applicant may file amended claims under Art. 19 PCT directly with the International Bureau of WIPO. The PCT reform of 2004 did not change this procedure. For further information please see Rule 46 PCT as well as form PCT/ISA/220 and the corresponding Notes to form PCT/ISA/220.

Filing a demand for international preliminary examination

In principle, the WO-ISA will be considered as the written opinion of the IPEA. This should, in many cases, make it unnecessary to file a demand for international preliminary examination. If the applicant nevertheless wishes to file a demand this must be done before expiry of 3 months after the date of mailing of the ISR/WO-ISA or 22 months after priority date, whichever expires later (Rule 54bis PCT). Amendments under Art. 34 PCT can be filed with the IPEA as before, normally at the same time as filing the demand (Rule 66.1 (b) PCT).

If a demand for international preliminary examination is filed and no comments/amendments have been received the WO-ISA will be transformed by the IPEA into an IPRP (International Preliminary Report on Patentability) which would merely reflect the content of the WO-ISA. The demand can still be withdrawn (Art. 37 PCT).

Filing informal comments

After receipt of the ISR/WO-ISA the applicant may file informal comments on the WO-ISA directly with the International Bureau of WIPO. These will be communicated to the designated Offices together with the IPRP (International Preliminary Report on Patentability) at 30 months from the priority date. Please also refer to the next box.

End of the international phase

At the end of the international phase the International Bureau of WIPO will transform the WO-ISA or, if a demand was filed, the written opinion of the IPEA into the IPRP, which will then be transmitted together with possible informal comments to the designated Offices. The IPRP replaces the former IPEA (international preliminary examination report).

Relevant PCT Rules and more information

Rule 43 PCT, Rule 43bis PCT, Rule 44 PCT, Rule 44bis PCT, PCT Newsletter 12/2003, OJ 11/2003, OJ 12/2003



19 BUNDESREPUBLIK
DEUTSCHLAND



DEUTSCHES
PATENT- UND
MARKENAMT

12 **Offenlegungsschrift**
10 **DE 199 52 486 A 1**

51 Int. Cl.7:
G 06 F 1/16
G 09 F 9/30
// G09F 27/00

21 Aktenzeichen: 199 52 486.6
22 Anmeldetag: 29. 10. 1999
43 Offenlegungstag: 3. 5. 2001

DE 199 52 486 A 1

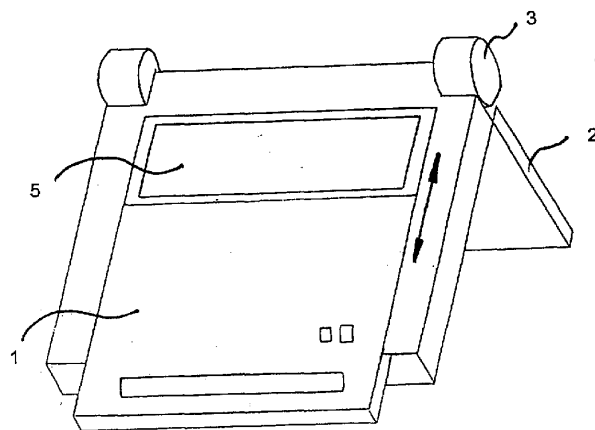
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54 **Präsentationsvorrichtung**

57 Die Erfindung bezieht sich auf eine Präsentationsvorrichtung, die vorwiegend für eine Kundenberatung im Außendienst konzipiert ist. Ein Laptop-Computer mit einer verschiebbaren Tastatur 1 hat unter dieser einen zweiten Bildschirm 5, der bei einer Präsentation als Kontrollbildschirm verwendet wird. Der Hauptbildschirm 2 kann über wenigstens 220 Grad verschwenkt werden, so daß bei einer Präsentation zwei sich gegenüber sitzende Personen je einen Bildschirm betrachten können. Die Präsentationsvorrichtung kann auch wie ein herkömmlicher Laptop genutzt werden.



DE 199 52 486 A 1

Beschreibung

Die Erfindung bezieht sich auf eine Präsentationsvorrichtung, die vorwiegend für eine Kundenberatung im Außendienst konzipiert ist.

Wenn ein Beratungs- bzw. Verkaufsgespräch beim Kunden durchgeführt wird, sind die räumlichen Verhältnisse oft nicht für eine optimale Präsentation geeignet, d. h., moderne Präsentationsmittel, wie Overhead-Projektor mit LC-Display oder Videoprojektor, können nicht eingesetzt werden. Wenn z. B. Versicherungsvertreter oder Finanzdienstleister ihre Kunden in der Wohnung aufsuchen, ist es nicht möglich, eine Projektionswand aufzustellen. Derartige räumliche Veränderungen werden von den meisten Kunden abgelehnt. Es ist daher üblich, Berechnungen und Diagramme auf einem Blatt Papier aufzuzeichnen und dabei das Blatt halb zum Kunden zu drehen, damit er der ergänzenden schriftlichen Erläuterung folgen kann. Es ist auch möglich, einen Laptop-Computer zu benutzen, was jedoch insofern Probleme bringt, da der Verkäufer und der Kunde gemeinsam einen relativ kleinen Bildschirm betrachten müssen.

Es hat sich gezeigt, daß die Präsentation mit einem Computer eine Reihe von Vorteilen bietet. Mittels spezieller Software können z. B. verschiedenste Varianten einer Lebensversicherung durchgerechnet und sofort grafisch, d. h. leicht verständlich und daher überzeugend, dargestellt werden. Da sich diese Präsentationstechnik ständig weiterentwickelt und vom Kunden als sehr komfortabel akzeptiert wird, besteht das dringende Bedürfnis, auch für den kleinen Präsentationseinsatz vor Ort, d. h. in der Wohnung des Kunden oder in einem kleinen Büroraum, diese Technik einzusetzen.

Moderne Kleincomputer, wie z. B. kleine Notebooks, bieten auf Grund ihrer hohen Rechenleistung prinzipiell die Möglichkeit, auch programm- und speicherintensive, d. h. anspruchsvolle, Präsentationssoftware zu verarbeiten. Somit wäre auch beim Kunden vor Ort eine überzeugende Präsentation möglich, wenn das o. g. Problem der räumlichen Einschränkungen gelöst werden könnte.

Dazu wurde in dem deutschen GBM 94 06 985 vorgeschlagen, an einem herkömmlichen Laptop mit Flachbildschirm einen weiteren Flachbildschirm über ein Gelenk anzukoppeln, so daß zwei sich gegenüber sitzende Personen jeweils auf einen Bildschirm sehen können. Diese Vorrichtung ist prinzipiell für den vorgesehenen Anwendungsfall geeignet, jedoch umständlich in der Bedienung. Es besteht daher das Bedürfnis nach einer weiteren Verbesserung der Präsentationsqualität, nach einer weiteren Kostensenkung, nach einer Gewichtsverringerung oder nach einer verbesserten Bedienbarkeit.

Die Aufgabe der Erfindung besteht in der Schaffung einer rechnergestützten Präsentationsvorrichtung, die auch unter sehr beengten räumlichen Verhältnissen eine überzeugende Präsentation ermöglicht und einfach und bequem zu bedienen ist.

Die Aufgabe wird mit Vorrichtungen nach Anspruch 1 gelöst. Die Präsentationsvorrichtung ist ein herkömmlicher Laptop-Computer mit einer verschiebbaren Tastatur und einem schwenkbaren Hauptbildschirm, der im eingeklappten Zustand auf dem Grundkörper des Laptop-Computer aufliegt und die Tastatur abdeckt.

Erfindungsgemäß ist unter der Tastatur in dem Grundkörper ein weiterer Bildschirm angeordnet, der ebenfalls an den Laptop-Computer angeschlossen ist. Weiterhin ist das Gelenk des schwenkbaren Hauptbildschirms so ausgebildet, daß der Hauptbildschirm wenigstens um ca. 220 Grad schwenkbar ist.

Die Präsentationsvorrichtung kann als herkömmlicher

Laptop-Computer genutzt werden, wobei wahlweise die Tastatur so verschoben werden kann, so daß der darunter liegende Bildschirm sichtbar wird.

Wenn einer zweiten Person eine Präsentation gezeigt werden soll, wird der Hauptbildschirm um wenigstens 220 Grad oder mehr, umgeklappt, so daß die zweite Person nunmehr auf den Hauptbildschirm sehen kann. Durch eine Steuereinrichtung wird das Bild des Hauptbildschirms um 180 Grad gedreht.

Die Bedienerperson steuert die Präsentation mittels der Tastatur, Maus oder anderer Eingabegeräte und verfolgt den Ablauf der Präsentation auf dem zweiten Bildschirm, dem Kontrollbildschirm.

Das Einschalten des zweiten Bildschirms und das Umklappen des Bildes des Hauptbildschirms kann wahlweise über Schalter oder über Tastatureingabe manuell erfolgen. Zweckmäßig ist jedoch gemäß Anspruch 2 ein automatisches Einschalten und Drehen des Bildes, indem z. B. in dem Gelenk eine Schwenkwinkelerkennungsvorrichtung angeordnet ist, die veranlaßt, daß bei einem vorbestimmten Schwenkwinkel des Hauptbildschirms, das Bild des Hauptbildschirms gedreht und auch der zweite Bildschirm eingeschaltet wird.

Nach Anspruch 3 ist der zweite Bildschirm ein einfarbiger Bildschirm. Diese Weiterbildung ist dann vorteilhaft, wenn z. B. auf dem Hauptbildschirm dem Kunden eine aufwendige farbige Grafik, d. h. z. B. eine ansprechende und überzeugende Präsentation, gezeigt werden soll. Die Bedienerperson, d. h. der Verkäufer, benötigt diese hochwertige Darstellung nicht. Er muß lediglich die Präsentation verfolgen können und bei Eingaben, z. B. persönliche Daten des Kunden, die Richtigkeit der Eingabe überprüfen können.

Da der zweite Bildschirm auch eine geringere Auflösung benötigt, ist er kostengünstiger als der Hauptbildschirm, wodurch die Gesamtkosten gesenkt werden können.

Nach Anspruch 4 ist die Tastatur auch abnehmbar, wobei die Kommunikation mit dem Rechner über eine drahtlose Datenschnittstelle erfolgt. Diese Option ist dann von Vorteil, wenn die Präsentationsvorrichtung z. B. nahe beim Kunden stehen soll.

Eine Ausführungsform der Erfindung wird an Hand der beigefügten schematischen Zeichnungen erläutert:

Fig. 1 zeigt eine perspektivische Seitenansicht der Erfindung bei herkömmlicher Verwendung als Laptop.

Fig. 2 zeigt eine perspektivische Seitenansicht der Erfindung bei Verwendung als Präsentationsvorrichtung.

Die **Fig. 1** zeigt eine perspektivische Seitenansicht der Erfindung bei herkömmlicher Verwendung als Laptop mit einer Tastatur **1**, einem Hauptbildschirm **2**, der mit Gelenken **3** an dem Grundkörper **4** des Laptop schwenkbar befestigt ist. Es ist auch möglich, falls gewünscht, die Tastatur herauszuschieben.

Die **Fig. 2** zeigt die Erfindung bei Verwendung als Präsentationsvorrichtung. Die Tastatur **1** ist herausgeschoben, so daß die Bedienperson auf den zweiten Bildschirm **5** sehen kann. Der Hauptbildschirm **2** ist umgeklappt, wie mit dem Doppelpfeil gezeigt. Damit der Kunde das Bild des Hauptbildschirms richtig betrachten kann, wird es elektronisch um 180 Grad gedreht.

Patentansprüche

1. Präsentationsvorrichtung, die als Laptop-Computer mit einer Tastatur (**1**) ausgebildet ist und ein aufklappbarer Hauptbildschirm (**2**) mit Gelenken (**3**) an dem Grundkörper (**4**) des Laptop-Computers schwenkbar befestigt ist, **dadurch gekennzeichnet**, daß

– die Tastatur (**1**) im Grundkörper (**4**) verschieb-

- bar ist,
– unter der verschiebbaren Tastatur (1) ein zweiter Bildschirm (5) vorgesehen ist,
die Gelenke (3) einen Schwenkradius von über 220 Grad aufweisen und
– eine Steuereinrichtung vorgesehen ist,
die das Bild auf dem Hauptbildschirm (2) um 180 Grad dreht, wenn der Hauptbildschirm (2) über 220 Grad geschwenkt ist.
2. Präsentationsvorrichtung nach Anspruch 1, dadurch gekennzeichnet, daß die Steuereinrichtung eine Schwenkwinkelerkennungsvorrichtung aufweist, die veranlaßt, daß bei einem vorbestimmten Schwenkwinkel des Hauptbildschirms (2), das Bild des Hauptbildschirms um 180 Grad gedreht wird und gleichzeitig der zweite Bildschirm (5) eingeschaltet wird.
3. Präsentationsvorrichtung nach Anspruch 1 und 2, dadurch gekennzeichnet, daß der zweite Bildschirm (5) ein einfarbiger Bildschirm ist.
4. Präsentationsvorrichtung nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Tastatur (1) auch abnehmbar ist, wobei die Kommunikation mit dem Rechner über eine drahtlose Datenschnittstelle erfolgt.

Hierzu 1 Seite(n) Zeichnungen

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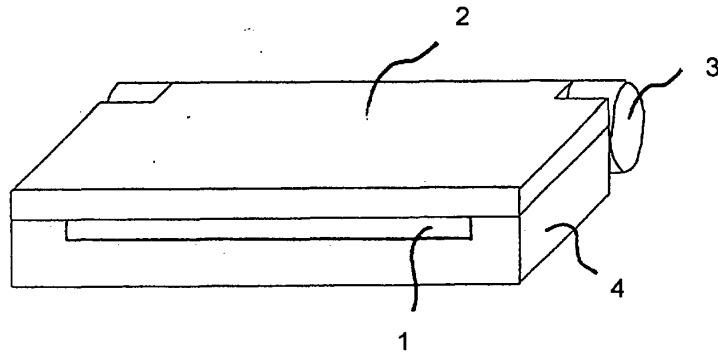


Fig. 1

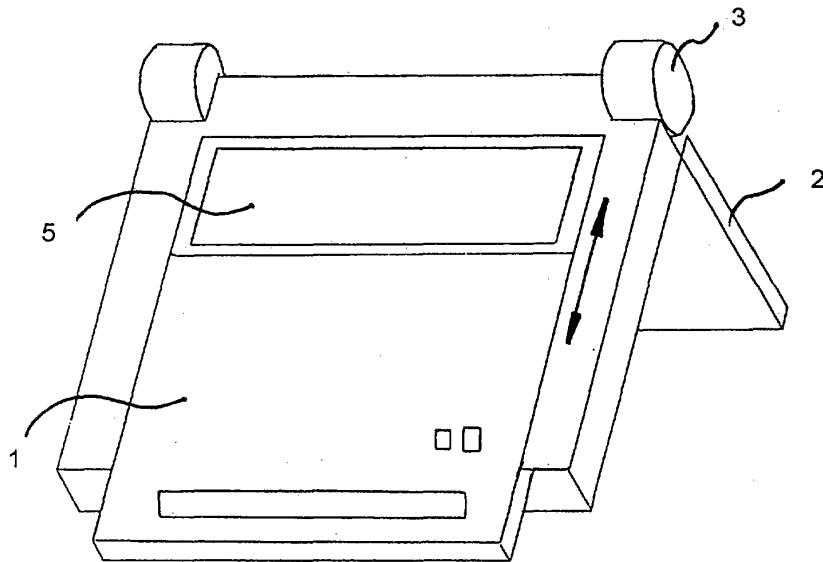


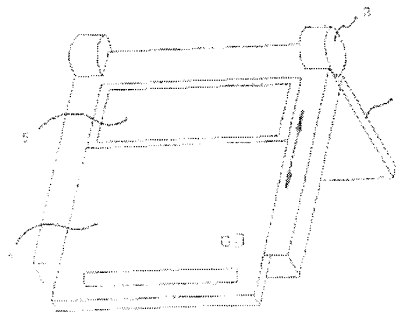
Fig. 2

Presentation device has lap-top, main and second screens, controller that rotates image on main screen by 180 degrees when main screen is pivoted by 220 degrees

Publication number: DE19952486 (A1)
Publication date: 2001-05-03
Inventor(s): SCHWEIZER JOACHIM [DE] +
Applicant(s): SCHWEIZER JOACHIM [DE]; RUETTIGER MAXIMILIAN [DE]; JAENICKE VOLKMAR [DE] +
Classification:
 - **international:** G06F1/16; G06F1/16; (IPC1-7): G06F1/16; G09F27/00; G09F9/30
 - **European:** G06F1/16P2; G06F1/16P2S5; G06F1/16P2S6
Application number: DE19991052486 19991029
Priority number(s): DE19991052486 19991029

Abstract of DE 19952486 (A1)

The device is in the form of a lap-top computer with a removable keyboard (1), whereby the keyboard has a separate power supply and is coupled to the lap-top via a wireless link. A hinged main display screen (2) is pivotably attached to the lap-top's base body (4) via joints (3) and able to pivot over more than 200 degrees. A second screen is arranged in the base body beneath the removable keyboard. A controller rotates the image on the screen by 180 degrees when the main screen is pivoted by 220 degrees. Independent claims are also included for a notebook with a keyboard and for a flat screen unit for a notebook.



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Result Page

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The invention refers to a presentation device, which is predominant designed for a customer advisory service in the field service.

If a consulting and/or. Sales talk with the customer performed becomes, is often not the spatial ratios not for an optimum presentation appropriate, D. h., modern presentation means, like overhead projector with process card display or video projector, cannot become inserted. If z. B. Insurance agents or Finanzdienstleister their customers in the home visit, are not it not possible to set up an adjusting wall. Such spatial changes are rejected by most customers. It is usual to note calculations and diagrams on a sheet of paper and to turn the sheet half to the customer, so that it can follow the complementary written explanation. It is also possible, a laptop computer to use, which brings problems however to that extent, since the vendor and the customer must regard a common relative small screen.

It has itself shown that the presentation with a computer offers a number of advantages. By means of particular software z can. B. most diverse variants of a life insurance calculated and immediately graphic, D. h. easy understandably and therefore convincing, shown become. Since this presentation technology becomes continuous further developed and of the customer as very comfortable accepted, the urgent need, also for the small presentation employment locally, exists D. h. in the home of the customer or in a small office space to use this technique.

Modern small computers, like z. B. small notebooks, offer the possibility, also program and memory-intensive, D in principle due to their high arithmetic performance. h. fastidious to process presentation software. Thus a convincing presentation would locally be possible also with the customer, if the o. g. Problem of the spatial limitations dissolved will could.

In addition 94 06 985 proposed became to couple at a conventional laptop with flat screen an other flat screen over an articulation in the German GBM so that two can see themselves opposite seated persons in each case on a screen. This device is pedantic in principle for the intended application appropriate, however in the operation. It exists therefore the need after an other improvement of the presentation quality, after an other reduction of costs, after a weight reduction or after an improved operability.

The object of the invention exists in the provision of a computer-aided presentation device, which is to be served also bottom very much restrained spatial ratios a convincing presentation possible and simple and convenient.

The object becomes according to claim 1 dissolved with devices. The presentation device is a conventional laptop computer with a displaceable keyboard and a pivotable main screen, which rest upon in the folded state on the basic body laptop computers and which keyboard takes off.

The bottom keyboard in the basic body an other screen arranged, which is likewise connected to the laptop computer, is according to invention. Further the articulation of the pivotable main screen is so formed that the main screen at least over approx. 220 is degree more pivotable.

The presentation device can become as conventional laptop computers used, whereby alternatively the keyboard can become so shifted, so that the screen located under it becomes more visible.

If a second person a presentation is to become shown, the main screen is turned down around at least 220 degree or more, so that the second person can see now on the main screen. By control means the image of the main screen becomes around 180 rotated degree.

The operator person steers the presentation by means of the keyboard, mouse or other input mechanisms and the tracked flow of the presentation on the second screen, the control display.

Switching on of the second screen on and turning the image of the main screen down can be made alternatively by means of switches or by keyboard entry manual. Convenient one is however according to claim 2 automatic switching on and rotation of the image on, by z. B. in the articulation an angle of traverse recognition device arranged is, those caused that with a pre-determined pivoting angle of the main screen, the image of the main screen rotated and also the second screen are switched on.

According to claim one 3 is the second screen a monochrome screen. This development is favourable if z. B. on the main screen the customer an expensive colored diagram, D. h. z. B. a responsive and convincing presentation, shown will is. The operator, D. h. the vendor, required this high-quality illustration not. It must be able to only pursue the presentation and with inputs, z. B. personal data of the customer, the correctness of the input to examine can.

Since the second screen also a smaller resolution required, is he more inexpensive than the main screen, whereby the total costs lowered to become to be able.

According to claim 4 is is also more detachable the keyboard, whereby the communication with the computer over a wireless data interface made. This option is from advantage if the presentation device z. B. close with the customer to stand is.

An embodiment of the invention becomes explained on the basis the accompanying schematic designs:

Fig. 1 shows an isometric side view of the invention with conventional use as laptop.

Fig. an isometric side view of the invention shows 2 with use as presentation device.

The Fig. 1 shows an isometric side view of the invention with conventional use as laptop with a keyboard 1, a main screen 2, which is with articulations 3 at the basic body 4 laptop of the pivotally mounted. It is also possible, if desired, to shift the keyboard out.

The Fig. the invention shows 2 with use as presentation device. The keyboard 1 is shifted out, so that the operator can see 5 on the second screen. The main screen 2 turned down, as with the double arrow shown. So that the customer can regard the image of the main screen proper, it becomes electronic around 180 rotated degree.



Result Page

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1. Presentation device, which is formed as laptop computers with a keyboard (1) and a opening by hinges main screen (2) with articulations (3) at the basic body (4) of the laptop computer is pivotally mounted, characterised in that
 - the keyboard (1) in the basic body (4) is more displaceable,
 - is the bottom displaceable keyboard (1) a second screen (5) provided, the articulations (3) a Schwenkradius of over 220 degree exhibit and
 - is control means provided, those the image on the main screen (2) 180 degree, if the main screen (2) over 220 is degree pivoted.
2. Presentation device according to claim 1, characterised in that the control means an angle of traverse recognition device exhibits, which caused that with a pre-determined pivoting angle of the main screen (2), the image of the main screen is switched on by 180 degree rotated will and the simultaneous second screen (5).
3. Presentation device according to claim 1 and 2, characterised in that the second screen (5) a monochrome screen is.
4. Presentation device after one of the preceding claims, characterised in that the keyboard (is 1) also more detachable, whereby the communication with the computer over a wireless data interface made.

Bibliography

DWPI Title

Presentation device has lap-top, main and second screens, controller that rotates image on main screen by 180 degrees when main screen is pivoted by 220 degrees

Original Title

Presentation device

Abstract

No Abstract exists for this Record

Family

Family

Expand INPADOC Family (12)

Claims

Claims

Collapse All Claims (4)

Claims (German)

1. Presentation device, those as laptop computers with a keyboard (1) and a opening by hinges main screen is trained (2) with joints (3) at the base (4) is tiltable fastened the laptop computer, **thus characterized**that

- - the keyboard (1) in the base (4) is adjustable,
- - under the adjustable keyboard (1) a second screen (5) is intended,

the joints (3) a Schwenkradius from over 220 degrees exhibit and

- - is intended control equipment,

those the picture on the main screen (2) turns around 180 degrees, if the main screen (2) is swivelled over 220 degrees.

2. Presentation device according to requirement 1, by characterized that the control equipment exhibits an angle of traverse recognition device, which arranges that with a pre-determined angle of traverse of the main screen (2), the picture of the main screen around 180 degrees is turned and at the same time the second screen (5) one switches on.

3. Presentation device according to requirement 1 and 2, by characterized that the second screen (5) a in-colored screen is.

4. Presentation device after one of the preceding requirements, thereby characterized that the keyboard (1) is also removable, whereby communication with the computer is made by a wireless data interface.

Description

Background/ Summary

Collapse Background/Summary

-

Drawing Description

Collapse Drawing Description

-

Description

Collapse Description

The invention refers to a presentation device, which is conceived predominantly for a customer advisory service in the field service.

If a consulting and/or a sales talk is accomplished with the customer, spatial conditions are often not for an optimal presentation suitable, are called modern presentation means, like overhead projector with LC-display or video projector, cannot be used. If e.g. Insurance agents or financial service provider their customers in the apartment visit, are not it not possible to set up an adjusting wall. Such spatial changes are rejected by most customers. It is usual to note computations and diagrams on a sheet paper and to turn the sheet half to the customer, so that it can follow the supplementing written explanation. It is also possible to use a laptop computer which brings problems however to that extent, since the salesman and the customer must regard a relatively small screen together.

It was shown that the presentation with a computer offers a set of advantages. By means of special software e.g. most

diverse variants of a life insurance can be calculated and be represented immediately graphically, i.e. easily understandably and from there convincing. Since this presentation technology constantly develops themselves further and is accepted by the customer as very comfortable, the urgent need, also for the small presentation employment locally, exists i.e. in the apartment of the customer or in a small office space to use this technology.

Modern small computers, like e.g. small notebooks, offer the possibility, also program and memory-intensive, i.e. fastidious in principle due to their high arithmetic performance, of processing presentation software. Thus locally a convincing presentation would be possible also at the customer, if that could be solved above mentioned problem of the spatial restrictions.

In addition in the German GBM 94 06 985 one suggested coupling at a conventional laptop with flat screen a further flat screen over a joint so that two can see themselves opposite sitting persons in each case on a screen. This device is pedantic in principle for the intended application suitably, however in the operation. There is from there the need after a further improvement of the presentation quality, after a further reduction of costs, after a weight reduction or after an improved operability.

The task of the invention exists in the creation of a computer-aided presentation device, which is to be served a convincing presentation also under very much restrained spatial conditions made possible and simply and comfortably.

The task is solved with devices according to requirement 1. The presentation device is a conventional laptop computer with an adjustable keyboard and a tiltable main screen, which rest upon in the folded condition on the base the laptop computers and which keyboard takes off.

A further screen is according to invention arranged under the keyboard in the base, which is likewise attached to the laptop computer. Further the joint of the tiltable main screen is in such a way trained that the main screen is tiltable around approx. 220 degrees at least.

The presentation device can be used as conventional laptop computers, whereby the keyboard can be shifted alternatively in such a way, so that the screen which is under it becomes visible.

If a second person a presentation is to be demonstrated, the main screen is turned down around at least 220 degrees or more, so that the second person can see now on the main screen. The picture of the main screen by control equipment 180 degrees.

The operator person steers the presentation by means of the keyboard, mouse or other input mechanisms and pursues the expiration of the presentation on the second screen, the control display.

Switching on of the second screen on and turning the picture of the main screen down can be made alternatively by means of switches or by keyboard entry manually. Appropriately however automatic switching on and rotation of the picture on, as e.g. in the joint an angle of traverse recognition device is arranged, are those compelled in accordance with requirement 2 that with a pre-determined angle of traverse of the main screen, the picture of the main screen is turned and also the second screen is switched on.

According to requirement 3 the second screen is a in-colored screen. This further training is favorable if e.g. on the main screen the customer a complex colored diagram, i.e. e.g. a responding and convincing presentation are to be demonstrated. The control person, i.e. the salesman, do not need this high-quality representation. It must be able to only pursue the presentation and during inputs, e.g. personal data of the customer, the correctness of the input to examine be able.

Since the second screen needs also a smaller dissolution, it is more economical than the main screen, whereby the total costs can be lowered.

According to requirement 4 is also removable the keyboard, whereby communication with the computer is made by a wireless data interface. This option is of advantage if the presentation device e.g. close is to stand at the customer.

An execution form of the invention is described on the basis the attached schematic designs:

Fig. 1 shows a perspective side view of the invention with conventional use as laptop.

Fig. 2 a perspective side view of the invention shows 2 with use as presentation device.

Those **Fig. 1** shows a perspective side view of the invention with conventional use as laptop with a keyboard **1**, a main screen **2**, that with joints **3** at the base **4** the laptop is tiltable fastened. It is also possible, if desired, to shift the keyboard out.

Those **Fig. 2** the invention shows 2 with use as presentation device. The keyboard **1** is shifted out, so that the control person on the second screen **5** to see can. The main screen **2** turned down, as shown with the double arrow. So that the customer can regard the picture of the main screen correctly, it electronically 180 degrees.

Citations

Citation

 Expand Citing Patents (3)

Cited Patents (0)

Cited Non-patents (0)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951
	Filing Date		2008-07-10
	First Named Inventor	Yves Behar	
	Art Unit		2115
	Examiner Name	Not Yet Assigned	
	Attorney Docket Number		A2029-700111

U.S.PATENTS							Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	
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	8	6223393	B1	2001-05-01	Eric Andrew Knopf		

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	12170951
Filing Date	2008-07-10
First Named Inventor	Yves Behar
Art Unit	2115
Examiner Name	Not Yet Assigned
Attorney Docket Number	A2029-700111

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	12170951
Filing Date	2008-07-10
First Named Inventor	Yves Behar
Art Unit	2115
Examiner Name	Not Yet Assigned
Attorney Docket Number	A2029-700111

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	1	20070182663	A1	2007-08-09	Biech	
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	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit		2115	
	Examiner Name	Not Yet Assigned		
	Attorney Docket Number		A2029-700111	

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	1	0588210	EP	A1	1994-03-23	Hitachi, Ltd.		<input type="checkbox"/>
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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	http://laptop.org/en/laptop/start/ebook.shtml accessed on September 29, 2008	<input type="checkbox"/>

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	Filing Date		2008-07-10
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That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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See attached certification statement.

Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Matthew H. Grady/	Date (YYYY-MM-DD)	2009-12-18
Name/Print	Matthew H. Grady	Registration Number	52957

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 **EUROPEAN PATENT APPLICATION**


 Application number: **93114327.5**


 Int. Cl.⁵: **H04M 1/02**


 Date of filing: **07.09.93**

 Priority: **08.09.92 JP 239735/92**


 Date of publication of application:
23.03.94 Bulletin 94/12

 Designated Contracting States:
DE FR GB

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 **Portable radio telephone set.**


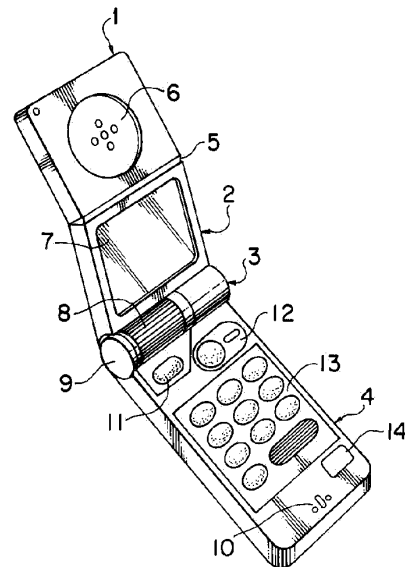
 A portable radio telephone set provided with a display section includes a rotary selector which turns to select various functions. A menu displayed on the display section is selected by the rotary selector during a non-conversation time and the sound volume can be adjusted during a conversation time. The adjusting operation can be performed from both the front and rear sides of the telephone set. The rotary selector and button keys are arranged within the operation range of the thumb, and ordinary dial functions performed by operating these rotary selector and button keys are provided.

FIG. 1



EP 0 588 210 A1

BACKGROUND OF THE INVENTION

Field of the Invention:

The present invention relates to a portable radio terminal and, more particularly, to a portable radio telephone set having a folding and housing control mechanism and a rotary selector for selecting various functions provided in a hinge section for folding and housing purpose.

Description of the Related Art:

Conventional portable radio telephone sets (hereinafter referred to simply as telephone sets) are not only provided with ordinary telephone functions, but also an electronic telephone directory function by which telephone numbers and names can be registered, a help function for guiding various functions, an incoming call tone selection function for selecting incoming call tone, and the like, thus being formed as a multi-functional terminal. The conventional portable radio telephone set uses function buttons in order to select such functions. The operation of some terminals has been made easier by making the shape of function buttons different from that of dial buttons.

When, for example, the electronic telephone directory function is used, first a telephone set user operates a function button for the electronic telephone directory function in order to call a telephone number stored in the electronic telephone directory on a display section of the portable radio telephone set. Then, the telephone set user operates a function button for selecting the telephone number and a function button for scrolling the registered telephone numbers in order to call the wanted telephone number on the display section from among telephone numbers registered in the electronic telephone directory. When the wanted telephone number is confirmed on the display section by the above operation, the user operates a function button for starting a conversation in order to call the other party.

Though the conventional portable radio telephone set is multi-functional, the operation procedure thereof is complex for a user when the series of operations described above is considered. Furthermore, there is the possibility that the greater the number of buttons, the greater the chances that a button may be depressed erroneously when the button arrangement of a present portable radio telephone set is considered.

That is, in view of the complexity of such an operation procedure, it is not said easy, as regards a conventional telephone set in which functions are selected by function buttons, to operate various buttons with only one hand while holding the tele-

phone set itself in the same hand.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a telephone set which makes it possible to easily perform various operations required particularly for conducting a radio conversation with one hand while the telephone set itself is being held by the same hand.

It is another object of the present invention to simplify the procedure for selecting or operating a plurality of functions of the telephone set.

It is still another object of the present invention to provide a multi-functional telephone set, the number of buttons thereof being reduced as much as possible.

To achieve the above-described objects, a portable radio telephone set in accordance with the present invention is provided, which portable radio telephone set has a display section, comprising a rotary selector which turns to select various functions. A menu of various functions displayed on the display section is selected when the rotary selector is during a non-conversation time, sound volume can be adjusted during a conversation time, the adjusting operation can be performed from both the front and rear sides of the telephone set. The rotary selector and button keys are arranged within the operation range of the thumb, and thus ordinary dial functions, performed by operating the rotary selector and the button keys, are provided.

According to the present invention, since the rotary selector is provided as a telephone terminal, it is possible to easily select a desired function of the telephone terminal with one hand by rotating the selector.

Also, according to the present invention, since the rotary selector is provided in a hinge section of a telephone terminal which is foldable so that it can be housed, it is possible to select a desired function of the telephone terminal by rotating the rotary selector.

Since the rotary selector is provided in the hinge section of the telephone terminal which is foldable so it can be housed, the hinge section can be of any size, and the mechanical strength of the hinge section is strengthened. The provision of the rotary selector results in a reduction of key buttons for performing multiple functions, or the like, making it possible to effectively use the space where the telephone set is arranged.

Also, by arranging the rotary selector provided in a terminal so as to be rotatable longitudinally and slidable along the shaft of the hinge, the rotary selector can be used as a cursor. Further, by moving the cursor on the display section up and down, or from side to side in linkage with the rotary

selector in this way, various functions of a portable telephone set can be performed, and it is made easy to perform an operation with one hand.

The above and further objects and novel features of the invention will more fully appear from the following detailed description when the same is read in connection with the accompanying drawings. It is to be expressly understood, however, that the drawings are for the purpose of illustration only and are not intended as a definition of the limits of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

- Fig. 1 is a perspective view illustrating the appearance of a portable radio telephone set in accordance with an embodiment of the present invention;
- Fig. 2 is a perspective view illustrating a state in which the portable radio telephone set shown in Fig. 1 is used while it is held with one hand;
- Fig. 3 is a perspective view illustrating a state in which the portable radio telephone set is used during a radio conversation state as it is seen from the outer side (the rear side) thereof;
- Fig. 4 is an illustration of a one-hand operation method in a state in which the radio telephone set is held with one hand;
- Fig. 5 is a partial sectional view of a joint portion of the radio telephone set in accordance with the embodiment of the present invention;
- Fig. 6 is a partial sectional view of the joint portion and the receiver portion of the radio telephone set, a display section, and the like;
- Fig. 7 is a perspective view, partly in cross section, illustrating a state in which the radio telephone set is folded so it is housed;
- Fig. 8 is a plan view illustrating a method for controlling the position of a cursor by operating the dials of the radio telephone set in accordance with the present invention; and
- Fig. 9 is a flowchart showing a selection of various functions by using a rotary selector of the radio telephone set.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Preferred embodiments of the present invention will be explained below with reference to the accompanying drawings of Fig. 1 through Fig. 9.

The appearance of a telephone set in accordance with the present invention will be explained first. Fig. 1 illustrates in perspective the overall appearance of the main body of the telephone set when the folded state thereof is released and it is placed in a use state. In this case, a receiver section 1 and a display section 2 are freely flexed

and engaged with each other via a hinge 5. These sections are engaged with an operation section 4 via a joint portion 3 by which the telephone set is folded and rotated so as to be housed. A receiver (speaker for outputting received voice sound) 6 is provided in the central portion of the receiver section 1. When this receiver is brought into contact with the ear of a party (user) during a radio conversation, a voice sound from the other party is heard. Since, as shown in the figure, the hinge 5 is flexed to form a V shape, it is easy to operate the telephone set during the radio conversation state. The joint portion 3 maintains the state in which the telephone set is rotated after the main body of the telephone set is folded and housed, that is, the use state, and is provided with a selector 8 for selecting functions, a rotation operation mechanism, and a push-button 9. A set button 11 for storing/retrieving and inputting/outputting information, a call origination (re-origination) button 12 for starting a conversation, a ten-key portion 13, and a termination button 14 for terminating a conversation are provided in the operation section 4, a microphone 10 being contained in the front end portion of the main body. With this construction, when a radio conversation function is selected by the selector 8, a telephone set user brings the receiver 6 into contact with the ear, and the user's mouth is brought close to the microphone 10 as in a handset of a conventional telephone set, a radio conversation with the other party then being conducted. Keyed-in information and necessary information from among stored information are called and displayed on a liquid-crystal display screen 7 disposed in the central portion of the display section 2.

Fig. 2 illustrates a state in which the telephone set is being used while it is held by one hand (the left hand in this embodiment). The telephone set user grasps both end portions of the joint portion 3 between the thumb "a" and the forefinger "b". The push-button 9 is depressed by the thumb "a" in order to rotate the display section 2 and the receiver section 1 via the joint portion 3, thereby shifting the state of the telephone set from the state in which it is folded and housed to a stable use state. Since the main body of the telephone set is basically held by the thenar "c" and the remaining three fingers "d", an accident, such as the main body of the telephone set falling from the hand, does not occur even if the thumb "a" and the forefinger "b" are separated from the main body of the telephone set. Therefore, if the main body of the telephone set is held as shown in Fig. 2, the telephone set user can operate the selector 8 and various operation buttons on the operation section 4 with the thumb "a" while simultaneously confirming a display on the liquid-crystal display screen 7.

Fig. 3 is a perspective view of the portable radio telephone set as it is seen from the outer side (the rear side) thereof, illustrating a state in which the radio telephone set is used during a radio conversation. As shown in Fig. 3, the forefinger "b" is separated from one end of the joint portion 3, and the selector 8 is operated by the forefinger "b". As a result, the selector 8 can be operated by the thumb "a" from the inner surface thereof, and also by the forefinger "b" from the outer surface thereof.

Therefore, the selector 8 is provided in the joint portion 3 so as to select various functions (to be specific, call origination/reception, telephone number, secrecy, input, output, storage, calculation, time, remote control, schedule, call, clear, calendar, dictionary, map, characters, numerals, or the like) during a non-radio conversation time, and so as to function to adjust the volume of the received voice sound during a radio conversation time. The selector 8 is provided in such a way that the selector 8 is rotatable longitudinally and can be operated from both the inner and outer surfaces.

Fig. 4 illustrates a one-hand operation method in a state in which the radio telephone set is held with one hand. As shown in the figure, in the main body of the telephone set, the right and left ends of the operation section 4 are held by the thenar "c" and the three fingers "d". If the push-button 9 is depressed by the thumb "a", the folded and housed telephone set can be shifted to a stable use state, i.e., a radio conversation state, by rotating the receiver section 1 and the display section 2 via the joint portion 3.

An example of a case in which a radio conversation is conducted in this use state will be explained. First, the telephone set user selects by using the selector 8 a list display function (one function of the telephone set) for displaying a list of names and their telephone numbers. The available selection methods include a method in which a list of functions is displayed beforehand on the liquid-crystal display screen 7 and a cursor which is moved in linkage with the rotation of the selector 8 or the like is moved up and down to identify any one of the functions, a method in which the selector itself is provided with a change-over switch corresponding to multiple functions, the selector being switched to select any one of the functions. The functions can be more easily selected by using the selector 8 in addition to the key buttons. Next, a list of the prestored names and their telephone numbers is displayed on the liquid-crystal display screen 7, and a wanted telephone number is retrieved by scrolling the display screen using the selector 8. In the above display and retrieval method, only the selector 8 needs to be operated. As a result, an operation for switching the selector

8 at a thumb position "f" is possible. Further, when the telephone number of the other party is confirmed, a set button 11 is depressed at a thumb position "g", and a call origination (re-origination) button 12 is operated, allowing a radio conversation to start. When the radio conversation is terminated, a termination button 14 is depressed at a thumb position "i" in order to complete a series of operations necessary for conducting a radio conversation. That is, the range in which the liquid-crystal display screen 7 can be visually confirmed and in which the thumb "a" can be moved to operate the selector 8, the call origination (re-origination) button 12, and the termination button 14 is assumed to be the range defined by the broken lines A and B shown in the figure. In this range, necessary operations can be performed by the thumb "a". In other words, this range is a range in which the thumb "a" is rotated, turned, moved back and forth, and bent in a combined manner at a joint "e" about the base of a human's phalanx in the thumb "a". Therefore, when the selector 8 and various buttons required for a radio conversation are arranged in the range defined by the broken lines A and B, since the selector 8 and the buttons are operated with one hand, the ease with which the telephone set is operated with one hand is enhanced.

An example in which these various functions are selected by the selector 8 will now be explained with reference to the flowchart in Fig. 9. When the telephone set is opened for use from the state in which it is housed because the push-button 9 is depressed by the thumb "a", the power supply is turned on, and the initial screen appears on the liquid-crystal display screen 7, on which screen date, time, and the like are displayed. When the set button 11 is depressed, a function screen appears on the display screen 7. The displayed function setting and the memory dial are cursor-moved by turning the selector 8. Then, a function is selected, and the function is determined by operating the set button 11.

When a function setting is selected in such function selection, functions "Set/Release", "Select", "Adjust", "Command input" and "Display only" are successively displayed as a result of the turning of the selector 8, making scrolling retrieval possible and allowing these selected functions to be confirmed. When these functions are selected and set by the set button 11, call origination restriction is set or released in "Set/Release", turning on/off of number announcement is selected by the cursor movement caused by the turning of the selector 8 and determined by the set button 11, and the screen returns to the initial screen. When the function "Select" is selected and set, the selectable range of ringing tone quality is displayed, and it is possible to select the tone quality by turning

the selector 8 while displaying the current situation. After the tone quality is determined by the set button 11, the screen returns to the initial screen. When the function "Adjust" is selected and set, the selectable range of the receiver tone volume is displayed, and it is possible to select the tone volume by turning the selector 8 while displaying the current situation. After the receiver tone volume is determined by the set button 11, the screen returns to the initial screen. When the function "Command input" is selected and set, a display screen for inputting four digits of a personal identification number appears, making it possible to input the number by using the buttons of a ten-key section 13. The number is set by the set button 11 after it is input, and the screen returns to the initial screen. When the function "Display only" is selected and set, the amount of the remaining memory of the memory dial is displayed, and the screen returns to the initial screen.

When the memory dial is selected in the function selection, "Store", "Update", and "Clear" displayed on the display screen 7 are set by the selector 8 as a result of the turning thereof, and set by the set button 11, making it possible to proceed to the subsequent functions.

Although in the above-described operation, functions are determined by the set button 11, the selector 8 may be moved axially so as to have the same functions as those of the set button 11 as in a joystick 29 which will be described later. In such a case, the ease with which the telephone set is operated with one hand is enhanced even more.

Fig. 5 is a partial sectional view of the joint portion 3 of the radio telephone set in accordance with the present invention. The joint portion 3 is formed of a case 15 and a button shaft 19, and fixed to the operation section 4. A boss shaft 16 is formed in the central end surface portion of the case 15, and the boss shaft 16 and a hollow flange 18 are rotatably engaged with each other. Similarly, a sleeve shaft 22 is formed in the button shaft 19, and the sleeve shaft 22 and a sleeve flange 20 are rotatably engaged with each other. The rotatable hollow flange 18 and the sleeve flange 20 are fixed by a chassis 17 which is stably fixed inside the display section 2. In this way, the operation section 4 and the display section 2 are freely engaged with each other in such a way that they can be folded on one another via the joint portion 3.

The push-button 9 can be movably inserted into the end surface of the button shaft 19. A shank 23 formed in the push-button 9 is slidably fitted into the inside of the sleeve shaft 22. A stopper piece 24 is disposed in the shank 23 which is engaged with notches 25 and 26 formed in the end surfaces of the sleeve shaft 22 and the sleeve flange 20. As a result, the rotation of the sleeve

flange 20 is stopped, and consequently the rotation of the display section 2 is stopped stably. The notch 26 of the sleeve shaft 22 does not allow the engagement of the stopper piece 24 to be released for the maximum axial stroke of the push-button 9. In contrast, the engagement of the notch 25 of the sleeve flange 20 can be released and freely rotated. The notch 25 of the sleeve flange 20 is formed at an open position where the telephone set is being used and at a housing position (not shown) where it is folded and housed.

Further, a torsion coil spring 21 is disposed inside the case 15. One end of the torsion coil spring 21 is connected and fixed to the case 15, and the other end thereof is extended from the case 15 and engaged with a spring hole formed in the hollow flange 18. As a result, if the push-button 9 is depressed, the stopper piece 24 releases the stoppage at the notch 25 (not shown) when it is housed, and the elastic force of the torsion coil spring 21 is released, causing the hollow flange 18 to rotate. Therefore, the receiver section 1 and the display section 2 are rotated, becoming ready for use.

Since some elastic force still remains in the torsion coil spring 21 in the above connection in the use state, a rotational force is given continuously in the direction in which the remaining elastic force is released. This fact indicates that unwanted jarring which may occur when the telephone set is used, is prevented by the rotational force thereof.

Further, when a selector shaft 28 engaging with the selector 8 moves along the axis thereof when the mechanical position thereof is read, the stroke stops at the end surface of the shank 23 so as to serve as a stopper. The press fitting between the shank 23 and a shaft 27 is not released by such an operation force acting on the selector shaft 28. The selector shaft 28 and the shaft 27 are able to slide axially and turn around the shaft thereof on one shaft. The shaft 27 is supported so as to be slidable and turnable inside the selector shaft 28, and the other end reaches the joystick 29. Further, the selector shaft 28 extends close to the center of the joint portion 3, and the selector 8 is press-fitted to the end. The selector 8 is able to smoothly slide axially and turn around the shaft thereof without contacting other components.

Next, the joystick 29 will be explained. Disposed inside the joystick 29 are a power-supply switch (not shown) working with the shaft 27, a volume (for adjusting the receiver tone volume) which operates in response to the movement of the selector shaft 28, a sensor (for selecting functions), and the like. Examples of the sensor are a mechanical sensor, an electrical sensor, or an optical sensor. In short, the sensor detects the rotational position of the selector shaft 28, the sliding opera-

tion along the rotational shaft, and sends a signal to the liquid-crystal display screen 7 so that function selection/setting shown in Fig. 9 is performed and the screen is switched. Examples of methods performed by the power-supply switch are a method in which the position of the selector shaft is detected by the sensor and the power supply is turned on/off, and a method in which simply one end of the selector shaft 28 and the surface which the one end contacts are formed into an electrical contact point, and it is made to work with the depressing of the push-button 9. If the turning on/off of the push-button 9 is made to work in linkage with the turning on/off of the power-supply switch as in these methods, the telephone set user depresses the push-button 9 in order to make the telephone set in a folded and housed state shift to a use state, the power supply of the telephone set can be turned on, making it unnecessary to provide a key button exclusively used for the power-supply switch in the operation section 4. More specifically, when the telephone set is shifted to a state in which it is placed in a use state from the folded and housed state, the power supply of the telephone set can be inevitably turned on without operating a key button exclusively used for the power supply. The sensor inside the joystick 29 works not only with the selector shaft 28, but also with the operation of the function button in the operation section 4, and functions can be selected from the operation section 4.

The functions selected in this way reach a display processing circuit (not shown) via a cord E, and various displays necessary for performing the functions are made. Although in the embodiment the selector 8 works for controlling the position of a cursor, a selector exclusively used for controlling the position of the cursor, in addition to the selector 8, may be disposed near the selector 8.

Fig. 6 is a partial sectional view of the joint portion 3, the receiver section 1, and the display section 2. As shown in the figure, the display section 2 is able to turn along a slide ring 30 which serves as a part of the joint portion 3 fixed to the operation section 4. Inside the display section 2, one end of a fine slide pin 31 is always pressed against and built onto the slide ring 30. The other end of the slide pin 31 is rotatably engaged with a hinge piece 32 which works with the hinge 5 by which the section between the display section 2 and the receiver section 1 is made flexible. An elastic spring 33 is fixed to the hinge piece 32, and the other end is fixed to a spring seat 34 formed inside the receiver section 1. As shown in the figure, the receiver section 1 stabilizes at the flex position as indicated by the solid line by the action of the elastic spring 33. When an unnecessary force acts on the receiver section 1, since the

receiver section 1 is turned as indicated by the broken line, the telephone set itself is protected, and the receiver section 1 contacts the user's ear with elastic properties during a non-radio conversation. Thus, received voice can be heard in a satisfactory contact. When the telephone set is folded and housed, the receiver section 1 and the display section 2 are folded via the joint portion 3 as indicated by the broken line. Since, at that time, the slide pin 31 engages with a notch 35 of the slide ring 30, formed at the position at which the telephone set is housed, the receiver section 1 and the display section 2 are folded stably. At the folded time, the hinge piece 32 which works with the slide pin 31 is retracted into the display section 2. Therefore, the receiver section 1 which is flexed with respect to the display section 2 is folded in a state in which it is spread linearly so as to be along the display section 2.

Fig. 7 is a perspective view, partly in cross section, illustrating a state in which the telephone set is folded so as to be housed. As shown in the figure, since the slide pin 31 built into the display section 2 is engaged with the notch 35 formed in a part of the outer periphery of the joint portion 3 (equivalent to the slide ring 30), the telephone set is stably folded and housed. In this folded and housed state, if the push-button 9 is operated, the receiver section 1 and the display section 2 are turned for use, and the slide pin 31 is slidingly released from the notch 35. As a result, the receiver section 1 is flexed with respect to the display section 2.

Finally, controlling the position of the cursor by using the selector 8 will be explained. Fig. 8 illustrates a method for controlling the position of the cursor. As shown in the figure, the selector 8 disposed in the joint portion 3 is used to update the position of the noticed display on the liquid-crystal display screen 7, i.e., the position of a cursor 37. When that position is updated, the thumb "a" is operated at will from side to side in the direction of the arrow A or up and down in the direction of the arrow B in a state in which the thumb "a" contacts at a position "j" on the selector 8. That is, when the selector 8 is in a free state, the selector 8 stabilizes while maintaining clearances 36a and 36b of the same size toward the right and left, respectively. The operation using the thumb "a" in the direction of the arrow A changes the size of these clearances 36a and 36b. This change is sensed by a sensor inside the above-mentioned joystick 29. If, for example, the selector 8 is operated to the right, the cursor 37 is moved to the right on the liquid-crystal display screen 7. If the thumb "a" is released from the selector 8, the selector 8 is automatically made to return to the central position. The upward and downward opera-

tion of the selector 8 by using the thumb "a" causes the selector 8 to rotate up and down. The direction and the amount of the rotation at that time is sensed by the knob or sensor inside the joystick 29, and the cursor 37 moves up and down on the liquid-crystal display screen 7. What is meant by "sensed by the knob" here is that the amount of the rotation of the selector 8 is determined by voltage, current or the like corresponding to the knob. When a selector exclusively used for controlling the position of the cursor, in addition to the selector 8, is disposed near the selector 8, the selector exclusively used for controlling the position of the cursor is similarly operated, controlling the position of the cursor 37. Therefore, if the cursor 37 is moved successively to a desired position, for example, in a condition in which all necessary characters, numerals, symbols or the like are displayed on the liquid-crystal display screen 7, characters or the like at a moved position are sequentially selected as input subjects, and processed. When the set button 11 is operated on the operation section 4 in a condition in which, for example, the cursor 37 is moved to a desired character position, a list of names and telephone numbers can be displayed in part on the upper portion of the liquid-crystal display screen 7. Up to the present time, desired character strings or the like have been formed solely by operations of ten-keys for a necessary number of times. The operations are troublesome and complex, and key processing requiring a great number of operations is necessary. However, when display processing is performed as described above, such inconveniences as described above are reduced.

According to the embodiment of the present invention, as described above, since the rotary selector is disposed in the hinge section of a telephone set which is folded so as to be housed, the hinge section is made to have a desired size so that the mechanical strength of the hinge section can be strengthened. Since the provision of the rotary selector results in a reduction of key buttons for performing multiple functions, there is an advantage in that the space where the telephone set is arranged can be effectively used.

According to the embodiment of the present invention, there is an advantage in that by using the rotary selector disposed in a terminal, no key buttons exclusively used for controlling the cursor are needed, and the operation with one hand is made easier.

In addition, according to the embodiment of the present invention, the number of necessary key buttons can be reduced since the portable telephone set is provided with a rotary selector, and key buttons and a display of the most appropriate size can be arranged in a telephone set of the

most appropriate size. Furthermore, when the rotary selector is disposed in the hinge section of a folding type portable telephone set, the space where the rotary selector is disposed can be reduced.

According to the embodiment of the present invention, since a rotary selector is disposed in the telephone set, it is possible to easily perform various operations necessary, in particular, for conducting a radio conversation with the fingers of one hand while the telephone set itself is being held with the same hand.

Many different embodiments of the present invention may be constructed without departing from the spirit and scope of the present invention. It should be understood that the present invention is not limited to the specific embodiment described in this specification. To the contrary, the present invention is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the claims. The following claims are to be accorded the broadest interpretation, so as to encompass all such modifications and equivalent structures and functions.

Claims

1. A portable radio telephone set provided with a display section, comprising: a rotary selector which turns to select various functions, said rotary selector being capable of selecting a menu of the various functions displayed on the display section during a non-conversation time, and capable of adjusting the sound volume during a conversation time, the adjusting operation capable of being performed from both the front and rear sides of said telephone set, and button keys being arranged with said rotary selector within the operation range of the thumb so that ordinary dial functions performed by operating said rotary selector and said button keys are provided.
2. A portable radio telephone set according to claim 1, said telephone set being of a folding type so as to be housed, wherein said rotary selector is provided in the foldable hinge section so as to be rotatable in the same direction as that of said hinge section.
3. A portable radio telephone set according to claim 2, wherein a folding and housing control mechanism is disposed in the side end of said hinge section.
4. A portable radio telephone set according to claim 1, wherein said rotary selector is rotat-

able and slidable along the rotational shaft thereof.

- 5. A portable radio telephone set according to one of claims 1 and 4, wherein said rotary selector makes it possible to control the position of a cursor on the display section. 5

- 6. A portable radio telephone set according to claim 1, wherein, when said rotary selector turns to set functions in function selection, it is possible to scroll and retrieve setting and releasing of call origination restriction, ringing tone, receiver tone volume, inputting of a personal identification number or the like, which are functions displayed on said display section, and it is possible to select and set these functions by the rotary selector. 10
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- 7. A portable radio telephone set which is provided with a display section and of a folding and housing type, said telephone set comprising a rotary selector which turns to select various functions being disposed in a hinge section for folding and housing purpose in such a way that the rotary selector can turn in the same direction as that of said hinge section, and a dial for controlling the position of a cursor being disposed near the shaft of the hinge section of said rotary selector, said dial being capable of turning in the same direction as that of said hinge section and capable of sliding along the shaft of said hinge section. 20
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- 8. A portable radio telephone set according to claim 7, further comprising a folding and housing control mechanism disposed in the side end of said hinge section. 35

- 9. A portable radio telephone set which is provided with a display section and of a folding and housing type, said telephone set comprising a rotary selector which turns to select various functions disposed in a hinge section for folding and housing purpose in such a way that the rotary selector can turn in the same direction as that of said hinge section, said rotary selector selecting a menu displayed on a display section during a non-conversation time and adjusting a sound volume during a conversation time, such adjusting operation capable of being performed from both the front and rear sides of said telephone set, button keys being arranged with said rotary selector within the operation range of the thumb so that ordinary dial functions performed by operating said rotary selector and button keys are provided, and a dial for controlling the position of 40
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50
55

a cursor being disposed near the shaft of the hinge section of said rotary selector, said dial being capable of turning in the same direction as that of said hinge section and capable of sliding along the shaft of said hinge section.

FIG. 1

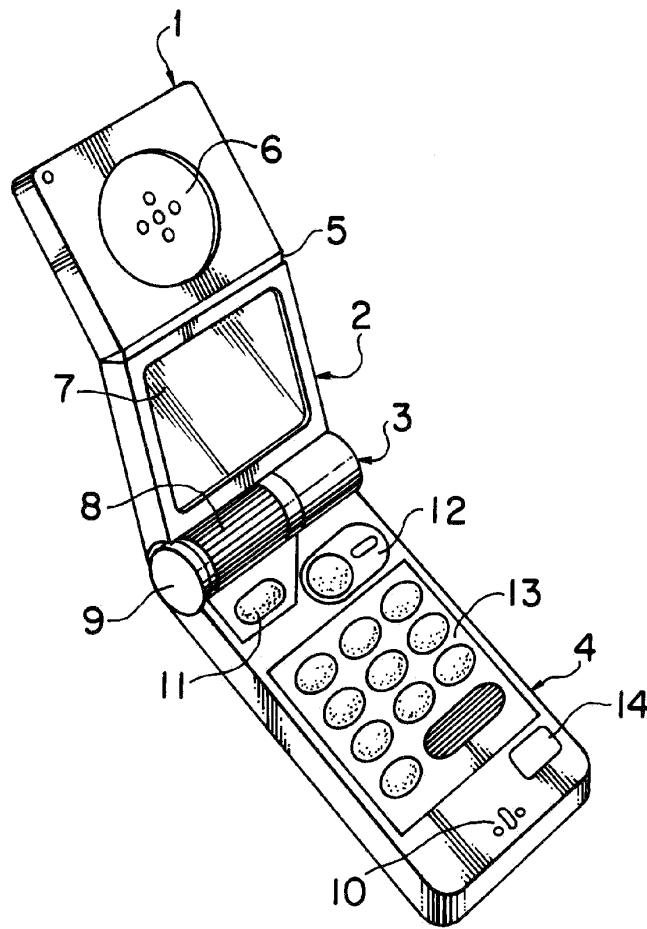


FIG. 2

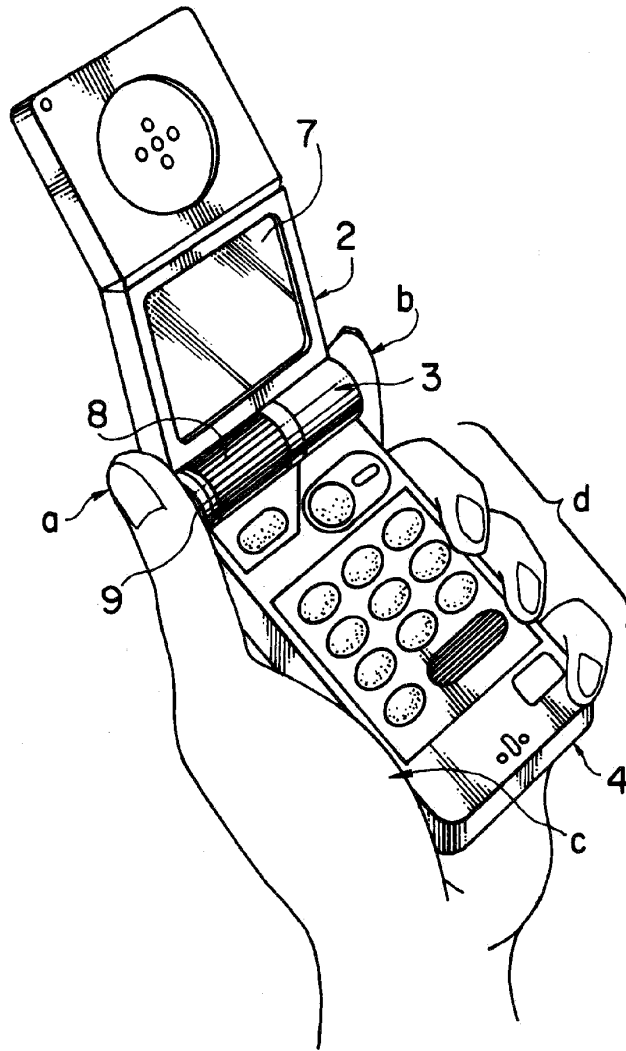


FIG. 4

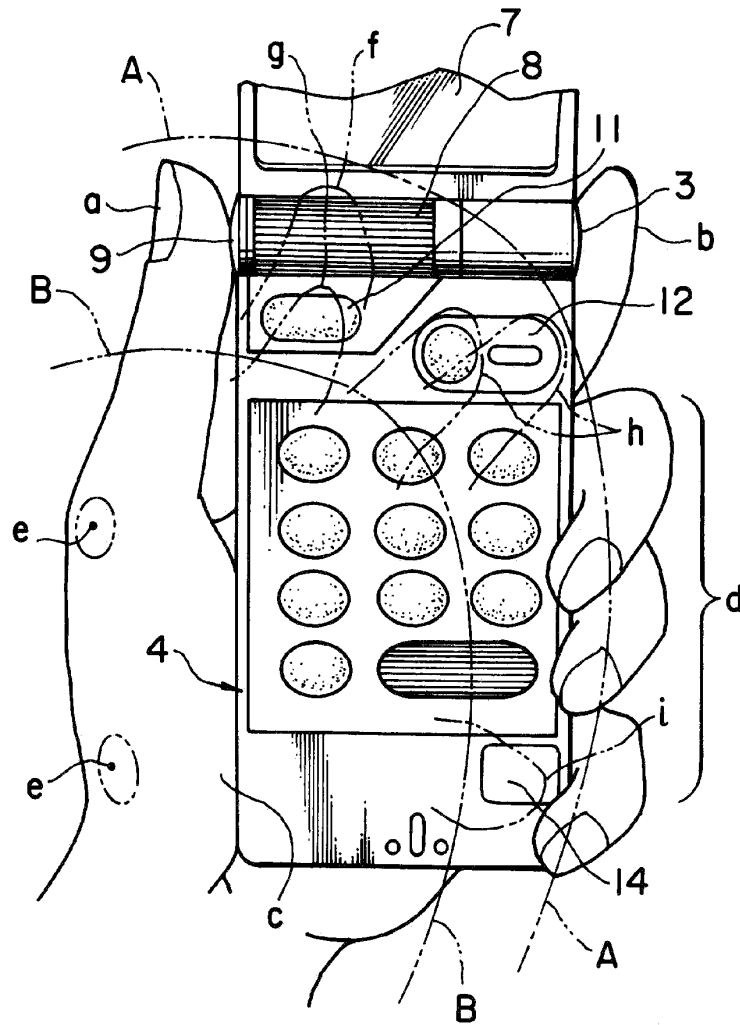


FIG. 3

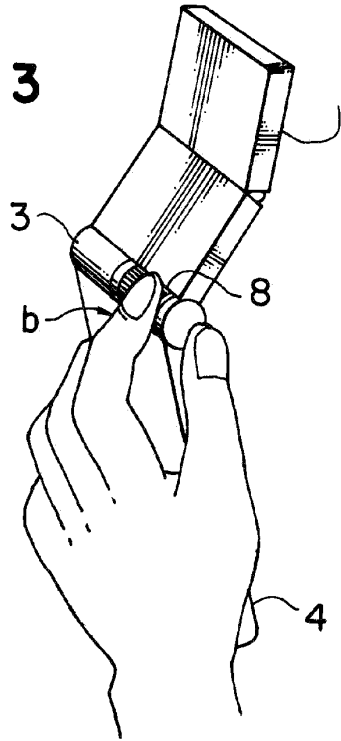


FIG. 5

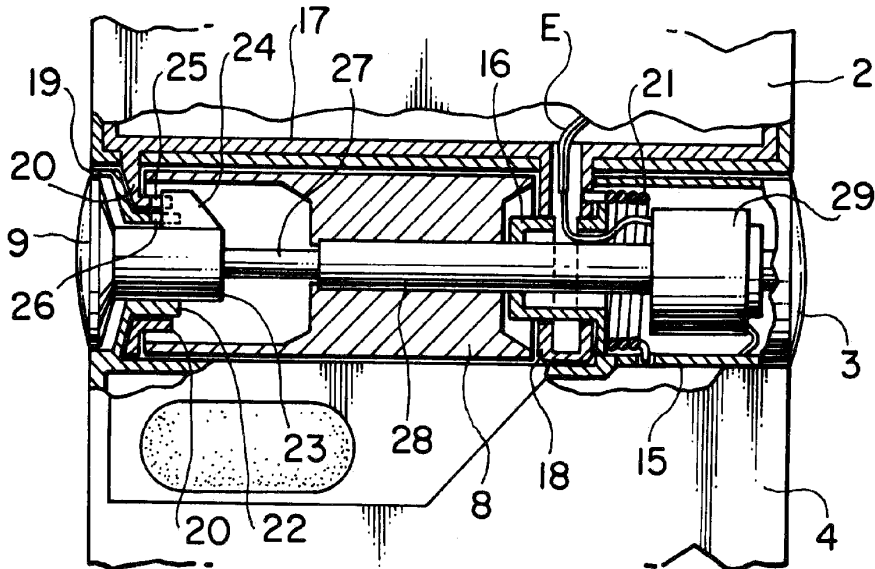


FIG. 6

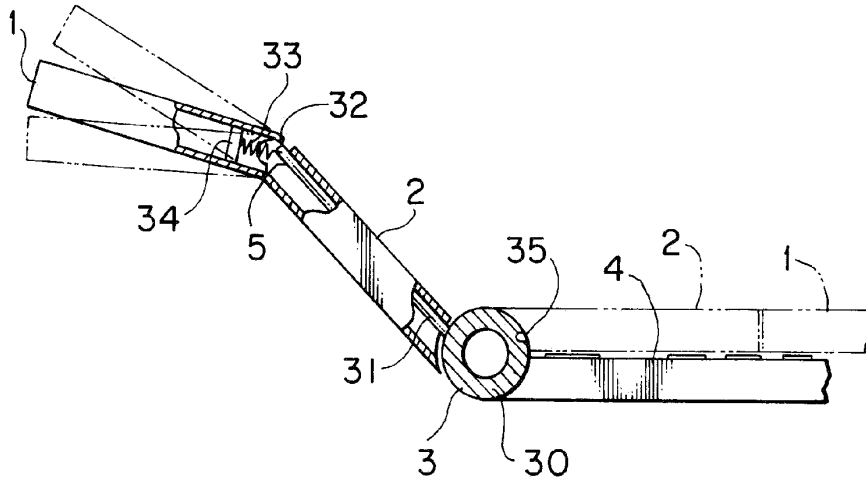


FIG. 7

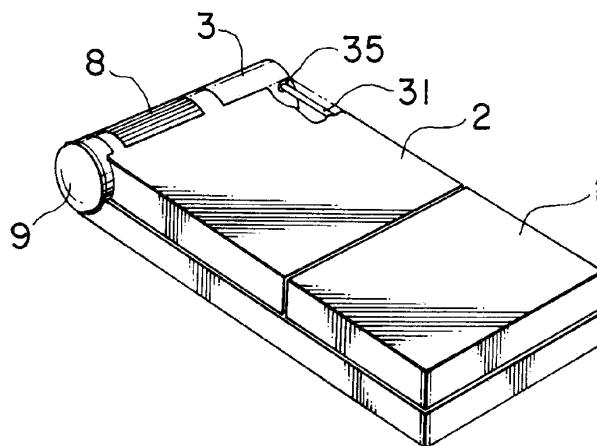
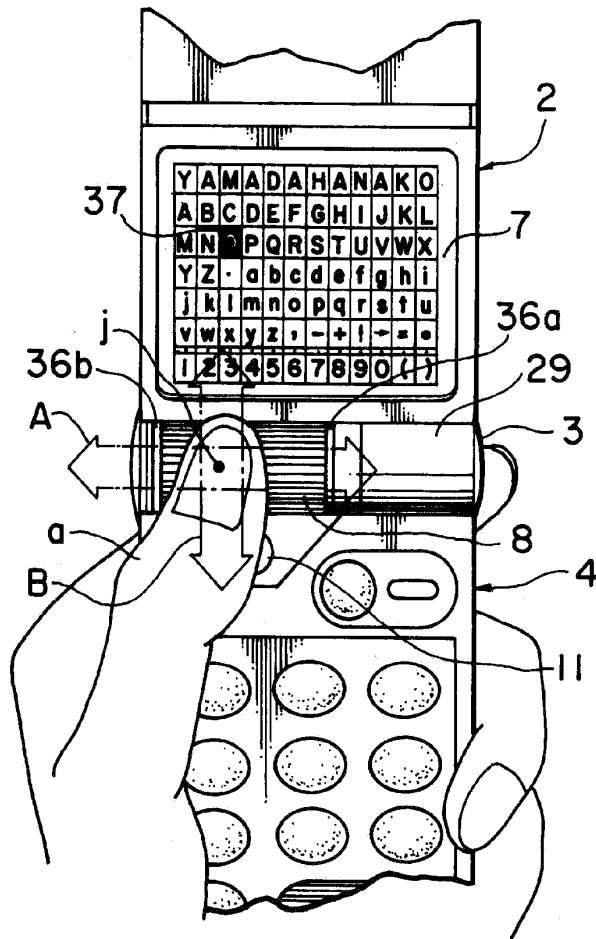
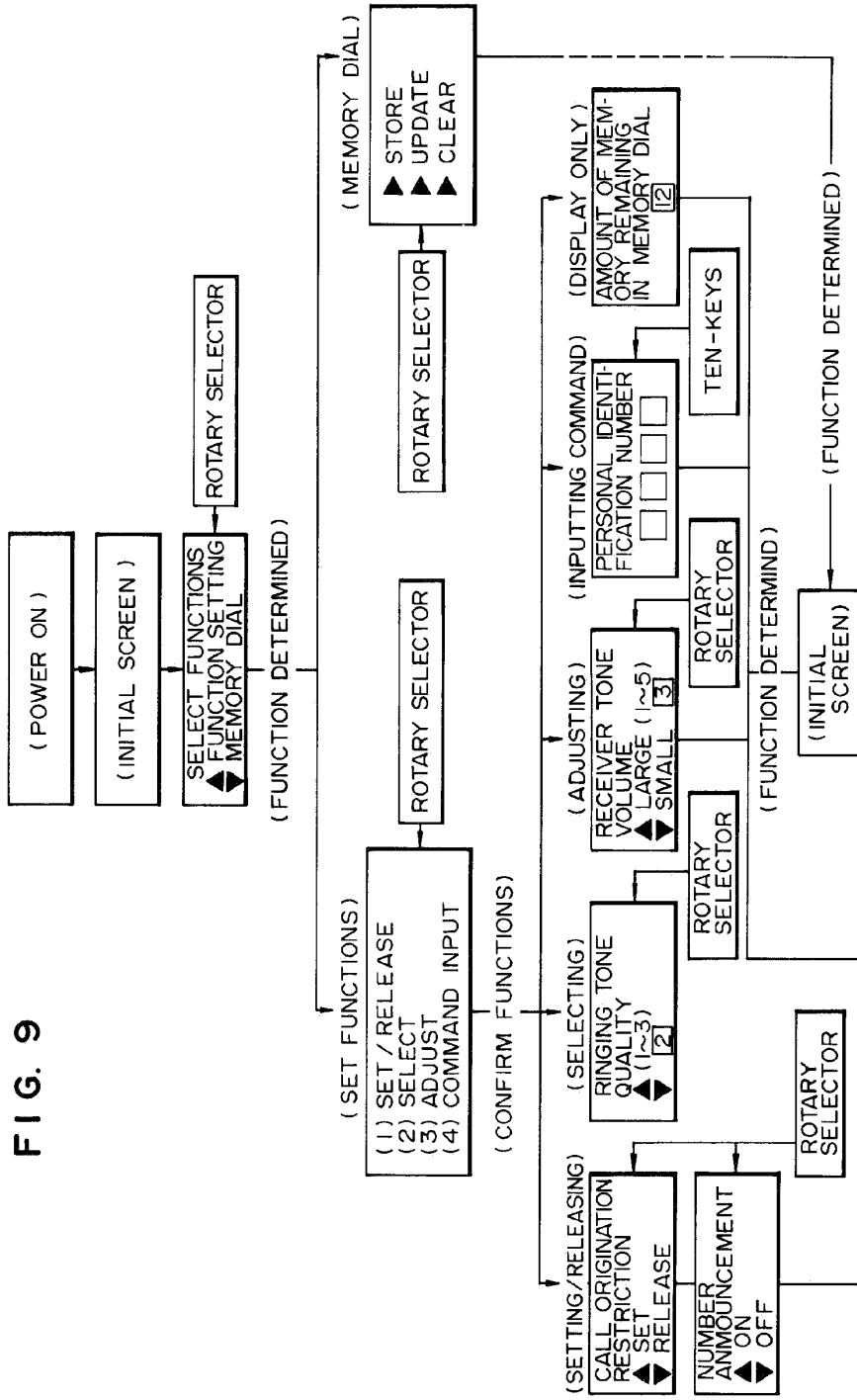


FIG. 8







DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
Y A	EP-A-0 463 856 (NOKIA MOBILE PHONES LTD) * the whole document * ---	1,6 7,9	H04M1/02
Y	DE-A-40 08 598 (PHILIPS PATENTVERWALTUNG GMBH) * column 3, line 15 - column 5, line 34; figures 1-3 * ---	1,6	
A	EP-A-0 373 387 (ROBERT BOSCH GMBH) * column 2, line 40 - column 4, line 35; figures 1,2 * ---	1,5,7,9	
A	US-A-4 481 382 (VILLA-REAL) * column 3, line 10 - column 5, line 65; figures 1-6 * ---	1,7,9	
A	US-A-5 027 394 (ONO ET AL) * column 2, line 55 - column 3, line 30; figures 1-7 * -----	2	
The present search report has been drawn up for all claims			
			H04M
Place of search		Date of completion of the search	Examiner
THE HAGUE		15 December 1993	Delangue, P
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

EPO FORM 1503 02.92 (IPMC01)

(19) **KOREAN INTELLECTUAL PROPERTY OFFICE**

KOREAN PATENT ABSTRACTS

(11)Publication number: **1020000036647**
(43)Date of publication of application: **05.07.2000** **A**

(21)Application number: **1020000015117**
(22)Date of filing: **24.03.2000**
(30)Priority: ..

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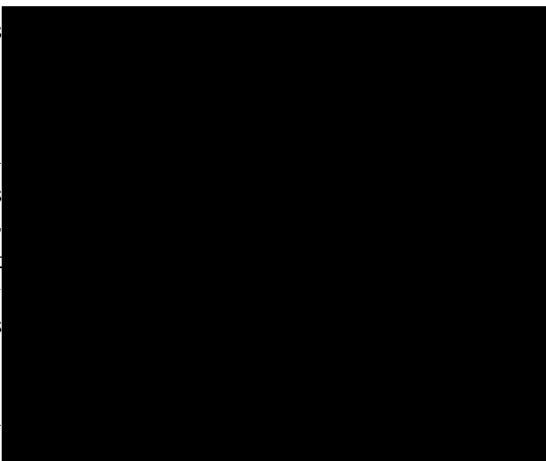
(51)Int. Cl **G06F 17/30**

(54) **SEARCH METHOD USING IMAGE INFORMATION**

(57) Abstract:

PURPOSE: A search method using image information is provided for a convenient search technique by enabling users to instinctively find necessary information among searched results of search engines displayed in image.

CONSTITUTION: A search method using image information is consisted of the three steps. A first step is for a user to connect to a site of search engine so as to search information. A second step is for the user to input query. A third step is for the search engine to display relevant image information after finding search results related to the query. A home page or a web page of a web site displayed as a search result, and specific icon, banner, or banner or icon using motion picture can be the image information. The home page is displayed as a small size icon made of itself and so, users can instinctively know whether the home page contains the needed information or not by seeing the icon. The site of a search engine should build an image database about information to be displayed as search result in advance, and shows image information, sometimes with text information, in case that there is a search request.



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Legal Status

(19) 대한민국특허청(KR)
(12) 공개특허공보(A)

(51) Int. Cl. ⁷ G06F 17/30	(11) 공개번호 특2000-0036647
	(43) 공개일자 2000년07월05일
(21) 출원번호 10-2000-0015117	
(22) 출원일자 2000년03월24일	
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(54) 이미지 정보를 이용한 검색방법

요약
본 발명은 인터넷상에서 검색엔진을 이용하여 원하는 정보를 검색한 경우, 검색결과를 단순한 텍스트가 아닌 이미지 정보를 디스플레이 함으로써 시각적 효과에 의해 보다 효율적인 검색이 가능한 이미지 검색 시스템에 관한 것이다.

본 발명의 이미지 정보를 이용한 검색방법은 인터넷상에서 정보를 검색하고자 하는 사용자가 검색엔진 사이트에 접속하고, 상기 사용자가 검색하고자 하는 검색어를 입력하고, 검색엔진 서버에서 상기 검색어에 해당하는 검색결과를 찾아 해당 이미지 정보를 출력하고, 출력된 이미지 정보 중의 어느 하나를 클릭하여 해당 웹페이지로 접속하는 단계로 구성된다. 상기 이미지 정보는 해당 웹사이트의 홈페이지나 특정의 웹페이지가 될 수도 있고, 특정한 아이콘이나 배너 또는 동영상을 이용한 배너나 아이콘이 될 수도 있다.

본 발명의 이미지 정보를 이용한 검색방법을 이용할 경우, 단순한 텍스트가 아닌 이미지 정보를 출력함으로써 시각적 효과에 의해 검색결과를 보다 신속하고 직관적으로 파악할 수 있어 검색이 용이한 장점이 있다.

도면

도 1

도면

도면의 간단한 설명

도 1은 본 발명의 이미지 정보를 이용한 검색방법에 의해 출력된 검색결과물의 일 예이다.

도면의 상세한 설명

발명의 목적

발명이 속하는 기술 및 그 분야의 종래기술

본 발명은 이미지 검색 시스템이다. 보다 구체적으로, 인터넷상에서 검색엔진을 이용하여 원하는 정보를 검색한 경우, 검색결과를 단순한 텍스트가 아닌 이미지 정보를 디스플레이 함으로써 시각적 효과에 의해 보다 효율적인 검색이 가능한 이미지 검색 시스템에 관한 것이다.

인터넷상에서 원하는 정보를 찾기 위해 통상적으로 검색엔진을 이용한다. 사용자가 특정의 검색엔진 사이트에 접속한 후 찾고자 하는 정보와 관련된 키워드를 입력하면 검색엔진에서 키워드와 관련된 정보를 찾아서 화면상에 출력하게 된다. 그러나, 종래의 검색엔진은 검색결과를 단순히 텍스트로만 출력하고 있으며, 출력결과도 상기 검색엔진에 등록된 문장이나, 웹페이지의 타이틀과 같은 정보만을 출력할 뿐이다.

그러나, 최근에는 인터넷의 이용자가 폭발적으로 증가하고 인터넷상의 정보 또한 폭발적으로 증가하면서 검색엔진을 이용하여 자료를 검색한다는 것도 그다지 용이하지 않게 되었다. 즉, 내가 원하는 정보만을 검색할 수 있어야 하나, 너무 많은 검색결과가 출력됨으로써 정작 내가 원하는 정보를 찾기가 쉽지 않다. 또한, 텍스트로 출력된 검색결과만을 보고서 내가 원하는 정보인지를 알기 어려운 경우가 많으며 일일이 모든 검색결과를 조회해 볼 수밖에 없고 원하는 정보를 찾는 데 많은 시간과 노력을 필요로 하게

된다.

발명이 이루고자하는 기술적 과제

본 발명의 목적은 검색엔진의 검색결과를 이미지 정보로 출력함으로써 사용자가 검색결과 중에서 자신이 원하는 정보를 직관적으로 찾을 수 있어 검색이 용이한 검색방법을 제공하는 것이다.

발명의 구성 및 작용

본 발명의 이미지 정보를 이용한 검색방법은 인터넷상에서 정보를 검색하고자 하는 사용자가 검색엔진 사이트에 접속하고, 상기 사용자가 검색하고자 하는 검색어를 입력하고, 검색엔진 서버에서 상기 검색어에 해당하는 검색결과를 찾아 해당 이미지 정보를 출력하는 단계로 구성된다. 상기 이미지 정보는 해당 웹사이트의 홈페이지나 특정의 웹페이지가 될 수도 있고, 특정한 아이콘이나 배너 또는 동영상상을 이용한 배너나 아이콘이 될 수도 있다.

인터넷상에서 정보를 검색하고자 하는 사용자는 인터넷을 통해 특정 검색엔진 사이트에 접속한다. 상기 검색엔진 사이트에서 자신이 찾고자 하는 정보와 관련된 검색어를 입력하여 관련 정보를 출력할 것을 요청한다. 검색엔진 사이트에서는 입력된 검색어와 관련된 정보를 검색하여 다시 사용자에게 전송하여 사용자의 단말기로 출력하며, 이러한 일련의 검색엔진을 이용한 검색과정은 통상적으로 사용하는 것이다. 다만, 본 발명에서는 검색결과를 단순한 텍스트가 아닌 이미지 정보로 출력한다는 점에서 차이가 있다. 검색엔진 사이트에서는 검색결과로써 출력되기 위한 정보에 대한 이미지 데이터베이스를 사전에 구축해 놓으며, 해당 정보에 대한 검색요청이 있을 경우 상기 이미지 정보를 출력한다. 출력시 이미지와 함께 텍스트 정보를 출력할 수도 있다.

상기 이미지 정보는 해당 웹사이트의 홈페이지 화면이 될 수도 있고, 특정 아이콘이나 배너가 될 수도 있다. 웹사이트 홈페이지의 경우 사용자들이 상기 웹사이트 홈페이지만을 보더라도 그 웹사이트에서 어떠한 정보를 제공하고 있는지, 그 웹사이트가 사용자가 찾는 정보를 갖고 있는지 등에 대해서 직관적으로 알 수 있기 때문에 웹사이트 홈페이지 화면을 작은 크기로 아이콘화하여 디스플레이하는 것이다.

인터넷 웹사이트상에는 광고용으로 많은 아이콘이나 배너들이 링크되어 있다. 이러한 아이콘이나 배너들은 해당 아이콘이나 배너가 전달하고자 하는 내용을 그래픽으로 또는 동영상으로 함축적으로 표현하고 있어 사용자가 상기 아이콘이나 배너만을 보더라도 전달하고자 하는 내용을 직관적으로 파악할 수 있다. 따라서, 검색결과로써 이러한 아이콘이나 배너를 출력할 경우 사용자가 상기 아이콘이나 배너로부터 출력결과에 대한 내용을 직관적으로 파악할 수 있어 정보의 검색이 한결 용이해진다.

도 1은 본 발명의 이미지 정보를 이용한 검색방법에 의해 출력된 검색결과와 예이다. 검색결과는 이미지 정보와 텍스트가 함께 디스플레이되고 있으며, 이미지 정보는 검색결과에 해당하는 웹사이트의 홈페이지를 축소하여 디스플레이하고 있다. 이미지 정보와 함께 간단한 텍스트를 같이 부가함으로써 이미지 정보만으로 전달하기 어려운 정보를 함께 전달하며, 해당 웹사이트의 운영자나 소유자에 대한 정보와 해당 웹사이트에서 제공하는 정보 대한 간략한 요약정보가 디스플레이된다.

사용자는 검색결과중에서 자신이 원하는 정보가 있을 경우 그 이미지 정보나 텍스트 정보를 클릭하면 해당하는 웹사이트로 접속된다.

발명의 효과

본 발명의 이미지 정보를 이용한 검색방법을 이용할 경우, 단순한 텍스트가 아닌 이미지 정보를 출력함으로써 시각적 효과에 의해 검색결과를 보다 신속하고 직관적으로 파악할 수 있어 검색이 용이한 장점이 있다.

(57) 청구의 범위

청구항 1

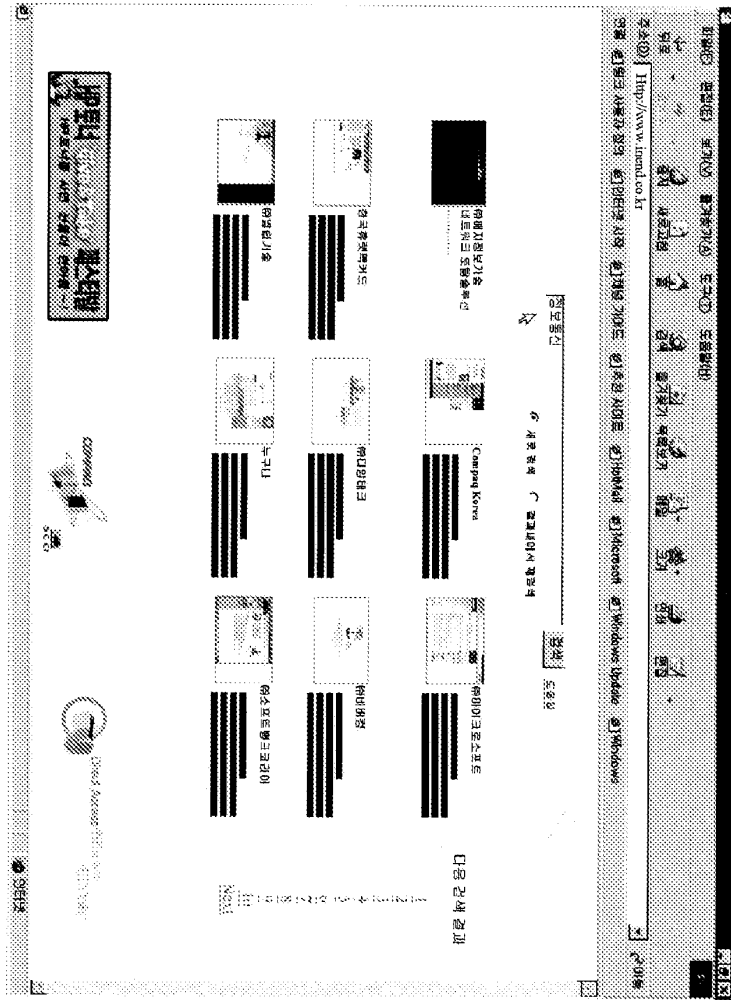
인터넷상에서 정보를 검색하고자 하는 사용자가 검색엔진 사이트에 접속하고;
 상기 사용자가 검색하고자 하는 검색어를 입력하고;
 검색엔진 서버에서 상기 검색어에 해당하는 검색결과를 찾아 해당 이미지 정보를 출력하고; 그리고,
 사용자는 출력된 이미지 정보중의 어느 하나를 클릭하여 해당 웹페이지로 접속하는 단계;
 로 구성되는 것을 특징으로 하는 이미지 정보를 이용한 검색방법.

청구항 2

제1항에서, 상기 이미지 정보는 웹사이트의 홈페이지 화면, 특정 웹페이지 또는 그래픽 또는 동영상을 이용한 아이콘 또는 배너 중의 어느 하나인 것을 특징으로 하는 이미지 정보를 이용한 검색방법.

도면

2/21



Electronic Acknowledgement Receipt

EFS ID:	6665849
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Matthew H. Grady
Filer Authorized By:	
Attorney Docket Number:	A2029-700111
Receipt Date:	18-DEC-2009
Filing Date:	10-JUL-2008
Time Stamp:	12:12:05
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	A2029-700111_IDS_letter.pdf	34966 <small>0a56945167188191680beb86860c735590d93670</small>	no	3

Warnings:

Information:

2	Information Disclosure Statement (IDS) Filed (SB/08)	A2029-700111_SB08.pdf	640104 5e796783bbd080ab21acff9de07963f79e9273f3	no	7
Warnings:					
Information:					
3	Foreign Reference	EP_0588210.pdf	16182669 b6b83027b347162ab6f7d1ebbe4f4db65071790a	no	16
Warnings:					
Information:					
4	Foreign Reference	KR_10_2000_0036647.pdf	3021280 83b5d33e74d76c5dc053e38060bcdcb8a9a68c4a	no	4
Warnings:					
Information:					
5	NPL Documents	One_Laptop_Per_Child.pdf	2186514 71a90e3be6c4236c41bea3ce7cd7c4f01fa8211a	no	4
Warnings:					
Information:					
6	NPL Documents	12416479IDS.pdf	11307668 aa3ed82cb8ac3ecb49325b9b4aef7540252a98a2	no	182
Warnings:					
Information:					
7	NPL Documents	12611282IDS.pdf	5148600 25168e367fe502c0ff304b649eb6107c86f6bada	no	107
Warnings:					
Information:					
Total Files Size (in bytes):				38521801	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yves Behar
Serial No: 12/170,951
Confirmation No: 2004
Filed: July 10, 2008
For: PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS

Examiner: Not Yet Assigned
Art Unit: 2115

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being electronically filed in accordance with §1.6(a)(4) on the 18th day of December, 2009.

/Matthew H. Grady/
Matthew H. Grady, Reg. No. 52,957

Commissioner for Patents

INFORMATION DISCLOSURE STATEMENT FILED PURSUANT TO THE DUTY OF DISCLOSURE UNDER 37 CFR §§1.56, 1.97 AND 1.98

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicant requests consideration of this Information Disclosure Statement.

PART I: Information Cited

The Applicant hereby makes of record in the above-identified application the information listed on the concurrently filed form PTO/SB/08a.

The order of presentation of the references should not be construed as an indication of the importance of the references.

The Applicant hereby makes the following additional information of record in the above-identified application.

The applicant would like to bring to the Examiner's attention the following co-pending applications that may contain subject matter related to this application, the published applications are cited on the form PTO/SB/08a, and a copy of the unpublished applications are enclosed:

<u>Serial No.</u>	<u>Filing Date</u>	<u>Inventor(s)</u>	<u>Publication No.</u>
12/416,496	April 1, 2009	Yves Behar	US 2009/0303676 A1
12/416,503	April 1, 2009	Yves Behar	US 2009/0300511 A1

12/416,479	April 1, 2009	Yves Behar	N/A
12/611,282	November 3, 2009	Robert Pennington	N/A

The applicant would like to bring to the Examiner's attention the following other information, whose relevance is discussed in Part II below:

PART II: Explanation of Non-English Language References and Remarks Concerning Other Information Cited

The following is a concise explanation of the relevance of each non-English language reference listed on the concurrently filed form PTO/SB/08a:

For the relevance of the listed non-English language reference KR 10-2000-0036647 A published July 05, 2000, the reference was cited in the International Search Report from a commonly owned PCT application PCT/US09/39117, wherein this document was placed in category "A," meaning that, in the opinion of the International Searching Authority, it relates to the general state of the art disclosed in PCT/US09/39117 and is not considered to be of particular relevance. An English language version of the Abstract has been provided with KR 10-2000-0036647 A.

The following are remarks concerning the other information cited:

PART III: Remarks

Documents cited anywhere in the Information Disclosure Statement, other than U.S. Patents and U.S. Patent Application Publications listed on a Form PTO/SB/08a, are enclosed unless otherwise indicated. It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. Any concurrently filed form PTO/SB/08a be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;
3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

Respectfully submitted,

Yves Behar, Applicant

By: Matthew H. Grady/
Matthew H. Grady, Reg. No. 52,957
LANDO & ANASTASI, LLP
Riverfront Office Park
One Main Street
Cambridge, Massachusetts 02142
Tel. (617) 395-7000



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 4 columns: APPLICATION NUMBER (12/170,951), FILING OR 371(C) DATE (07/10/2008), FIRST NAMED APPLICANT (Yves Behar), ATTY. DOCKET NO./TITLE (A2029-700111)

CONFIRMATION NO. 2004

PUBLICATION NOTICE

37462
LANDO & ANASTASI, LLP
ONE MAIN STREET, SUITE 1100
CAMBRIDGE, MA 02142



Title:PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS

Publication No.US-2009-0244012-A1

Publication Date:10/01/2009

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 8 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY. DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 12/170,951, 07/10/2008, 2115, 1220, A2029-700111, 17, 3

CONFIRMATION NO. 2004

UPDATED FILING RECEIPT



37462
LOWRIE, LANDO & ANASTASI, LLP
ONE MAIN STREET, SUITE 1100
CAMBRIDGE, MA 02142

Date Mailed: 11/19/2008

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Applicant(s)

Yves Behar, Oakland, CA;
Joshua Morenstein, San Francisco, CA;
Christopher Hibmacronan, Oakland, CA;
Naoya Edahiro, San Francisco, CA;
Matthew David Day, San Francisco, CA;

Power of Attorney: The patent practitioners associated with Customer Number 37462

Domestic Priority data as claimed by applicant

This appln claims benefit of 61/041,365 04/01/2008

Foreign Applications

If Required, Foreign Filing License Granted: 07/23/2008

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 12/170,951

Projected Publication Date: 10/01/2009

Non-Publication Request: No

Early Publication Request: No

Title

PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS

Preliminary Class

713

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER**Title 35, United States Code, Section 184****Title 37, Code of Federal Regulations, 5.11 & 5.15****GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as

set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

Docket No.: A2029-700111

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yves Behar et al.
Serial No: 12/170,951
Confirmation No: 2004
Filed: July 10, 2008
For: PORTABLE COMPUTER WITH MULTIPLE DISPLAY
CONFIGURATIONS
Examiner: Not Yet Assigned
Art Unit: 2115

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being electronically filed in accordance with § 1.6(a)(4), on the 10th day of November, 2008

/Sarah M. Gates/
Sarah M. Gates

Commissioner for Patents
Alexandria, VA 22313-1450

PRELIMINARY AMENDMENT

Sir:

Responsive to the Notice to File Missing Parts mailed July 29, 2008, please amend the above-identified application as follows, please amend the above-identified application as follows. Changes to the Specification are shown by ~~strike through~~ (for deleted matter) and underlining (for added matter).

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Drawings begin on page 3 of this paper and include attached replacement sheets.

Remarks begin on page 4 of this paper.

An **Appendix** including replacement drawing figures is attached.

Amendments to the Specification

Please replace the paragraph beginning at page 6, line 29 with the following:

FIG. 9 is a cross-sectional diagram of a portion of the hinge assembly of FIG. 8, taken along line ~~A-A~~ 9-9 in FIG. 8;

Amendments to the Drawings

Please replace Figures 1-27 contained in drawing sheets 1-25 with the attached replacement figures contained in drawing sheets 1-25. Figure 8 has been amended as shown on the attached annotated sheet. The replacement Figures contain no new matter.

REMARKS

Prior to examination on the merits, please enter and consider the amendments to the specification and drawings. The replacement drawings are in compliance with 37 C.F.R. 1.84 and 37 C.F.R. 1.121(d). The specification is amended as shown on page 2 of this paper to for consistency with the replacement drawings. No new matter has been added.

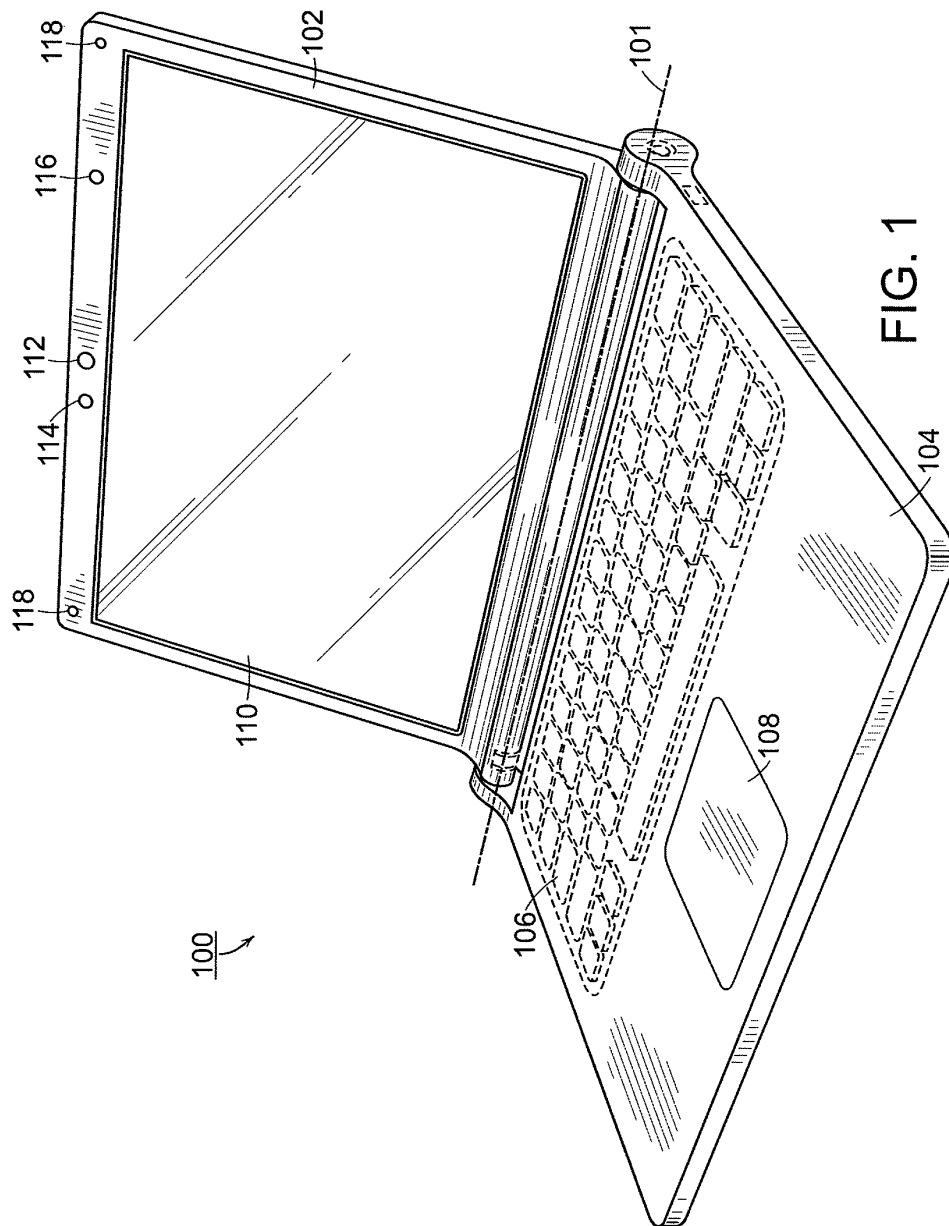
This application should now be in condition for allowance; a notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, please charge any such fee to Deposit Account No. 50/2762; ref. no. A2029-700111.

Respectfully submitted,
Yves Behar et al., *Applicant*

By: /Sarah M. Gates/
Sarah M. Gates, Reg. No. 60,661
LOWRIE, LANDO & ANASTASI, LLP
One Main Street
Cambridge, Massachusetts 02142
United States of America
Telephone: 617-395-7000
Facsimile: 617-395-7070

Docket No.: A2029-700111



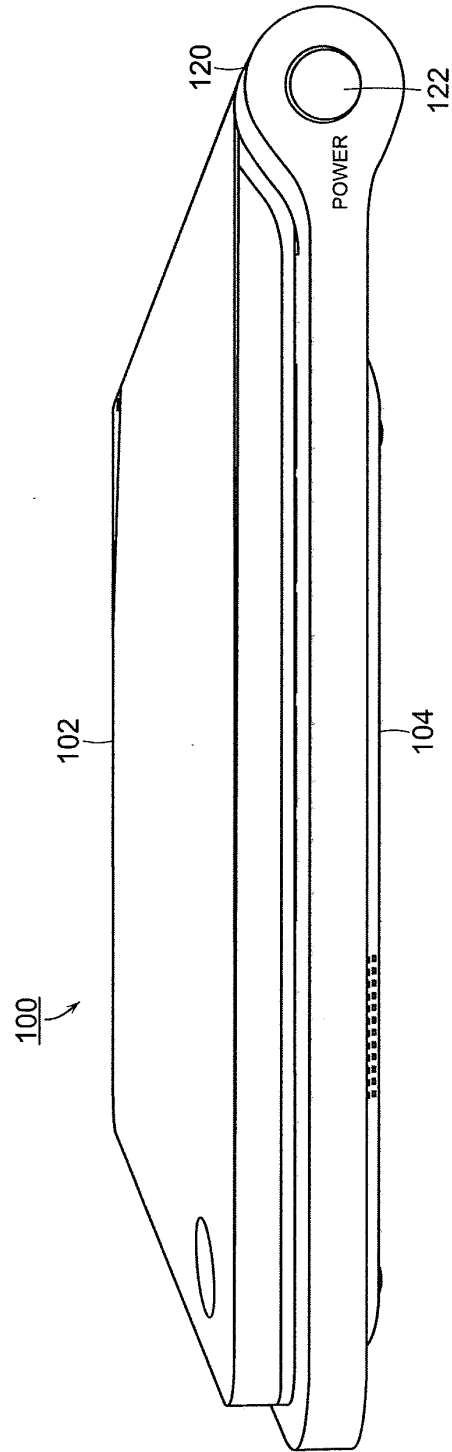


FIG. 2

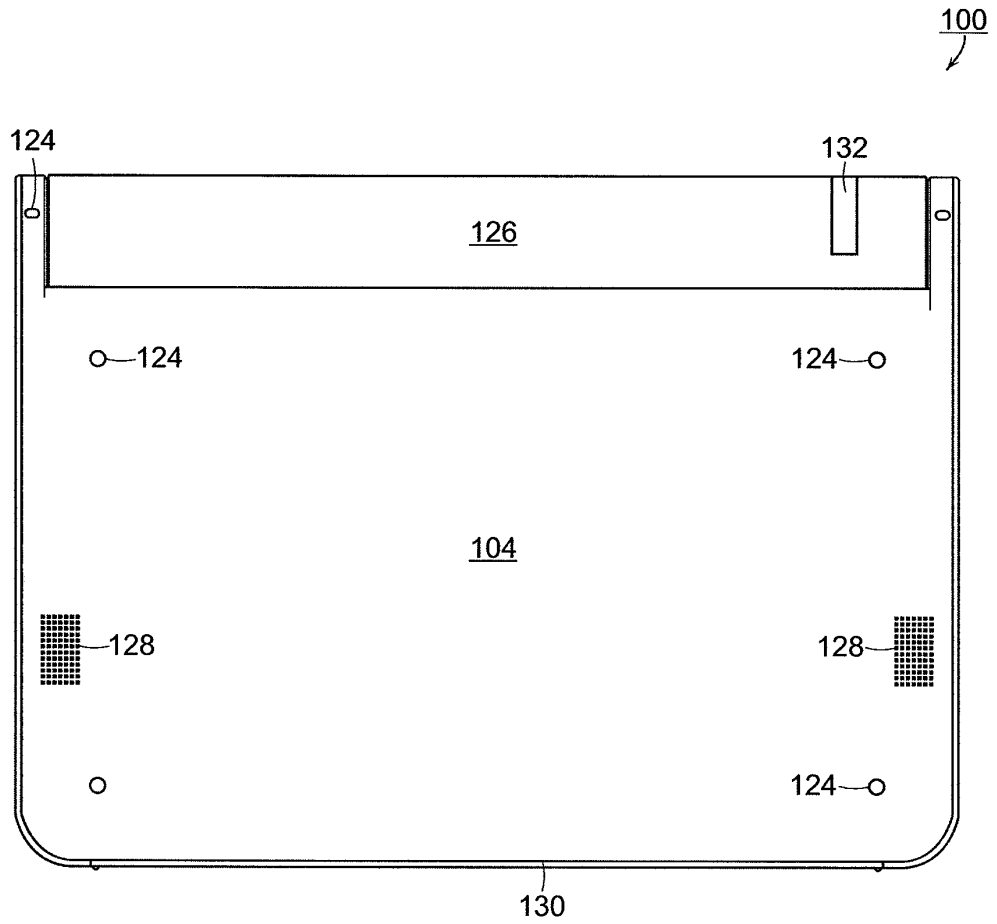


FIG. 3

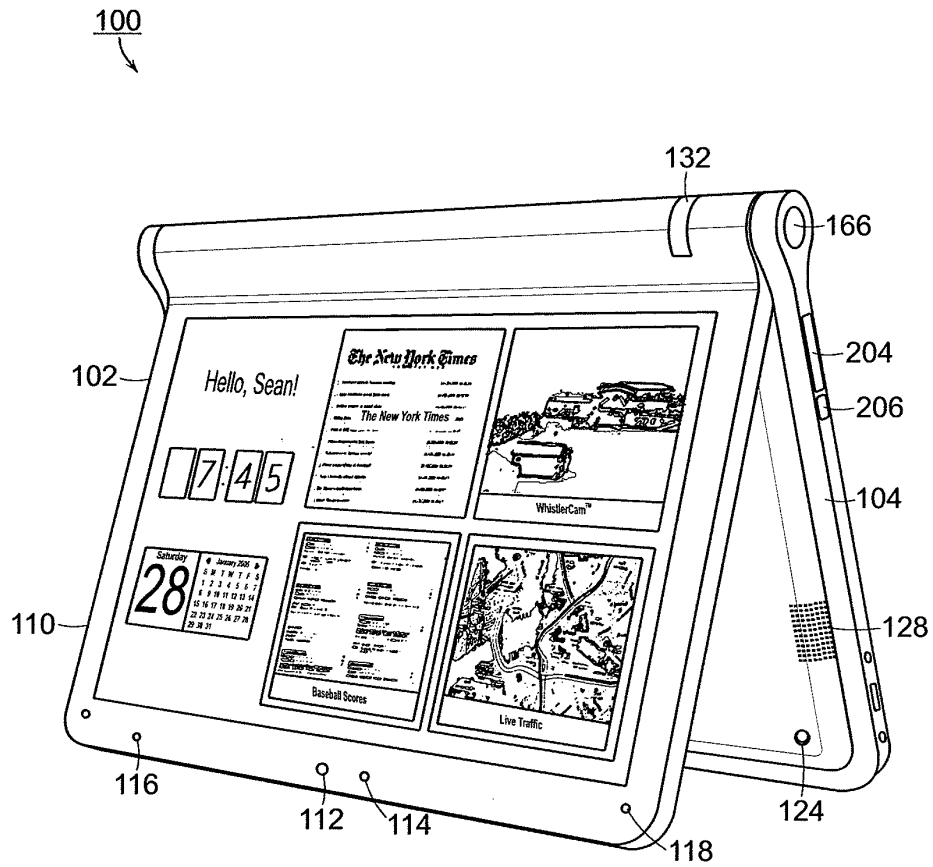


FIG. 4

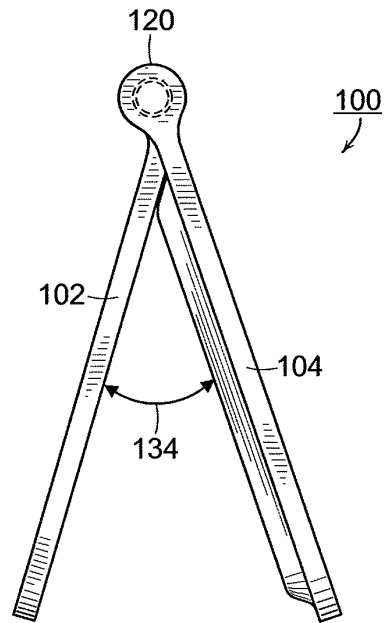


FIG. 5

6/25

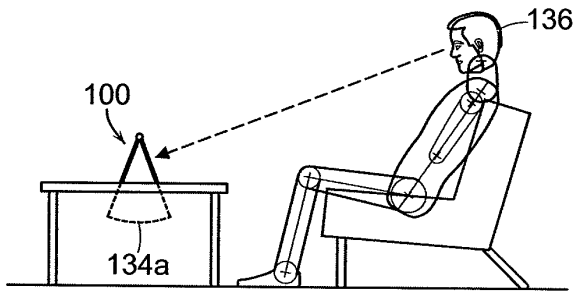


FIG. 6A

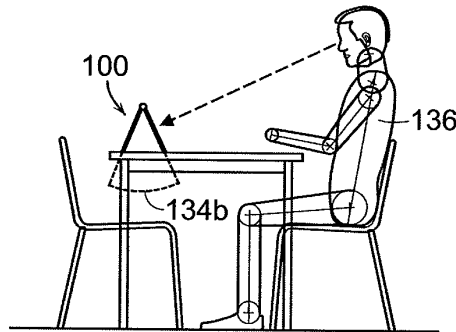


FIG. 6B

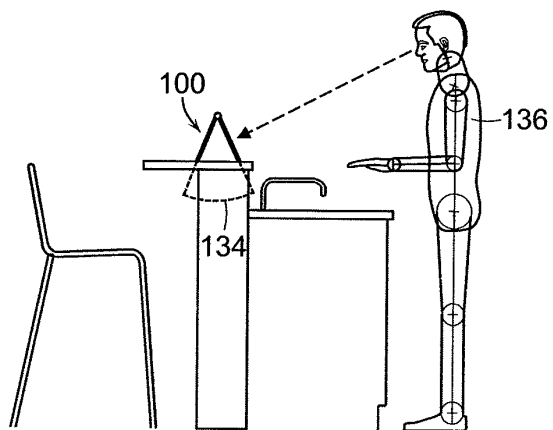


FIG. 6C

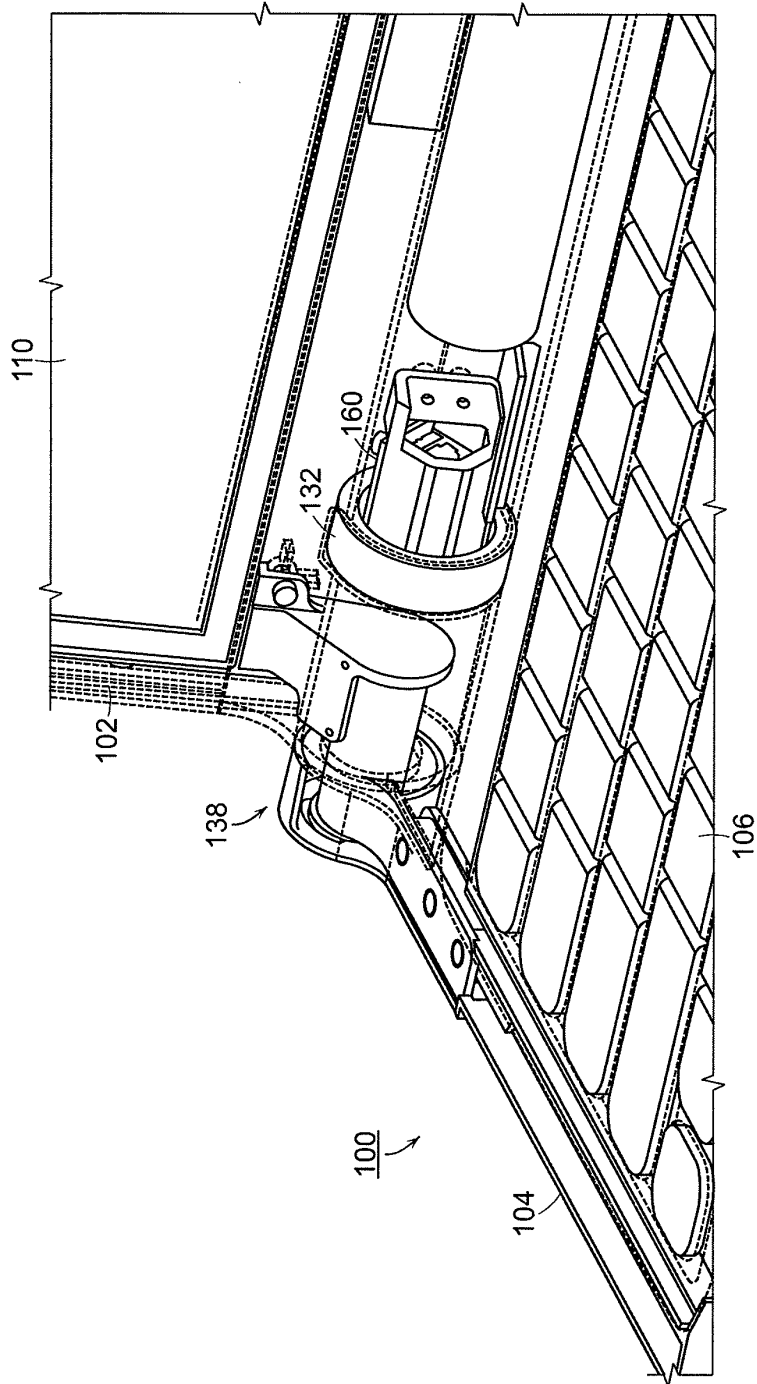


FIG. 7A

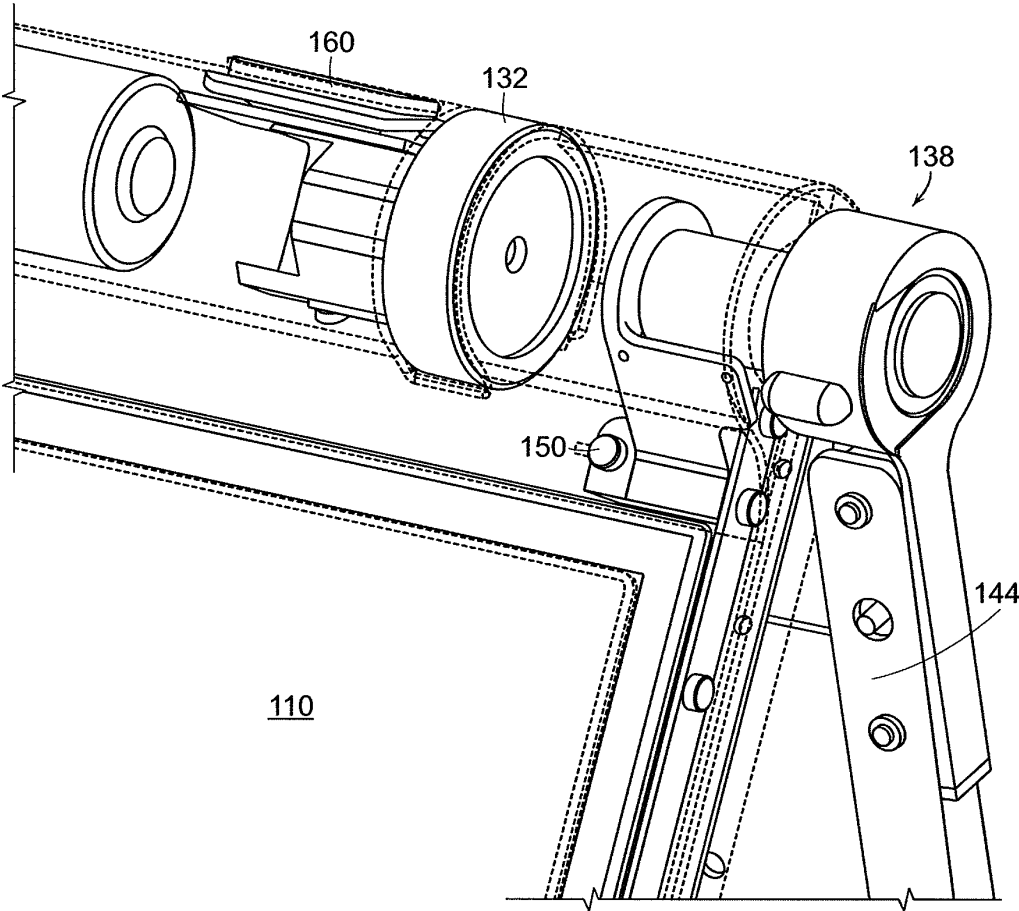


FIG. 7B

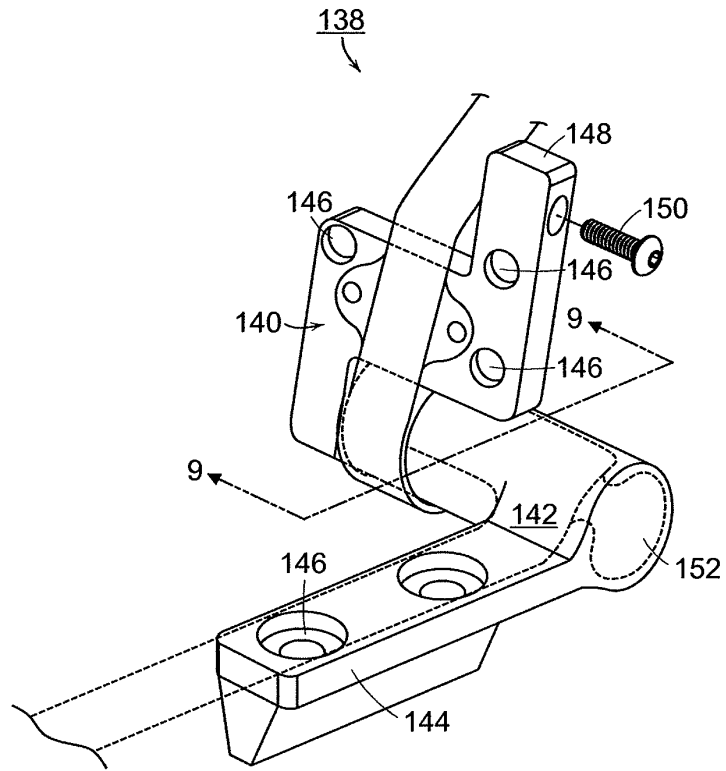


FIG. 8

10/25

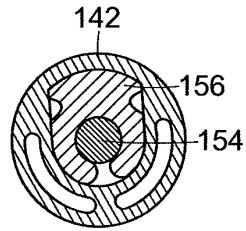


FIG. 9

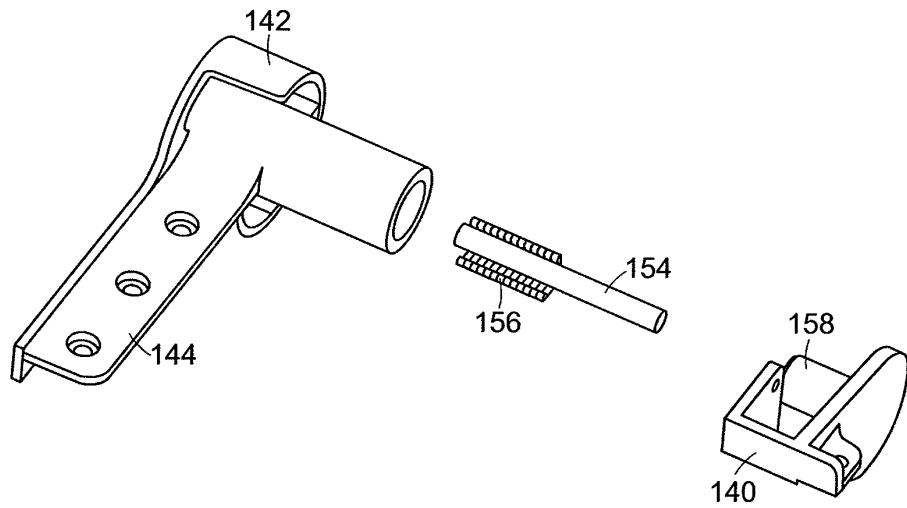


FIG. 10

11/25

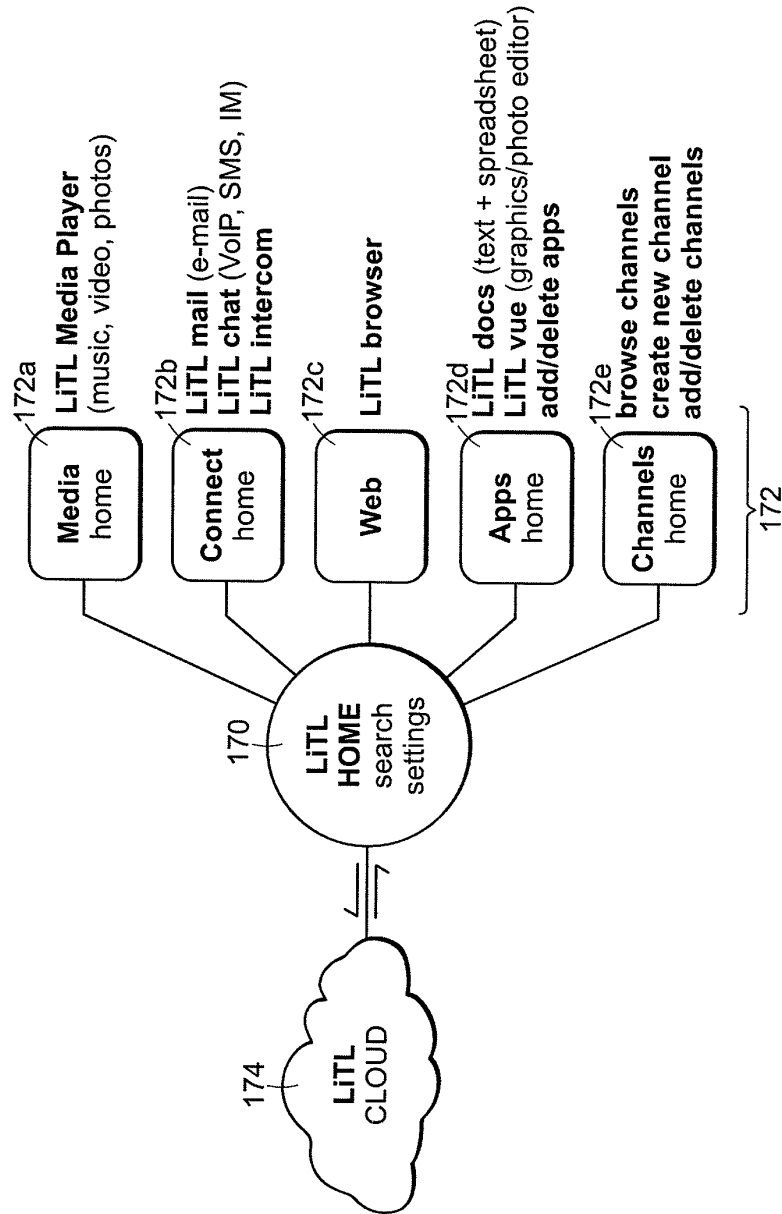


FIG. 11

12/25

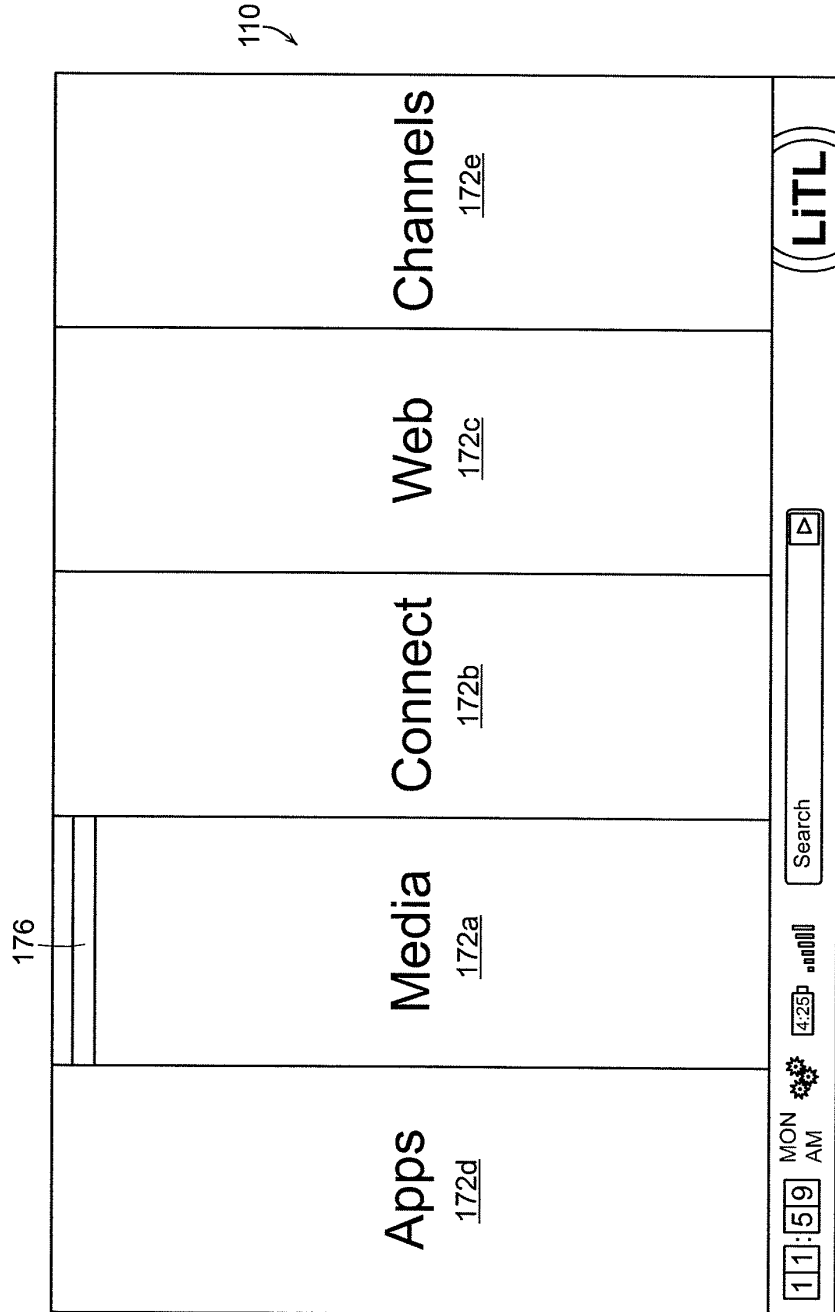


FIG. 12

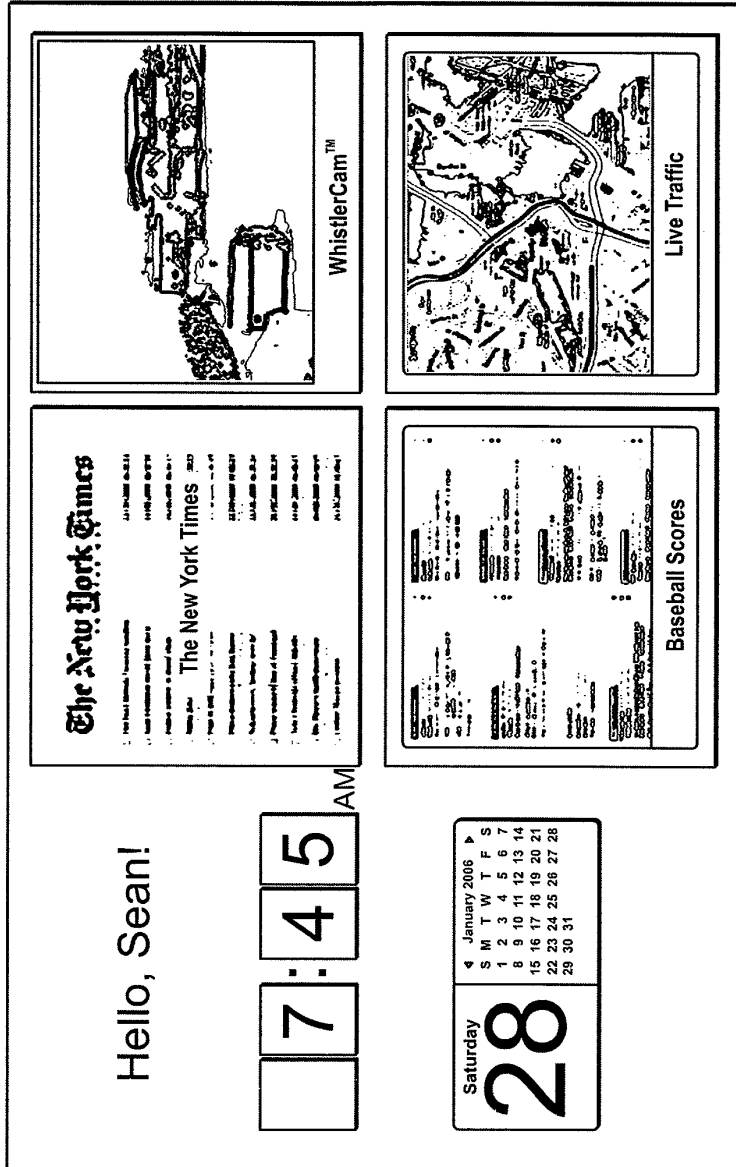


FIG. 13

110

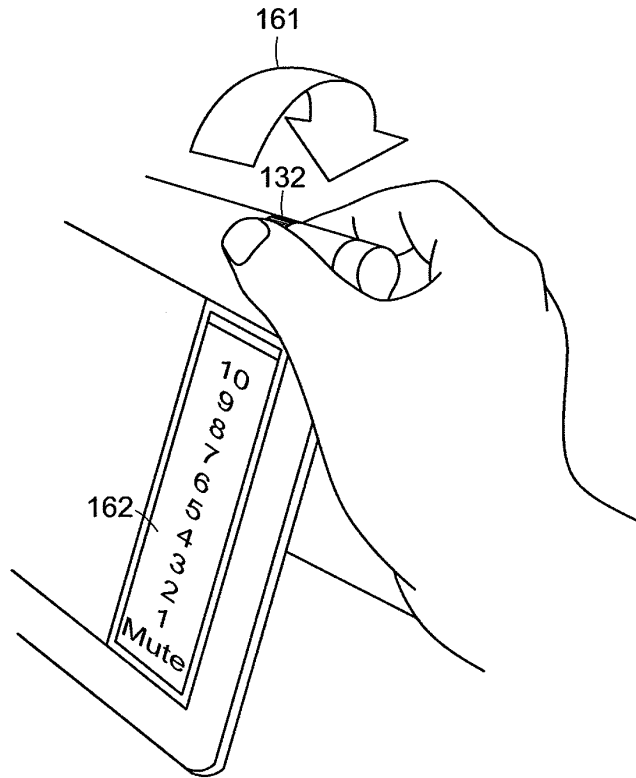


FIG. 14



FIG. 15

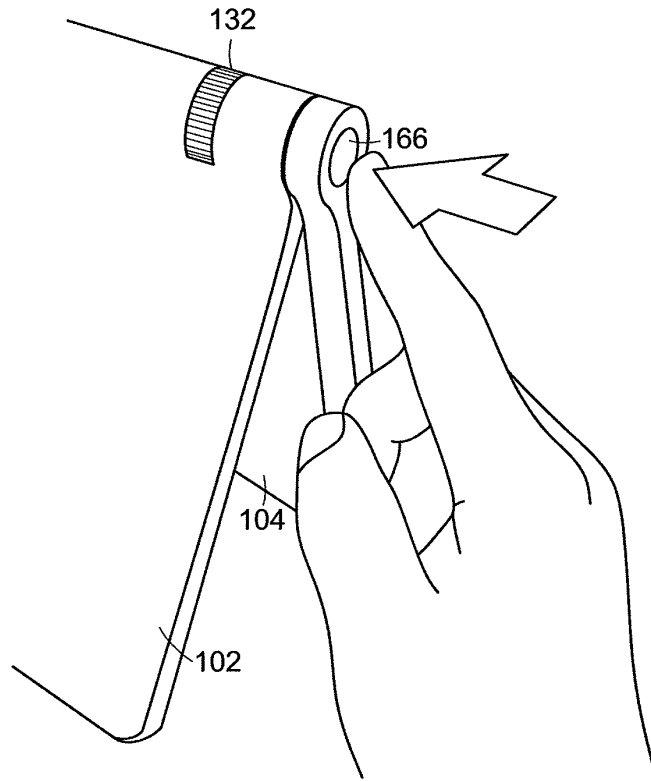


FIG. 16

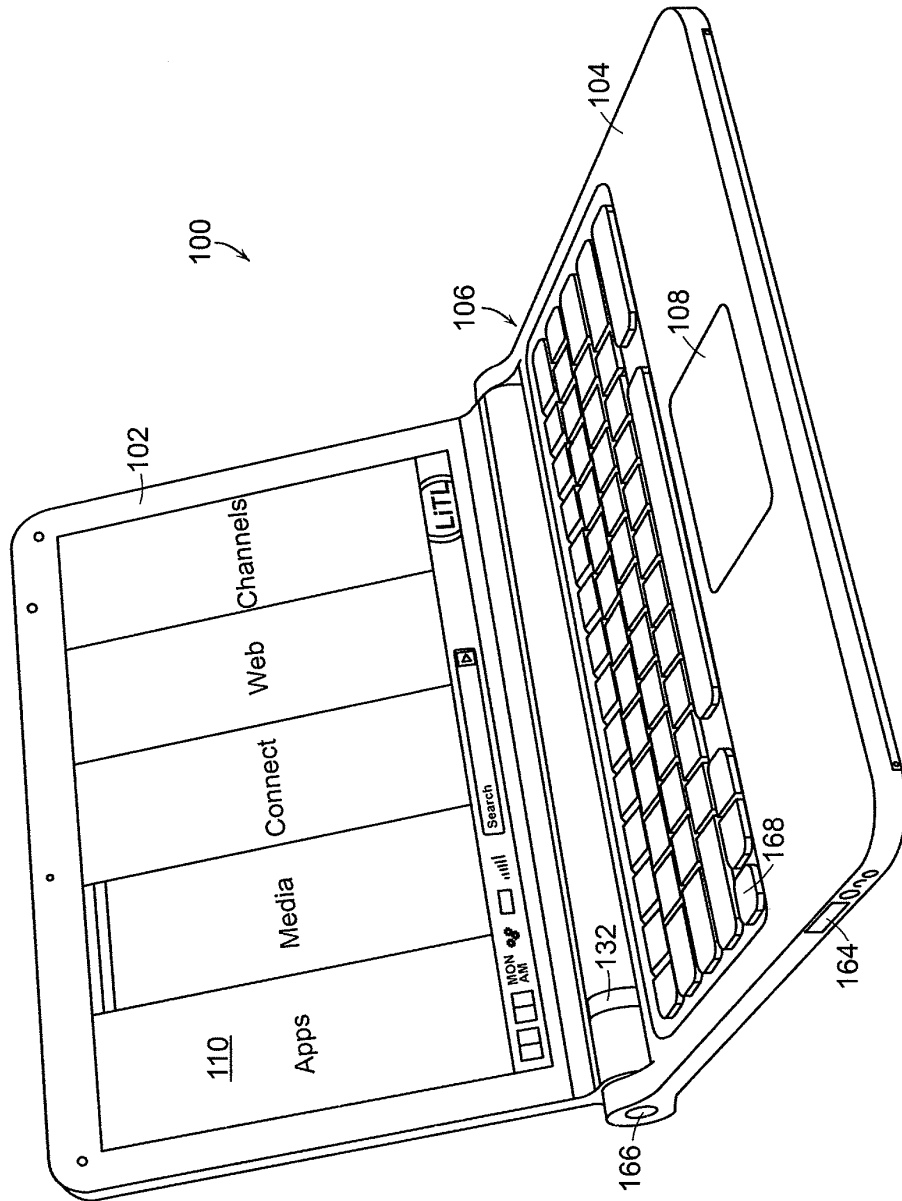


FIG. 17

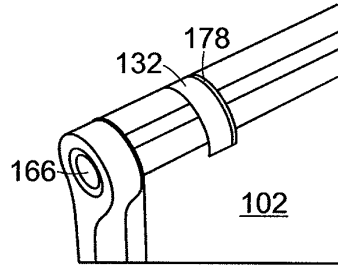


FIG. 18

19/25

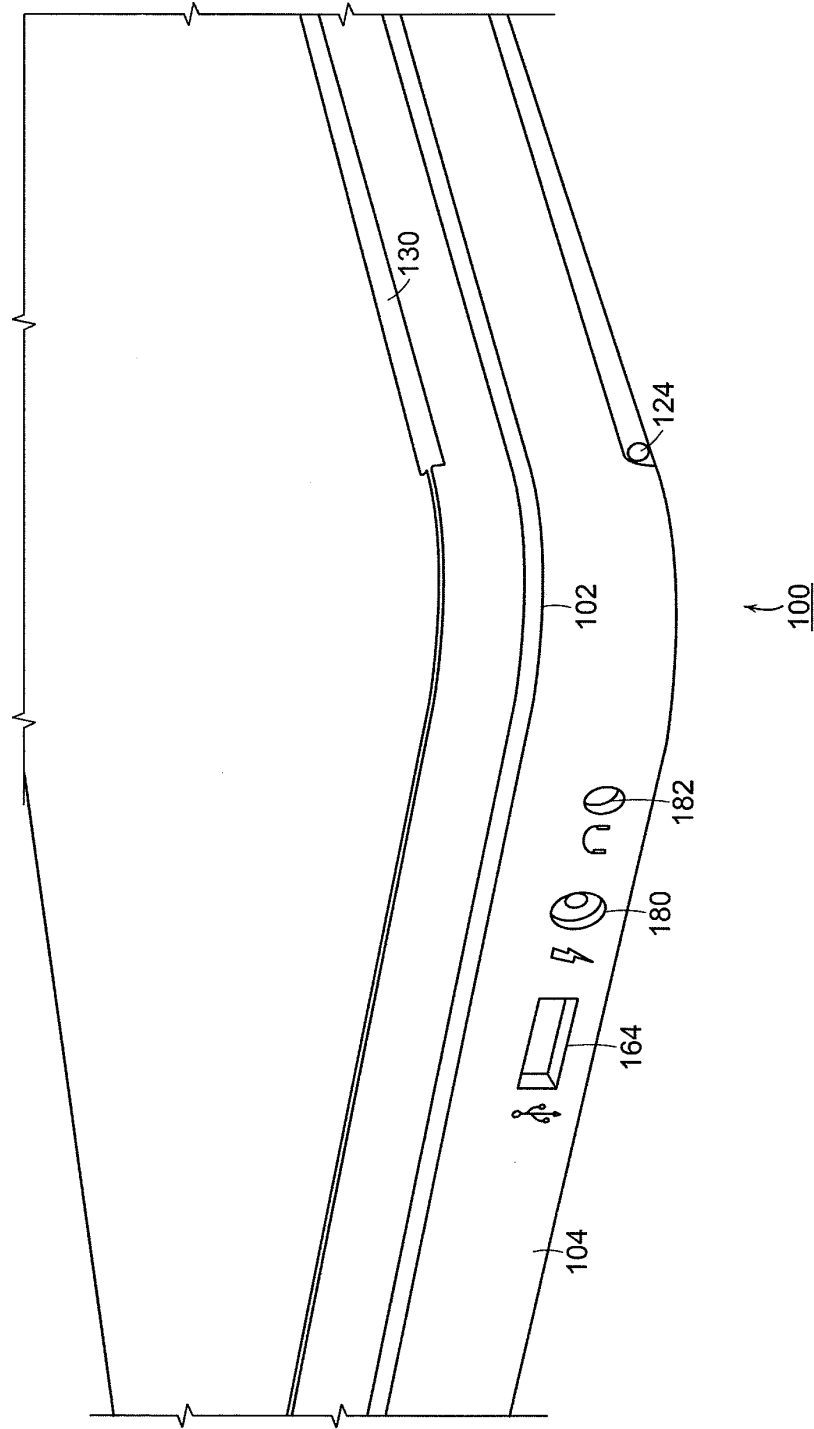


FIG. 19

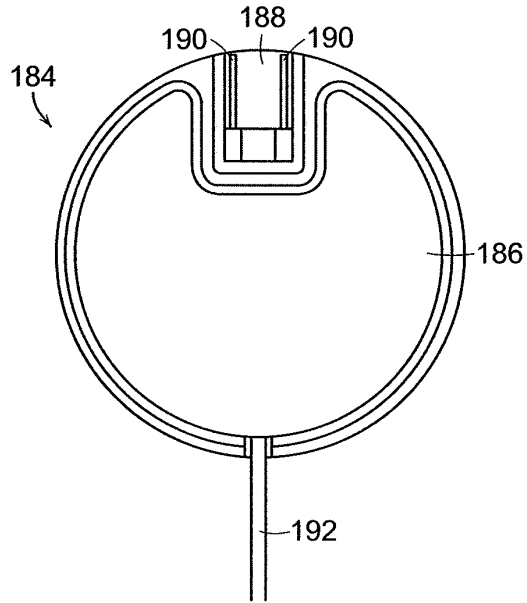


FIG. 20

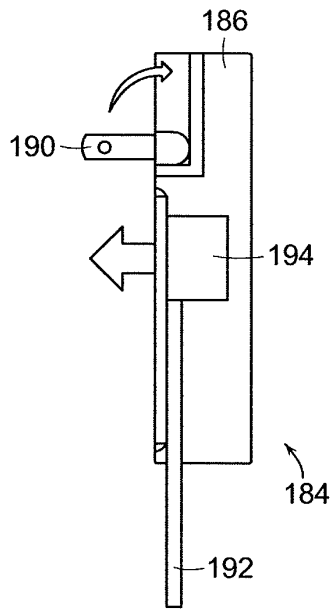


FIG. 21

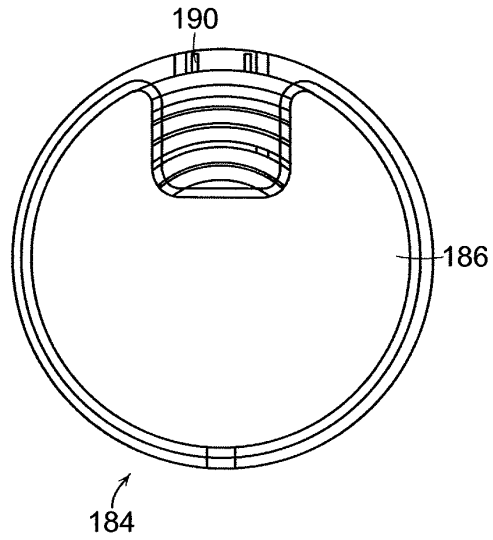


FIG. 22A

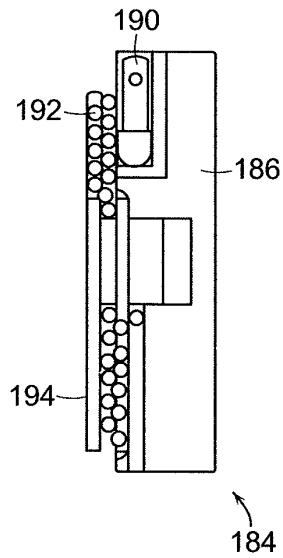


FIG. 22B

22/25

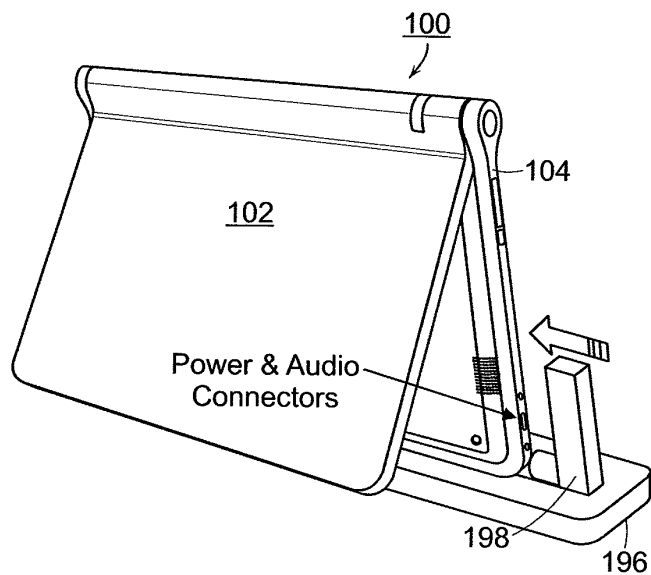


FIG. 23

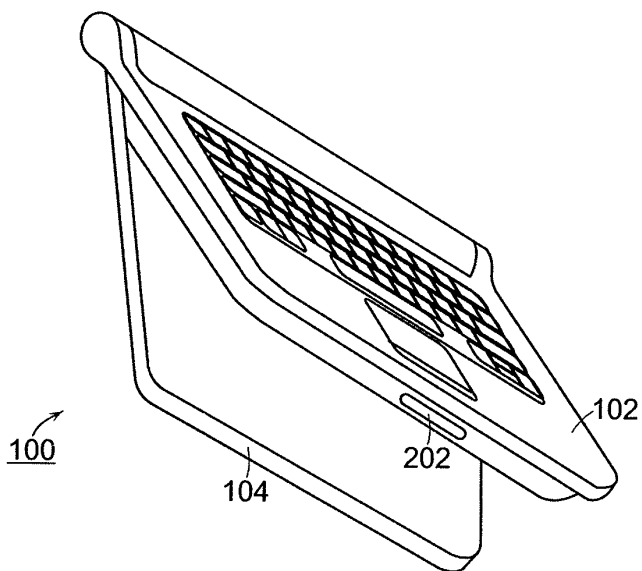


FIG. 24

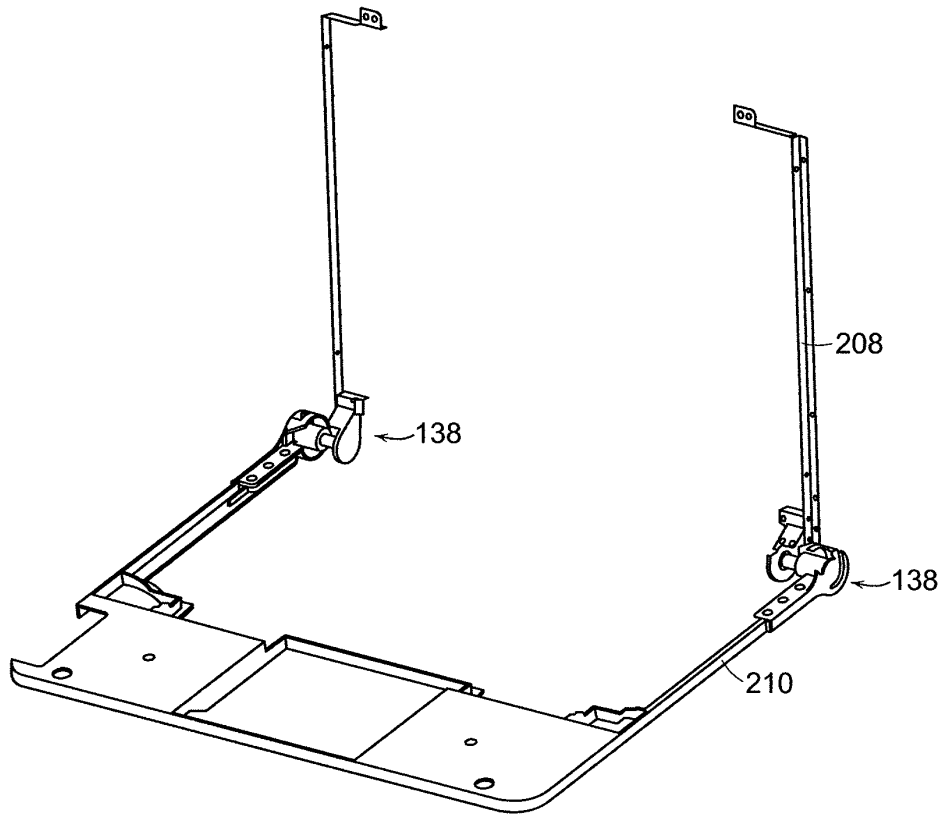


FIG. 25

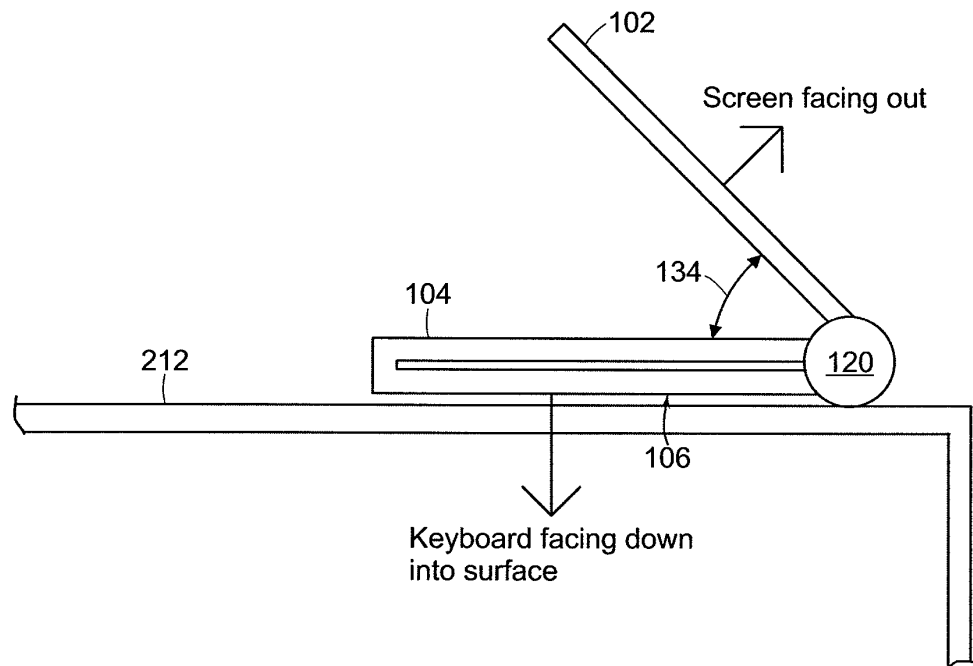


FIG. 26

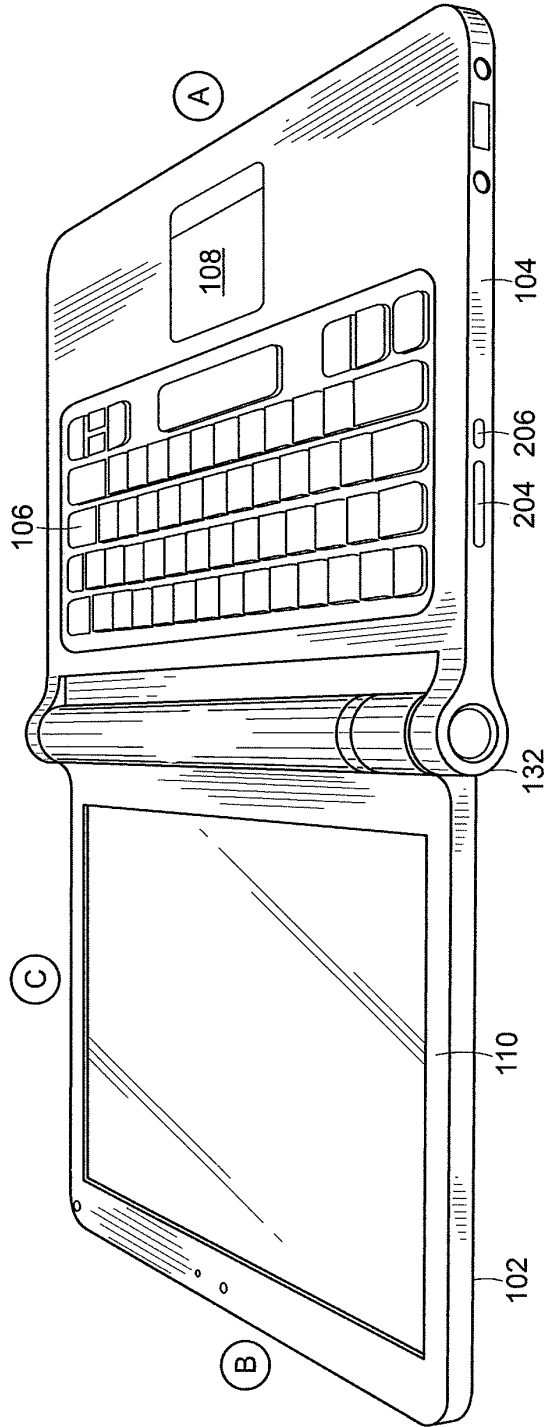


FIG. 27

DECLARATION FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the application entitled

PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
the specification of which was filed on July 10, 2008, as Application No. 12/170,951, bearing attorney docket No. A2029-700111.

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims.

I acknowledge the duty to disclose information which is known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below:

61/041,365 April 1, 2008
(Application Number) (filing date)

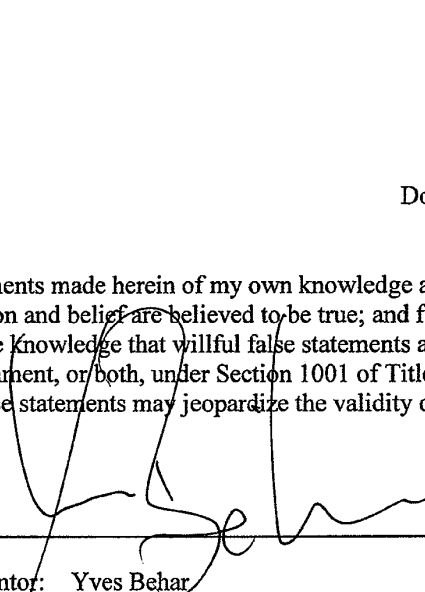
I hereby appoint the following Registered Practitioners to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

All Registered Practitioners of Lowrie, Lando & Anastasi, LLP associated with Customer Number 37462.

Address all telephone calls to John L. Welch at telephone no. (617) 395-7000.

Address all correspondence to: the Correspondence Address associated with Customer Number 37462.

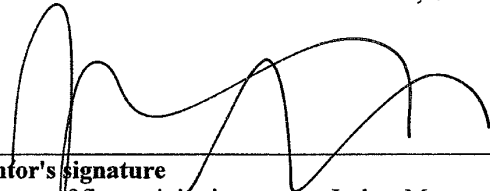
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



Inventor's signature

10-28-2008
Date


Full name of first or joint inventor: Yves Behar
Citizenship: Switzerland
Residence: 5741 Scarborough Drive
Oakland, CA 94611
Post Office Address: 5741 Scarborough Drive
Oakland, CA 94611



Inventor's signature

10/22/08
Date


Full name of first or joint inventor: Joshua Morenstein
Citizenship: US
Residence: 124 Downey Street
San Francisco, CA 94117
Post Office Address: 124 Downey Street
San Francisco, CA 94117



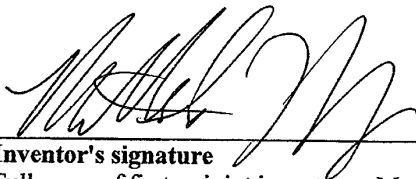
Inventor's signature

10/22/08
Date

Full name of first or joint inventor: Christopher Hibmacronan
Citizenship: US
Residence: 2429 Damuth Street
Oakland, CA 94602
Post Office Address: 2429 Damuth Street
Oakland, CA 94602



Inventor's signature **Date**
Full name of first or joint inventor: Naoya Edahiro
Citizenship: Japan
Residence: 375 Bartlett Street
San Francisco, CA 94110
Post Office Address: 375 Bartlett Street
San Francisco, CA 94110



Inventor's signature **Date**
Full name of first or joint inventor: Matthew David Day
Citizenship: US
Residence: 425 2nd Street #301
San Francisco, CA 94107
Post Office Address: 425 2nd Street #301
San Francisco, CA 94107

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yves Behar et al.
Serial No: 12/170,951
Confirmation No: 2004
Filed: July 10, 2008
For: PORTABLE COMPUTER WITH MULTIPLE DISPLAY
CONFIGURATIONS
Examiner: Not Yet Assigned
Art Unit: 2115

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being electronically filed in accordance with § 1.6(a)(4), on the 10th day of November, 2008

/Sarah M. Gates/
Sarah M. Gates

Commissioner for Patents
Alexandria, VA 22313-1450

PETITION FOR TWO MONTH EXTENSION OF TIME

Sir:

A two (2) month extension of time, to and including November 29, 2008, is requested for response to the Patent Office Communication of July 29, 2008.

The extension fee as set forth in 37 C.F.R. §1.17(a) is enclosed herewith.

Respectfully submitted,
Yves Behar et al., Applicant

/Sarah M. Gates/
Sarah M. Gates, Reg. No. 60,661
LOWRIE, LANDO & ANASTASI, LLP
Riverfront Office Park
One Main Street
Cambridge, Massachusetts 02142
Tel. (617) 395-7000

Electronic Patent Application Fee Transmittal

Application Number:	12170951			
Filing Date:	10-Jul-2008			
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS			
First Named Inventor/Applicant Name:	Yves Behar			
Filer:	Sarah May Gates/Jessica Correia			
Attorney Docket Number:	A2029-700111			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility application filing	1011	1	330	330
Utility Search Fee	1111	1	540	540
Utility Examination Fee	1311	1	220	220
Pages:				
Claims:				
Miscellaneous-Filing:				
Late filing fee for oath or declaration	1051	1	130	130
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 2 months with \$0 paid	1252	1	490	490
Miscellaneous:				
Total in USD (\$)				1710

Electronic Acknowledgement Receipt

EFS ID:	4260681
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Sarah May Gates
Filer Authorized By:	
Attorney Docket Number:	A2029-700111
Receipt Date:	10-NOV-2008
Filing Date:	10-JUL-2008
Time Stamp:	15:31:37
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$1710
RAM confirmation Number	1009
Deposit Account	502762
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		A2029_PA.pdf	31090 ae3570e866627984fdb64535ab4a5d8cd8a99c92	yes	4
Multipart Description/PDF files in .zip description					
	Document Description		Start	End	
	Preliminary Amendment		1	1	
	Specification		2	2	
	Drawings-other than black and white line drawings		3	3	
	Applicant Arguments/Remarks Made in an Amendment		4	4	
Warnings:					
Information:					
2	Drawings-only black and white line drawings	A2029_Replacementfigs.pdf	532782 ac8db1139b4659228c175418691027a285104f7e	no	25
Warnings:					
Information:					
3	Drawings-other than black and white line drawings	A2029_700111_Annotated_Sheet.pdf	325959 bfc65436782c0a74097250b3022ec9dc566e94d8	no	1
Warnings:					
Information:					
4	Oath or Declaration filed	A2029_Dec.pdf	111953 2fc6781b1fd9b5bd78d7940fd87909bd783eac	no	3
Warnings:					
Information:					
5	Extension of Time	A2029_2EOT.pdf	22127 e04017d99a40acc0f35eed5d59b71ee929708564	no	1
Warnings:					
Information:					
6	Fee Worksheet (PTO-06)	fee-info.pdf	38716 2d587bb1850e99dd88fe63e702daa1b512853428	no	2
Warnings:					
Information:					

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

9/25

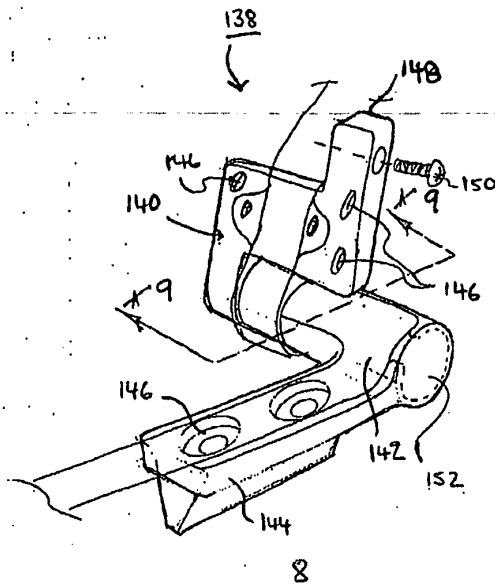


FIG. 8

SCORE Placeholder Sheet for IFW Content

Application Number: 12170951 Document Date: 11/10/2008 3:31:37 PM

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

- Drawings – Other than Black and White Line Drawings

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

To access the documents in the SCORE database, refer to instructions developed by SIRA.

At the time of document entry (noted above):

- Examiners may access SCORE content via the eDAN interface.
- Other USPTO employees can bookmark the current SCORE URL (<http://es/ScoreAccessWeb/>).
- External customers may access SCORE content via the Public and Private PAIR interfaces.

Form Revision Date: February 8, 2006

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 12/170,951		Filing Date 07/10/2008		<input type="checkbox"/> To be Mailed		
APPLICATION AS FILED – PART I					SMALL ENTITY <input type="checkbox"/>		OR		OTHER THAN SMALL ENTITY		
(Column 1)		(Column 2)									
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)				
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A			N/A					
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A			N/A					
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A			N/A					
TOTAL CLAIMS <small>(37 CFR 1.16(j))</small>	minus 20 =	*	X \$ =			X \$ =					
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =			X \$ =					
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).										
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>											
* If the difference in column 1 is less than zero, enter "0" in column 2.											
APPLICATION AS AMENDED – PART II					SMALL ENTITY		OR		OTHER THAN SMALL ENTITY		
(Column 1)		(Column 2)		(Column 3)							
AMENDMENT	11/10/2008	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)	
	Total <small>(37 CFR 1.16(o))</small>	* 17	Minus	** 20	= 0	X \$ =			X \$52=	0	
	Independent <small>(37 CFR 1.16(h))</small>	* 3	Minus	***3	= 0	X \$ =			X \$220=	0	
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>										
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>										
						TOTAL ADD'L FEE			TOTAL ADD'L FEE	0	
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)	
	Total <small>(37 CFR 1.16(o))</small>	*	Minus	**	=	X \$ =			X \$ =		
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	X \$ =			X \$ =		
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>										
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>										
						TOTAL ADD'L FEE			TOTAL ADD'L FEE		
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.											
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".											
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".											
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.											

Legal Instrument Examiner:
/ROSA HOLLAND/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
 If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yves Behar et al.
Serial No: 12/170,951
Confirmation No: 2004
Filed: July 10, 2008
For: PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
Examiner: Not Yet Assigned
Art Unit: 2115

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being electronically filed in accordance with §1.6(a)(4) on the 9th day of October 2008.

/Sarah M. Gates/
Sarah M. Gates

Commissioner for Patents

INFORMATION DISCLOSURE STATEMENT FILED PURSUANT TO THE DUTY OF DISCLOSURE UNDER 37 CFR §§1.56, 1.97 AND 1.98

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicant requests consideration of this Information Disclosure Statement.

PART I: Information Cited

The Applicant hereby makes of record in the above-identified application the information listed on the concurrently filed form PTO/SB/08a.

The order of presentation of the references should not be construed as an indication of the importance of the references.

The Applicant hereby makes the following additional information of record in the above-identified application.

The applicant would like to bring to the Examiner's attention the following co-pending applications that may contain subject matter related to this application:

<u>Serial No.</u>	<u>Filing Date</u>	<u>Inventor(s)</u>
12/170,939	July 10, 2008	Yves Behar et al.

PART II: Remarks

Documents cited anywhere in the Information Disclosure Statement, other than U.S. Patents and U.S. Patent Application Publications listed on a Form PTO/SB/08a, are enclosed unless otherwise indicated. It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. Any concurrently filed form PTO/SB/08a be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;
3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

Respectfully submitted,

Yves Behar et al., *Applicant*

By: _____/Sarah M. Gates/
Sarah M. Gates, Reg. No. 60,661
LOWRIE, LANDO & ANASTASI, LLP
Riverfront Office Park
One Main Street
Cambridge, Massachusetts 02142
Tel. (617) 395-7000

Electronic Acknowledgement Receipt

EFS ID:	4087240
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Sarah May Gates
Filer Authorized By:	
Attorney Docket Number:	A2029-700111
Receipt Date:	09-OCT-2008
Filing Date:	10-JUL-2008
Time Stamp:	17:18:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Filed (SB/08)	A2029_700111_IDS.pdf	608269 <small>236a5e7353fe6274f3c85bb75b5cd68f072c6354</small>	no	4

Warnings:

Information:

2	NPL Documents	A2029_Copending_Ap.pdf	112945 b19c781cc4bfbb117e766ac6d3d190f0f3c e26f	no	31
Warnings:					
Information:					
3	Information Disclosure Statement Letter	908882_A2029_EFSIDS.pdf	28247 d35d5dc420942b3a9917aa27a36b20e830 33fe33	no	2
Warnings:					
Information:					
Total Files Size (in bytes):				749461	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	
	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit	2115		
	Examiner Name	Not Yet Assigned		
	Attorney Docket Number	A2029-700111		

U.S.PATENTS							Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	
	1	3468576		1969-09-23	G. E. Beyer et al.		
	2	5825352		1998-10-20	Stephen J. Bisset et al.		
	3	5841631		1998-11-24	Seong S. Shin et al.		
	4	6323846	B1	2001-11-27	Wayne Westerman et al		
	5	6659516	B2	2003-12-09	Shyune-Yang Wang et al.		
	6	7250207	B1	2007-07-31	Gary W. Heal et al.		
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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	
	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit	2115		
	Examiner Name	Not Yet Assigned		
	Attorney Docket Number	A2029-700111		

	1	20070138806	A1	2007-06-21	Chris Ligtenberg et al.	
	2	20080042987	A1	2008-02-21	Wayne Westerman et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² i	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							<input type="checkbox"/>

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1		<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951
	Filing Date		2008-07-10
	First Named Inventor	Yves Behar	
	Art Unit	2115	
	Examiner Name	Not Yet Assigned	
	Attorney Docket Number	A2029-700111	

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

- See attached certification statement.
- Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.
- None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Sarah M. Gates/	Date (YYYY-MM-DD)	2008-10-09
Name/Print	Sarah M. Gates	Registration Number	60661

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



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United States Patent and Trademark Office
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www.uspto.gov

Table with 4 columns: APPLICATION NUMBER (12/170,951), FILING OR 371(C) DATE (07/10/2008), FIRST NAMED APPLICANT (Yves Behar), ATTY. DOCKET NO./TITLE (A2029-700111)

CONFIRMATION NO. 2004

FORMALITIES LETTER

37462
LOWRIE, LANDO & ANASTASI, LLP
ONE MAIN STREET, SUITE 1100
CAMBRIDGE, MA 02142



Date Mailed: 07/29/2008

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given TWO MONTHS from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment.

- The statutory basic filing fee is missing. Applicant must submit \$310 to complete the basic filing fee for a non-small entity.
The oath or declaration is missing. A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121(d) are required. The drawings submitted are not acceptable because:
The drawings must be reasonably free from erasures and must be free from alterations, overwriting, interlineations, folds, and copy marks.
The drawings submitted to the Office are not electronically reproducible because portions of figures 2,4, 7A, 7B, 12,13, 17-19, 27 are missing and/or blurry.
The drawings are not in compliance with 37 CFR 1.84 because figures 2, 4, 7A, 7B, 11-13, 17, 19, 25 contain figure or view numbers that have incorrect orientation.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of **\$130** for a non-small entity, must be submitted with the missing items identified in this notice.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **\$1160** for a non-small entity

- **\$310** Statutory basic filing fee.
- **\$130** Surcharge.
- The application search fee has not been paid. Applicant must submit **\$510** to complete the search fee.
- The application examination fee has not been paid. Applicant must submit **\$210** to complete the examination fee for a non-small entity.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.

<https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

/ygizaw/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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P.O. Box 1450
Alexandria, Virginia 22313-1450
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Table with 8 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY. DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 12/170,951, 07/10/2008, 2115, 0.00, A2029-700111, 17, 3

CONFIRMATION NO. 2004

FILING RECEIPT



37462
LOWRIE, LANDO & ANASTASI, LLP
ONE MAIN STREET, SUITE 1100
CAMBRIDGE, MA 02142

Date Mailed: 07/29/2008

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Applicant(s)

Yves Behar, Oakland, CA;
Joshua Morenstein, San Francisco, CA;
Christopher Hibmacronan, Oakland, CA;
Naoya Edahiro, San Francisco, CA;
Matthew David Day, San Francisco, CA;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This appln claims benefit of 61/041,365 04/01/2008

Foreign Applications

If Required, Foreign Filing License Granted: 07/23/2008

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 12/170,951

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

Title

PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS

Preliminary Class

713

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER**Title 35, United States Code, Section 184****Title 37, Code of Federal Regulations, 5.11 & 5.15****GRANTED**

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NOT GRANTED

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PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS

RELATED APPLICATIONS

This application claims priority under 35 U.S.C. §119(e) to U.S. Provisional Patent
5 Application No. 61/041,365 filed April 1, 2008, entitled “PORTABLE COMPUTER WITH
MULTIPLE DISPLAY CONFIGURATIONS,” which is incorporated herein by reference in
its entirety.

BACKGROUND

10 Field of Invention

The present invention relates generally to portable computers and, more particularly,
to a portable computer that is configurable into different functional and positional modes.

Discussion of Related Art

15 Portable computers, such as laptop computers or notebook computers, have become
increasingly popular and ubiquitous in the home and workplace. Conventional portable
computers most commonly have a “clam-shell” configuration, with a base including the
keyboard, various ports, connectors and/or inputs (e.g., for power and connecting peripheral
devices), and the majority of the electrical components (e.g., the central processing unit and
20 memory), and a display component pivotably coupled to the base by a hinge. The display
component is movable about the hinge between a closed position, with the display screen
positioned adjacent the keyboard, and an open position, with the display screen inclined at a
desired viewing angle.

Some portable computers are able to accept user inputs via a touch screen in addition
25 to via conventional tools, such as a keyboard or mouse. The use of a touch screen to input
data is sometimes referred to as operating in “tablet mode” because the computer is being
used in a manner similar to a tablet of paper. U.S. Patent No. 6,771,494 discloses a hybrid
tablet-type portable computer that is capable of operating either as a normal laptop computer
receiving user input via a keyboard (“laptop mode”), or as a tablet computer receiving user
30 input via a touch screen. The ‘494 patent further discloses that the display component of the

computer is attached to the base of the computer by hinges that allow the display to be tilted relative to the base (for laptop mode), and to be rotated and folded against the base to configure the computer into tablet mode.

Another variation of a portable computer with a moveable display is disclosed in U.S. Patent No. 6,266,236. The '236 patent discloses a computer including a base, a display member and an arm assembly coupling the display member to the base. According to the '236 patent, the arm assembly allows pivotable movement of the display member between a plurality of positions, including a notebook mode configuration, a tablet mode configuration, a presentation mode configuration, and a closed mode.

10

SUMMARY OF INVENTION

Aspects and embodiments of the present invention are directed to a portable computer that is configurable between a laptop mode (in which the portable computer has a conventional laptop appearance) and an easel mode in which the base of the computer and its display component stand upright forming an inverted "V," as discussed further below. The display component is pivotably coupled to the base of the portable computer by a hinge that allows the display component to be rotated or tilted about a longitudinal axis running along an interface between the base and the display component. Unlike the computers discussed in U.S. Patent No. 6,266,236 and U.S. Patent No. 6,771,494 above, the portable computer according to embodiments of the invention does not require an arm assembly, nor multiple, different hinge assemblies to be configured into the different modes. Furthermore, the portable computer according to embodiments of the invention is capable of different display modes and different functionality in the different configurations, as discussed below.

Further aspects and embodiments are directed to a portable computer having an embedded scroll wheel that can be configured to allow a user to control various features and functionality of the portable computer. For example, as discussed further below the scroll wheel can be used to navigate among information displayed on the portable computer's display and/or to alter operating modes of the portable computer, and/or to control features such as volume, display brightness, etc.

According to one embodiment, a portable computer is configurable between various modes, including a closed mode, a laptop mode, an easel mode, a flat mode and a frame mode. The portable computer may comprise a display component including a display screen, a base, and a hinge assembly at least partially housed within the base and configured to

5 pivotably couple the display component to the base. The display component may be rotatable about a longitudinal axis running along an interface between the display component and the base. In the closed mode, the display screen may be disposed substantially against the base, and rotating the display component about the longitudinal axis up to approximately 180 degrees from the closed mode may configure the portable computer into the laptop mode.

10 Rotating the display component about the longitudinal axis beyond approximately 180 degrees axis from the closed mode may configure the portable computer into the easel mode.

In one example of the portable computer, the display component is rotatable about the longitudinal axis up to approximately 320 degrees from the closed mode. In another example, the portable computer comprises a display orientation module that displays content on the

15 display screen in one of a plurality of orientations relative to the longitudinal axis. The orientation of the displayed content may be dependent on the current display mode of the portable computer, or may be configurable responsive to a user input. The portable computer may further comprise a mode sensor which detects a current display mode of the portable computer, and the display orientation module may display content on the display screen in an

20 orientation dependent on the current display mode detected by the mode sensor. Depending on the hinge assembly used, the longitudinal axis may comprises multiple parallel axes, and the hinge assembly may be configured to permit rotation of the display component about any of the multiple parallel axes to configure the portable computer between the plurality of display modes.

25 Another embodiment is directed to a portable computer comprising a base, a display component rotatably coupled to the base, and means for rotating the display component in a single direction relative to the base to configure the portable computer between a laptop mode and an easel mode.

In another embodiment of a portable computer configurable between multiple modes

30 including a laptop mode and an easel mode, the portable computer comprises a display

component, a base, and a hinge assembly configured to rotatably couple the display component to the base. The hinge assembly may be configured to permit rotation of the display component about a single axis to configure the portable computer between the laptop mode and the easel mode. In one example, the single axis is a longitudinal axis running along an interface between the display component and the base. The portable computer may further
5 comprise a scroll wheel disposed at least partially about the longitudinal axis. In one example, the display component comprises a display screen, and the scroll wheel is configured to permit a user to manipulate content displayed on the display screen.

Another embodiment is directed to a method of automatically orienting content
10 displayed on a portable computer. The method comprises rotating a display component of the portable computer about a longitudinal axis running along an interface between the display component and a base of the portable computer, detecting a degree of rotation of the display component relative to the base, providing a signal representative of the degree of rotation of the display component, and automatically configuring an orientation, relative to the
15 longitudinal axis, of the content displayed on the portable computer responsive to the signal.

According to another embodiment, a portable computer comprises a base unit, a display unit including a display screen configured to display content, an orientation sensor which detects an orientation of the display unit relative to the base unit, and a display orientation module which orients the content displayed on the display screen responsive to the
20 orientation detected by the orientation sensor.

Another embodiment of a portable computer comprises a base, a display component rotatably coupled to the base such that the display component and the base are rotatable with respect to one another about a longitudinal axis running along an interface between the display component and the base, the display component including a display screen, and a
25 scroll wheel disposed at least partially within the base and rotatable about the longitudinal axis, the scroll wheel configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen. In one example, the scroll wheel is configured to permit the user to adjust a volume of sound produced by the portable computer. In another example, the screen is configured to display at
30 least one of a plurality of modes of content, and the scroll wheel is configured to permit the

user to select a mode of content for display by the portable computer. The portable computer may further comprise one or more navigation buttons that may be used in conjunction with the scroll wheel to control aspects of the portable computer and displayed content.

According to another embodiment, a portable computer is configurable between a plurality of display modes including a laptop mode and an easel mode, the portable computer comprising a base, a display component rotatably coupled to the base and including a screen which displays content, and a scroll wheel accessible in each of the plurality of display modes and configured to permit a user to manipulate at least one of operating parameters of the portable computer and the content displayed on the screen. In one example, the scroll wheel is disposed at least partially about an axis of rotation of the display component relative to the base.

In another embodiment, a portable computer comprises a base, a display component including a screen configured to display content, a hinge assembly configured to rotatably couple the display component to the base and to permit rotation of the display component about a longitudinal axis running along an interface between the display component and the base, and a scroll wheel disposed at least partially about the longitudinal axis.

Still other aspects, embodiments, and advantages of these exemplary aspects and embodiments, are discussed in detail below. Moreover, it is to be understood that both the foregoing information and the following detailed description are merely illustrative examples of various aspects and embodiments, and are intended to provide an overview or framework for understanding the nature and character of the claimed aspects and embodiments. Any embodiment disclosed herein may be combined with any other embodiment in any manner consistent with the objects, aims, and needs disclosed herein, and references to “an embodiment,” “some embodiments,” “an alternate embodiment,” “various embodiments,” “one embodiment” or the like are not necessarily mutually exclusive and are intended to indicate that a particular feature, structure, or characteristic described in connection with the embodiment may be included in at least one embodiment. The appearances of such terms herein are not necessarily all referring to the same embodiment. The accompanying drawings are included to provide illustration and a further understanding of the various aspects and embodiments, and are incorporated in and constitute a part of this specification. The

drawings, together with the remainder of the specification, serve to explain principles and operations of the described and claimed aspects and embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

5 Various aspects of at least one embodiment are discussed below with reference to the accompanying figures, which are not intended to be drawn to scale. Where technical features in the figures, detailed description or any claim are followed by reference signs, the reference signs have been included for the sole purpose of increasing the intelligibility of the figures, detailed description, and claims. Accordingly, neither the reference signs nor their absence
10 are intended to have any limiting effect on the scope of any claim elements. In the figures, each identical or nearly identical component that is illustrated in various figures is represented by a like numeral. For purposes of clarity, not every component may be labeled in every figure. The figures are provided for the purposes of illustration and explanation and are not intended as a definition of the limits of the invention. In the figures:

15 FIG. 1 is an illustration of one example of a portable computer, according to aspects of the invention, in a “laptop” configuration;

 FIG. 2 is a view of the portable computer of FIG. 1 in the closed position;

 FIG. 3 is a plan view of the exterior of the bottom of the portable computer of FIG. 1;

 FIG. 4 is a perspective view of the portable computer of FIG. 1 in the easel mode;

20 FIG. 5 is a side view of the portable computer of FIG. 4, illustrating the adjustable angle of the easel mode;

 FIGS. 6A-C are diagrams illustrating different positions of the portable computer of FIG. 4 in easel mode;

25 FIG. 7A is an illustration of a portion of the portable computer of FIG. 1 in the laptop mode, illustrating a hinge assembly according to aspects of the invention;

 FIG. 7B is an in illustration of a portion of the portable computer of FIG. 1 in the easel mode, illustrating the hinge assembly according to aspects of the invention;

 FIG. 8 is a diagram of one example of the hinge assembly of FIGS. 7A and 7B;

30 FIG. 9 is a cross-sectional diagram of a portion of the hinge assembly of FIG. 8, taken along line A-A in FIG. 8;

FIG. 10 is an exploded view of the hinge assembly of FIG. 8;

FIG. 11 is a block diagram of one example of a portable computer user interface architecture, according to aspects of the invention;

FIG. 12 is a screen shot illustrating one example of a graphical user interface,
5 according to aspects of the invention;

FIG. 13 is a screen shot illustrating another example of a graphical user interface according to aspects of the invention;

FIG. 14 is an illustration of a user adjusting the scroll wheel on a portable computer in the easel mode, according to aspects of the invention;

10 FIG. 15 is an illustration of a user pressing the scroll wheel on a portable computer, according to aspects of the invention;

FIG. 16 is an illustration of a user pressing a navigation button on the portable computer, according to aspects of the invention;

15 FIG. 17 is an illustration of an example of the portable computer in the laptop mode, according to aspects of the invention;

FIG. 18 is a view of a portion of the portable computer illustrating a wireless signal indicator feature, according to aspects of the invention;

FIG. 19 is a view of a portion of the portable computer in the closed position, according to aspects of the invention;

20 FIG. 20 is a plan view of one example of a power adaptor, according to aspects of the invention;

FIG. 21 is a side view of the power adaptor of FIG. 20;

FIG. 22A is another side view of the power adaptor of FIG. 20, illustrating the power cord would around a cord spool, according to aspects of the invention;

25 FIG. 22B is a plan view of the power adaptor of FIG. 22A

FIG. 23 is an illustration of the portable computer coupled to a docking station, according to aspects of the invention;

FIG. 24 is an illustration of the portable computer showing one example of a docking connector, according to aspects of the invention;

FIG. 24 is an illustration of a hinge assembly coupled to a computer frame, according to aspects of the invention;

FIG. 26 is an illustration of the portable computer configured into a “frame” mode, according to aspects of the invention; and

5 FIG. 27 is an illustration of the portable computer configured into a “flat” mode, according to aspects of the invention.

DETAILED DESCRIPTION

Aspects and embodiments are directed to a portable computer that is configurable
10 between different operating modes, including a laptop mode (in which the portable computer has a conventional laptop appearance), a flat mode, a frame mode, and an easel mode in which the base of the computer and its display component stand vertically forming an inverted “V,” as discussed further below. The portable computer is capable of different display formats and functionality in the different modes, and includes a graphical user
15 interface that may work seamlessly with the computer hardware to provide a unified, comfortable, holistic user experience. In particular, the portable computer may provide access to a wide array of functions, both those traditionally provided by computing devices and those traditionally provided by other passive information devices. For example, the hardware and software, including the graphical user interface, of the portable computer may be focused
20 toward providing access to entertainment media, such as audio and video (e.g., playing music, streaming video, viewing photographs, etc.), email, and internet, while also providing state-of-the-art computer processing capability.

It is to be appreciated that embodiments of the methods and apparatuses discussed herein are not limited in application to the details of construction and the arrangement of
25 components set forth in the following description or illustrated in the accompanying drawings. The methods and apparatuses are capable of implementation in other embodiments and of being practiced or of being carried out in various ways. Examples of specific implementations are provided herein for illustrative purposes only and are not intended to be limiting. In particular, acts, elements and features discussed in connection with any one or
30 more embodiments are not intended to be excluded from a similar role in any other

embodiments. Also, the phraseology and terminology used herein is for the purpose of description and should not be regarded as limiting. Any references to embodiments or elements or acts of the systems and methods herein referred to in the singular may also embrace embodiments including a plurality of these elements, and any references in plural to
5 any embodiment or element or act herein may also embrace embodiments including only a single element. References in the singular or plural form are not intended to limit the presently disclosed systems or methods, their components, acts, or elements. The use herein of “including,” “comprising,” “having,” “containing,” “involving,” and variations thereof is meant to encompass the items listed thereafter and equivalents thereof as well as additional
10 items. References to “or” may be construed as inclusive so that any terms described using “or” may indicate any of a single, more than one, and all of the described terms.

Referring to FIG. 1, there is illustrated one example of a portable computer according to aspects of the invention. In FIG. 1, the portable computer 100 is illustrated in the “laptop” mode, with the display component 102 inclined at a viewing angle from the base 104. The
15 display component 102 is pivotably coupled to the base 104 by a hinge assembly (not shown) that allows the display component to be rotated with respect to the base. The hinge assembly may include a single or multiple hinges, which may be any of a variety of hinge types, including, but not limited, to single-axis hinges, multiple-axis hinges, geared hinges, etc. In one example, the hinge assembly allows the display component 102 to be rotated (or tilted)
20 about a longitudinal axis 101 running along an interface between the display component and the base 104, as illustrated in FIG. 1 and discussed further below. The base 104 includes a keyboard 106 and internal electronic components (not shown), such as a central processing unit, memory, and other components necessary to operate the portable computer, as known to those skilled in the art. In some embodiments, the base 104 may also include a touch pad 108
25 or trackball (not shown) for receiving user commands, as known to those skilled in the art.

Still referring to FIG. 1, the display component 102 includes a display screen 110, and may also include a camera 112, microphone 114, and infrared receiver 116, as discussed further below. It is to be appreciated that the locations of the camera 112, microphone 114 and infrared receiver 114 are not limited to the example illustrated in FIG. 1, and may be
30 placed in other locations on the display component 102 and/or base 104, as would be

recognized by those skilled in the art. The display component 102 may also include cushions 118 that provide soft contact points between the base 104 and the display component 102 when the portable computer is closed. In one example, the cushions 118 are made of rubber. However, it is to be appreciated that the invention is not so limited, and the cushions 118 may
5 comprise materials other than rubber, including, for example, a polymer, felt, or other suitable materials as would be recognized by those skilled in the art.

Referring to FIG. 2, there is illustrated a side view of the portable computer 100 of FIG. 1 in the closed configuration. As is the case for conventional clam-shell type portable computers, when the portable computer 100 is closed, the display screen is disposed “face
10 down” against the keyboard of the base 104. In the illustrated embodiment, the base 104 includes a rounded portion 120 that houses the hinge (not shown) that pivotably couples the display component 102 to the base, as discussed further below. It is to be appreciated that the rounded portion 120 is not limited to having a round shape, but may instead have another shape, which may be dependent on the type of hinge used. In one embodiment, a power
15 button 122, configured to turn the portable computer ON and OFF, may also be provided on the rounded portion 120, as illustrated in FIG. 2. However, it is to be appreciated that the invention is not so limited, and the power button 122 may be located elsewhere on the base 104. In one example, the power button 122 may be slightly recessed relative to the surface of the base 104, so as decrease the potential for the power button to be accidentally pressed.

20 An exterior view of the bottom of the base 104 (the underside of the portable computer 100) is illustrated in FIG. 3. As can be seen in FIG. 3, in one embodiment, the base 104 includes a plurality of feet 124. In one example, the feet 124 are made of rubber; however, it is to be appreciated that the invention is not so limited and the feet may be made of another material, such as, for example, a polymer or felt. A ventilation slit 126 may be provided near
25 an interface between the base 104 and the display component 102, as illustrated, or elsewhere as may be desired, to allow heat to dissipate from the internal electronic components in the base. The base 104 may also include one or more speakers 128. In one example, the base 104 includes two stereo speakers 128, positioned at either side of the base, as illustrated in FIG. 3; however, it is to be appreciated that the portable computer 100 may comprise more or
30 fewer speakers which may be placed at any location on the base 104. A scroll wheel 132 may

be provided to allow a user to control certain functionality of the portable computer 100, such as navigating web pages, controlling speaker volume, selecting programs, etc., as discussed further below.

According to one embodiment, the base 104 may comprise a cushioning strip 130 disposed along an edge of the base 104 opposite to the interface between the display component 102 and the base, as illustrated in FIG. 3. The cushioning strip 130, which may comprise rubber, a polymer, or another suitable material, may serve as a “foot” when the portable computer is configured into the easel mode, as discussed further below. In one embodiment, the display component 102 may be provided with a similar cushioning strip that may serve as a second supporting foot when the portable computer is configured into the easel mode.

Referring to FIG. 4, there is illustrated an example of the portable computer 100 configured into the easel mode. To convert the portable computer 100 from the laptop mode (or closed position) into the easel mode, the display component 102 may be folded away from the base 104, in the same direction as to open the computer (i.e., to configure the computer from the closed position into the laptop mode) such that the base 104 and the display component 102 form an inverted “V” shape with the bottom of the base and the back of the display component face another, as illustrated in FIG. 4. In the easel mode, the display screen 110 is visible and accessible on one side of the portable computer 100 and the keyboard 106 (not shown in FIG. 4) is visible and accessible on the other side.

As illustrated in FIG. 4, in one embodiment, the portable computer may comprise integrated hardware volume controls, including a volume control button 204 and a mute button 206. In one example, the volume control button 204 may be a rocker switch that allows a user to easily increase or decrease the volume of audio played through the speakers 128. When the user presses the volume control button 204, a volume indicator may temporarily appear on the display screen 110, to provide a visual indication of the amount by which the volume is being increased or decreased. Similarly, pressing the mute button 206 may cause a visual indication that the volume is muted to appear on the display screen 110.

According to one embodiment, when the portable computer 100 is configured into the easel mode, the visual display on the display screen 110 is automatically rotated 180 degrees

such that the information appears “right-way-up,” even through the display screen is upside-down compared to when the portable computer is in the laptop mode. Thus, a user may simply “flip” the portable computer 100 into the easel mode and immediately be able to comfortably view information on the display screen 110, without having to access display screen controls to adjust the orientation of the visual display. In one embodiment, the portable computer 100 includes an orientation (or mode) sensor that is configured to detect whether the portable computer is in the laptop mode or the easel mode, and to adjust the display accordingly. The orientation sensor may be incorporated into the base component 104, for example, underneath the keyboard 106, or into the display component. In one example, locating the orientation sensor in the display component 102, rather than the base 104, may provide more robust detection and therefore, may be presently preferred in some embodiments. The orientation sensor may be used to determine a precise relative orientation of the base component 104 with respect to the display component 102, or vice versa, for example, to determine whether the device is in the laptop mode, easel mode, or some point in between the two modes. In one example, the orientation sensor includes an accelerometer whose output is fed to the computer operating system (or to dedicated logic circuitry) which then triggers a display inversion as appropriate.

Accelerometers have been used in portable devices such as cellular phones, media players or computers, as sudden motion sensors, or “drop detectors,” to protect against hard drive crashes in the event that the device is dropped. By contrast, however, the accelerometer in the portable computer according to an embodiment of the invention is not used to detect motion of the overall computer, but rather to detect a configuration of the portable computer 100 (e.g., laptop mode or easel mode), particularly, to detect an orientation of the display component 102 relative to the base component 104. In one example, information from the accelerometer is provided to a display controller in the portable computer and used to switch the display between portrait or landscape mode, as is done in some conventional devices.

Referring to FIG. 5, when the portable computer 100 is in the easel mode, the base 104 is disposed at an angle 134 to the display component 102. This angle 134 is adjustable, for example, to allow a comfortable viewing angle to the display screen 110 to be maintained for different positions of a user 136 and of the portable computer 100, as illustrated in FIGS. 6A,

6B and 6C. For example, when the user 136 is further from the portable computer, the angle 134a (FIG. 6A) may be made smaller than the angle 134b when the user is closer to the portable computer (FIG. 6B). As discussed above, in one example, the orientation sensor (not shown) may be used to detect, either approximately or precisely, the angle 134 and to provide the information to the computer operating system.

According to one embodiment, the display component 102 is pivotably coupled to the base 104 by a hinge that allows the display component to be moved relative to the base so as to allow the portable computer 100 to be configured into the closed position, the laptop mode or the easel mode. As discussed above, in conventional “clamshell” type portable computers, the hinges that couple the display component to the base generally do not permit more than about 180 degrees of rotation of the display component. Thus, these conventional portable computers can be in a closed position or open, laptop configuration, but cannot be configured into an easel mode because the conventional hinges do not permit sufficient movement of the display component. Similarly, the tablet-type portable computers discussed above have displays that can be opened, rotated and folded such that they lie flat against the keyboard on the base, but cannot be configured into an easel mode. Although, as discussed above, U.S. Patent No. 6,266,236 discloses a computer that is configurable into a presentation mode, this requires a complex arm assembly. By contrast, the portable computer according to embodiments of the present invention may be configured into the easel mode by simply continuing to tilt or rotate the display component past the “laptop positions” until a desired easel angle 134 is reached.

Referring to FIGS. 7A and 7B, there is illustrated a portion of the portable computer 100 illustrating a hinge assembly 138 that allows the portable computer to be configured into either the laptop mode (FIG. 7A) or the easel mode (FIG. 7B), according to aspects of the invention. According to one embodiment, the hinge assembly 138 accommodates 0-320 degrees of rotation, allowing a minimum angle 134 (see FIG. 5) of 40 degrees. However, it is to be appreciated that the hinge assembly 138 may allow greater or fewer degrees of rotation, provided only that sufficient rotation is allowed so as to configure the portable computer 100 into either the laptop mode or the easel mode. As discussed above, in one embodiment the portable computer 100 includes an orientation sensor (not shown) that is configured to detect

a relative orientation of the display component 102 and the base component 104. In one example, the orientation sensor may be an accelerometer incorporated into the base component 104, as discussed above. Alternatively, the orientation sensor may be incorporated into the hinge assembly 138 and may be used to detect movement of the hinge assembly, and to translate that movement into an information about the relative orientation of the display component 102 and the base component 104 (for example, a size of the angle 134). It is also to be appreciated that the orientation sensor may include electronic or mechanical components, or a combination thereof. For example, the hinge assembly may be provide with detents that provide an indication of the mode of the portable computer.

10 As discussed above, and also illustrated in FIGS. 7A and 7B, the portable computer may also comprise a scroll wheel 132 that allows a user to adjust, control and/or select various aspects of the portable computer (e.g., wireless capability or speaker volume) or items displayed on the display screen 110. A housing 160 may contain or support various mechanical and/or electronic components (not shown) that are coupled to the scroll wheel 132 and are configured to convert physical movement of the scroll wheel into electrical signals. These electrical signals may be provided to the central processing unit of the portable computer 100 which processes the electrical signals so as to translate movement of the scroll wheel into control of a selected feature, for example, adjusting the volume of the speaker(s) or selecting a particular item displayed on the display screen, as discussed further below.

20 One embodiment of the hinge assembly 138 is illustrated in FIG. 8. The hinge assembly includes a bracket 140 rotatably coupled to a housing 142. The housing 142 may include a first flange 144 that may be fastened to an internal frame in the base 104, as illustrated in FIG. 7A. The first flange 144 may include holes 146 to allow the first flange to be fastened to the base 104 using fasteners, such as, for example, screws, rivets or bolts. The bracket 140 may include a second flange 148 that may be similarly coupled to the display component 102 using fasteners 150. In one embodiment, the display screen 110 (see FIG. 1) may be an LCD screen. As known to those skilled in the art, an LCD screen generally comprises a frame and plastic housing. In one example, the second flange 148 may be fastened to either or both of the display screen frame and the screen's plastic housing.

30 Referring to FIG. 25, there is illustrated an example of two hinge assemblies 138 coupled to

the display frame 208 of the display component, and to the base frame 210 of the base component 104. According to one embodiment, the bracket 140 and/or housing 142 may be formed of cast zinc. However, it is to be appreciated that other materials, including other metals, may be used, and the bracket 140 and/or housing 142 may be formed using a
5 procedure other than casting, such as, for example, machining or molding.

Referring again to FIG. 8, in one embodiment, the hinge assembly 138 may also incorporate an area 152 for locating the power button (FIG. 2, 122) or a navigation control button (FIG. 4, 166), as discussed further below.

Referring to FIG. 9, there is illustrated a cross-sectional view of a portion of the hinge
10 assembly 138 taken along line A-A in FIG. 8. As shown in FIG. 9, in one embodiment the hinge assembly 138 comprises a shaft 154 located within the hinge housing 142. The shaft 154 may be held in position within the hinge housing 142, and rotatably coupled to the housing, by torsion elements, such as springs 156. In one example, the springs 156 may be formed by stamping; however, it is to be appreciated that other methods of manufacture may
15 be used. In one example, the hinge assembly may accommodate about 320 degrees of rotation, as discussed above, and may provide about 6.5 in-lbs in symmetric torque.

FIG. 10 is an exploded view of the hinge assembly of FIGS. 8 and 9. As shown in FIG. 10, the shaft 154 is coupled to a member 158. This member 158 may be integral with or coupled to the bracket 140 which is, in turn, fastened to the display component, as discussed
20 above. Thus, the shaft 154 and springs 156 provide a rotatable coupling between the fixed elements of the hinge assembly, namely, the hinge housing 142 and bracket 140 which are fastened to the base 104 and display component 102 of the portable computer. In this manner, the hinge assembly allows the display component 102 to be moved relative to the base 104, thereby allowing the portable computer to be easily and quickly configured into any of the
25 closed position, laptop mode or easel mode. For example, simply rotating or tilting the display component about the longitudinal axis 101 (see FIG. 1) up to approximately 180 degrees from the closed mode configures the portable computer into the laptop mode, and rotating the display component about the longitudinal axis 101 beyond approximately 180 degrees axis from the closed mode configures the portable computer into the easel mode.

According to one embodiment, the portable computer may include integrated “navigation” hardware that allows a user to easily and comfortably control various features and functions of the portable computer, and to manipulate content displayed on the portable computer. For example, as discussed above, the portable computer 100 may comprise a scroll wheel 132 that allows a user to control, adjust and/or select various functionality of the portable computer. According to another embodiment, the scroll wheel 132 may be used to provide “hardware navigation” through information, such as menus, icons, etc., displayed on the display screen 110, as discussed further below with reference to FIG. 17. A common display configuration used in conventional computers is a “desktop” view in which multiple icons representing links to various programs or applications are displayed over a background image. Navigation is conventionally performed using a mouse, touch pad or trackball, as known to those skilled in the art. In one embodiment, the portable computer 100 may display information on the display screen 110 in the conventional desktop configuration, and navigation may be performed using either conventional tools, such as a touchpad 108, trackball (not shown) or peripheral, for example, a mouse, that is connected to the portable computer 100 via a port 164, or the scroll wheel 132, or a combination thereof. According to another embodiment, the portable computer 100 includes a streamlined graphical user interface that supports “map” navigation. The map user interface provides a clear overview of the entire computing environment and searching capability within the environment that may be accessed using the scroll wheel 132 and, optionally, one or navigation buttons 166, 168 that may be provided on the base 104 of the portable computer 100 (button 166) and/or in the keyboard 106 (button 168), illustrated in FIG. 17. In one embodiment, the map mode of navigation is a hierarchical mode that reduces the number of items to select amongst at any stage of navigation, thereby facilitating user access with the scroll wheel 132 and, optionally, the navigation button(s) 166, 168. Of course, it is to be appreciated that the map user interface may also be navigated using conventional tools, such as a trackball, touchpad, mouse or arrow keys.

Referring to FIG. 11, there is illustrated a block diagram of one example of an architecture of the portable computer including a map user interface. The user interface “home” screen 170 that displays a plurality of modes of content 172. In the illustrated

example, the home screen 170 contains five modes of content 172; however, it is to be appreciated that the home screen may include more or fewer than five modes of content and that the modes of content may differ from the examples discussed below. According to one example, the modes of content 172 accessible via the home screen 170 may include “media” 172a, “connect” 172b, “web” 172c, “applications” 172d, and “channels” 172e. Using the map user interface, information, programs, features and applications may be grouped into the various modes of content 172. By selecting any mode of content 172, for example, by using the scroll wheel 132 and/or navigation buttons 166, 168, as discussed further below, the user may access the content organized within that mode. For example, the media mode 172a may provide access to a medial player to play, view, search and organize media such as music, video, photos, etc. The connect mode 172b may provide access to features such as, for example, email, voice-over-IP, instant messaging, etc., and the web mode 172c may provide access to internet browsing and searching. The application mode 172d may provide access to, for example, computer applications or programs, such as word processor, spreadsheet, calculator, etc. In one example, these applications or programs may be provided as web-based services rather than programs or applications residing on the portable computer 100. The channels mode 172e may provide access to different functionality of the portable computer, with the different functions or features defined as different channels. For example, a channel may include an alarm clock channel in which the portable computer is configured to display a clock and can be programmed to activate an alarm, e.g., a sound, piece of music, etc., at a predetermined time. Another example of a channel may include a “photo frame” channel in which the portable computer may be configured to display a pre-selected image or set of images, etc. Another example of a channel is a “television” channel, in which the portable computer is configured to stream Internet television. In one example, a user may configure particular Internet television channels (e.g., a news channel, a movie channel, a home and garden channel, etc.) into sub-channels within the channels mode of content 172(e). Some or all of the modes of content 172 may access, retrieve and/or store information on the Internet 174.

According to one embodiment, the different modes of content 172 may be displayed as a series of bars across the display screen 110, as illustrated in FIG. 12. The following

discussion of various features, including hardware navigation through the map user interface may refer primarily to the display configuration illustrated in FIG. 12. However, it is to be appreciated that the invention is not so limited, and the modes of content may be displayed in other configurations, including, for example, a “desktop” and icon configuration, a
5 “dashboard” type display, as illustrated in FIG. 13, or another configuration, as would be recognized by those skilled in the art. Similarly, navigation is discussed below primarily with reference to the scroll wheel 132 and navigation buttons 166, 168; however, it is to be appreciation that navigation may also be accomplished using any of the conventional tools discussed above or known to those skilled in the art.

10 As discussed above, according to one embodiment, the scroll wheel 132 and, optionally, the navigation buttons 166, 168 may be used to navigate the user interface. Referring again to FIG. 12, scrolling the scroll wheel may sequentially highlight different ones of the modes of content 172. In one example, the highlighting may be achieved by changing the color of the selected mode, and/or by providing a visual indicator, such as a
15 colored bar 176. A highlighted mode 172 may be selected by pressing the scroll wheel, thereby bringing up a new “page” or screen on the user interface corresponding to the selected mode. Once within a selected mode of content 172, the scroll wheel may similarly be used to select particular functions, features or applications within that mode. In one embodiment, the default action for the scroll wheel 132 may vary depending on whether the portable computer
20 100 is in the laptop mode or the easel mode. For example, in easel mode, the default action for the scroll wheel may be channel selection within the channels mode 172(e).

As discussed above, in one embodiment volume control for the speakers 128 may be provided by the volume control button 204 and mute button 206. Alternatively, according to another embodiment, volume control may be provided using the scroll wheel 132. Thus, as a
25 user scrolls the scroll wheel 132, as illustrated in FIG. 14 by arrow 161, a volume indicator may appear on the display screen 110. In one example, the volume indicator may comprise a transparent, or partially transparent, box 162 containing volume level indicators that may appear directly below the scroll wheel 132 on the display screen 110. In this example, as the user scrolls the scroll wheel 132, different volume levels in the volume box 162 may be
30 successively highlighted, to indicate to the user that the volume is increasing or decreasing.

In one embodiment, the scroll wheel 132 may be depressible as well as scrollable. Thus, pressing the scroll wheel 132, as illustrated in FIG. 15, may allow further control, such as, for example, selecting a channel onto which the user has scrolled, or “play” and “pause” of audio or video being played through the portable computer 100.

5 As discussed above, according to one embodiment, one or more navigation buttons may be used in conjunction with the scroll wheel. In particular, in one embodiment, the navigation button(s) may be used to change the action of the scroll wheel. As discussed above, in one example, the default action of the scroll wheel is volume control. This action may be changed by pressing the navigation button 166, as illustrated in FIG. 16, for example,
10 from volume control to menu navigation in the user interface, and vice versa. According to one embodiment, the effect of pressing the navigation button 166 may vary depending on active the mode of content of the portable computer 100. For example, if a user is in the media mode using a photo viewing application, pressing the navigation button 166 may change the action of the scroll wheel 132 from mode navigation to slideshow controls for the
15 photos. When the navigation button 166 is pressed, an control indicator box (similar to the volume indicator box 162 discussed above with reference to FIG. 14) may appear containing different actions for the photo slideshow, such as “play,” “next,” “back,” “skip,” “full screen view,” etc., and scrolling the scroll wheel 132 may allow a user to select one of these actions. Pressing the navigation button 166 again may return the scroll wheel action to menu
20 navigation, to allow the user to, for example, move to a different feature or application within the active mode, or to select a different mode.

As can be seen in FIG. 16, the navigation button 166 may be easily accessed when the portable computer 100 is in the easel mode, providing a convenient navigation tool for this configuration. A similar navigation button 168 may be provided on the keyboard 106, as
25 illustrated in FIG. 17. In one example, the functionality of the two navigation buttons 166, 168 may be the same, with the different locations providing easy, comfortable access in the different configuration modes (i.e., laptop or easel) of the portable computer 100. Thus, a user may use either navigation button 166 or navigation button 168, depending on personal preference. In another example, the two navigation buttons may have different functionality.
30 For example, the navigation button 166 may be used to alter the action of the scroll wheel

132, as discussed above, while the navigation button 168 is used to navigate “up” or “down” a level within the map user interface. For example, pressing the navigation button 168 while within a given mode of content may allow the user to “back up” to the home screen; or pressing the navigation button 168 while within a selected channel (in the channel mode of the content 172e) may allow the user to “back-up” to the channel mode main page.

It is to be appreciated that numerous variations on the functionality of the navigation buttons 166, 168 is possible, as would be recognized by those skilled in the art, and the above examples are given for illustration only and are not intended to be limiting. In addition, any functions described with reference to one navigation button (166 or 168) may be instead (or additionally) implemented with the other navigation button. In one example, the function of the navigation buttons 166, 168 may vary depending on whether the portable computer 100 is configured into the laptop mode or the easel mode. For example, only the navigation button 166 may be active in the easel mode, and only the navigation button 168 may be active in the laptop mode. Alternatively, both navigation buttons 166, 168 may be usable in either the laptop mode or the easel mode, but their functionality may vary. For example, when the portable computer 100 is in the easel mode, the default action for the navigation button 166 may be channel selection whereas the default action for the navigation button 168 is to access the “home” screen. Furthermore, the portable computer 100 is not limited to the use of two navigation buttons and may instead comprise only a single navigation button or more than two navigation buttons, any of which may be disposed in the locations described above (e.g., on the rounded portion 120 of the base 104 or on the keyboard 106), or in other locations on the portable computer.

As discussed above, according to one embodiment, the function or display content and/or display orientation of the portable computer may vary when the portable computer is configured from the laptop mode into the easel mode, or vice versa. For example, as discussed above, when the portable computer 100 is configured into the easel mode, the visual display on the display screen 110 is automatically rotated 180 degrees such that the information appears “right-way-up,” even through the display screen is upside-down compared to when the portable computer is in the laptop mode. In another example, for at least some activities within at least some modes of content (e.g., viewing a photograph or

video), when the portable computer 100 is configured into the easel mode, the display may automatically adjust to “full screen view” (i.e., the displayed image or video is displayed on the full screen size, rather than in a window) to allow for comfortable viewing.

In addition, as discussed above, the ability to configure the portable computer 100 into either the laptop mode or the easel mode provides enhanced functionality. For example, when the portable computer 100 is not being actively used, the user may configure the portable computer into the easel mode, and program the portable computer to act as a digital photo frame, displaying one or more photos of the user’s choice. In the easel mode, the portable computer 100 may occupy a smaller footprint on a surface than in the laptop or closed modes because the base 104 and display component 102 are upright, as illustrated in FIGS. 4 and 5. In addition, because the portable computer can act as a passive information and/or entertainment device, such as a photo frame or clock, as discussed above, the portable computer may provide a useful function even when not being actively used by the user, and may do so (in the easel mode) without taking up much surface area.

According to another embodiment, the portable computer 100 may further comprise a wireless signal indicator 178, as illustrated in FIG. 18. The wireless signal indicator 178 may indicate the availability and/or strength of a wireless signal to which the portable computer 100 is connected, or is attempting to connect to. In one example, the color of the wireless signal indicator 178 may provide information regarding the strength of a detected wireless signal. For example, green may indicate a “good” signal; yellow may indicate a “poor” or “low” signal; and red may indicate that there is no signal available. In one example, the wireless signal indicator 178 may be ON or active whenever the portable computer 100 is powered up. Alternatively, the wireless signal indicator 178 may be activated by a user action, for example, by pressing the navigation button 166 or another button or key provided on the portable computer 100, and may remain active for a predetermined time period (e.g., for 2 seconds, 10 seconds, one minute, etc.). As discussed above, the functionality of the navigation button 166 may vary depending on the configuration mode of the portable computer 100. In one example, when the portable computer 100 is in the closed position, but still powered up, the default action for the navigation button 166 may be to activate the wireless signal indicator 178.

According to one embodiment, the portable computer 100 may be provided with power cord and adapter to allow the portable computer to be plugged into a wall supply. Referring to FIG. 19, there is illustrated a view of a portion of the portable computer 100, showing a power jack 180 to which the power adaptor can be connected. As discussed above, the portable computer 100 may also include a port 164 to which peripheral devices, such as mouse, external keyboard, portable flash drive, memory stick, etc. may be connected. In one example, the port 164 is a USB port; however, it is to be appreciated that the port may accommodate protocols other than USB. In addition, although only one port 164 is illustrated in FIG 19, the portable computer 100 may comprise multiple ports that may accommodate multiple protocols. In one example, the portable computer 100 may also comprise a headphone jack 182. It is to be appreciated that the location of any or all of the power jack 180, port(s) 164, and headphone jack 182 are not limited to the example shown in FIG. 19, but may be anywhere convenient or desirable on the portable computer 100.

Referring to FIG. 20, there is illustrated a top down view one example of a power adaptor 184 that may be used with the portable computer 100 and connected via the power jack 180. As known to those skilled in the art, the power adaptor 184 comprises a transformer (not shown) that converts the wall power to a level acceptable for use by the portable computer 100. In one embodiment, the power adaptor 184 comprises a substantially round body 186 that houses the transformer and other necessary components. A connector 188 may allow the power adaptor 184 to be connected to a wall outlet or extension cord. In one example, the connector 188 may include foldable prongs 190 that can be folded against the connector 188 for storage, and folded out for connection, as illustrated in FIG. 21. A cord 192 may be slidably accommodated within the body 186, such that the cord may be stored within the body and flexibly extended (up to its maximum length) by a user.

According to one embodiment, the cord 192 may be wound around a cord spool 194 located within, or partially within, the body 186 of the power adaptor 184. As illustrated in FIG. 21, the cord spool 194 may be configured to slide out from the body 186 of the power adaptor 184, such that the cord 192 can be wound around the cord spool 194, as illustrated in FIGS. 22A and 22B.

According to another embodiment, the portable computer 100 may be configured to connect to a docking station 196, as illustrated in FIG. 23. In one embodiment, a connector 198 on the docking station 196 may be configured to slidably connect to connectors 200 on the portable computer 100, as illustrated in FIG. 23. In one example, the connectors 200 may include power and audio connectors, such that the portable computer 100 may receive power from the docking station and receive and/or provide audio signals from/to the docking station, respectively. For example, the docking station may be coupled to external speakers, and the portable computer may provide audio signals to the docking station to be played through the external speakers. In another example, the docking station 196 may also be coupled to an audio device (not shown), such as an MP3 player, which may provide audio signals and data to the portable computer 100, for example, to update an audio library on the portable computer. It is to be appreciated that many other variations of communication between the portable computer 100 and devices coupled to the docking station 196 are possible, as would be recognized by those skilled in the art, and such variations are intended to be within the scope of this disclosure. Furthermore, numerous variations on the connector(s) 198, 200 that couple the docking station 196 to the portable computer 100 are also possible, as would be recognized by those skilled in the art. For example, the portable computer 100 may include a multi-pin connector 202 located on the base 104, as illustrated in FIG. 24. Such and other variations are intended to be within the scope of this disclosure and the above-mentioned examples are provided for illustration only and are not intended to be limiting.

In addition, it is to be appreciated that although the above discussion refers primarily to the portable computer 100 being in either the laptop mode or easel mode, other modes or configurations are also possible. For example, as discussed above, because the portable computer 100 can be configured from the closed position, through the laptop mode into the easel mode by rotating the display component 102, a number of configurations are possible in between “true” laptop mode and “true” easel mode. In another example, the portable computer 100 may be configured into a “frame” mode, as illustrated in FIG. 26, in which the portable computer is placed on a surface 212 with the keyboard 106 “face down” on the surface 212 and the display 110 facing upward. In the frame mode, the display component 102 may be at a similar orientation, and angle 134, with respect to the base component 104 as

in the easel mode. However, rather than the base component 104 and display component 102 being oriented vertically with respect to the surface 212, as in the easel mode (in which the portable computer forms an inverted “V” as discussed above), in the frame mode, the base component 104 may lie flat on the surface 212, as shown in FIG. 26. In one example, software and/or hardware protection may be provided for the keyboard to prevent keys from being pressed (or to prevent the portable computer from responding to pressed keys) when the portable computer is in the frame mode.

Similarly, referring to FIG. 27, there is illustrated another configuration of the portable computer 100, referring to as the “flat” mode. In the flat mode, the display component 102 may be rotated (or opened) to approximately 180 degrees with respect to the base component 104, such that the base component and display component lay flat on a surface, with the keyboard 106 and display screen 110 exposed, as shown in FIG. 27. Unlike the easel and frame modes, in which the keyboard may be concealed and not easily accessible, in the flat mode, the keyboard is accessible and usable. In addition, as discussed above, the visual display on the display screen 110 may be automatically rotated to accommodate comfortable viewing of information by persons located in different positions relative to the base component 104 or display component 102. The visual display on the display screen 110 may also be manually adjusted by a user using, for example, the keyboard 106, touch pad 108 or mouse (not shown), scroll wheel 132 or navigation buttons (not shown). For example, if a user (located at position A) wishes to display information for a person located opposite the user (at position B), the visual display may be rotated (automatically or manually) 180 degrees such that the information appears “right-way-up,” to the person at location B, even though the display screen 110 is upside-down for that person. Similarly, in another example, the visual display may be rotated (automatically or manually) 90 degrees such that the information appears “right-way-up,” for a person at location C. In one example, a user can “toggle” the visual display among various orientations. For example, a user at location A may have the visual display facing themselves while using the keyboard 106 or other controls to change or access information on the display, then toggle the display orientation 180 or 90 degrees to display the information for persons at locations B or C.

In summary, various aspects and embodiments provide a portable computer that is configurable between different operating modes, including a laptop mode and an easel mode, and that is capable of different display formats and functionality in the different modes. The ability to view and operate the portable computer in the different laptop and easel modes, and to incorporate features and functions such as an alarm clock, digital photograph frame, voice-over-IP, etc, may provide enhanced flexibility and usefulness. In addition, the portable computer may include a graphical user interface that may work seamlessly with the computer hardware to provide an enjoyable, holistic user experience.

Having thus described several aspects of at least one embodiment, it is to be appreciated various alterations, modifications, and improvements will readily occur to those skilled in the art. For example functionality or features that have been described herein in connection with hardware may instead be implemented in software, or vice versa. For example, the wireless signal indicator discussed above may instead (or in addition) be provided as a software application. Such alterations, modifications, and improvements are intended to be part of this disclosure and are intended to be within the scope of the invention. Accordingly, the foregoing description and drawings are by way of example only.

What is claimed is:

CLAIMS

1. A portable computer comprising:
 - a base;
 - 5 a display component rotatably coupled to the base such that the display component and the base are rotatable with respect to one another about a longitudinal axis running along an interface between the display component and the base, the display component including a display screen; and
 - a scroll wheel disposed at least partially within the base and rotatable about the
 - 10 longitudinal axis, the scroll wheel configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the display screen.
2. The portable computer of claim 1, where the scroll wheel is configured to permit the user to adjust a volume of sound produced by the portable computer.
- 15 3. The portable computer of claim 1, further comprising a first navigation button disposed on one of the base and the display component and configured to permit the user to manipulate selected content displayed on the screen.
- 20 4. The portable computer of claim 3, wherein the screen is configured to display at least one of a plurality of modes of content; and
 - wherein the navigation button is configured to permit the user to select for display one of the plurality of modes of content.
- 25 5. The portable computer of claim 3, further comprising a second navigation button; wherein the first navigation button is disposed on a major surface of the base; and wherein the second navigation button is disposed on a minor surface of the base.
6. The portable computer of claim 1, wherein the scroll wheel is configured to permit the
- 30 user to select a mode of content for display by the portable computer.

7. A portable computer configurable between a plurality of display modes including a laptop mode and an easel mode, the portable computer comprising:
- a base;
 - 5 a display component rotatably coupled to the base and including a screen which displays content; and
 - a scroll wheel accessible in each of the plurality of display modes and configured to permit a user to manipulate at least one of operating parameters of the portable computer and the content displayed on the screen.
- 10
8. The portable computer of claim 7; wherein the scroll wheel is disposed at least partially about an axis of rotation of the display component relative to the base.
9. The portable computer of claim 8, wherein the axis of rotation runs along an interface
- 15 between the display component and the base.
10. The portable computer of claim 7, further comprising a first navigation button user-accessible in each of the laptop mode and the easel mode, and configured to permit the user to manipulate selected content displayed on the screen.
- 20
11. The portable computer of claim 10, wherein the screen is configured to display at least one of a plurality of modes of content; and
- wherein the first navigation button is configured to permit the user to select for display one of the plurality of modes of content.
- 25
12. The portable computer of claim 10, further comprising a second navigation button that is not user-accessible when the portable computer is in the laptop mode.
- 30

13. A portable computer comprising:
a base;
a display component including a screen configured to display content;
a hinge assembly configured to rotatably couple the display component to the base and
5 to permit rotation of the display component about a longitudinal axis running along an
interface between the display component and the base; and
a scroll wheel disposed at least partially about the longitudinal axis.
14. The portable computer of claim 13, wherein the scroll wheel is configured to permit a
10 user to manipulate the content displayed on the screen.
15. The portable computer of claim 13, wherein the scroll wheel is configured to permit a
user to control a volume of sound played by the portable computer.
16. The portable computer of claim 13, wherein the scroll wheel is disposed at least
15 partially within the hinge assembly.
17. The portable computer of claim 13, further comprising at least one navigation button
disposed on one of the base and the display component.

20

ABSTRACT

A portable computer that is configurable between a laptop mode (in which the portable computer has a conventional laptop appearance) and an easel mode in which the base of the computer and its display component stand vertically forming an inverted “V.” The portable computer includes a hinge assembly that couples the display component to the base of the computer, and allows the display component to be rotated about an axis along an interface between the display component and the base to configure the portable computer between a closed position, the laptop mode and the easel mode. The portable computer further comprises a scroll wheel and optional navigation buttons that

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	A2029-700111
		Application Number	
Title of Invention	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2

Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1					<input type="button" value="Remove"/>
Applicant Authority <input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117		<input type="radio"/> Party of Interest under 35 U.S.C. 118	
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Yves		Behar		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Oakland	State/Province	CA	Country of Residence i	US
Citizenship under 37 CFR 1.41(b) i		CH			
Mailing Address of Applicant:					
Address 1	5741 Scarborough Drive				
Address 2					
City	Oakland	State/Province	CA		
Postal Code	94611	Countryi	US		
Applicant 2					<input type="button" value="Remove"/>
Applicant Authority <input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117		<input type="radio"/> Party of Interest under 35 U.S.C. 118	
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Joshua		Morenstein		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	San Francisco	State/Province	CA	Country of Residence i	US
Citizenship under 37 CFR 1.41(b) i		US			
Mailing Address of Applicant:					
Address 1	124 Downey Street				
Address 2					
City	San Francisco	State/Province	CA		
Postal Code	94117	Countryi	US		
Applicant 3					<input type="button" value="Remove"/>
Applicant Authority <input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117		<input type="radio"/> Party of Interest under 35 U.S.C. 118	
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Christopher		Hibmacronan		
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	A2029-700111	
		Application Number		
Title of Invention	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS			
Citizenship under 37 CFR 1.41(b) i	US			
Mailing Address of Applicant:				
Address 1	2429 Damuth Street			
Address 2				
City	Oakland	State/Province	CA	
Postal Code	94602	Country ⁱ	US	
Applicant 4				<input type="button" value="Remove"/>
Applicant Authority	<input checked="" type="radio"/> Inventor	<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Party of Interest under 35 U.S.C. 118	
Prefix	Given Name	Middle Name	Family Name	Suffix
	Naoya		Edahiro	
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service				
City	San Francisco	State/Province	CA	Country of Residence ⁱ
				US
Citizenship under 37 CFR 1.41(b) i	JP			
Mailing Address of Applicant:				
Address 1	375 Bartlett Street			
Address 2				
City	San Francisco	State/Province	CA	
Postal Code	94110	Country ⁱ	US	
Applicant 5				<input type="button" value="Remove"/>
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Prefix	Given Name	Middle Name	Family Name	Suffix
	Matthew	David	Day	
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service				
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Citizenship under 37 CFR 1.41(b) i	US			
Mailing Address of Applicant:				
Address 1	425 2nd Street #301			
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All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.				<input type="button" value="Add"/>

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Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	A2029-700111
		Application Number	
Title of Invention	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS		
Email Address		<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>

Application Information:

Title of the Invention	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS		
Attorney Docket Number	A2029-700111	Small Entity Status Claimed	<input type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	24	Suggested Figure for Publication (if any)	4

Publication Information:

<input type="checkbox"/> Request Early Publication (Fee required at time of Request 37 CFR 1.219)
<input type="checkbox"/> Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.			
Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	37462		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.			
Prior Application Status	Pending	<input type="button" value="Remove"/>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61041365	2008-04-01
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			<input type="button" value="Add"/>

Foreign Priority Information:

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	A2029-700111
	Application Number	
Title of Invention	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS	

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

<input type="button" value="Remove"/>			
Application Number	Country ⁱ	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			<input type="radio"/> Yes <input checked="" type="radio"/> No
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			<input type="button" value="Add"/>

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1					<input type="button" value="Remove"/>
If the Assignee is an Organization check here. <input type="checkbox"/>					
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Additional Assignee Data may be generated within this form by selecting the Add button.					<input type="button" value="Add"/>

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.					
Signature	/Sarah M. Gates/		Date (YYYY-MM-DD)	2008-07-10	
First Name	Sarah	Last Name	Gates	Registration Number	60661

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
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Electronic Acknowledgement Receipt

EFS ID:	3596910
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Sarah May Gates
Filer Authorized By:	
Attorney Docket Number:	A2029-700111
Receipt Date:	10-JUL-2008
Filing Date:	
Time Stamp:	16:31:49
Application Type:	Utility under 35 USC 111(a)

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1		898552_A2029_700111_AP.pdf	108262 4c041da9631a339441338f6ef09e0e146b56e06f	yes	29

Multipart Description/PDF files in .zip description					
Document Description			Start	End	
Specification			1	25	
Claims			26	28	
Abstract			29	29	
Warnings:					
Information:					
2	Drawings-other than black and white line drawings	A2029_700111_Figs.pdf	1020649 <small>f61b93aca4a393fc9678ff639e066421442ab369</small>	no	25
Warnings:					
Information:					
3	Application Data Sheet	A2029_700111_ADS.pdf	965632 <small>b24ca6f137507fae7a53ea4ea35cbcf0e822783b</small>	no	5
Warnings:					
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Total Files Size (in bytes):			2094543		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

SCORE Placeholder Sheet for IFW Content

Application Number: 12170951

Document Date: 7/10/2008

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

- Drawings – Other than Black and White Line Drawings

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

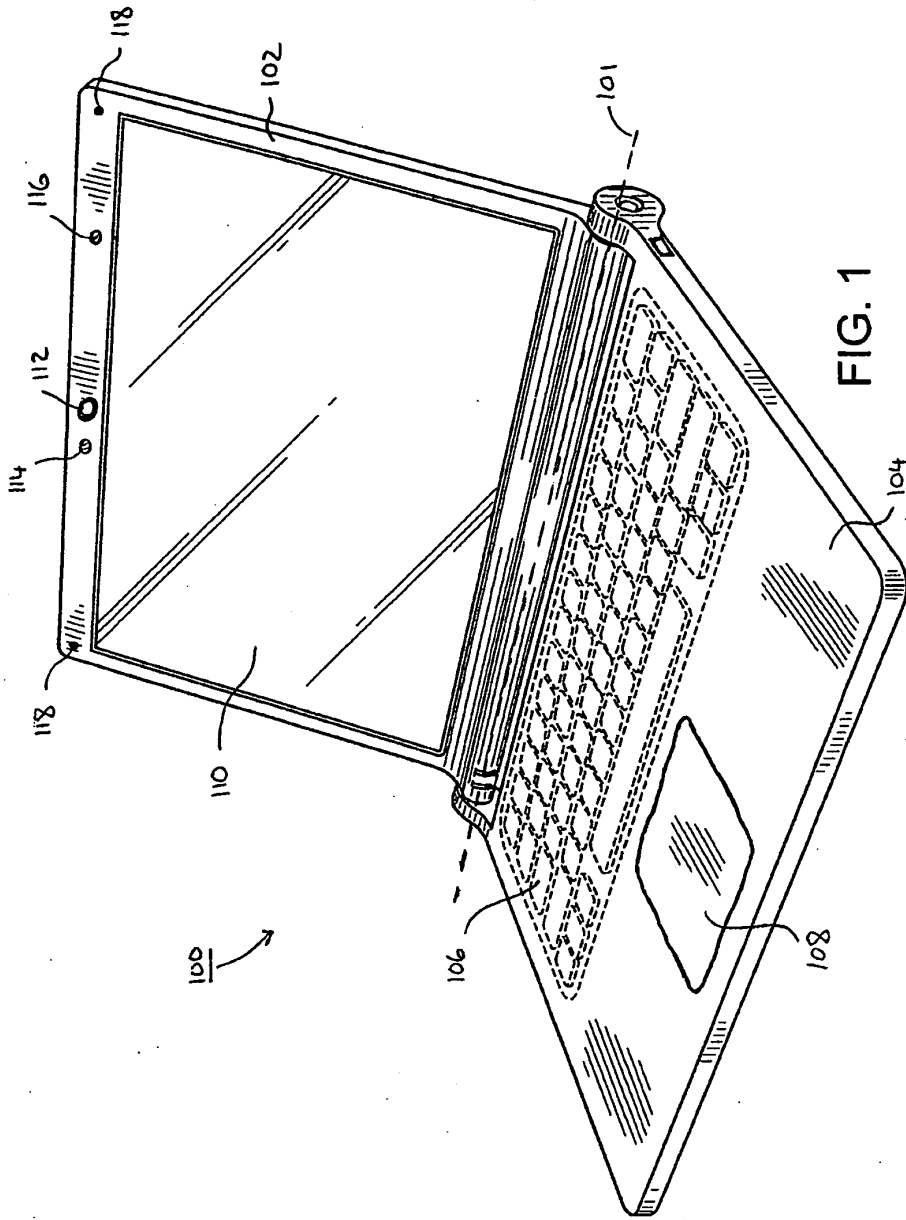
To access the documents in the SCORE database, refer to instructions developed by SIRA.

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Form Revision Date: February 8, 2006

1/25



2/25

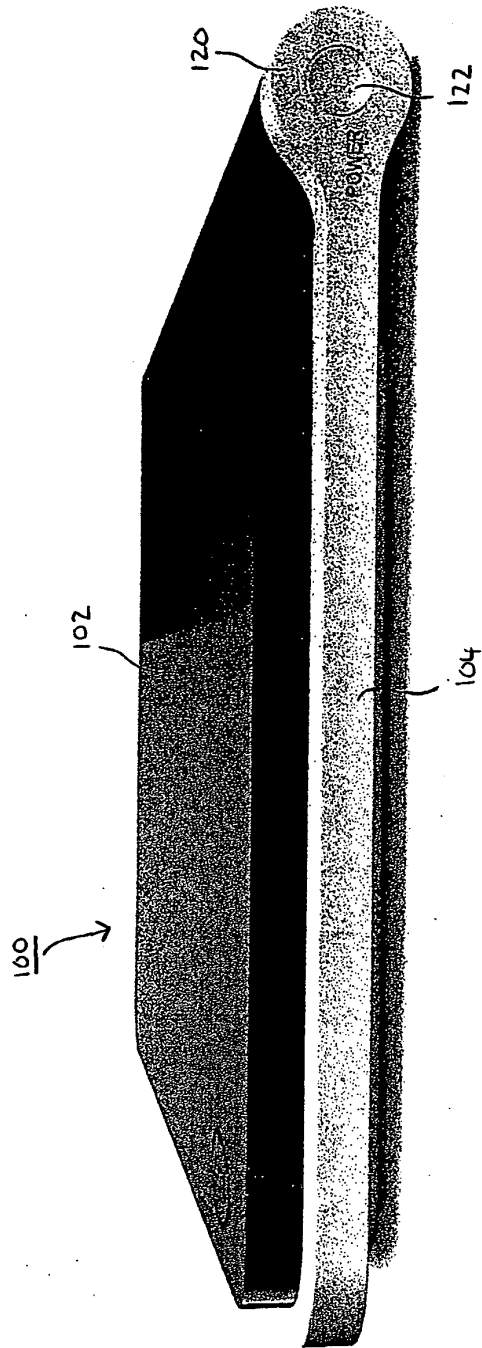


FIG. 2

3/25

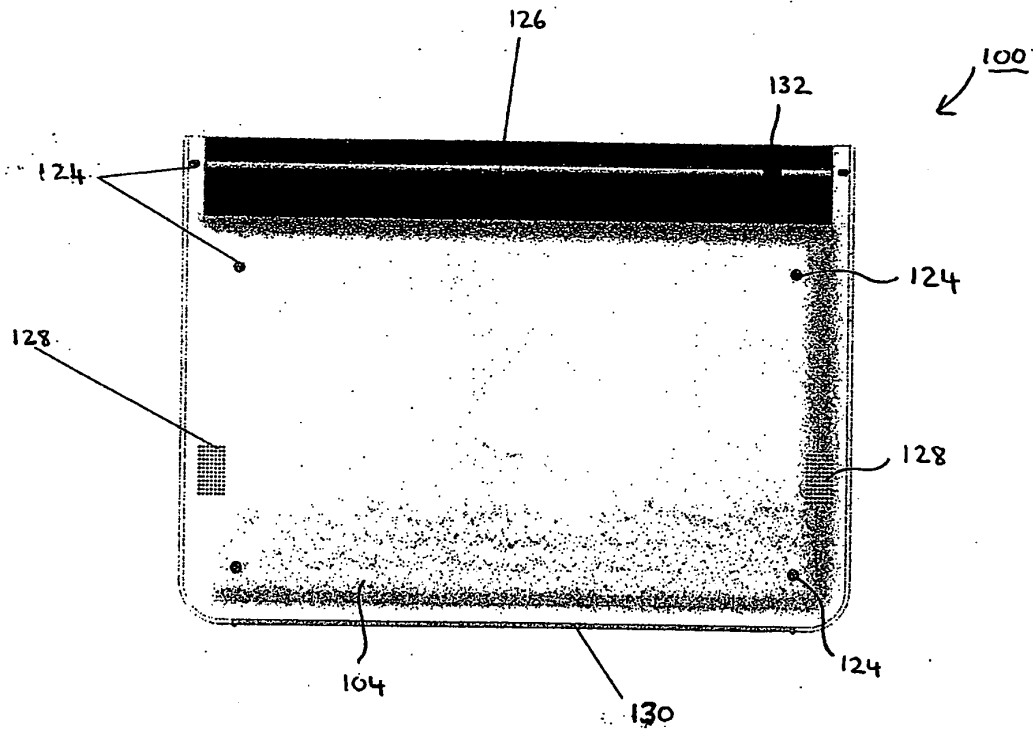


FIG. 3

4/25

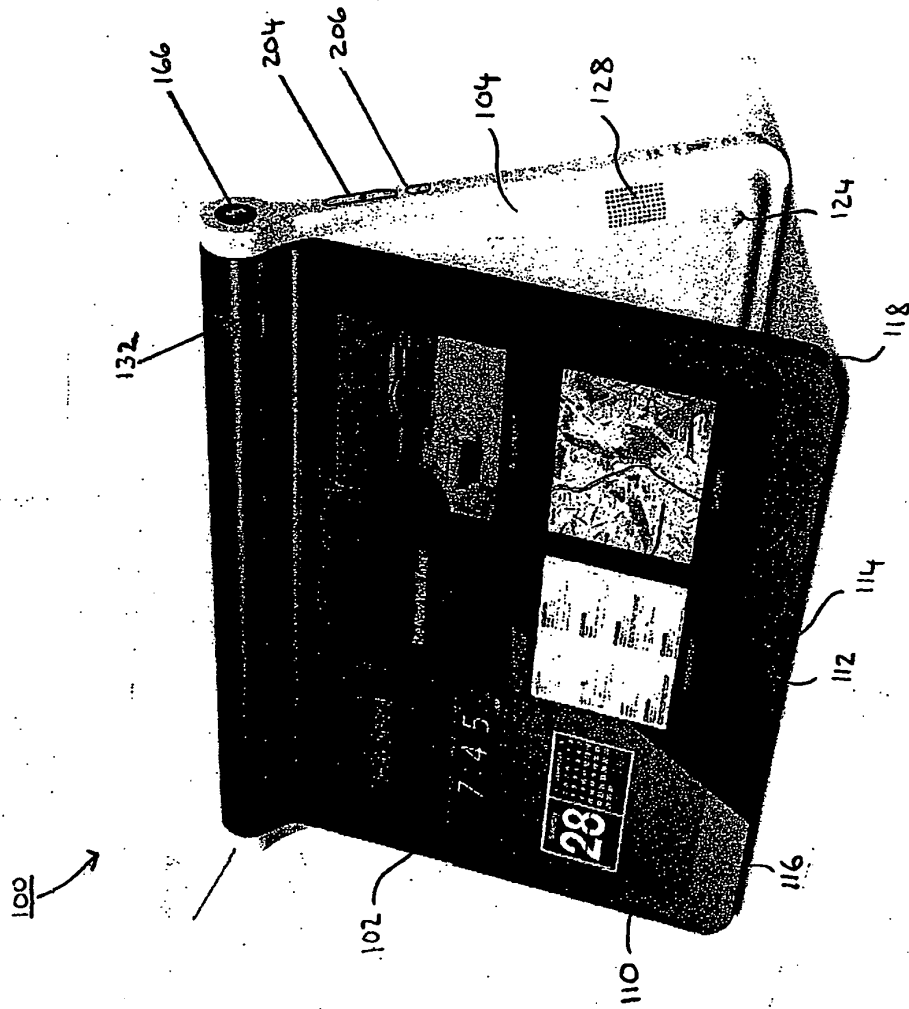


FIG. 4

5/25

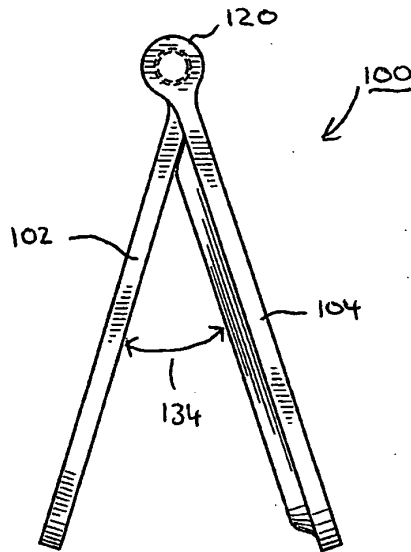


FIG. 5

6/25

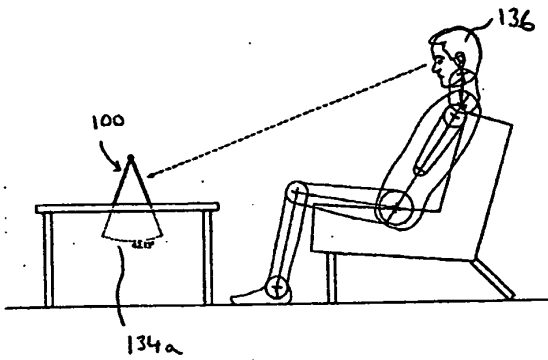


FIG. 6A

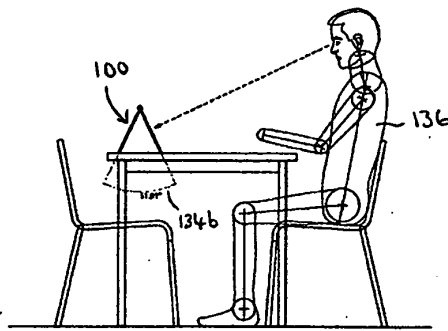


FIG. 6B

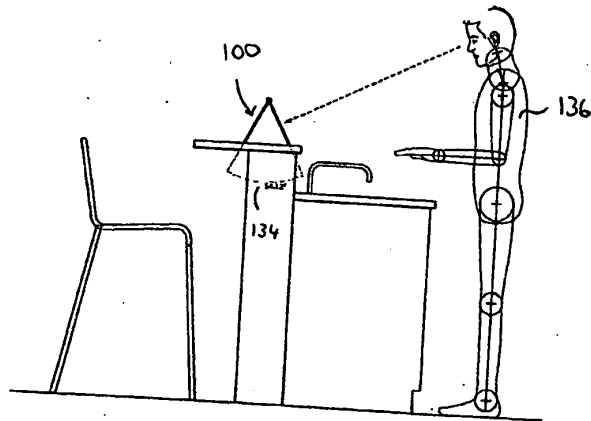


FIG. 6C

7/25

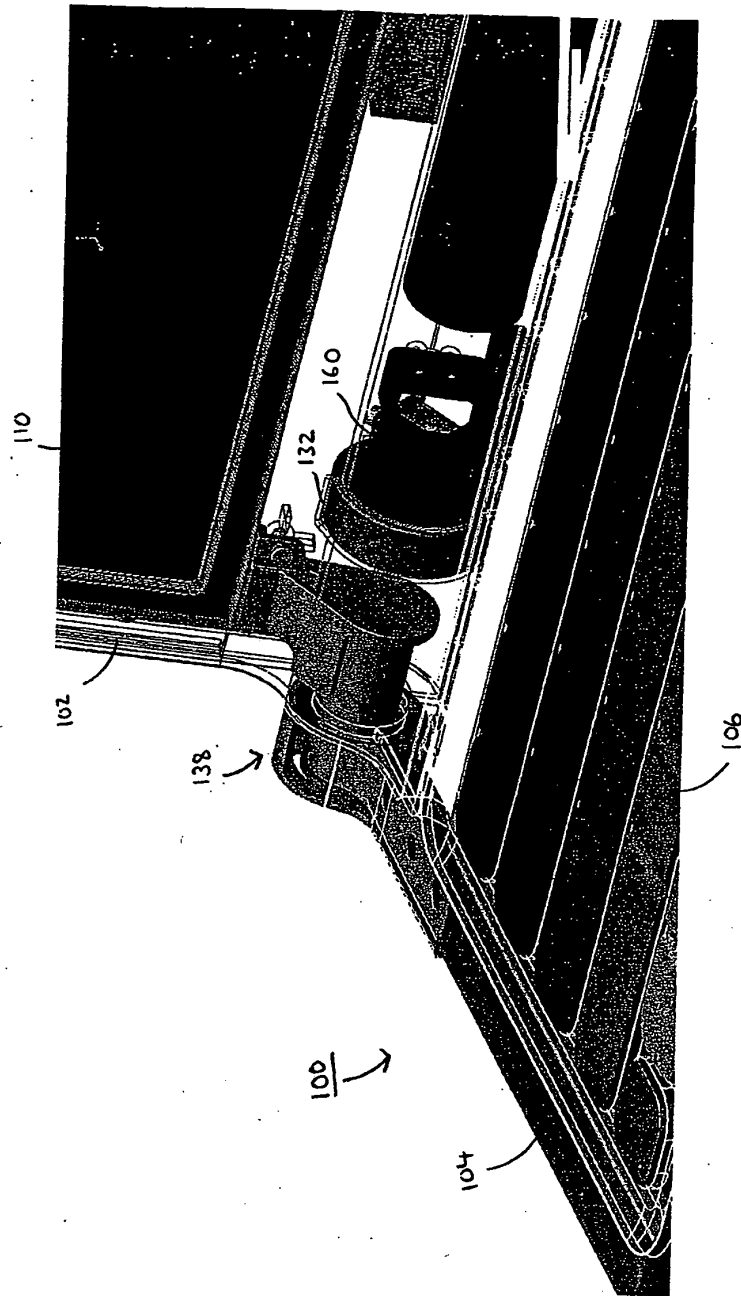


FIG. 7A

8/25

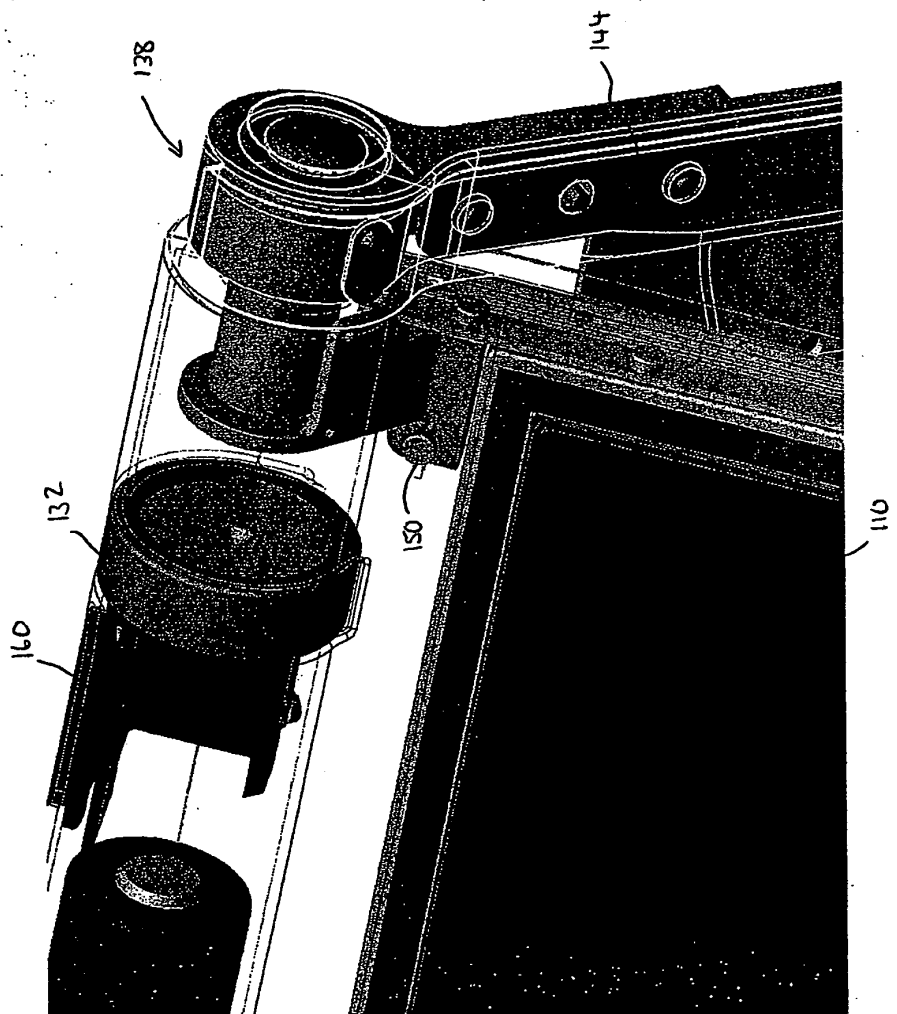


FIG. 7B

9/25

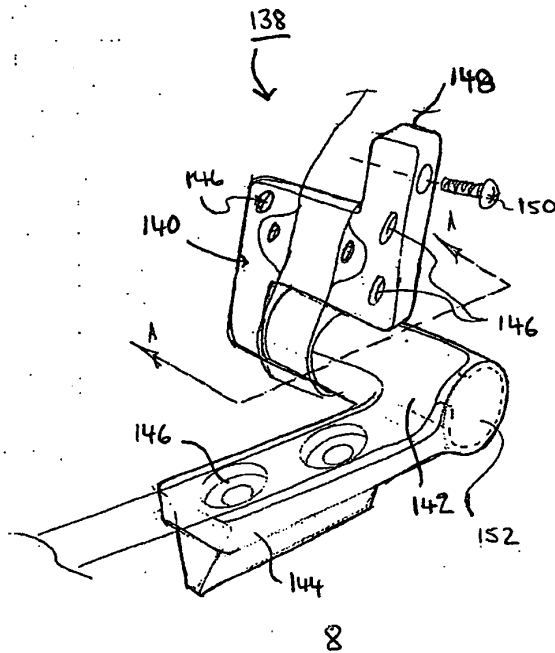


FIG. 8

10/25

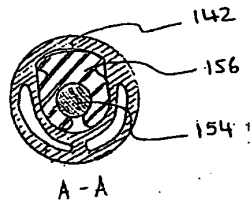


FIG 9

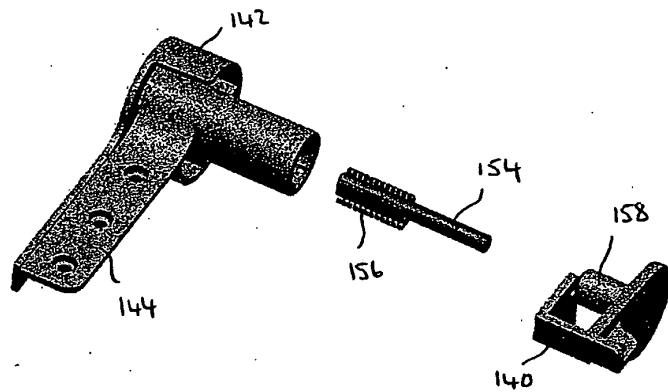


FIG. 10

11/25

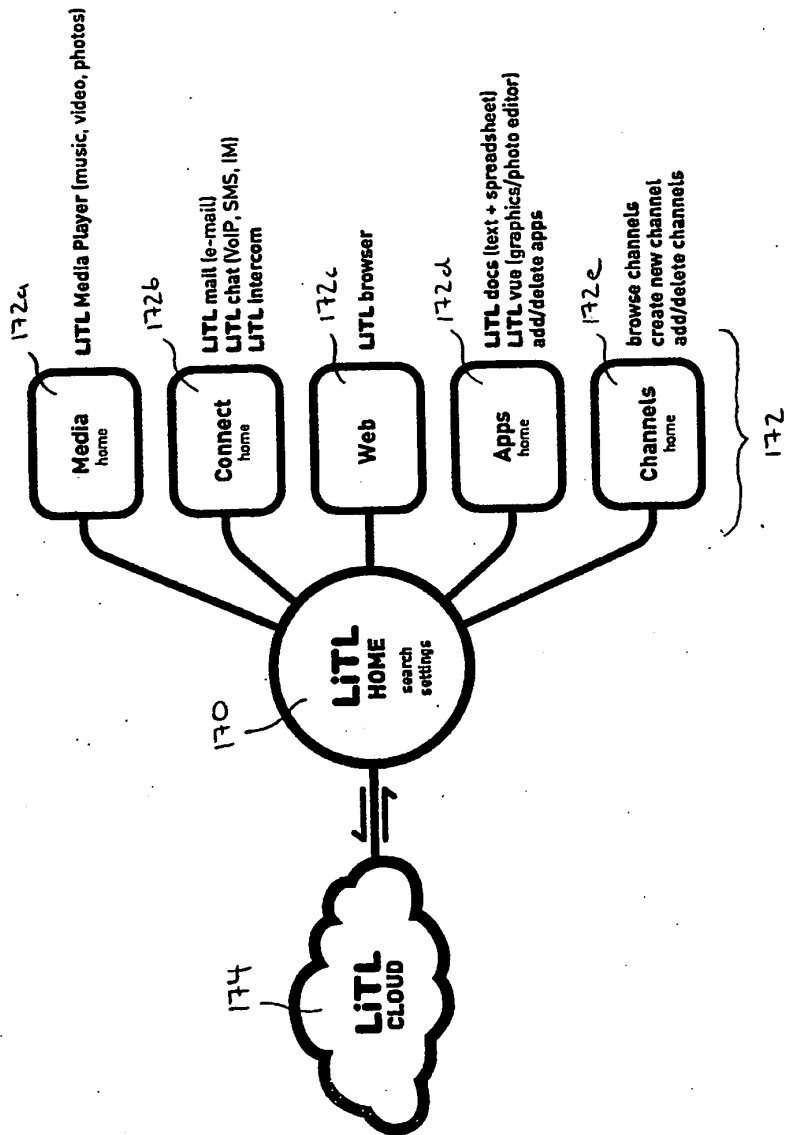


FIG. 11

12/25

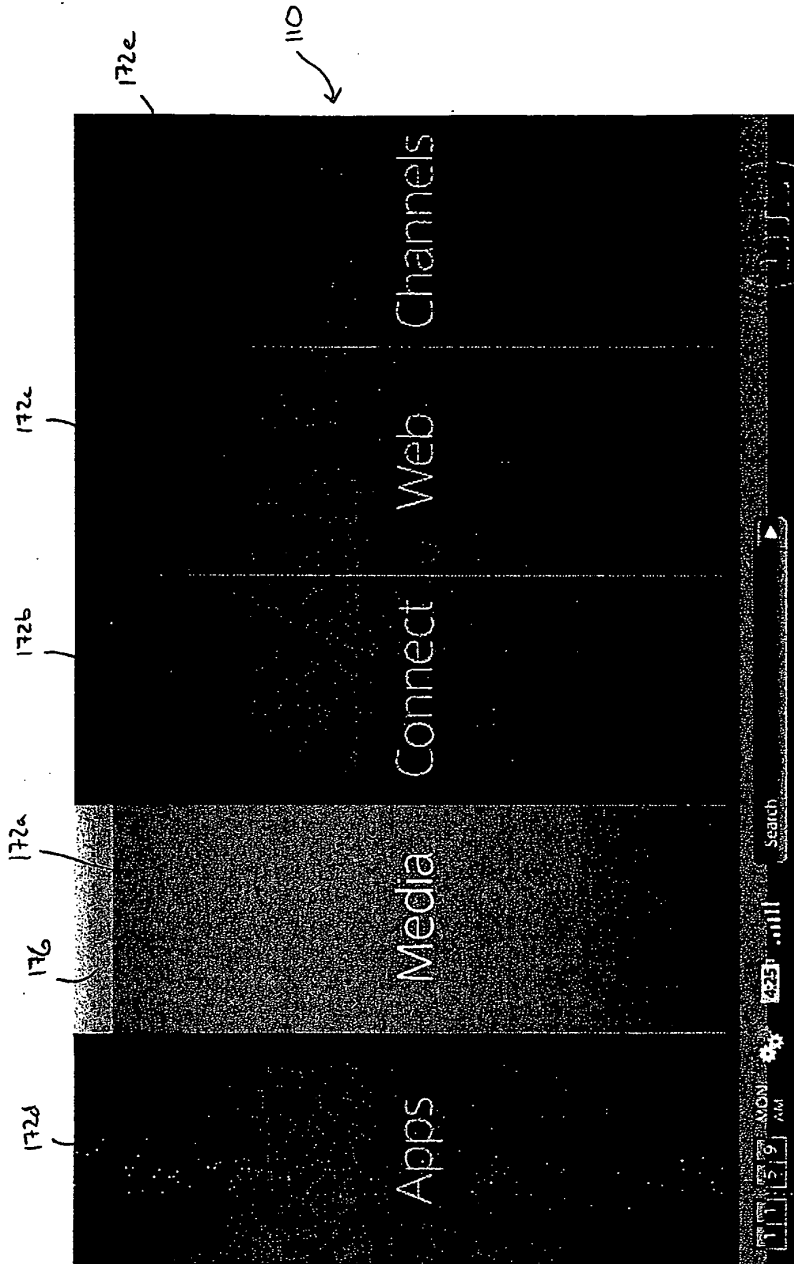


FIG. 12

13/25

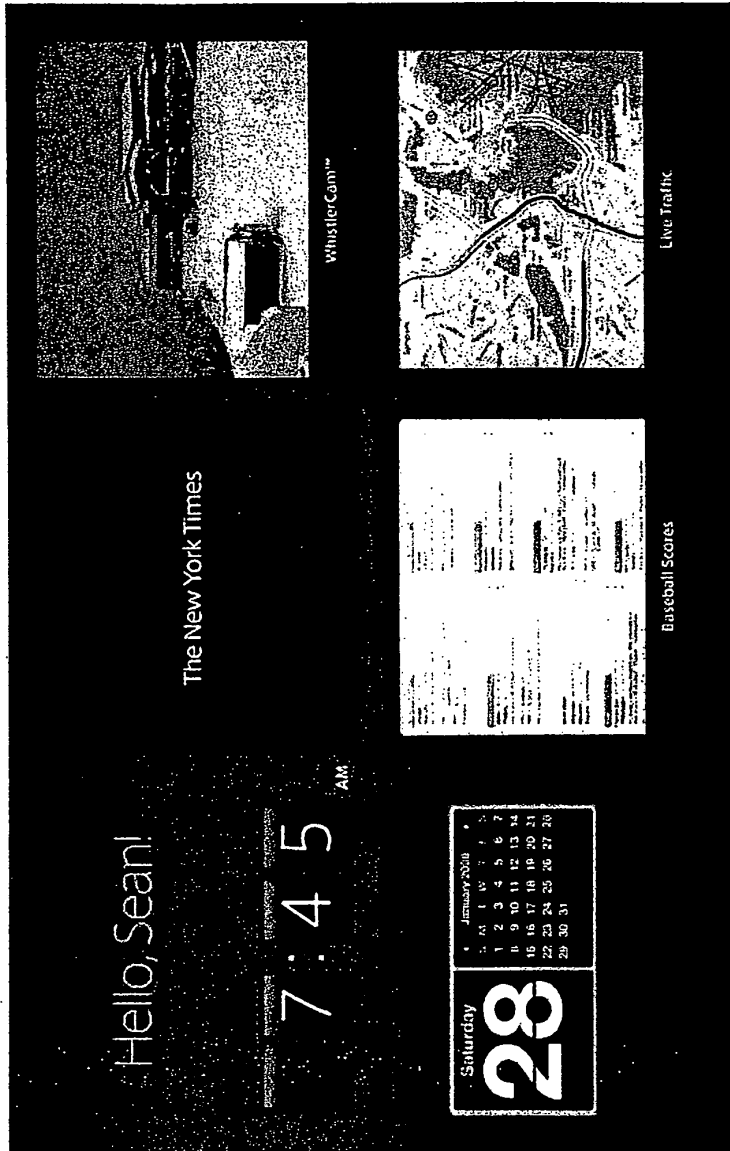


FIG. 13

14/25

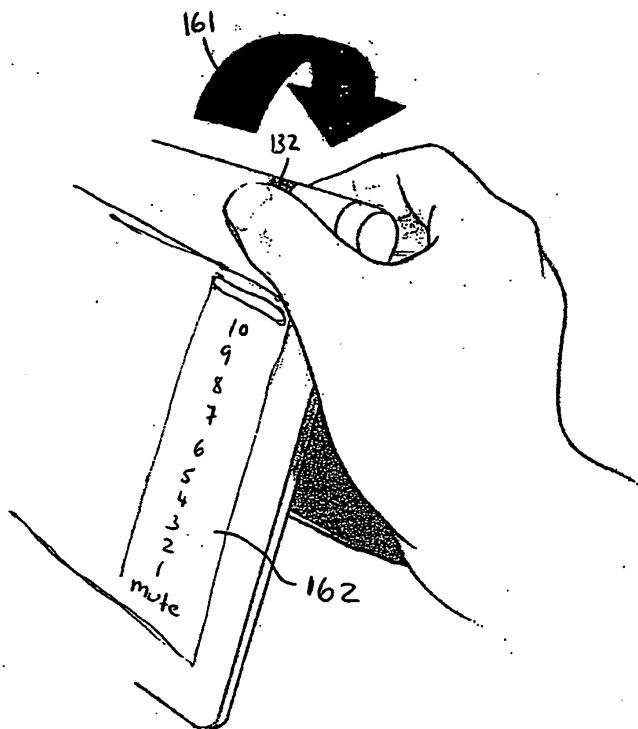


FIG. 14

15/25

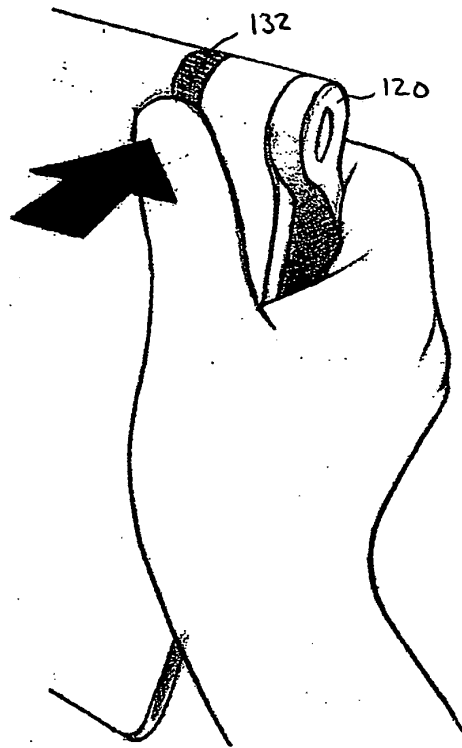


FIG. 15

16/25

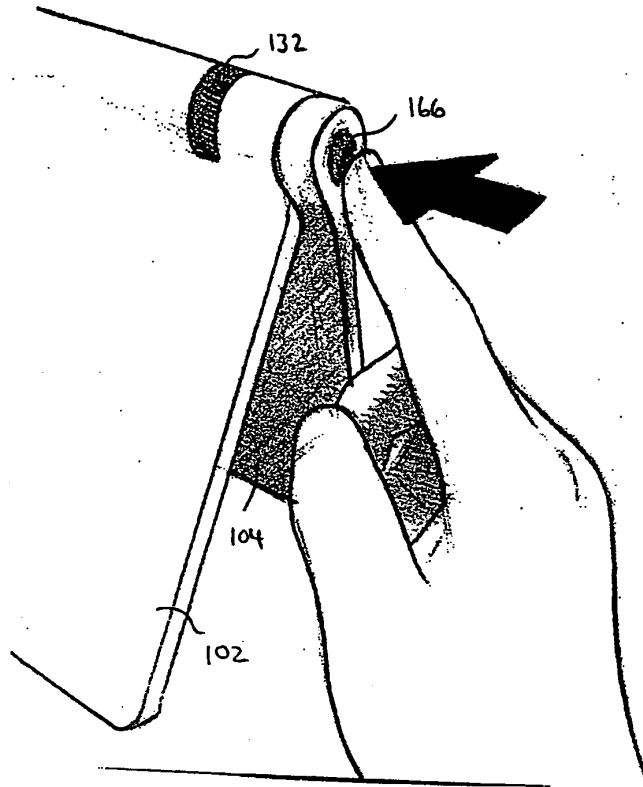


FIG. 16

17/25

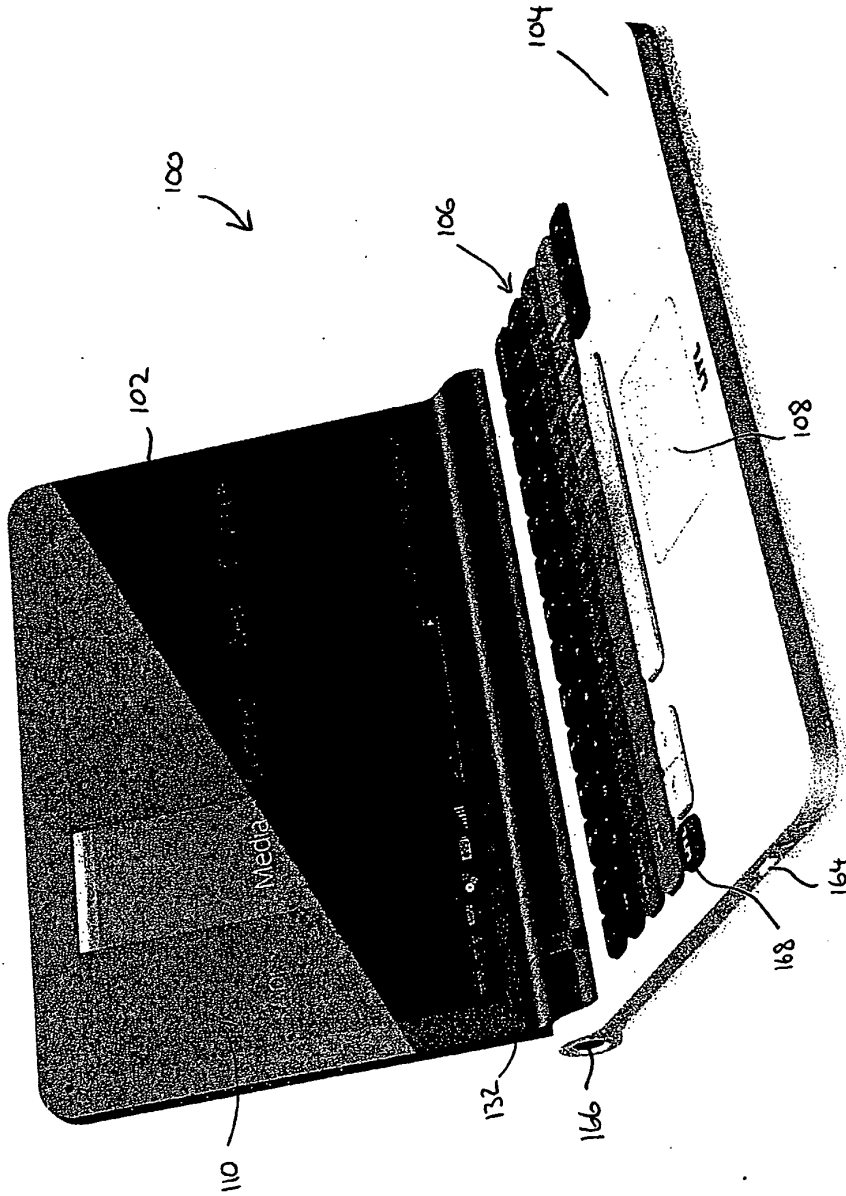


FIG. 17

18/25

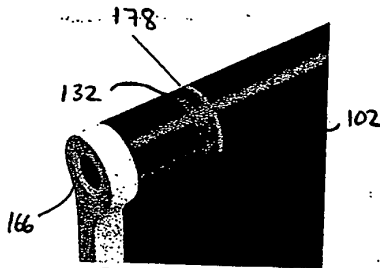


FIG 18

19/25

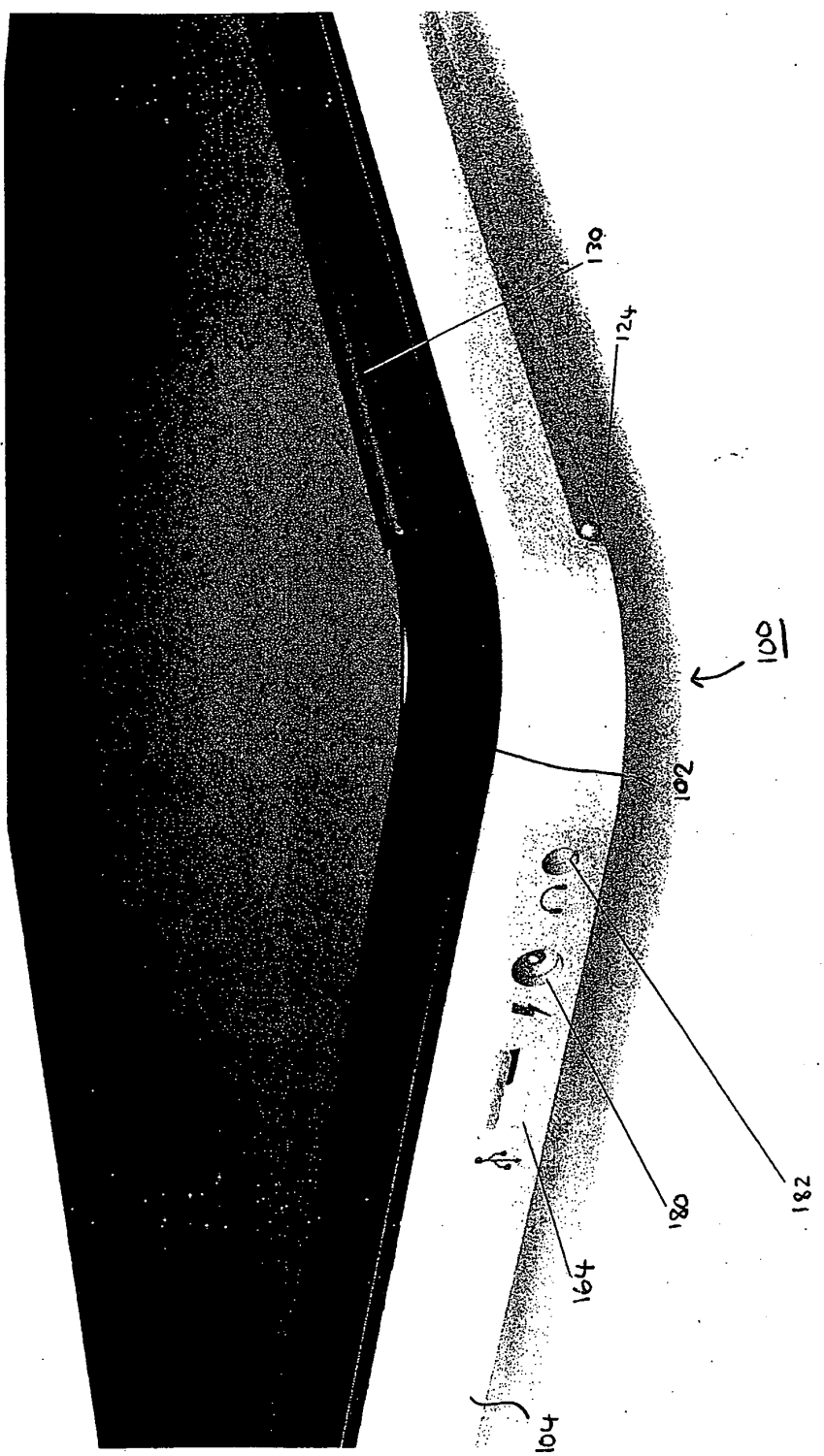


FIG. 19

20/25

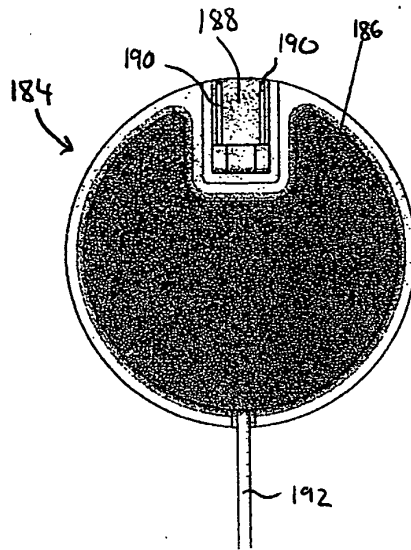


FIG 20

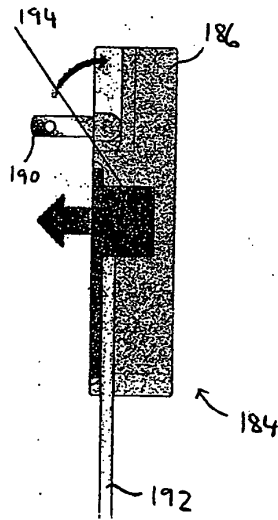


FIG 21

21/25

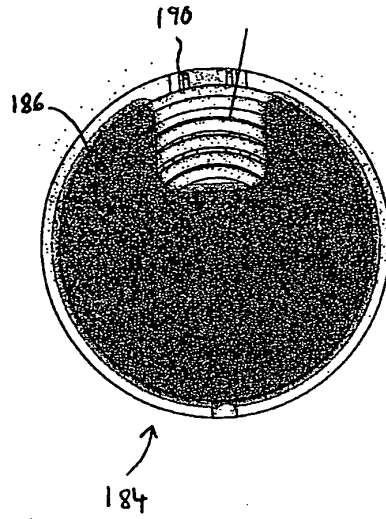


FIG. 22A

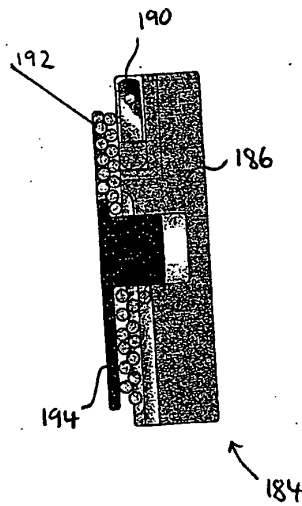


FIG. 22B

22/25

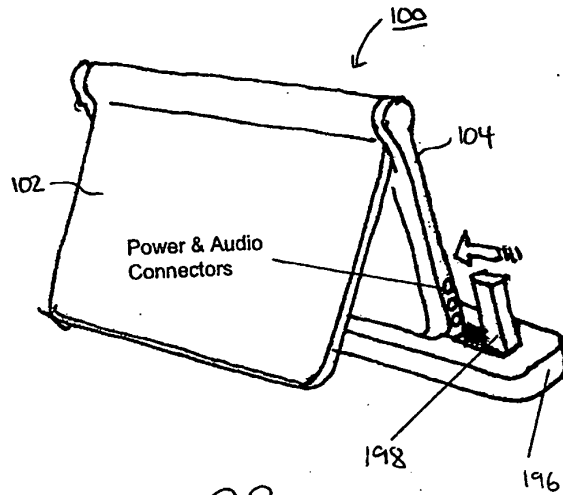


FIG 23

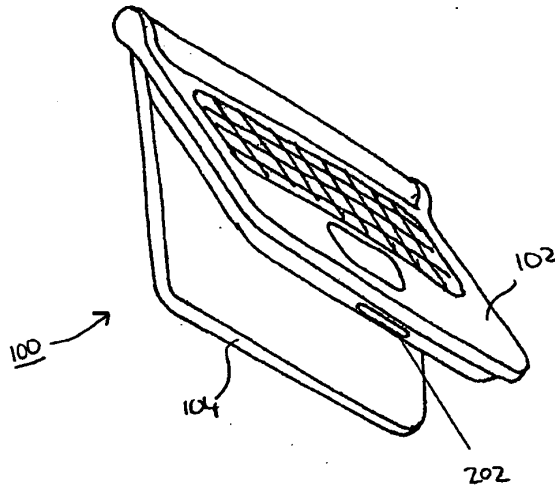


FIG. 24

23/25

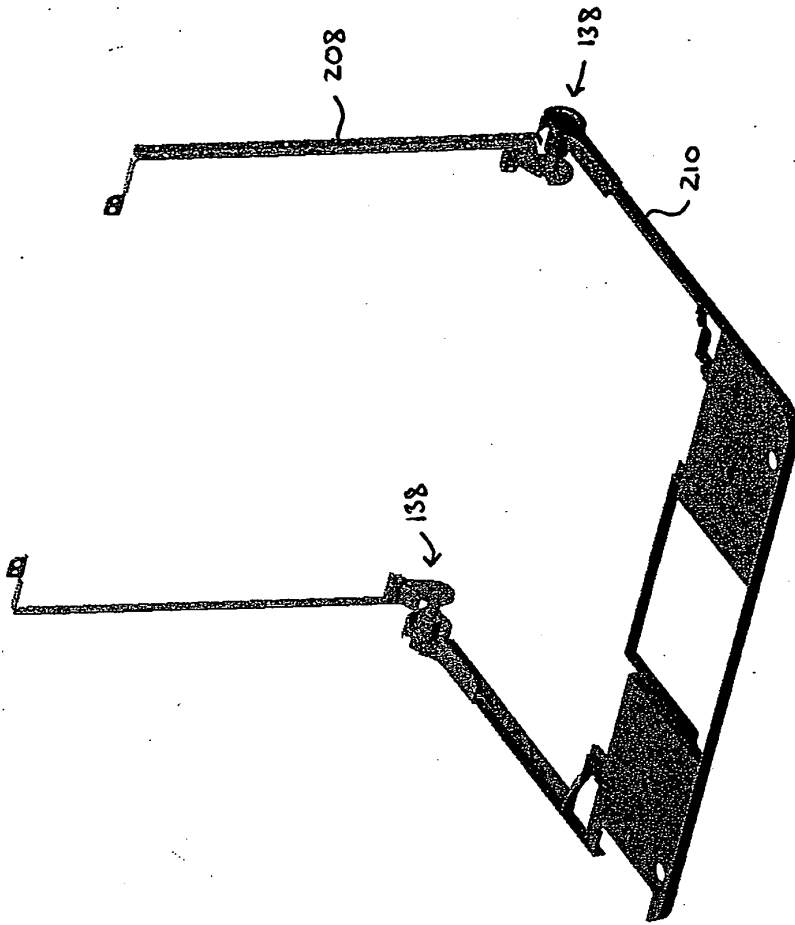


FIG. 25

24/25

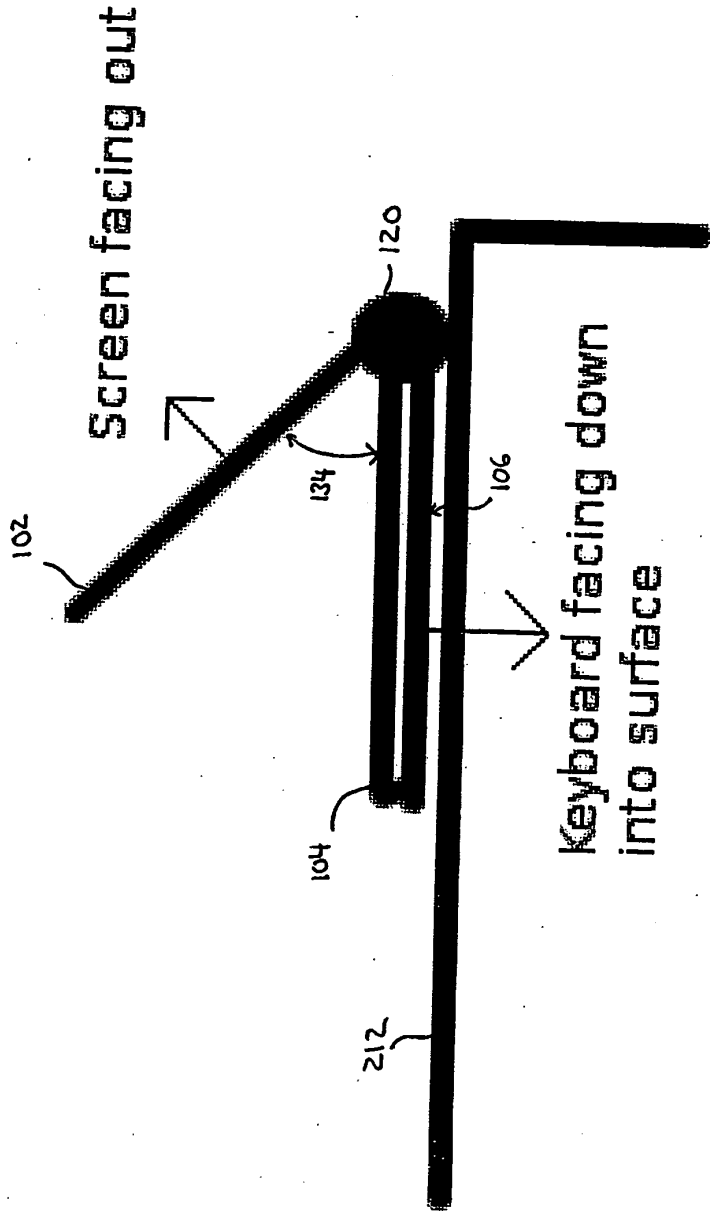


FIG. 26

25/25

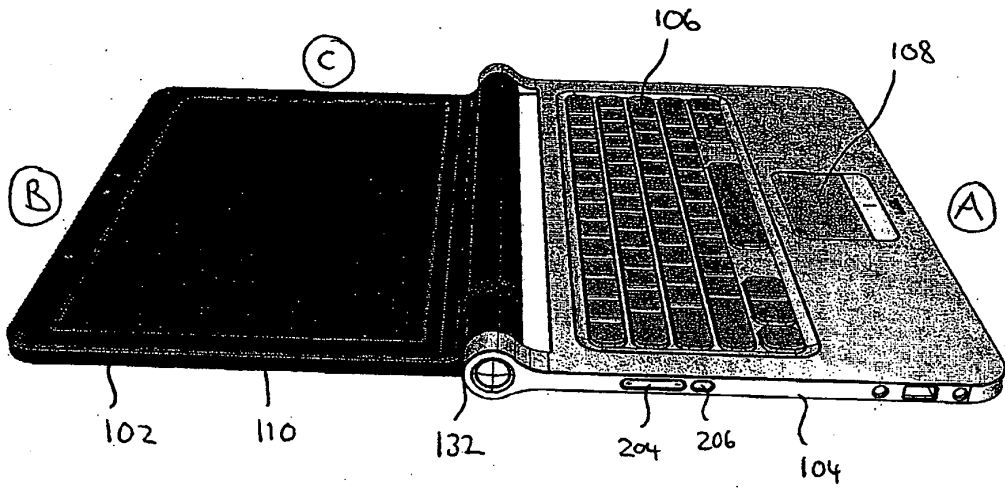


FIG. 27

Filing Date: 07/10/08

Approved for use through 7/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 12/170,951										
APPLICATION AS FILED – PART I					SMALL ENTITY		OR		OTHER THAN SMALL ENTITY						
(Column 1)		(Column 2)			(Column 3)		(Column 4)		(Column 5)						
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)		RATE (\$)		FEE (\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A				N/A		310			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))		N/A		N/A		N/A				N/A		510			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A				N/A		210			
TOTAL CLAIMS (37 CFR 1.16(j))		17		minus 20 =		X\$ 25				X\$50		0			
INDEPENDENT CLAIMS (37 CFR 1.16(h))		3		minus 3 =		X\$105				X\$210		0			
APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$260 (\$130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR													
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))								185				370			
								TOTAL		0		TOTAL		1030	
* If the difference in column 1 is less than zero, enter "0" in column 2.															
APPLICATION AS AMENDED – PART II					SMALL ENTITY		OR		OTHER THAN SMALL ENTITY						
(Column 1)		(Column 2)		(Column 3)		(Column 4)		(Column 5)		(Column 6)		(Column 7)			
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)		RATE (\$)		ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))		Minus **		=		X =				X =				
	Independent (37 CFR 1.16(h))		Minus ***		=		X =				X =				
	Application Size Fee (37 CFR 1.16(s))						N/A				N/A				
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						TOTAL ADD'T FEE				TOTAL ADD'T FEE				
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)		RATE (\$)		ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))		Minus **		=		X =				X =				
	Independent (37 CFR 1.16(h))		Minus ***		=		X =				X =				
	Application Size Fee (37 CFR 1.16(s))						N/A				N/A				
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						TOTAL ADD'T FEE				TOTAL ADD'T FEE				
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.</p>															

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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