

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.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	MAYG-1001-WO-USC4
		Application Number	
Title of Invention	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF		
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**

<input type="checkbox"/>	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.)
--------------------------	---

**Inventor Information:**

Inventor 1					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Walter	G.	Mayfield		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Houston	State/Province	TX	Country of Residence	US
Mailing Address of Inventor:					
Address 1	801 Crestbend Dr.				
Address 2					
City	Houston	State/Province	TX		
Postal Code	77042	Country	US		
Inventor 2					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Daniel	Martin	Valdez		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Kingwood	State/Province	TX	Country of Residence	US
Mailing Address of Inventor:					
Address 1	4007 Brook Shadow Dr.				
Address 2					
City	Kingwood	State/Province	TX		
Postal Code	77345-1268	Country	US		
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.					Add

**Correspondence Information:**

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).
---

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.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	MAYG-1001-WO-USC4
		Application Number	
Title of Invention	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF		

<input type="checkbox"/> An Address is being provided for the correspondence information of this application.			
Customer Number	87627		
Email Address		<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>

### Application Information:

Title of the Invention	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF		
Attorney Docket Number	MAYG-1001-WO-USC4	Small Entity Status Claimed	<input type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	13	Suggested Figure for Publication (if any)	

### Filing By Reference :

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

### Publication Information:

<input type="checkbox"/> Request Early Publication (Fee required at time of Request 37 CFR 1.219)
<input type="checkbox"/> <b>Request Not to Publish.</b> 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 <b>has not and will not</b> 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). Either enter 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	87627		

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.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	MAYG-1001-WO-USC4
		Application Number	
Title of Invention	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF		

### Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(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.

When referring to the current application, please leave the application number blank.

Prior Application Status	Pending	<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	15/597005	2017-05-16
Prior Application Status	Pending	<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
15/597005	Continuation of	14/343665	2014-07-14
Prior Application Status	Pending	<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
14/343665	a 371 of international	PCT/US2012/049562	2012-08-03
Prior Application Status	Expired	<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
PCT/US2012/049562	Claims benefit of provisional	61/661090	2012-06-18
Prior Application Status	Expired	<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
PCT/US2012/049562	Claims benefit of provisional	61/619229	2012-04-02
Prior Application Status	Expired	<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
PCT/US2012/049562	Claims benefit of provisional	61/592344	2012-01-30
Prior Application Status	Expired	<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
PCT/US2012/049562	Claims benefit of provisional	61/576834	2011-12-16
Prior Application Status	Expired	<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
PCT/US2012/049562	Claims benefit of provisional	61/569093	2011-12-09
Prior Application Status	Expired	<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
PCT/US2012/049562	Claims benefit of provisional	61/568031	2011-12-07
Prior Application Status	Expired	<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
PCT/US2012/049562	Claims benefit of provisional	61/561087	2011-11-17
Prior Application Status	Expired	<a href="#">Remove</a>	

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.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	MAYG-1001-WO-USC4
		Application Number	
Title of Invention	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF		

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
PCT/US2012/049562	Claims benefit of provisional	61/555310	2011-11-03
Prior Application Status	Expired		<input type="button" value="Remove"/>
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
PCT/US2012/049562	Claims benefit of provisional	61/515752	2011-08-05

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

### Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. 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. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)<sup>i</sup> the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country <sup>i</sup>	Filing Date (YYYY-MM-DD)	Access Code <sup>i</sup> (if applicable)
			<input type="button" value="Remove"/>

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

### Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

### Authorization to Permit Access:

Authorization to Permit Access to the Instant Application by the Participating Offices

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.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	MAYG-1001-WO-USC4
		Application Number	
Title of Invention	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF		

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

## Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

### Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

Assignee
  Legal Representative under 35 U.S.C. 117
  Joint Inventor  
 Person to whom the inventor is obligated to assign.
  Person who shows sufficient proprietary interest

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor :

If the Applicant is an Organization check here.

Organization Name GUI GLOBAL PRODUCTS, LTD.

### Mailing Address Information For Applicant:

Address 1	1819 St. James Place		
Address 2			
City	Houston	State/Province	TX
Country	US	Postal Code	77056
Phone Number		Fax Number	

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.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	MAYG-1001-WO-USC4
		Application Number	
Title of Invention	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF		

Email Address	
---------------	--

Additional Applicant Data may be generated within this form by selecting the Add button.

## Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

<b>Assignee 1</b>			
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.			
If the Assignee or Non-Applicant Assignee is an Organization check here. <input checked="" type="checkbox"/>			
Organization Name	GUI GLOBAL PRODUCTS, LTD.		
<b>Mailing Address Information For Assignee including Non-Applicant Assignee:</b>			
Address 1	1819 St. James Place		
Address 2			
City	Houston	State/Province	TX
Country <sup>i</sup>	US	Postal Code	77056
Phone Number		Fax Number	
Email Address			
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.			

## Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.					
Signature	/Gene L. Tyler/			Date (YYYY-MM-DD)	2017-12-22
First Name	Gene L.	Last Name	Tyler	Registration Number	35395
Additional Signature may be generated within this form by selecting the Add button.					

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.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	MAYG-1001-WO-USC4
		Application Number	
Title of Invention	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF		

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.**

## 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.



**U.S. NON-PROVISIONAL APPLICATION**  
**FOR**  
**APPARATUS FOR CLEANING VIEW SCREENS**  
**AND LENSES AND METHOD FOR THE USE THEREOF**

**INVENTOR(S):**     **Walter G. Mayfield**  
                          **Daniel M. Valdez**

**Assignee:**           **GUI Global Products, Ltd.**  
                          **1819 St. James Place**  
                          **Houston, Texas 77056**  
                          **United States of America**

**CROSS-REFERENCE TO RELATED APPLICATIONS**

[0001] This application is a continuation of U.S. Patent Application Serial No. 15/597005, filed May 16, 2017, which is a continuation of U.S. Application Serial No.: 14/343665, filed July 14, 2014, which is a national stage entry of PCT application No.: PCT/US2012/049562, filed, August 3, 2012, which claims priority from U.S. Provisional Application Serial No.: 61/661090, filed June 18, 2012, and U.S. Provisional Application Serial No.: 61/619,229; and U.S. Provisional Application Serial No.: 61/592344, filed January 30, 2012; and U.S. Provisional Application Serial No.: 61/576834, filed December 16, 2011; and U.S. Provisional Application Serial No.: 61/569093, filed December 9, 2011; and U.S. Provisional Application Serial No.: 61/568031, filed December 7, 2011; and U.S. Provisional Application Serial No.: 61/561087, filed November 17, 2011; and U.S. Provisional Application Serial No.: 61/555310, filed November 3, 2011; and U.S. Provisional Application Serial No.: 61/515752, filed August 5, 2011, the entire disclosure of which is incorporated herein by reference in its entirety.

**BACKGROUND OF THE INVENTION****1. Field of the Invention**

[0002] The invention relates to an apparatus for cleaning view screens. The invention particularly relates to such an apparatus used with electrical devices.

**2. Background of the Art**

[0003] Cleaning lenses has long been an issue for the users of devices employing them. For example, telescopes, glasses, binoculars, and cameras have long been used and keeping the lenses of such devices clean has been the subject of many creative efforts.

[0004] More recently, there are new devices to clean. With the advent of portable electronic devices, it has become common to observe such devices being used in many public venues. Such venues include coffee shops, restaurants, shopping malls, and the like. These devices can be seen in just about any public setting.

[0005] Many of the portable electronic devices have a view screen for displaying text. Some of these devices also are used for displaying photographs and in some cases movies. The newest of these devices display photographs and movies in high definition.

[0006] While the view screens are usually rugged, and often covered with a protective film or screen, they are still subject to becoming dirty. Oils from human skin, environmental

liquids and powders, and even airborne aerosols and dust can collect on a view screen and make it difficult to use.

[0007] Cleaning the view screen of a portable electronic device can be problematic. It is often not desirable to use materials that are readily available to clean the view screen. For example, paper towels and paper napkins or sometimes composed of materials that may scratch and thereby damage a view screen.

[0008] Carrying appropriate cleaning materials is sometimes a problem. Cleaning devices are sometimes too bulky to be comfortably carried. In their rush to get ready in the morning, it is easy for users of electronic devices to forget or overlook such preparations for their day.

[0009] It would be desirable in the art of manufacturing portable electronic devices to incorporate into such devices the cleaning apparatus. It would also be desirable in the art of providing accessories for portable electronic devices to provide a cleaning component that can be carried on an electronic device case.

#### **SUMMARY OF THE INVENTION**

[00010] In one aspect, the invention is a method of cleaning a view screen of an electronic device having at least one case comprising wiping the view screen with a cleaning component wherein the cleaning component is configured to selectively couple to the at least one case using a magnetic attractive force.

[00011] In another aspect, the invention is a cleaning component for use on an electronic device view screen comprising a cleaning material covering at least one surface of a ferromagnetic or ferrimagnetic substrate wherein the cleaning component has a maximum thickness of 1.5 cm.

[00012] In still another aspect, the invention is a small electronic device comprising a case, a view screen, and internal electronic components wherein the view screen and internal electronic components are mounted within the case and the view screen is externally visible in at least one configuration of the case. Also, the case has a surface that is substantially diamagnetic and at least a part of the surface of the case has been configured to receive a cleaning component wherein: the cleaning component is configured to selectively couple to the at least one part of the surface of the case that has been configured to receive the cleaning component; the at least one part of the surface of the case that has been configured to receive the cleaning component is ferromagnetic or ferrimagnetic or overlays a ferromagnetic or

ferrimagnetic material; and the cleaning component comprises a cleaning material covering at least one surface of a ferromagnetic or ferrimagnetic substrate.

**[00013]** Another aspect of the invention is a second case, that functions to protect an electronic device's primary case, and has a surface that is substantially diamagnetic and at least a part of the surface of the second case has been configured to receive a cleaning component wherein: the cleaning component is configured to selectively couple to the at least one part of the surface of the second case that has been configured to receive the cleaning component; the at least one part of the surface of the second case that has been configured to receive the cleaning component is ferromagnetic or ferrimagnetic or overlays a ferromagnetic or ferrimagnetic material; and the cleaning component comprises a cleaning material covering at least one surface of a ferromagnetic or ferrimagnetic substrate.

**[00014]** In still another aspect, the invention is a method of cleaning a view screen or a lens for use with a mechanical or non-electronic device having a view screen or a lens comprising wiping the view screen or lens with a cleaning component wherein the cleaning component is configured to selectively couple to the at least one part of the mechanical or non-electrical device using a magnetic attractive force.

**[00015]** In yet another aspect, the invention is a method of cleaning a view screen or a lens using a cleaning component wherein the cleaning component is configured to adhere to portable object different from the object having the view screen or lens.

**[00016]** Another aspect of the invention is employing a cleaning component having a magnet element to activate or deactivate a magnetic switch.

**[00017]** In still another aspect, the invention is a cleaning component having a cleaning surface that is replaceable and held in place within the cleaning component with a tacky adhesive wherein the tacky adhesive is directly on the surface of the non-cleaning surface or the tacky adhesive is in the form of a double sided tape.

**[00018]** In yet another aspect, the invention is a cleaning component having an external cover for protecting one both sides of a cleaning material wherein the external cover is reversible so that it may be folded over to expose the cleaning surface.

**[00019]** In still another aspect, the invention is a case for an electronic device having a magnetic switch, and in the area of the case over the magnetic switch, a recessed area that functions to facilitate a cleaning component having a magnet moving past the switch in order to activate or deactivate the switch.

**[00020]** Another aspect of the invention is a cleaning system having at least one element being a piece of clothing selected from the group consisting of a hat, helmet, sweatband or

other headgear; a jacket or coat; a shirt or top; a skirt or pants; and a shoe or boot, wherein the piece of clothing is configured to accept a cleaning component and the cleaning component is held in place, at least in part, using a magnet.

**[00021]** In yet another aspect, the invention may be cleaning system comprising a cleaning component and an area on a device case configured to receive the cleaning component wherein the area of the device case configured to receive the cleaning component and the cleaning component may be used as a game wherein the cleaning component is tossed at the device case configured to receive the cleaning component.

**[00022]** In still another aspect, the invention is a stylus configured to receive a cleaning component.

**[00023]** Another aspect of the invention is a cleaning system having at least one element being an accessory selected from the group consisting of a purse, wallet, computer case, gun case, glasses strap, gloves, backpack, and a belt, wherein the piece of clothing is configured to accept a cleaning component and the cleaning component is held in place, at least in part, using a magnet.

**[00024]** Yet another aspect of the invention is a cleaning component for use on an electronic device view screen comprising a cleaning material covering at least one surface of a ferromagnetic or ferrimagnetic substrate wherein the cleaning component also includes a tab. In one embodiment, the tab is elongated so that it can function as a stand to hold the electronic device upright.

**[00025]** Another aspect of the invention is a cleaning device having a hard surface and cleaning surface and including at least one ferromagnetic or ferrimagnetic material within the cleaning device wherein the at least one ferromagnetic or ferrimagnetic material may function to actuate a power switch or sensor that is capable of being actuated using a magnet.

**[00026]** Another aspect of the invention is a cleaning device having additional functionality such as a remote control, laser pointer or the like.

**[00027]** In one aspect, the invention is a switching device for use with a portable electronic device having a view screen and at least one switch that can be activated or de-activated by introducing a magnetic field to the at least one switch wherein the switching device has at least one magnet and at least one surface that is non-abrasive to the surface of the view screen.

**[00028]** In another aspect, the invention is a switching device for an electronic apparatus that can be activated or deactivated by employing a magnet, the switching device having (i) at least one magnet, (ii) a body surrounding the magnet, and (iii) at least one surface configured

to contact any surface of the device, including the view screen; wherein the surface configured to contact the electronic apparatus is non-abrasive to the view screen of the apparatus.

[00029] In another aspect, the invention is a method of conserving power when using a portable electronic device having a view screen and at least one switch that can be activated or de-activated by introducing a magnetic field to the at least one switch wherein the switching device has at least one magnet and at least one surface that is non-abrasive to the surface of the view screen, wherein the method includes using the switching device to turn the portable electronic device off when the portable electronic device is not in actual use and then on when the portable electronic device is needed.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

[00030] The above and other features and advantages of the present invention will become more apparent by describing in detail embodiments thereof with reference to the attached drawings in which:

**FIG. 1A** illustrates the top view of an embodiment of a cleaning component;

**FIG. 1B** illustrate the side view of an embodiment of a cleaning component;

**FIG. 2A** illustrates the top view of a second embodiment of a cleaning component;

**FIG. 2B** illustrate the side view of a second embodiment of a cleaning component; and

**FIG. 2C** illustrates an embodiment similar to that of **FIG. 2B**, but having a tab;

**FIG. 3** illustrates a computer case configured to receive a cleaning component;

**FIG. 4** illustrates a flip type phone case configured to receive a cleaning component;

**FIG. 5A** illustrates a lateral type phone case configured to receive a cleaning component;

**FIG. 5B** illustrates the interaction of two components of the lateral type phone case configured to receive a cleaning component;

**FIG. 6** illustrates a cleaning component with a single offset magnet;

**FIG. 7** illustrates a cleaning component having multiple layers;

**FIG. 8** illustrates a cleaning component used with a set of binoculars;

**FIG. 9** illustrates a cleaning component employing a structural feature to enhance adhesion;

**FIG. 10A** illustrates a cleaning component employing a replaceable cleaning surface held in place with a tacky adhesive;

**FIG. 10B** illustrates the cleaning component of **FIG. 10B** wherein the sticky adhesive is in the form of a double sided tape;

**FIG. 11A** illustrates a cleaning component employing a revisable cover;

**FIG. 11B** illustrates a the cleaning component of **FIG. 11A** where the cleaning surface is not attached to the cover;

**FIG. 11C** illustrates a the cleaning component of **FIG. 11A** where the cleaning surface is detachable;

**FIG. 12** illustrates a cleaning component including a brush;

**FIG.13A** illustrates a cap having a cleaning component located on the bill of the cap;

**FIG.13B** illustrates a bottom view of the bill of the cap having a cleaning component located on the bill of the cap;

**FIG.13C** illustrates a bottom view of the bill of the cap having a cleaning component located on the bill of the cap with the cleaning component in place;

**FIG. 14A** illustrates a cleaning component having a “quick release” capability;

**FIG. 14B** illustrates a cleaning component having a “quick release” capability with cleaning component in the released state;

**FIG. 15** illustrates a stylus for use with a cleaning component;

**FIG. 16A** illustrates a purse having a cleaning component attached thereto;

**FIG. 16B** illustrates an alternative embodiment of the purse having a cleaning component attached thereto;

**FIG. 17A** illustrates a top view of a cleaning component having a tab and a magnetic tab hold-down;

**FIG. 17B** illustrates a side view of a cleaning component having a tab and a magnetic tab hold-down;

**FIG. 17C** illustrates a side view of a cleaning component having a tab and a magnetic tab hold-down with the tab in the raised position;

**FIG. 18** illustrates a side view of a cleaning component having a tab wherein the tab is elongated and functions as a stand for an electronic device;

**FIG. 19A** illustrates a top view of a cleaning component which may also be a switch for electronic devices having a magnetically activated switch or sensor;

**FIG. 19B** illustrates a side view of a cleaning component which may also be a switch for electronic devices having a magnetically activated switch or sensor;

**FIG. 20** illustrates a cleaning component which may also include a powered devices such as a remote control, laser pointer or the like;

**FIG. 21** illustrates a combination cleaner and glasses holder that is also buoyant; and  
**FIG. 22** is a photograph illustrating an example of a device as illustrated in **FIG. 21** preventing a pair of glasses from sinking;  
**FIG. 23** is an illustration of an embodiment which may be used to affix objects to clothing.  
**FIG. 24** is an illustration of a tablet computer and a switching device of the application;  
**FIG. 25** illustrates a side view of a the switching device in **FIG. 24**; and  
**FIG. 26** is a photograph of a trademarked doll used as a component of the switching device of the disclosure, perched on an APPLE iPad.



**DESCRIPTION OF THE PREFERRED EMBODIMENTS**

[00031] One embodiment of the invention is a method of cleaning a view screen of an electronic device having at least one case comprising wiping the view screen with a cleaning component wherein: the cleaning component is configured to selectively couple to the at least one case using a magnetic attractive force. For the purposes of this application, the term “at least one case” means the primary case used by a manufacturer to hold and protect the individual electronic components of which an electronic device is composed, but it can also mean a protective case that functions to protect the primary case. For example, a smartphone generally comprises electronics disposed within a rigid shell like case. This would be the primary case. There are available protective cases, often made of leather, rubber, and/or rigid flexible plastic, that serve to prevent scratches and blemishes on the primary case and sometimes to impart a bit of shock resistance as well.

[00032] The term electronic device means such devices having a view screen including, but not limited to cell phones, smartphones, some cameras, some telescopes, some weapons scopes, tablet computers, laptop computers, DVD players, and the like. Other examples include computer monitors, televisions, laboratory apparatus (both portable and non portable), and the like. The method of this application may be used with any electronic device having a view screen.

[00033] The term “selectively couple” describes the process wherein a cleaning component of the disclosure is applied to an electronic device and adheres to it because of a magnetic force. In one embodiment of the disclosure, there is sufficient magnetic force to allow the cleaning component to remain in place despite casual movements of the electronic device, but to still be easily removed by a human operator.

[00034] Turning to **Figs. 1A** and **1B**, a top and side view of a round cleaning component (**100**) are shown. As can be observed, the cleaning component is covered with a cleaner material (**101**). Cleaner materials useful with the method and apparatus of the application include, but are not limited to fabrics. Exemplary fabrics include microfiber cloths, open-end weave microfiber cloths, double layer cloths wherein the outer layer which would make contact with a view screen is a microfiber cloth, and combinations thereof. For the purposes of this application, the term “fabrics” is defined to further include non-plant materials such as animal skins and/or cloth prepared using synthetic materials or animal materials. In at least one embodiment, the fabric may be a shammy (a.k.a. chamois). In another preferred embodiment, the cleaning material may be the material commonly known in the art as a Micro Shamois Cloth such as is available from iKlear. Any cleaning material that can be used

to clean a view screen that does not cause excessive wear or abrasions may be used with the method and apparatus of the application. A ferromagnetic or ferrimagnetic substrate (**102**) is also shown.

[00035] Turning to **Figs. 2A and 2B**, a side view of the cleaning component, it can be seen that disposed within the cleaner material (**201**) is a ferromagnetic or ferrimagnetic substrate (**202**). The ferromagnetic or ferrimagnetic substrate may be made of iron or other conventional ferrimagnetic and ferrimagnetic materials. It may also be a composite. Exemplary composites include combinations of aluminum, nickel, and cobalt compound with iron. Such composites may be made by sintering metals or by mixing the metallic components with a resin and injection molding. Mixtures of iron oxide and ceramic components such as barium and strontium carbonate may be used to make ceramic magnets for use as the ferromagnetic or ferrimagnetic substrates useful with the application. For the purposes of this application, rare earth magnets, such as but not limited to samarium and neodymium based magnets, are ferrimagnetic and ferrimagnetic materials and may be used to prepare the ferromagnetic or ferrimagnetic substrates useful with the application. Any magnetic material or material that is attracted to magnets may be used to prepare the ferromagnetic or ferrimagnetic substrates useful with the application.

[00036] In another embodiment, the invention is a cleaning component for use on an electronic device view screen comprising a cleaning material covering at least one surface of a ferromagnetic or ferrimagnetic substrate wherein the cleaning component has a maximum thickness of 1.5 cm. Turning to **Figs. 2A and 2B**, a top and side view of a rectangular cleaning component is shown. In this embodiment, a cleaner material (**201**) is shown surrounding, on both sides, a ferromagnetic or ferrimagnetic substrate (**202**) that is rectangular in shape.

[00037] In some embodiments, the cleaning material is present only on one side of the substrate. On the other side of the substrate is a different material that is selected to facilitate movement of the cleaning component on a view screen or to protect from a hostile environment. This material may be textured or it may be one that has a higher coefficient of friction than the cleaning material. In a variation of this embodiment, the cleaning component may include a tab that can be pinched to facilitate moving the cleaning component. In still another variation, in this latter embodiment, the tab may be constructed such that it can lay down in order to lower the profile of the cleaning component. Turning to **Fig. 2C**, a cleaning component otherwise identical to that of **Figs. 2A and 2B** is shown, except that a tab (**203**) is shown in the raised position.

**[00038]** The dimensions of the cleaning component may vary according to its intended use. For example, one class of small electronic devices upon which the cleaning components may be employed is cell phones. The cell phone class includes both cell phones and devices combining cell phone functionality with computing power such as the so called smart phones. When the cleaning component will be used with a cell phone, it may have dimensions ranging as follows. Length may range from about 2.1 cm to about 0.5 cm. In one embodiment, the length may be about 1.7 cm. Width may range from 1.9 cm to about 0.5 cm. In one embodiment, the width may be about 1.7 cm.

**[00039]** Another class of small electronic devices is the so called tablet computers. When the cleaning component will be used with a tablet computer, it may have dimensions ranging as follows. Length may range from about 7.5 cm to about 0.6 cm. In one embodiment, the length may be about 2.5 cm. Width may range from 3 cm to about 0.5 cm. In one embodiment, the width may be about 2.5 cm.

**[00040]** In embodiments of the disclosure wherein the cleaning component will be employed on a cell phone or tablet computer, it may be desirable to make the cleaning component as thin as possible. This is of course the subject the caveat that the cleaning component is thick enough to be easily manipulated during the cleaning process. While in some embodiments the cleaning component may be as thin as a sheet of paper, but in most embodiments it will have a thickness of from about 0.5 cm to about 1 mm.

**[00041]** The overall shape of the cleaning component when used with cell phones and tablet computers may be round, oval, rectangular, or square. In some embodiments, in order to avoid overlapping with a view screen, the cleaning component may be shaped to fit available space.

**[00042]** The cleaning components of the disclosure may be used with another class of small electronic devices, commonly referred to as laptop computers. They may also be used with televisions, laboratory instruments, and the like. Because these devices are larger it may be desirable in some embodiments to increase the dimensions of the cleaning component. For example, the length of cleaning component used with these devices may range from about 10 cm to about 1 cm. The optimum length may range from about five cm to about 8 cm. The width may range from about 0.5 cm to about 5 cm. The optimum width may be from about 0.5 to about 5 cm. Similar to the other classes, the cleaning component may be as thin as a sheet of paper, but in most embodiments it will have a thickness of from about 0.5 cm to about 1 mm.

[00043] For the larger devices, shape is generally not as critical. There are often larger areas to which the cleaning component can be coupled. For these applications, it is often desirable to make the cleaning component rectangular in shape. Still, other shapes would be within the scope of the claims of this application.

[00044] Another embodiment of the application invention is a small electronic device comprising a case, a view screen, and internal electronic components wherein the view screen and internal electronic components are mounted within the case. In this embodiment, the view screen is externally visible in at least one configuration of the case and the case has a surface that is substantially diamagnetic. At least a part of the surface of the case has been configured to receive a cleaning component. Further, the cleaning component is configured to selectively couple to the at least one part of the surface of the case that has been configured to receive the cleaning component; the at least one part of the surface of the case that has been configured to receive the cleaning component is ferromagnetic or ferrimagnetic or overlays a ferromagnetic or ferrimagnetic material; and the cleaning component comprises a cleaning material covering at least one surface of a ferromagnetic or ferrimagnetic substrate.

[00045] It may be desirable, in some applications, to make the cleaning components such that they have beveled edges. Such components could be particularly useful when coupled with devices having a case configured to accept the cleaning component wherein there is a ridge configured to accept the beveled edge to more securely hold it in place.

[00046] Some electronic devices have view screens that are always visible. Exemplary of this are some cell phones and tablet computers that do not have covers. Other devices such as laptops have view screens that may be seen only when the cover is lifted.

[00047] In embodiments of the disclosure where a case has been configured to receive a cleaning component, it may be so configured in several ways. In one embodiment, such a case is configured by placing a ferromagnetic or ferrimagnetic material onto the surface of the case where the cleaning component is received. In another embodiment, the case is prepared such that the case itself is composed of a ferromagnetic or ferrimagnetic material at the point where the cleaning component is received. In still another embodiment, the case is prepared by placing a ferromagnetic or ferrimagnetic material underneath where the cleaning component is received. Additionally, the case may be fabricated such that the cleaning component is received into a groove, slot, or other indented geometrical shape to lower the profile of the cleaning component to facilitate closing a cover or prevent snagging a cleaning component. Another reason to lower the profile that the cleaning component may be to enhance the aesthetics of the device.

[00048] Turning to **Fig. 3**, the base of a laptop computer (**300**) is shown. Above and to the right of the keyboard (**301**) is a rectangular indentation (**302**) having dimensions and all three directions that are slightly larger than those of a cleaning component (**303**). In one embodiment of the disclosure, the cleaning component has a ferromagnetic or ferrimagnetic substrate that is a permanent magnet. The case, at the base of the invention, is prepared using a ferromagnetic material.

[00049] In employing the method of the disclosure, the cleaning component is coupled to the base of the laptop computer by placing it within the invention. The magnetic attractive force between the permanent magnet and the ferromagnetic material holds the cleaning component in place as a laptop computer is moved. The cleaning component is decoupled from the laptop computer base by lifting it to overcome the magnetic force. The cleaning component is then placed on the view screen (not shown) and is then moved across the view screen using one or more fingers. After the view screen has been cleaned, the cleaning component may be recoupled to the computer base.

[00050] Similarly, the method and apparatus of this disclosure may apply to a second case. In this embodiment, a case constructed to protect the primary case of a small electronic device may be similarly configured to receive a cleaning component. Such cases which are sometime manufactured by 3<sup>rd</sup> party providers generally serve to protect the finish of the primary case and/or provide additional impact protection for the electrical components of the small electronic devices.

[00051] In practicing the method of the disclosure, there are three basic embodiments regarding the source of magnetic force used. In one embodiment, the cleaning component may include a magnet and the case may include an unmagnetized ferromagnetic or ferrimagnetic material. In a second embodiment, the cleaning device may have only an unmagnetized ferromagnetic or ferrimagnetic material and the magnet may be in or on the case. In the third embodiment, both the cleaning component and the case may include a magnet.

[00052] When a magnet or a ferromagnetic or ferrimagnetic material is applied to a case, in one embodiment, it may be adhered using a tacky adhesive. One such embodiment includes using double sided gaffer's tape as the source of the tacky adhesive. Any tacky adhesive can be used with the method of the application.

[00053] In one embodiment, the cleaning component of the application may be used as a source of advertising. For example, in one embodiment of the application, a cleaning component may have imprinted upon it a logo, trademark, slogan, or the like. In another

embodiment, a pre-printed substrate having a logo or decorative side, and optionally, a second adhesive side may be used. In some of these embodiments where the substrate includes an adhesive, it may be used to secure a magnet to the cleaning component. In another embodiment, the substrate having an adhesive may be free of advertisements and/or decoration.

[00054] In this application, the term diamagnetic is used to delineate materials that are not ferromagnetic or ferrimagnetic. From a practical perspective, the materials that are paramagnetic have such a weak attraction to magnets that they would not be effective if utilized and thus are to be treated as if they are diamagnetic.

[00055] While, generally speaking, the cleaning components are meant to be unitary, in some embodiments, the cleaning material may be removed and replaced with new cleaning material. Also, the cleaning components may be configured such that they have a thinner center to allow a user to employ lateral force to the cleaning component to more easily slide it across the surface of a view screen. In some embodiments, the cleaning component may have a profile such that the cleaning component is thinner in the middle and near the edge of the cleaning component.

[00056] Other embodiments of the invention include those such as are illustrated in **Fig. 4**. In this embodiment, a flip case and a smart phone **400** is shown. The flip case includes a cover **401**, a hinge **403**, and a base **404** holding the smartphone **405**. The cleaning device **402** is held in place by means of a magnet (not shown). In one embodiment, the magnet is built into the cover. In another embodiment, the magnet is attached to the cover using an adhesive. In still another embodiment, the cover includes a ferromagnetic or ferrimagnetic material rather than a magnet.

[00057] While many of the cleaning components have a single magnet or ferromagnetic or ferrimagnetic substrate, this is not a limitation of the application. In some embodiments, it may be desirable to have multiple magnets in a cleaning component. For Example, at **Fig. 5**, a case having two magnets to hold it closed **500** is shown. This case consists of a body **504** which functions to hold a smartphone; and a lid having a top **501**, a side **502**, and a hinge **507**. Also shown is the cleaning component **503** adhering to the inside of the side of the lid. The side is shown again at **502a** from lateral perspective with the magnets visible **506**. The cleaning component **503a** is also shown from a lateral perspective, again showing two magnets **506**. The two magnets of the case line up with the two magnets of the cleaning component in some embodiments to allow for a more secure fit to the case.

[00058] Note that in the embodiments shown in **Fig. 5**, the magnets are offset from center. The magnets may be placed anywhere within the cleaning component as necessary to facilitate their use with a device. For example, in **Fig. 6**, a cleaning component **602** is shown with a magnet **601** offset near the edge of the component. In one example of a method of the application, the cleaning component is adhered to the top of a device having a case that closes, such as a laptop computer, with the body of the cleaning component rotated down when the case is closed. When the laptop is opened for use, the body can be rotated up and away from the screen.

[00059] In some embodiments, the cleaning component of the application can be composed of multiple layers. For example, in one such embodiment illustrated in **Fig. 7**, a three layer cleaning component may be seen. Therein, a cleaning component having an offset magnet **702** and as described hereinabove is shown. It is sandwiched between two additional layers (**701** & **703**) that serve to protect the cleaning layer from ambient conditions that might shorten its useful life. One such environment could be one that is dusty such as in a production facility that employs saws or knives to cut dust generating objects. In an alternative embodiment, there may be multiple cleaning components so that dirty or worn components can be discarded.

[00060] In an alternative embodiment, the layers of the cleaning component may be stitched or otherwise joined with the caveat that at least one external layer will have a magnet or a ferromagnetic or ferrimagnetic substrate.

[00061] The cleaning components of the application may be used with mechanical and/or non-electrical devices having small view screens, windows, or lens. For example, in one embodiment, a cleaning component may be used with a site glass in a chemical manufacturing facility. In another embodiment, the cleaning component may be used with a pump to facilitate the cleaning a window used to make visual inspections of the material within the feed or flow lines. The cleaning components are particularly useful with devices having lens.

[00062] Devices that have lens include, but are not limited to telescopes, binoculars, eye glasses, and weapon scopes. Turning to **Fig. 8**, a pair of binoculars is shown having eye pieces **801**, a body **803**, and objective lens **804**. In one embodiment, a cleaning component for the lenses may be secured in place using a magnet directly upon the body of the binoculars. However, in a preferred embodiment, the cleaning component (**804** or **806**) is secured to the inside of a lens cap or an eyepiece cap (**805** or **807**). In such an embodiment, different sized cleaning components may be employed and by placing them under the lens

cap, they are protected from the environment except when in use, thereby extending their use-life.

[00063] In one preferred embodiment, a lens cap may be prepared or even retrofitted to work with the cleaning components of the disclosure by deploying a magnet on the outside of the lens cap using an adhesive. In an especially useful embodiment, the magnet serves as the base for a tether that terminates in an element useful for attaching the lens cap to another object, such as the device to which it is employed to protect a lens.

[00064] In an alternative embodiment, the cleaning component may be configured to adhere to a case for the objects having lens.

[00065] While the adhesive may be a tacky adhesive such as already discussed hereinabove, it may also be a permanent adhesive. Such permanent adhesives may be selected from acrylic emulsion adhesives, rubber-based adhesives, or any other suitable material exhibiting durable bonding qualities.

[00066] In a related embodiment, a cleaning component of the invention may be secured to a portable object, such as, but not limited to, a set of keys, jacket, other clothing items, jewelry, belts, or other items worn or kept in a pocket, by employing a tether having a first end terminating in form suitable for connecting to, for example the key chain and a second end terminating in a magnet configured to secure a cleaning component as describe hereinabove. Two uses for this embodiment would be the cleaning of glasses and also the cleaning of goggles or other protective eyewear.

[00067] In an alternative embodiment, the magnet that was on the tether can attached a clip or other device suitable for affixing the cleaning component to the portable object.

[00068] In yet another alternative embodiment, the portable object may be modified to include a magnet so that the cleaning component can be secured directly to the portable object.

[00069] In still another related embodiment, a cleaning component of the application can be adhered to a personal accessory such as a wallet, change purse, purse or the like.

[00070] The cleaning components may be configured with sufficient structural integrity that they have constant or at least resilient shape at the magnet so that they may employed with devices having cases configured to utilize that dimensional stability to increase the security with which the cleaning components are adhered to the case. **Fig. 9** shows such a device case **901** having a raised section **902** configured to fit within a recess **904** of a cleaning component **903**. The magnets (not shown) are within the recessed and raised parts of the case



and cleaning component. When joined, the fitting of the raised section and recessed sections add an additional level of security to the magnetic adhesion.

[00071] Another embodiment of the disclosure includes incorporating a magnet or ferromagnetic or ferrimagnetic material into a rigid or semi rigid construction configured to accept a cleaning material as defined hereinabove. In some applications of this embodiment the rigid or semi-rigid construction can be used to facilitate moving the cleaning material during the process of cleaning.

[00072] In addition to their cleaning functionality, the cleaning components of the application have a functionality of being able to active magnetic switches on devices having such switches. This is particularly useful in saving battery life as it does not require the cover of such devices to be closed (the normal mode for activation of such switches). In the use of tablet devices having a magnetic switch, the cleaning components are particularly useful as the tablet can be put into hibernation mode with a single touch to the cleaning component as compared to the multiple touches required to do the same thing using the touch pad of the tablet.

[00073] In one embodiment where a cleaning component of the application is employed on a tablet using the Apple® Smart Cover, it may be employed on the outside of the smart cover to function as a handle for more easily manipulating the cover. Magnets at the bottom of the Smart Cover allow for a very efficient employment of the cleaning component.

[00074] Another embodiment of the cleaning components of the application is one where the cleaning component has a cleaning surface that is replaceable and held in place within the cleaning component with a tacky adhesive wherein the tacky adhesive is directly on the surface of the non-cleaning surface or the tacky adhesive is in the form of a double sided tape. Turning to **Fig. 10A**, there is an illustration of an enhancement to any of the other cleaning components discussed herein, wherein a cleaning surface **1001** is held in place on a non-cleaning surface **1002** using a tacky adhesive **1003**. In **Fig. 10B**, an alternative embodiment is shown wherein the tacky adhesive is in the form of a double sided tape **1004**.

[00075] In still another embodiment, the cleaning component is one having an external cover for protecting one or both sides of a cleaning material wherein the external cover is reversible so that it may be folded over to expose the cleaning surface. Turning to **Fig. 11A**, a configuration where single side of two cleaning surfaces **1102** is protected by an external cover **1101**. The external cover **1101** includes a hinge **1103** which may be a cloth hinge or a mechanical hinge or any other type of hinge known to those of ordinary skill in the art which would not interfere with the cleaning functionality of the cleaning component. In one

embodiment, the configuration of **Fig. 11A** when not reversed is particularly useful for cleaning both sides of a lens such as in a pair of eyeglasses. In some embodiments, the cleaning surfaces may be specialized with one side of the cleaning surface being more useful removing oily materials while the other side is more useful for removing water based materials from a lens or view screen surface.

[00076] The cleaning component may be, in some embodiments, stored in an eyeglasses case configured to receive the cleaning component. In some embodiments, this case may include a magnet and in other embodiments, the case may be prepared using a ferromagnetic or ferrimagnetic substrate.

[00077] Turning to **Fig. 11B**, in this embodiment the same a single sheet of cleaning material **1102** is shown where the cleaning material hangs from the hinge area of the cleaning component **1103**. In either of these embodiments, the external component may be fully opened and folded back upon itself to serve as a support of the cleaning surface.

[00078] Turning to **Fig. 11C**, still another useful configuration is shown where the cleaning material, **1102** is shown to be detachable. In some embodiments, the cleaning material is held in place with a magnet or ferromagnetic or ferrimagnetic substrate. If there is a magnet in both the cleaning material and the cover, in some embodiments, at least one of the magnets will be on a swivel to facilitate the easy replacement of the cleaning material within the cover.

[00079] In another embodiment, the cleaning component is configured to work with optical devices such as scopes and binoculars wherein the cleaning component includes at least one cleaning surface and brush. Such a cleaning component is illustrated in **Fig. 12**. The body of the cleaning component **1201** has at least one surface that is a cleaning surface and in some embodiments, the entire body is a cleaning surface. The body also acts as a support for a brush **1202**. The bristles of the brush may be employed to remove sand, dust or other materials from a lens or view screen. After this removal, the cleaning surfaces may be used to further clean the lens or view screen. In one particularly desirable embodiment, the cleaning component is sized to fit within a lens cap and may be held in place in the lens cap employing an magnet (not shown). In still another embodiment, the cleaning component has a cleaning only one side and the other side a tab or other construction to facilitate holding the component. And, yet another embodiment, there is no cleaning surface and this configuration functions only as a brush.

[00080] In another embodiment, a cleaning system having at least one element being a piece of clothing may be selected from the group consisting of a hat, helmet, sweatband or

other headgear; a jacket or coat; a shirt or top; a skirt or pants; and a shoe or boot, wherein the piece of clothing is configured to accept a cleaning component and the cleaning component is held in place, at least in part, using a magnet. The magnet may be incorporated using any method known to those of ordinary skill in the art of preparing clothing. Turning to **Fig. 13A**, a cap **1300** having a bill **1301** is shown. In this embodiment, at **Fig. 13B**, a magnet **1303** is located on or in the bill of the hat. **Fig. 13C** illustrates a cleaning component **1304** in place on the bill.

**[00081]** The cleaning components of the application may be placed in any type of clothing. For example, the cleaning devices may be employed with a boot having a magnet located on the upper quadrant of the boot. In another example, the magnet may be incorporated into a pocket of a pair of trousers analogous to a watch pocket within a pocket of times past. Any employment of a magnet to secure the cleaning devices of the application within a piece of clothing is within the scope of the invention.

**[00082]** Turning to **Fig. 14**, an embodiment of the disclosure is illustrated that is a quick release cleaning component. In this embodiment, at **Fig. 14A**, a cleaning component which includes a flexible cover **1400** and a cleaning material **1402** within the flexible cover bends or folds such that two magnets **1401** at the ends may function to keep it folded when not in use. A third magnet in the middle of the cleaning component serves to secure it to the body of a holding component having index number **1403**. The holding component is composed of the same flexible cover material, at least in some embodiments, and usually will not include a cleaning material. The holding component will also have magnets **1401** at the ends. **Fig. 14B** shows this cleaning component engaged upon a substrate **1404**, often a key ring, a caribbeaner, or a ring on a jacket or other article of clothing.

**[00083]** When engaged with the cleaning component, the holding component wraps around the substrate and the magnets at the end of the holding component hold the cleaning component in place employing the magnet at the middle of the cleaning component. The cleaning component can be quickly removed by pulling it with a force sufficient to overcome the attraction of the magnets. As the cleaning component leaves the holding component, the magnets of the holding component will be attracted to each other thereby keeping the holding component wrapped around the substrate.

**[00084]** Turning to **Fig. 15**, a stylus **1500** is shown that is configured to accept a cleaning component of the disclosure (not shown). In this figure, the stylus may be prepared wherein the entire stylus exterior is a magnet or a substrate that would be attracted to a magnet. In an alternative embodiment, the stylus includes a clip **1501** or other decorative component which

can serve as a substrate to accept and hold a cleaning component. Note that the stylus may also be a writing implement.

[00085] Another aspect of the invention is a cleaning system having at least one element being an accessory. The accessory may be selected from the group consisting of a purse, wallet, computer case, gun case, glasses strap, gloves, backpack, and a belt, wherein the accessory is configured to accept a cleaning component and the cleaning component is held in place, at least in part, using a magnet. In **Fig. 16A**, a purse **1600** is shown having attached thereto a cleaning component **1601** of the application. The cleaning component is shown attached to the handle **1602** of the purse. The cleaning component is shown in this illustration as being attached via a simple loop **1603** from the handle, but it can be attach using any means known to those of ordinary skill in the art or otherwise already disclosed herein. For example, the cleaning component may be attached to the pull tab of a zipper. It may also be attached to a decorative ring. On a backpack, it may be attached to a ring which also allows for the attachment of a shoulder strap.

[00086] Also shown in **Fig. 16A** is the use of a logo for advertising purposes wherein the logo is clearly visible on the cleaning component.

[00087] In **Fig. 16B**, an alternative embodiment of the purse is shown wherein the cleaning component is attached to a purse having a flap **1604**. In this embodiment, the cleaning component, shown in a cut-away view, is protected from environmental damage by being between the flap and the side of the purse. In one embodiment, the purse includes a magnet that then couples with the magnet of the cleaning component to hold it in place.

[00088] The cleaning components may be enhanced by adding additional features. For example, the cleaning component having a tab illustrated in **Fig. 2C** may be further enhanced by employing a magnetic hold-down. Turning to **Fig. 17A**, a cleaning component **1700** having a tab **1701** is shown with the tab in the closed position. **Fig. 17B** is a side view of the same cleaning component. Also shown in this view are the magnet **1702** and cleaning material **1703**. It can be seen in this view that the tab has a hinge **1704** at its center. In **Fig. 17C**, the cleaning component is shown with the tab in the raised position and also showing a magnet **1705** within the raised portion of the tab. The magnet, when the tab is closed, functions to hold the tab down which may prevent the tab from being broken or the tab being caught by another object resulting in the cleaning component being unintentionally removed from its substrate.

[00089] In another embodiment featuring a tab, **Fig. 18** illustrates an electronic device **1801** having a cleaning component **1802** with an elongated tab **1803**. The tab is hinged (not

shown) so that it may be positioned to act as a stand. **Fig. 18** illustrates a “portrait” configuration, but in another embodiment, the stand may be used to hold the device in a “landscape” configuration.

**[00090]** Any cleaning component useful with the application may be prepared using additives that may be applied to the cleaning material to make it more suitable to a specific cleaning job. For example, in some embodiments, the cleaning material may be treated to make it better at removing oily smudges from a lens while in other embodiments, the cleaning material may be modified to make it better for removing hydrophilic dirt or smudges. In still other embodiments, the cleaning material(s) in a cleaning component maybe selected to have part of the component be useful for oily smudges while another part of the cleaning component is more useful for hydrophilic dirt or smudges. In embodiments where the cleaning components have more than one cleaning surface, then the cleaning materials and/or additives may be selected so that they are useful for cleaning both types of smudges/dirt.

**[00091]** In some embodiments of the cleaning components of the application, the use of magnets or ferromagnetic or ferrimagnetic substrates is done with magnetic orientation utilized to facilitate the removal or replacement of the cleaning component to/or a case or other substrate. For example, when possible it is desirable to employ only a single magnet at a contact/adhesion point where the magnet is affixed using a ferromagnetic or ferrimagnetic substrate. This avoids entirely the problem of magnetic orientation when returning the cleaning component.

**[00092]** When the strength of two magnets is necessary, then the use of a swivel as described above may be desirable. Other means of mitigating the issues arising with magnetic orientation include but are not limited to printing a notice on the device (such as “this side up” or configuring the shape of the cleaning component such that it is obvious which side of the cleaning component will have an attraction to the magnet fixed on or within the case to which it is being applied.

**[00093]** Any cleaning device of the application may be prepared using an additional layer that functions to stiffen the cleaning device. As the objects to be cleaned, be they viewscreens or lens, get larger, it may be desirable to stiffen the cleaning device. Materials useful as a stiffening layer include, but are not limited to plastic, metal, wood and heavy fabrics.

**[00094]** The cleaning components of the disclosure, when prepared with especially strong magnets, can have a dual purpose of being a game component. For example, in an

embodiment where a smart phone is within a case having a recessed area configured to receive a cleaning component, the recessed area and the cleaning component may be shaped to resemble a ball or other game object. If the cleaning component is tossed accurately, it will be attached into the recessed area and such a toss could be a goal or score. Any such game is within the scope of the invention.

[00095] In order to make the cleaning components more desirable to young users, they may be converted into or incorporated into dolls or toys with the caveat that the doll or toy is configured to be attached to or perched upon an electronic device and secured thereon using a magnet. While trademarked and/or copyrighted toys and dolls may be used (subject to proper licensing), even generic toys and dolls may be used, particularly if they will function to encourage proper maintenance of devices by, at least in some instances, young users. For example a Mini Beanie Baby™ from TY™ may be configured to sit upon a rectangular cleaning component wherein the cleaning component resembles a “rug.” In another embodiment, covers and cases for electronic devices may be configured to resemble a cage or a house and an appropriately selected figure prepared using a cleaning material on at least one surface and at least one magnet. The figure/cleaning component could be adhered to the cover or case such that it appears to be using the cage/house. One example would be the use of a Snoopy™ shaped cleaning component on a case or cover having a doghouse design or shape. In another embodiment, an Angry Bird™ figure could be configured to sit upon (aka perch) upon the top of a case or cover being secured from falling by the magnet containing within the cleaning component.

[00096] In yet another example of employing the cleaning components of the application, a cleaning component may be used on the contact surface of interactive toys used with electronic devices. The advantage of this embodiment would be that the toy would simultaneously clean a view screen/monitor while providing entertainment. In still another embodiment, such devices may be employed for purposes of therapy rather than entertainment, or they may be used for both.

[00097] The cleaners of the application, in some embodiments, may be prepared from wood, plastic or even metal. Turning to **Fig. 19A&B**, a combination switch and cleaner for an electronic device is shown. The switch/cleaner may be made with, for example, acrylic plastic. In this embodiment, the switch is shown from above in **Fig. 19A** where the hard shell is **1901** and three magnets are enclosed within the shell and have the reference number **1902**. Figure **19B** is a side view that also shows the cleaning material, **1903**.

[00098] Cleaners such as those illustrated in **Fig. 19** may be employed with devices that have power switches or sensors that may be actuated using a magnet. In some embodiments, the magnets of these cleaners may serve a dual function of both actuating a sensor or switch and holding the cleaner in place when not in use. As devices change, the number and location of the magnets could be modified to fit new devices.

[00099] In addition to the shape shown in the drawing, the cleaner/switches may be further modified to facilitate use by incorporating recesses (not shown). In an alternative embodiment, the switch may also have a knob, or “bumps” or surface features that allow for an easier “grip” by the finger, two fingers, one or two fingers and thumb used to move the cleaner/switch. In some embodiments, a tacky adhesive may even be employed upon the surface.

[00100] Another embodiment of the application is a cleaning device having additional functionality such as a remote control, laser pointer or the like. Turning to **Fig. 20**, a device **2000** including both a laser pointer and a remote control is shown. This device includes and a case, **2001**, a battery **2002**, a remote transmitter and/or receiver **2004** and a laser **2007**. Power is provided to the remote over circuit **2003** and to the laser over circuit **2008**. The remote device is controlled using the buttons shown at **2005**. An off/on switch is provided for the laser at **2006** which actuates a switch on the top of the laser (not shown). This device may or may not include cleaning capabilities but will include a rare earth magnet or magnets such as are already disclosed. Ideally, the device may be deployed with an apparatus with which the additional functionality is complementary. For example, a laser pointer and a remote functionality for sending signals to a laptop computer to aid in providing visual aids during a conference presentation or lecture.

[00101] Capabilities that can be included with this embodiment include, but are not limited to: pointing devices such as a laser pointer; remote functionality such as a transmitter that can send mouse inputs to control a presentation; a wifi hotspot, and the like. The remote function can be particularly useful for volume control, off/on switching, pause/play, and next/previous slide functionality.

[00102] Still other functionality that may be incorporated into such a device may include, but not be limited to a flash drive or other solid-state recording device, earplugs, Bluetooth earplugs, credit card reader, microphone, and the like.

[00103] In some embodiments, the devices of the application may be held in place using both magnetic and frictional forces. For the purposes of this, the term frictional forces includes those such as are obtained by including a ridge on a cleaning device that fits into a

slot on a case. For example, a smart phone case having a slot which is configured to receive a cleaning device of the application wherein the cleaning device has a ridge that fits into that slot. By having both magnetic and frictional forces in play, such a cleaning device could be employed where it would otherwise be likely that the cleaning device would be separated from the smart phone case.

**[000104]** Also within the scope of the application are embodiments wherein the cleaning material is replaceable. In these embodiments, the cleaning material may be such that it is held in place by an adhesive or the cleaning material may be rigid and fit within a slot configured to receive it. This is true of any of the previously disclosed embodiments.

**[000105]** The cleaning devices of the application may be prepared using material that is foamed or otherwise buoyant. For example, in one application, a glasses holder can be configured to prevent a pair of glasses from sinking if dropped into water. For Example, in **Fig. 21**, a cleaning device **2100** is shown that has an outside cover **2101** and two cleaning surfaces within **2104**. Within the outside cover are two foamed inserts **2103** and two magnets **2102** which function to hold the cover together when the cleaning device is not in use. **Fig. 22** is a photograph showing such a device in use. Note that the cleaning device prevents the glasses from sinking.

**[000106]** Embodiments of the disclosure that are hourglass in shape may be prepared using exceptionally strong magnets. Turning to **Fig. 23**, these embodiments, in addition to being useful for cleaning lenses, may also be employed to affix items such as glasses, golf tees, flies for fly-fishing and other fish hooks, and the like to clothing and hats. The device **2300** is employed by opening the device and then placing the magnets **2302** on either side of a substrate like the sleeve or pocket of a shirt. The body of the cleaner, which is flexible, then “snaps” shut as the magnets divided only the thin material of the shirt or hat. By inserting a pen, pair of glasses or the like before bringing the magnets together, the item can be held in place. In one particularly useful embodiment, two such devices can be applied to the lens of a pair of glasses thereby protecting the lens from scratches and other perils of the environment.

**[000107]** In another embodiment, the cleaners of the application can be applied to a non-magnetic surface using an adhesive, a clamp, an elastic snap on design or the like.

**[000108]** The previous embodiment is just one example of how to prepare a buoyant cleaner. Any buoyant material can be employed in the making such an apparatus. For example the cleaning material themselves can be encapsulated around the buoyant core.



[000109] Many the features of the illustrated devices of the application can be employed on other embodiments. For example, the use of buoyant materials may be employed with cleaning devices such as those illustrated in **Figs. 13 and 14**. Also, any of the embodiment of the application with sufficient internal volume, may include a reservoir for a cleaning fluid which may be dispensed as a spray or any other method known to those of ordinary skill in the art.

[000110] One embodiment of the invention is a switching device for use a portable electronic device having a view screen, a switch for turning the portable device off and on that can be activated or deactivated by the application of a magnetic field and at least one case. The term portable electronic device means such devices having a view screen including, but not limited to, tablet computers, laptop computers, portable DVD players, and the like.

[000111] The switching devices of the application selectively couple with the case or cases of the portable electronic devices. The term “selectively couple” describes the process wherein a switching device of the disclosure is applied to a portable electronic device and adheres to it because of a magnetic force. In one embodiment of the disclosure, there is sufficient magnetic force to allow the witching device to remain in place despite casual movements of the portable electronic device, but to still be easily removed by a human operator.

[000112] Turning to **Fig. 24**, a front view of a portable electronic device, in this case a table computer (**2400**) is shown. As can be observed, the switching device (**2401**) is selectively coupled to the front of the portable electronic device **2402** outside of the view screen **2403**. The magnetic switch is normally disposed with the portable electronic device but is shown here for illustration purposes (**2404**).

[000113] In employing the method of the application, the switching component may be picked up and, depending upon the model and functionality of the magnetic switch, the switching device is either applied directly to the magnetic switch or applied to either side of the switch and then slid past it to activate or deactivate the portable electronic device.

[000114] Turning to **Fig 25**, a side view of the switching device **2401** of **Fig. 25** may be seen. The body of the switching device has a bottom surface (**2501**) and a top surface **2502**. This particular embodiment has a tab (**2503**) on the top surface to facilitate its manipulation. Disposed within the switching device is a ferromagnetic or ferrimagnetic substrate (**2504**). In this embodiment, the bottom of the switching device is in contact with portable electronic device and is composed of a material that is not abrasive to the portable electronic device generally and the view screen in particular. Except for this limitation, the switching devices

may be prepared with any material known to be useful to those of ordinary skill in the art for such applications.

**[000115]** In some embodiments, the switching device may include a tab that can be pinched to facilitate moving the switching device. In still another variation, in this latter embodiment, the tab may be constructed such that it can lie down in order to lower the profile of the switching device.

**[000116]** The dimensions of the switching device may vary according to its intended use. For some embodiments, length may range from about 12.5 cm to about 5 cm. In one embodiment, the length may be about 7 cm. Width may range from 1.5 cm to about 4 cm. In one embodiment, the width may be about 2cm.

**[000117]** The overall shape of the switching device may be round, oval, rectangular, or square. In some embodiments, in order to avoid overlapping with a view screen, the switching device may be shaped to fit available space.

**[000118]** Another embodiment of the application invention is a small electronic device comprising a case, a view screen, and internal electronic components wherein the view screen and internal electronic components are mounted within the case. In this embodiment, the view screen is externally visible in at least one configuration of the case and the case has a surface that is substantially diamagnetic. At least a part of the surface of the case has been configured to receive a switching device. Further, the switching device is configured to selectively couple to the at least one part of the surface of the case that has been configured to receive the switching device; the at least one part of the surface of the case that has been configured to receive the switching device is ferromagnetic or ferrimagnetic or overlays a ferromagnetic or ferrimagnetic material.

**[000119]** It may be desirable, in some applications, to make the switching devices such that they have beveled edges. Such components could be particularly useful when coupled with devices having a case configured to accept the switching device wherein there is a ridge configured to accept the beveled edge to more securely hold it in place.

**[000120]** In embodiments of the disclosure where a case has been configured to receive a switching device, it may be so configured in several ways. In one embodiment, such a case is configured by placing a ferromagnetic or ferrimagnetic material onto the surface of the case where the switching device is received. In another embodiment, the case is prepared such that the case itself is composed of a ferromagnetic or ferrimagnetic material at the point where the switching device is received. In still another embodiment, the case is prepared by placing a ferromagnetic or ferrimagnetic material underneath where the switching device is

received. Additionally, the case may be fabricated such that the switching device is received into a groove, slot, or other indented geometrical shape to lower the profile of the switching device to facilitate closing a cover or prevent snagging a switching device. Another reason to lower the profile that the switching device may be to enhance the aesthetics of the device.

**[000121]** In employing the method of the disclosure, the switching device is coupled to the base of, for example, a laptop computer by placing it within the invention. The magnetic attractive force between the permanent magnet and the ferromagnetic material holds the switching device in place as a laptop computer is moved. The switching device is decoupled from the laptop computer base by lifting it to overcome the magnetic force. The switching device is then placed on the view screen (not shown) and is then moved across the view screen using one or more fingers. After the device has been activated or deactivated, the switching device may be recoupled to the computer base.

**[000122]** Similarly, the method and apparatus of this disclosure may apply to a second case. In this embodiment, a case constructed to protect the primary case of a small electronic device may be similarly configured to receive a switching device. Such cases which are sometime manufactured by 3<sup>rd</sup> party providers generally serve to protect the finish of the primary case and/or provide additional impact protection for the electrical components of the small electronic devices.

**[000123]** In practicing the method of the disclosure, there are three basic embodiments regarding the source of magnetic force used. In one embodiment, the switching device may include a magnet and the case may include an unmagnetized ferromagnetic or ferrimagnetic material. In a second embodiment, the switching device may have only an unmagnetized ferromagnetic or ferrimagnetic material and the magnet may be in or on the case. In the third embodiment, both the switching device and the case may include a magnet.

**[000124]** When a magnet or a ferromagnetic or ferrimagnetic material is applied to a case, in one embodiment, it may be adhered using a tacky adhesive. One such embodiment includes using double sided gaffer's tape as the source of the tacky adhesive. Any tacky adhesive can be used with the method of the application.

**[000125]** In one embodiment, the switching device of the application may be used as a source of advertising. For example, in one embodiment of the application, a switching device may have imprinted upon it a logo, trademark, slogan, or the like. In another embodiment, a pre-printed substrate having a logo or decorative side, and optionally, a second adhesive side may be used. In some of these embodiments where the substrate includes an adhesive, it may

be used to secure a magnet to the switching device. In another embodiment, the substrate having an adhesive may be free of advertisements and/or decoration.

**[000126]** In this application, the term diamagnetic is used to delineate materials that are not ferromagnetic or ferrimagnetic. From a practical perspective, the materials that are paramagnetic have such a weak attraction to magnets that they would not be effective if utilized and thus are to be treated as if they are diamagnetic.

**[000127]** While many of the switching device have a single magnet or ferromagnetic or ferrimagnetic substrate, this is not a limitation of the application. In some embodiments, it may be desirable to have multiple magnets in a switching device. In one example of a method of the application, the switching device is adhered to the top of a device having a case that closes, such as a laptop computer, with the body of the switching device rotated down when the case is closed. When the laptop is opened for use, the body can be rotated up and away from the screen.

**[000128]** The switching devices have a functionality of being able to active magnetic switches on devices having such switches. This is particularly useful in saving battery life as it does not require the cover of such devices to be closed (the normal mode for activation of such switches). In the use of tablet devices having a magnetic switch, the switching devices are particularly useful as the tablet can be put into hibernation mode with a single touch to the switching device as compared to the multiple touches required to do the same thing using the touch pad of the tablet.

**[000129]** In one embodiment where a switching device of the application is employed on a tablet using the Apple® Smart Cover, it may be employed on the outside of the smart cover to function as a handle for more easily manipulating the cover. Magnets at the bottom of the Smart Cover allow for a very efficient employment of the switching device.

**[000130]** The switching device of the disclosure, when prepared with especially strong magnets, can have a dual purpose of being a game component. For example, in an embodiment where a smart phone is within a case having a recessed area configured to receive a switching device, the recessed area and the switching device may be shaped to resemble a ball or other game object. If the switching device is tossed accurately, it will be attached into the recessed area and such a toss could be a goal or score. Any such game is within the scope of the invention.

**[000131]** In order to make the switching device more desirable to young users, they may be converted into or incorporated into dolls or toys with the caveat that the doll or toy is configured to be attached to or perched upon an electronic device and secured thereon using a

magnet. While trademarked toys and dolls, such as Angry Birds™ doll in **Fig. 3** may be used, even generic toys and dolls may be used, particularly if they will function to encourage proper maintenance of devices by, at least in some instances, young users. For example a Mini Beanie Baby™ from TY™ may be configured to sit upon a rectangular switching device wherein the switching device resembles a “rug.” In another embodiment, covers and cases for electronic devices may be configured to resemble a cage or a house and an appropriately selected figure prepared using a nonabrasive material on at least one surface and at least one magnet. The figure/ switching device could be adhered to the cover or case such that it appears to be using the cage/house. One example would be the use of a Snoopy™ shaped switching device on a case or cover having a doghouse design or shape. In another embodiment, a cartoon figure could be configured to sit upon (aka perch) upon the top of a case or cover being secured from falling by the magnet containing within the switching device.

**[000132]** The switching devices of the application have many advantages as compared to the conventional switching devices which are generally fixed within the covers of cases. The conventional switches often cannot be moved from side to side and usually block the view screen when employed. The switching devices of the application do not have these limitations. In fact, the switching devices of the application may be perched or attached to the front of a portable electronic device whether the device is off or on.

**[000133]** The switching devices of the application do not server as a cover, but this allows them to be of very low weight compared to the conventional covers/switches. Where a conventional case lacks a handle, the switching devices of the application may do double duty as a handle when the case, such as the Apple® Smart Case, is in place.

**[000134]** The cleaning materials that are employed in some of the embodiments of the application may be removable. For example, the cleaning devices illustrated in **Figs. 19A and 19B** may be prepared with a cleaning material that 1903 that can be removed and replaced. While in some embodiment a tacky adhesive or other adhesive may be employed for the purpose of holding the cleaning material in place, because the device includes at least one magnet, a cleaning material that has been impregnated with iron particles (such as dust of filings) may be employed so that the magnet also serves to hold the cleaning material in place. In the alternative a metal foil could be used.

**[000135]** An adhesive can be selected to secure the impregnated metal particles of foil in place. The adhesive, in some embodiments, can function to protect the metal particles from

corrosion as well as to prevent their escape. It would be desirable that especially metal particles such as iron dust or filings be secured and not escape onto surfaces being cleaned.

**[000136]** Some of the cleaning devices, such as those illustrated at **Fig. 23**, have secondary uses. For example, these devices may also be prepared with a surface made out of a material suitable for holding fly fishing lures and other fishhooks. Where such a secondary use has been disclosed, then such devices, with or without the cleaning material are also within the scope of the application.

**What Is Claimed Is:**

1. A system comprising:  
a portable switching device coupled to a portable electronic device;  
wherein:
  - the switching device and the electronic device are configured to selectively couple to each other employing magnetic force;
  - the switching device comprises a first case;
  - the electronic device comprises a second case and an electronic circuit that is responsive to the switching device;
  - a first magnet is fully disposed within the electronic device;
  - the electronic device comprises at least one element selected from the group consisting of beveled edges, ridges, recessed areas, grooves, slots, indented shapes, bumps, raised shapes, and combinations thereof; configured to correspond to complimentary surface elements on the switching device; and
  - when coupled, the first case functions to protect the second case.
2. The system of Claim 1 wherein the electronic device has a lens.
3. The system of Claim 1 wherein the electronic device has a view screen.
4. The system of Claim 1 wherein the switching device has a lens.
5. The system of Claim 1 wherein the switching device has a view screen.
6. The system of Claim 1 wherein the switching device includes a lid and hinge attaching the lid to the switching device.
7. The system of Claim 6 wherein the lid is recessed to configure to the electronic device.
8. The system of Claim 6 wherein the lid has a second magnet disposed within it.
9. The system of Claim 8 wherein the lid is configured to employ the second magnet to secure the lid in a closed position.

- 10 The system of Claim 1 wherein the electronic device is wireless earplugs.
11. The system of Claim 1 wherein the electronic device has a tab or knob configured to be manipulated by an external force.
12. The system of Claim 2 wherein a surface of the first case is composed of a material nonabrasive to the lens.
13. The system of Claim 3 wherein a surface of the first case is composed of a material nonabrasive to the view screen.
14. The system of Claim 4 wherein a surface of the first case is composed of a material nonabrasive to the lens.
15. The system of Claim 5 wherein a surface of the first case is composed of a material nonabrasive to the view screen.
16. The system of Claim 1 wherein the first magnet is employed in actuating the electronic circuit.
17. The system of Claim 8 wherein the second or a third magnet is employed in the lid to actuate the electronic circuit.
18. The system of Claim 1 wherein the switching device additionally comprises a laser.
19. The system of Claim 1 wherein the switching device can be employed to perform at least one function selected from the group consisting of: control volume, pause, play, next slide, switch on, switch off, and combinations thereof; to an electronic device.



**ABSTRACT**

A lens and/or a view screen of an electronic device having at least one case can be cleaned by wiping the view screen with a cleaning component wherein the cleaning component is configured to selectively couple to the at least one case or some other substrate using a magnetic attractive force. The cleaning devices may have secondary applications such as securing fly fishing lures, activating or deactivating a device having a magnetic switch, or preventing sunglasses from sinking. They may also be manufactured without a cleaning component for use with the secondary applications.

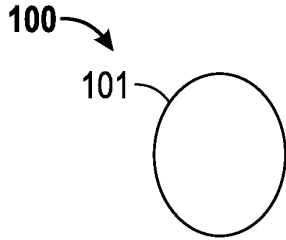


FIG. 1A

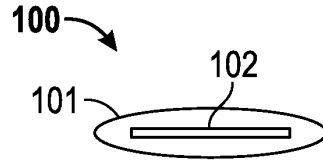


FIG. 1B

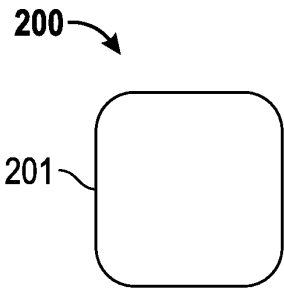


FIG. 2A

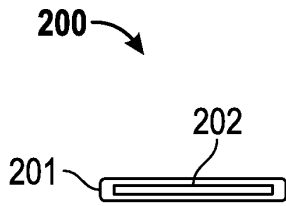


FIG. 2B

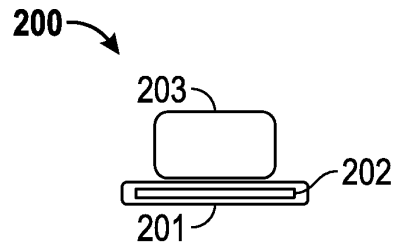


FIG. 2C

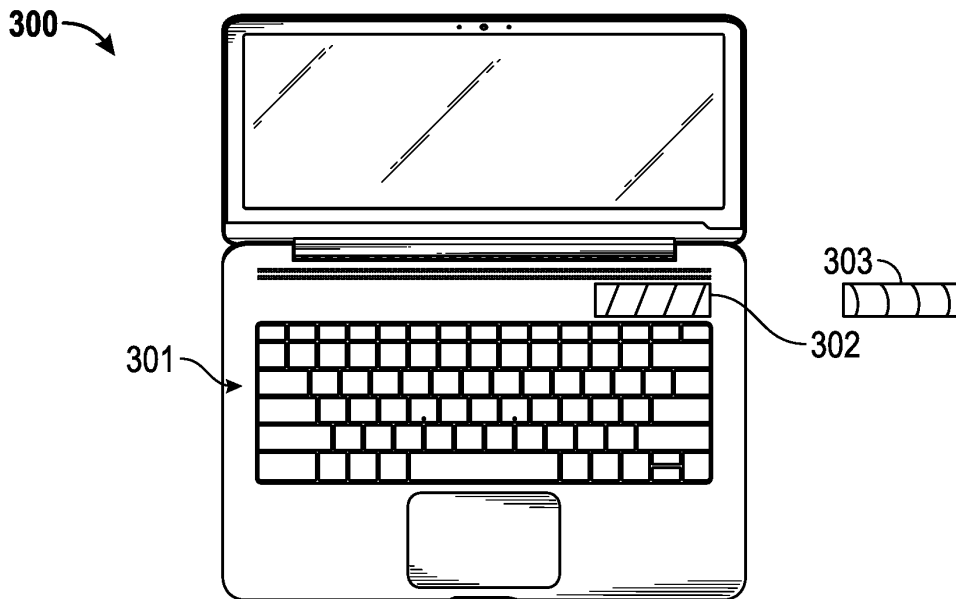


FIG. 3

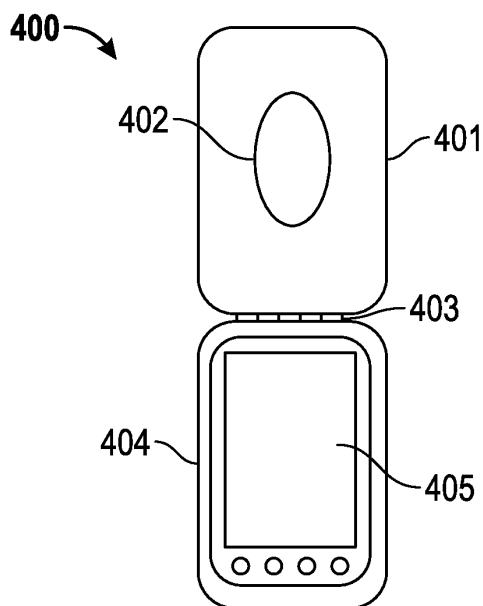


FIG. 4

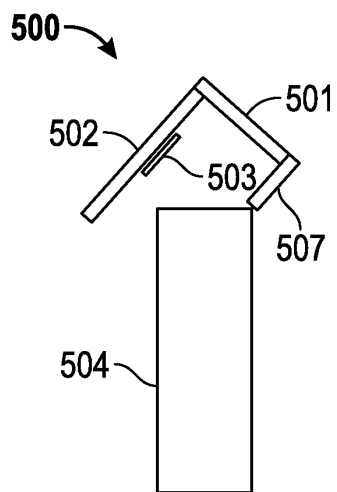


FIG. 5A

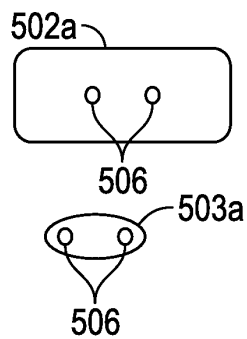


FIG. 5B

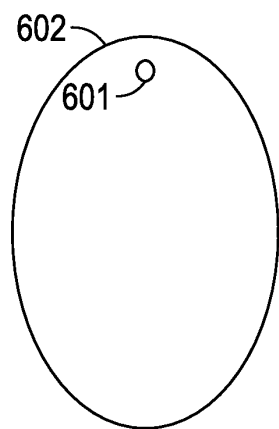


FIG. 6

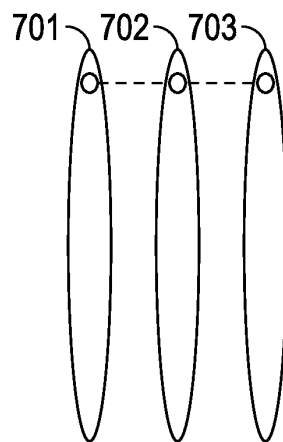


FIG. 7

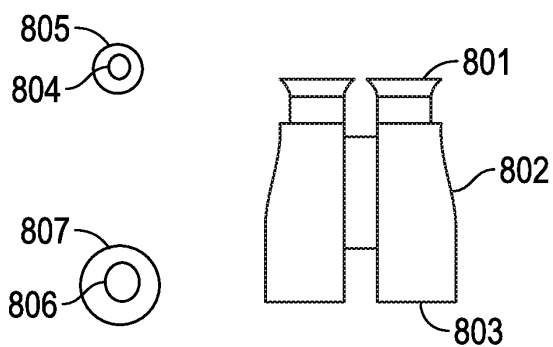


FIG. 8

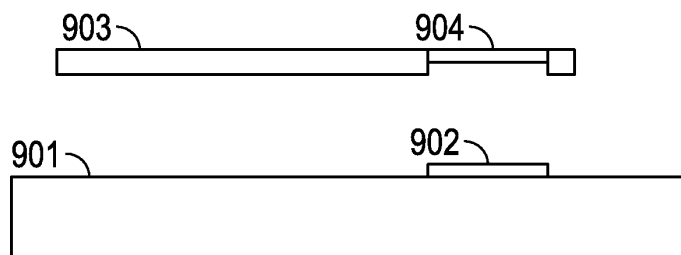
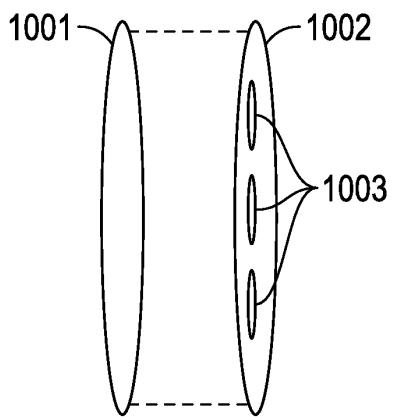
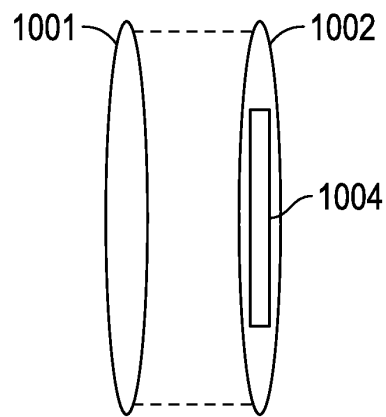


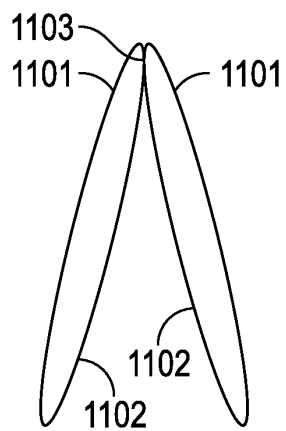
FIG. 9



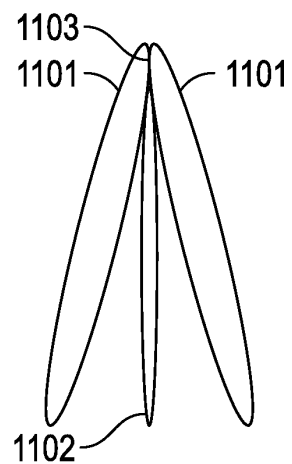
**FIG. 10A**



**FIG. 10B**



**FIG. 11A**



**FIG. 11B**

5/13

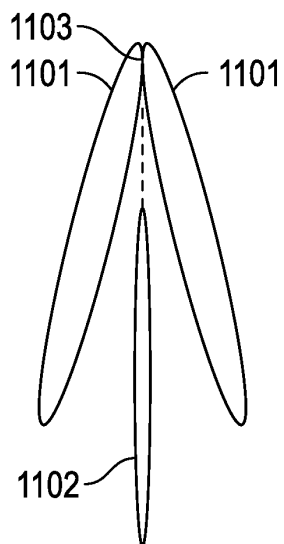


FIG. 11C

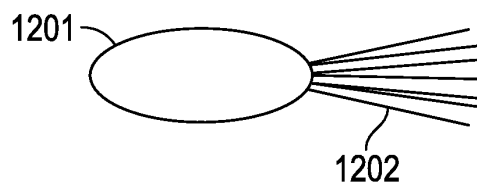


FIG. 12

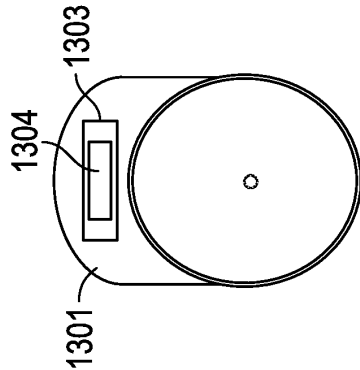


FIG. 13A

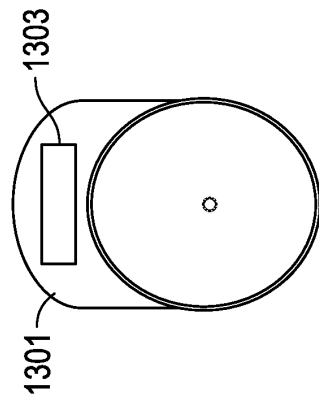


FIG. 13B

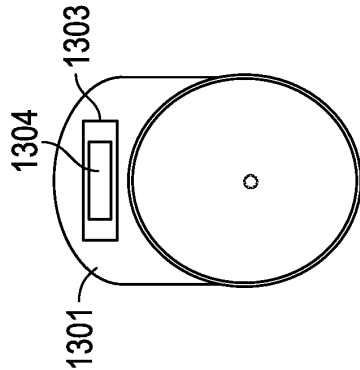


FIG. 13C

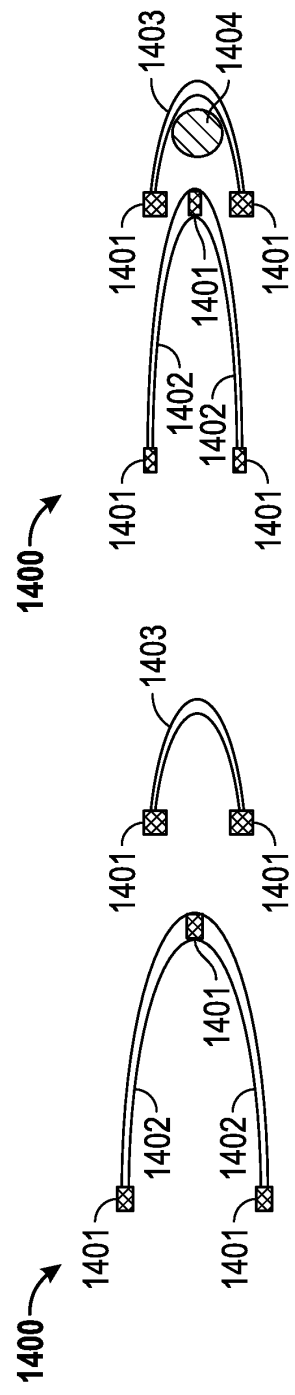


FIG. 14A

FIG. 14B

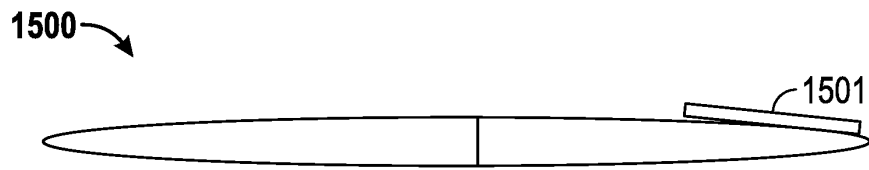


FIG. 15

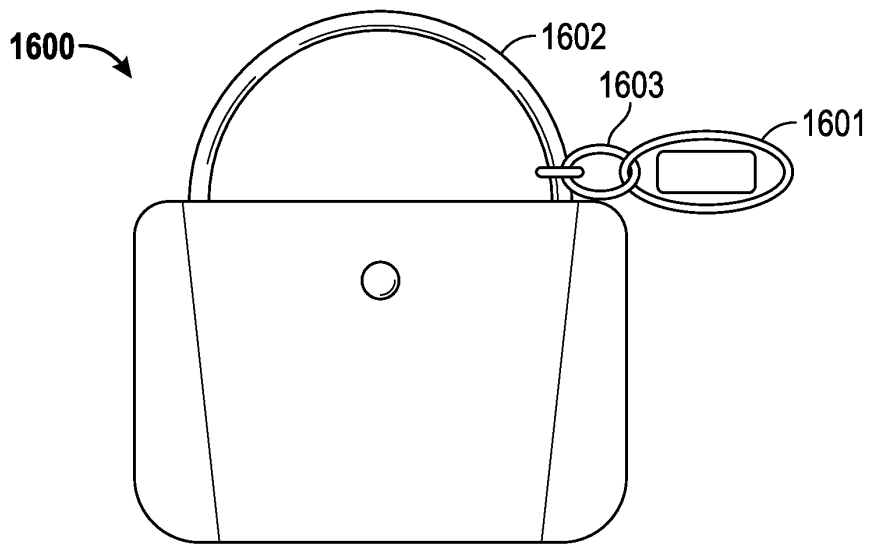


FIG. 16A

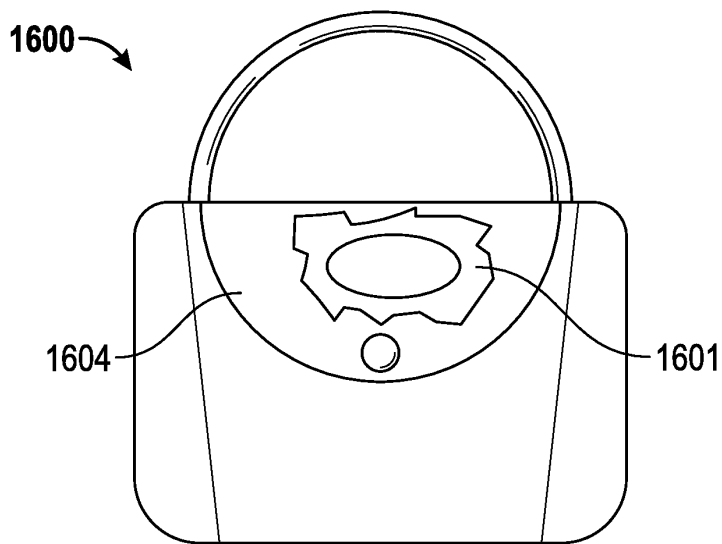


FIG. 16B



8/13

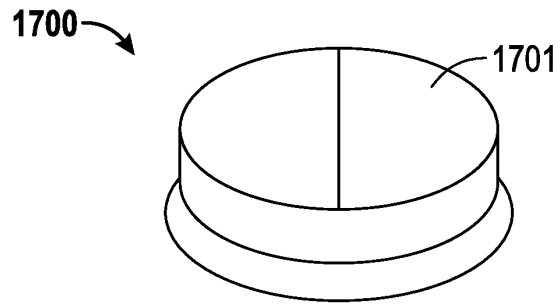


FIG. 17A

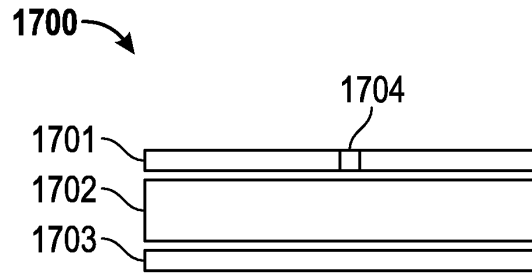


FIG. 17B

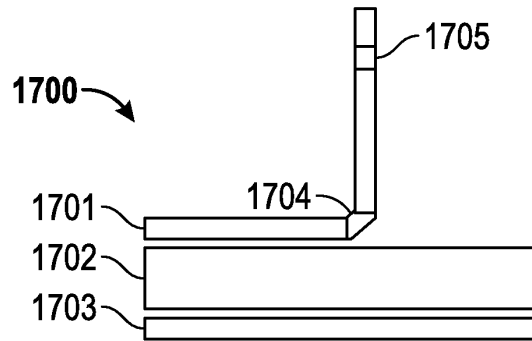


FIG. 17C

9/13

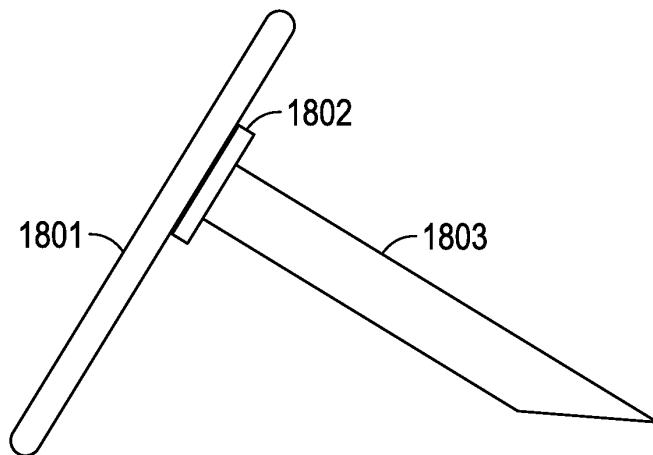


FIG. 18

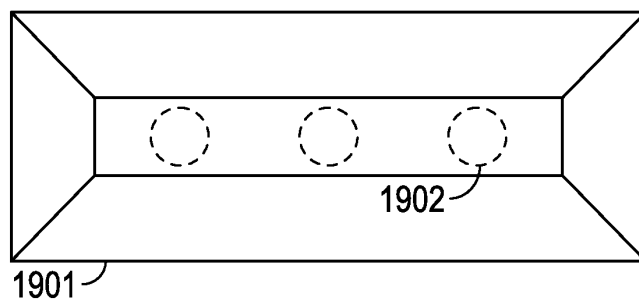


FIG. 19A

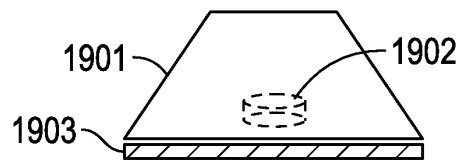


FIG. 19B

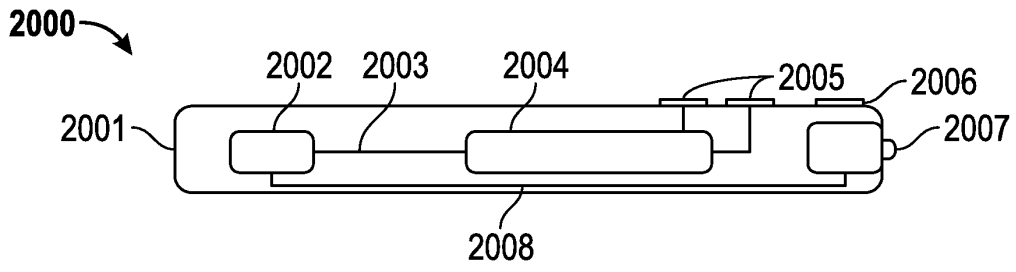


FIG. 20

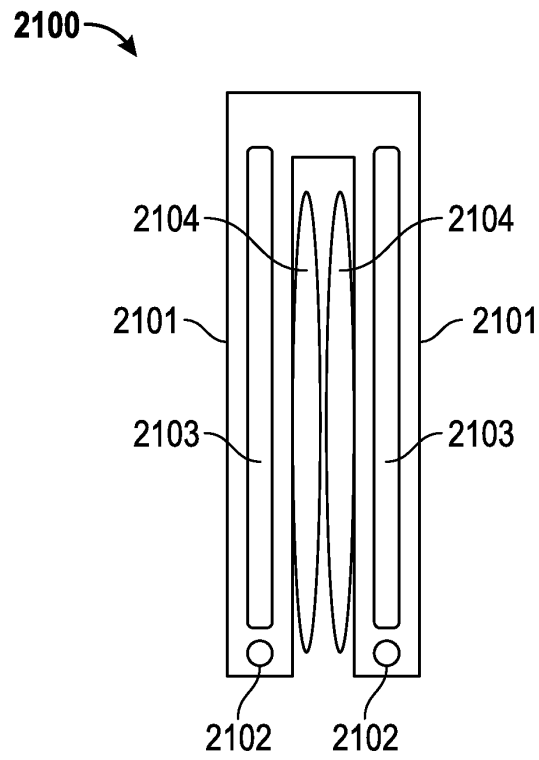


FIG. 21

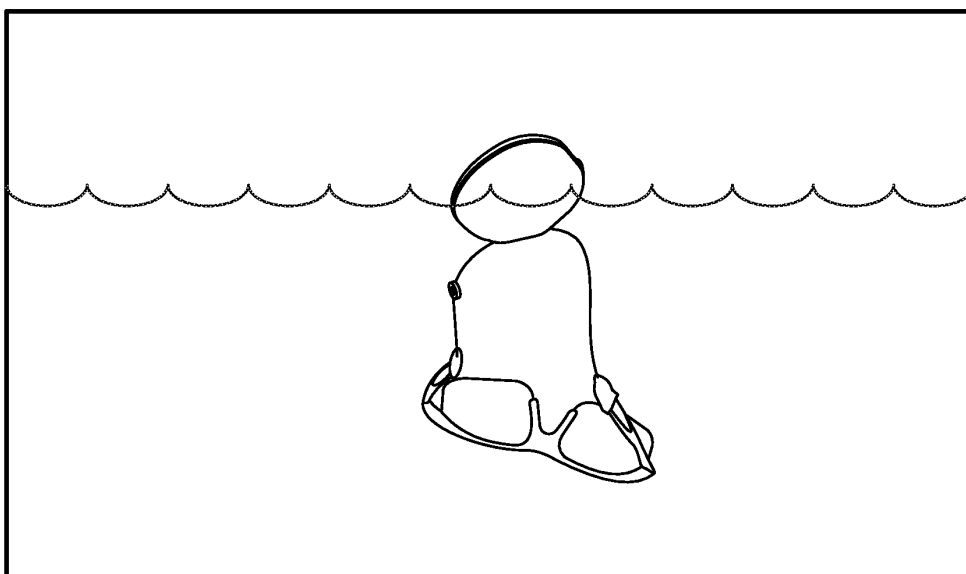


FIG. 22

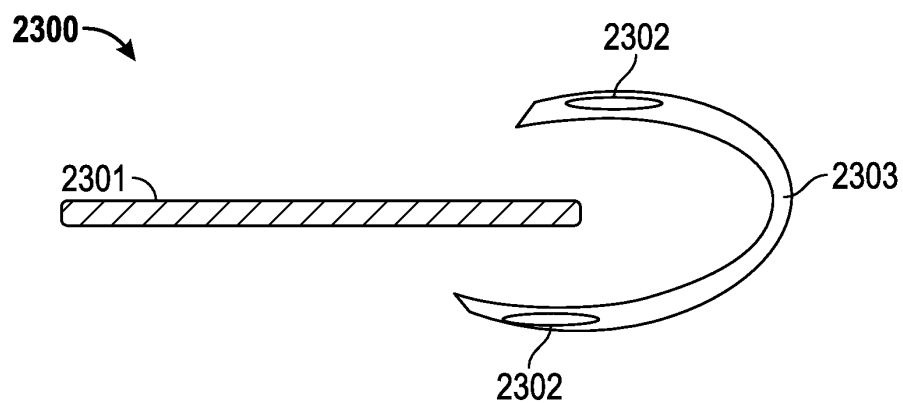


FIG. 23

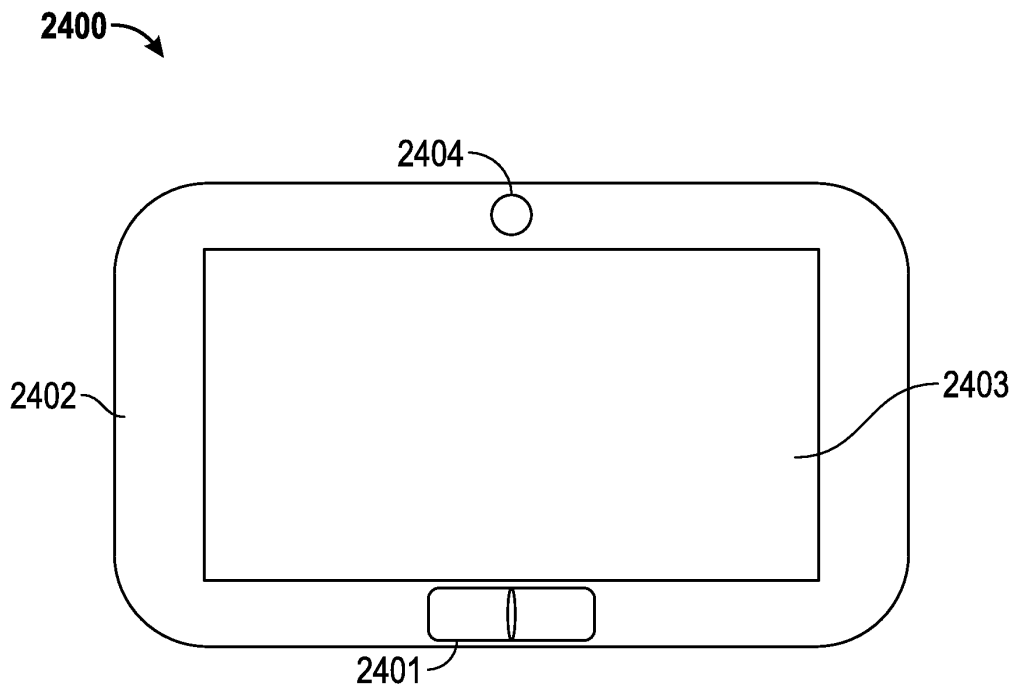


FIG. 24

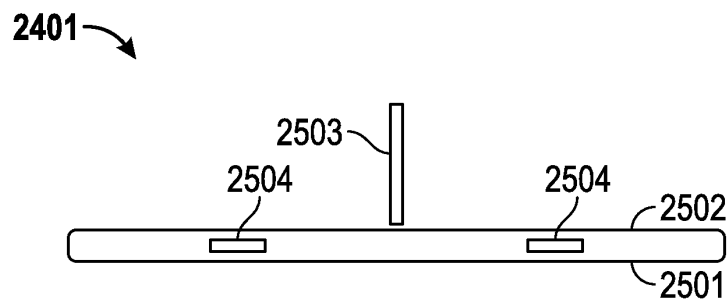


FIG. 25

13/13

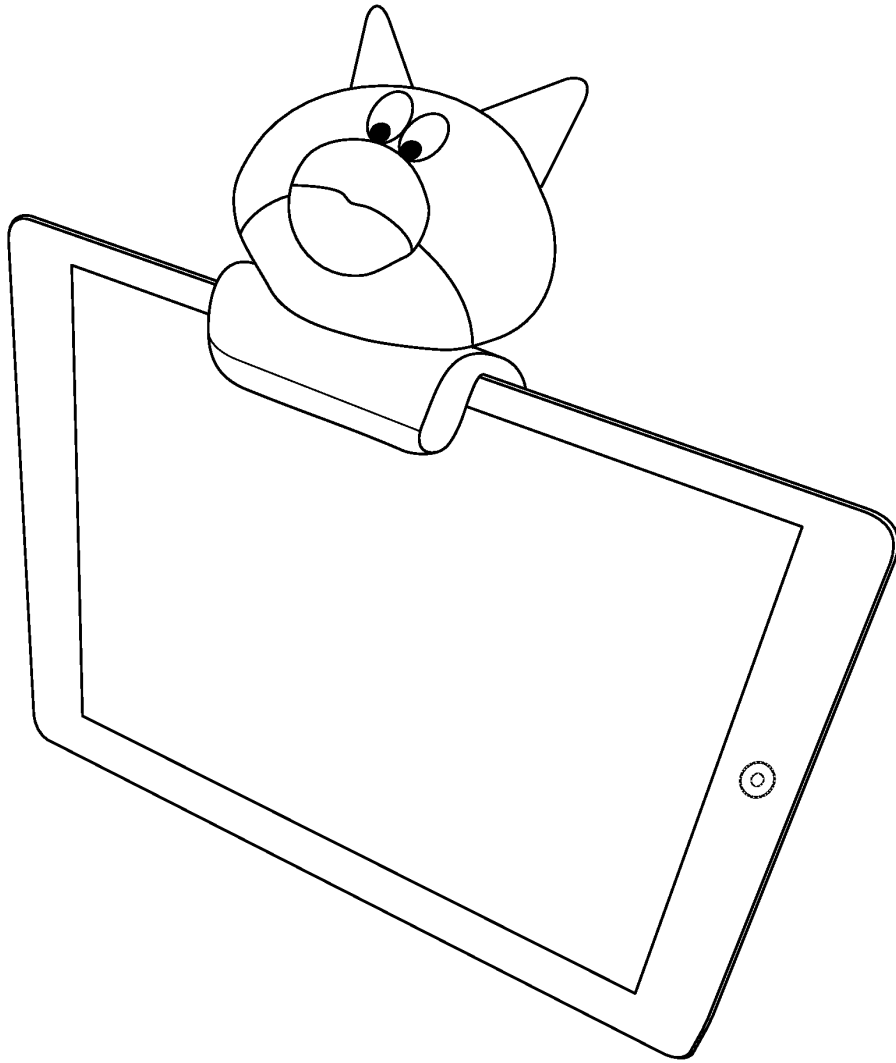


FIG. 26

## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>				
<b>Filing Date:</b>				
<b>Title of Invention:</b>	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF			
<b>First Named Inventor/Applicant Name:</b>	Walter G. Mayfield			
<b>Filer:</b>	Gene Tyler/Tracie Thigpen			
<b>Attorney Docket Number:</b>	MAYG-1001-WO-USC4			
Filed as Large Entity				
<b>Filing Fees for Utility under 35 USC 111(a)</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
UTILITY APPLICATION FILING	1011	1	280	280
UTILITY SEARCH FEE	1111	1	600	600
UTILITY EXAMINATION FEE	1311	1	720	720
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
LATE FILING FEE FOR OATH OR DECLARATION	1051	1	140	140
<b>Petition:</b>				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>1740</b>



## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	31317340
<b>Application Number:</b>	15852000
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	4536
<b>Title of Invention:</b>	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF
<b>First Named Inventor/Applicant Name:</b>	Walter G. Mayfield
<b>Customer Number:</b>	87627
<b>Filer:</b>	Gene Tyler/Tracie Thigpen
<b>Filer Authorized By:</b>	Gene Tyler
<b>Attorney Docket Number:</b>	MAYG-1001-WO-USC4
<b>Receipt Date:</b>	22-DEC-2017
<b>Filing Date:</b>	
<b>Time Stamp:</b>	11:10:57
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 1740
RAM confirmation Number	122217INTEFSW11112500
Deposit Account	504920
Authorized User	Tracie Thigpen

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

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)  
 37 CFR 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	Application Data Sheet	MAYG_1001WOUSC4_ADS_pto_Filed.pdf	111359 79de6db44898cf787c6f9a9e4097506e7f378f10	no	8

**Warnings:**

**Information:**

This is not an USPTO supplied ADS fillable form

2		MAYG_1001USC_Continuation App_pto_Cont4_for_filing.pdf	259639 3cd0c278f6241a1c3ca2f3386705ab9095776ba1	yes	33
---	--	--	--	-----	----

**Multipart Description/PDF files in .zip description**

Document Description	Start	End
Specification	1	30
Claims	31	32
Abstract	33	33

**Warnings:**

**Information:**

3	Drawings-only black and white line drawings	MAYG_1001WOUSC4_Formals.pdf	312794 d432a99a9fac446705ce485ceb27207c8ee4789d	no	13
---	---	-----------------------------	--	----	----

**Warnings:**

**Information:**

4	Fee Worksheet (SB06)	fee-info.pdf	36667 450eaf7e2e41aefc556a86b3f9ba1051d4835ca7	no	2
---	----------------------	--------------	---	----	---

**Warnings:**

**Information:**

**Total Files Size (in bytes):** 720459

**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

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/852,000	12/22/2017	Walter G. Mayfield	MAYG-1001-WO-USC4

**CONFIRMATION NO. 4536**

87627  
Mossman, Kumar & Tyler PC  
P.O. Box 421239  
Houston, TX 77242

**INFORMAL NOTICE**



0C00000096776381

Date Mailed: 01/22/2018

**INFORMATIONAL NOTICE TO APPLICANT**

Applicant is notified that the above-identified application contains the deficiencies noted below. No period for reply is set forth in this notice for correction of these deficiencies. However, if a deficiency relates to the inventor's oath or declaration, the applicant must file an oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each actual inventor no later than the expiration of the time period set in the "Notice of Allowability" to avoid abandonment. See 37 CFR 1.53(f).

The item(s) indicated below are also required and should be submitted with any reply to this notice to avoid further processing delays.

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):  
Walter G. Mayfield  
Daniel Martin Valdez

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/s/ibrahim/



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 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 15/852,000, 12/22/2017, 1721, 1740, MAYG-1001-WO-USC4, 19, 1

CONFIRMATION NO. 4536

FILING RECEIPT



87627
Mossman, Kumar & Tyler PC
P.O. Box 421239
Houston, TX 77242

Date Mailed: 01/22/2018

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

Inventor(s)

Walter G. Mayfield, Houston, TX;
Daniel Martin Valdez, Kingwood, TX;

Applicant(s)

GUI GLOBAL PRODUCTS, LTD., Houston, TX;

Assignment For Published Patent Application

GUI GLOBAL PRODUCTS, LTD., Houston, TX

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 15/597,005 05/16/2017 which is a CON of 14/343,665 07/14/2014 ABN which is a 371 of PCT/US2012/049562 08/03/2012 which claims benefit of 61/661,090 06/18/2012 and claims benefit of 61/619,229 04/02/2012 and claims benefit of 61/592,344 01/30/2012 and claims benefit of 61/576,834 12/16/2011 and claims benefit of 61/569,093 12/09/2011 and claims benefit of 61/568,031 12/07/2011 and claims benefit of 61/561,087 11/17/2011 and claims benefit of 61/555,310 11/03/2011 and claims benefit of 61/515,752 08/05/2011

Foreign Applications for which priority is claimed (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.) - None.

*Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.*

**Permission to Access Application via Priority Document Exchange:** Yes

**Permission to Access Search Results:** No

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

**If Required, Foreign Filing License Granted:** 01/18/2018

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/852,000**

**Projected Publication Date:** 05/03/2018

**Non-Publication Request:** No

**Early Publication Request:** No

**Title**

APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF

**Preliminary Class**

430

**Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications:** No

### **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

page 2 of 4

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 (1-866-999-4258).

**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).

## ***SelectUSA***

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.



<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875	Application or Docket Number 15/852,000
---	--

APPLICATION AS FILED - PART I			SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
	(Column 1)	(Column 2)					
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A			N/A	300
SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A			N/A	660
EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A			N/A	760
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	19	minus 20 = *				x 100 =	0.00
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	1	minus 3 = *				x 460 =	0.00
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).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1720

APPLICATION AS AMENDED - PART II					SMALL ENTITY		OR	OTHER THAN SMALL ENTITY		
	(Column 1)	(Column 2)	(Column 3)							
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=			x	=	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=			x	=	
	Application Size Fee <small>(37 CFR 1.16(s))</small>									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>									
					TOTAL ADD'L FEE			TOTAL ADD'L FEE		
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)	
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=			x	=	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=			x	=	
	Application Size Fee <small>(37 CFR 1.16(s))</small>									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>									
					TOTAL ADD'L FEE			TOTAL ADD'L 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 found in the appropriate box in column 1.</p>										

<p align="center"><b>DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)</b></p> <p><input type="checkbox"/> Declaration Submitted With Initial Filing      OR      <input checked="" type="checkbox"/> Declaration Submitted After Initial Filing (surcharge (37 CFR 1.16(f)) required)</p>		Attorney Docket Number	MAYG-1001-WO-USC4
		First Named Inventor	Walter G. Mayfield
COMPLETE IF KNOWN			
		Application Number	15/852000
		Filing Date	December 22, 2017
		Art Unit	
		Examiner Name	

**APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF**

*(Title of the Invention)*

As a below named inventor, I hereby declare that:

This declaration is directed to:

The attached application,

OR

United States Application Number or PCT International application number 15/852000  
filed on December 22, 2017

The above-identified application was made or authorized to be made by me.

I believe I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

**Authorization To Permit Access To Application by Participating Office**

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified patent application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the above-identified patent application is filed to have access to the above-identified patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the above-identified patent application with respect to: 1) the above-identified patent application-as-filed; 2) any foreign application to which the above-identified patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the above-identified patent application; and 3) any U.S. application-as-filed from which benefit is sought in the above-identified patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

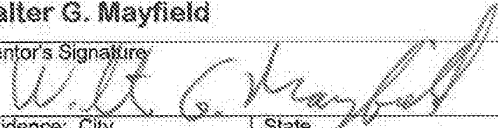
[Page 1 of 2]

This collection of information is required by 35 U.S.C. 116 and 37 CFR 1.63. 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 21 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-9196 and select option 2.


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.

**DECLARATION — Utility or Design Patent Application**

Direct all correspondence to:	<input checked="" type="checkbox"/> The address associated with Customer Number:	<b>87627</b>	OR	<input type="checkbox"/> Correspondence address below
Name				
Address				
City		State	Zip	
Country	Telephone	Email		
<b>WARNING:</b>				
<p>Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available. Petitioner/applicant is advised that documents which form the record of a patent application (such as the PTO/SB/01) are placed into the Privacy Act system of records DEPARTMENT OF COMMERCE, COMMERCE-PAT-7, System name: <i>Patent Application Files</i>. Documents not retained in an application file (such as the PTO-2038) are placed into the Privacy Act system of COMMERCE/PAT-TM-10, System name: <i>Deposit Accounts and Electronic Funds Transfer Profiles</i>.</p>				
<b>LEGAL NAME OF SOLE OR FIRST INVENTOR:</b>				
(E.g., Given Name (first and middle (if any)) and Family Name or Surname)				
<b>Walter G. Mayfield</b>				
Inventor's Signature 			Date (Optional)	
Residence: City	State	Country		
<b>Houston</b>	<b>TX</b>	<b>US</b>		
Mailing Address				
<b>801 Crestbend Drive</b>				
City	State	Zip	Country	
<b>Houston</b>	<b>TX</b>	<b>77042</b>	<b>US</b>	
<input checked="" type="checkbox"/> Additional inventors are being named on the <u>1</u> supplemental sheet(s) PTO/AIA/10 attached hereto				

[Page 2 of 2]

<b>SUPPLEMENTAL SHEET FOR DECLARATION</b>	<b>ADDITIONAL INVENTOR(S)</b>
	Supplemental Sheet (for PTO/AIA/08,09) Page <u>3</u> of <u>3</u>

<b>Legal Name of Additional Joint Inventor, if any:</b>			
(E.g., Given Name (first and middle (if any)) and Family Name or Surname)			
Daniel Martin Valdez			
Inventor's Signature 			Date (Optional)
Residence: City	Kingwood	State	TX
		Country	US
Mailing Address			
3703 Sunny Oaks Ct.			
City	Kingwood	State	TX
		Zip	77345
		Country	US
<b>Legal Name of Additional Joint Inventor, if any:</b>			
(E.g., Given Name (first and middle (if any)) and Family Name or Surname)			
Inventor's Signature			Date (Optional)
Residence: City		State	
		Country	
Mailing Address			
City		State	
		Zip	
		Country	
<b>Legal Name of Additional Joint Inventor, if any:</b>			
(E.g., Given Name (first and middle (if any)) and Family Name or Surname)			
Inventor's Signature			Date (Optional)
Residence: City		State	
		Country	
Mailing Address			
City		State	
		Zip	
		Country	

This collection of information is required by 35 U.S.C. 116 and 37 CFR 1.63. 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. 132 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 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 (1-800-786-9199) and select option 2.

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	31607192
<b>Application Number:</b>	15852000
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	4536
<b>Title of Invention:</b>	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF
<b>First Named Inventor/Applicant Name:</b>	Walter G. Mayfield
<b>Customer Number:</b>	87627
<b>Filer:</b>	Gene Tyler/Margaret A. Pruitt-Johns
<b>Filer Authorized By:</b>	Gene Tyler
<b>Attorney Docket Number:</b>	MAYG-1001-WO-USC4
<b>Receipt Date:</b>	25-JAN-2018
<b>Filing Date:</b>	22-DEC-2017
<b>Time Stamp:</b>	15:39:17
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
------------------------	----

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Oath or Declaration filed	MAYG_1001WOUSC4_Oath_pt o.pdf	2400022  49fd056f2269fd2bbe7b64145160e250cf9d 3138	no	3

### Warnings:

<b>Information:</b>	
<b>Total Files Size (in bytes):</b>	2400022
<p><b>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.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  <b>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.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  <b>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.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  <b>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.</b></p>	



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 (15/852,000), FILING OR 371(C) DATE (12/22/2017), FIRST NAMED APPLICANT (Walter G. Mayfield), ATTY. DOCKET NO./TITLE (MAYG-1001-WO-USC4)

CONFIRMATION NO. 4536

PUBLICATION NOTICE

87627
Mossman, Kumar & Tyler PC
P.O. Box 421239
Houston, TX 77242



Title: APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF

Publication No. US-2018-0117636-A1

Publication Date: 05/03/2018

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 Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, 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 https://portal.uspto.gov/pair/PublicPair. 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

PETITION TO MAKE SPECIAL BASED ON AGE FOR ADVANCEMENT OF EXAMINATION UNDER 37 CFR 1.102(c)(1)					
Application Information					
Application Number	15852000	Confirmation Number	4536	Filing Date	2017-12-22
Attorney Docket Number (optional)	MAYG-1001-WO-USC4	Art Unit	1721	Examiner	CAMPBELL
First Named Inventor	Walter G. Mayfield				
Title of Invention	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF				
<p><b>Attention: Office of Petitions</b>                      An application may be made special for advancement of examination upon filing of a petition showing that the applicant is 65 years of age, or more. No fee is required with such a petition. See 37 CFR 1.102(c)(1) and MPEP 708.02 (IV).</p> <p>APPLICANT HEREBY PETITIONS TO MAKE SPECIAL FOR ADVANCEMENT OF EXAMINATION IN THIS APPLICATION UNDER 37 CFR 1.102(c)(1) and MPEP 708.02 (IV) ON THE BASIS OF THE APPLICANT'S AGE.</p> <p>A grantable petition requires one of the following items:                      (1) Statement by one named inventor in the application that he/she is 65 years of age, or more; or                      (2) Certification by a registered attorney/agent having evidence such as a birth certificate, passport, driver's license, etc. showing one named inventor in the application is 65 years of age, or more.</p>					
<b>Name of Inventor who is 65 years of age, or older</b>					
Given Name	Middle Name	Family Name	Suffix		
Daniel		VALDEZ			
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 format of the signature.  Select (1) or (2) :					
<input type="radio"/> (1) I am an inventor in this application and I am 65 years of age, or more.					
<input checked="" type="radio"/> (2) I am an attorney or agent registered to practice before the Patent and Trademark Office, and I certify that I am in possession of evidence, and will retain such in the application file record, showing that the inventor listed above is 65 years of age, or more.					
Signature	/Gene L. Tyler/		Date (YYYY-MM-DD)	2018-08-23	
Name	Gene L. Tyler		Registration Number	35395	



## 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.

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	33525533
<b>Application Number:</b>	15852000
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	4536
<b>Title of Invention:</b>	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF
<b>First Named Inventor/Applicant Name:</b>	Walter G. Mayfield
<b>Customer Number:</b>	87627
<b>Filer:</b>	Gene Tyler/Margaret A. Pruitt-Johns
<b>Filer Authorized By:</b>	Gene Tyler
<b>Attorney Docket Number:</b>	MAYG-1001-WO-USC4
<b>Receipt Date:</b>	23-AUG-2018
<b>Filing Date:</b>	22-DEC-2017
<b>Time Stamp:</b>	18:01:24
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
------------------------	----

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition to make special based on Age/ Health	MAYG_1001WOUSC4_Petition MakeSpecial_pto.pdf	71614  b959f2f569f2328ceb6424f37c56052d1c9fe eb0	no	2

### Warnings:

<b>Information:</b>	
<b>Total Files Size (in bytes):</b>	71614
<p><b>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.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  <b>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.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  <b>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.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  <b>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.</b></p>	

## Office of Petitions: Routing Sheet



Application No.

**This application is being forwarded to your office for further processing. A decision has been rendered on a petition filed in this application, as indicated below. For details of this decision, please see the document PET.OP.DEC filed on the same date as this document.**

**GRANTED**

**DISMISSED**

**DENIED**



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 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO., EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, DELIVERY MODE.

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):

docket@mktlaw.com
tthigpen@mktlaw.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
www.uspto.gov

In re Application of :  
WALTER G. MAYFIELD, ET AL. :  
Application No.: 15/852,000 : DECISION ON PETITION  
Filed: December 22, 2017 : TO MAKE SPECIAL UNDER  
Attorney Docket No.: MAYG-1001-WO-USC4 : 37 CFR 1.102(c)(1)

This is a decision on the petition under 37 CFR 1.102(c)(1), filed August 23, 2018, to make the above-identified application special based on applicant’s age as set forth in MPEP §708.02, Section IV.

The petition is **GRANTED**.

A grantable petition to make an application special under 37 CFR 1.102(c)(1) and MPEP §708.02, Section IV: Applicant’s Age must be accompanied by evidence showing that at least one of the applicants is 65 years of age, or more, such as a birth certificate or a statement by applicant. No fee is required

The instant petition includes a statement from the attorney of record declaring that he is in possession of such evidence that proves the applicant is 65 years of age or older. Accordingly, the above-identified application has been accorded “special” status.

Telephone inquiries concerning this decision should be directed to Cheryl Gibson-Baylor at (571) 272-3213.

All other inquiries concerning either the examination or status of the application should be directed to the Technology Center.

The application is being forwarded to the Technology Center Art Unit 2835 for action on the merits commensurate with this decision.

/Cheryl Gibson-Baylor/  
Cheryl Gibson-Baylor  
Petitions Paralegal Specialist  
Office of Petitions

Office of Petitions: Decision Count Sheet

11

Application No.

15852000



For US serial numbers: enter number only, no slashes or commas. Ex: 10123456

For PCT: enter "51+single digit of year of filing+last 5 numbers", Ex. for PCT/US05/12345, enter 51512345

Deciding Official:

GIBSON-BAYLOR, C

Count (1) - Palm Credit

15852000

Decision:

GRANT

FINANCE WORK NEEDED

Select Check Box for YES



Decision Type:

601 - TO MAKE APPLICATION SPECIAL ON GROUND C



Notes:

Count (2)

Decision:

n/a

FINANCE WORK NEEDED

Select Check Box for YES

Decision Type:

NONE

Notes:

Count (3)

Decision:

n/a

FINANCE WORK NEEDED

Select Check Box for YES

Decision Type:

NONE

Notes:

Initials of Approving Official (if required)

Printed on: 11/19/2018

Office of Petitions Internal Document - Ver. 5.0



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. Includes application details for 15/852,000 and associated attorney information.

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):

docket@mktlaw.com
tthigpen@mktlaw.com



<b>Office Action Summary</b>	<b>Application No.</b> 15/852,000	<b>Applicant(s)</b> Mayfield et al.	
	<b>Examiner</b> ANTHONY M HAUGHTON	<b>Art Unit</b> 2835	<b>AIA Status</b> No

**-- 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 MONTHS 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 1/22/2018.  
 A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_.
- 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) 1-19 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) 1-19 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](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).

**Application Papers**

- 10)  The specification is objected to by the Examiner.
- 11)  The drawing(s) filed on 12/22/2017 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).  
**Certified copies:**  
a)  All      b)  Some\*\*      c)  None of the:  
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/08a and/or PTO/SB/08b)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 3)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4)  Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale or otherwise available to the public before the effective filing date of the claimed invention.

(a)(2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.

**Claim(s) 1-3, 6, 7, 11-13, 16, 18, and 19** is/are rejected under 35 U.S.C. 102(a)(1) as being anticipated by Rothbaum (2011/0192857).

**Regarding Claim 1:** Rothbaum teaches a system comprising: a portable switching device (108 or other device from other embodiments) coupled to a portable electronic device (figs. 1-2 and paragraph [0138]); wherein: the switching device and the electronic device are configured to selectively couple to each other employing magnetic force (paragraph [0009]); the switching device comprises a first case (case holding 108 or other device from other embodiments); the electronic device comprises a second case (figs. 1-2) and an electronic circuit that is responsive to the switching device (figs. 31-34 and 61a-61b); a first magnet is fully disposed within the electronic device (figs. 1-2 and 57); the electronic device comprises at least one element selected from the group consisting of beveled edges, ridges, recessed areas, grooves, slots, indented shapes, bumps, raised shapes, and combinations thereof (figs. 1-2 and 31-34 and 61a-61b); configured to correspond to complimentary surface elements on the switching device (Figs. 1-2); and when coupled, the second case functions to protect the first case (figs. 1-2).

**Regarding Claim 2:** Rothbaum teaches the electronic device has a lens (paragraph [0006]).

**Regarding Claim 3:** Rothbaum teaches the electronic device has a view screen (paragraph [0006]).

**Regarding Claim 6** Rothbaum teaches the electronic device includes a lid (figs. 29a-30) and hinge (figs. 29a-30) attaching the lid to the electronic device (figs. 29a-30).

**Regarding Claim 7:** Rothbaum teaches the lid is recessed (through back in fig. 30) to configure to the switching device (figs. 29a-30).

**Regarding Claim 11:** Rothbaum teaches the switching device has a tab or knob configured to be manipulated by an external force (figs. 31-34 and 61a-61b).

**Regarding Claim 12:** Rothbaum teaches a surface of the first case is composed of a material nonabrasive to the lens (paragraph [0145]).

**Regarding Claim 13:** Rothbaum teaches a surface of the first case is composed of a material nonabrasive to the lens (paragraph [0145]).

**Regarding Claim 16:** Rothbaum teaches the first magnet is employed in actuating the electronic circuit (figs. 61a-61b actuate the powering circuit).

**Regarding Claim 18:** Rothbaum teaches the switching device additionally comprises a laser (paragraph [0178]).

**Regarding Claim 19:** Rothbaum teaches the switching device can be employed to perform at least one function selected from the group consisting of control volume, pause, play, next slide, switch on, switch off, and combinations thereof, to an electronic device (the battery device of figs. 61a-61b, allow for the switching on and off of the device due to power loss or gain).

### ***Claim Rejections - 35 USC § 103***

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory

basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

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

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 4, 5, 14, and 15** is/are rejected under 35 U.S.C. 103 as being unpatentable over Rothbaum (2011/0192857) as applied to the claims above, and further in view of Bliven (2008/0103637).

**Regarding Claim 4:** Rothbaum lacks a specific teaching of the switching device has a lens.

Bliven teaches the switching device (150) has a lens (fig. 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Rothbaum by having the switching device has a lens in order to allow for the user to use the switching device to still see the display of the portable electronic device but also to use the switching device in multiple different ways making the electronic device more versatile.

**Regarding Claim 5:** Rothbaum lacks a specific teaching of the switching device has a view screen.

Bliven teaches the switching device (165) has a view screen (fig. 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Rothbaum by having the switching device has a view screen in order to allow for the user to use the switching device to still see the display of the portable electronic device but also to use the switching device in multiple different ways making the electronic device more versatile.

**Regarding Claim 14:** Rothbaum teaches a surface of the first case is composed of a material nonabrasive to the lens (paragraph [0145]).

**Regarding Claim 15:** Rothbaum teaches a surface of the first case is composed of a material nonabrasive to the lens (paragraph [0145]).

Claims 8, 9, and 17 is/are rejected under 35 U.S.C. 103 as being unpatentable over Rothbaum (2011/0192857) as applied to the claims above.

**Regarding Claim 8:** Rothbaum lacks a specific teaching of the lid has a second magnet (5704) disposed within it.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Rothbaum by having the lid has a second magnet disposed within it in order to allow for a better more secure connection between the device and the portable electronic device decreasing the chances of damage to the device wherein this would be accomplished merely by relocating the already disclosed elements of the apparatus and it has been held that rearranging already disclosed parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

**Regarding Claim 9:** Rothbaum lacks a specific teaching of the lid is configured to employ the second magnet (5704) to secure the lid in a closed position.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Rothbaum by having the lid is configured to employ the second magnet to secure the lid in a closed position in order to allow for a better more secure connection between the device and the portable electronic device decreasing the chances of damage to the device wherein this would be accomplished merely by relocating the already disclosed elements of the apparatus and it has been held that rearranging already disclosed parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

**Regarding Claim 17:** Rothbaum lacks a specific teaching of the second (5704) or a third magnet (other 5704) is employed in the lid to actuate the electronic circuit.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Rothbaum by having the second or a third magnet is employed in the lid to actuate the electronic circuit in order to allow for a better more secure connection between the device and the portable electronic device decreasing the chances of damage to the device wherein this would be accomplished merely by relocating the already disclosed elements of the apparatus and it has been held that rearranging already disclosed parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

**Claim 10** is/are rejected under 35 U.S.C. 103 as being unpatentable over Rothbaum (2011/0192857) as applied to the claims above, and further in view of Abramov (2005/0107131).

**Regarding Claim 10:** Rothbaum lacks a specific teaching of the switching device is wireless earplugs.

Abramov teaches the switching device is wireless earplugs (figs. 1-3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Rothbaum by having the switching device is wireless earplugs in order to allow the user an easier way to store and access wireless earplugs to use with the portable electronic device.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY MICHAEL HAUGHTON whose telephone number is (571)272-9087. The examiner can normally be reached on M-F 8a-4p.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jinhee Lee can be reached on 571-272-1977. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ANTHONY M HAUGHTON/

Primary Examiner, Art Unit 2835

<b>Notice of References Cited</b>	Application/Control No. 15/852,000	Applicant(s)/Patent Under Reexamination Mayfield et al.	
	Examiner ANTHONY M HAUGHTON	Art Unit 2835	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A US-20050284904-A1	12-2005	Knapp, Christopher J.	A45F5/02	224/269
*	B US-20110192857-A1	08-2011	Rothbaum; Wayne Philip	B25F1/00	220/694
*	C US-20100011524-A1	01-2010	Roebach; Gerald Oliver	B08B1/00	15/105
*	D US-20080103637-A1	05-2008	Bliven; Robert P.	F16B2/20	701/1
*	E US-20050107131-A1	05-2005	Abramov, Igor	H04M1/0258	455/569.1
*	F				
*	G				
*	H				
*	I				
*	J				
*	K				
*	L				
*	M				

**FOREIGN PATENT DOCUMENTS**


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

**NON-PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC 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.



<b>Search Notes</b> 	<b>Application/Control No.</b> 15/852,000	<b>Applicant(s)/Patent Under Reexamination</b> Mayfield et al.
	<b>Examiner</b> ANTHONY M HAUGHTON	<b>Art Unit</b> 2835

CPC - Searched*		
Symbol	Date	Examiner
g06f1/32,16,1601,1603,1605,1607,1609,1611	12/26/2018	AMH
B08B1/006,002	12/26/2018	AMH

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
361	679.01, 679.02	12/26/2018	AMH

\* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
EAST SEARCH (SEE SEARCH NOTES)	12/26/2018	AMH
INVENTOR SEARCH	12/26/2018	AMH
IP.COM SEARCH	12/26/2018	AMH
CLASSIFICATION SEARCH IN COMBINATION WITH TEXT SEARCH	12/26/2018	AMH

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/ANTHONY M HAUGHTON/ Primary Examiner, Art Unit 2835	
---	--

## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	2	("6935661"   "7835150").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 11:01
S2	462	361/679.22.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 11:01
S3	267	haughton.xa.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 11:03
S4	196	haughton.xp.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 11:03
S5	463	S3 S4	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 11:03
S6	261	S5 and display	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 11:03
S7	181	S6 and (hing\$4 or rotat\$4 or hinge\$4)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 11:03
S8	91	S7 and keyboard\$1	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 11:04
S9	5	("20040246667"   "20050078444"   "5283862"   "5298681").PN. OR ("8081429").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 11:37
S10	6	("5375076"   "6659319"   "7599181").PN. OR ("7898796").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 11:43
S11	3	("6262885"   "6842332"   "7599181").PN. OR ("7869200").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 11:44
S12	1461	361/679.21.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 11:47
S13	303	S2 and (hing\$4 or rotat\$4 or hinge\$4)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 11:47
S14	221	S13 and (cas\$3 or hous\$3 or enclosure)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 11:50
S15	131	S13 and ((top or front or bottom or back) with (cas\$3 or hous\$3 or enclosure))	US-PGPUB;	OR	OFF	2014/02/07 11:51

			USPAT; USOCR			
S16	90	S14 not S15	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:31
S17	172	S13 not S15	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:31
S18	10	S17 and (all-in-one)	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:31
S19	0	S17 and (all near in near one)	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:32
S20	10	S17 and ((all-in-one) or AIO)	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:32
S21	25	("5805190"   "6168124"   "6268997").PN. OR ("6366453").URPN.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:33
S22	59	"20030235029"   "20040190236"   "20050077439"   "20050141180"   "20060061958"   "20060071641"   "20060133021"   "20060168865"   "20060250764"   "20060250767"   "20060262232"   "20060274495"   "20070146981"   "20070168593"   "20080158803"   "20080180898"   "20100001148"   "20100188808"   "20110043986"   "20110122556"   "5169221"   "5568359"   "5701347"   "5729478"   "5870280"   "6010111"   "6032918"   "6049454"   "6134103"   "6168124"   "6206593"   "6259601"   "6268998"   "6366453"   "6392873"   "6661649"   "6816364"   "6833988"   "6894893"   "6987666"   "7046517"   "7072175"   "7222395"   "7255317"   "7280347"   "7355844"   "7471511"   "7551432"   "7636235"   "7665185"   "7716408"   "7724533"   "7760500"   "7773371"   "7793026"   "7835154"   "7852625"   "7883063"   "D636778").PN. OR ("8576554").URPN.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:34
S23	804	361/679.56.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:40
S24	6	S23 and ((all-in-one) or AIO)	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:40
S25	0	S23 and (all near in near one)	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:41
S26	488	361/679.3.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:41
S27	5	S26 and ((all-in-one) or AIO)	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:41
S28	0	S26 and (all near in near one)	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:41
S29	459	361/679.57.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:42
S30	1532	361/679.58.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:42

S31	6	S29 and ((all-in-one) or AIO)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:42
S32	10	S30 and ((all-in-one) or AIO)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:42
S33	0	S29 and (all near in near one)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:43
S34	0	S30 and (all near in near one)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:43
S35	16	S31 S32	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:43
S36	29	S2 and ((all-in-one) or AIO)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:45
S37	19	S36 not S20	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:45
S38	3865	349/58.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:49
S39	241	349/59.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:49
S40	547	349/60.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:49
S41	963	S38 and (hing\$4 or rotat\$4 or hinge\$4)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:50
S42	46	S39 and (hing\$4 or rotat\$4 or hinge\$4)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:50
S43	123	S40 and (hing\$4 or rotat\$4 or hinge\$4)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:50
S44	800	S41 and (cas\$3 or hous\$3 or enclosure)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:50
S45	37	S42 and (cas\$3 or hous\$3 or enclosure)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:50
S46	100	S43 and (cas\$3 or hous\$3 or enclosure)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:50
S47	502	S41 and ((top or front or bottom or back) with (cas\$3 or hous\$3 or enclosure))	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:50

S48	22	S42 and ((top or front or bottom or back) with (cas\$3 or hous\$3 or enclosure))	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:50
S49	56	S43 and ((top or front or bottom or back) with (cas\$3 or hous\$3 or enclosure))	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:50
S50	124	S45 S46	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:51
S51	68	S48 S49	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:51
S52	0	S50 and ((all-in-one) or AIO)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:51
S53	0	S51 and ((all-in-one) or AIO)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:51
S54	2	S47 and ((all-in-one) or AIO)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:51
S55	3	S44 and ((all-in-one) or AIO)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:51
S56	3	S41 and ((all-in-one) or AIO)	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:51
S57	3	S54 S55 S56	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:52
S58	56	S50 not S51	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 12:55
S59	84	("4803652"   "4832419"   "4980676"   "5021763"   "5107402"   "5157585"   "5175672"   "5187645"   "5305183"   "5351176"   "5426564"   "5430607"   "5461717"   "5666264"   "6025989"   "6049449"   "D373573").PN. OR ("6219229").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 13:03
S60	27	(US-20090168321-\$ or US-20060274487-\$ or US-20060133016-\$).did. or (US-8400767-\$ or US-8081435-\$ or US-8081429-\$ or US-7898796-\$ or US-7869200-\$ or US-7724511-\$ or US-7450372-\$ or US-7298610-\$ or US-6219229-\$ or US-8576554-\$ or US-8373976-\$ or US-8218303-\$ or US-7846026-\$ or US-7601067-\$ or US-6049449-\$ or US-5430607-\$ or US-5351176-\$ or US-5305183-\$ or US-5175672-\$ or US-5157585-\$ or US-5107402-\$ or US-5021763-\$ or US-4980676-\$ or US-4832419-\$).did.	US-PGPUB; USPAT	OR	OFF	2014/02/07 14:56
S61	12	S60 and CPU	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 14:56
S62	11	S61 and power	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 14:56
S63	5	S62 and memory	US-PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 14:56
S64	76	("4514920"   "4814711"   "5010322"   "5021763"   "5027111"   "5051868"   "5201813"   "5248193").PN. OR ("5351176").URPN.	US-PGPUB;	OR	OFF	2014/02/07 14:57

## EAST Search History

			USPAT; USOCR			
S65	42	("3177404"   "3713614"   "3962608"   "4268100"   "4736332"   "4905173"   "4979075"   "5023754"   "5131272"   "5159528").PN. OR ("5305183").URPN.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/07 15:24
S66	205	((OWEN) near2 (RICHARD)).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/10 11:24
S67	23	((JONATHAN) near2 (BASSETT)).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/10 11:25
S68	55	((DAVID) near2 (QUIJANO)).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/10 11:25
S69	3	("6359775"   "5157585"   "4736332").PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/02/10 11:26
S70	1	"6359775".PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/05/28 18:36
S71	2	"20080316692"	US- PGPUB; USPAT; USOCR	OR	OFF	2014/05/29 00:31
S72	1	"7835150".pn.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/11/12 08:40
S73	1569	361/679.21.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/11/16 09:33
S74	497	361/679.22.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/11/16 09:33
S75	1615	361/679.58.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/11/16 09:33
S76	5	("20030063432"   "20060038104"   "20070058329"   "20070152125"   "20110025943").PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/03/24 22:34
S77	5	("20030063432"   "20060038104"   "20070058329"   "20070152125"   "20110025943").PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/03/24 22:34
S78	5	S76 S77	US- PGPUB; USPAT; USOCR	OR	OFF	2015/03/24 22:34
S79	1718	361/679.21.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:13
S80	538	361/679.22.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:14
S81	676	361/679.3.CCLS.	US- PGPUB; USPAT;	OR	OFF	2016/08/08 02:14

			USOCR			
S82	1036	361/679.56.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:14
S83	520	361/679.57.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:14
S84	1721	361/679.58.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:14
S85	5374	S79 S80 S81 S82 S83 S84	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:14
S86	4774	349/58.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:14
S87	274	349/59.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:14
S88	677	349/60.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:14
S89	5149	S86 S87 S88	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:14
S90	3401	G06F1/1601.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:14
S91	569	G06F1/1607.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:14
S92	409	G06F1/1633.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:14
S93	4275	S90 S91 S92	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:14
S94	226	(("RICHARD") near3 ("Owen")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:15
S95	36	(("BASSETT") near3 ("Jonathan")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:15
S96	73	(("QUIJANO") near3 ("David")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 02:15
S97	3401	g06F1/1601.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 13:02
S98	569	g06F1/1607.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08 13:03

S99	409	g06F1/1633.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08; 13:03
S100	538	361/679.22.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08; 13:03
S101	1718	361/679.21.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08; 13:03
S102	676	361/679.3.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08; 13:03
S103	1036	361/679.56.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08; 13:03
S104	520	361/679.57.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08; 13:03
S105	1721	361/679.58.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08; 13:03
S106	4774	349/58.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08; 13:03
S107	274	349/59.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08; 13:03
S108	677	349/60.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/08; 13:03
S109	1	"5157585".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24; 00:24
S110	14	("20030063432"   "20060038104"   "20070058329"   "20070152125"   "20080013268"   "20110025943"   "20110058326"   "4736332"   "5157585"   "5633782"   "6359775"   "6935661"   "7601067"   "7835150").PN.	US-PGPUB; USPAT	OR	OFF	2016/12/24; 00:24
S111	34	("2003/0063432").URPN.	USPAT	OR	OFF	2016/12/24; 00:31
S112	14	("20030063432"   "20060038104"   "20070058329"   "20070152125"   "20080013268"   "20110025943"   "20110058326"   "4736332"   "5157585"   "5633782"   "6359775"   "6935661"   "7601067"   "7835150").PN. OR ("9092200").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24; 00:32
S113	4	("2006/0133016").URPN.	USPAT	OR	OFF	2016/12/24; 00:36
S114	1	"20060133016"	USPAT	OR	OFF	2016/12/24; 00:40
S115	2	"20060133016"	US-PGPUB; USPAT	OR	OFF	2016/12/24; 00:40
S116	1	"20030063432"	US-PGPUB; USPAT	OR	OFF	2016/12/24; 00:40
S117	3	S115 S116	US-PGPUB; USPAT	OR	OFF	2016/12/24; 00:40
S118	9	("20030090864"   "20030227739"   "20040232298"   "20050127253"   "7061753").PN. OR ("7274557").URPN.	US-PGPUB;	OR	OFF	2016/12/24; 00:42



			USPAT; USOCR			
S119	41	("20040011932"   "20040012917"   "20050157457"   "20070076358"   "20070146979"   "5007608"   "5276589"   "5812368"   "6134103"   "6189842"   "6288891"   "6381125"   "6464195"   "6543734"   "6766994"   "6778196"   "6822857"   "6873521"   "6874743"   "6954221"   "6969037"   "6987666"   "7061753"   "7068497"   "7124984"   "7180731"   "7198240"   "7245481"   "7251127"   "7255317"   "7274557"   "7286342"   "7287729"   "7775494"   "7798457"   "8050024"   "8052102"   "8132765").PN. OR ("8387930").URPN.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 00:43
S120	1	"20030063432"	US- PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 00:50
S121	37	"4736332"	US- PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 00:52
S122	1	"4736332".pn.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 00:52
S123	12	("20020105793"   "20030077453"   "20050259438"   "20080230177"   "20110182084"   "20110188846"   "20130213565"   "3441398"   "3798013"   "6287674"   "8013834"   "8824140").PN.	US- PGPUB; USPAT	OR	OFF	2016/12/24 01:16
S124	16	("20030077453"   "20080230177"   "3798013"   "20150077624"   "20150331444"   "20130213565"   "8013834"   "20050259438"   "8824140"   "20110188846"   "20020105793"   "3441398"   "20110182084"   "6287674"   "9125298").PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:16
S125	11	S124 and glass	US- PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:16
S126	228	("20020035853"   "20020155302"   "20020157199"   "20030024274"   "20030057183"   "20030234771"   "20040051944"   "20040119701"   "20040142118"   "20040163414"   "20050058423"   "20050105071"   "20050135724"   "20050193772"   "20050245165"   "20050285991"   "20060026521"   "20060055936"   "20060070694"   "20060097991"   "20060197753"   "20060227331"   "20060238695"   "20060250559"   "20060268528"   "20060292822"   "20070003796"   "20070013822"   "20070029519"   "20070030436"   "20070039353"   "20070046200"   "20070063876"   "20070089827"   "20070122542"   "20070132737"   "20070196578"   "20070236618"   "20080026260"   "20080074028"   "20080094716"   "20080135175"   "20080158181"   "20080202167"   "20080243321"   "20080258603"   "20080261057"   "20080264176"   "20080286548"   "20090046240"   "20090067141"   "20090091551"   "20090096937"   "20090153729"   "20090162703"   "20090197048"   "20090202808"   "20090220761"   "20090257189"   "20090294420"   "20090324899"   "20090324939"   "20100009154"   "20100028607"   "20100053632"   "20100062284"   "20100119846"   "20100137031"   "20100154992"   "20100167059"   "20100171920"   "20100179044"   "20100206008"   "20100215862"   "20100216514"   "20100224767"   "20100265188"   "20100279067"   "20100285275"   "20100296027"   "20100315570"   "20100321305"   "20110003619"   "20110012873"   "20110019123"   "20110019354"   "20110030209"   "20110067447"   "20110072856"   "20110102346"   "20110159321"   "20110164372"   "20110186345").PN. OR ("20110199687"   "20110248152"   "20110255000"   "20110255250"   "20110267833"   "20110300908"   "20120018323"   "20120027399"   "20120099113"   "20120105400"   "20120118628"   "20120135195"   "20120136259"   "20120151760"   "20120188743"   "20120196071"   "20120202040"   "20120236477"   "20120236526"   "20120281381"   "20120328843"   "20130083506"   "20130182259"   "20130188366"   "20140176779"   "3415637"   "3467508"   "3498773"   "3558415"   "3607172"   "3619240"   "3626723"   "3652244"   "3753840"   "3798013"   "3843472"   "3857689"   "4015045"   "4119760"   "4156755"   "4165228"   "4178082"   "4212919"   "4346601"   "4353649"   "4425810"   "4646722"   "4733973"   "4842629"   "4844724"   "4846868"   "4849002"   "4872896"   "4911743"   "4937129"   "4957364"   "4959548"   "4983197"   "4986130"   "5041173"   "5104435"   "5129934"   "5157746"   "5160523"   "5254149"   "5269888"   "5281303"   "5369267"   "5411563"   "5437193"   "5445871"   "5483261"   "5488204"   "5525138"   "5625154"   "5654057"   "5733622"   "5766493"   "5780371"   "5816225"   "5825352"   "5835079"	US- PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:19

		"5880411"   "5930047"   "5953094"   "5985014"   "6050870"   "6120908"   "6166915"   "6188391"   "6245313"   "6307590"   "6310610"   "6323846"   "6325704"   "6327011"   "6350664"   "6393180"   "6429840"   "6437867"   "6516634"   "6521862"   "6621542"   "6690387"   "6718612"   "6769274"   "6810688"   "6936741"   "6955971"   "6996324"   "7012700"   "7013709"   "7015894"   "7070837"   "7184064"   "7461564".PN. OR ("7558054"   "7626807"   "7663607"   "7810355"   "7872644"   "7918019"   "8110268"   "8111248"   "8312743"   "8393175"   "8551283"   "8673163"   "8684613").PN. OR ("9125298").URPN.				
S127	227	S126 not S124	US- PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:20
S128	193	S127 and glass	US- PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:20
S129	59	S127 and (glass near2 (hous\$3 or chassis or cas\$3 or enclosure))	US- PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:20
S130	251	"20010034222"   "20010053464"   "20020035853"   "20020157199"   "20020195562"   "20030024274"   "20030100275"   "20030183448"   "20040051944"   "20040053014"   "20040102229"   "20040163414"   "20040196607"   "20040224638"   "20050052425"   "20050135724"   "20050193772"   "20060052144"   "20060070694"   "20060227331"   "20060238695"   "20060255493"   "20060268528"   "20070013822"   "20070029519"   "20070030436"   "20070236618"   "20080059680"   "20080074028"   "20080094716"   "20080202167"   "20080243321"   "20080261057"   "20080264176"   "20080286548"   "20090011803"   "20090046240"   "20090049773"   "20090067141"   "20090096937"   "20090153729"   "20090197048"   "20090202808"   "20090220761"   "20090247244"   "20090257189"   "20090294420"   "20090318200"   "20090324899"   "20090324939"   "20100009154"   "20100014232"   "20100028607"   "20100048257"   "20100061040"   "20100093412"   "20100179044"   "20100206008"   "20100216514"   "20100224767"   "20100279067"   "20100285275"   "20100296027"   "20100315570"   "20110003619"   "20110012842"   "20110012873"   "20110019123"   "20110019354"   "20110067447"   "20110072856"   "20110102346"   "20110136553"   "20110159321"   "20110164365"   "20110164372"   "20110188179"   "20110199687"   "20110255218"   "20110255250"   "20110272088"   "20110287812"   "20110300908"   "20110305875"   "20120027399"   "20120044635"   "20120105400"   "20120135195"   "20120136259"   "20120151760"   "20120176277"   "20120202040"   "20120236477").PN. OR ("20120236526"   "20120281381"   "3270252"   "3415637"   "3479568"   "3498773"   "3558415"   "3607172"   "3652244"   "3753840"   "3798013"   "3843472"   "3857689"   "4015045"   "4119760"   "4156755"   "4165228"   "4178082"   "4212919"   "4346601"   "4353649"   "4425810"   "4646722"   "4842629"   "4843624"   "4844724"   "4849002"   "4872896"   "4937129"   "4957364"   "4959548"   "4976435"   "4983197"   "4986130"   "5066368"   "5104435"   "5157746"   "5160523"   "5192082"   "5254149"   "5269888"   "5281303"   "5369267"   "5379057"   "5437193"   "5445871"   "5525138"   "5528453"   "5625154"   "5661632"   "5675362"   "5733622"   "5780371"   "5867772"   "5917545"   "5930047"   "5953094"   "5964661"   "6058356"   "6122526"   "6127986"   "6134121"   "6178094"   "6220680"   "6227966"   "6249427"   "6254477"   "6262785"   "6292556"   "6314483"   "6319631"   "6351374"   "6393180"   "6429840"   "6449164"   "6516634"   "6521862"   "6621542"   "6643918"   "6659274"   "6693601"   "6769274"   "6790556"   "6795715"   "6810688"   "6837435"   "6840311"   "6926141"   "6936741"   "6995715"   "6996324"   "7013164"   "7013709"   "7046230"   "7070837"   "7070881"   "7188484"   "7203309"   "7312984"   "7389128"   "7461564"   "7495659"   "7515431"   "7649744"   "7697281"   "7724532"   "7810355"   "7839646"   "7856255"   "7869206"   "7894185"   "7912515"   "8110268"   "8111248"   "8112130"   "8119048"   "8144475"   "8146244"   "8264837"   "8312743"   "8391010"   "8393175"   "D264969"   "D412940").PN. OR ("D430169"   "D432523"   "D437860"   "D448810"   "D450713"   "D452250"   "D455793"   "D468365"   "D469109"   "D472245"   "D483809"   "D489731"   "D490068"   "D497618"   "D506476"   "D515545"   "D516579"   "D521023").PN. OR ("8824140").URPN.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:21
S131	55	S130 and (glass near2 (hous\$3 or chassis or cas\$3 or enclosure))	US- PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:22

## EAST Search History

S132	80	S129 S131	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:22
S133	674	361/679.3.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:22
S134	2234	361/679.55.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:22
S135	1033	361/679.56.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:22
S136	5111	361/679.21-679.29.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:22
S137	7795	S133 S134 S135 S136	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:22
S138	125	S137 and (glass near2 (hous\$3 or chassis or cas\$3 or enclosure))	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:22
S139	120	S138 and display	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:23
S140	3	"9125298"	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:36
S141	1	"9125298".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 01:36
S142	13	"20020070275"   "20040056088"   "20070279852"   "20120194976"   "20130107674"   "20130120459"   "20130222270"   "20130234850"   "20140077946"   "20140188516"   "20150241914"   "20150241922"   "6142368"   "20020070275"   "20040056088"   "20070279852"   "20120194976"   "20130120459"   "20130222270"   "20140077946").PN.	US-PGPUB; USPAT	OR	OFF	2016/12/24 01:51
S143	267	haughton.xa.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 12:47
S144	790	haughton.xp.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 12:47
S145	1057	S143 S144	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 12:47
S146	5396	361/679.01.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 12:47
S147	137	S145 and S146	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 12:47
S148	28	S147 and charg\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 12:47

S149	1145	361/679.32.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 12:48
S150	28	S145 and S149	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 12:48
S151	2	S150 and charg\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 12:48
S152	30	S148 S151	US-PGPUB; USPAT; USOCR	OR	OFF	2016/12/24 12:48
S153	49	(US-20090168321-\$ or US-20060274487-\$ or US-20060133016-\$ or US-20110058326-\$ or US-20110025943-\$ or US-20030063432-\$ or US-20060038104-\$ or US-20050157457-\$ or US-20040012917-\$ or US-20120194976-\$ or US-20070279852-\$).did. or (US-8400767-\$ or US-8081435-\$ or US-8081429-\$ or US-7898796-\$ or US-7869200-\$ or US-7724511-\$ or US-7450372-\$ or US-7298610-\$ or US-6219229-\$ or US-8576554-\$ or US-8373976-\$ or US-8218303-\$ or US-7846026-\$ or US-7601067-\$ or US-6049449-\$ or US-5430607-\$ or US-5351176-\$ or US-5305183-\$ or US-5175672-\$ or US-5157585-\$ or US-5107402-\$ or US-5021763-\$ or US-4980676-\$ or US-4832419-\$ or US-8335089-\$ or US-8313072-\$).did. or (US-7267613-\$ or US-6359775-\$ or US-5640296-\$ or US-5631805-\$ or US-7002793-\$ or US-6504706-\$ or US-5761034-\$ or US-4736332-\$ or US-8387930-\$ or US-8052102-\$ or US-8050024-\$ or US-7775494-\$).did	US-PGPUB; USPAT	OR	OFF	2017/03/02 10:33
S154	0	S153 and (all near3 one)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/02 10:34
S155	1	"20040012917"	US-PGPUB; USPAT	OR	OFF	2017/03/02 10:49
S156	1	"7775494".pn.	US-PGPUB; USPAT	OR	OFF	2017/03/02 10:49
S157	1	"20050157457"	US-PGPUB; USPAT	OR	OFF	2017/03/02 10:49
S158	3	S155 S156 S157	US-PGPUB; USPAT	OR	OFF	2017/03/02 10:49
S159	0	S158 and (cpu or processor)	US-PGPUB; USPAT	OR	OFF	2017/03/02 10:55
S160	23	S153 and (cpu or processor)	US-PGPUB; USPAT	OR	OFF	2017/03/02 10:55
S161	16	S153 and (cpu)	US-PGPUB; USPAT	OR	OFF	2017/03/02 10:55
S162	14	S153 and (motherboard or (mother near board) or (main near board))	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/02 11:08
S163	6	S162 and (cpu or (central near3 process\$3))	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/02 11:08
S164	4	S163 and (batter\$3 or (power near suppl\$3))	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/02 11:08
S165	4	S164 and (memor\$3 or RAM\$1)	US-PGPUB; USPAT;	OR	OFF	2017/03/02 11:08

				USOCR			
S166	1	"4736332".pn.		US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/02 11:11
S167	1	"20040012917"		US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/04 14:37
S168	1	"8387930".pn.		US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/04 14:37
S169	1	"5631805".pn.		US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/04 14:37
S170	1	"20110025943"		US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/04 14:37
S171	4	S167 S168 S169 S170		US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/04 14:37
S172	1	"8971023".pn.		US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/04 15:49
S173	1	"8397930".pn.		US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/18 14:16
S174	1	"5631805".pn.		US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/18 14:16
S175	2	S173 S174		US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/18 14:16
S176	1	"8387930".pn.		US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/18 14:17
S177	2	S174 S176		US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/18 14:17
S178	1	"20110025943"		US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/18 14:18
S179	6	("20040012917"   "20050157457"   "20110025943"   "5631805"   "7775494"   "8387930").PN.		US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/18 14:20
S180	5	("4736332"   "5157585"   "5633782"   "6359775"   "7601067").PN.		US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/18 14:20
S181	11	S179 S180		US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/18 14:20
S182	0	S181 and gas		US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/18 14:20

S183	49	(US-20090168321-\$ or US-20060274487-\$ or US-20060133016-\$ or US-20110058326-\$ or US-20110025943-\$ or US-20030063432-\$ or US-20060038104-\$ or US-20050157457-\$ or US-20040012917-\$ or US-20120194976-\$ or US-20070279852-\$).did. or (US-8400767-\$ or US-8081435-\$ or US-8081429-\$ or US-7898796-\$ or US-7869200-\$ or US-7724511-\$ or US-7450372-\$ or US-7298610-\$ or US-6219229-\$ or US-8576554-\$ or US-8373976-\$ or US-8218303-\$ or US-7846026-\$ or US-7601067-\$ or US-6049449-\$ or US-5430607-\$ or US-5351176-\$ or US-5305183-\$ or US-5175672-\$ or US-5157585-\$ or US-5107402-\$ or US-5021763-\$ or US-4980676-\$ or US-4832419-\$ or US-8335089-\$ or US-8313072-\$).did. or (US-7267613-\$ or US-6359775-\$ or US-5640296-\$ or US-5631805-\$ or US-7002793-\$ or US-6504706-\$ or US-5761034-\$ or US-4736332-\$ or US-8387930-\$ or US-8052102-\$ or US-8050024-\$ or US-7775494-\$).did.	US-PGPUB; USPAT	OR	OFF	2017/05/18; 14:21
S184	4	S183 and gas	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/18; 14:21
S185	3	S177 S178	US-PGPUB; USPAT; USOCR	OR	OFF	2017/05/18; 14:28
S186	3686	G06F1/1601.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 11:25
S187	630	G06F1/1607.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 11:25
S188	512	G06F1/1633.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 11:25
S189	1716	361/679.21.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 11:25
S190	538	361/679.22.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 11:25
S191	674	361/679.3.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 11:25
S192	1034	361/679.56.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 11:25
S193	520	361/679.57.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 11:25
S194	1720	361/679.58.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 11:25
S195	979	361/679.26.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 11:25
S196	4703	S186 S187 S188	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 11:27
S197	6052	S189 S190 S191 S192 S193 S194 S195	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 11:27

S198	234	((("RICHARD") near3 ("Owen"))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:27
S199	39	((("BASSETT") near3 ("Jonathan"))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:28
S200	75	((("QUIJANO") near3 ("David"))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:28
S201	316	S198 S199 S200	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:31
S202	4456	S197 and display	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:32
S203	4334	S196 and display	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:32
S204	940	S202 and (stand)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:32
S205	1514	S203 and (stand)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:32
S206	812	S204 and (hous\$3 or cas\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:32
S207	1347	S205 and (hous\$3 or cas\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:33
S208	152	S206 and (lift or lift\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:33
S209	221	S207 and (lift or lift\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:33
S210	340	S208 S209	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:33
S211	7	S206 and ((lift or lift\$3) near3 assist\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:34
S212	3	S207 and ((lift or lift\$3) near3 assist\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:34
S213	8	S211 S212	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 11:34
S214	4	((("MASTROCOLA") near3 ("Naison"))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:06
S215	403	((("HAMILTON") near3 ("SUNDSTRAND") near3 ("CORPORATION"))).AANM.	USPAT	OR	OFF	2017/06/26

							12:06
S216	576	H05K13/04.cpc..	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:07	
S217	88	H05K7/1402.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:07	
S218	306	H05K7/1404.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:07	
S219	107	H05K7/1407.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:07	
S220	217	H05K7/1408.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:07	
S221	660	H05K7/1409.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:07	
S222	2362	403/373-374.5.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:12	
S223	1720	361/679.58.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:12	
S224	395	361/679.59.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:12	
S225	1341	361/679.31.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:13	
S226	1147	361/679.32.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:13	
S227	5038	361/704.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:13	
S228	437	361/721.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:13	
S229	2926	361/719.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:13	
S230	11184	S223 S224 S225 S226 S227 S228 S229	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:16	
S231	2362	S222	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:16	
S232	1892	S216 S217 S218 S219 S220 S221	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 12:16	



S233	9	S230 and (linear near actuator\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:17
S234	683	S230 and (linear near actuator\$1)S191	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:17
S235	1	S193 and (linear near actuator\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:18
S236	4	S231 and (linear near actuator\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:18
S237	7	S232 and (linear near actuator\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:18
S238	19	S233 S236 S237	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:18
S239	442	S230 and (wedge)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:18
S240	569	S231 and (wedge)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:19
S241	223	S232 and (wedge)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:19
S242	44	S239 and ((first and second) near2 direction\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:19
S243	50	S240 and ((first and second) near2 direction\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:19
S244	43	S241 and ((first and second) near2 direction\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:19
S245	126	S242 S243 S244	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:19
S246	371	S240 and (lock\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:21
S247	154	S241 and (lock\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:21
S248	234	S239 and (lock\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:21
S249	1	S246 and (mount\$3 near plane\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:21
S250	2	S247 and (mount\$3 near plane\$1)	US-	OR	OFF	2017/06/26;

			PGPUB; USPAT; USOCR			12:21
S251	0	S248 and (mount\$3 near plane\$1)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:21
S252	0	S239 and (mount\$3 near plane\$1)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:22
S253	1	S240 and (mount\$3 near plane\$1)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:22
S254	2	S241 and (mount\$3 near plane\$1)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:22
S255	3	S249 S250 S251 S252 S253 S254	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:22
S256	711	S246 S247 S248	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:22
S257	384	S256 and parallel	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:22
S258	202	S257 and (driv\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:22
S259	21	S258 and actuator\$1	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:23
S260	20	S259 and axis	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 12:23
S261	5598	361/679.21-679.3.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:08
S262	2237	361/679.55.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:08
S263	1034	361/679.56.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:08
S264	252	359/263.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:09
S265	1847	G06F1/1652.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:09
S266	692	h01141/29.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:09
S267	696	h01141/047.cpc.	US- PGPUB;	OR	OFF	2017/06/26; 13:09

			USPAT; USOCR			
S268	514	h01151/5225.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:09
S269	728	h01151/5209.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:09
S270	8553	h01151/56.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:09
S271	12410	S265 S266 S267 S268 S269 S270	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:10
S272	8055	S261 S262 S263 S264	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:10
S273	7	(("CHOI") near3 ("Seulgi")).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:10
S274	11	(("CHOI") near3 ("Suseok")).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:10
S275	2	(("HAM") near3 ("Yongsu")).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:10
S276	9	(("KIM") near3 ("Taeheon")).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:10
S277	29	(("LEE") near3 ("Yongwoo")).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:10
S278	7	(("LIM") near3 ("Myungjin")).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:10
S279	35	S273 S274 S275 S276 S277 S278	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:13
S280	11452	S271 and layer\$1	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:18
S281	1916	S272 and layer\$1	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:18
S282	10061	S280 and (electrode\$1)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:19
S283	554	S281 and (electrode\$1)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26; 13:19
S284	9513	S282 and (first and second)	US- PGPUB; USPAT;	OR	OFF	2017/06/26; 13:19

S285	503	S283 and (first and second)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:19
S286	5774	S280 and ((first and second) near2 (electrode\$1))	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:19
S287	113	S281 and ((first and second) near2 (electrode\$1))	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:20
S288	91	S286 and precipitat\$1	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:20
S289	145	S286 and precipitate\$1	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:20
S290	3	S287 and precipitate\$1	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:20
S291	4	S287 and precipitat\$3	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:20
S292	190	S286 and precipitat\$3	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:21
S293	69	S292 and (conductive near2 material)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:21
S294	1	S292 and ((conductive near2 material) near4 (precipitat\$3))	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:21
S295	0	S291 and ((conductive near2 material) near4 (precipitat\$3))	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:21
S296	0	S287 and ((conductive near2 material) near4 (precipitat\$3))	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:21
S297	3	S292 and ((electro near active) near3 layer\$1)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:22
S298	23	((precipitates) near2 (conductive near material\$1))	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:27
S299	1	S297 and ((precipitates) near2 (conductive near material\$1))	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:30
S300	11	(("HO") near3 ("CHI-CHUNG")).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:32
S301	126	(("LIN") near3 ("CHUN-CHENG")).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:32

## EAST Search History

S302	136	S300 S301	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:32
S303	704	G06F1/1618.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:47
S304	1610	G06F1/1624.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:47
S305	1971	G06F1/1662.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:47
S306	725	G06F1/1669.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:47
S307	2883	G06F1/1637.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:47
S308	2354	361/679.08-679.2.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:47
S309	34	400/294.2.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:48
S310	84	400/286.3.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:48
S311	450	400/274-276.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:48
S312	132	400/663.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:48
S313	116	400/676-678.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:48
S314	44	400/667.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:48
S315	3276	S303 S307	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:48
S316	1230	228-233	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:49
S317	2354	S308	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:50
S318	3195	S315 and display	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:50
S319	573	S316 and display	US-	OR	OFF	2017/06/26

			US- PGPUB; USPAT; USOCR			13:50
S320	1790	S317 and display	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:50
S321	219	S318 and (first near hing\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:51
S322	0	S319 and (first near hing\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:51
S323	149	S320 and (first near hing\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:51
S324	179	S321 and (second near hing\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:51
S325	114	S323 and (second near hing\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:51
S326	79	S319 and (lock\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:52
S327	63	S324 and (lock\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:52
S328	37	S325 and (lock\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:52
S329	63	S326 and (key\$1 or keypad\$1 or keyboard or (key near board) or (key near pad))	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:52
S330	61	S327 and (key\$1 or keypad\$1 or keyboard or (key near board) or (key near pad))	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:52
S331	36	S328 and (key\$1 or keypad\$1 or keyboard or (key near board) or (key near pad))	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:52
S332	149	S329 S330 S331	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:52
S333	11	S332 and wheel\$1	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:53
S334	34	S332 and radius	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:53
S335	1	S332 and ((first and second) near2 radius)	US- PGPUB; USPAT; USOCR	OR	OFF	2017/06/26 13:53
S483	2	"20080291521"	US- PGPUB;	OR	OFF	2018/06/11 01:20

			USPAT; USOCR			
S484	2	"20140175463"	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 01:27
S485	3	("20080291521"   "20120139393"   "20140175463").PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 01:28
S486	1	("20110149410").PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 01:28
S487	4	S485 S486	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 01:28
S488	1	S487 and (input\$1 or touch\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 01:28
S489	2	("20130135230"   "20140118678").PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 01:29
S490	1	("5410210").PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 01:29
S491	3	S489 S490	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 01:29
S492	2	S491 and (input\$1 or touch\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 01:29
S493	5	((("20110267298") or ("9400911") or ("20160179263") or ("20120242635") or ("9274553")).PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 01:43
S494	2646	((("20110267298") or ("9400911") or ("20160179263") or ("20120242635") or ("9274553") or ("20020071940") or ("20040234752") or ("6768654") or ("20170364726") or ("9103999") or ("20140270659") or ("20130265137") or ("20150325498") or ("20130026645") or ("20140332981") or ("20130259329") or ("9659858") or ("8816505") or ("9214425") or ("9152838") or ("20170250132") or ("9736283") or ("20130108124") or ("20150072727") or ("20090256251") or ("20080247712") or ("20170287992") or ("8203207") or ("20020028045") or ("6684007") or ("20110255850") or ("20150243937") or ("7688206") or ("20170040306") or ("20160353616") or ("6429033") or ("20170068143") or ("8471709") or ("20110255250") or ("20130329460") or ("9280183") or ("20140078412") or ("20170261830") or ("20150329054") or ("20120229882") or ("20130300618") or ("9946302") or ("20130033736") or ("9075567") or ("9969199") or ("9701248") or ("9056584") or ("8506096") or ("9093745") or ("9048537") or ("20150301563") or ("6643918") or ("20160257254") or ("20150055009") or ("20130043568") or ("9878670") or ("20090237820") or ("20130321893") or ("9609183") or ("9990001") or ("20180147993") or ("20040187311") or ("20080225396") or ("20140009873") or ("8928129") or ("20160072027") or ("20140373898") or ("8727547") or ("7826123") or ("20010040043") or ("20100283069") or ("20130329054") or ("20110266561") or ("20070279752") or ("7542193") or ("7391563") or ("9601671") or ("20130328462") or ("20150355518") or ("20140285865") or ("9117940") or ("9606579") or ("9341914") or ("7972875") or ("20170179085") or ("9090211") or ("20170179100") or ("6803651") or ("7414197") or ("20110186345") or ("8722458") or ("20170179356") or ("7255451") or ("9473681") or ("20170196112") or ("20050195488") or ("8551283") or ("20140166350") or ("20110187245") or ("9232670") or ("20160181345") or ("20060185884") or ("20180097199") or ("20160240605") or ("20160172427") or ("7102082") or ("9179537") or ("20150132873") or ("9490312") or ("9356087") or ("20060243476") or ("20160054537") or	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 01:45

("20120094046") or ("20120275100") or ("8277059") or ("9185816") or ("9846452") or ("20160062398") or ("9647171") or ("20070108890") or ("20110188180") or ("20140340925") or ("20150307027") or ("9073491") or ("20110019260").PN. or ("9545883") or ("8797721") or ("9041851") or ("20130107563") or ("20060109129") or ("20170220837") or ("20170066930") or ("8797627") or ("9167161") or ("20120250250") or ("20170120827") or ("20120314992") or ("8625938") or ("20160179229") or ("20170075464") or ("20100226101") or ("20170003440") or ("9766737") or ("6936495") or ("20120314384") or ("20170200707") or ("20160174304") or ("9535522") or ("8723049") or ("20170005077") or ("20140152890") or ("9869807") or ("20070059901") or ("20160198824") or ("20140140020") or ("20170371465") or ("20140078449") or ("20120050975") or ("9841548") or ("9706607") or ("9983714") or ("8072764") or ("8988636") or ("8905772") or ("20100317132") or ("9952626") or ("20170290106") or ("20140339668") or ("20160187930") or ("20160005931") or ("7410825") or ("7385284") or ("20170013731") or ("8638549") or ("20160164165") or ("9469469") or ("9123614") or ("9980326") or ("20150255853") or ("8552299") or ("20160334668") or ("20160231619") or ("20120236388") or ("20110079893") or ("20180092166") or ("20050110157") or ("20160254465") or ("9793334") or ("9907193") or ("9229481") or ("20140201994") or ("9337152") or ("20130050228") or ("20150177789") or ("20150279768") or ("9065175") or ("9703139") or ("20150131009") or ("20120075817") or ("9653778") or ("20160054175") or ("20140111684") or ("20050253273") or ("9433100") or ("20170223846") or ("9645008") or ("20070164419") or ("20110255000") or ("20180063941") or ("9293806") or ("20170227807") or ("7129163") or ("20150184998") or ("9673358") or ("9945818") or ("9134763") or ("8035077") or ("20070072321") or ("8610822") or ("20150062525") or ("8703603") or ("20070040268") or ("20140226690") or ("8879272") or ("20140063302") or ("20150054692") or ("20090320139") or ("20160093644") or ("20150241393") or ("7449784") or ("20120127420") or ("7338836") or ("20140327951") or ("20180059298") or ("7508065") or ("20150036302") or ("7888793") or ("9582043") or ("9060111") or ("20130050227") or ("9349758") or ("20150116810") or ("8730553") or ("6989295") or ("20140043810") or ("7714931") or ("20150185427") or ("20090268296") or ("20050285973") or ("20160240602") or ("9704908") or ("20110253411") or ("9090212") or ("9235016") or ("20170025640").PN. or ("20160344159") or ("20170023979") or ("20170235066") or ("8905541") or ("9070063") or ("9647420") or ("20170323934") or ("8372726") or ("8922867") or ("8489158") or ("20170194411") or ("9748322") or ("7957805") or ("9837634") or ("20170285844") or ("20100002402") or ("20170211973") or ("20150237711") or ("6706546") or ("9817199") or ("20020039464") or ("7329056") or ("20130050155") or ("20050111797") or ("20150181700") or ("9781842") or ("20080154365") or ("20160027834") or ("20100178722") or ("20130316487") or ("9410799") or ("8993450") or ("7706887") or ("20150216024") or ("20120300412") or ("9807919") or ("8686297") or ("20060061889") or ("20120223896") or ("20060109123") or ("20130329396") or ("9204025") or ("7009309") or ("20170042480") or ("20110215685") or ("9374919") or ("20140268625") or ("8937370") or ("20130170013") or ("20130169590") or ("7294827") or ("20140071634") or ("9134585") or ("20060077150") or ("9223352") or ("9076822") or ("8865489") or ("20080318027") or ("20100181381") or ("9753317") or ("20080090338") or ("20160172623") or ("9785299") or ("20170135198") or ("20080314867") or ("9379355") or ("20170176835") or ("20160097959") or ("7446926") or ("20180074272") or ("9991311") or ("20180090713") or ("20120318872") or ("20040076382") or ("9953910") or ("9610758") or ("9983455") or ("9105899") or ("20170192462") or ("6908794") or ("9949359") or ("20160268546") or ("20150271911") or ("20170242506") or ("6774659") or ("20140176848") or ("6935792") or ("9801273") or ("20130048347") or ("20170068286") or ("20160260768") or ("9536815") or ("8607444") or ("9778705") or ("20140218606") or ("20160181346") or ("9847506") or ("6891276") or ("20100311502") or ("20040240191") or ("8993899") or ("9601530") or ("7443693") or ("20120127423") or ("9310643") or ("20140071601") or ("20140306261") or ("9780157") or ("20180013191") or ("6987034") or ("20160336523") or ("20160260765") or ("20170205847") or ("20160093685") or ("8944590") or ("20130075739") or ("20180074553") or ("20060183265") or ("20160172428") or ("9977460") or ("20170232899") or ("8287386") or ("20180062090") or ("20150329050") or ("20060043513") or ("9425418") or ("20060276842") or ("8288214") or ("20150313003") or ("20150002926") or ("9685689").PN. or ("20110212555") or ("20130023072") or ("20170068276") or ("9391250") or ("20140159249") or ("20080095985") or ("20100045538") or ("8592233") or ("20090200564") or ("9935281") or ("9812659") or ("9076785") or ("6661084") or ("9496602") or ("20160259375") or ("9637055") or ("6989584") or ("20150214194") or ("6611635") or ("8097926") or ("20170110529") or ("20130009270") or ("20140321818") or ("9147711") or ("20180061748") or ("9403236") or ("6343171") or ("20170098622") or ("9437536") or ("8796135") or



("20160300962") or ("20160365302") or ("20150270193") or ("20140240938")  
 or ("7629537") or ("8536667") or ("20120157804") or ("20050270045") or  
 ("9237648") or ("20170364125") or ("6690845") or ("20050189622") or  
 ("20170351042") or ("6785447") or ("20060109130") or ("20140190931") or  
 ("20050189635") or ("20130321988") or ("20160282977") or ("7629617") or  
 ("7527993") or ("20110034912") or ("9406654") or ("20170237027") or  
 ("20150270227") or ("8764996") or ("20160190522") or ("20070034875") or  
 ("20130041235") or ("8435824") or ("20080095988") or ("20020097962") or  
 ("20050272177") or ("20180062094") or ("9460643") or ("7129523") or  
 ("20180088296") or ("20180076336") or ("9607928") or ("20060027937") or  
 ("20080197435") or ("20120273963") or ("20180149321") or ("9186606") or  
 ("6716670") or ("20120226130") or ("20170104856") or ("7475964") or  
 ("9583445") or ("20030206029") or ("9754866") or ("20140239276") or  
 ("20150187673") or ("20170178958") or ("20180144113") or ("9662069") or  
 ("9287329") or ("20160045162") or ("20130249740") or ("20050270620") or  
 ("6845184") or ("9550335") or ("9673423") or ("20160008923") or  
 ("20130010405") or ("20100203248") or ("20160079090") or ("20160079663")  
 or ("20120112238") or ("9241435") or ("20140111953") or ("9190720") or  
 ("20170027058") or ("8710376") or ("20130048368") or ("20160317068") or  
 ("9241097") or ("9656350") or ("9876883") or ("20170149019") or  
 ("9287336") or ("20030057446") or ("20170103941") or ("20090115891") or  
 ("20170049000") or ("20070080360") or ("7706046") or ("8787016") or  
 ("20180017741") or ("9883583") or ("6674159") or ("20130265708") or  
 ("9812768") or ("20140328041") or ("8139145") or ("20130335898") or  
 ("20150296106") or ("20140192464") or ("20170060192").PN. or  
 ("20160064800") or ("9596794") or ("20140240615") or ("20160212311") or  
 ("20140039290") or ("20170038641") or ("20130078860") or ("20120105400")  
 or ("20110084270") or ("20140352440") or ("20080037769") or  
 ("20140160650") or ("20160366777") or ("20180103557") or ("9209310") or  
 ("20160041663") or ("9888561") or ("20140226269") or ("9917044") or  
 ("20140168864") or ("5073521") or ("9504170") or ("20150048759") or  
 ("9143668") or ("20130105952") or ("20090008729") or ("20160064466") or  
 ("20160155788") or ("20170013729") or ("9119533") or ("20080274579") or  
 ("20030076649") or ("7991147") or ("6822264") or ("20100326720") or  
 ("9627463") or ("20140374872") or ("20130223836") or ("5302778") or  
 ("20140217607") or ("20030094615") or ("8187795") or ("9224793") or  
 ("20170295304") or ("20080191297") or ("20080037770") or ("9985086") or  
 ("9276055") or ("9349669") or ("20130328186") or ("20120261697") or  
 ("20160352151") or ("20180130750") or ("20170179215") or ("20130314875")  
 or ("20180145059") or ("20110170192") or ("20140226291") or  
 ("20040151014") or ("20170006716") or ("20160087024") or ("8772946") or  
 ("20110220610") or ("20020105080") or ("20160029511") or ("9485396") or  
 ("9282653") or ("9350009") or ("8712233") or ("5882108") or ("9420714") or  
 ("20140240911") or ("20150250386") or ("20120154690") or ("8552536") or  
 ("20150338887") or ("6590346") or ("8619067") or ("20180084323") or  
 ("9324733") or ("20130009544") or ("9616625") or ("8258433") or  
 ("20150195941") or ("20140086541") or ("20150092370") or ("20150338883")  
 or ("20140104288") or ("6744126") or ("9406854") or ("20030076666") or  
 ("20080019502") or ("6454449") or ("8879266") or ("20140303452") or  
 ("20120018863") or ("20150062927") or ("9691693") or ("9385175") or  
 ("7977170") or ("9568800") or ("9773715") or ("20080037765") or  
 ("8698394") or ("20170178840") or ("6503831") or ("20110194022") or  
 ("20140104284") or ("6713389") or ("9137891") or ("9073291") or  
 ("9001268") or ("20170040270") or ("9000600") or ("20100078343") or  
 ("20150163940") or ("8525397") or ("20140043519") or ("9614941") or  
 ("7190060") or ("20160285046") or ("20110024627") or ("9936056") or  
 ("9865837") or ("4247600") or ("7031170") or ("8395242") or  
 ("20160381789") or ("9007520") or ("20140313473").PN. or  
 ("20170060190") or ("8203647") or ("7834853") or ("20160209516") or  
 ("20050056840") or ("20060103758") or ("20140043525") or ("20160300991")  
 or ("6784551") or ("8467177") or ("20120146210") or ("20070087564") or  
 ("20120106063") or ("20150155230") or ("20120262667") or ("20140153211")  
 or ("8608310") or ("7323634") or ("6940022") or ("20150201723") or  
 ("20140240856") or ("7129166") or ("20170344789") or ("7648287") or  
 ("20080298818") or ("20120245444") or ("20170373272") or ("20150181692")  
 or ("8791575") or ("20090194882") or ("20110214978") or ("7261950") or  
 ("9099368") or ("20100148345") or ("8801174") or ("20160100478") or  
 ("20150348906") or ("20120229709") or ("8610264") or ("20120327608") or  
 ("20120327568") or ("9946097") or ("20140099754") or ("9588551") or  
 ("20140091336") or ("20120018868") or ("9768415") or ("20130010256") or  
 ("9614168") or ("8559092") or ("9545764") or ("20170294321") or  
 ("9581702") or ("7288739") or ("20160204366") or ("20150173680") or  
 ("20140296687") or ("20160091636") or ("20170242276") or ("20050145608")  
 or ("9974199") or ("20070267708") or ("9770207") or ("20160226019") or  
 ("8545327") or ("20150173602") or ("20140342503") or ("9560750") or  
 ("20100311488") or ("8217381") or ("8982582") or ("9411380") or

("8906720") or ("20120157175") or ("9085457") or ("20180035888") or  
 ("9859234") or ("20080099900") or ("8611077") or ("7864245") or  
 ("20160147263") or ("20120236387") or ("20110090626") or ("9766763") or  
 ("9596988") or ("8982547") or ("20090014822") or ("9215301") or  
 ("20160111485") or ("20170094821") or ("20180011569") or ("20150282304")  
 or ("7968378") or ("20120325794") or ("9939850") or ("7829966") or  
 ("9224649") or ("20120327567") or ("8796828") or ("8729524") or  
 ("5770884") or ("20040245519") or ("20080099907") or ("20050145609") or  
 ("20170207182") or ("20100288357") or ("9292044") or ("20080298814") or  
 ("6398396") or ("20180157889") or ("8558141") or ("5657150") or  
 ("9253884") or ("20140354877") or ("8503169") or ("9372505") or  
 ("20030066672") or ("20180117882") or ("20160242279") or ("20050073017")  
 or ("7935568") or ("7282769") or ("20090134483") or ("20160216812") or  
 ("8169684") or ("20080157235") or ("20160259377") or ("20090154872") or  
 ("6907178") or ("9769920").PN. or ("20170035170") or ("20140042406") or  
 ("20160190055") or ("9269914") or ("20170213940") or ("20180145277") or  
 ("9847505") or ("9044200") or ("20170338207") or ("7898074") or  
 ("20160014915") or ("9720450") or ("20020012250") or ("9350093") or  
 ("20120171907") or ("20140242816") or ("20090159900") or ("20090026566")  
 or ("20030231833") or ("20150035001") or ("20160202403") or  
 ("20140070423") or ("9480155") or ("7812416") or ("8979259") or  
 ("9736936") or ("20150296622") or ("20170127543") or ("20150315715") or  
 ("6956182") or ("20110117703") or ("20180114942") or ("9557841") or  
 ("7498556") or ("6624353") or ("20150162216") or ("7994598") or  
 ("20170324058") or ("20140043524") or ("8947303") or ("20170160766") or  
 ("9419065") or ("7353598") or ("6000814") or ("20140002727") or  
 ("20080037771") or ("20140376091") or ("9859258") or ("20170263873") or  
 ("20090082075") or ("9947836") or ("20170336831") or ("20170325347") or  
 ("20140043496") or ("9279189") or ("8717487") or ("9282920") or  
 ("8963335") or ("20080224248") or ("20130328741") or ("20110018082") or  
 ("20110169122") or ("9362204") or ("20080055581") or ("8715779") or  
 ("7524753") or ("7609310") or ("20060148166") or ("20130314760") or  
 ("20120058653") or ("20160133540") or ("20140173894") or ("20180122781")  
 or ("20170347448") or ("8217482") or ("20110130177") or ("20100321758")  
 or ("20130328730") or ("20160313767") or ("8758067") or ("7329054") or  
 ("20160066419") or ("20160150133") or ("20110102167") or ("9911942") or  
 ("20160225809") or ("9431442") or ("6965071") or ("6962834") or  
 ("20170068287") or ("20160259366") or ("20040104460") or ("20050099532")  
 or ("8984748") or ("9780042") or ("20150065820") or ("20130234931") or  
 ("20160327986") or ("9583428") or ("20160378071") or ("20160378070") or  
 ("6114088") or ("20150346782") or ("20100117224") or ("20140083600") or  
 ("20060035073") or ("20050139848") or ("5473512") or ("20060286789") or  
 ("20160248051") or ("9849650") or ("20150214600") or ("20150373831") or  
 ("8015702") or ("6140009") or ("20160378069") or ("20090032964") or  
 ("9769929") or ("8173490") or ("6586153") or ("9768225") or ("8654433") or  
 ("20050146025") or ("9153856") or ("20170028924") or ("20120055701") or  
 ("20160255929") or ("9073490") or ("8897002").PN. or ("20170069575") or  
 ("7115961") or ("20010036561") or ("7659134") or ("6214520") or  
 ("20140036337") or ("20160351618") or ("6221553") or ("7674701") or  
 ("20090059345") or ("20060077571") or ("20050270752") or ("20150021788")  
 or ("20140268780") or ("7824112") or ("9766662") or ("9485862") or  
 ("20180138102") or ("20140307344") or ("20070014018") or ("20180159067")  
 or ("20160327980") or ("20080237881") or ("8950068") or ("7807508") or  
 ("9274142") or ("20050208702") or ("20020172887") or ("20160276296") or  
 ("9186828") or ("20160058375") or ("7291518") or ("20160270272") or  
 ("9184527") or ("20150321214") or ("8254011") or ("20160077276") or  
 ("20080251872") or ("9454188") or ("20130028450") or ("6270944") or  
 ("20050155957") or ("20060054997") or ("20150162678") or ("20170294495")  
 or ("7517712") or ("20080173792") or ("9756733") or ("7932179") or  
 ("20120161603") or ("20120268961") or ("20100259930") or ("20170360167")  
 or ("9161712") or ("20050275079") or ("7456076") or ("20100157566") or  
 ("20160057897") or ("9515099") or ("7133222") or ("6970219") or  
 ("20100129945") or ("9750322") or ("7615479") or ("20130234899") or  
 ("7672142") or ("20120050958") or ("20170207194") or ("20170154767") or  
 ("9246214") or ("20160004019") or ("9448373") or ("20060157274") or  
 ("20070184643") or ("7351479") or ("20120075216") or ("8730551") or  
 ("20120044635") or ("8998454") or ("7122436") or ("9859193") or  
 ("20180052488") or ("5118361") or ("20060279005") or ("20130076573") or  
 ("20170256479") or ("20050215907") or ("20140360766") or ("9634378") or  
 ("9000548") or ("7940467") or ("20140002996") or ("5879571") or  
 ("20110043479") or ("20170048990") or ("9899330") or ("20160316574") or  
 ("20120274346") or ("20140296672") or ("20180033979") or ("6985361") or  
 ("20140296673") or ("20060032665") or ("9434197") or ("20150146401") or  
 ("20170086298") or ("9671823") or ("9676334") or ("9204023") or  
 ("9948895") or ("20090056113") or ("9835793") or ("20040257525") or  
 ("9793119") or ("20110084269") or ("20140239781") or ("20160048163") or

("6611237") or ("8963292") or ("20160099214") or ("20160218432") or  
 ("8969132") or ("20170003718") or ("20050247470") or ("20100033647") or  
 ("20140264691") or ("20150090969") or ("9355948") or ("20140049958") or  
 ("6886937").PN. or ("20040257473") or ("8384097") or ("20170165051") or  
 ("20160204183") or ("9845546") or ("9554457") or ("20120018894") or  
 ("20130334511") or ("8955215") or ("20100177386") or ("8913390") or  
 ("20030193545") or ("6641254") or ("20170256687") or ("20020185588") or  
 ("8391010") or ("20140210104") or ("8704961") or ("8970516") or  
 ("8827517") or ("7557367") or ("20030160035") or ("20170023752") or  
 ("20140264693") or ("20170062485") or ("7893514") or ("20140061837") or  
 ("20130181348") or ("20150366097") or ("9660368") or ("8547493") or  
 ("9268366") or ("9773853") or ("20080115350") or ("7913381") or  
 ("20080217709") or ("20170352503") or ("20160014923") or ("9469252") or  
 ("7341881") or ("9299956") or ("8697569") or ("20150341478") or  
 ("20140267760") or ("20160035759") or ("20140125551") or ("8952911") or  
 ("9018724") or ("20070269921") or ("9018769") or ("20160109852") or  
 ("20160105950") or ("20160170250") or ("20020093396") or ("20130201429")  
 or ("20160087329") or ("20100165442") or ("6138349") or ("20080045063")  
 or ("7574084") or ("9360696") or ("20170051883") or ("20050047730") or  
 ("20090278219") or ("9468118") or ("20070261497") or ("9848495") or  
 ("20140246337") or ("20100143848") or ("9768023") or ("7259969") or  
 ("20160270213") or ("8963782") or ("20080116552") or ("20170367190") or  
 ("9643272") or ("9627648") or ("20170025302") or ("20170038055") or  
 ("8766400") or ("8716725") or ("20130255875") or ("20080136956") or  
 ("20160077633") or ("9832868") or ("7952789") or ("20110221018") or  
 ("7272273") or ("7452748") or ("20120320444") or ("20140192520") or  
 ("20100224469") or ("20080191300") or ("20130082984") or ("20120248615")  
 or ("20120267789") or ("20150325812") or ("20080283991") or  
 ("20180096187") or ("9209420") or ("20060134982") or ("9455181") or  
 ("7593636") or ("9824962") or ("9190443") or ("20160234585") or  
 ("20140353789") or ("20090039489") or ("9941581") or ("20150228869") or  
 ("20150296607") or ("8975751") or ("20160219736") or ("20120177358") or  
 ("7605348") or ("20160141260") or ("20140008651") or ("20130299789") or  
 ("9761477") or ("9666635") or ("20180114905") or ("20090080055") or  
 ("20160116701") or ("20020175669") or ("20170047307") or ("20110050509")  
 or ("20010033478") or ("20150140807") or ("9088006").PN. or ("4871583")  
 or ("9941450") or ("8987113") or ("20140262847") or ("6670599") or  
 ("20110042783") or ("20150138710") or ("20060165341") or ("9044898") or  
 ("20150129401") or ("9666773") or ("9545025") or ("6484045") or  
 ("20170351895") or ("8434951") or ("20130240112") or ("9578759") or  
 ("20080044131") or ("20120068327") or ("9795989") or ("9971379") or  
 ("20150229844") or ("20070206267") or ("20170200670") or ("8456856") or  
 ("20160234949") or ("20180059690") or ("7450295") or ("8610259") or  
 ("6943423") or ("9478514") or ("20170227681") or ("20140110859") or  
 ("20160121531") or ("20140097546") or ("7829363") or ("20050279530") or  
 ("20130063415") or ("20150091588") or ("20130141870") or ("9314871") or  
 ("20100246152") or ("20150221551") or ("20060242828") or ("7636188") or  
 ("20170060180") or ("20170278878") or ("9779893") or ("9977945") or  
 ("6903541") or ("9088705") or ("8708584") or ("20130136280") or  
 ("9565366") or ("20170272559") or ("20140055702") or ("20130127879") or  
 ("9804607") or ("20160111353") or ("5866443") or ("9848111") or  
 ("7800019") or ("7709915") or ("20120199985") or ("20180084680") or  
 ("20120282420") or ("20150319378") or ("9025112") or ("7919857") or  
 ("5674758") or ("20150351292") or ("20160324044") or ("9960213") or  
 ("20170069442") or ("20110127546") or ("8451591") or ("20100038352") or  
 ("20160133615") or ("9871898") or ("20180107168") or ("7932615") or  
 ("9171794") or ("7620175") or ("20140264809") or ("9653523") or  
 ("9525011") or ("7969006") or ("6879014") or ("8503062") or ("9355901") or  
 ("7551141") or ("20080081458") or ("20150022759") or ("9612615") or  
 ("20170240102") or ("9508697") or ("20170279081") or ("8742570") or  
 ("20150311260") or ("8809190") or ("6730459") or ("20120119367") or  
 ("20030214792") or ("20060124953") or ("20140292591") or ("20160035812")  
 or ("20140003004") or ("20160028148") or ("20040188242") or  
 ("20140268344") or ("8021918") or ("8399904") or ("20170126983") or  
 ("20080081457") or ("20140334077") or ("6816380") or ("8811636") or  
 ("9640437") or ("9843014") or ("9664874") or ("20080191333") or  
 ("7066660") or ("9549481") or ("20180076236") or ("20020048729") or  
 ("20130174410") or ("20120018893") or ("20160195983") or ("20020181208")  
 or ("20120171814") or ("9465472") or ("20120038046").PN. or ("9195108")  
 or ("7195733") or ("9142695") or ("20160192474") or ("20170051884") or  
 ("20110250401") or ("20090309176") or ("8004083") or ("9702051") or  
 ("8759147") or ("6577427") or ("20060043509") or ("8129838") or  
 ("20130242500") or ("20180059318") or ("20170098619") or ("20070108634")  
 or ("9854629") or ("20060038182") or ("20180110143") or ("20130053098")  
 or ("9428380") or ("20130285978") or ("20120329213") or ("20140218909")  
 or ("20080266685") or ("20140217862") or ("20150295615") or

("20120229752") or ("20150227000") or ("20170358637") or ("9743885") or  
 ("9941337") or ("20180090699") or ("20150077873") or ("9577315") or  
 ("9949377") or ("20140028543") or ("20110309405") or ("20180090530") or  
 ("20140300004") or ("20090257626") or ("20080231964") or ("20160149298")  
 or ("20100109516") or ("20050263903") or ("20170063419") or  
 ("20040188124") or ("7919348") or ("20080212189") or ("7400435") or  
 ("20020076911") or ("20170177108") or ("6778406") or ("20170200759") or  
 ("20120176760") or ("8586451") or ("20150327410") or ("8848160") or  
 ("20120235959") or ("20170084661") or ("6832861") or ("20170148764") or  
 ("20120050114") or ("20160358989") or ("20160345440") or ("20150351207")  
 or ("20160118416") or ("8742541") or ("20150060110") or ("20170205927")  
 or ("20160254837") or ("9001031") or ("8803258") or ("9049801") or  
 ("20150380627") or ("20140328504") or ("8915361") or ("9907498") or  
 ("20140268526") or ("20120067871") or ("8610265") or ("20160035797") or  
 ("20080080112") or ("20040037519") or ("9431475") or ("20080205873") or  
 ("20070158807") or ("9666560") or ("8766858") or ("9366899") or  
 ("8358816") or ("20160322283") or ("8994047") or ("9544994") or  
 ("8684613") or ("9564473") or ("20080111242") or ("20080303436") or  
 ("8548541") or ("20070182004") or ("20160011340") or ("20120306092") or  
 ("9724869") or ("20140043244") or ("20160209681") or ("20050074217") or  
 ("7109410") or ("20110254108") or ("20080083980") or ("9542589") or  
 ("8537564") or ("20080080111") or ("20060063351") or ("20070190329") or  
 ("8198739") or ("9060227") or ("20080080113") or ("20120181658") or  
 ("9161434") or ("20160101499") or ("9857930") or ("20080079461") or  
 ("20070166955") or ("9917242") or ("20140226330") or ("20180084161") or  
 ("9111841") or ("9159635").PN. or ("9059072") or ("9762278") or  
 ("8339553") or ("9548785") or ("9568156") or ("20040008952") or  
 ("8432045") or ("6786654") or ("9761444") or ("9158958") or ("6444489") or  
 ("20160079189") or ("20150030217") or ("9426936") or ("9356061") or  
 ("20140273393") or ("9842875") or ("20070145362") or ("20150362770") or  
 ("20160066825") or ("20150217993") or ("20170125660") or ("8102039") or  
 ("20160111551") or ("20160303838") or ("20160034740") or ("7816146") or  
 ("20110186998") or ("20160282194") or ("20170149127") or ("20140319550")  
 or ("8502340") or ("7452139") or ("20070279885") or ("20080174438") or  
 ("20110121336") or ("20120091594") or ("20070254490") or ("7259106") or  
 ("7068491") or ("9278853") or ("9391208") or ("9450038") or  
 ("20060181772") or ("20100066519") or ("8373202") or ("20120092604") or  
 ("9450043") or ("20100164086") or ("20060043364") or ("20170077147") or  
 ("20130314761") or ("20040231872") or ("20170213665") or ("9257410") or  
 ("20110285889") or ("20100052086") or ("20120146182") or ("20010020545")  
 or ("20130175557") or ("7622367") or ("9437557") or ("20180113493") or  
 ("9774087") or ("20160163755") or ("20160066409") or ("7989954") or  
 ("9818764") or ("20120070145") or ("20090141334") or ("7542301") or  
 ("7609461") or ("20170293161") or ("8642119") or ("20130127024") or  
 ("7389689") or ("6194789") or ("7358447") or ("8618580") or  
 ("20150333293") or ("20150264233") or ("20060255418") or ("20130175556")  
 or ("20160043240") or ("20170248514") or ("9721825") or ("20180024274")  
 or ("20170221952") or ("20130313680") or ("9190463") or ("8665510") or  
 ("20110207328") or ("20130189805") or ("20110255260") or ("9777914") or  
 ("20140009355") or ("20170200755") or ("20020149107") or ("20150035028")  
 or ("9386734") or ("20140191236") or ("9718249") or ("20130293482") or  
 ("8663806") or ("20110205615") or ("20020155661") or ("20100068838") or  
 ("20100072577") or ("20090294803") or ("20130087817") or ("20140353613")  
 or ("20170338845") or ("20160343756") or ("9570634") or ("20170148866")  
 or ("20090141512") or ("20180039372") or ("20140230846") or  
 ("20130100143") or ("20140073079") or ("9780160") or ("8860072") or  
 ("8772908") or ("20170005689") or ("20170295654") or ("20090321726") or  
 ("20160219718") or ("20110003102") or ("20130077813").PN. or  
 ("9634053") or ("20160149086") or ("20170098115") or ("20120164888") or  
 ("20180095190") or ("20150237757") or ("20020145139") or ("8440546") or  
 ("20120127578") or ("20140043782") or ("20060278965") or ("8547471") or  
 ("20140227817") or ("20170212613") or ("9178172") or ("20110012845") or  
 ("9818976") or ("9293816") or ("20130320503") or ("20110215349") or  
 ("7859738") or ("20160284544") or ("20180054077") or ("20150130077") or  
 ("9247116") or ("8526161") or ("20140001022") or ("7982296") or  
 ("20170373228") or ("9768086") or ("7199439") or ("20110220890") or  
 ("20150307028") or ("20130342495") or ("20150309637") or ("7173323") or  
 ("20120008294") or ("8698172") or ("8927316") or ("9654674") or  
 ("20090233013") or ("20150361551") or ("20180062294") or ("20110051337")  
 or ("8456586") or ("20160155732") or ("20170170676") or ("20070259541")  
 or ("20030232174") or ("20100167441") or ("9668355") or ("9419669") or  
 ("20040084693") or ("20130092562") or ("8753712") or ("20100171138") or  
 ("8824162") or ("20160284627") or ("20170092892") or ("20150166333") or  
 ("20150063764") or ("9772706") or ("20160225653") or ("20170293194") or  
 ("20160029502") or ("20180084647") or ("20180053790") or ("20180049339")  
 or ("20120020000") or ("20180031188") or ("20130278846") or

("20070241459") or ("8324654") or ("20140043552") or ("20140055961") or  
 ("5463229") or ("7059040") or ("20050255261") or ("7692292") or  
 ("20110013280") or ("20060022225") or ("20160293794") or ("20080185701")  
 or ("20120068330") or ("6952053") or ("20120243093") or ("20180024680")  
 or ("8606057") or ("20150124308") or ("20140353775") or ("8847380") or  
 ("6882045") or ("7910859") or ("20150362754") or ("9768144") or  
 ("20100068839") or ("20130106746") or ("20160020417") or ("20160315139")  
 or ("20060121745") or ("20130176750") or ("9847277") or ("8994680") or  
 ("9529214") or ("7225538") or ("8804363") or ("8300299") or  
 ("20140198532") or ("20180126704") or ("20170005057") or ("20120082870")  
 or ("20170111077") or ("8314430") or ("8476644") or ("9904024") or  
 ("20060210769") or ("20110193211") or ("20160261023") or ("9440589") or  
 ("9516760") or ("8563358") or ("9276336") or ("8754529") or ("8829671") or  
 ("20060246626") or ("9941210") or ("7626749") or ("20150247758") or  
 ("20170309733").PN. or ("20180046305") or ("8664699") or  
 ("20100117111") or ("9929220") or ("20130270419") or ("20050238967") or  
 ("20090218041") or ("20080278954") or ("6686588") or ("9807898") or  
 ("9658111") or ("9570660") or ("20010020546") or ("20090104769") or  
 ("20170091513") or ("20120051007") or ("9156678") or ("20140103943") or  
 ("20130175515") or ("8330061") or ("20070259540") or ("20180023793") or  
 ("20030201462") or ("20060177956") or ("20120175506") or ("20170094776")  
 or ("20060188697") or ("9800700") or ("20180012939") or ("20180150667")  
 or ("9362203") or ("20110304001") or ("20030049560") or ("9029759") or  
 ("20140293144") or ("20030161603") or ("20170207123") or ("20150061102")  
 or ("20080224192") or ("7816676") or ("20150167193") or ("5472828") or  
 ("8339798") or ("20160006845") or ("9673246") or ("7985653") or  
 ("20090009941") or ("9608216") or ("8855480") or ("20150198782") or  
 ("8994024") or ("7470604") or ("7647836") or ("20140226268") or  
 ("20170094796") or ("9595497") or ("7759629") or ("20150167949") or  
 ("9420713") or ("20050135758") or ("20160336988") or ("20180108639") or  
 ("20150255740") or ("9690118") or ("20100171949") or ("20140050469") or  
 ("20080230682") or ("20150003053") or ("5706177") or ("6621542") or  
 ("20130106813") or ("9171960") or ("20180130770") or ("20140371559") or  
 ("20160274436") or ("9030832") or ("20080030835") or ("20170210161") or  
 ("20160179259") or ("20150072518") or ("20150382446") or ("20130039018")  
 or ("6969205") or ("20040048077") or ("20180052319") or ("20070052322")  
 or ("9477263") or ("9535528") or ("9507380") or ("20160026842") or  
 ("9713295") or ("20150091418") or ("9213375") or ("20140313086") or  
 ("20130099358") or ("20110169667") or ("8974945") or ("8016467") or  
 ("20180081085") or ("20170059746") or ("20100302218") or ("20130188305")  
 or ("9454177") or ("20040252867") or ("8711304") or ("9182863") or  
 ("20120178195") or ("7112356") or ("20180131087") or ("9596397") or  
 ("7417781") or ("20160324014") or ("8132318") or ("4282597") or  
 ("20120020002") or ("6667143") or ("20140371560") or ("9933872") or  
 ("9509813") or ("20120055702") or ("8994906") or ("20120178194") or  
 ("20020126456") or ("7754520") or ("20180067212") or ("20080044143") or  
 ("20100065863") or ("8899761") or ("9603249").PN. or ("20130244490") or  
 ("9779940") or ("20130088828") or ("20150261032") or ("9437563") or  
 ("20120092747") or ("20140134429") or ("8362517") or ("9651513") or  
 ("20150160768") or ("9200757") or ("9801286") or ("20180067245") or  
 ("8294891") or ("20140139978") or ("6974263") or ("9332935") or  
 ("20180081086") or ("20040031977") or ("6358664") or ("20110101201") or  
 ("8456393") or ("20160233166") or ("20160329309") or ("9423897") or  
 ("20170147857") or ("6441453") or ("9715156") or ("20160377770") or  
 ("8753947") or ("20160210495") or ("20020117315") or ("20160079560") or  
 ("20150342036") or ("20070069393") or ("20130335275") or ("9793599") or  
 ("6482564") or ("9432561") or ("20110255726") or ("20080257585") or  
 ("8217259") or ("20160147109") or ("20080258066") or ("9582704") or  
 ("7910843") or ("8670171") or ("6336269") or ("20130278612") or  
 ("20120038881") or ("20150237756") or ("7662653") or ("20140063821") or  
 ("20130119488") or ("9558390") or ("20090101897") or ("9991584") or  
 ("20040007063") or ("9437832") or ("20170060183") or ("9877384") or  
 ("8379392") or ("20050029514") or ("8971594") or ("20110316015") or  
 ("20110109856") or ("8133768") or ("20100065862") or ("20160183376") or  
 ("20130170172") or ("20130118879") or ("20100129965") or ("20050151246")  
 or ("8796611") or ("20020086232") or ("20140078677") or ("20110134303")  
 or ("20040106707") or ("7279239") or ("20110012116") or ("20080239724")  
 or ("20110233776") or ("6894903") or ("20180114743") or ("9723711") or  
 ("20060183342") or ("20160293885") or ("20080008890") or ("9755184") or  
 ("20100175750") or ("7578623") or ("20180076229") or ("20020117330") or  
 ("20170289324") or ("20160020165") or ("20150022986") or ("6676810") or  
 ("20140091440") or ("9899626") or ("20150298392") or ("7091469") or  
 ("9966361") or ("20020002683") or ("9136304") or ("20160337561") or  
 ("20040247949") or ("8395722") or ("20130286567") or ("20080044140") or  
 ("20180014781") or ("8922009") or ("20140241672") or ("20110019370") or  
 ("20100282947") or ("6642158") or ("20140206147") or ("20150194997") or

("6835898") or ("20140353791") or ("20160044751") or ("20160097681") or  
 ("20100065963") or ("8456392") or ("20140253150") or ("20180123060") or  
 ("20120139082") or ("9316362") or ("20140124922") or ("8866989").PN. or  
 ("20090058687") or ("20160351460") or ("20140253870") or  
 ("20170068359") or ("8097895") or ("20040041261") or ("9768224") or  
 ("20060263727") or ("20140191910") or ("8753946") or ("9625948") or  
 ("20070099333") or ("7417305") or ("20040058561") or ("9363892") or  
 ("9446943") or ("20150123285") or ("20170186797") or ("9196571") or  
 ("9847359") or ("20150171298") or ("20140262848") or ("20170033323") or  
 ("20140133174") or ("20150372208") or ("20120001286") or ("20130175516")  
 or ("9867301") or ("20180068930") or ("7585697") or ("20150187833") or  
 ("8441796") or ("20150380673") or ("20090200648") or ("20170177037") or  
 ("9859320") or ("9492967") or ("20180074551") or ("9059514") or  
 ("20150093104") or ("20160300871") or ("20150277099") or ("20110175101")  
 or ("7742312") or ("20170098747") or ("20120170887") or ("9635769") or  
 ("20160324286") or ("20130063876") or ("9576909") or ("9543488") or  
 ("20150008401") or ("8552460") or ("20010023820") or ("20130128333") or  
 ("20130050226") or ("6897474") or ("20180130747") or ("9121979") or  
 ("20140092028") or ("8112109") or ("9335493") or ("7774930") or  
 ("9204839") or ("20150277098") or ("9534772") or ("8420978") or  
 ("20180093078") or ("20140092630") or ("20050258216") or ("9917282") or  
 ("20150049243") or ("20110080516") or ("20150271959") or ("9389487") or  
 ("20170141146") or ("20130134438") or ("20050224935") or ("20150054001")  
 or ("20130279088") or ("20150236280") or ("20120028391") or ("8044412")  
 or ("7462833") or ("8724304") or ("9237389") or ("20170013735") or  
 ("20140008778") or ("8837872") or ("7054162") or ("8982361") or  
 ("20130146905") or ("8384630") or ("20080053713") or ("6570085") or  
 ("9335355") or ("7470927") or ("20180149920") or ("20150022978") or  
 ("20160375846") or ("20130053106") or ("20080057604") or ("20150177521")  
 or ("9065065") or ("20150099976") or ("20140167234") or ("20150280313")  
 or ("6409930") or ("8837754") or ("8395568") or ("20040058521") or  
 ("9913412") or ("20170075122") or ("9236527") or ("20090032941") or  
 ("20020166682") or ("20090067123") or ("20140369012") or ("20160064338")  
 or ("9477076") or ("8523031") or ("20180106980") or ("20140268516") or  
 ("20140268275") or ("20150243696") or ("20160021998") or ("20150226383")  
 or ("20080150148") or ("20070031992").PN. or ("20160104675") or  
 ("20170330903") or ("20150276194") or ("20160072996") or ("9116267") or  
 ("20140267756") or ("20150077624") or ("20160125220") or ("9773723") or  
 ("8866286") or ("20080157312") or ("20160227655") or ("20140210835") or  
 ("9264090") or ("20070069883") or ("9018074") or ("20120153771") or  
 ("20140168926") or ("20170254705") or ("9629586") or ("9910342") or  
 ("9196812") or ("9988725") or ("9008785") or ("9048124") or  
 ("20140113089") or ("20150076328") or ("9000442") or ("9622556") or  
 ("20150069449") or ("9414500") or ("20180109659") or ("20100060563") or  
 ("20180076401") or ("20140110565") or ("20140225786") or ("20160056526")  
 or ("20150270221") or ("8579434") or ("9471172") or ("8362588") or  
 ("9894265") or ("20100315570") or ("20130300284") or ("8865298") or  
 ("20050163415") or ("20120069517") or ("5608264") or ("20160056118") or  
 ("6502999") or ("20100248405") or ("20130282119") or ("20180076360") or  
 ("9407798") or ("20140184521") or ("20140209691") or ("9111947") or  
 ("20130127784") or ("9235240") or ("20130306367") or ("20140377914") or  
 ("20100038670") or ("20140332148") or ("20130146635") or ("20110255218")  
 or ("20160119014") or ("20070297037") or ("9105869") or ("9543250") or  
 ("20110255259") or ("9389342") or ("20150277097") or ("20170092885") or  
 ("20160212872") or ("8926389") or ("20110262699") or ("20120026571") or  
 ("8174452") or ("8729474") or ("9680205") or ("9583432") or  
 ("20160334692") or ("9263790") or ("20100266801") or ("8886334") or  
 ("20020080265") or ("9475947") or ("20130155723") or ("20150110493") or  
 ("20130248828") or ("20030230798") or ("20160214137") or ("20130207131")  
 or ("9513482") or ("20110031494") or ("8824140") or ("20100090211") or  
 ("20180052281") or ("8964352") or ("20160209691") or ("20040183167") or  
 ("8405193") or ("8503061") or ("20130004753") or ("9236528") or  
 ("20170172268") or ("20170100597") or ("20160373627") or ("6953985") or  
 ("6291126") or ("20180132372") or ("20090179862") or ("20130082883") or  
 ("9251458") or ("20150092382") or ("20150317020") or ("9059058") or  
 ("20140276087") or ("9818776") or ("20080099759") or ("20070090387") or  
 ("9155367") or ("20180059512") or ("9172148") or ("20070257398") or  
 ("9627429") or ("20070091062") or ("20160185298") or ("20100073241").PN.  
 or ("20140036353") or ("8092102") or ("20140264255") or ("8597965") or  
 ("9195358") or ("20150016058") or ("20160066456") or ("20090321651") or  
 ("9001024") or ("9392854") or ("20160081193") or ("20100302616") or  
 ("20150333221") or ("9337154") or ("9635755") or ("20160126417") or  
 ("4446194") or ("9440848") or ("20170188942") or ("20170022051") or  
 ("8330157") or ("9123914") or ("20180035923") or ("20130069906") or  
 ("20130087690") or ("8905610") or ("20160091777") or ("9774072") or  
 ("20160218422") or ("20160005684") or ("9219247") or ("20140370325") or

("8952519") or ("6910812") or ("20080191335") or ("9570494") or  
 ("20160139702") or ("9144938") or ("20180081481") or ("9406635") or  
 ("9645336") or ("20140233170") or ("20060098289") or ("8164815") or  
 ("9400529") or ("8628840") or ("20100190300") or ("20130335808") or  
 ("6140155") or ("20120081406") or ("9585275") or ("20160345449") or  
 ("20140247269") or ("9243317") or ("8442254") or ("20020032374") or  
 ("7825407") or ("9018833") or ("8969778") or ("9362331") or  
 ("20120069232") or ("9041013") or ("6410201") or ("20110293947") or  
 ("20160050776") or ("9947849") or ("7064063") or ("9439305") or  
 ("9496247") or ("9362972") or ("20160320543") or ("20010000744") or  
 ("20140162449") or ("20030197197") or ("20120326015") or ("20180102457")  
 or ("9603240") or ("6844673") or ("20070158772") or ("20090108473") or  
 ("8698265") or ("9200758") or ("20060259090") or ("8633574") or  
 ("8492661") or ("20150346858") or ("20040043540") or ("8053269") or  
 ("20130020468") or ("20160050763") or ("20110299848") or ("8888309") or  
 ("20090034962") or ("20140205235") or ("20090056098") or ("20050230844")  
 or ("8680455") or ("6763576") or ("20170200679") or ("20120286312") or  
 ("20130328094") or ("20140170787") or ("9318475") or ("9967375") or  
 ("20160090299") or ("6867368") or ("7663213") or ("9865767") or  
 ("20120165759") or ("20170176787") or ("9076849") or ("20150219284") or  
 ("20040163836") or ("9325445") or ("20160322271") or ("8945994") or  
 ("9024432") or ("20150185527") or ("6076950") or ("20100298895") or  
 ("9449214") or ("8885096") or ("20130251182") or ("9070615") or  
 ("20110169159") or ("20170045669") or ("7646015") or ("20180061639") or  
 ("20150001462") or ("20080176398") or ("20130135317") or ("7184190").PN.  
 or ("20140299884") or ("9917024") or ("7968804") or ("20090145623") or  
 ("20130128106") or ("9504124") or ("20110274303") or ("20130082895") or  
 ("7973722") or ("6727579") or ("8183067") or ("8912018") or ("9650716") or  
 ("20130004750") or ("20020015907") or ("6867831") or ("20100084665") or  
 ("9706092") or ("5811050") or ("20060174712") or ("20050233502") or  
 ("20130020590") or ("6927379") or ("20140168510") or ("9937526") or  
 ("20110140744") or ("9645464") or ("9640561") or ("7145243") or  
 ("20140184057") or ("8619185") or ("20100285260") or ("7805071") or  
 ("20180042127") or ("20130018434") or ("20060214202") or ("6863444") or  
 ("7733552") or ("9936574") or ("20140098332") or ("20040180476") or  
 ("20100155769") or ("20140270640") or ("9681570") or ("20150002945") or  
 ("20180114802") or ("20170142239") or ("20150049275") or ("9678586") or  
 ("20130106712") or ("20130100618") or ("8207553") or ("20120274800") or  
 ("20140376165") or ("20030161593") or ("20130215642") or ("20110141336")  
 or ("8409905") or ("7466390") or ("8071953") or ("20120043119") or  
 ("9983342") or ("9904502") or ("20160282978") or ("7736936") or  
 ("20160079281") or ("9554024") or ("5646067") or ("20110205468") or  
 ("20130002517") or ("9209207") or ("8827446") or ("20150103494") or  
 ("20170039018") or ("6194119") or ("20170097446") or ("9711556") or  
 ("20120229754") or ("6835950") or ("8982055") or ("20160231787") or  
 ("9023689") or ("20160013544") or ("20160299332") or ("20030147115") or  
 ("9418925") or ("20080312707") or ("7692289") or ("6573609") or  
 ("20170207160") or ("8485418") or ("9105555") or ("20170092669") or  
 ("20110088924") or ("6291116") or ("7557031") or ("7854172") or  
 ("20040056365") or ("20090127697") or ("7170100") or ("9894789") or  
 ("20180033707") or ("9331228") or ("9728494") or ("20140070375") or  
 ("20140268274") or ("20180150109") or ("20160091713") or ("20100037935")  
 or ("20120056640") or ("9061128") or ("20160299609") or ("6110823") or  
 ("20070199738") or ("6653557") or ("8889460") or ("9305842") or  
 ("8970446") or ("9793522") or ("7310177") or ("20150132949") or  
 ("8580607") or ("20120327029") or ("20120319966") or ("8754396") or  
 ("20130264109") or ("20170250578") or ("20170147852") or ("8526180") or  
 ("20050052751") or ("20140065756") or ("9324752").PN. or  
 ("20040026779") or ("20130088130") or ("20070153356") or  
 ("20080180779") or ("20070256291") or ("6582876") or ("7952107") or  
 ("9917267") or ("6421013") or ("20180084636") or ("9110217") or  
 ("20170104224") or ("20150365508") or ("4797024") or ("9795037") or  
 ("20110103041") or ("20150323843") or ("20140276248") or ("5618752") or  
 ("20150248142") or ("20120286311") or ("7884432") or ("20150179072") or  
 ("20160027737") or ("20140072261") or ("9153490") or ("7919410") or  
 ("20160086802") or ("7433737") or ("8264837") or ("6991963") or  
 ("20150048048") or ("9804441") or ("5069626") or ("9030001") or  
 ("20130259281") or ("8941137") or ("20170079144") or ("7419841") or  
 ("8749006") or ("9183749") or ("20180073706") or ("20170092566") or  
 ("9161450") or ("20150351232") or ("20170364172") or ("8981809") or  
 ("20100079387") or ("9001002") or ("9082673") or ("20070200130") or  
 ("20030159844") or ("9633919") or ("9431244") or ("20140340265") or  
 ("8452037") or ("20120211382") or ("20170073546") or ("20160295702") or  
 ("9515025") or ("9079349") or ("20160050751") or ("8165679") or  
 ("20010048591") or ("20140085317") or ("8611095") or ("20070026634") or  
 ("6365057") or ("20160049624") or ("20170062363") or ("5682062") or

		("7498647") or ("8830665") or ("20130176700") or ("9681829") or ("7710631") or ("8329510") or ("20180056871") or ("20080143906") or ("20140077351") or ("9886062") or ("20110057018") or ("20170084533") or ("20160329386") or ("20150364815") or ("20060292732") or ("9257740") or ("20040134792") or ("7826127") or ("9832890") or ("6964886") or ("20140011046") or ("20090207514") or ("20040209396") or ("9671671") or ("6940141") or ("9674965") or ("20150250038") or ("8342325") or ("20010013654") or ("20120038813") or ("7221048") or ("20150372041") or ("20140016217") or ("20150243624") or ("9698129") or ("20110096508") or ("20150351220") or ("6444293") or ("20150103297") or ("20110104855") or ("20120025365") or ("9164246") or ("20160310050") or ("20040041282") or ("20060154405") or ("20110277361") or ("8035179") or ("20170052422") or ("9461006") or ("20020197554") or ("9257423") or ("6588949") or ("7525715") or ("20170078777") or ("20140268273") or ("7449821") or ("20100203679") or ("20080004088") or ("20180059729") or ("9536953").PN. or ("9804639") or ("9664747") or ("20170294453") or ("20150346876") or ("20110088770") or ("5896267") or ("20070228110") or ("7675080") or ("20100172008") or ("6472031") or ("20110026367") or ("20170258380") or ("20040094410") or ("20100182286") or ("20140267732") or ("9887392") or ("20170251937") or ("20100190297") or ("20160076750") or ("20100289104") or ("6985193") or ("20160118289") or ("20130127736") or ("8896700") or ("20110304008") or ("4753548") or ("8981533") or ("9865839") or ("9530681") or ("9257750") or ("8730179") or ("6956295") or ("9962115") or ("20180032105") or ("20040041247") or ("20110272816") or ("20160357318") or ("20080111223") or ("20140247404") or ("20140117565") or ("9780028") or ("20100248161") or ("8071276") or ("20120097415") or ("20120293924") or ("20130196539") or ("7723144") or ("20090321862").PN.				
S495	331	S494 and (flex\$4 near2 (hous\$3 or cas\$3 or enclosure))	US-PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 01:47
S496	164	S495 and (polymers and metal\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 01:48
S497	99	S496 and (protect\$3 near3 coat\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 01:48
S498	26	("20110309482"   "20120112764"   "20120275025"   "20120305422"   "20120325720"   "20130126372"   "20130175186"   "20130220841"   "20130231046"   "20140152890"   "20140246339"   "5506053"   "5940526"   "6646864"   "6995976"   "7158376"   "7180735"   "7230823"   "7663879"   "7688580"   "7949242"   "8008591"   "8503170"   "8548541").PN. OR ("9622556").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 02:05
S499	11	S498 and (flex\$4 near2 (hous\$3 or cas\$3 or enclosure))	US-PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 02:05
S500	2	S499 and (polymers and metal\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 02:06
S501	0	S499 and (promot\$3 near3 layer\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 02:38
S502	0	S498 and (promot\$3 near3 layer\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 02:38
S503	71	S497 and (promot\$3 near3 layer\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 02:38
S504	9	S497 and (promot\$3 near layer\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 02:39
S505	0	S504 and LDS	US-PGPUB;	OR	OFF	2018/06/11 02:40



			USPAT; USOCR			
S506	3	S497 and LDS	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 02:40
S507	4	S504 and primer\$1	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 03:05
S508	2	"20130234899"	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 03:07
S509	2	"20160148189"	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:39
S510	8	("20040225613"   "20050177716"   "20050275505"   "20080099553"   "20090307132"   "20110140841"   "20140239065"   "8095974").PN. OR ("9978055").URPN.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:40
S511	16	("20150241916"   "20130329532"   "20110007468"   "6529754"   "20140121539"   "20150189134"   "20080002528"   "20110007468"   "20160066859"   "9110498"   "20150049591"   "20150223355"   "20100292599"   "4819860"   "20020151775"   "20160078061"   "8477981").PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:41
S512	4640	G06F1/163.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:47
S513	1922	G06F1/1686.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:47
S514	5319	h04n5/2252.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:47
S515	4004	h04n5/23216.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:47
S516	8913	G06F3/016.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:48
S517	6035	G06F3/14.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:48
S518	1472	(wrist near watch).ti.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:49
S519	311	361/679.03.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:50
S520	0	S518 and (hing\$3 near3 screw\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:51
S521	5	S519 and (hing\$3 near3 screw\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:51
S522	2	S518 and (pivot\$3 near3 screw\$3)	US- PGPUB;	OR	OFF	2018/06/11 12:51

			USPAT; USOCR			
S523	112	S518 and (screw\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:52
S524	143	S519 and wrist	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:52
S525	45	S524 and (screw\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:52
S526	3287	G06F1/1637.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:54
S527	1	"20150346767"	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 12:54
S528	3	("2015/0346767").URPN.	USPAT	OR	OFF	2018/06/11 12:54
S529	4	("2015/0277489").URPN.	USPAT	OR	OFF	2018/06/11 12:58
S530	1	"20150277489"	USPAT	OR	OFF	2018/06/11 12:58
S531	380	368/281.ccls.	USPAT	OR	OFF	2018/06/11 13:02
S532	354	368/282.ccls.	USPAT	OR	OFF	2018/06/11 13:02
S533	64	368/283.ccls.	USPAT	OR	OFF	2018/06/11 13:02
S534	59	368/313.ccls.	USPAT	OR	OFF	2018/06/11 13:02
S535	186	G04b37/0008.cpc.	USPAT	OR	OFF	2018/06/11 13:08
S536	24	G04b37/0427.cpc.	USPAT	OR	OFF	2018/06/11 13:08
S537	404	G04b37/1486.cpc.	USPAT	OR	OFF	2018/06/11 13:08
S538	382	a44c5/14.cpc.	USPAT	OR	OFF	2018/06/11 13:08
S539	29	a44c5/147.cpc.	USPAT	OR	OFF	2018/06/11 13:08
S540	1584	361/679.01.ccls.	USPAT	OR	OFF	2018/06/11 13:09
S541	1147	361/679.02.ccls.	USPAT	OR	OFF	2018/06/11 13:09
S542	3287	G06F1/1637.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:09
S543	2237	h05k1/0203.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:31
S544	874	h05k1/0209.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:31
S545	647	h05k1/021.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:32

## EAST Search History

S546	5652	h05k1/181.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:32
S547	985	h01121/4842.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:32
S548	5038	361/704.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:32
S549	1718	361/707.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:32
S550	248	361/712.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:32
S551	621	361/718.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:32
S552	1985	361/690.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:32
S553	1395	257/685.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:32
S554	4	((("Kahrimanovic") near3 ("Elvir"))).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:33
S555	5605	361/679.21-679.3.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:49
S556	2993	361/679.55-679.56.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:49
S557	3963	G06F1/1601.CPC.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:50
S558	1715	G06F1/1613.CPC.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:50
S559	601	G06F1/1633.CPC.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:50
S560	2473	G06F1/1652.CPC.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/06/11 13:50
S561	1040	((("PETERS") near3 ("David")) OR ((("TAUSSIG") near3 ("Carl")) OR ((("CHENG") near3 ("Shan")) OR ((("SRINIVAS") near3 ("Vikram"))).INV.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/11/06 12:35
S562	3	("20110277361"   "20130234899"   "20140152890").PN.	US- PGPUB; USPAT;	OR	OFF	2018/11/06 12:41

			USOCR			
S563	1	"20110277361"	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/06 12:41
S564	44	("2014/0152890").URPN.	USPAT	OR	OFF	2018/11/06 12:41
S565	18	("2013/0234899").URPN.	USPAT	OR	OFF	2018/11/06 12:41
S566	35	("2011/0277361").URPN.	USPAT	OR	OFF	2018/11/06 12:42
S567	97	S564 S565 S566	USPAT	OR	OFF	2018/11/06 12:42
S568	63	S567 and (flex\$4 or bend\$4)	USPAT	OR	OFF	2018/11/06 12:42
S569	52	S568 and metal\$3	USPAT	OR	OFF	2018/11/06 12:42
S570	42	S569 and polymer\$1	USPAT	OR	OFF	2018/11/06 12:42
S571	34	S570 and substrate\$1	USPAT	OR	OFF	2018/11/06 12:43
S572	14	S571 and ((flex\$4 or bend\$4) near3 (hous\$3 or cas\$3 or enclosure\$1))	USPAT	OR	OFF	2018/11/06 12:44
S573	54	(US-20090168321-\$ or US-20060274487-\$ or US-20060133016-\$ or US-20110058326-\$ or US-20110025943-\$ or US-20030063432-\$ or US-20060038104-\$ or US-20050157457-\$ or US-20040012917-\$ or US-20120194976-\$ or US-20070279852-\$ or US-20130135230-\$ or US-20140152890-\$ or US-20150277489-\$).did. or (US-8400767-\$ or US-8081435-\$ or US-8081429-\$ or US-7898796-\$ or US-7869200-\$ or US-7724511-\$ or US-7450372-\$ or US-7298610-\$ or US-6219229-\$ or US-8576554-\$ or US-8373976-\$ or US-8218303-\$ or US-7846026-\$ or US-7601067-\$ or US-6049449-\$ or US-5430607-\$ or US-5351176-\$ or US-5305183-\$ or US-5175672-\$ or US-5157585-\$ or US-5107402-\$ or US-5021763-\$ or US-4980676-\$ or US-4832419-\$ or US-8335089-\$ or US-8313072-\$).did. or (US-7267613-\$ or US-6359775-\$ or US-5640296-\$ or US-5631805-\$ or US-7002793-\$ or US-6504706-\$ or US-5761034-\$ or US-4736332-\$ or US-8387930-\$ or US-8052102-\$ or US-8050024-\$ or US-7775494-\$ or US-5410210-\$ or US-9622556-\$).did.	US-PGPUB; USPAT	OR	OFF	2018/11/06 12:48
S574	3	S573 and ((flex\$4 or bend\$4) near3 (hous\$3 or cas\$3 or enclosure\$1))	USPAT	OR	OFF	2018/11/06 12:49
S575	3448	361/679.21-679.3.CCLS.	USPAT	OR	OFF	2018/11/06 23:53
S576	1916	361/679.55,679.56.CCLS.	USPAT	OR	OFF	2018/11/06 23:53
S577	3500	349/56-60.CCLS.	USPAT	OR	OFF	2018/11/06 23:53
S578	1815	G06F1/1601.CPC.	USPAT	OR	OFF	2018/11/06 23:53
S579	772	G06F1/1613.CPC.	USPAT	OR	OFF	2018/11/06 23:53
S580	272	G06F1/1633.CPC.	USPAT	OR	OFF	2018/11/06 23:53
S581	1062	G06F1/1652.CPC.	USPAT	OR	OFF	2018/11/06 23:53
S582	0	G06F1/16162.CPC.	USPAT	OR	OFF	2018/11/06 23:53
S583	4847	G06F1/1616.CPC.	USPAT	OR	OFF	2018/11/06 23:53
S584	8068	S578 S579 S580 S581 S583	USPAT	OR	OFF	2018/11/06 23:53
S585	1206	H05K5/0017.CPC.	USPAT	OR	OFF	2018/11/06 23:54
S586	674	H05K5/03.CPC.	USPAT	OR	OFF	2018/11/06 23:54
S587	290	H05K5/0013.CPC.	USPAT	OR	OFF	2018/11/06 23:54

S588	1946	S585 S586 S587	USPAT	OR	OFF	2018/11/06 23:54
S589	2	((("20140270659" or ("9103999"))).PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/06 23:59
S590	1056	((("20140270659" or ("9103999" or ("20110267298" or ("20150325498" or ("10048787" or ("20140332981" or ("9659858" or ("20130026645" or ("9214425" or ("8816505" or ("9400911" or ("20170364726" or ("20170250132" or ("20160179263" or ("20090256251" or ("20080247712" or ("20120242635" or ("9274553" or ("8203207" or ("20020071940" or ("20040234752" or ("6768654" or ("20170287992" or ("20020028045" or ("8723049" or ("20120314384" or ("20130033736" or ("20170068143" or ("8506096" or ("20120314992" or ("8879272" or ("20170261830" or ("20150329054" or ("20140201994" or ("8625938" or ("6684007" or ("20120229882" or ("9701248" or ("9433100" or ("9056584" or ("20160257254" or ("20080225396" or ("20130043568" or ("9878670" or ("20130321893" or ("20070279752" or ("20110255850" or ("20050110157" or ("20110079893" or ("20140159249" or ("10043052" or ("9076785" or ("7391563" or ("20090237820" or ("7542193" or ("8727547" or ("8928129" or ("20180147993" or ("20150270193" or ("20150243937" or ("7826123" or ("20130108124" or ("20070164419" or ("7129163" or ("20180059298" or ("9607928" or ("20050195488" or ("20160353616" or ("20130023072" or ("7255451" or ("20150184998" or ("8703603" or ("8592233" or ("20070072321" or ("7449784" or ("20140226690" or ("20140285865" or ("20070040268" or ("20150355518" or ("20140166350" or ("9341914" or ("20170178958" or ("9090211" or ("7888793" or ("7508065" or ("9179537" or ("20160344159" or ("9736283" or ("9647420" or ("20110255250" or ("20170235066" or ("6803651" or ("20170098622" or ("9817199" or ("20180097199" or ("8993450" or ("9410799" or ("20150072727" or ("20180218859" or ("20150187673" or ("7329056" or ("20140306261" or ("20050111797" or ("8277059" or ("20180217669" or ("9391250" or ("20130050228" or ("9237648" or ("20110019260" or ("20140240938" or ("20180217668" or ("20130265137" or ("20120236388" or ("20140340925" or ("20130107563" or ("20140217607" or ("20150307027" or ("20160365302" or ("20110186998" or ("9257410" or ("9437536" or ("9545883" or ("20150348906" or ("9073491" or ("20170120827" or ("20160155732" or ("9349669" or ("20130328186" or ("8797627").PN. or ("10029616" or ("8772946" or ("20180074272" or ("20130050227" or ("20160079090" or ("9754866" or ("9768144" or ("20100226101" or ("9846452" or ("9000600" or ("6936495" or ("6429033" or ("20140327951" or ("20150116810" or ("20140043810" or ("20170013731" or ("20140078412" or ("20150279768" or ("20080237881" or ("9946302" or ("20130050155" or ("9090212" or ("8072764" or ("8730553" or ("20120050975" or ("9907193" or ("20130259329" or ("20120300412" or ("20120146210" or ("20130329460" or ("20140099754" or ("8922867" or ("8610264" or ("20140342503" or ("9224649" or ("20120075817" or ("9152838" or ("8796828" or ("9075567" or ("20120248615" or ("8937370" or ("20150162216" or ("7714931" or ("9691693" or ("6989295" or ("20140070423" or ("20130300618" or ("7443693" or ("9362204" or ("20150301563" or ("20180232009" or ("20040240191" or ("8963335" or ("9780042" or ("20170207182" or ("20150155230" or ("20050285973" or ("6908794" or ("20120018868" or ("20160276296" or ("20160150133" or ("9990001" or ("20180249586" or ("9093745" or ("9997473" or ("20170294321" or ("9048537" or ("20150329050" or ("20170232899" or ("8791575" or ("20160259375" or ("10057983" or ("20170040270" or ("8686297" or ("9278853" or ("20120267789" or ("10001812" or ("20170220837" or ("20150140807" or ("9637055" or ("9455181" or ("8975751" or ("20150132873" or ("20130170013" or ("20180117882" or ("20140227817" or ("20150055009" or ("7688206" or ("9134585" or ("9859234" or ("20150131009" or ("6643918" or ("20160097959" or ("20160240602" or ("20170323934" or ("7009309" or ("9536815" or ("20150270221" or ("9609183" or ("20140373898" or ("20170098619" or ("20170104856" or ("9543250" or ("9748322" or ("8754529" or ("5770884" or ("20180062090" or ("20160072027" or ("9647171" or ("20130105952" or ("10068960" or ("20170223846" or ("20100283069" or ("9134763" or ("9876883" or ("20120273963" or ("20110266561" or ("8471709" or ("6891276" or ("9935281" or ("7972875" or ("20140162449" or ("9941210" or ("20110194022" or ("9280183" or ("8203647" or ("20170179085" or ("20170179100" or ("20120261697" or ("20110285889" or ("20070080360" or ("9117940").PN. or ("10026721" or ("9076849" or ("20160147263" or ("20040187311" or ("20050189635" or ("8722458" or ("9969199" or ("20180074553" or ("20170179356" or ("9601671" or	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/06 23:59

("20170200759") or ("10071584") or ("20140073079") or ("20010040043") or  
 ("9720450") or ("9406854") or ("20140063302") or ("20160005931") or  
 ("9431475") or ("20050189622") or ("8547471") or ("6706546") or  
 ("20020039464") or ("20130328462") or ("20160334668") or ("20160231619")  
 or ("8927316") or ("20120119367") or ("20180302994") or ("20170176835")  
 or ("8742541") or ("20170200707") or ("9060111") or ("20120112238") or  
 ("7414197") or ("9703139") or ("8502340") or ("20140173894") or  
 ("20150048759") or ("20120181658") or ("20130329054") or ("20130313680")  
 or ("20140339668") or ("20110186345") or ("9983455") or ("10069018") or  
 ("20120146182") or ("9606579") or ("20120055701") or ("20140273393") or  
 ("20150146401") or ("20120171907") or ("20160079189") or ("20140242816")  
 or ("20160300991") or ("9437557") or ("20150162678") or ("9190463") or  
 ("9073490") or ("20120306092") or ("20170196112") or ("6774659") or  
 ("9350093") or ("9807919") or ("8432045") or ("20140104288") or  
 ("20100317132") or ("6987034") or ("20170049000") or ("8906720") or  
 ("20160315139") or ("20170003440") or ("20120275100") or ("6989584") or  
 ("8551283") or ("9673358") or ("20110187245") or ("7115961") or  
 ("20140104284") or ("20060183265") or ("9473681") or ("9232670") or  
 ("20060185884") or ("9185816") or ("8758067") or ("8772908") or  
 ("7102082") or ("6661084") or ("20160062398") or ("20170040306") or  
 ("20180263151") or ("20170023752") or ("9786633") or ("20110188180") or  
 ("20160054537") or ("20180166507") or ("9448373") or ("20130009270") or  
 ("20160004019") or ("9660368") or ("20160181345") or ("10115662") or  
 ("20170038641") or ("20080095985") or ("20170135198") or ("20070108890")  
 or ("20050145608") or ("20110221018") or ("7288739") or ("20160329309")  
 or ("20060243476") or ("20170084661") or ("8955215") or ("8797721") or  
 ("20120282420") or ("9076822") or ("20170325347") or ("9490312") or  
 ("20160254465") or ("8435824") or ("9801273") or ("20080251872") or  
 ("20080090338") or ("20110170192") or ("9041851") or ("20130009544") or  
 ("20130078860") or ("8698394") or ("20180068930").PN. or  
 ("20170351042") or ("20050145609") or ("20180233552") or  
 ("20160172427") or ("20090108473") or ("20160240605") or ("8258433") or  
 ("20140009873") or ("20070158807") or ("9773723") or ("8764996") or  
 ("6785447") or ("20090154872") or ("9640437") or ("20120223896") or  
 ("9167161") or ("20160101499") or ("20160149086") or ("9356087") or  
 ("6956182") or ("20170148764") or ("10101548") or ("7341881") or  
 ("9991311") or ("5866443") or ("20020097962") or ("20120018893") or  
 ("20140264693") or ("20080095988") or ("6690845") or ("10090266") or  
 ("7893514") or ("20140264691") or ("20180084323") or ("20140307344") or  
 ("20170047307") or ("9570660") or ("9460643") or ("20170066930") or  
 ("6674159") or ("9601530") or ("8638549") or ("9666560") or  
 ("20160260768") or ("20170289324") or ("20150214194") or ("20160260765")  
 or ("20050146025") or ("20170062363") or ("20150063764") or  
 ("20050253273") or ("20090014822") or ("20150002926") or ("9428380") or  
 ("20140083600") or ("20180182806") or ("20100203248") or ("9099368") or  
 ("9904024") or ("20050155957") or ("10050078") or ("20180096187") or  
 ("20050099532") or ("9676334") or ("9190443") or ("20120325794") or  
 ("20120268961") or ("20180286924") or ("20130028450") or ("9406654") or  
 ("20180286912") or ("8559092") or ("20130314760") or ("20060043509") or  
 ("8558141") or ("20140070375") or ("20070059901") or ("8982582") or  
 ("20180268988") or ("20170028924") or ("20180088296") or ("20080053713")  
 or ("20160179229") or ("9391045") or ("20150279806") or ("20120236387")  
 or ("20110186992") or ("20170075464") or ("20180218998") or  
 ("20060109129") or ("8827517") or ("9766737") or ("9034730") or  
 ("8654433") or ("20160174304") or ("8796135") or ("7338836") or  
 ("20180114905") or ("20120250250") or ("20170098630") or ("20170069575")  
 or ("20140008815") or ("10020288") or ("8169684") or ("20120092747") or  
 ("20180263133") or ("7410825") or ("8035077") or ("20060061889") or  
 ("8981533") or ("9535522") or ("20030160035") or ("9111841") or  
 ("20170371465") or ("20090278219") or ("20080278954") or ("8865489") or  
 ("8670171") or ("8836142") or ("9706607") or ("7294827") or  
 ("20150217993") or ("9983714") or ("20120229752") or ("20150062927") or  
 ("20110255726") or ("20170048990") or ("20120176760") or  
 ("20140319550").PN. or ("20170290106") or ("20060255418") or  
 ("9310643") or ("20180234594") or ("20110102167") or ("6624353") or  
 ("20150338887") or ("8537564") or ("20160255929") or ("20080037769") or  
 ("9564473") or ("20160035797") or ("20140061837") or ("9196571") or  
 ("20150243696") or ("8848160") or ("20120164888") or ("9980326") or  
 ("20150279798") or ("20150123285") or ("20130244490") or ("20180092166")  
 or ("9159689") or ("7709915") or ("20180039372") or ("20130314761") or  
 ("20150185427") or ("9350009") or ("20080298818") or ("7648287") or  
 ("20100321758") or ("20120091594") or ("20090200564") or ("20150315715")  
 or ("9793334") or ("9241097") or ("20150255853") or ("20160164165") or  
 ("8665510") or ("20150201723") or ("20100311502") or ("20080136956") or  
 ("9750322") or ("9235016") or ("9147711") or ("20180017741") or  
 ("20150338883") or ("20180061748") or ("8987113") or ("20180237214") or

("8254011") or ("20180063941") or ("20130048368") or ("20160259366") or  
 ("20120320444") or ("20150008401") or ("7385284") or ("9279189") or  
 ("20160005706") or ("9952626") or ("5069626") or ("20150307028") or  
 ("20180217639") or ("8710376") or ("20170023979") or ("20120146206") or  
 ("20170148866") or ("20160187930") or ("20080154365") or ("20120075216")  
 or ("20110130177") or ("9780160") or ("8287386") or ("9276336") or  
 ("20140036337") or ("9324752") or ("20140111684") or ("20090082075") or  
 ("20080237766") or ("9065175") or ("9480155") or ("20180052281") or  
 ("9595499") or ("9653778") or ("20170227807") or ("20170360167") or  
 ("20140140020") or ("9440589") or ("20160093644") or ("20140152890") or  
 ("20160198824") or ("20160014915") or ("7527993") or ("20140210104") or  
 ("20080298814") or ("20140267760") or ("8970516") or ("20150062525") or  
 ("9293806") or ("20130050226") or ("20180240829") or ("7605348") or  
 ("9237389") or ("20180090699") or ("7706887") or ("20120018894") or  
 ("7964926") or ("20120091468") or ("9508771") or ("20170236909") or  
 ("9123914") or ("8563358") or ("8950068") or ("20090080055") or  
 ("20150282304") or ("20170035170") or ("20050272177") or ("9184527") or  
 ("20150003053") or ("9469252") or ("10005611") or ("9954019") or  
 ("8730551") or ("8442254") or ("20130329396") or ("7723144") or  
 ("8905772") or ("20170062321") or ("8697569") or ("20180059690").PN. or  
 ("20160056118") or ("20160109096") or ("20110255000") or ("9018769") or  
 ("9349758") or ("9582043") or ("8952519") or ("7800019") or  
 ("20160056198") or ("8619067") or ("20140192520") or ("20080019502") or  
 ("20180184532") or ("20170200755") or ("10020462") or ("20170205927") or  
 ("9911688") or ("8552299") or ("7636188") or ("20150346782") or  
 ("20170040365") or ("9200757") or ("9161712") or ("8503062") or  
 ("9842875") or ("7259969") or ("20170117243") or ("9578759") or  
 ("20030096516") or ("20050263903") or ("20100052086") or ("9356061") or  
 ("9614168") or ("9411380") or ("20160270272") or ("20120112361") or  
 ("9685689") or ("20180024401") or ("9406635") or ("20160234949") or  
 ("9204025") or ("20060134982") or ("20140206147") or ("8430579") or  
 ("20100038352") or ("20180074551") or ("20170194411") or ("8786058") or  
 ("9469469") or ("20130048347") or ("20180293420") or ("9223352") or  
 ("7329054") or ("20150035028") or ("20170053907") or ("9059067") or  
 ("20160204366") or ("20080303436") or ("20110169159") or ("8610822") or  
 ("10036734") or ("8837754") or ("9614941") or ("9804607") or  
 ("20170285844") or ("20180240746") or ("20130251182") or ("20140296672")  
 or ("20160343756") or ("20130010405") or ("8988636") or ("20060043513")  
 or ("9136289") or ("9897789") or ("20150296622") or ("20140296673") or  
 ("20120038046") or ("20140078449") or ("20110215685") or ("20120094046")  
 or ("7368695") or ("20170186712") or ("20150163940") or ("20170344789")  
 or ("20180024274") or ("20180235544") or ("20090320139") or  
 ("20120018863") or ("20140352440") or ("10104787") or ("9305842") or  
 ("20130126838") or ("9454188") or ("20120153771") or ("20120139082") or  
 ("20160077276") or ("20170051883") or ("20160300962") or ("20170263873")  
 or ("20150132949") or ("20120199985") or ("20150177789") or  
 ("20110049652") or ("20160170250") or ("20140328041") or ("20080266685")  
 or ("9841548") or ("8642119") or ("20150221551") or ("7400435") or  
 ("9337152") or ("20140353789") or ("20130265708") or ("20180046305") or  
 ("8000041") or ("8787016") or ("9360696") or ("9374919") or ("9711502") or  
 ("8637992") or ("9073291") or ("20160082889") or ("20060054997") or  
 ("20150241393") or ("9229481") or ("20180126704") or ("8198739") or  
 ("20040041261") or ("20130161809").PN. or ("20180316160") or  
 ("20160041663") or ("9504170") or ("9835793") or ("6666693") or  
 ("20180013191") or ("8523031") or ("9907498") or ("20160375846") or  
 ("20120070145") or ("7456076") or ("20180190704") or ("20040076382") or  
 ("20130134602") or ("7615479") or ("20080055581") or ("7824112") or  
 ("9355901") or ("20120229709") or ("9945818") or ("20100117224") or  
 ("8724304") or ("20130279088") or ("20060279005") or ("7609461") or  
 ("20030201462") or ("20160268490") or ("20130201429") or ("20170013729")  
 or ("20140239276") or ("7957805") or ("20070267708") or ("20120026571")  
 or ("20170212613") or ("20160054175") or ("9123614") or ("20140042406")  
 or ("8607444") or ("7122436") or ("20150054692") or ("7629617") or  
 ("9583686") or ("20130146635") or ("20080212189") or ("9694751") or  
 ("20120161305") or ("9070063") or ("20140085601") or ("20160327986") or  
 ("20070034875") or ("20180279471") or ("20180042127") or ("20060181772")  
 or ("20070210924") or ("20140117565") or ("8503061") or ("9645008") or  
 ("6935792") or ("8319347") or ("20170177037") or ("7129523") or  
 ("20170147852") or ("20050279916") or ("9085457") or ("20160240462") or  
 ("20140141568") or ("7059040") or ("20150022983") or ("20060046430") or  
 ("20150021788") or ("20100002402") or ("20180144113") or ("9111823") or  
 ("20110127675") or ("20160172623") or ("20170068286") or ("20170110631")  
 or ("8610265") or ("20170338381") or ("20170051884") or ("9287336") or  
 ("20110299848") or ("20170142239") or ("9966358") or ("20130240960") or  
 ("20130127879") or ("20100066519") or ("9379355") or ("20110080516") or  
 ("20130328741") or ("20130128106") or ("10020245") or ("20180090713") or

		( <u>"9780262"</u> ) or ( <u>"20120038813"</u> ) or ( <u>"7160791"</u> ) or ( <u>"6686588"</u> ) or ( <u>"6863444"</u> ) or ( <u>"9420713"</u> ) or ( <u>"9018724"</u> ) or ( <u>"9778705"</u> ) or ( <u>"20160327980"</u> ) or ( <u>"20180183913"</u> ) or ( <u>"20110186960"</u> ) or ( <u>"9142695"</u> ) or ( <u>"20160181346"</u> ) or ( <u>"20160268546"</u> ) or ( <u>"20140071601"</u> ) or ( <u>"20160351472"</u> ) or ( <u>"20180284369"</u> ) or ( <u>"8796109"</u> ) or ( <u>"9997675"</u> ) or ( <u>"20170205847"</u> ) or ( <u>"20150124308"</u> ) or ( <u>"20150181700"</u> ) or ( <u>"20120157175"</u> ) or ( <u>"20170005077"</u> ) or ( <u>"20170336831"</u> ) or ( <u>"9120287"</u> ) or ( <u>"10040681"</u> ) or ( <u>"20060109123"</u> ) or ( <u>"8097895"</u> ) or ( <u>"9793309"</u> ) or ( <u>"9201201"</u> ) or ( <u>"9977460"</u> ) or ( <u>"20180130770"</u> ) or ( <u>"20160172428"</u> ) or ( <u>"7859738"</u> ) or ( <u>"20040043540"</u> ).PN. or ( <u>"9301391"</u> ) or ( <u>"20050230844"</u> ) or ( <u>"20130321988"</u> ) or ( <u>"20150340397"</u> ) or ( <u>"20160372445"</u> ) or ( <u>"7812416"</u> ) or ( <u>"8664043"</u> ) or ( <u>"20140125551"</u> ) or ( <u>"20160093685"</u> ) or ( <u>"20150237711"</u> ) or ( <u>"9529214"</u> ) or ( <u>"20130249740"</u> ) or ( <u>"20170068276"</u> ) or ( <u>"20150311260"</u> ) or ( <u>"9093767"</u> ) or ( <u>"9960213"</u> ) or ( <u>"8897002"</u> ) or ( <u>"20140124961"</u> ) or ( <u>"20140043782"</u> ) or ( <u>"20140367777"</u> ) or ( <u>"9780157"</u> ) or ( <u>"9869807"</u> ) or ( <u>"20150367598"</u> ) or ( <u>"20090056113"</u> ) or ( <u>"9025112"</u> ) or ( <u>"20090115891"</u> ) or ( <u>"20150270227"</u> ) or ( <u>"20170242506"</u> ) or ( <u>"20180270946"</u> ) or ( <u>"10009523"</u> ) or ( <u>"9525011"</u> ) or ( <u>"20170131488"</u> ) or ( <u>"20160336523"</u> ) or ( <u>"20110253411"</u> ) or ( <u>"9653523"</u> ) or ( <u>"20170062387"</u> ) or ( <u>"9847506"</u> ) or ( <u>"6907178"</u> ) or ( <u>"20140266976"</u> ) or ( <u>"7626749"</u> ) or ( <u>"20050233502"</u> ) or ( <u>"20150229745"</u> ) or ( <u>"20160313767"</u> ) or ( <u>"20170103941"</u> ) or ( <u>"20120235969"</u> ) or ( <u>"20120055702"</u> ) or ( <u>"20140099058"</u> ) or ( <u>"20170149019"</u> ) or ( <u>"20180232554"</u> ) or ( <u>"20030231833"</u> ) or ( <u>"20180219165"</u> ) or ( <u>"9425418"</u> ) or ( <u>"20170086298"</u> ) or ( <u>"8704961"</u> ) or ( <u>"9733438"</u> ) or ( <u>"8738137"</u> ) or ( <u>"20170003718"</u> ) or ( <u>"20150325812"</u> ) or ( <u>"5989402"</u> ) or ( <u>"20100181381"</u> ) or ( <u>"8467177"</u> ) or ( <u>"20110013280"</u> ) or ( <u>"20130207131"</u> ) or ( <u>"20130050571"</u> ) or ( <u>"9627648"</u> ) or ( <u>"10037947"</u> ) or ( <u>"20120106063"</u> ) or ( <u>"7910859"</u> ) or ( <u>"9688053"</u> ) or ( <u>"20130223034"</u> ) or ( <u>"8187795"</u> ) or ( <u>"20080099900"</u> ) or ( <u>"9355948"</u> ) or ( <u>"9550335"</u> ) or ( <u>"20180252981"</u> ) or ( <u>"9219247"</u> ) or ( <u>"20140264692"</u> ) or ( <u>"10064269"</u> ) or ( <u>"20080217709"</u> ) or ( <u>"8489158"</u> ) or ( <u>"9966361"</u> ) or ( <u>"8139145"</u> ) or ( <u>"9147598"</u> ) or ( <u>"9190720"</u> ) or ( <u>"7109410"</u> ) or ( <u>"20180278815"</u> ) or ( <u>"20180130747"</u> ) or ( <u>"10094708"</u> ) or ( <u>"6822264"</u> ) or ( <u>"20150368095"</u> ) or ( <u>"20160234585"</u> ) or ( <u>"20140268344"</u> ) or ( <u>"9943239"</u> ) or ( <u>"20120318872"</u> ) or ( <u>"9812659"</u> ) or ( <u>"20140321818"</u> ) or ( <u>"20170211973"</u> ) or ( <u>"10069952"</u> ) or ( <u>"9832868"</u> ) or ( <u>"9917044"</u> ) or ( <u>"8619185"</u> ) or ( <u>"20160212311"</u> ) or ( <u>"20130223836"</u> ) or ( <u>"9603249"</u> ) or ( <u>"7195733"</u> ) or ( <u>"20150313003"</u> ) or ( <u>"8916911"</u> ) or ( <u>"8372726"</u> ) or ( <u>"20160329300"</u> ) or ( <u>"20090233013"</u> ) or ( <u>"6590346"</u> ) or ( <u>"20180106980"</u> ) or ( <u>"7935568"</u> ) or ( <u>"20100297407"</u> ) or ( <u>"5302778"</u> ) or ( <u>"20030094615"</u> ) or ( <u>"20040056365"</u> ) or ( <u>"20160351460"</u> ) or ( <u>"20160284659"</u> ) or ( <u>"20120267030"</u> ) or ( <u>"8829671"</u> ) or ( <u>"20060154405"</u> ) or ( <u>"20160043240"</u> ) or ( <u>"20080099907"</u> ) or ( <u>"20180266984"</u> ) or ( <u>"20180259749"</u> ) or ( <u>"20040231872"</u> ) or ( <u>"20180190877"</u> ) or ( <u>"6940141"</u> ) or ( <u>"20140240615"</u> ).PN. or ( <u>"20180220525"</u> ) or ( <u>"8947303"</u> ) or ( <u>"9583445"</u> ) or ( <u>"20180292864"</u> ) or ( <u>"20120127578"</u> ) or ( <u>"6964886"</u> ) or ( <u>"9766662"</u> ) or ( <u>"20170111077"</u> ) or ( <u>"9743885"</u> ) or ( <u>"20150227000"</u> ) or ( <u>"20180225503"</u> ) or ( <u>"10088865"</u> ) or ( <u>"9143668"</u> ) or ( <u>"20060292732"</u> ) or ( <u>"20140264785"</u> ) or ( <u>"9241435"</u> ) or ( <u>"20160218422"</u> ) or ( <u>"9136589"</u> ) or ( <u>"10022937"</u> ).PN.				
S591	1040	((("PETERS") near3 ("David")) OR ((("TAUSSI G") near3 ("Carl")) OR ((("CHENG") near3 ("Shan")) OR ((("SRINIVAS") near3 ("Vikram")))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/11/07 00:00
S592	899	G05B11/01.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 00:30
S593	12888	G05B15/02.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 00:30
S594	1940	H05B37/0245.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 00:30
S595	0	174/50.5.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 00:30
S596	5410	361/679.01.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 00:30



S597	3191	G06F1/16.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 00:31
S598	186	((("CARLSON") near3 ("Brian")) OR (("CHERNIK") near3 ("Ryan")) OR ((("DAHLGREN") near3 ("Aron")) OR (("NELSON") near3 ("Wesley")))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/11/07 00:31
S599	8	("20170083060"   "20170188448"   "20180070436"   "7974093"   "8009429"   "9125299"   "9521782"   "9781863").PN.	US-PGPUB; USPAT	OR	OFF	2018/11/07 00:34
S600	9	("20080258293"   "20090206461"   "20110140259"   "20140133105"   "8482111"   "8525318"   "8749989"   "8766429"   "9362235").PN. OR ("9781863").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 00:58
S601	28	("20010015583"   "20020185262"   "20030181075"   "20040095713"   "20050219137"   "20060193114"   "20100020514"   "20110049749"   "20110187188"   "20120020017"   "20120026668"   "20120170224"   "20130182389"   "20130194755"   "5181167"   "5550710"   "6141211"   "6181553"   "6472785"   "6504722"   "6665184"   "6768633"   "6796372"   "7187342"   "7344919"   "7751192"   "8305754"   "8427828").PN. OR ("9521782").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 00:58
S602	27	("20040099945"   "20090002950"   "20090057871"   "20090109624"   "4396936"   "5703753"   "5924191"   "5982031"   "6181556"   "6278607"   "6472741"   "6477052"   "6498394"   "6608379"   "6681482"   "6735086"   "6946190"   "6975025"   "7019976"   "7375974"   "7477527"   "7579217"   "7592695"   "7705447"   "7759169").PN. OR ("8009429").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 00:58
S603	22	("20050146855"   "20090122500"   "20100097767"   "4398779"   "4466049"   "4510533"   "4920453"   "5436794"   "5828546"   "5872701"   "5940288"   "6166919"   "6175501"   "6661664"   "6741466"   "6771514"   "6839232"   "7079381"   "7731533").PN. OR ("7974093").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 00:58
S604	86	S600 S601 S602 S603	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 00:59
S605	0	S604 AND TAPPER\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 00:59
S606	12	S604 AND TAPER\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 00:59
S607	10499	361/715,714,709,707,704,703,702,689,688.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 01:00
S608	13762	G06F1/20,203,206.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 01:00
S609	2880	H05K7/14,2039,20409,20418.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 01:00
S610	421	H05K7/20418.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 01:00
S611	99	S610 AND TAPER\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 01:00
S612	90	S611 AND (HEAT NEAR3 TRANSFER\$4)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 01:01

S613	90	S611 AND (HEAT NEAR TRANSFER\$4)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 01:01
S614	0	((("MARKOVICH") near3 ("Igor"))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/11/07 01:05
S615	2	"20150277489"	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 01:07
S616	31	("20030006572"   "20040209657"   "20050174302"   "20060203621"   "20100000257"   "20100071413"   "20120182677"   "20120274508"   "20120297592"   "20130154826"   "2707800"   "4087989"   "4412751"   "4624581"   "4674299"   "5872744"   "5944661"   "6457215"   "6549791"   "6550930"   "6619836"   "6681014"   "6748631"   "6754069"   "6829809"   "7023426"   "7353048"   "7460085"   "7568263").PN. OR ("9703322").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 01:07
S617	57	("4130987"   "4255801"   "4412751"   "4421423"   "4779249"   "5012229"   "5020039"   "6216490").PN. OR ("6619836").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 01:10
S635	239	("20010043514"   "20040151071"   "20050237704"   "20070064542"   "20070141915"   "4586827"   "4604772"   "4847818"   "4873677"   "5008864"   "5239521"   "5265272"   "5381387"   "5467324"   "5872744"   "6035035"   "6212414"   "6249487"   "6459890"   "6529713"   "6536941"   "6549791"   "6619835"   "6619836"   "6681014"   "6757389"   "6775205"   "6801476"   "D380476"   "D466829").PN. OR ("7618260").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 23:55
S636	79	("2322461"   "4117542"   "4130987"   "4365245"   "4365246"   "4472066"   "4601584"   "4847818"   "4993004"   "5125078"   "5260915").PN. OR ("6216490").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 23:56
S637	5647	g06f1/163.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 23:57
S638	314	S635 S636	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 23:58
S639	2890	g06f1/1652.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 23:58
S640	258	S637 and S639	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/07 23:58
S641	74	S640 and ((flex\$4 or bend\$4) near3 (display\$3))	USPAT	OR	OFF	2018/11/07 23:59
S642	29	S638 and ((flex\$4 or bend\$4) near3 (display\$3))	USPAT	OR	OFF	2018/11/07 23:59
S643	54	S641 and wrist	USPAT	OR	OFF	2018/11/08 00:00
S644	18	S642 and wrist	USPAT	OR	OFF	2018/11/08 00:00
S645	53	S643 not S644	USPAT	OR	OFF	2018/11/08 00:00
S646	1	"7618260".pn.	USPAT	OR	OFF	2018/11/08 00:02
S647	48	("20030212336"   "20070040449"   "20070279852"   "20080171945"   "20080294058"   "20090018409"   "20090048526"   "20090163820"   "20090270743"   "20090306485"   "20090322513"   "20100076331"   "20100210956"   "20100267361"   "20100306854"   "20110213255"   "20110234160"   "20110245630"   "20110288382"   "20120030165"   "20120045303"   "20120059233"   "20120065514"   "20120071731"   "20120203076"   "20130014706"   "20130141235"   "20130165817"	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 00:03

		"20130192050"   "20130211204"   "20130261405"   "20130282679"   "20130317333"   "20130318347"   "20130324072"   "20140142403"   "20140159640"   "6595929"   "6619835"   "7127432"   "7512985"   "7618260"   "7894888"   "8251903"   "8504145"   "8618930"   "8647268"   "8965498").PN. OR ("9844340").URPN.				
S648	49	"20030212336"   "20070040449"   "20070279852"   "20080171945"   "20080294058"   "20090018409"   "20090048526"   "20090163820"   "20090270743"   "20090306485"   "20090322513"   "20100076331"   "20100210956"   "20100267361"   "20100306854"   "20110213255"   "20110234160"   "20110245630"   "20110288382"   "20120030165"   "20120045303"   "20120059233"   "20120065514"   "20120071731"   "20120203076"   "20130014706"   "20130141235"   "20130165817"   "20130192050"   "20130211204"   "20130261405"   "20130282679"   "20130317333"   "20130318347"   "20130324072"   "20140142403"   "20140159640"   "20150173686"   "6595929"   "6619835"   "7127432"   "7512985"   "7618260"   "7894888"   "8251903"   "8504145"   "8618930"   "8647268"   "8965498").PN. OR ("9768628").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 00:03
S649	20	"20010043514"   "20030030595"   "20060260842"   "20090243756"   "20100164888"   "20110089903"   "20110310545"   "20120078999"   "20120182677"   "20120322516"   "20130083496"   "20130335929"   "20140231518"   "4130987"   "5615179"   "6216490").PN. OR ("9615473").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 00:05
S650	27	"20110014956"   "20110286157"   "20120204453"   "20120264489"   "20120307472"   "20120314399"   "20130222271"   "20140029171"   "20140029190"   "20140160055"   "20140226275"   "20140320396"   "20140362513"   "20150177782"   "20150177789"   "20150261259"   "20150378391"   "20150378397"   "20160266672"   "20160357158"   "20170192460"   "20170208466"   "20170235341"   "20170364123"   "4412751"   "6577496"   "9442563").PN. OR ("9983629").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 00:10
S651	13	("20080002528"   "20100117975"   "20130010405"   "20130278624"   "20140043226"   "20140085230"   "20140245785"   "20140247252"   "20140321073"   "20150227245"   "20160007697"   "20160026381"   "20160188162").PN. OR ("9874957").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 00:12
S652	9	"20060209218"   "20140160055"   "20140307395"   "20140337621"   "20160259430"   "5931764"   "7558057"   "9510470").PN. OR ("9733668").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 00:20
S653	0	"2014072328"	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 00:27
S654	2	"20140072328"	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 00:27
S655	1	"9510470".pn.	USPAT	OR	OFF	2018/11/08; 00:52
S656	17	S650 and thick\$4	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 01:07
S657	2895	g06f1/1652.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 01:08
S658	517	S657 and ((window or cover or layer) near3 (transparent\$3))	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 01:08
S659	508	S657 and ((window or cover or layer) near3 (thick\$4))	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 01:08
S660	413	S657 and ((window or cover or layer) near2 (transparent\$3))	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 01:08
S661	177	S658 and ((window or cover or layer) near3 (thick\$4))	US-PGPUB; USPAT;	OR	OFF	2018/11/08; 01:09

			USOCR			
S662	101	S660 and ((window or cover or layer) near2 (thick\$4))	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:09
S663	259	S657 and ((window or cover or layer) near (transparent\$3))	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:09
S664	31	S663 and ((window or cover or layer) near (thick\$4))	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:09
S665	2	S664 and ((variable or varying or varied or chang\$3) near (thick\$4))	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:15
S666	5	S662 and ((variable or varying or varied or chang\$3) near (thick\$4))	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:15
S667	10	S661 and ((variable or varying or varied or chang\$3) near (thick\$4))	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:16
S668	10	S665 S666 S667	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:16
S669	23	S659 and ((variable or varying or varied or chang\$3) near (thick\$4))	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:16
S670	13	S669 not S668	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:16
S671	21	("20080212271"   "20110210937"   "20130216740"   "20140065326"   "20140240985"   "20150004334"   "20150043174"   "20150070826"   "20160033994"   "20160204183"   "20160224238"   "20160357318"   "20170013729"   "6861136"   "9069521"   "9321678"   "9321679"   "9354476"   "9367095"   "9504170"   "9557874").PN.	US- PGPUB; USPAT	OR	OFF	2018/11/08: 01:18
S672	18	S671 and thick\$4	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:19
S673	2	S671 and ((variable or varying or varied or chang\$3) near (thick\$4))	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:19
S674	2	"20150268697"	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:37
S675	41	S668 S669 S672 S673 S674	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:38
S676	16	S675 AND LAMINAT\$3	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:38
S677	3	S676 and (finger or (finger near print\$3) or biometric\$1)	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/08: 01:39
S678	3	S676 and (finger\$1 or (finger near print\$3) or biometric\$1)	US- PGPUB; USPAT;	OR	OFF	2018/11/08: 01:39

			USOCR			
S679	267	haughton.xa.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 02:09
S680	1220	haughton.xp.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 02:09
S681	1487	S679 S680	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 02:09
S682	198	S681 and key	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 02:09
S683	70	S682 and button	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 02:09
S684	128	S682 not S683	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 02:10
S685	8	("20030036362"   "20090009945"   "20090134003"   "20090315828"   "5523531"   "6011543"   "6148183"   "6275215").PN. OR ("8564937").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 02:12
S686	5	("5969953"   "6567273"   "6706966"   "6979210"   "7125265").PN. OR ("8493720").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 02:12
S687	2	"20090134003"	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 02:27
S688	28	("3600528"   "3742157"   "4066860"   "4394546"   "4520240"   "4638151"   "4678872"   "4760218"   "5455743").PN. OR ("5523531").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 02:28
S689	32	("2841659"   "3170995"   "3632938").PN. OR ("4394546").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 02:38
S690	28	("3030460"   "3648581"   "3736390"   "3932176"   "3952176"   "3956763"   "4118716"   "4253756"   "4394546"   "4497564"   "4866219"   "5180050").PN. OR ("5369230").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 02:44
S691	428	H05K5/0069.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 03:18
S692	505	G05B19/02.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 03:18
S693	5410	361/679.01.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 03:18
S694	1	"9321679".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 03:53
S695	2	((("9510470") or ("9594402"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08 04:21

## EAST Search History

S696	3	(("20150268697") or ("20150378397") or ("9321679")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 04:32
S697	1	("5831816").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 08:16
S698	267	haughton.xa.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 08:17
S699	1220	haughton.xp.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 08:17
S700	1487	S698 S699	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 08:17
S701	29	S700 and (display near control)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/08; 08:18
S702	1	"20130128445"	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/16; 16:34
S703	5	("20050052156"   "20090177908"   "20100145236"   "20130031377"   "20140036437").PN.	US-PGPUB; USPAT	OR	OFF	2018/11/16; 17:22
S704	4	S703 and wireless	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/16; 17:22
S705	2	"20130031377"	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/16; 17:25
S706	15	("20040150934"   "20050246470"   "20080195788"   "20090106567"   "20100057969"   "20100295960"   "20110127954"   "7793121"   "8185755"   "8234509"   "8305741"   "8373310"   "8380998").PN. OR ("8898489").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/16; 17:25
S707	14	S706 and wireless	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/16; 17:26
S708	6	("20080049560"   "20130261405"   "20130272103"   "4903253"   "7126483"   "9721452").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/20; 13:03
S709	8	("20120264489"   "20140123436"   "20140226275"   "20150277506"   "20160132076"   "9164547"   "9606583"   "9870031").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/26; 00:24
S710	2	S709 and oled	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/26; 00:56
S711	0	S709 and sma	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/26; 01:00
S712	1	S709 and (shape near memor\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/11/26; 01:00
S713	5	("20140347802"   "20150055289"   "20150116926"   "20160004279"   "20160062411").PN.	US-PGPUB;	OR	OFF	2018/11/26; 01:12

			USPAT; USOCR			
S714	0	S713 and wedg\$3	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/26; 01:13
S715	2	S713 and elastic	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/26; 01:20
S716	1	("20160004279").PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/26; 01:26
S717	2931	g06f1/1652.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/26; 14:08
S718	4205	g06f1/1601.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/26; 14:08
S719	1086	h05k5/0226.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/26; 14:08
S720	3138	h05k5/0017.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/26; 14:08
S721	17155	G06F1/1632,1654,1679,1615,1635,1637,1662.CPC.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/26; 14:29
S722	4756	361/679.27,679.28,679.29,679.41,679.42,679.43,679.44,679.05,679.32.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/26; 14:29
S723	2135	((("GAULT") near3 ("Joseph")) OR (("BOWERS") near3 ("Scott")) OR (("CAMPBELL") near3 ("John")) OR (("HILLYERD") near3 ("Anthony")) OR (("ALDEHAYYAT") near3 ("Yazan")) OR (("AAGAARD") near3 ("Karsten")) OR (("WITT") near3 ("Eric"))).INV.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/11/26; 14:31
S724	3	((("LI") near3 ("Xiao") near3 ("Hua"))).INV.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/11/26; 14:31
S725	2135	((("GAULT") near3 ("Joseph")) OR (("BOWERS") near3 ("Scott")) OR (("CAMPBELL") near3 ("John")) OR (("HILLYERD") near3 ("Anthony")) OR (("ALDEHAYYAT") near3 ("Yazan")) OR (("AAGAARD") near3 ("Karsten")) OR (("WITT") near3 ("Eric"))).INV.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2018/11/26; 14:32
S726	5	("20140347802"   "20150055289"   "20150116926"   "20160004279"   "20160062411").PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/11/26; 14:34
S727	1276	((("20180093303") or ("20180133759") or ("20180117636") or ("20140311928") or ("20170245732") or ("20180337704") or ("20140158583") or ("9095194") or ("10090877") or ("9615476") or ("20170237460") or ("20110069404") or ("8531834") or ("20120314354") or ("8995126") or ("9660684") or ("20130294020") or ("9300344") or ("20160099741") or ("9559741") or ("20140233167") or ("20130027862") or ("9276626") or ("20150171913") or ("20130334072") or ("10005611") or ("9469469") or ("20140152890") or ("20160198824") or ("20180237214") or ("20150201723") or ("20170035170") or ("20170235341") or ("9609902") or ("20150163936") or ("8960634") or ("9538675") or ("20140304891") or ("20120199501") or	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/04; 12:21

("20110031287") or ("8382059") or ("20130134291") or ("9267638") or ("10088738") or ("10003371") or ("20150305461") or ("20150293430") or ("9946505") or ("9548785") or ("20160254837") or ("9116665") or ("20130088813") or ("9848494") or ("20080180818") or ("20160098064") or ("20130083469") or ("20170034918") or ("20150378391") or ("20180054897") or ("20180046214") or ("8665228") or ("20180232191") or ("9286024") or ("7277239") or ("9591905") or ("7529042") or ("20160262514") or ("20060171044") or ("20150108012") or ("9382033") or ("8925722") or ("20130082585") or ("20130175200") or ("9086836") or ("8564950") or ("9869423") or ("20120327580") or ("20180218859") or ("20130077236") or ("20110192857") or ("20160102805") or ("20180217668") or ("20130279096") or ("9116655") or ("20180217669") or ("20130077221") or ("20130083470") or ("8783457") or ("8973753") or ("20170085283") or ("8915361") or ("9900041") or ("9497697") or ("7850032") or ("20140217862") or ("20140027317") or ("20110049175") or ("20070171205") or ("9247661") or ("7464813") or ("20180263362") or ("9450634") or ("20060169607") or ("8701912") or ("20160191101") or ("20150090748") or ("9439314") or ("20130083464") or ("20170142242") or ("20060175766") or ("9612674") or ("5325278") or ("9195023") or ("20160066459") or ("9954330") or ("20170098916") or ("20120168323") or ("8648677") or ("20160154293") or ("20150152981") or ("20150358439") or ("20170170863") or ("7277240") or ("20120200990") or ("8441450") or ("9602639") or ("20060125785") or ("20150193038") or ("20130077226").PN. or ("10050658") or ("8548541") or ("8503174") or ("20060171045") or ("20140071547") or ("8487872") or ("20100079404") or ("9706026") or ("20180109660") or ("10125921") or ("20160282899") or ("20150027912") or ("9107299") or ("8875879") or ("7145766") or ("20060169689") or ("20130301205") or ("20180241429") or ("9651756") or ("20120037285") or ("8297440") or ("20160309010") or ("8783456") or ("8708142") or ("20160065702") or ("20150227178") or ("20180094769") or ("20160057879") or ("9089056") or ("9955762") or ("20130083558") or ("8887902") or ("20120037523") or ("20130285984") or ("20130076597") or ("9674411") or ("9317243") or ("20060238281") or ("8342325") or ("9380723") or ("8570737") or ("9317076") or ("9549598") or ("8312991") or ("20170196329") or ("9218024") or ("20160066460") or ("20160103292") or ("6088240") or ("8393466") or ("20140217863") or ("20180167497") or ("8328008") or ("5117339") or ("10085531") or ("20050083308") or ("20170086551") or ("20150381859") or ("20180181361") or ("20180206607") or ("20160044148") or ("9871900") or ("9917935") or ("20130075281") or ("20140016217") or ("9179562") or ("9904501") or ("20130043777") or ("20150256655") or ("20120211382") or ("20130092576") or ("20110242009") or ("9164246") or ("10143080") or ("20110227761") or ("20060169608") or ("5165779") or ("20170214777") or ("8604931") or ("20130088828") or ("20150052854") or ("9867301") or ("9560751") or ("8526180") or ("20120118773") or ("20180335603") or ("20150122854") or ("9603425") or ("8531824") or ("9229494") or ("20160226182") or ("20130083477") or ("20030007261") or ("7907394") or ("20040057131") or ("8264837") or ("9809049") or ("20130188312") or ("10063009") or ("8671553") or ("20170201285") or ("9723113") or ("20140072261") or ("7364319") or ("7464814") or ("20060077655") or ("20140028243") or ("20160037625") or ("20090009945") or ("9086835") or ("20130088130") or ("20130063876") or ("20180129078") or ("20120327594") or ("7699493") or ("20140077911") or ("20180335602") or ("20170024018") or ("20110064401") or ("8491312") or ("20180132372") or ("20130178155") or ("20170238412") or ("20110255218") or ("10050378") or ("9141136") or ("20080232095") or ("9207712") or ("20070258236") or ("9661906") or ("20150069099").PN. or ("10088865") or ("20120208378") or ("20100197148") or ("20130178161") or ("10013074") or ("9621690") or ("8187006") or ("20100315806") or ("20180307325") or ("7661732") or ("8887903") or ("20130098782") or ("9531119") or ("20180338069") or ("20170284646") or ("20130176626") or ("9294659") or ("20150099259") or ("20080309098") or ("8891798") or ("9690385") or ("20170326904") or ("10069318") or ("20050264472") or ("20170264046") or ("9389739") or ("20160226183") or ("20160106202") or ("20170068318") or ("20150212603") or ("9046231") or ("20130083467") or ("20160268730") or ("20180335601") or ("9229675") or ("20130088447") or ("20160048165") or ("20130082955") or ("9949561") or ("20130083468") or ("20160268729") or ("10133314") or ("20160116943") or ("9645607") or ("20160270525") or ("8095191") or ("9176701") or ("20110003616") or ("20160240966") or ("9502819") or ("10136714") or ("20150105127") or ("20100134964") or ("7771077") or ("8967824") or ("20110136350") or ("7963773") or ("20090269943") or ("8342857") or ("20170289428") or ("8934226") or ("20140262933") or ("7012727") or ("20180307333") or ("20150237252") or ("20150338887") or ("8960421") or ("20140321040") or ("20140049636") or ("9019428") or ("20150009347") or ("20150122852") or ("9411380") or ("9703173") or ("9195279") or ("20150338883") or ("20070216655") or ("20170003718") or ("20140346306") or ("6428172") or ("20160327986") or ("20130175186") or ("7917028") or ("20160313628") or



("8695798") or ("10126783") or ("20090128521") or ("20150241931") or  
 ("8896694") or ("20160327980") or ("6532152") or ("8995117") or  
 ("20140240505") or ("20180259787") or ("9588550") or ("10054984") or  
 ("20040004559") or ("9632535") or ("8888309") or ("20140209503") or  
 ("20120268878") or ("20180168303") or ("8690379") or ("5217295") or  
 ("5091832") or ("20110266314") or ("20080144261") or ("20080049433") or  
 ("20160070300") or ("20110235313") or ("7549766") or ("8672851") or  
 ("5325280") or ("8610822") or ("20120120239") or ("9827918") or  
 ("20170227987") or ("20180234529") or ("7656460") or ("20170083049") or  
 ("8897033") or ("20140224675") or ("9529387") or ("9294660") or  
 ("5130907") or ("20160197502") or ("20110255250") or ("8890954") or  
 ("20130286623") or ("10014624").PN. or ("9128611") or ("20160248952") or  
 ("20150301561") or ("9614569") or ("6762748") or ("20140063265") or  
 ("9007522") or ("20170285781") or ("20110255850") or ("20090051776") or  
 ("20030044000") or ("20120019770") or ("7293888") or ("20180284454") or  
 ("9503697") or ("9411213") or ("20150116851") or ("20150205184") or  
 ("20090005136") or ("20080080076") or ("20040081422") or ("20140233181")  
 or ("9625947") or ("20020093328") or ("20160327982") or ("9645609") or  
 ("20160190736") or ("9429759") or ("20170149171") or ("20160085076") or  
 ("8641188") or ("20170227985") or ("9933817") or ("9894192") or  
 ("20120236425") or ("8279544") or ("20140173807") or ("20160254836") or  
 ("9644783") or ("8891187") or ("20090297136") or ("20140360893") or  
 ("20130278631") or ("9348366") or ("20130271722") or ("7927026") or  
 ("9188764") or ("20150087359") or ("20120113572") or ("20160187937") or  
 ("20160363737") or ("20160116944") or ("20160072933") or ("20160306393")  
 or ("20160144917") or ("20140285911") or ("20100072334") or ("9185953")  
 or ("20180126704") or ("20060002123") or ("9513705") or ("20160058145")  
 or ("20170303654") or ("20170065044") or ("20150024809") or ("10116776")  
 or ("20110255000") or ("9131756") or ("9807211") or ("20160353616") or  
 ("9498034") or ("9700114") or ("8872370") or ("9742975") or  
 ("20160202734") or ("20160320808") or ("20180210503") or ("20180031188")  
 or ("20060091222") or ("20120111881") or ("20150243937") or ("9335509")  
 or ("8519558") or ("20140267882") or ("20100158511") or ("9797592") or  
 ("20140151248") or ("20130313836") or ("20170019512") or ("20150192955")  
 or ("20030117728") or ("20170171371") or ("20130002939") or ("9013867")  
 or ("20160065262") or ("8797721") or ("9477320") or ("20140197048") or  
 ("20140253789") or ("10076176") or ("20170351056") or ("9511903") or  
 ("20080251364") or ("20130135759") or ("9578940") or ("8593745") or  
 ("7593524") or ("9203281") or ("8699141") or ("20140375152") or  
 ("20140320987") or ("20160134733") or ("20150097009") or ("10070707") or  
 ("20120103855") or ("20180013934") or ("9931748") or ("20170052601") or  
 ("7380759") or ("6574096") or ("8500180") or ("20150250245") or  
 ("20100232161") or ("20150138711") or ("9274340") or ("20180343370") or  
 ("20160001928") or ("10133308").PN. or ("20110109093") or  
 ("20020028045") or ("9329295") or ("9483082") or ("20160255941") or  
 ("10117476") or ("20130083466") or ("4640597") or ("20040204204") or  
 ("8363014") or ("20100123663") or ("20150146371") or ("20150367247") or  
 ("20170365766") or ("20160246029") or ("9134817") or ("6684007") or  
 ("20110188180") or ("9223346") or ("20160295981") or ("10082840") or  
 ("9954569") or ("8695935") or ("20120033415") or ("20170060183") or  
 ("20160317086") or ("6964510") or ("20110007263") or ("20170156464") or  
 ("20170026555") or ("10138672") or ("20120106054") or ("9596914") or  
 ("20130192961") or ("9395757") or ("7910843") or ("8162283") or  
 ("5119239") or ("6902284") or ("20120275100") or ("8511847") or  
 ("9232670") or ("9814289") or ("8551283") or ("20160139495") or  
 ("9185816") or ("9304375") or ("20080125195") or ("20150378245") or  
 ("8944614") or ("9846452") or ("20100328231") or ("8777446") or  
 ("20180284841") or ("20180059512") or ("20180107247") or ("8501294") or  
 ("20120287032") or ("20160378070") or ("20160378071") or ("20160209025")  
 or ("20180249798") or ("20120228181") or ("9298216") or ("20110187245")  
 or ("5307209") or ("20050162227") or ("9176325") or ("20120275118") or  
 ("20150041341") or ("9149100") or ("8910787") or ("9888753") or  
 ("20110186345") or ("20120069165") or ("20180067379") or ("20160140887")  
 or ("20140181347") or ("9298661") or ("20130127980") or ("20170364125")  
 or ("20130271922") or ("20160058375") or ("20160378069") or  
 ("20130118879") or ("20180045910") or ("6464185") or ("6663064") or  
 ("8905610") or ("20170164703") or ("20140334155") or ("20180324288") or  
 ("9772498") or ("20170196112") or ("7665782") or ("20150195439") or  
 ("8330061") or ("20090208894") or ("20150234189") or ("20100149106") or  
 ("20140037867") or ("9049911") or ("8092007") or ("10058155") or  
 ("8787009") or ("9591221") or ("9606579") or ("20090058687") or  
 ("20070080948") or ("20160062398") or ("20180325229") or ("20160378191")  
 or ("20180284899") or ("20050128284") or ("8749983") or ("9185278") or  
 ("20140183891") or ("9880447") or ("20150234192") or ("8964298") or  
 ("8833555") or ("9326404") or ("20120033414") or ("20120287565") or  
 ("9766482") or ("20160087370") or ("20150061477") or ("20080266401") or

("20130328462") or ("20160054537").PN. or ("20140263939") or ("20130043778") or ("20070115621") or ("20160209001") or ("20180188777") or ("20170099922") or ("20110169667") or ("20130201299") or ("9599824") or ("9778705") or ("20180011390") or ("9364769") or ("20090237813") or ("7273983") or ("20130155723") or ("20170123463") or ("8403278") or ("20150078035") or ("8644011") or ("20160169483") or ("20140238894") or ("9516937") or ("20180004256") or ("9004359") or ("9880685") or ("9456673") or ("20140104180") or ("9774713") or ("20160072327") or ("10125013") or ("20140346078") or ("8416065") or ("20080139260") or ("20100328052") or ("20140325818") or ("20080192124") or ("20170371230") or ("8248521") or ("7500858") or ("7885695") or ("20180134547") or ("20140374309") or ("9523807") or ("10063783") or ("20150362736") or ("20170017268") or ("9462712") or ("8149130") or ("20040190282") or ("20170094180") or ("20130306727") or ("20170094181") or ("8208806") or ("20100187842") or ("9426911") or ("20120182727") or ("20120182723") or ("20140281633") or ("20170075445") or ("20160147086") or ("7067753") or ("20140049983") or ("8390759") or ("8253780") or ("20130308306") or ("9362969") or ("9417678") or ("9057490") or ("9625948") or ("20170354220") or ("20070035144") or ("20080026614") or ("20070020572") or ("20120256821") or ("20060034091") or ("9261701") or ("9453624") or ("20070009247") or ("9774787") or ("6932485") or ("9313305") or ("20140002676") or ("9291823") or ("9377626") or ("8905573") or ("20110277361") or ("20180013271") or ("7388619") or ("9872530") or ("20160253006") or ("6817026") or ("20180146084") or ("5818634") or ("20180052274") or ("20120320604") or ("9335790") or ("9110200") or ("8570367") or ("20100078343") or ("9993054") or ("20140072312") or ("9696553") or ("20090229892") or ("20150276347") or ("20180013272") or ("9866676") or ("20060075934") or ("20170045669") or ("9489046") or ("20090225154") or ("8115745") or ("20120050075") or ("7850301") or ("9651992") or ("20140218962") or ("9285566") or ("20150009127") or ("8740270") or ("8585230") or ("20150133193") or ("9936111") or ("20170245360") or ("20050128322") or ("9618827") or ("9459658") or ("20090257019") or ("8317067") or ("20140117177") or ("20170068286") or ("9829924") or ("20070090254").PN. or ("9605836") or ("20150160693") or ("8154680") or ("20150042870") or ("20130258270") or ("20170200575") or ("20180188822") or ("9482869") or ("7050764") or ("20150378492") or ("20180173355") or ("20180191392") or ("9032130") or ("20060148425") or ("20120275025") or ("7471888") or ("20170227785") or ("20180246584") or ("20140262847") or ("8094141") or ("20170242225") or ("10112670") or ("20180269702") or ("9753436") or ("20160266672") or ("20160334628") or ("9454256") or ("20130301242") or ("20130235260") or ("20160209728") or ("20150062050") or ("9927209") or ("20170024013") or ("20110025908") or ("20160070304") or ("20160377827") or ("9357109") or ("10013092") or ("20140073377") or ("20170006716") or ("8098319") or ("7338189") or ("10023404") or ("7173237") or ("20100328219") or ("10007364") or ("20160305646") or ("20150029352") or ("9632327") or ("9545139") or ("20110234498") or ("7769417") or ("20130335954") or ("20040203493") or ("20150335115") or ("20170192455") or ("20090231275") or ("20110079619") or ("20180099714") or ("20110050443") or ("10093377") or ("9709769") or ("20180116356") or ("10063269") or ("20150234501") or ("20160070115") or ("8490846") or ("20160295173") or ("20170255019") or ("20160266400") or ("6831238") or ("9684184") or ("8052534") or ("20130194183") or ("20100277430") or ("8950902") or ("20150235426") or ("20140369033") or ("9285105") or ("20170068340") or ("20130250618") or ("20060133798") or ("20170094816") or ("20180284571") or ("20170170677") or ("20160170168") or ("9552023") or ("9986908") or ("20170068342") or ("10123434") or ("2361398") or ("20180136613") or ("9627803") or ("9462099") or ("8605008") or ("20180013229") or ("20150102879") or ("20170068341") or ("20180203418") or ("9882305") or ("9628131") or ("9515692") or ("20080311963") or ("9653844") or ("7675565") or ("20160378072") or ("20160098016") or ("9498033") or ("20100200456") or ("20140368731") or ("20170194999") or ("20090036219") or ("20170213665") or ("9119458") or ("20170353208") or ("20160369986") or ("9307128") or ("20170068339") or ("20080259035") or ("9939850") or ("20040110527") or ("20110227487") or ("9915393") or ("20010036149") or ("20110255303") or ("20160080024") or ("20110090626") or ("20140202891").PN. or ("6611635") or ("10145711") or ("9755355") or ("20070008719") or ("8434909") or ("20160336988") or ("20040242405") or ("20160327987") or ("6614336") or ("20160301157") or ("9749451") or ("20040145887") or ("6592220") or ("20110255023") or ("20160259377") or ("20170083100") or ("20150250062") or ("20170094187") or ("20160258784") or ("6330149") or ("8708151") or ("8245842") or ("8511626") or ("20150234193") or ("20160211875") or ("9203938") or ("7817141") or ("8721120") or ("9383774") or ("20100259509") or ("20130329430") or ("9229485") or ("10119686") or ("20170134628") or ("7281826") or ("20140123436") or ("9557473") or ("20030106782") or ("20090111512") or ("8430529") or ("9886006") or ("8073501") or

("20170156465") or ("20150189134") or ("20150062787") or ("20120195066")  
 or ("20130201064") or ("20170183052") or ("20180337467") or  
 ("20140312086") or ("20110176796") or ("20110255286") or ("20030016327")  
 or ("20070109272") or ("9028123") or ("20130181584") or ("20160182804")  
 or ("9807289") or ("20160370690") or ("20170205854") or ("20170187855")  
 or ("20170262676") or ("20170010743") or ("9312633") or ("20130050555")  
 or ("20110309117") or ("20180097920") or ("9592871") or ("8957835") or  
 ("20180063307") or ("20160204545") or ("20150198811") or ("20070232348")  
 or ("8851349") or ("9906259") or ("20100079356") or ("20160111815") or  
 ("8705229") or ("9609930") or ("20150375894") or ("6129321") or  
 ("20150366447") or ("20140265765") or ("9681031") or ("9179050") or  
 ("6831629") or ("20120063018") or ("8827129") or ("9897818") or  
 ("20160004355") or ("20180224665") or ("20070195210") or ("8457701") or  
 ("20140284243") or ("20160095241") or ("20040233159") or ("9990523") or  
 ("9266664") or ("9814151") or ("9595237") or ("6422715") or ("9612508") or  
 ("20170310353") or ("20180324964") or ("20080121004") or ("20130292440")  
 or ("4089593") or ("20080236018") or ("20150358528") or ("20180262029")  
 or ("7106301") or ("20160045005") or ("9717314") or ("20120243110") or  
 ("9454066") or ("20180077810") or ("20160327799") or ("8887970") or  
 ("20140218305") or ("20110259771") or ("20110157915") or ("20140098009")  
 or ("10084328") or ("20170127822") or ("20130114232") or ("8395894") or  
 ("9646573") or ("20020071271") or ("9992888") or ("7699603").PN. or  
 ("8764458") or ("20010026445") or ("20020067609") or ("20110273906") or  
 ("20020097224") or ("20020071269") or ("20080156836") or ("9768819") or  
 ("20140002978") or ("20160297491") or ("20180234530") or ("20180017842")  
 or ("7841120") or ("20150049059") or ("20170097512") or ("8526161") or  
 ("6239968") or ("6642977") or ("10037052") or ("20150304463") or  
 ("6600479") or ("20130286551") or ("8070026") or ("20180138937") or  
 ("5857148") or ("20180150174") or ("20070279853") or ("7420153") or  
 ("20180084093") or ("9185813") or ("20170108197") or ("20170212552") or  
 ("9611881") or ("20130258586") or ("8469534") or ("20030197684") or  
 ("20150370150") or ("20050088411") or ("20090097238") or ("7997631") or  
 ("20060250377") or ("20160365064") or ("20050099391") or ("20160191102")  
 or ("20170094183") or ("7647681") or ("20110282247") or ("8692783") or  
 ("20160119705") or ("20100096284") or ("20070223906") or ("9307060") or  
 ("20180202631") or ("20170177037") or ("20150219834") or ("20170318958")  
 or ("20070090277") or ("20050087702") or ("9917937") or ("20050068135")  
 or ("20180164852") or ("20050093822") or ("9460643") or ("6670874") or  
 ("4810086") or ("9435910") or ("7257430") or ("20170336059") or  
 ("8451240") or ("20180183916") or ("8291563") or ("7239898") or  
 ("20140144792") or ("20170094182") or ("20110157037") or ("20150062927")  
 or ("20050068134") or ("10084948") or ("9106816") or ("9004334") or  
 ("6806850") or ("8265717") or ("20170280033") or ("20100242332") or  
 ("20130265703") or ("20170299493") or ("20110309728") or ("7489296") or  
 ("8926151") or ("6481866") or ("20020044347") or ("20180180257") or  
 ("20170201108") or ("20130127309") or ("7502014") or ("20100154194") or  
 ("20040067783") or ("20160056856") or ("9569023") or ("9281858") or  
 ("6483651") or ("5485318") or ("9052087") or ("20180064221") or  
 ("8373310") or ("20130113423") or ("20140078462") or ("9669520") or  
 ("6505949") or ("20110157800") or ("9654605") or ("20060001657") or  
 ("7502013") or ("20160150067") or ("4810087") or ("7633488") or  
 ("20060263733") or ("9829669") or ("20180307268") or ("20150305173") or  
 ("20110006611") or ("20110255260") or ("20160054756") or ("20180271301")  
 or ("20160329174") or ("20130038996") or ("5933330") or ("9806755") or  
 ("6785447") or ("9733036").PN. or ("9951930") or ("5734513") or  
 ("20140283354") or ("20150194995") or ("20020097962") or ("9646574") or  
 ("10136737") or ("6706546") or ("9170658") or ("20130099637") or  
 ("20170011716") or ("10009449") or ("20130206621") or ("9173314") or  
 ("20160242564") or ("20180270971") or ("9416950") or ("20170338844") or  
 ("8345429") or ("20160178176") or ("20140226062") or ("10125918") or  
 ("20140069824") or ("20170026498") or ("20080143954") or ("20170280845")  
 or ("9515693") or ("20020039464") or ("20040203485") or ("20140001022")  
 or ("6141569") or ("20160099740") or ("20120307384") or ("20110216485")  
 or ("7905648") or ("8727546") or ("20090315832") or ("6428177") or  
 ("20170318199") or ("20180145713") or ("20170268716") or ("20160132700")  
 or ("7023004") or ("6847480") or ("20030016317") or ("20120212399") or  
 ("9606375") or ("8215983") or ("9769389") or ("20070064207") or  
 ("20100328250") or ("10063268") or ("9569645") or ("20120212400") or  
 ("20150288405") or ("20160119011") or ("9247598") or ("9118195") or  
 ("20150036047") or ("20150377578") or ("7810750") or ("8816977") or  
 ("20170208911") or ("8964352") or ("10044396") or ("7595712") or  
 ("20060061347") or ("20080088597") or ("20140138221") or ("20160037658")  
 or ("20030016316") or ("20110051982") or ("9116295") or ("20140176690")  
 or ("20150380141") or ("20160090047") or ("7342723") or ("6728557") or  
 ("20160101499") or ("20110130632") or ("10088927") or ("20130027600") or  
 ("8982267") or ("8890369") or ("9577694") or ("9877549") or ("9738227") or

		("20110255259") or ("9179831") or ("20180239162") or ("7009111") or ("9730340") or ("9924805") or ("20050073506") or ("20120235887") or ("9153391") or ("20070242134") or ("7751134") or ("8300389") or ("8611973") or ("20080207272") or ("20090103254") or ("20140347814") or ("4692359") or ("9766426") or ("7345250") or ("7663880") or ("20170154196"), PN.				
S728	944	S727 and magnet\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/04 12:47
S729	183	S728 and clean\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/04 13:36
S730	125	(US-20090168321-\$ or US-20060274487-\$ or US-20060133016-\$ or US-20110058326-\$ or US-20110025943-\$ or US-20030063432-\$ or US-20060038104-\$ or US-20050157457-\$ or US-20040012917-\$ or US-20120194976-\$ or US-20070279852-\$ or US-20130135230-\$ or US-20140152890-\$ or US-20150277489-\$ or US-20140270659-\$ or US-20120297592-\$ or US-20120182677-\$ or US-20040209657-\$ or US-20140160055-\$ or US-20130335929-\$ or US-20170364123-\$ or US-20170208466-\$ or US-20170192460-\$ or US-20160357158-\$ or US-20150378397-\$ or US-20140226275-\$).did. or (US-20140029190-\$ or US-20140029171-\$ or US-20120204453-\$ or US-20150207102-\$ or US-20160202782-\$ or US-20150185782-\$ or US-20160204183-\$ or US-20180113241-\$ or US-20150268697-\$ or US-20090134003-\$ or US-20100295960-\$ or US-20100057969-\$ or US-20090106567-\$ or US-20050246470-\$).did. or (US-8400767-\$ or US-8081435-\$ or US-8081429-\$ or US-7898796-\$ or US-7869200-\$ or US-7724511-\$ or US-7450372-\$ or US-7298610-\$ or US-6219229-\$ or US-8576554-\$ or US-8373976-\$ or US-8218303-\$ or US-7846026-\$ or US-7601067-\$ or US-6049449-\$ or US-5430607-\$ or US-5351176-\$ or US-5305183-\$ or US-5175672-\$ or US-5157585-\$ or US-5107402-\$ or US-5021763-\$ or US-4980676-\$ or US-4832419-\$ or US-8335089-\$ or US-8313072-\$).did. or (US-7267613-\$ or US-6359775-\$ or US-5640296-\$ or US-5631805-\$ or US-7002793-\$ or US-6504706-\$ or US-5761034-\$ or US-4736332-\$ or US-8387930-\$ or US-8052102-\$ or US-8050024-\$ or US-7775494-\$ or US-5410210-\$ or US-9622556-\$ or US-9703322-\$ or US-6748631-\$ or US-6681014-\$ or US-6619836-\$ or US-5872744-\$ or US-4412751-\$ or US-4087989-\$ or US-9880632-\$ or US-7618260-\$ or US-6216490-\$ or US-9891665-\$ or US-9844340-\$ or US-9768628-\$).did. or (US-9615473-\$ or US-9541955-\$ or US-9158285-\$ or US-7722245-\$ or US-9983629-\$ or US-9874957-\$ or US-9848494-\$ or US-9807875-\$ or US-9733668-\$ or US-9510470-\$ or US-9612623-\$ or US-9395750-\$ or US-10095346-\$ or US-10001810-\$ or US-9930794-\$ or US-8564937-\$ or US-8493720-\$ or US-5523531-\$ or US-7745742-\$ or US-7041917-\$ or US-6225579-\$ or US-6096985-\$ or US-4394546-\$ or US-8232486-\$ or US-7920075-\$ or US-7145087-\$ or US-5369230-\$).did. or (US-4857677-\$ or US-9362069-\$ or US-8946573-\$ or US-10061372-\$ or US-8234509-\$).did.	US-PGPUB; USPAT	OR	OFF	2018/12/21 15:12
S731	12	S730 and clean\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 15:13
S732	5	S731 and (magnet\$3 or magnetiz\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 15:13
S733	7	S731 not S732	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 15:25
S734	4	((("20180345325") or ("20180093303") or ("20180133759") or ("20180117636")), PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 15:28
S735	36	((("20180345325") or ("20180093303") or ("20180133759") or ("20180117636") or ("20140311928") or ("20170245732") or ("20180337704") or ("9615476") or ("10090877") or ("8531834") or ("8995126") or ("9660684") or ("20170237460") or ("9300344") or ("20120314354") or ("9559741") or ("20130294020") or ("20140158583") or ("9276626") or ("9095194") or ("20160099741") or ("20130027862") or ("20140233167") or ("20150171913") or ("20130334072") or ("10005611") or ("9469469") or ("20110069404") or	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 15:29

		("20140152890") or ("20160198824") or ("20180237214") or ("20150201723") or ("20170035170") or ("9609902") or ("20170235341") or ("20140304891").PN.				
S736	5	("20100011524"   "20090078478"   "20110192857"   "20080244847"   "20060238281").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 15:31
S737	31	S735 and (magnet\$4 or magnetic\$4)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 15:34
S738	31	S735 and (magnet\$4 or magnetic\$4 or magnetiz\$4)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 15:35
S739	1	"20110192857"	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 15:40
S740	65	("2011/0192857").URPN.	USPAT	OR	OFF	2018/12/21 16:48
S741	48	S740 and (magnet\$4 or magnetic\$4 or magnetiz\$4)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 16:48
S742	2	S741 and clean\$4	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 16:48
S743	65	("2011/0192857").URPN.	USPAT	OR	OFF	2018/12/21 17:08
S744	17	S743 not S741	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:14
S745	40	("20060237495"   "20070163904"   "20090036175"   "20100200628"   "20100224519"   "20100230301"   "20110031287"   "20110064401"   "20110136555"   "20110192857"   "20110253569"   "20110267748"   "20120024741"   "20120043236"   "20120050968"   "20120074006"   "20120270600"   "20130015088"   "20130126565"   "20130140312"   "20130181584"   "20140360893"   "6264079"   "6695269"   "6752299"   "6955279"   "6966519"   "8251210"   "8328055"   "8408513"   "8584916"   "8616422"   "8631980"   "8746448"   "8800762"   "9004333"   "9027814").PN. OR ("9481490").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:16
S746	42	("20030010799"   "20050072872"   "20050284904"   "20060237495"   "20070023559"   "20070215659"   "20070287302"   "20080103637"   "20080296449"   "20090184145"   "20090189039"   "20100155550"   "20100159741"   "20100181450"   "20100315041"   "20110000945"   "20110031287"   "20110064401"   "20110073743"   "20110101058"   "20110163211"   "20110192857"   "20110240830"   "20110248838"   "20110248947"   "20110255226"   "20120234111"   "20120327565"   "5604050"   "6869395"   "7153212"   "7233319"   "7861985"   "7963494"   "7969732"   "7988114"   "8016107").PN. OR ("8830663").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:17
S747	1	"20080103637"	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:24
S748	31	("20070138360"   "4327514"   "5901937"   "3807675"   "4693345"   "5699925"   "5890603"   "5855343"   "5989676"   "2510181"   "7219866"   "5743414"   "5890603"   "5547343"   "5743414"   "6678977"   "7034902"   "5615854"   "5666263"   "5775046"   "5855343"   "6219950"   "4850804"   "5820095"   "5989676"   "6587151"   "6286800"   "6336615"   "5683070"   "5769374"   "5292013"   "5385327"   "5725356"   "5850998"   "6219950").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:24
S749	4	S748 and (magnet\$4 or magnetic\$4 or magnetiz\$4)	US-PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:25
S750	1	"20110192857"	US-PGPUB;	OR	OFF	2018/12/21 17:36

			USPAT; USOCR			
S751	1	"20050284904"	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:47
S752	144	(US-20090168321-\$ or US-20060274487-\$ or US-20060133016-\$ or US-20110058326-\$ or US-20110025943-\$ or US-20030063432-\$ or US-20060038104-\$ or US-20050157457-\$ or US-20040012917-\$ or US-20120194976-\$ or US-20070279852-\$ or US-20130135230-\$ or US-20140152890-\$ or US-20150277489-\$ or US-20140270659-\$ or US-20120297592-\$ or US-20120182677-\$ or US-20040209657-\$ or US-20140160055-\$ or US-20130335929-\$ or US-20170364123-\$ or US-20170208466-\$ or US-20170192460-\$ or US-20160357158-\$ or US-20150378397-\$ or US-20140226275-\$).did. or (US-20140029190-\$ or US-20140029171-\$ or US-20120204453-\$ or US-20150207102-\$ or US-20160202782-\$ or US-20150185782-\$ or US-20160204183-\$ or US-20180113241-\$ or US-20150268697-\$ or US-20090134003-\$ or US-20100295960-\$ or US-20100057969-\$ or US-20090106567-\$ or US-20050246470-\$ or US-20140311928-\$ or US-20120314354-\$ or US-20110069404-\$ or US-20110192857-\$ or US-20100011524-\$ or US-20080244847-\$ or US-20060238281-\$ or US-20050284904-\$ or US-20080103637-\$ or US-20070215659-\$ or US-20070138360-\$).did. or (US-8400767-\$ or US-8081435-\$ or US-8081429-\$ or US-7898796-\$ or US-7869200-\$ or US-7724511-\$ or US-7450372-\$ or US-7298610-\$ or US-6219229-\$ or US-8576554-\$ or US-8373976-\$ or US-8218303-\$ or US-7846026-\$ or US-7601067-\$ or US-6049449-\$ or US-5430607-\$ or US-5351176-\$ or US-5305183-\$ or US-5175672-\$ or US-5157585-\$ or US-5107402-\$ or US-5021763-\$ or US-4980676-\$ or US-4832419-\$ or US-8335089-\$ or US-8313072-\$).did. or (US-7267613-\$ or US-6359775-\$ or US-5640296-\$ or US-5631805-\$ or US-7002793-\$ or US-6504706-\$ or US-5761034-\$ or US-4736332-\$ or US-8387930-\$ or US-8052102-\$ or US-8050024-\$ or US-7775494-\$ or US-5410210-\$ or US-9622556-\$ or US-9703322-\$ or US-6748631-\$ or US-6681014-\$ or US-6619836-\$ or US-5872744-\$ or US-4412751-\$ or US-4087989-\$ or US-9880632-\$ or US-7618260-\$ or US-6216490-\$ or US-9891665-\$ or US-9844340-\$ or US-9768628-\$).did. or (US-9615473-\$ or US-9541955-\$ or US-9158285-\$ or US-7722245-\$ or US-9983629-\$ or US-9874957-\$ or US-9848494-\$ or US-9807875-\$ or US-9733668-\$ or US-9510470-\$ or US-9612623-\$ or US-9395750-\$ or US-10095346-\$ or US-10001810-\$ or US-9930794-\$ or US-8564937-\$ or US-8493720-\$ or US-5523531-\$ or US-7745742-\$ or US-7041917-\$ or US-6225579-\$ or US-6096985-\$ or US-4394546-\$ or US-8232486-\$ or US-7920075-\$ or US-7145087-\$ or US-5369230-\$).did. or (US-4857677-\$ or US-9362069-\$ or US-8946573-\$ or US-10061372-\$ or US-8234509-\$ or US-8610523-\$ or US-9481490-\$ or US-8830663-\$ or US-5604050-\$ or US-7219866-\$ or US-6678977-\$ or US-6286800-\$ or US-5775046-\$).did.	US- PGPUB; USPAT	OR	OFF	2018/12/21 17:47
S753	0	S752 and (wireless near3 (headphone\$1 or (head near phone\$1) or earphone\$1 or (ear near phone\$1)))	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:48
S754	0	S752 and (wireless near5 (headphone\$1 or (head near phone\$1) or earphone\$1 or (ear near phone\$1)))	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:48
S755	18	S752 and ((headphone\$1 or (head near phone\$1) or earphone\$1 or (ear near phone\$1)))	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:48
S756	12	S755 and (wireless or (wire near less))	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:49
S757	6400	(wireless near (headphone\$1 or (head near phone\$1) or earphone\$1 or (ear near phone\$1)))	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:52
S758	1687	g06f11/1603,1605,1607.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:54
S759	21	S757 and S758	US-	OR	OFF	2018/12/21

			PGPUB; USPAT; USOCR			17:54
S760	6848	(wireless near (headphone\$1 or (head near phone\$1) or earphone\$1 or (ear near phone\$1) or earbud\$1 or (ear near bud\$1) or earplug\$1 or (ear near plug\$1)))	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:55
S761	6400	S757 and S760	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:56
S762	21	S758 and S760	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:56
S763	5492	g06f11/1601,1603,1605,1607.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:56
S764	32	S763 and S760	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:56
S765	11	S764 not S759	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:56
S766	6169	S760 and (cas\$3 or hous\$3 or holder\$1)	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:58
S767	4711	S766 and display	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:58
S768	1994	S767 and (electronic near device)	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:58
S769	1227	S768 and (magnet\$4 or magnetic\$4 or magnetiz\$4)	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 17:59
S770	267	haughton.xa.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 18:07
S771	1233	haughton.xp.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 18:07
S772	1500	S770 S771	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 18:07
S773	470	S772 and cooling	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 18:07
S774	165	S773 and fluid	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 18:07
S775	120	S774 and liquid	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 18:24
S776	14	S775 and shield\$3	US- PGPUB;	OR	OFF	2018/12/21 18:28

S777	165	(US-20090168321-\$ or US-20060274487-\$ or US-20060133016-\$ or US-20110058326-\$ or US-20110025943-\$ or US-20030063432-\$ or US-20060038104-\$ or US-20050157457-\$ or US-20040012917-\$ or US-20120194976-\$ or US-20070279852-\$ or US-20130135230-\$ or US-20140152890-\$ or US-20150277489-\$ or US-20140270659-\$ or US-20120297592-\$ or US-20120182677-\$ or US-20040209657-\$ or US-20140160055-\$ or US-20130335929-\$ or US-20170364123-\$ or US-20170208466-\$ or US-20170192460-\$ or US-20160357158-\$ or US-20150378397-\$ or US-20140226275-\$).did. or (US-20140029190-\$ or US-20140029171-\$ or US-20120204453-\$ or US-20150207102-\$ or US-20160202782-\$ or US-20150185782-\$ or US-20160204183-\$ or US-20180113241-\$ or US-20150268697-\$ or US-20090134003-\$ or US-20100295960-\$ or US-20100057969-\$ or US-20090106567-\$ or US-20050246470-\$ or US-20140311928-\$ or US-20120314354-\$ or US-20110069404-\$ or US-20110192857-\$ or US-20100011524-\$ or US-20080244847-\$ or US-20060238281-\$ or US-20050284904-\$ or US-20080103637-\$ or US-20070215659-\$ or US-20070138360-\$).did. or (US-8400767-\$ or US-8081435-\$ or US-8081429-\$ or US-7898796-\$ or US-7869200-\$ or US-7724511-\$ or US-7450372-\$ or US-7298610-\$ or US-6219229-\$ or US-8576554-\$ or US-8373976-\$ or US-8218303-\$ or US-7846026-\$ or US-7601067-\$ or US-6049449-\$ or US-5430607-\$ or US-5351176-\$ or US-5305183-\$ or US-5175672-\$ or US-5157585-\$ or US-5107402-\$ or US-5021763-\$ or US-4980676-\$ or US-4832419-\$ or US-8335089-\$ or US-8313072-\$).did. or (US-7267613-\$ or US-6359775-\$ or US-5640296-\$ or US-5631805-\$ or US-7002793-\$ or US-6504706-\$ or US-5761034-\$ or US-4736332-\$ or US-8387930-\$ or US-8052102-\$ or US-8050024-\$ or US-7775494-\$ or US-5410210-\$ or US-9622556-\$ or US-9703322-\$ or US-6748631-\$ or US-6681014-\$ or US-6619836-\$ or US-5872744-\$ or US-4412751-\$ or US-4087989-\$ or US-9880632-\$ or US-7618260-\$ or US-6216490-\$ or US-9891665-\$ or US-9844340-\$ or US-9768628-\$).did. or (US-9615473-\$ or US-9541955-\$ or US-9158285-\$ or US-7722245-\$ or US-9983629-\$ or US-9874957-\$ or US-9848494-\$ or US-9807875-\$ or US-9733668-\$ or US-9510470-\$ or US-9612623-\$ or US-9395750-\$ or US-10095346-\$ or US-10001810-\$ or US-9930794-\$ or US-8564937-\$ or US-8493720-\$ or US-5523531-\$ or US-7745742-\$ or US-7041917-\$ or US-6225579-\$ or US-6096985-\$ or US-4394546-\$ or US-8232486-\$ or US-7920075-\$ or US-7145087-\$ or US-5369230-\$).did. or (US-4857677-\$ or US-9362069-\$ or US-8946573-\$ or US-10061372-\$ or US-8234509-\$ or US-8610523-\$ or US-9481490-\$ or US-8830663-\$ or US-5604050-\$ or US-7219866-\$ or US-6678977-\$ or US-6286800-\$ or US-5775046-\$ or US-9713285-\$ or US-9638477-\$ or US-9210831-\$ or US-9445526-\$ or US-9437523-\$ or US-9414480-\$ or US-9357675-\$ or US-9420728-\$ or US-9913411-\$ or US-9335802-\$ or US-9756766-\$ or US-9693488-\$ or US-9680385-\$ or US-9674984-\$).did. or (US-9655279-\$ or US-9646935-\$ or US-9420724-\$ or US-9385059-\$ or US-9195282-\$ or US-9097467-\$ or US-7295435-\$).did.	USPAT; USOCR	OR	OFF	2018/12/21 18:33
S778	29	S777 and (fluid or liquid)	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 18:34
S779	15	S778 and shield\$3	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 18:34
S780	3	((("9420728") or ("9437523") or ("9693488")).PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2018/12/21 23:52

12/ 26/ 2018 7:42:32 AM

C:\Users\ahaughton\Documents\EAST\Workspaces\16\_\16\_041594\Search11\_7.wsp



## Bibliographic Data

Application No: 15/852,000

Foreign Priority claimed:  Yes  No

35 USC 119 (a-d) conditions met:  Yes  No  Met After Allowance

Verified and Acknowledged:

/ANTHONY M HAUGHTON/

Examiner's Signature

Initials

Title:

APPARATUS FOR CLEANING VIEW SCREENS AND LENSES  
AND METHOD FOR THE USE THEREOF

---

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/22/2017	361	2835	MAYG-1001-WO-USC4
<b>RULE</b>			

### APPLICANTS

GUI GLOBAL PRODUCTS, LTD., Houston, TX,

### INVENTORS

Walter G. Mayfield Houston, TX, UNITED STATES

Daniel Martin Valdez Kingwood, TX, UNITED STATES

### CONTINUING DATA

This application is a CON of 15597005 05/16/2017ABN

15597005 is a CON of 14343665 07/14/2014ABN

14343665 is a 371 of PCT/US2012/049562 08/03/2012

PCT/US2012/049562 has PRO of 61661090 06/18/2012

PCT/US2012/049562 has PRO of 61619229 04/02/2012

PCT/US2012/049562 has PRO of 61592344 01/30/2012

PCT/US2012/049562 has PRO of 61576834 12/16/2011

PCT/US2012/049562 has PRO of 61569093 12/09/2011

PCT/US2012/049562 has PRO of 61568031 12/07/2011

PCT/US2012/049562 has PRO of 61561087 11/17/2011

PCT/US2012/049562 has PRO of 61555310 11/03/2011

PCT/US2012/049562 has PRO of 61515752 08/05/2011

### FOREIGN APPLICATIONS

#### IF REQUIRED, FOREIGN LICENSE GRANTED\*\*

01/18/2018

### STATE OR COUNTRY

UNITED STATES

**ADDRESS**

Mossman, Kumar & Tyler PC

P.O. Box 421239

Houston, TX 77242

UNITED STATES

**FILING FEE RECEIVED**

\$1,740



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

NOTICE OF ALLOWANCE AND FEE(S) DUE

87627 7590 02/27/2019
Mossman, Kumar & Tyler PC
P.O. Box 421239
Houston, TX 77242

EXAMINER
HAUGHTON, ANTHONY MICHAEL

ART UNIT PAPER NUMBER
2835

DATE MAILED: 02/27/2019

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
15/852,000 12/22/2017 Walter G. Mayfield MAYG-1001-WO-USC4 4536

TITLE OF INVENTION: APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF

Table with 7 columns: APPLN. TYPE, ENTITY STATUS, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE
nonprovisional UNDISCOUNTED \$1000 \$0.00 \$0.00 \$1000 05/28/2019

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

**PART B - FEE(S) TRANSMITTAL**

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

87627 7590 02/27/2019  
 Mossman, Kumar & Tyler PC  
 P.O. Box 421239  
 Houston, TX 77242

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

_____	(Typed or printed name)
_____	(Signature)
_____	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/852,000	12/22/2017	Walter G. Mayfield	MAYG-1001-WO-USC4	4536

TITLE OF INVENTION: APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1000	\$0.00	\$0.00	\$1000	05/28/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
HAUGHTON, ANTHONY MICHAEL	2835	361-679010

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).  
 Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
 "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list  
 (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
 (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE \_\_\_\_\_ (B) RESIDENCE: (CITY and STATE OR COUNTRY) \_\_\_\_\_

Please check the appropriate assignee category or categories (will not be printed on the patent) :  Individual  Corporation or other private group entity  Government

4a. Fees submitted:  Issue Fee  Publication Fee (if required)  Advance Order - # of Copies \_\_\_\_\_

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

Electronic Payment via EFS-Web  Enclosed check  Non-electronic payment by credit card (Attach form PTO-2038)  
 The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. \_\_\_\_\_

5. Change in Entity Status (from status indicated above)

Applicant certifying micro entity status. See 37 CFR 1.29  
 Applicant asserting small entity status. See 37 CFR 1.27  
 Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.  
 NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.  
 NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_



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 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO., EXAMINER, ART UNIT, PAPER NUMBER. Includes application details for 15/852,000 filed 12/22/2017 by Walter G. Mayfield, attorney Mossman, Kumar & Tyler PC, examiner HAUGHTON, ANTHONY MICHAEL, art unit 2835, dated 02/27/2019.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. 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 30 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, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. 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.

### 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 disclosure of these records is required by the Freedom of Information Act.
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 inspection 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.

<b>Notice of Allowability</b>	<b>Application No.</b> 15/852,000	<b>Applicant(s)</b> Mayfield et al.	
	<b>Examiner</b> ANTHONY M HAUGHTON	<b>Art Unit</b> 2835	<b>AIA Status</b> No

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1.  This communication is responsive to the interview conducted on 2/12/2019.  
 A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_\_.
- 2.  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.
- 3.  The allowed claim(s) is/are 1-19. As a result of the allowed claim(s), 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](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).
- 4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

**Certified copies:**

- a)  All      b)  Some      \*c)  None of the:
  - 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)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

- 5.  CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
 including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
- 6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- 1.  Notice of References Cited (PTO-892)
- 2.  Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_.
- 3.  Examiner's Comment Regarding Requirement for Deposit of Biological Material \_\_\_\_\_.
- 4.  Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_.
- 5.  Examiner's Amendment/Comment
- 6.  Examiner's Statement of Reasons for Allowance
- 7.  Other \_\_\_\_\_.

/ANTHONY M HAUGHTON/ Primary Examiner, Art Unit 2835	
---	--

**DETAILED ACTION**

**EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in an interview with Gene Tyler on 2/12/2019.

The application has been amended as follows:

**Regarding Claim 1:** Claim 1 should read as follows:

1. A system comprising:  
a portable switching device coupled to a portable electronic device;  
wherein:
  - the switching device and the electronic device are configured to selectively couple to each other employing magnetic force;
  - the switching device comprises a first case;
  - the electronic device comprises a second case and an electronic circuit that is responsive to the switching device;
  - a first magnet is fully disposed within the electronic device;
  - the electronic device comprises at least one element selected from the group consisting of beveled edges, ridges, recessed areas, grooves, slots, indented shapes, bumps, raised shapes, and combinations thereof; configured to correspond to complimentary surface elements on the switching device;
  - the portable switching device is configured to activate, deactivate or send into hibernation the portable electronic device; and
  - when coupled, the first case functions to protect the second case.



***Allowable Subject Matter***

**Claims 1-19** are allowed.

The following is an examiner's statement of reasons for allowance: **Claims 1-19** are considered to be allowable because the prior art of record neither anticipates nor renders obvious the limitations of the base claim 1. Claim 1 includes a system comprising: a portable switching device coupled to a portable electronic device; wherein: the switching device and the electronic device are configured to selectively couple to each other employing magnetic force; the switching device comprises a first case; the electronic device comprises a second case and an electronic circuit that is responsive to the switching device; a first magnet; the portable switching device is configured to activate, deactivate or send into hibernation the portable electronic device; and when coupled, the first case functions to protect the second case in combination with all other elements of the base claim. **Claims 2-19** are all dependent upon claim 1 and are considered to be allowable at least for the same reasons as claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY MICHAEL HAUGHTON whose telephone number is (571)272-9087. The examiner can normally be reached on M-F 8a-4p.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jinhee Lee can be reached on 571-272-1977. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ANTHONY M HAUGHTON/  
Primary Examiner, Art Unit 2835

<b><i>Applicant-Initiated Interview Summary</i></b>	<b>Application No.</b> 15/852,000	<b>Applicant(s)</b> Mayfield et al.	
	<b>Examiner</b> ANTHONY M HAUGHTON	<b>Art Unit</b> 2835	<b>AIA Status</b> No

All participants (applicant, applicants representative, PTO personnel):

(1) ANTHONY MICHAEL. HAUGHTON. (3) \_\_\_\_.

(2) Gene Tyler (Reg. No. 35,395). (4) \_\_\_\_.

Date of Interview: 12 February 2019.

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: 1-19.

Identification of prior art discussed: Rothbaum (2011/0192857).

**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...)

Proposed amendments were discussed in relation to the current art rejections and it was agreed the proposed amendments would overcome the current art rejections..

**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

/ANTHONY M HAUGHTON/ Primary Examiner, Art Unit 2835	
---	--

## 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 examiners 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 applicants 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 applicants 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 examiners 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 examiners initials.

<b>Issue Classification</b> 	<b>Application/Control No.</b> 15/852,000	<b>Applicant(s)/Patent Under Reexamination</b> Mayfield et al.
	<b>Examiner</b> ANTHONY M HAUGHTON	<b>Art Unit</b> 2835

CPC						
Symbol					Type	Version
B08B	/	1	/	006	F	2013-01-01
A45C	/	11	/	00	I	2013-01-01
G06F	/	1	/	32	I	2013-01-01
B08B	/	1	/	002	I	2013-01-01
B08B	/	11	/	04	I	2013-01-01
H04M	/	1	/	21	I	2013-01-01
H04B	/	1	/	3816	A	2013-01-01
H04M	/	1	/	0266	A	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version
/	/			

NONE		<b>Total Claims Allowed:</b>	
(Assistant Examiner)	(Date)	19	
/ANTHONY M HAUGHTON/ Primary Examiner, Art Unit 2835	19 February 2019	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1


<b>Issue Classification</b> 	<b>Application/Control No.</b> 15/852,000	<b>Applicant(s)/Patent Under Reexamination</b> Mayfield et al.
	<b>Examiner</b> ANTHONY M HAUGHTON	<b>Art Unit</b> 2835

<b>INTERNATIONAL CLASSIFICATION</b>			
<b>CLAIMED</b>			
G06F	1	16	
H05K	5	00	
H05K	7	00	
<b>NON-CLAIMED</b>			

<b>US ORIGINAL CLASSIFICATION</b>	
<b>CLASS</b>	<b>SUBCLASS</b>
361	679.01

<b>CROSS REFERENCES(S)</b>					
<b>CLASS</b>	<b>SUBCLASS (ONE SUBCLASS PER BLOCK)</b>				


NONE			<b>Total Claims Allowed:</b>	
(Assistant Examiner)	(Date)	19		
/ANTHONY M HAUGHTON/ Primary Examiner, Art Unit 2835	19 February 2019	O.G. Print Claim(s)	O.G. Print Figure	
(Primary Examiner)	(Date)	1	1	

<b>Issue Classification</b> 	<b>Application/Control No.</b> 15/852,000	<b>Applicant(s)/Patent Under Reexamination</b> Mayfield et al.
	<b>Examiner</b> ANTHONY M HAUGHTON	<b>Art Unit</b> 2835

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

CLAIMS																
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Original
1	1	10	10	19	19											
2	2	11	11													
3	3	12	12													
4	4	13	13													
5	5	14	14													
6	6	15	15													
7	7	16	16													
8	8	17	17													
9	9	18	18													

NONE	<b>Total Claims Allowed:</b>	
(Assistant Examiner)	(Date)	19
/ANTHONY M HAUGHTON/ Primary Examiner, Art Unit 2835	19 February 2019	O.G. Print Claim(s)
(Primary Examiner)	(Date)	1
		O.G. Print Figure
		1

<b>Search Notes</b> 	<b>Application/Control No.</b> 15/852,000	<b>Applicant(s)/Patent Under Reexamination</b> Mayfield et al.
	<b>Examiner</b> ANTHONY M HAUGHTON	<b>Art Unit</b> 2835

CPC - Searched*		
Symbol	Date	Examiner
g06f1/32,16,1601,1603,1605,1607,1609,1611	12/26/2018	AMH
B08B1/006,002	12/26/2018	AMH
g06f1/32,16,1601,1603,1605,1607,1609,1611	02/19/2019	AMH
B08B1/006,002	02/19/2019	AMH

CPC Combination Sets - Searched*		
Symbol	Date	Examiner


US Classification - Searched*			
Class	Subclass	Date	Examiner
361	679.01, 679.02	12/26/2018	AMH
361	679.01, 679.02	02/19/2019	AMH

\* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
EAST SEARCH (SEE SEARCH NOTES)	12/26/2018	AMH
INVENTOR SEARCH	12/26/2018	AMH
IP.COM SEARCH	12/26/2018	AMH
CLASSIFICATION SEARCH IN COMBINATION WITH TEXT SEARCH	12/26/2018	AMH
UPDATED INVENTOR SEARCH	02/19/2019	AMH
UPDATED INVENTOR SEARCH	02/19/2019	AMH
IP.COM SEARCH	02/19/2019	AMH
CLASSIFICATION SEARCH IN COMBINATION WITH TEXT SEARCH 361/679.01,679.02; g06f1/32,16,1601,1603,1605,1607,1609,1611; B08B1/006,002	02/19/2019	AMH

/ANTHONY M HAUGHTON/ Primary Examiner, Art Unit 2835	
---	--



<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 15/852,000	<b>Applicant(s)/Patent Under Reexamination</b> Mayfield et al.
	<b>Examiner</b> ANTHONY M HAUGHTON	<b>Art Unit</b> 2835

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	PG-PUB CLAIM TEXT SEARCH	02/19/2019	AMH
361	679.01, 679.02	02/19/2019	AMH
G06F1	32, 16, 1601, 1607	02/19/2019	AMH
B08B1	006, 002	02/19/2019	AMH

/ANTHONY M HAUGHTON/ Primary Examiner, Art Unit 2835	
---	--

## Bibliographic Data

Application No: 15/852,000

Foreign Priority claimed:  Yes  No

35 USC 119 (a-d) conditions met:  Yes  No  Met After Allowance

Verified and Acknowledged:

/ANTHONY M HAUGHTON/

Examiner's Signature

Initials

Title:

APPARATUS FOR CLEANING VIEW SCREENS AND LENSES  
AND METHOD FOR THE USE THEREOF

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/22/2017	361	2835	MAYG-1001-WO-USC4
<b>RULE</b>			

### APPLICANTS

GUI GLOBAL PRODUCTS, LTD., Houston, TX,

### INVENTORS

Walter G. Mayfield Houston, TX, UNITED STATES

Daniel Martin Valdez Kingwood, TX, UNITED STATES

### CONTINUING DATA

This application is a CON of 15597005 05/16/2017ABN

15597005 is a CON of 14343665 07/14/2014ABN

14343665 is a 371 of PCT/US2012/049562 08/03/2012

PCT/US2012/049562 has PRO of 61661090 06/18/2012

PCT/US2012/049562 has PRO of 61619229 04/02/2012

PCT/US2012/049562 has PRO of 61592344 01/30/2012

PCT/US2012/049562 has PRO of 61576834 12/16/2011

PCT/US2012/049562 has PRO of 61569093 12/09/2011

PCT/US2012/049562 has PRO of 61568031 12/07/2011

PCT/US2012/049562 has PRO of 61561087 11/17/2011

PCT/US2012/049562 has PRO of 61555310 11/03/2011

PCT/US2012/049562 has PRO of 61515752 08/05/2011

### FOREIGN APPLICATIONS

#### IF REQUIRED, FOREIGN LICENSE GRANTED\*\*

01/18/2018

### STATE OR COUNTRY

UNITED STATES

**ADDRESS**

Mossman, Kumar & Tyler PC  
P.O. Box 421239  
Houston, TX 77242  
UNITED STATES

**FILING FEE RECEIVED**

\$1,740

## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	150	((("REGIMBAL") near3 ("Laurent")) OR ((("MORRI SON") near3 ("Jason")))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2019/02/19 12:35
L2	1025	((("ROBERTSON") near3 ("William")) OR ((("BERNARD") near3 ("Daniel")))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2019/02/19 12:35
L3	9136	361/679.01,724-727.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 13:38
L4	0	h05k/0204,0221,0226.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 13:38
L5	2973	h05k5/0204,0221,0226.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 13:38
L6	325	h02b1/36.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 13:38
L7	13227	g06f1/1613,1615,1616,1633.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 13:38
L8	3498	361/679.26-679.3.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 13:39
L9	2995	361/679.55-679.56.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 13:39
L10	7304	361/679.01,679.02.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 13:39
L11	11053	g06f1/16,32,1601,1603,1605,1607,1609,1611.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 13:39
L12	1078	b08b1/006,002.cpc.	US-	OR	OFF	2019/02/19

			PGPUB; USPAT; USOCR			13:39
S1	362127	(dual or two or (first and second)) with (display or screen)	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:44
S2	49439	S1 and ((display or screen) with (uncoupl\$2 or detach\$3 or detachable or remov\$3))	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:45
S3	2282	S2 and ((display or screen) with (wireless))	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:45
S4	508	S3 and ((display or screen) with (speaker))	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:45
S5	316	S4 and ((display or screen) with (microphone))	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:46
S6	206	S5 and ((display or screen) with (video))	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:46
S7	31	S6 and ((display or screen) with ("360"))	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:46
S8	43	S6 and ((display or screen) with (hinge))	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:46
S9	209	S3 and ((display or screen) with (hinge))	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:46
S10	7	S9 and (hinge with "360")	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:46
S11	1968	S2 and ((display or screen) with (hinge))	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:46
S12	50	S11 and ("360" with degree\$1)	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:47
S13	24	S11 and (hinge with "360")	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:47
S14	278	S3 and ((display or screen) with (hing\$3))	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:48

S15	16	S14 and ("360" with degree\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:48
S16	52	S15 S12	US-PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:48
S17	3157	S2 and ((display or screen) with (hing\$3))	US-PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:49
S18	71	S17 and ("360" with degree\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:49
S19	5946	361/681,683.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:49
S20	136	S19 and ((first and second) adj display\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:49
S21	76	S20 and hinge	US-PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:50
S22	76	S21 and hing\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:50
S23	5	((LARRY) near2 (LAYCOCK)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:50
S24	2	((LISA) near2 (LAYCOCK)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:50
S25	2	S24 and ((first and second) adj display\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2008/10/04 10:50
S38	947495	first.clm.	US-PGPUB	OR	OFF	2008/10/04 10:51
S39	931891	second.clm.	US-PGPUB	OR	OFF	2008/10/04 10:51
S40	210319	display\$3.clm.	US-PGPUB	OR	OFF	2008/10/04 10:52
S41	28617	hing\$3.clm.	US-PGPUB	OR	OFF	2008/10/04 10:52
S42	3	atttached.clm.	US-PGPUB	OR	OFF	2008/10/04 10:52
S43	6211	detached.clm.	US-PGPUB	OR	OFF	2008/10/04 10:52
S44	6011	"360".clm.	US-PGPUB	OR	OFF	2008/10/04

						10:52
S45	30825	camera.clm.	US-PGPUB	OR	OFF	2008/10/04 10:52
S46	11683	speaker.clm.	US-PGPUB	OR	OFF	2008/10/04 10:52
S47	9778	microphone.clm.	US-PGPUB	OR	OFF	2008/10/04 10:52
S48	52612	video.clm.	US-PGPUB	OR	OFF	2008/10/04 10:52
S49	0	S38 S39 S40 S41 S42 S43 S44 S45 S46 S47 S48	US-PGPUB	AND	OFF	2008/10/04 10:52
S50	947495	first.clm.	US-PGPUB	OR	OFF	2008/10/04 10:53
S51	931891	second.clm.	US-PGPUB	OR	OFF	2008/10/04 10:53
S52	210319	display\$3.clm.	US-PGPUB	OR	OFF	2008/10/04 10:53
S53	105736	S50 S51 S52	US-PGPUB	AND	OFF	2008/10/04 10:53
S54	947495	S50	US-PGPUB	AND	OFF	2008/10/04 10:54
S55	931891	S51	US-PGPUB	AND	OFF	2008/10/04 10:54
S56	210319	S52	US-PGPUB	AND	OFF	2008/10/04 10:54
S57	28617	hing\$3.clm.	US-PGPUB	OR	OFF	2008/10/04 10:54
S58	28617	S57	US-PGPUB	AND	OFF	2008/10/04 10:54
S59	3	attttached.clm.	US-PGPUB	OR	OFF	2008/10/04 10:54
S60	3	S59	US-PGPUB	AND	OFF	2008/10/04 10:54
S61	6211	detached.clm.	US-PGPUB	OR	OFF	2008/10/04 10:54
S62	6211	S61	US-PGPUB	AND	OFF	2008/10/04 10:54
S63	6011	"360".clm.	US-PGPUB	OR	OFF	2008/10/04 10:54
S64	6011	S63	US-PGPUB	AND	OFF	2008/10/04 10:54
S65	30825	camera.clm.	US-PGPUB	OR	OFF	2008/10/04 10:54
S66	30825	S65	US-PGPUB	AND	OFF	2008/10/04 10:54
S67	11683	speaker.clm.	US-PGPUB	OR	OFF	2008/10/04 10:54
S68	11683	S67	US-PGPUB	AND	OFF	2008/10/04 10:54
S69	9778	microphone.clm.	US-PGPUB	OR	OFF	2008/10/04 10:54
S70	9778	S69	US-PGPUB	AND	OFF	2008/10/04 10:54
S71	52612	video.clm.	US-PGPUB	OR	OFF	2008/10/04

## EAST Search History

						10:54
S72	52612	S71	US-PGPUB	AND	OFF	2008/10/04 10:54
S73	2050	S53 S57	US-PGPUB	AND	OFF	2008/10/04 10:54
S74	654	S52 S61	US-PGPUB	AND	OFF	2008/10/04 10:55
S75	377	S53 S61	US-PGPUB	AND	OFF	2008/10/04 10:55
S76	396	S65 S67 S69 S71	US-PGPUB	AND	OFF	2008/10/04 10:55
S77	308	S76 S52	US-PGPUB	AND	OFF	2008/10/04 10:55
S78	149	S76 S53	US-PGPUB	AND	OFF	2008/10/04 10:55
S79	12	S57 S78	US-PGPUB	AND	OFF	2008/10/04 10:55
S80	1	"20070182663"	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/16 13:41
S81	1	"7074999".pn.	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/16 13:41
S82	2	S80 S81	US- PGPUB; USPAT; USOCR	OR	OFF	2008/10/16 13:41
S83	6148	361/681,683.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2009/01/15 12:02
S84	5	((LARRY) near2 (LAYCOCK)).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2009/01/15 12:02
S85	2938432	first.clm.	US- PGPUB; USPAT; USOCR	OR	OFF	2009/01/15 12:04
S86	979477	second.clm.	US-PGPUB	OR	OFF	2009/01/15 12:05
S87	996084	first.clm.	US-PGPUB	OR	OFF	2009/01/15 12:05
S88	221502	display\$3.clm.	US-PGPUB	OR	OFF	2009/01/15 12:05
S89	29967	hing\$3.clm.	US-PGPUB	OR	OFF	2009/01/15 12:05
S90	229188	attach\$3.clm.	US-PGPUB	OR	OFF	2009/01/15 12:05
S91	11537	detach\$3.clm.	US-PGPUB	OR	OFF	2009/01/15 12:05
S92	6226	"360".clm.	US-PGPUB	OR	OFF	2009/01/15 12:05
S93	54681	degrees.clm.	US-PGPUB	OR	OFF	2009/01/15



						12:05
S94	32440	camera.clm.	US-PGPUB	OR	OFF	2009/01/15 12:05
S95	12229	speaker.clm.	US-PGPUB	OR	OFF	2009/01/15 12:05
S96	10313	microphone.clm.	US-PGPUB	OR	OFF	2009/01/15 12:05
S97	55566	video.clm.	US-PGPUB	OR	OFF	2009/01/15 12:05
S98	2142	S86 S87 S88 S89	US-PGPUB	AND	OFF	2009/01/15 12:06
S99	2525	S92 S93	US-PGPUB	AND	OFF	2009/01/15 12:06
S100	416	S94 S95 S96 S97	US-PGPUB	AND	OFF	2009/01/15 12:06
S101	1	S98 S99 S100	US-PGPUB	AND	OFF	2009/01/15 12:06
S102	25	S98 S99	US-PGPUB	AND	OFF	2009/01/15 12:06
S103	12	S98 S100	US-PGPUB	AND	OFF	2009/01/15 12:06
S104	5	S99 S100	US-PGPUB	AND	OFF	2009/01/15 12:06
S105	6425	S90 S91	US-PGPUB	AND	OFF	2009/01/15 12:06
S106	39	S98 S105	US-PGPUB	AND	OFF	2009/01/15 12:06
S107	111343	S86 S87 S88	US-PGPUB	AND	OFF	2009/01/15 12:06
S108	375	S105 S107	US-PGPUB	AND	OFF	2009/01/15 12:06
S109	43	S108 S94	US-PGPUB	AND	OFF	2009/01/15 12:07
S110	27	S108 S95	US-PGPUB	AND	OFF	2009/01/15 12:07
S111	14	S108 S96	US-PGPUB	AND	OFF	2009/01/15 12:07
S112	40	S108 S97	US-PGPUB	AND	OFF	2009/01/15 12:07
S113	6	S105 S100	US-PGPUB	AND	OFF	2009/01/15 12:07
S114	5	S108 S100	US-PGPUB	AND	OFF	2009/01/15 12:07
S115	6276	music.clm.	US-PGPUB	AND	OFF	2009/01/15 12:07
S116	0	S101 S115	US-PGPUB	AND	OFF	2009/01/15 12:07
S117	2	S102 S115	US-PGPUB	AND	OFF	2009/01/15 12:07
S118	2	S103 S115	US-PGPUB	AND	OFF	2009/01/15 12:07
S119	0	S104 S115	US-PGPUB	AND	OFF	2009/01/15 12:07
S120	1	S86 S87 S88 S90 S91 S92 S93	US-PGPUB	AND	OFF	2009/01/15

## EAST Search History

						12:08
S121	0	S115 S120	US-PGPUB	AND	OFF	2009/01/15 12:08
S122	111343	S86 S87 S88	US-PGPUB	AND	OFF	2009/01/15 12:08
S123	1152	S115 S122	US-PGPUB	AND	OFF	2009/01/15 12:08
S124	2525	S92 S93	US-PGPUB	AND	OFF	2009/01/15 12:08
S125	3	S123 S124	US-PGPUB	AND	OFF	2009/01/15 12:08
S126	6425	S90 S91	US-PGPUB	AND	OFF	2009/01/15 12:08
S127	4	S123 S126	US-PGPUB	AND	OFF	2009/01/15 12:08
S128	0	S89 S127	US-PGPUB	AND	OFF	2009/01/15 12:08
S129	50	S88 S89 S90 S91	US-PGPUB	AND	OFF	2009/01/15 12:09
S130	0	S129 S115	US-PGPUB	AND	OFF	2009/01/15 12:09
S131	0	S129 S100	US-PGPUB	AND	OFF	2009/01/15 12:09
S132	0	S129 S92 S93	US-PGPUB	AND	OFF	2009/01/15 12:09
S133	924	361/679.26.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:23
S134	1830	361/679.27.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:23
S135	637	361/679.3.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:23
S136	2142	361/679.55.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:23
S137	992	361/679.56.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:23
S138	21156	345/173.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:24
S139	4603	345/168.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:24
S140	492	345/170.ccls.	US- PGPUB; USPAT;	OR	OFF	2015/06/27 01:24

			USOCR			
S141	725	345/172.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:24
S142	655	361/679.08.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:25
S143	895	361/679.09.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:25
S144	2783	(project\$3 near3 (keyboard or keypad or ((key near board) or (key near pad))))	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:26
S145	13	S133 and S144	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:26
S146	31	S134 and S144	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:26
S147	4	S135 and S144	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:26
S148	28	S136 and S144	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:26
S149	3	S137 and S144	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:26
S150	140	S138 and S144	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:26
S151	248	S139 and S144	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:26
S152	22	S140 and S144	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:26
S153	7	S141 and S144	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:26
S154	31	S142 and S144	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:26
S155	36	S143 and S144	US-	OR	OFF	2015/06/27

			PGPUB; USPAT; USOCR			01:26
S156	114	S154 S155 S145 S146 S147 S148 S149	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:27
S157	375	S150 S151 S152 S153	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:27
S158	16	S156 and (touch near (screen or panel))	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:27
S159	187	S157 and (touch near (screen or panel))	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:27
S160	98	S156 not S158	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:29
S161	6	("6266048"   "6614422"   "6650318"   "6690357"   "6710770"   "6734879").PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:33
S162	1	"20100214270"	USPAT	OR	OFF	2015/06/27 01:54
S163	2	"20100214270"	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:54
S164	1	"8228307".pn.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:54
S165	3	S162 S163 S164	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 01:54
S166	1	"20120032887"	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:01
S167	1	"20030165048"	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:01
S168	2	S166 S167	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:01
S169	1	"20070182663"	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:04
S170	97	("2007/0182663").URPN.	USPAT	OR	OFF	2015/06/27

						02:04
S171	1	"20130016469"	USPAT	OR	OFF	2015/06/27 02:05
S172	22	(US-20070182663-\$ or US-20070153461-\$ or US-20060028792-\$ or US-20030165048-\$ or US-20140145958-\$ or US-20130181905-\$ or US-20120169621-\$ or US-20120032887-\$ or US-20120169622-\$ or US-20120169623-\$ or US-20140132521-\$).did. or (US-7074999-\$ or US-6710770-\$ or US-6650318-\$ or US-6614422-\$ or US-6266048-\$ or US-8284549-\$ or US-8228307-\$ or US-7016711-\$ or US-7436657-\$ or US-7864517-\$ or US-7542273-\$).did.	US-PGPUB; USPAT	OR	OFF	2015/06/27 02:12
S173	1	S172 and haptic	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:12
S174	21156	345/173.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:12
S175	4603	345/168.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:12
S176	492	345/170.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:12
S177	725	345/172.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:12
S178	2783	(project\$3 near3 (keyboard or keypad or ((key near board) or (key near pad))))	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:12
S179	140	S174 and S178	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:12
S180	248	S175 and S178	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:12
S181	22	S176 and S178	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:12
S182	7	S177 and S178	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:12
S183	375	S179 S180 S181 S182	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:12
S184	46	S183 and haptic	US-PGPUB;	OR	OFF	2015/06/27 02:12

			USPAT; USOCR			
S185	0	S183 and (haptic near2 surface)	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:13
S186	267	haughton.xa.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:18
S187	385	haughton.xp.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:18
S188	652	S186 S187	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:18
S189	159	S188 and hing\$4	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:19
S190	43	S189 and (touch near (screen or panel))	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:19
S191	27	S190 and tablet\$1	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:19
S192	303	G06F1/1618.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:20
S193	104	G06F1/1673.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:21
S194	560	G06F1/1692.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:21
S195	1451	G06F1/1643.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:22
S196	0	S192 S193 S194 S195	US- PGPUB; USPAT; USOCR	AND	OFF	2015/06/27 02:22
S197	0	S192 S193 S194	US- PGPUB; USPAT; USOCR	AND	OFF	2015/06/27 02:22
S198	0	S192 S193 S195	US- PGPUB; USPAT; USOCR	AND	OFF	2015/06/27 02:23

## EAST Search History

S199	5	S192 S194 S195	US-PGPUB; USPAT; USOCR	AND	OFF	2015/06/27 02:23
S200	0	S193 S194 S195	US-PGPUB; USPAT; USOCR	AND	OFF	2015/06/27 02:23
S201	1	S192 S193	US-PGPUB; USPAT; USOCR	AND	OFF	2015/06/27 02:23
S202	0	S193 S194	US-PGPUB; USPAT; USOCR	AND	OFF	2015/06/27 02:23
S203	4	S193 S195	US-PGPUB; USPAT; USOCR	AND	OFF	2015/06/27 02:23
S204	10	S199 S201 S203	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/27 02:23
S205	0	"20040057211"	USPAT	OR	OFF	2015/06/28 12:13
S206	1	"20040057211"	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:15
S207	2	"20060126304"	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:29
S208	2	"20090310296"	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:30
S209	0	"2011100607"	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:30
S210	0	"2010100607"	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:30
S211	0	"2011000607"	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:30
S212	1	"20110100607"	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:30
S213	5	S212 S208 S207	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:31

## EAST Search History

S214	2	"20110303394"	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:38
S215	2	"20070035928"	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:38
S216	1	"20120291997"	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:38
S217	5	S214 S215 S216	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:38
S218	6	"8607976"	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:45
S219	1	"8607976".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:45
S220	1	"20130229100"	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 12:59
S221	1	"20090237420"	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 13:00
S222	2	S220 S221	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 13:00
S223	1	"20040218349"	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/28 14:48
S224	50	((Wade) near2 (Burch)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/29 03:13
S225	29	((Jason) near2 (Crowe)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/29 03:13
S226	32	((Steven) near2 (Hyma)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/29 03:13
S227	12	((Timothy) near2 (Janda)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/06/29 03:13
S228	129	((Michael) near2 (Steele)).INV.	US-PGPUB; USPAT;	OR	OFF	2015/06/29 03:13



			USOCR			
S229	1	"20110002096"	USPAT	OR	OFF	2015/06/29 03:13
S230	2	"20110002096"	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/29 03:13
S231	79	((Wah) near2 (Kwong)).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/29 03:23
S232	119	((Hong) near2 (Wong)).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/29 03:23
S233	18	((Christine) near2 (Kim)).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2015/06/29 03:24
S234	1	"20110002096"	USPAT	OR	OFF	2015/11/30 02:02
S235	0	"20120032887"	USPAT	OR	OFF	2015/11/30 02:09
S236	1	"20120032887"	US- PGPUB; USPAT	OR	OFF	2015/11/30 02:10
S237	2	("20150036864"   "20080004083").PN.	US- PGPUB; USPAT	OR	OFF	2016/02/18 09:17
S238	1	"7821786".PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/02/18 20:54
S239	1	"6473296".PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/02/18 20:54
S240	2	S238 S239	US- PGPUB; USPAT; USOCR	OR	OFF	2016/02/18 20:54
S241	2	("20080141875"   "6294886").PN.	US- PGPUB; USPAT	OR	OFF	2016/02/20 16:59
S242	1	"6473296".pn.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/02/21 15:15
S243	1	"7821786".pn.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/02/21 15:16
S244	2	S242 S243	US- PGPUB; USPAT; USOCR	OR	OFF	2016/02/21 15:16
S245	958	361/679.26.CCLS.	US- PGPUB;	OR	OFF	2016/03/07 13:36

			USPAT; USOCR			
S246	1875	361/679.27.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:36
S247	658	361/679.3.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:36
S248	2210	361/679.55.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:36
S249	1025	361/679.56.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:36
S250	665	361/679.08.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:36
S251	922	361/679.09.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:36
S252	4672	345/168.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:36
S253	498	345/170.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:36
S254	730	345/172.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:36
S255	22350	345/173.CCLS.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:36
S256	23301	S255 S254 S253	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:37
S257	26993	S252 S256	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:37
S258	6517	S251 S250 S249 S248 S247 S246 S245	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:37
S259	535	g06f1/1618.CPC.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:37

S260	1873	g06f1/1643.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:37
S261	0	g06f1/16763.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:37
S262	114	g06f1/1673.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:37
S263	673	g06f1/1692.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:37
S264	2738	S260 S262 S263 S259	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:37
S265	83	(("KWONG") near3 ("Wah")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:39
S266	145	(("WONG") near3 ("Hong")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:39
S267	19	(("KIM") near3 ("Christine")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:39
S268	2738	S259 S260 S262 S263	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:41
S269	23301	S256	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:41
S270	26993	S257	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:41
S271	295	S268 AND (FIRST NEAR HOUSING)	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:41
S272	387	S269 AND (FIRST NEAR HOUSING)	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:41
S273	511	S270 AND (FIRST NEAR HOUSING)	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:41
S274	2	S271 AND (KICKSTAND OR (KICK NEAR STAND))	US-PGPUB; USPAT;	OR	OFF	2016/03/07 13:42

			USOCR			
S275	3	S272 AND (KICKSTAND OR (KICK NEAR STAND))	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:42
S276	3	S273 AND (KICKSTAND OR (KICK NEAR STAND))	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:42
S277	124	S271 AND TABLET	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:42
S278	105	S272 AND TABLET	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:42
S279	127	S273 AND TABLET	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:42
S280	13	S277 AND CLAMSHELL	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:42
S281	12	S278 AND CLAMSHELL	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:42
S282	14	S279 AND CLAMSHELL	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:43
S283	7610	S279 A40 S275 S276	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:43
S284	5	S274 S275 S276	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:43
S285	293	S271 AND DISPLAY	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:44
S286	371	S272 AND DISPLAY	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:44
S287	477	S273 AND DISPLAY	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:44
S288	693	S285 S286 S287	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:44
S289	379	S288 AND HING\$3	US-	OR	OFF	2016/03/07

			PGPUB; USPAT; USOCR			13:44
S290	227	S289 AND (TOUCHSCREEN OR (TOUCH NEAR SCREEN))	US- PGPUB; USPAT; USOCR	OR	OFF	2016/03/07 13:44
S328	52	(US-20060146487-\$ or US-20100067184-\$ or US-20040264118-\$ or US-20040021051-\$ or US-20070236873-\$ or US-20070159778-\$ or US-20070177344-\$ or US-20060018089-\$ or US-20110038119-\$ or US-20100142130-\$ or US-20090168338-\$ or US-20110058112-\$ or US-20100289972-\$ or US-20100149438-\$ or US-20040041851-\$ or US-20090147155-\$ or US-20090009667-\$ or US-20050139740-\$ or US-20060049327-\$ or US-20050001114-\$ or US-20080265121-\$ or US-20070062089-\$ or US-20100302153-\$ or US-20060050471-\$ or US-20090261216-\$ or US-20060082957-\$).did. or (US-20060077623-\$ or US-20070075208-\$ or US-20050269479-\$ or US-20040084588-\$ or US-20100165553-\$).did. or (US-7542276-\$ or US-5375076-\$ or US-7916478-\$ or US-7898801-\$ or US-7898796-\$ or US-7660113-\$ or US-7450372-\$ or US-D538800-\$ or US-6301101-\$ or US-5729429-\$ or US-5235495-\$ or US-7974084-\$ or US-7922133-\$ or US-7760493-\$ or US-7636133-\$ or US-7580248-\$ or US-7866615-\$ or US-7233488-\$ or US-7667957-\$ or US-7239506-\$ or US-5396399-\$ or US-5107402-\$ or US-7926781-\$ or US-5323290-\$ or US-5640301-\$ or US-7649576-\$).did. or (US-7839626-\$ or US-7780131-\$ or US-7571883-\$ or US-7472880-\$ or US-7467773-\$ or US-7143478-\$ or US-6191940-\$ or US-5646818-\$ or US-6975507-\$ or US-7784758-\$ or US-6796541-\$ or US-6672558-\$ or US-6543734-\$ or US-6851656-\$ or US-7232098-\$ or US-6016248-\$ or US-7937810-\$ or US-6807050-\$ or US-2388567-\$ or US-5927673-\$ or US-7948753-\$ or US-5293300-\$ or US-5642258-\$ or US-4858162-\$ or US-7054152-\$ or US-5150222-\$).did.	USPAT	OR	OFF	2016/05/02 12:36
S329	20	S328 and ((laptop or (lap near top) or notebook or clamshell or portable) near computer)	USPAT	OR	OFF	2016/05/02 12:37
S330	84	(US-20060146487-\$ or US-20100067184-\$ or US-20040264118-\$ or US-20040021051-\$ or US-20070236873-\$ or US-20070159778-\$ or US-20070177344-\$ or US-20060018089-\$ or US-20110038119-\$ or US-20100142130-\$ or US-20090168338-\$ or US-20110058112-\$ or US-20100289972-\$ or US-20100149438-\$ or US-20040041851-\$ or US-20090147155-\$ or US-20090009667-\$ or US-20050139740-\$ or US-20060049327-\$ or US-20050001114-\$ or US-20080265121-\$ or US-20070062089-\$ or US-20100302153-\$ or US-20060050471-\$ or US-20090261216-\$ or US-20060082957-\$).did. or (US-20060077623-\$ or US-20070075208-\$ or US-20050269479-\$ or US-20040084588-\$ or US-20100165553-\$).did. or (US-7542276-\$ or US-5375076-\$ or US-7916478-\$ or US-7898801-\$ or US-7898796-\$ or US-7660113-\$ or US-7450372-\$ or US-D538800-\$ or US-6301101-\$ or US-	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 12:37

		5729429-\$ or US-5235495-\$ or US-7974084-\$ or US-7922133-\$ or US-7760493-\$ or US-7636133-\$ or US-7580248-\$ or US-7866615-\$ or US-7233488-\$ or US-7667957-\$ or US-7239506-\$ or US-5396399-\$ or US-5107402-\$ or US-7926781-\$ or US-5323290-\$ or US-5640301-\$ or US-7649576-\$).did. or (US-7839626-\$ or US-7780131-\$ or US-7571883-\$ or US-7472880-\$ or US-7467773-\$ or US-7143478-\$ or US-6191940-\$ or US-5646818-\$ or US-6975507-\$ or US-7784758-\$ or US-6796541-\$ or US-6672558-\$ or US-6543734-\$ or US-6851656-\$ or US-7232098-\$ or US-6016248-\$ or US-7937810-\$ or US-6807050-\$ or US-2388567-\$ or US-5927673-\$ or US-7948753-\$ or US-5293300-\$ or US-5642258-\$ or US-4858162-\$ or US-7054152-\$ or US-5150222-\$).did.				
S331	28	S330 and ((laptop or (lap near top) or notebook or clamshell or portable) near computer)	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 12:37
S332	20	("2004/0264118").URPN.	USPAT	OR	OFF	2016/05/02 12:37
S333	29	(US-20070182663-\$ or US-20070153461-\$ or US-20060028792-\$ or US-20030165048-\$ or US-20140145958-\$ or US-20130181905-\$ or US-20120169621-\$ or US-20120032887-\$ or US-20120169622-\$ or US-20120169623-\$ or US-20140132521-\$ or US-20110002096-\$ or US-20110038119-\$ or US-20040264118-\$).did. or (US-7074999-\$ or US-6710770-\$ or US-6650318-\$ or US-6614422-\$ or US-6266048-\$ or US-8284549-\$ or US-8228307-\$ or US-7016711-\$ or US-7436657-\$ or US-7864517-\$ or US-7542273-\$ or US-8941979-\$ or US-8792947-\$ or US-8660621-\$ or US-7136282-\$).did.	US-PGPUB; USPAT	OR	OFF	2016/05/02 12:38
S334	25	S333 and (process\$3 or cpu or microprocess\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 12:38
S335	8	("20050132536"   "20090033785"   "20090290298"   "20090322967"   "5235495"   "7156351").PN. OR ("8284549").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 12:43
S336	5	("2009/0322967").URPN.	USPAT	OR	OFF	2016/05/02 12:46
S337	17	("20020180726"   "20050128695"   "20050132536"   "20060291020"   "20080136973"   "20090322967"   "20110279687"   "20110286170"   "5218389"   "5521660"   "6198624"   "6597410"   "6806850"   "7156351"   "7677737"   "7712903").PN. OR ("8264599").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 12:46
S338	123	G06F1/1667.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 12:49
S339	349	G06F1/1664.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 12:49

S340	65	S338 and (process\$3 or cpu or microprocess\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 12:49
S341	289	S339 and (process\$3 or cpu or microprocess\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 12:49
S342	8	("20050132536"   "20090033785"   "20090290298"   "20090322967"   "5235495"   "7156351").PN. OR ("8284549").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 12:59
S343	64	("2388567"   "3878964"   "3924775"   "4089464"   "4196821"   "4669053"   "4951241"   "4964018"   "5049862"   "5100098"   "5168601").PN. OR ("5235495").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:01
S344	17	("20100165553"   "4951241"   "5235495"   "5293300"   "5351508"   "5375076"   "5642258"   "5721668"   "7206198"   "7342778"   "7492581"   "7576981"   "7612998").PN. OR ("7948753").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:04
S345	56	("4926365").PN. OR ("5293300").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:06
S346	157	361/679.11.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:18
S347	103	361/679.12.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:18
S348	967	361/679.26.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:18
S349	1881	361/679.27.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:19
S350	241	361/679.28.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:19
S351	242	S346 S347	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:19
S352	2815	S348 S349 S350	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:19
S353	133	S351 and (process\$3 or cpu or microprocess\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:19
S354	1820	S352 and (process\$3 or cpu or microprocess\$3)	US-PGPUB;	OR	OFF	2016/05/02 13:19

			USPAT; USOCR			
S355	133	S353 and (process\$3 or cpu or microprocess\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:19
S356	1820	S354 and (process\$3 or cpu or microprocess\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:19
S357	23	((("KNEPPER") near3 ("Lawrence"))).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:20
S358	227	((("MEYERS") near3 ("David"))).INV.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:20
S359	2	"20140002096"	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:21
S360	2	"20110002096"	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:21
S361	1	"8264599".PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:22
S362	1	"7948753".PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:22
S363	2	S361 S362	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:22
S364	1	"8284549".pn.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:36
S365	1	"8264599".pn.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:38
S366	2	"20140036423"	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:46
S367	1	"8059393".pn.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:46
S368	3	S366 S367	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:46



## EAST Search History

S369	8819	g06f1/1616.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:59
S370	551	g06f1/1615.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:59
S371	1395	g06f1/1613.CPC.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 13:59
S372	2	("2014/0036423").URPN.	USPAT	OR	OFF	2016/05/02 14:00
S373	37	("20040134031"   "20050044663"   "20050050687"   "20050055806"   "20060032020"   "20060048337"   "20070089270"   "20090217486"   "20100026854"   "20120036679"   "20120102675"   "20130044422"   "20130119842"   "20130170122"   "20130175914"   "20130182403"   "20130308262"   "20130318746"   "20130342974"   "20140007379"   "20140016250"   "20140036423"   "20140047672"   "20140063750"   "20140126134"   "20140165334"   "20140331452"   "20140352113"   "20150007416"   "20150009614"   "20150089770"   "20150098175"   "20150121654"   "6115886"   "6175990"   "8625267"   "9021658").PN. OR ("9274565").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 14:00
S374	627	16/337.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 14:02
S375	796	16/342.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 14:02
S376	968	16/366.CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 14:02
S377	2266	S374 S375 S376	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 14:02
S378	692	S377 AND ((FIRST AND SECOND) NEAR3 HING\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 14:03
S379	19	((("HIRAO") near3 ("Hiroaki")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 14:07
S380	22	((("TATEMACHI") near3 ("Atsushi")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/02 14:07
S381	25	("20010003450"   "20010034249"   "20020090980"   "20030048256"   "20030109286"	US-PGPUB;	OR	OFF	2016/05/03 22:26

		"20030144034"   "20040061683"   "20060034039"   "20060061555"   "20060146488"   "20060194619"   "20060209218"   "5267708"   "5613223"   "5986813"   "6229514"   "6311076"   "6369952"   "6643124"   "6771232"   "6801855"   "7050835"   "7180665"   "7184086"   "7187363").PN.	USPAT			
S382	4193	(shoulder near pad\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/03 22:36
S383	1032	S382 and football	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/03 22:36
S384	213	S383 and sensor\$1	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/03 22:36
S385	76	S383 and ((sensor\$1) with (shoulder near pad\$1))	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/03 22:36
S386	2	"20110060260"	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/03 22:37
S387	1	"20130308271"	USPAT	OR	OFF	2016/05/10 15:43
S388	2	"20130308271"	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/10 15:46
S389	4	("6389643"   "6213671"   "5325984"   "20060112519").PN.	US-PGPUB; USPAT	OR	OFF	2016/05/16 11:40
S390	48	(US-20070182663-\$ or US-20070153461-\$ or US-20060028792-\$ or US-20030165048-\$ or US-20140145958-\$ or US-20130181905-\$ or US-20120169621-\$ or US-20120032887-\$ or US-20120169622-\$ or US-20120169623-\$ or US-20140132521-\$ or US-20110002096-\$ or US-20110038119-\$ or US-20040264118-\$ or US-20090322967-\$ or US-20110279687-\$ or US-20150193009-\$ or US-20140160654-\$ or US-20130308263-\$ or US-20130329394-\$ or US-20030038567-\$).did. or (US-7074999-\$ or US-6710770-\$ or US-6650318-\$ or US-6614422-\$ or US-6266048-\$ or US-8284549-\$ or US-8228307-\$ or US-7016711-\$ or US-7436657-\$ or US-7864517-\$ or US-7542273-\$ or US-8941979-\$ or US-8792947-\$ or US-8660621-\$ or US-7136282-\$ or US-8264599-\$ or US-8848366-\$ or US-7948753-\$ or US-7686261-\$ or US-7612998-\$ or US-7450372-\$ or US-5323290-\$ or US-5642258-\$ or US-5293300-\$ or US-7113397-\$ or US-9274565-\$).did. or (US-9152169-\$).did.	US-PGPUB; USPAT	OR	OFF	2016/05/16 11:42
S391	52	S389 S390	US-PGPUB; USPAT;	OR	OFF	2016/05/16 11:42

			USOCR			
S392	177990	"52" and clutch	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 11:42
S393	4	S391 and clutch	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 11:42
S394	1	S390 and clutch	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 11:42
S395	1361	361/679.41-679.44.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 11:46
S396	328	S395 and tablet	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 11:46
S397	133	S396 and hing\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 11:46
S398	1	S397 and clutch\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 11:46
S399	363	S395 and hing\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 11:48
S400	191314	"31" and clutch\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 11:48
S401	9	S399 and clutch\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 11:48
S402	2	S396 and clutch\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 11:53
S403	76	S397 and lock\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 11:54
S404	34	S403 and friction	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 12:16
S405	7	S404 and cam	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 12:17
S406	51	(US-20070182663-\$ or US-20070153461-\$ or US-	US-	OR	OFF	2016/05/16

		20060028792-\$ or US-20030165048-\$ or US-20140145958-\$ or US-20130181905-\$ or US-20120169621-\$ or US-20120032887-\$ or US-20120169622-\$ or US-20120169623-\$ or US-20140132521-\$ or US-20110002096-\$ or US-20110038119-\$ or US-20040264118-\$ or US-20090322967-\$ or US-20110279687-\$ or US-20150193009-\$ or US-20140160654-\$ or US-20130308263-\$ or US-20130329394-\$ or US-20030038567-\$ or US-20140098485-\$ or US-20150116927-\$ or US-20130322011-\$).did. or (US-7074999-\$ or US-6710770-\$ or US-6650318-\$ or US-6614422-\$ or US-6266048-\$ or US-8284549-\$ or US-8228307-\$ or US-7016711-\$ or US-7436657-\$ or US-7864517-\$ or US-7542273-\$ or US-8941979-\$ or US-8792947-\$ or US-8660621-\$ or US-7136282-\$ or US-8264599-\$ or US-8848366-\$ or US-7948753-\$ or US-7686261-\$ or US-7612998-\$ or US-7450372-\$ or US-5323290-\$ or US-5642258-\$ or US-5293300-\$ or US-7113397-\$ or US-9274565-\$).did. or (US-9152169-\$).did.	PGPUB; USPAT			12:24
S407	1	S406 and gear	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 12:25
S408	8	S406 and friction	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 12:25
S409	9	S397 and gear	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 12:35
S410	31	S399 and gear	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 12:36
S411	103	361/679.12.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 12:55
S412	6462	G06F1/1632.CPC.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 12:56
S413	322	friction near hing\$3.clm.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 13:43
S414	1965	friction near hing\$3	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 13:43
S415	267	haughton.xa.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 13:43
S416	601	haughton.xp.	US- PGPUB; USPAT;	OR	OFF	2016/05/16 13:43

			USOCR			
S417	868	S415 S416	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 13:43
S418	8	S414 and S417	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 13:43
S419	30	("20040228077"   "20070041151"   "20070206349"   "20080174943"   "4960256"   "5128662"   "5168426"   "5255214"   "5375076"   "5481430"   "5494447"   "5507072"   "5729429"   "5768096"   "5949643"   "6016171"   "6081207"   "6229693"   "6233138"   "6272006"   "6464195"   "6665175"   "7724511"   "7917993"   "D366032").PN. OR ("8390997").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 13:45
S420	14	("20050117286"   "20060023408"   "20070201199"   "20070201200"   "6078496"   "6101088"   "6658275"   "7239504"   "7255582"   "7489507"   "7530823"   "7602606"   "7631410"   "8081439").PN. OR ("9086841").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 13:45
S421	44	S419 S420	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 13:45
S422	4	S421 and (friction near3 hing\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 13:45
S423	4304	(friction near3 hing\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 13:45
S424	11	S417 and S423	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 13:46
S425	3	S424 not S418	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 13:46
S426	30	("20040001310"   "20040042176"   "20040070942"   "20040080908"   "20040083577"   "20060114653"   "20060158846"   "20060176652"   "20070131383"   "20090219673"   "20090279258"   "20100053885"   "20100149755"   "20100321888"   "20110216509"   "5901037"   "6026888"   "6078499"   "6175493"   "6226180"   "6252767"   "6297947"   "6341062"   "6507488"   "6507490"   "7116552"   "7203062"   "7450382"   "8514589"   "8891244").PN. OR ("9182794").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 13:52
S427	14	("20050117286"   "20060023408"   "20070201199"   "20070201200"   "6078496"   "6101088"   "6658275"   "7239504"   "7255582"   "7489507"   "7530823"   "7602606"   "7631410"   "8081439").PN. OR ("9086841").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:02
S428	7	S427 and (friction)	US-PGPUB;	OR	OFF	2016/05/16 14:03

			USPAT; USOCR			
S429	241	361/679.28.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:20
S430	8831	g06f1/1616.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:21
S431	3231	g06f1/1681.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:21
S432	319	S430 AND (FRICTION NEAR3 HING\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:22
S433	309	S431 AND (FRICTION NEAR3 HING\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:22
S434	5	S429 AND (FRICTION NEAR3 HING\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:22
S435	416	S432 S433	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:22
S436	293	S435 AND ((CLAMSHELL OR LAPTOP OR NOTEBOOK OR PORTBALE) NEAR3 (COMPUTER))	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:23
S437	4	S434 AND ((CLAMSHELL OR LAPTOP OR NOTEBOOK OR PORTBALE) NEAR3 (COMPUTER))	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:23
S438	1321	361/679.31.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:35
S439	464	h05k7/14.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:35
S440	1402	h02g3/22.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:35
S441	1142	361/679.32.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:35
S442	5357	361/679.01.ccls.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:36

## EAST Search History

S443	2150	361/679.02.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:36
S444	654	312/223.1-223.3	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:36
S445	4582	312/223.1-223.3.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:36
S446	2300	361/724-725.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:37
S447	0	S439 and (first near level).clm.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:42
S448	1866	S439 S440	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:42
S449	8334	S441 S442 S443	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:42
S450	10384	S446 S449	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:42
S451	5165	S444 S445	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:42
S452	3	S448 and (first near level).clm.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:43
S453	16	S449 and (first near level).clm.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:43
S454	25	S450 and (first near level).clm.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:43
S455	6	S451 and (first near level).clm.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:43
S456	3	S452 and (second near level).clm.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:43
S457	9	S453 and (second near level).clm.	US-PGPUB; USPAT;	OR	OFF	2016/05/16 14:43

			USOCR			
S458	16	S454 and (second near level).clm.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:43
S459	2	S455 and (second near level).clm.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:43
S460	21	S456 S457 S458 S459	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:43
S461	90	((("WATSON") near3 ("Christopher")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:43
S462	42	((("BEALL") near3 ("Christopher")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/05/16 14:44
S538	59	(US-20070182663-\$ or US-20070153461-\$ or US-20060028792-\$ or US-20030165048-\$ or US-20140145958-\$ or US-20130181905-\$ or US-20120169621-\$ or US-20120032887-\$ or US-20120169622-\$ or US-20120169623-\$ or US-20140132521-\$ or US-20110002096-\$ or US-20110038119-\$ or US-20040264118-\$ or US-20090322967-\$ or US-20110279687-\$ or US-20150193009-\$ or US-20140160654-\$ or US-20130308263-\$ or US-20130329394-\$ or US-20030038567-\$ or US-20140098485-\$ or US-20150116927-\$ or US-20130322011-\$ or US-20130170131-\$ or US-20060023408-\$).did. or (US-7074999-\$ or US-6710770-\$ or US-6650318-\$ or US-6614422-\$ or US-6266048-\$ or US-8284549-\$ or US-8228307-\$ or US-7016711-\$ or US-7436657-\$ or US-7864517-\$ or US-7542273-\$ or US-8941979-\$ or US-8792947-\$ or US-8660621-\$ or US-7136282-\$ or US-8264599-\$ or US-8848366-\$ or US-7948753-\$ or US-7686261-\$ or US-7612998-\$ or US-7450372-\$ or US-5323290-\$ or US-5642258-\$ or US-5293300-\$ or US-7113397-\$ or US-9274565-\$).did. or (US-9152169-\$ or US-8941985-\$ or US-9182794-\$ or US-6101088-\$ or US-6078496-\$ or US-8724312-\$ or US-8390997-\$).did.	US-PGPUB; USPAT	OR	OFF	2016/11/28 02:33
S539	3	S538 and clutch	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 02:34
S540	1368	361/679.41-679.44.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:20
S541	1149	361/679.54.ccls.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:21
S542	16	S540 and S541	US-	OR	OFF	2016/11/28



			PGPUB; USPAT; USOCR			03:21
S543	10	("20030045296"   "20040253979"   "20080150122"   "20090322472"   "20140160668"   "7668958"   "7957131"   "8321587"   "8634183"   "9081554").PN.	US- PGPUB; USPAT	OR	OFF	2016/11/28 03:21
S544	5	("20090323275"   "20130114203"   "6601179"   "6691197"   "7761641").PN.	US- PGPUB; USPAT	OR	OFF	2016/11/28 03:21
S545	15	S543 S544	US- PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:21
S546	267	haughton.xa.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:34
S547	771	haughton.xp.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:34
S548	1038	S546 S547	US- PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:34
S549	0	S542 and S548	US- PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:34
S550	0	S545 and S548	US- PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:35
S551	6913	G06F1/1632.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:43
S552	5855	G06F1/20.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:43
S553	2909	G06F1/203.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:43
S554	3834	G06F1/206.cpc.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:43
S555	16	("20080047694"   "20090194862"   "20110057303"   "20140168901"   "3746947"   "4765400"   "6223815"   "6729383"   "7215545"   "7578337"   "7849914"   "7968925"   "8391008"   "8587977"   "8957316"   "9241429").PN.	US- PGPUB; USPAT	OR	OFF	2016/11/28 03:45
S556	63	("4765400"   "4800956"   "5595240"   "5623394"   "5829514"   "5862038"   "6064573"   "6093961"   "6134783").PN. OR ("6223815").URPN.	US- PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:51

S557	17	("20080047694"   "20090194862"   "20110057303"   "20140168901"   "3746947"   "4765400"   "6223815"   "6233815"   "6729383"   "7215545"   "7578337"   "7849914"   "7968925"   "8391008"   "8587977"   "8957316"   "9241429").PN. OR ("9437797").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:52
S558	20	("20060104034"   "20070046304"   "20090002950"   "20110228484"   "5844784"   "5946191"   "6181556"   "6223815"   "6249435"   "6400565"   "6750084"   "6917525"   "7019266"   "7187076"   "7187083"   "7289328"   "7327569"   "7349221").PN. OR ("8957316").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:54
S559	63	("4765400"   "4800956"   "5595240"   "5623394"   "5829514"   "5862038"   "6064573"   "6093961"   "6134783").PN. OR ("6223815").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:56
S560	34	S559 and fin\$1	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 03:57
S561	1	"6275945".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 11:41
S562	1	"6223815".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 12:01
S563	1	"7362575".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 12:01
S564	2	S562 S563	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/28 12:01
S565	1	"7362575".pn.	USPAT	OR	OFF	2017/03/02 11:23
S566	76	(US-20070182663-\$ or US-20070153461-\$ or US-20060028792-\$ or US-20030165048-\$ or US-20140145958-\$ or US-20130181905-\$ or US-20120169621-\$ or US-20120032887-\$ or US-20120169622-\$ or US-20120169623-\$ or US-20140132521-\$ or US-20110002096-\$ or US-20110038119-\$ or US-20040264118-\$ or US-20090322967-\$ or US-20110279687-\$ or US-20150193009-\$ or US-20140160654-\$ or US-20130308263-\$ or US-20130329394-\$ or US-20030038567-\$ or US-20140098485-\$ or US-20150116927-\$ or US-20130322011-\$ or US-20130170131-\$ or US-20060023408-\$).did. or (US-20140168901-\$ or US-20110057303-\$).did. or (US-7074999-\$ or US-6710770-\$ or US-6650318-\$ or US-6614422-\$ or US-6266048-\$ or US-8284549-\$ or US-8228307-\$ or US-7016711-\$ or US-7436657-\$ or US-7864517-\$ or US-7542273-\$ or US-8941979-\$ or US-8792947-\$ or US-8660621-\$ or US-7136282-\$ or US-8264599-\$ or US-8848366-\$ or US-7948753-\$ or US-7686261-\$ or US-7612998-\$ or US-7450372-\$ or US-5323290-\$ or US-5642258-\$ or US-5293300-\$ or US-7113397-\$	US-PGPUB; USPAT	OR	OFF	2017/03/02 13:42

		or US-9274565-\$.did. or (US-9152169-\$ or US-8941985-\$ or US-9182794-\$ or US-6101088-\$ or US-6078496-\$ or US-8724312-\$ or US-8390997-\$ or US-6275945-\$ or US-6038128-\$ or US-9241429-\$ or US-8957316-\$ or US-8587977-\$ or US-7849914-\$ or US-6223815-\$ or US-4765400-\$ or US-7215545-\$ or US-9437797-\$ or US-6400565-\$ or US-6181556-\$ or US-8341842-\$ or US-8296947-\$ or US-7362575-\$.did.				
S567	27	S566 and pin\$1	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/02 13:43
S568	40	("4226281"   "4649990").PN. OR ("4765400").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/02 15:52
S569	26	S568 and pin\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/02 15:53
S570	1	"4226281".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/02 16:01
S571	1	S570 and pin\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/02 16:01
S572	83	(US-20070182663-\$ or US-20070153461-\$ or US-20060028792-\$ or US-20030165048-\$ or US-20140145958-\$ or US-20130181905-\$ or US-20120169621-\$ or US-20120032887-\$ or US-20120169622-\$ or US-20120169623-\$ or US-20140132521-\$ or US-20110002096-\$ or US-20110038119-\$ or US-20040264118-\$ or US-20090322967-\$ or US-20110279687-\$ or US-20150193009-\$ or US-20140160654-\$ or US-20130308263-\$ or US-20130329394-\$ or US-20030038567-\$ or US-20140098485-\$ or US-20150116927-\$ or US-20130322011-\$ or US-20130170131-\$ or US-20060023408-\$.did. or (US-20140168901-\$ or US-20110057303-\$.did. or (US-7074999-\$ or US-6710770-\$ or US-6650318-\$ or US-6614422-\$ or US-6266048-\$ or US-8284549-\$ or US-8228307-\$ or US-7016711-\$ or US-7436657-\$ or US-7864517-\$ or US-7542273-\$ or US-8941979-\$ or US-8792947-\$ or US-8660621-\$ or US-7136282-\$ or US-8264599-\$ or US-8848366-\$ or US-7948753-\$ or US-7686261-\$ or US-7612998-\$ or US-7450372-\$ or US-5323290-\$ or US-5642258-\$ or US-5293300-\$ or US-7113397-\$ or US-9274565-\$.did. or (US-9152169-\$ or US-8941985-\$ or US-9182794-\$ or US-6101088-\$ or US-6078496-\$ or US-8724312-\$ or US-8390997-\$ or US-6275945-\$ or US-6038128-\$ or US-9241429-\$ or US-8957316-\$ or US-8587977-\$ or US-7849914-\$ or US-6223815-\$ or US-4765400-\$ or US-7215545-\$ or US-9437797-\$ or US-6400565-\$ or US-6181556-\$ or US-8341842-\$ or US-8296947-\$ or US-7362575-\$ or US-8089767-\$ or US-6065530-\$ or US-5705850-\$ or US-5673177-\$ or	US-PGPUB; USPAT	OR	OFF	2017/03/02 16:23

		US-5170319-\$).did. or (US-5161089-\$ or US-4226281-\$).did.				
S573	5	S572 and (heat\$3 near pip\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/02 16:23
S574	79	("3128419"   "3387191"   "3390717"   "3993123"   "4153107"   "4156458").PN. OR ("4226281").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/02 16:25
S575	8	S574 and (heat\$3 near pip\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/02 16:26
S576	5	S575 and pin\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/02 16:26
S577	57	((("BURR") near3 ("JEREMY")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/20 11:09
S578	75	((("BROWNING") near3 ("DAVID")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/20 11:09
S579	53	((("MCEUEN") near3 ("SHAWN")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/20 11:09
S580	105	((("MACDONALD") near3 ("MARK")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/20 11:09
S581	7	((("COAKLEY") near3 ("MATTHEW")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/03/20 11:10
S582	117	S577 S578 S579 S580 S581	USPAT	OR	OFF	2017/03/20 11:10
S583	3332	G06F1/1632.cpc.	USPAT	OR	OFF	2017/03/20 11:34
S584	2646	G06F1/20.cpc.	USPAT	OR	OFF	2017/03/20 11:34
S585	1370	G06F1/203.cpc.	USPAT	OR	OFF	2017/03/20 11:34
S586	1781	G06F1/206.cpc.	USPAT	OR	OFF	2017/03/20 11:34
S587	862	361/679.41-679.44.ccls.	USPAT	OR	OFF	2017/03/20 11:34
S588	734	361/679.54.ccls.	USPAT	OR	OFF	2017/03/20 11:34
S589	503	361/701.ccls.	USPAT	OR	OFF	2017/03/20 11:34
S590	672	361/702.ccls.	USPAT	OR	OFF	2017/03/20 11:34
S591	1258	361/709.ccls.	USPAT	OR	OFF	2017/03/20

						11:34
S592	1028	361/710.ccls.	USPAT	OR	OFF	2017/03/20 11:35
S633	8	((("COAKLEY" near3 ("MATTHEW") near3 ("D")))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/08 15:53
S634	130	((("MACDONALD" near3 ("MARK")))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/08 15:53
S635	38	((("MCEUEN" near3 ("SHAWN") near3 ("S")))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/08 15:53
S636	52	((("BROWNING" near3 ("DAVID") near3 ("W")))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/08 15:54
S637	64	((("BURR" near3 ("JEREMY")))).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2018/07/08 15:54
S638	862	361/679.41-679.44.CCLS.	USPAT	OR	OFF	2018/07/08 15:54
S639	734	361/679.54.CCLS.	USPAT	OR	OFF	2018/07/08 15:54
S640	503	361/701.CCLS.	USPAT	OR	OFF	2018/07/08 15:54
S641	672	361/702.CCLS.	USPAT	OR	OFF	2018/07/08 15:54
S642	1258	361/709.CCLS.	USPAT	OR	OFF	2018/07/08 15:54
S643	1028	361/710.CCLS.	USPAT	OR	OFF	2018/07/08 15:54
S644	3825	G06F1/1632.CPC.	USPAT	OR	OFF	2018/07/08 15:54
S645	3007	G06F1/20.CPC.	USPAT	OR	OFF	2018/07/08 15:54
S646	1537	G06F1/203.CPC.	USPAT	OR	OFF	2018/07/08 15:54
S647	2074	G06F1/206.CPC.	USPAT	OR	OFF	2018/07/08 15:54
S648	9567	S644 S645 S646 S647	USPAT	OR	OFF	2018/07/08 15:55
S649	4153	S638 S639 S640 S641 S642 S643	USPAT	OR	OFF	2018/07/08 15:55
S650	84	(US-20070182663-\$ or US-20070153461-\$ or US-20060028792-\$ or US-20030165048-\$ or US-20140145958-\$ or US-20130181905-\$ or US-20120169621-\$ or US-20120032887-\$ or US-20120169622-\$ or US-20120169623-\$ or US-20140132521-\$ or US-20110002096-\$ or US-20110038119-\$ or US-20040264118-\$ or US-20090322967-\$ or US-20110279687-\$ or US-20150193009-\$ or US-20140160654-\$ or US-20130308263-\$ or US-20130329394-\$ or US-	US-PGPUB; USPAT	OR	OFF	2019/02/15 13:43

		20030038567-\$ or US-20140098485-\$ or US-20150116927-\$ or US-20130322011-\$ or US-20130170131-\$ or US-20060023408-\$).did. or (US-20140168901-\$ or US-20110057303-\$).did. or (US-7074999-\$ or US-6710770-\$ or US-6650318-\$ or US-6614422-\$ or US-6266048-\$ or US-8284549-\$ or US-8228307-\$ or US-7016711-\$ or US-7436657-\$ or US-7864517-\$ or US-7542273-\$ or US-8941979-\$ or US-8792947-\$ or US-8660621-\$ or US-7136282-\$ or US-8264599-\$ or US-8848366-\$ or US-7948753-\$ or US-7686261-\$ or US-7612998-\$ or US-7450372-\$ or US-5323290-\$ or US-5642258-\$ or US-5293300-\$ or US-7113397-\$ or US-9274565-\$).did. or (US-9152169-\$ or US-8941985-\$ or US-9182794-\$ or US-6101088-\$ or US-6078496-\$ or US-8724312-\$ or US-8390997-\$ or US-6275945-\$ or US-6038128-\$ or US-9241429-\$ or US-8957316-\$ or US-8587977-\$ or US-7849914-\$ or US-6223815-\$ or US-4765400-\$ or US-7215545-\$ or US-9437797-\$ or US-6400565-\$ or US-6181556-\$ or US-8341842-\$ or US-8296947-\$ or US-7362575-\$ or US-8089767-\$ or US-6065530-\$ or US-5705850-\$ or US-5673177-\$ or US-5170319-\$).did. or (US-5161089-\$ or US-4226281-\$ or US-7212409-\$).did.				
S651	43	S650 and signal\$1	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/15 13:44
S652	29	S651 and sensor\$1	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/15 13:44
S653	5	S652 and (temperature\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/15 13:44
S654	1	S652 and (temperature\$1 near4 controll\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/15 13:45
S655	1	S652 and (temperature\$1 near4 controll\$4)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/15 13:45
S656	1	"20180187051"	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 22:35
S657	0	("2018/0187051").URPN.	USPAT	OR	OFF	2019/02/18 22:36
S658	199	((("20180187051") or ("20070095012") or ("20170057193") or ("8042312") or ("20100071300") or ("8418730") or ("20130284858") or ("20120151868") or ("8579018") or ("8745958") or ("9017806") or ("20130273347") or ("9797661") or ("20170059256") or ("20160208476") or ("20130143060") or ("9539773") or ("20040154252") or ("20110250385") or ("20150306794") or ("9745736") or ("7963085") or	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 22:37

("9878472") or ("20150298443") or  
("20160214284") or ("9884436") or ("9751287") or  
("20180058531") or ("9890827") or  
("20160160952") or ("20150111158") or  
("9034563") or ("9405067") or ("20140272275") or  
("20100300669") or ("9453604") or  
("20080226870") or ("8247333") or  
("20140037873") or ("9862151") or ("9527261") or  
("9566758") or ("20170183870") or ("8353240") or  
("8800641") or ("8663539") or ("9457434") or  
("20160089753") or ("20160046095") or  
("20160325520") or ("20160084578") or  
("20090286100") or ("9352529") or  
("20120285114") or ("8650756") or ("10189226")  
or ("8176635") or ("8573289") or ("20140252674")  
or ("20160250820") or ("9528776") or  
("20090282773") or ("9809002") or  
("20130302633") or ("8272309") or  
("20040209145") or ("20170080673") or  
("20180341181") or ("20180113385") or  
("8155496") or ("9731471") or ("10061201") or  
("20170274619") or ("20050074593") or  
("7393577") or ("8419883") or ("20110229823") or  
("20190040631") or ("20130273308") or  
("20100266833") or ("9375864") or  
("20010031350") or ("9005847") or  
("20160056474") or ("20170014895") or  
("20110269001") or ("10061078") or ("8453717")  
or ("10104773") or ("10105941") or  
("20170215286") or ("9783324") or ("9116428") or  
("20160059970") or ("20180376595") or  
("20150306861") or ("20070132429") or  
("4757665") or ("6740381") or ("9738013") or  
("20190051789") or ("20170217088") or  
("7951483") or ("20160027425") or  
("20170010720") or ("10055076") or  
("20130000247") or ("9644655") or ("8367306") or  
("20070261787") or ("20160039168") or  
("20160126373") or ("20160257396") or  
("7670527") or ("20160089868") or  
("20080292854") or ("4079560") or ("7972698") or  
("20190019489") or ("5028474") or  
("20160059897") or ("9770881") or  
("20060137282") or ("20160208372") or  
("20160126363") or ("4120330") or  
("20130303067") or ("9598111") or  
("20170136738") or ("20160039193") or  
("20020124518").PN. or ("9321241") or  
("20110117315") or ("6170560") or ("9845600") or  
("20050208374") or ("20140117012") or  
("6560942") or ("20150307044") or ("9511540") or  
("20160194070") or ("20160126361") or  
("20030029120") or ("6076324") or ("9376074") or  
("7424967") or ("9102431") or ("10183736") or  
("20160200074") or ("5466086") or  
("20140216786") or ("6345482") or  
("20180095209") or ("20180114516") or  
("20130276308") or ("5788396") or ("5807015") or  
("10086587") or ("9236512") or ("5873672") or  
("8741500") or ("20100221633") or ("8474764") or  
("20150028352") or ("20160171271") or  
("20180361510") or ("20040032637") or  
("20180281339") or ("8049193") or ("9328511") or  
("8993896") or ("9456901") or ("9576177") or

		("20180122352") or ("20110266400") or ("20110269050") or ("20140227621") or ("20080124612") or ("20060080835") or ("9733429") or ("7364928") or ("5924815") or ("20060246619") or ("3998173") or ("20060181794") or ("8302363") or ("20020195624") or ("7316856") or ("20180323333") or ("20120273031") or ("20040137308") or ("7183582") or ("20170077343") or ("20080002460") or ("20180015684") or ("20030045032") or ("20080029879") or ("6472758") or ("10090430")).PN.				
S659	24	S658 AND DISPLAY	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 22:38
S660	3179	g06f1/1652.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:09
S661	1443	g06f1/1641.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:10
S662	4179	S660 S661	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:10
S663	891	g09f9/301.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:13
S664	1761	c09j7/10,00.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:15
S665	4903	c09j7/385,381,38,30.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:18
S666	1	S662 and S664	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:18
S667	5	S662 and S665	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:18
S668	1	S663 and S664	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:18
S669	2	S663 and S665	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:18
S670	6	S666 S667 S668 S669	US-PGPUB; USPAT;	OR	OFF	2019/02/18 23:18



			USOCR			
S671	1	"20160303843"	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:22
S672	7	("20050074578"   "20090169862"   "3984497"   "20130316219"   "20140349100"   "20120257129"   "20140267950").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:24
S673	2	"20140267950"	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:26
S674	3	("20120105344"   "20120162099").PN. OR ("9141144").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:26
S675	125	S662 and (lattice or microlattice or (micro near3 lattice))	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:32
S676	9	S663 and (lattice or microlattice or (micro near3 lattice))	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:32
S677	119	S675 not S676	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:32
S678	58	S677 and (glue or adhesiv\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:36
S679	58	S677 and (glu\$3 or adhesiv\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:36
S680	1	S662 and (truss or (micro near truss) or micro-truss)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:47
S681	5	S663 and (truss or (micro near truss) or micro-truss)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:47
S682	5	S680 S681	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:47
S683	1031	g02b6/12002.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:50
S684	177	S683 AND DISPLAY\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:50
S685	13	S684 and (frame with adhesiv\$3)	US-	OR	OFF	2019/02/18

			PGPUB; USPAT; USOCR			23:51
S686	68	S684 and (glu\$3 or adhesiv\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:52
S687	0	S662 and ((micro near lattice) or microlattice or micro-lattice)	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:56
S688	0	S663 and ((micro near lattice) or microlattice or micro-lattice)	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:56
S689	0	S663 and ((micro near4 lattice) or microlattice or micro-lattice)	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:56
S690	13	((flex\$4 or bend\$4) near display\$3) and ((micro near4 lattice) or microlattice or micro-lattice)	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:56
S691	12	((flex\$4 or bend\$4) near display\$3) and ((micro near lattice) or microlattice or micro-lattice)	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:57
S692	61	((flex\$4 or bend\$4) near display\$3) and (truss or (micro near truss) or micro-truss)	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:57
S693	5	((flex\$4 or bend\$4) near display\$3) and ((micro near truss) or micro-truss)	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:57
S694	17	S690 S693	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/18 23:57
S695	55	S692 not S694	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:16
S696	71	(fram\$3) and ((micro near truss) or micro-truss)	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:17
S697	0	S695 and S696	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:17
S698	1	S694 and S696	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:17
S699	1	S696 and ((flex\$4 or bend\$4) near display\$3)	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:18

S700	4	S696 and ((flex\$4 or bend\$4) near4 display\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:18
S701	10	S696 and (display\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:19
S702	468	((micro near lattice) or microlattice or micro-lattice) or ((micro near truss) or micro-truss)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:21
S703	178	S702 and wir\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:21
S704	148	S703 and (glu\$3 or adhesive\$1 or polymer\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:22
S705	32	S703 and ((glu\$3 or adhesive\$1 or polymer\$1) with (fram\$3 or support\$3 or chassis))	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:22
S706	6	S703 and ((glu\$3 or adhesive\$1 or polymer\$1) near3 (fram\$3 or support\$3 or chassis))	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:22
S707	4	S706 and display\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:22
S708	2	S706 not S707	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:24
S709	196	S663 and ((micro near lattice) or microlattice or micro-lattice) or ((micro near truss) or micro-truss)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:32
S710	196	S664 and ((micro near lattice) or microlattice or micro-lattice) or ((micro near truss) or micro-truss)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:32
S711	196	S665 and ((micro near lattice) or microlattice or micro-lattice) or ((micro near truss) or micro-truss)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:32
S712	196	S709 S710 S711	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:33
S713	66	S712 and wir\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 00:33
S714	34	S713 and adhesiv\$3	US-PGPUB; USPAT;	OR	OFF	2019/02/19 00:33

			USOCR			
S715	115	(US-20070182663-\$ or US-20070153461-\$ or US-20060028792-\$ or US-20030165048-\$ or US-20140145958-\$ or US-20130181905-\$ or US-20120169621-\$ or US-20120032887-\$ or US-20120169622-\$ or US-20120169623-\$ or US-20140132521-\$ or US-20110002096-\$ or US-20110038119-\$ or US-20040264118-\$ or US-20090322967-\$ or US-20110279687-\$ or US-20150193009-\$ or US-20140160654-\$ or US-20130308263-\$ or US-20130329394-\$ or US-20030038567-\$ or US-20140098485-\$ or US-20150116927-\$ or US-20130322011-\$ or US-20130170131-\$ or US-20060023408-\$).did. or (US-20140168901-\$ or US-20110057303-\$ or US-20170010720-\$ or US-20130273347-\$ or US-20040032637-\$ or US-20160303843-\$ or US-20140267950-\$ or US-20120105344-\$ or US-20160224068-\$ or US-20160155965-\$ or US-20150220118-\$ or US-20180153049-\$ or US-20150144920-\$ or US-20180074553-\$ or US-20160103539-\$ or US-20160041428-\$ or US-20150346866-\$ or US-20160046769-\$ or US-20120138893-\$ or US-20160208476-\$ or US-20160047980-\$ or US-20080226870-\$ or US-20160308218-\$ or US-20160214284-\$ or US-20160208372-\$ or US-20160194762-\$ or US-20150298443-\$).did. or (US-20130065122-\$).did. or (US-7074999-\$ or US-6710770-\$ or US-6650318-\$ or US-6614422-\$ or US-6266048-\$ or US-8284549-\$ or US-8228307-\$ or US-7016711-\$ or US-7436657-\$ or US-7864517-\$ or US-7542273-\$ or US-8941979-\$ or US-8792947-\$ or US-8660621-\$ or US-7136282-\$ or US-8264599-\$ or US-8848366-\$ or US-7948753-\$ or US-7686261-\$ or US-7612998-\$ or US-7450372-\$ or US-5323290-\$ or US-5642258-\$ or US-5293300-\$ or US-7113397-\$ or US-9274565-\$).did. or (US-9152169-\$ or US-8941985-\$ or US-9182794-\$ or US-6101088-\$ or US-6078496-\$ or US-8724312-\$ or US-8390997-\$ or US-6275945-\$ or US-6038128-\$ or US-9241429-\$ or US-8957316-\$ or US-8587977-\$ or US-7849914-\$ or US-6223815-\$ or US-4765400-\$ or US-7215545-\$ or US-9437797-\$ or US-6400565-\$ or US-6181556-\$ or US-8341842-\$ or US-8296947-\$ or US-7362575-\$ or US-8089767-\$ or US-6065530-\$ or US-5705850-\$ or US-5673177-\$ or US-5170319-\$).did. or (US-5161089-\$ or US-4226281-\$ or US-7212409-\$ or US-8663539-\$ or US-10061078-\$ or US-8367306-\$ or US-9453604-\$ or US-9770881-\$).did.	US-PGPUB; USPAT	OR	OFF	2019/02/19 01:14
S716	39	S715 and adhesiv\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:14
S717	8312	h01151/0097,5246.cpc.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:15
S718	200	S717 and ((micro near lattice) or microlattice or micro-lattice) or ((micro near truss) or micro-truss)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:15

S719	0	S718 and siplay\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:16
S720	45	S718 and display\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:16
S721	36	S720 and (fram\$3 or chassis or support\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:16
S722	23	S721 and adhesiv\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:16
S723	0	("2017/0080673").URPN.	USPAT	OR	OFF	2019/02/19 01:20
S724	1	"7382959".pn.	USPAT	OR	OFF	2019/02/19 01:22
S725	46	S717 and (((micro near lattice) or microlattice or micro-lattice) near core\$1) or (((micro near truss) or micro-truss) near core\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:25
S726	24	S725 and display\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:26
S727	23	S726 and adhesiv\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:26
S728	21	S727 and (fram\$3 or chassis or support\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:26
S729	46	S663 and (((micro near lattice) or microlattice or micro-lattice) near core\$1) or (((micro near truss) or micro-truss) near core\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:27
S730	46	S664 and (((micro near lattice) or microlattice or micro-lattice) near core\$1) or (((micro near truss) or micro-truss) near core\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:27
S731	46	S665 and (((micro near lattice) or microlattice or micro-lattice) near core\$1) or (((micro near truss) or micro-truss) near core\$1)	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:27
S732	46	S729 S730 S731	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:27
S733	24	S732 and display\$3	US-PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:27
S734	23	S733 and adhesiv\$3	US-PGPUB;	OR	OFF	2019/02/19 01:27

## EAST Search History

			USPAT; USOCR			
S735	2	S734 not S722	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:27
S736	58	((micro near lattice) or microlattice or micro-lattice) near core\$1) or (((micro near truss) or micro-truss) near core\$1)	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:28
S737	25	S736 and display\$3	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:28
S738	24	S737 and adhesiv\$3	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:28
S739	1	S738 not S734	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:29
S740	44	S736 and adhesiv\$3	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:29
S741	21	S740 not S734	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 01:29
S742	1	"6275945".PN.	US- PGPUB; USPAT; USOCR	OR	OFF	2019/02/19 10:50

2/ 19/ 2019 1:42:04 PM

C:\Users\ahaughton\Documents\EAST\Workspaces\15\_\ 15\_857883\ Search2\_19.wsp

**PART B - FEE(S) TRANSMITTAL**

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

87627 7590 02/27/2019  
 Mossman, Kumar & Tyler PC  
 P.O. Box 421239  
 Houston, TX 77242

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

<b>Margaret A. Pruitt-Johns</b>	(Typed or printed name)
<b>/Margaret A. Pruitt-Johns/</b>	(Signature)
<b>March 1, 2019</b>	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/852,000	12/22/2017	Walter G. Mayfield	MAYG-1001-WO-USC4	4536

TITLE OF INVENTION: APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1000	\$0.00	\$0.00	\$1000	05/28/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
HAUGHTON, ANTHONY MICHAEL	2835	361-679010

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).  
 Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
 "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list  
 (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, **1 Mossman, Kumar & Tyler, PC**  
 (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. **2 \_\_\_\_\_**  
**3 \_\_\_\_\_**

**3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)**

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: **GUI GLOBAL PRODUCTS, LTD.** (B) RESIDENCE: (CITY and STATE OR COUNTRY) **HOUSTON, TEXAS**

Please check the appropriate assignee category or categories (will not be printed on the patent):  Individual  Corporation or other private group entity  Government

4a. Fees submitted:  Issue Fee  Publication Fee (if required)  Advance Order - # of Copies \_\_\_\_\_

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

Electronic Payment via EFS-Web  Enclosed check  Non-electronic payment by credit card (Attach form PTO-2038)  
 The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. **50-4920**

**5. Change in Entity Status** (from status indicated above)

Applicant certifying micro entity status. See 37 CFR 1.29  
 Applicant asserting small entity status. See 37 CFR 1.27  
 Applicant changing to regular undiscounted fee status.

**NOTE:** Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.  
**NOTE:** If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.  
**NOTE:** Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

**NOTE:** This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Gene L. Tyler/ Date March 1, 2019  
 Typed or printed name Gene L. Tyler Registration No. 35,395

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	35297774
<b>Application Number:</b>	15852000
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	4536
<b>Title of Invention:</b>	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF
<b>First Named Inventor/Applicant Name:</b>	Walter G. Mayfield
<b>Customer Number:</b>	87627
<b>Filer:</b>	Gene Tyler/Margaret Pruitt-Johns
<b>Filer Authorized By:</b>	Gene Tyler
<b>Attorney Docket Number:</b>	MAYG-1001-WO-USC4
<b>Receipt Date:</b>	01-MAR-2019
<b>Filing Date:</b>	22-DEC-2017
<b>Time Stamp:</b>	12:16:48
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
------------------------	----

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	MAYG_1001WOUSC4_IssueFee _filed.pdf	182839  <small>178545e53c15e02836dbcc1cc07f6c6be86f50cf</small>	no	1

### Warnings:



<b>Information:</b>	
<b>Total Files Size (in bytes):</b>	182839
<p><b>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.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  <b>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.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  <b>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.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  <b>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.</b></p>	

**PART B - FEE(S) TRANSMITTAL**

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

87627 7590 02/27/2019  
 Mossman, Kumar & Tyler PC  
 P.O. Box 421239  
 Houston, TX 77242

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

<b>Margaret A. Pruitt-Johns</b>	(Typed or printed name)
<b>/Margaret A. Pruitt-Johns/</b>	(Signature)
<b>March 1, 2019</b>	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/852,000	12/22/2017	Walter G. Mayfield	MAYG-1001-WO-USC4	4536

TITLE OF INVENTION: APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1000	\$0.00	\$0.00	\$1000	05/28/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
HAUGHTON, ANTHONY MICHAEL	2835	361-679010

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).  
 Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
 "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list  
 (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, **1 Mossman, Kumar & Tyler, PC**  
 (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. **2 \_\_\_\_\_**  
**3 \_\_\_\_\_**

**3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)**

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: **GUI GLOBAL PRODUCTS, LTD.** (B) RESIDENCE: (CITY and STATE OR COUNTRY) **HOUSTON, TEXAS**

Please check the appropriate assignee category or categories (will not be printed on the patent):  Individual  Corporation or other private group entity  Government

4a. Fees submitted:  Issue Fee  Publication Fee (if required)  Advance Order - # of Copies \_\_\_\_\_

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

Electronic Payment via EFS-Web  Enclosed check  Non-electronic payment by credit card (Attach form PTO-2038)  
 The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. **50-4920**

**5. Change in Entity Status** (from status indicated above)

Applicant certifying micro entity status. See 37 CFR 1.29  
 Applicant asserting small entity status. See 37 CFR 1.27  
 Applicant changing to regular undiscounted fee status.

**NOTE:** Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.  
**NOTE:** If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.  
**NOTE:** Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

**NOTE:** This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Gene L. Tyler/ Date March 1, 2019  
 Typed or printed name Gene L. Tyler Registration No. 35,395

## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>	15852000			
<b>Filing Date:</b>	22-Dec-2017			
<b>Title of Invention:</b>	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF			
<b>First Named Inventor/Applicant Name:</b>	Walter G. Mayfield			
<b>Filer:</b>	Gene Tyler/Margaret Pruitt-Johns			
<b>Attorney Docket Number:</b>	MAYG-1001-WO-USC4			
Filed as Large Entity				
<b>Filing Fees for Utility under 35 USC 111(a)</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
UTILITY APPL ISSUE FEE	1501	1	1000	1000

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Extension-of-Time:</b>				
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>1000</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	35298133
<b>Application Number:</b>	15852000
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	4536
<b>Title of Invention:</b>	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF
<b>First Named Inventor/Applicant Name:</b>	Walter G. Mayfield
<b>Customer Number:</b>	87627
<b>Filer:</b>	Gene Tyler/Margaret Pruitt-Johns
<b>Filer Authorized By:</b>	Gene Tyler
<b>Attorney Docket Number:</b>	MAYG-1001-WO-USC4
<b>Receipt Date:</b>	01-MAR-2019
<b>Filing Date:</b>	22-DEC-2017
<b>Time Stamp:</b>	12:38:09
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 1000
RAM confirmation Number	030119INTEFSW12385400
Deposit Account	504920
Authorized User	Margaret Pruitt-Johns

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

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)  
 37 CFR 1.20 (Post Issuance fees)  
 37 CFR 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	Issue Fee Payment (PTO-85B)	MAYG_1001WOUSC4_IssueFee _filed.pdf	182839  178545e53c15e02836dbcc1cc07f6c6be86f50cf	no	1

**Warnings:**

**Information:**

2	Fee Worksheet (SB06)	fee-info.pdf	30142  0f7196e342db946c9ebfa391d7ec76e5a70d5f7b	no	2
---	----------------------	--------------	---	----	---

**Warnings:**

**Information:**

<b>Total Files Size (in bytes):</b>	212981
-------------------------------------	--------

**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.**

**PART B - FEE(S) TRANSMITTAL**

*M*

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**

By fax, send to: (571)-273-2885

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

87627 7590 02/27/2019  
**Mossman, Kumar & Tyler PC**  
**P.O. Box 421239**  
**Houston, TX 77242**



Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

<b>Margaret A. Pruitt-Johns</b>	(Typed or printed name)
<b>/Margaret A. Pruitt-Johns/</b>	(Signature)
<b>March 1, 2019</b>	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/852,000	12/22/2017	Walter G. Mayfield	MAYG-1001-WO-USC4	4536

TITLE OF INVENTION: APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1000	\$0.00	\$0.00	\$1000	05/28/2019

EXAMINER	ART UNIT	CLASS-SUBCLASS
HAUGHTON, ANTHONY MICHAEL	2835	361-679010

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 **Mossman, Kumar & Tyler, PC**

2 \_\_\_\_\_

3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

**GUI GLOBAL PRODUCTS, LTD.**

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

**HOUSTON, TEXAS**

Please check the appropriate assignee category or categories (will not be printed on the patent):  Individual  Corporation or other private group entity  Government

4a. Fees submitted:  Issue Fee  Publication Fee (if required)  Advance Order - # of Copies \_\_\_\_\_

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

Electronic Payment via EFS-Web  Enclosed check  Non-electronic payment by credit card (Attach form PTO-2038)

The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. **50-4920**

5. Change in Entity Status (from status indicated above)

- Applicant certifying micro entity status. See 37 CFR 1.29
- Applicant asserting small entity status. See 37 CFR 1.27
- Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature **/Gene L. Tyler/**

Date **March 1, 2019**

Typed or printed name **Gene L. Tyler**

Registration No. **35,395**

0  
0  
0 United States Patent and Trademark Office

0 - Sales Receipt -  
0

0  
0 03/01/2019 INTEFSW 00013027 15852000  
0

0  
0 01 FC:1501

1000.00 OP  
0





# 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](http://www.uspto.gov)

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/852,000	04/16/2019	10259021	MAYG-1001-WO-USC4	4536

87627 7590 03/27/2019  
Mossman, Kumar & Tyler PC  
P.O. Box 421239  
Houston, TX 77242

## ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

### **Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)** (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Walter G. Mayfield, Houston, TX;  
GUI GLOBAL PRODUCTS, LTD., Houston, TX;  
Daniel Martin Valdez, Kingwood, TX;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit [SelectUSA.gov](http://SelectUSA.gov).

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:	§	US Patent No. 10,259,021
Mayfield <i>et al.</i>	§	Issued: April 16, 2019
	§	
Application No. 15/852,000	§	Examiner: Anthony M. Haughton
	§	
Filed: Dec 22, 2017	§	Confirmation No.: 4536
	§	
For: APPARATUS FOR CLEANING	§	Attorney Docket No.: MAYG-1001-USC4
VIEW SCREENS AND LENSES AND	§	
METHOD FOR THE USE THEREOF	§	

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313.1450

Attn: Certificate of Correction Branch

**REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT  
(37 CFR 1.323)**

Applicants request that a Certificate of Correction be issued for the error in the above-identified patent set forth on the attached form PTO/SB/44. The error appears in the Claims and is a clerical error of a minor character on the part of the Applicants. It is certified that the error occurred in good faith. The correction does not involve such changes in the patent as would constitute new matter or would require reexamination.

The correction is being made to the following lines:

In the claims, at claim 1, column 22, line 1, delete “complimentary” and substitute therefor  
--complementary--

The required fee of \$150.00 for filing a Certificate of Correction is being submitted herewith. The Commissioner is hereby authorized to charge any additional fees associated with any of the papers submitted herewith or to credit any overpayment to Deposit Account No. 50-4920 (MAYG-1001-USC4).

Respectfully submitted,

Dated: June 19, 2020

/Gene L. Tyler/  
Gene L. Tyler  
Registration No. 35,395  
Mossman Kumar & Tyler, PC  
P.O. Box 421239  
Houston, TX 77242  
Telephone: (281) 404-4851  
Facsimile: (281) 404-4468

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page  1  of  1 

PATENT NO. : 10,259,021

APPLICATION NO.: 15/852,000

ISSUE DATE : April 16, 2019

INVENTOR(S) : Walter G. Mayfield; Daniel Martin Valdez

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the claims, at claim 1, column 22, line 1, delete "complimentary" and substitute therefor --complementary--

**MAILING ADDRESS OF SENDER (Please do not use Customer Number below):**

Mossman, Kumar, and Tyler, PC  
P.O. Box 421239  
Houston, Texas 77242

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. 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 1.0 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: Attention Certificate of Corrections Branch, 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.*

## 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 disclosure of these records is required by the Freedom of Information Act.
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 inspection 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

<b>Application Number:</b>	15852000			
<b>Filing Date:</b>	22-Dec-2017			
<b>Title of Invention:</b>	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF			
<b>First Named Inventor/Applicant Name:</b>	Walter G. Mayfield			
<b>Filer:</b>	Gene Tyler			
<b>Attorney Docket Number:</b>	MAYG-1001-WO-USC4			
Filed as Large Entity				
<b>Filing Fees for Utility under 35 USC 111(a)</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
CERTIFICATE OF CORRECTION	1811	1	150	150

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Extension-of-Time:</b>				
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>150</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	39779643
<b>Application Number:</b>	15852000
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	4536
<b>Title of Invention:</b>	APPARATUS FOR CLEANING VIEW SCREENS AND LENSES AND METHOD FOR THE USE THEREOF
<b>First Named Inventor/Applicant Name:</b>	Walter G. Mayfield
<b>Customer Number:</b>	87627
<b>Filer:</b>	Gene Tyler
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	MAYG-1001-WO-USC4
<b>Receipt Date:</b>	19-JUN-2020
<b>Filing Date:</b>	22-DEC-2017
<b>Time Stamp:</b>	22:25:26
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 150
RAM confirmation Number	E20206IM27108066
Deposit Account	
Authorized User	

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



--	--	--	--	--	--

**File Listing:**

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Certificate of Correction	US10259021_request_for_COC.pdf	69483 c13b68d0eb29b7c83262d676dbd7884ab33559ee	no	2

**Warnings:**

**Information:**

2	Request for Certificate of Correction	10259021_COC.pdf	153226 ff0679fd14931573b6f9de4697c274ee704fc978	no	2
---	---------------------------------------	------------------	--	----	---

**Warnings:**

**Information:**

3	Fee Worksheet (SB06)	fee-info.pdf	29858 65bde035cff4968fccae22fac82cee857c44bbdf	no	2
---	----------------------	--------------	---	----	---

**Warnings:**

**Information:**

<b>Total Files Size (in bytes):</b>	252567
-------------------------------------	--------

**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  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 10,259,021 B2  
APPLICATION NO. : 15/852000  
DATED : April 16, 2019  
INVENTOR(S) : Walter G. Mayfield and Daniel Martin Valdez

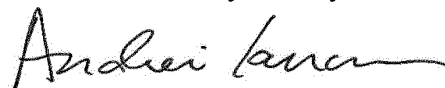
Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims

At Claim 1, Column 22, Line 1, delete "complimentary" and substitute therefor --complementary--

Signed and Sealed this  
Fourteenth Day of July, 2020



Andrei Iancu  
*Director of the United States Patent and Trademark Office*