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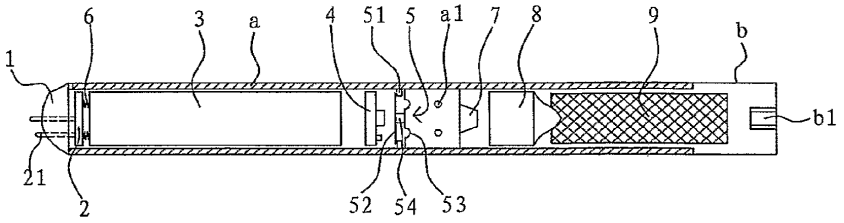
(54) **Title:** AEROSOL ELECTRONIC CIGRARETTE

(54) **发明名称:** 一种雾化电子烟



(57) **Abstract:** An aerosol electronic cigrarette includes a battery assembly,an atomizer assembly and a cigarette bottle assembly and also includes a shell(a) which is hollow and integrally formed. Said battery assembly connects with said atomizer assembly and both are located in said shell(a). Said cigarette bottle assembly is located in one end of the shell(a),which is detachable. Said cigarette bottle assembly fits with said atomizer assembly. Said shell(a) has through-air-inlets(a1).

(57) 摘要:

一种雾化电子烟, 包括电池组件、雾化器组件和烟瓶组件, 还包括一中空的一体成形的壳体(a), 所述电池组件与所述雾化器组件相连接, 并容置于所述壳体(a)内, 所述烟瓶组件可拆卸的安装于所述壳体(a)的一端, 并与其内的所述雾化器组件相配合, 所述壳体(a)上贯穿的开有进气孔(a1)。

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一种雾化电子烟

技术领域

本发明涉及一种电子烟，特别是一种不含有焦油、只含烟碱（尼古丁）的雾化电子烟。

背景技术

在当今“吸烟有害健康”已成为常识的情况下，全世界目前仍有 10 亿人吸烟，而且每年这个数字还在扩大。2003 年 3 月 1 日世界卫生组织（WHO）通过的第一个国际禁烟协定《烟草控制框架公约》，据 WHO 提供的数字表明，吸烟每年造成 490 万人死亡，尽管吸烟可导致严重的呼吸系统疾病和癌症，让吸烟者完全戒烟是极其困难的事。

香烟的有效成分是烟碱（即尼古丁），吸烟时烟碱随着香烟燃烧产生的大量焦油雾滴进入肺泡后被迅速吸收，烟碱被吸收入血后作用于中枢神经系统的受体上，引起类似兴奋剂的“陶醉感”，如吸烟者所经历的头晕目眩或飘飘然的感觉。

烟碱是小分子生物碱，在小剂量下对人体基本无害，而且在血液中的半衰期极短。烟草的有害物质主要是焦油，烟草焦油是由数千种成分组成，其中有数十种成分是致癌物。目前证实被动吸烟对不吸烟者的危害更大。

为了寻找只含烟碱而不含有害焦油的香烟代用品，有许多发明是用较纯的烟碱制成诸如“戒烟贴”、“烟碱含漱水”、“包装在有抛射剂的高压气罐喷雾剂”、“烟碱口香糖”、“烟碱饮料”等产品，这些产品虽然没有焦油的危害，但因烟碱吸收缓慢，在血液中不能建立有效的高峰浓度，不能解决需求烟碱“过瘾”的感觉，同时也剥夺了吸烟者已经养成的“抽”、“吸”的习惯，因而类似的产品不能真正的作为戒烟用品或香烟代用品。

现有市面上的电子烟产品，虽然可以解决上述问题，但同时结构比较复杂。烟体大多分为三段，使用者在使用时需将各段插接或螺纹连接在一起才能使用。另外，电池需要频繁的更换，给使用者带来诸多不便。而且，更重要的一点是，电子烟在工作中产生的雾化效果不够理想，雾化效率不高。

发明内容

为了克服上述不足，本发明的目的在于提供一种具有戒烟和香烟代用品作用的雾化电子烟。

本发明的目的是通过以下技术方案来实现的：一种雾化电子烟，包括电池组件，雾化器组件和烟瓶组件，还包括一中空的一体成形的壳体，所述电池组件与所述雾化器组件相连接，并容置于所述壳体内，所述烟瓶组件可拆卸的安装于所述壳体的一端，并与其内的所述雾化器组件相配合，所述壳体上贯穿的开有进气孔。

本发明进一步特征在于：所述电池组件包括电池，与所述电池连接的工作指示灯、电子线路板、气流传感器，所述气流传感器的信号输出端与所述电子线路板相连接；

还包括一单向阀，所述电池为一充电电池，所述充电电池设有一与其相弹性连接的充电插头，所述充电插头上的插片从所述壳体的另一端伸出；

所述充电插头与所述充电电池之间安装有弹簧，所述弹簧的一端顶靠于所述充电电池的本体上，自由端顶靠于所述充电插头上；

所述电池为一充电电池，所述充电电池上设有一充电插槽；所述工作指示灯为发光二极管；

所述气流传感器也可为半导体力敏芯片电容传感器或电感式传感器；

所述电子线路板包括电子开关电路；

所述气流传感器设有一硅胶件波纹膜，所述硅胶件波纹膜连接一磁钢，所述磁钢的一端设有干簧继电片，所述干簧继电片的两端分别与继电电极相对应；

所述气流传感器设有一硅胶件波纹膜，所述硅胶件波纹膜连接一磁钢，所述磁钢的一端设有霍尔器件或磁敏二极管或磁敏三极管；

所述雾化器组件为一雾化器，所述雾化器包括一多孔渗透件，加热体；

所述雾化器还包括一电加热棒，所述多孔渗透件的本体开有一贯通的雾化腔，所述电加热棒的直径小于所述雾化腔的直径，所述电加热棒伸入所述雾化腔内，并与所述雾化腔内壁之间形成有空隙，所述空隙为负压气流腔，所述多孔渗透件的一端与所述烟瓶组件相配合；

所述电加热棒包括一圆柱体，所述加热体为一加热丝，所述加热丝缠绕于所述圆柱体的周壁上，所述多孔渗透件的一端设有凸起，所述凸起与所述烟瓶组件相配合；所述凸起为半圆形球形凸起，在所述半圆形球形凸起的侧边开有与所述雾化腔相连通的通孔；

所述电加热棒包括一圆柱体，所述加热体采用导电陶瓷PTC材料制成，所述加热体设于所述圆柱体的周壁上，在所述圆柱体两端的周壁上分别设有顶杆，所述多孔渗透件的一端设有凸起，所述凸起与所述烟瓶组件相配合；所述凸起为半圆形球形凸起，在所述半圆形球形凸起的侧边开有与所述雾化腔相连通的通孔；

所述加热体为加热丝，所述雾化器组件包括一架体，所述多孔渗透件设于所述架体上，所述多孔渗透件上缠绕有加热丝，所述架体上开有一通孔，所述多孔渗透件上缠绕加热丝的部位处于所述通孔的轴向方向的一侧，所述多孔渗透件的一端与所述烟瓶组件相配合；

所述多孔渗透件采用泡沫镍、不锈钢纤维毡、高分子多聚物发泡体或泡沫陶瓷制成；

所述加热丝为铂丝、镍铬合金或含有稀土元素的铁铬铝合金丝制成，或制成片状体；

在所述多孔体渗透件的一端可拆卸的设有一限流件，所述限流件的本体上开有限流孔，所述限流孔与所述雾化腔相对应，所述限流孔的孔径小于所述雾化腔的内径；

所述烟瓶组件包括一中空的烟嘴壳体，容置于所述烟嘴壳体内的贮液多孔体，所述烟嘴壳体的一端插入所述壳体，所述烟嘴壳体的外周面具有向内凹的通气凹槽，在所述烟嘴壳体一端的端面上设有一向内延伸的吸气道；

所述吸气道位于所述烟嘴壳体一端端面的中心处；

所述多孔渗透件的一端抵靠于所述贮液多孔体一端的端面，与所述贮液多孔体相接触；

所述贮液多孔体的材料为聚丙纤维、涤纶纤维或尼龙纤维；

所述贮液多孔体采用塑料发泡成形体；或用聚氯乙烯、聚丙烯、聚碳酸酯注塑成多层板的柱状体；

所述电子烟容置于一充电装置中；

所述充电装置包括一盒体，所述盒体内安装有辅助充电蓄电池，容置电子烟并给电子烟内部的充电电池充电的充电器，以及电源电路，所述辅助充电蓄电池和充电器的电源输入端分别与电源电路相连接；

所述盒体内设有备用供液瓶；

所述辅助充电蓄电池的电源输出端与所述充电器的电源输入端相连接；

所述充电器的电源输出端为一与所述电子烟内部充电电池上的充电插头相配合的充电插槽，或与充电电池上的充电插槽相配合的充电插头；

所述充电器为一恒压恒流充电器；

在所述壳体的本体上，对应于放置所述电子烟的位置开有或安装有一对滑槽，所述滑槽内滑动的容置有一滑盖。

采用本发明带来的有益效果：（1）本发明在烟瓶组件内的贮液多孔体上只贮存有烟碱液，而不含焦油，大大降低了吸烟带来的致癌风险，同时吸烟者在使用时仍有吸烟的感觉和兴奋，无需点燃，无火灾危害。（2）

本发明将电池组件和雾化器组件直接安装于壳体内，之后与烟瓶组件相插接，只有两个部件之间的相互连接，结构简单。在使用或更换时只需将烟嘴插入壳体即可，使用更换方便。当烟瓶组件内部的烟碱液用完或烟瓶组件损坏需要更换时，操作亦十分方便。（3）本发明的电池组件内部的充电电池设有充电插头，充电插头的插片从壳体内伸出，当电子烟内的充电电池电量用完时可直接插在充电器上进行充电，而无需将充电电池拆卸下来，使用更加方便。（4）本发明的充电装置内部包括充电器和辅助充电蓄电池，电子烟在不使用时放在充电器里，充电装置接上电源即可对电子烟进行充电，并同时对辅助充电蓄电池充电。当没有供充电装置使用的电源时，辅助充电蓄电池则会对电子烟进行充电。在携带的过程中即可完成对电子烟的充电，而且出差或旅行时携带方便。另外，充电装置内还有备用供液瓶，备用供液瓶内装有烟碱液，当出差或旅行时，可以做备用。（5）本发明烟瓶组件的壳体一端设有向内延伸的吸气道，该吸气道的作用是当电子烟工作产生雾气后，雾气在向壳体流动的过程中有些细小的液滴会相互凝结成较大的液滴，当出现较大的液滴时，液滴就会顺着吸气道的外壁落入烟瓶组件壳体的内腔中，而不会从吸气道中被吸烟者吸走。（6）另外，本发明的装置和连接结构在贮液器稍加改动后可装入常规药物供肺内给药器械。

附图说明

图1为本发明电子烟的侧面剖视图；

图2为本发明电子烟的烟瓶组件壳体a分离后的剖视图；示出烟瓶组件可拆卸的安装于壳体a的结构；

图3为本发明烟瓶组件的轴向结构示意图，示出烟嘴壳体周壁上的通气凹槽结构

图4为本发明烟瓶组件的侧面剖视图；示出吸气道的结构；

图5为本发明雾化器的多孔渗透件的侧面剖视图，示出雾化腔，半圆形球形凸起的结构；

图6为本发明雾化器的电加热棒的结构示意图；

图7为本发明雾化器的侧面剖视图，示出电加热棒与多孔渗透件的位置连接关系；

图8为本发明雾化器的立体结构示意图，示出电加热棒与多孔渗透件的位置连接关系；

图9为本发明单向阀的剖视图；

图10为本发明第二优选实施例中限流件的正面剖视图，示出限流孔的结构；

图11为本发明第三优选实施例中烟瓶组件的轴向结构示意图；

图12为图11的A-A向剖视图；

图13为本发明第四优选实施例雾化器中的电加热棒的结构示意图；

图14为本发明第四优选实施例雾化器中的多孔渗透件的剖视图，

图15为图14的轴向结构示意图；

图16为本发明第四优选实施例雾化器的侧面剖视图，示出电加热棒与多孔渗透件的连接位置关系；

图17为本发明第五优选实施例雾化器轴向结构示意图；

图18为本发明第五优选实施例雾化器的侧面剖视图；

图19为本发明第六优选实施例电子烟的侧面剖视图，示出气流传感器采用霍尔器件的结构示意图；

图20为本发明气流传感器采用干簧继电片结构的电子烟的电路图；

图21为本发明气流传感器采用霍尔器件的电子烟的电路图；

图22为本发明充电装置的立体结构示意图，示出内部各部件的位置和连接关系；

图23为本发明充电装置侧面剖视图，示出滑盖和滑槽的结构；

图24为本发明充电装置的正面结构示意图，示出滑盖滑动时的结构；

具体实施方式

下面结合附图对本发明做进一步的详述：

如图1至图10所示，本实用新型提供的一种雾化电子烟，包括电池组件，雾化器组件和烟瓶组件，还包括一中空的一体成形的壳体a，壳体a为一整体件，一体成形。电池组件与雾化器组件相连接，并容置于壳体内，烟瓶组件可拆卸的安装于壳体的一端，并与其内的雾化器组件相配合，壳体a上贯穿的开有进气孔a1。

在本具体实施例中，电池组件包括电池，与电池连接的工作指示灯1、电子线路板4、气流传感器5，还包括一单向阀7，气流传感器5的信号输出端与电子线路板4相连接。本实施例中的电池为一充电电池3，充电电池3为可充电的聚合物锂电池，也可为可充电的锂离子电池。气流传感器5也可为半导体力敏芯片电容传感器或电感式传感器。充电电池3设有一与其相弹性连接的充电插头2，充电插头2上的插片21从壳体a的另一端伸出。充电插头2与充电电池3之间安装有弹簧6，弹簧6的一端顶靠于充电电池3的本体上，自由端顶靠于充电插头2上，形成一种弹性结构，在充电时，插接充电插头2的时候起到缓冲的作用，避免损坏充电电池3。当然，本实施例的充电电池3上也可设有位于充电电池3上的充电插槽，代

替充电插头2的结构，一样可以实现充电的功能，同时起到避免损坏充电电池3的作用。工作指示灯1为发光二极管，本实施例发光二极管的数量为2个。电子线路板4包括电子开关电路。电子开关电路根据输入的信号进行电路的通断控制，以便实现充电电池3对雾化器8内的电加热棒82进行供电以及对发光二极管供电。

如图1，图2所示，气流传感器5设有一硅胶件波纹膜53，硅胶件波纹膜53连接一磁钢54，所述磁钢54的一端设有干簧继电片52，所述干簧继电片52的两端分别与继电电极51相对应。

如图5至图8所示，雾化器组件为一雾化器8，雾化器8包括一多孔渗透件81，电加热棒82，多孔渗透件81的本体开有一贯通的雾化腔811，电加热棒82的直径小于雾化腔811的直径，电加热棒82伸入雾化腔811内，并与雾化腔811内壁之间形成有空隙，空隙为负压气流腔83，多孔渗透件81的一端与烟瓶组件相配合。如图5，图7和图8所示，多孔渗透件81的另一端设有凸起812，凸起812与烟瓶组件相配合。凸起812为半圆形球形凸起，在半圆形球形凸起的侧边开有与雾化腔811相连通的通孔813。当然，凸起812的形状还可为圆锥形、矩形等其他形状。多孔渗透件81采用泡沫镍、不锈钢纤维毡、高分子多聚物发泡体或泡沫陶瓷制成，具有很好的液体吸附及扩散能力，可以将烟瓶组件中存储的烟液吸附过来。

如图6所示，电加热棒82包括一圆柱体821，加热丝822缠绕于圆柱体821的周壁上，在圆柱体821两端的周壁上还分别设有顶杆823。顶杆823抵靠于多孔渗透件81的雾化腔811内壁上，在电加热棒与雾化腔内壁之间形成负压气流腔83。

加热丝为铂丝、镍铬合金或含有稀土元素的铁铬铝合金丝制成，或制成片状体。当然，在电加热棒82的周壁上设有采用导电陶瓷PTC材料制成的加热层来代替加热丝的方案也是可以的。

本实施例的电池组件与雾化器组件相互连接后安装于一体成形的壳体a内，形成一个整体部件，充电电池3可进行充电而无需再频繁的更换电池。在使用时，使用者只需将烟瓶组件插接到壳体a的一端开口处即可使用，不仅使用时方便，而且在更换时也十分方便。

如图3，图4所示，烟瓶组件包括一中空的烟嘴壳体b，容置于壳体b内的贮液多孔体9。贮液多孔体9的材料为聚丙纤维、涤纶纤维或尼龙纤维等可以存储液体的材料，或采用塑料发泡成形体；或用聚氯乙烯、聚丙烯、聚碳酸酯注塑成多层板的柱状体。烟嘴壳体b的一端插入壳体a，烟嘴壳体b的外周面具有向内凹的通气凹槽b2，在烟嘴壳体b一端的端面上设有一向内延伸的吸气道b1。吸气道b1位于壳体b一端端面的中心处。

如图1至图9，多孔渗透件81的一端抵靠于贮液多孔体9一端的端面，与贮液多孔体9相接触。将贮液多孔体9中存储的烟液吸附过来。当吸烟者吸烟时，烟嘴壳体b的内腔处于负压状态。在壳体a内，气流传感器5的一端形成常压腔，另一端形成负压腔，常压腔与负压腔之间的气压差或高速气流导致气流传感器5上的磁钢54带动干簧继电片52动作，与继电电极51相接触，如图20所示，电路导通，电子线路板4内的电子开关电路导通，充电电池3开始对雾化器8内的电加热棒82供电，同时发光二极管在充电电池3的供电下发光。大气由进气孔a1进入到常压腔内，经气流传感器5内的气流通道通过单向阀7，流到雾化器8内的负压气流腔83，由于负

压气流腔83内部较于外部为负压，气流进入时为喷射状进入，气流带动多孔渗透件81中的烟液以微滴形式喷射到负压气流腔83内，此时，电加热棒82在电子线路板4的控制下与充电电池3通电，对微滴进行加热雾化，雾化后的大直径微滴在涡流的作用下被多孔渗透件81重吸收，小直径微滴悬浮在气流中形成气溶胶经由负压气流腔83和通孔813排出，继而流入烟瓶组件的烟嘴壳体b中，被吸气道b1吸出。在气溶胶进入烟嘴壳体b内后，会出现由于多个较小的液滴相互凝结而形成直径较大的液滴，当出现直径较大的液滴后，液滴会落入烟嘴壳体b与吸气道b1的空隙处，而不会被吸气道b1吸走。烟瓶组件中的贮液多孔体9与雾化器8中的多孔渗透件81相接触实现毛细浸润供液。

本实用新型的装置和连接结构还可装入常规药物作为肺内吸入式给药器械。

如图22，图23和图24所示，雾化电子烟5容置于一充电装置中。充电装置包括一盒体1，盒体1内安装有辅助充电蓄电池2，容置电子烟5并给电子烟5内部的充电电池充电的充电器3，辅助充电蓄电池2和充电器3的电源输入端分别与电源相连接。本实施例中的充电器3为一恒压恒流充电器，可以采用GY5210型号充电器，也可为其他恒流恒压充电器。盒体1内还设有备用供液瓶4。辅助充电蓄电池2的电源输出端与充电器3的电源输入端相连接。充电器3的电源输出端为一与电子烟内部充电电池上的充电插头相配合的充电插槽31，或与充电电池上的充电插槽相配合的充电插头。

如图23和图24所示，在壳体1的本体上，对应于放置电子烟的位置开有或安装有一对滑槽12，滑槽内滑动的容置有一滑盖11。

按照本实用新型提供的第二优选实施例中：在多孔体渗透件81的一端可拆卸的设有一限流件10，限流件10的本体上开有限流孔101，限流孔101与雾化腔811相对应，限流孔的孔径小于雾化腔811的内径。限流孔101的孔径根据安装于多孔体渗透件81上的限流件10的尺寸的不同，小于雾化腔811内径的尺寸也不同，起到限制气体流量的作用，并根据实际使用情况可相应的更换不同尺寸，不同孔径的限流件。

本实用新型提供的第三优选实施例中：如图11，图12所示，在烟嘴壳体b的外壁上设有均分相间隔分部的凸肋b2，贮液多孔体9伸入烟嘴壳体b内后抵靠于凸肋b2上。这样，贮液多孔体9的外周面与壳体b的内壁之间就形成有空隙，该空隙起的作用是连通壳体a与烟嘴壳体b，在使用者吸烟时，通过吸气道b1吸气使壳体a内部产生气流流动，触动气流传感器5，进而启动电子烟工作。另外，在雾化器8工作时将烟液雾化后产生的气体流人到烟嘴壳体b内。

本实用新型提供的第四优选实施例中：如图13，图14，图15和图16所示，圆柱体821的一端设有一固定板84，所述固定板84的外周壁相间隔的设有支撑杆841，支撑杆841的外端顶靠与壳体a的内壁上，把与固定板84连接的圆柱体821悬空在壳体a的空腔内。在固定板84的板面上设有顶杆842，所述顶杆842的前端与多孔渗透件81的一端相抵靠，使固定板84与多孔渗透件81中的雾化腔811隔开，不至于将雾化腔811一端的通孔堵住，同时也便于雾化腔811产生的气雾向外扩散。多孔渗透件81的一端在

雾化腔811的腔口处设有两个瓣状的凸起812，这两个凸起812之间形成间隙，凸起812抵靠于贮液多孔体9。

按照本实用新型提供的第五优选实施例中：如图17，图18所示，雾化器组件为一雾化器8，雾化器8包括一架体82，设于架体82上的多孔渗透件81，多孔渗透件81上缠绕有加热丝83，架体82上开有一通孔821，多孔渗透件81上缠绕加热丝83的部位处于通孔821的轴向方向的一侧，多孔渗透件81的一端与烟瓶组件相配合。多孔渗透件81采用泡沫镍、不锈钢纤维毡、高分子多聚物发泡体或泡沫陶瓷制成。

按照本实用新型提供的第六优选实施例中：如图19所示，气流传感器5设有一硅胶件波纹膜53，硅胶件波纹膜53连接一磁钢54，磁钢54的一端设有霍尔器件52。或也可设磁敏二极管或磁敏三极管。图21为采用该方案的电子烟电路图。

权 利 要 求

1、一种雾化电子烟，包括电池组件，雾化器组件和烟瓶组件，其特征在于：还包括一中空的一体成形的壳体（a），所述电池组件与所述雾化器组件相连接，并容置于所述壳体（a）内，所述烟瓶组件可拆卸的安装于所述壳体（a）的一端，并与其内的所述雾化器组件相配合，所述壳体（a）上贯穿的开有进气孔（a1）。

2、根据权力要求1所述的雾化电子烟，其特征在于：所述电池组件包括电池，与所述电池连接的工作指示灯（1）、电子线路板（4）、气流传感器（5），所述气流传感器（5）的信号输出端与所述电子线路板（4）相连接。

3、根据权力要求2所述的雾化电子烟，其特征在于：还包括一单向阀（7），所述电池为一充电电池（3），所述充电电池（3）设有一与其弹性连接的充电插头（2），所述充电插头（2）上的插片（21）从所述壳体（a）的另一端伸出。

4、根据权力要求3所述的雾化电子烟，其特征在于：所述充电插头（2）与所述充电电池（3）之间安装有弹簧（6），所述弹簧（6）的一端顶靠于所述充电电池（3）的本体上，自由端顶靠于所述充电插头（2）上。

5、根据权力要求2所述的雾化电子烟，其特征在于：所述电池为一充电电池（3），所述充电电池（3）上设有一充电插槽，所述工作指示灯（1）为发光二极管。

6、根据权力要求2所述的雾化电子烟，其特征在于：所述气流传感器（5）也可为半导体力敏芯片电容传感器或电感式传感器。

7、根据权力要求2所述的雾化电子烟，其特征在于：所述电子线路板（4）包括电子开关电路。

8、根据权力要求2所述的雾化电子烟，其特征在于：所述气流传感器（5）设有一硅胶件波纹膜（53），所述硅胶件波纹膜（53）连接一磁

钢（54），所述磁钢（54）的一端设有干簧继电片（52），所述干簧继电片（52）的两端分别与继电电极（51）相对应。

9、根据权力要求2所述的雾化电子烟，其特征在于：所述气流传感器（5）设有一硅胶件波纹膜（53），所述硅胶件波纹膜（53）连接一磁钢（54），所述磁钢（54）的一端设有霍尔器件（52）或磁敏二极管或磁敏三极管。

10、根据权力要求3或5所述的雾化电子烟，其特征在于：所述雾化器组件为一雾化器（8），所述雾化器（8）包括一多孔渗透件（81），加热体。

11、根据权利要求10所述的雾化电子烟，其特征在于：所述雾化器（8）还包括一电加热棒（82），所述多孔渗透件（81）的本体开有一贯通的雾化腔（811），所述电加热棒（82）的直径小于所述雾化腔（811）的直径，所述电加热棒（82）伸入所述雾化腔（811）内，并与所述雾化腔（811）内壁之间形成有空隙，所述空隙为负压气流腔（83），所述多孔渗透件（81）的一端与所述烟瓶组件相配合。

12、根据权力要求11所述的雾化电子烟，其特征在于：所述电加热棒（82）包括一圆柱体（821），所述加热体为一加热丝（822），所述加热丝（822）缠绕于所述圆柱体（821）的周壁上，在所述圆柱体（821）两端的周壁上分别设有顶杆（823），所述多孔渗透件（81）的一端设有凸起（812），所述凸起（812）与所述烟瓶组件相配合；所述凸起（812）为半圆形球形凸起，在所述半圆形球形凸起的侧边开有与所述雾化腔（811）相连通的通孔（813）。

13、根据权利要求11所述的雾化电子烟，其特征在于：所述电加热棒（82）包括一圆柱体（821），所述加热体采用导电陶瓷PTC材料制成，所述加热体设于所述圆柱体（821）的周壁上，在所述圆柱体（821）两端的周壁上分别设有顶杆（823），所述多孔渗透件（81）的一端设有凸起（812），所述凸起（812）与所述烟瓶组件相配合；所述凸起（812）为半圆形球形凸起，在所述半圆形球形凸起的侧边开有与所述雾化腔（811）相连通的通孔（813）。

14、根据权力要求10所述的雾化电子烟，其特征在于：所述加热体为加热丝，所述雾化器（8）包括一架体（82），所述多孔渗透件（81）设于所述架体（82）上，所述多孔渗透件（81）上缠绕有所述加热丝（83），所述架体（82）上开有一通孔（821），所述多孔渗透件（81）上缠绕加热丝（83）的部位处于所述通孔（821）的轴向方向的一侧，所述多孔渗透件（81）的一端与所述烟瓶组件相配合。

15、根据权利要求10所述的雾化电子烟，其特征在于：所述多孔渗透件（81）采用泡沫镍、不锈钢纤维毡、高分子多聚物发泡体或泡沫陶瓷制成。

16、根据权利要求10所述的雾化电子烟，其特征在于：所述加热丝为铂丝、镍铬合金或含有稀土元素的铁铬铝合金丝制成，或制成片状体。

17、根据权利要求11所述的雾化电子烟，其特征在于：在所述多孔体渗透件（81）的一端可拆卸的设有一限流件，所述限流件的本体上开有限流孔，所述限流孔与所述雾化腔（811）相对应，所述限流孔的孔径小于所述雾化腔（811）的内径。

18、根据权利要求12或14所述的雾化电子烟，其特征在于：所述烟瓶组件包括一中空的烟嘴壳体（b），容置于所述烟嘴壳体（b）内的贮液多孔体（9），所述烟嘴壳体（b）的一端插入所述壳体（a），所述烟嘴壳体（b）的外周面具有向内凹的通气凹槽（b2），在所述烟嘴壳体（b）一端的端面上设有一向内延伸的吸气道（b1）。

19、根据权利要求18所述的雾化电子烟，其特征在于：所述吸气道（b1）位于所述烟嘴壳体（b）一端端面的中心处。

20、根据权利要求18所述的雾化电子烟，其特征在于：所述多孔渗透件（81）的一端抵靠于所述贮液多孔体（9）一端的端面，与所述贮液多孔体（9）相接触。

21、根据权利要求18所述的雾化电子烟，其特征在于：所述贮液多孔体（9）的材料为聚丙纤维、涤纶纤维或尼龙纤维。

22、根据权利要求18所述的雾化电子烟，其特征在于：所述贮液多孔体（9）采用塑料发泡成形体；或用聚氯乙烯、聚丙烯、聚碳酸酯注塑成多层板的柱状体。

23、根据权利要求11或14所述的雾化电子烟，其特征在于：所述雾化电子烟（5）容置于一充电装置中。

24、根据权利要求23所述的雾化电子烟，其特征在于：所述充电装置包括一盒体（1），所述盒体（1）内安装有辅助充电蓄电池（2），容置电子烟（5）并给电子烟（5）内部的充电电池充电的充电器（3），所述辅助充电蓄电池（2）和充电器（3）的电源输入端分别与电源相连接。

25、根据权利要求24所述的雾化电子烟，其特征在于：所述盒体（1）内还设有备用供液瓶（4）。

26、根据权利要求24所述的雾化电子烟，其特征在于：所述辅助充电蓄电池（2）的电源输出端与所述充电器（3）的电源输入端相连接。

27、根据权利要求24所述的雾化电子烟，其特征在于：所述充电器（3）的电源输出端为一与所述电子烟内部充电电池上的充电插头相配合的充电插槽（31），或与充电电池上的充电插槽相配合的充电插头。

28、根据权利要求26所述的雾化电子烟，其特征在于：所述充电器（3）为一恒压恒流充电器。

29、根据权利要求24所述的雾化电子烟，其特征在于：在所述壳体（1）的本体上，对应于放置所述电子烟的位置开有或安装有一对滑槽（12），所述滑槽（12）内滑动的容置有一滑盖（11）。

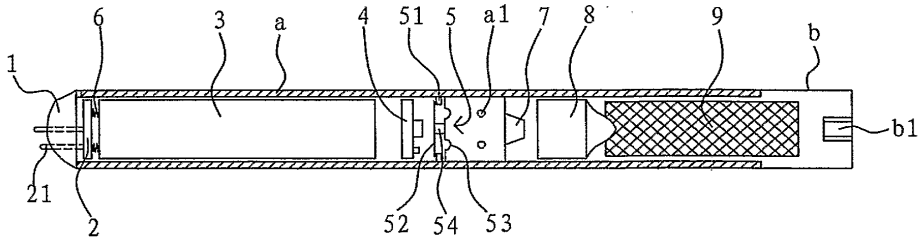
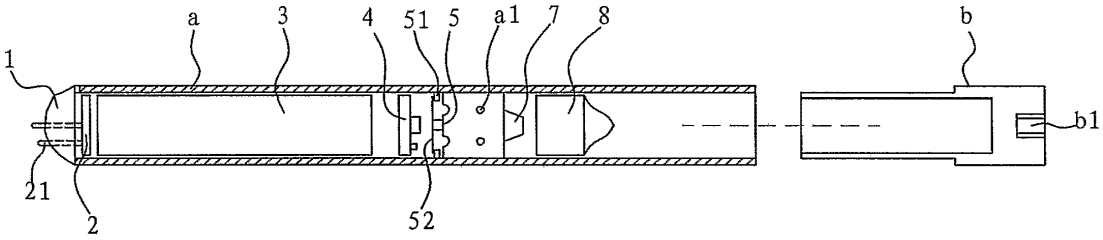

6
3
a
4
51
5
a1
7
8
9
b
1
b1
21
2
52
54
53

图1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51
5
a1
7
8
b
1
b1
21
2
52

图2

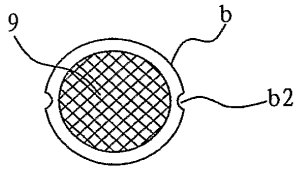
9
b
b2

图3

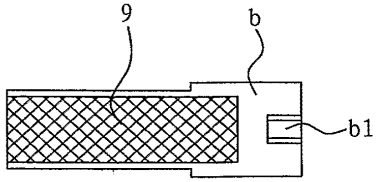
9
b
b1

图4

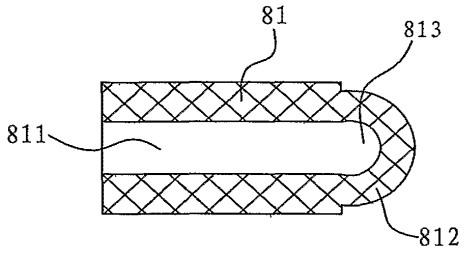

图5

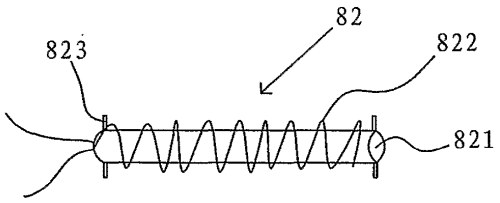

图6

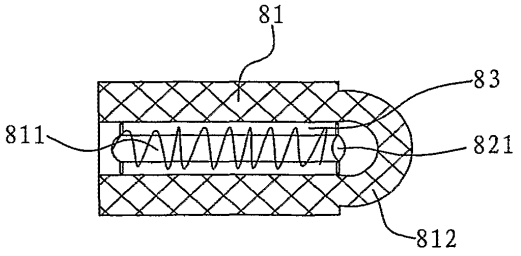

图7

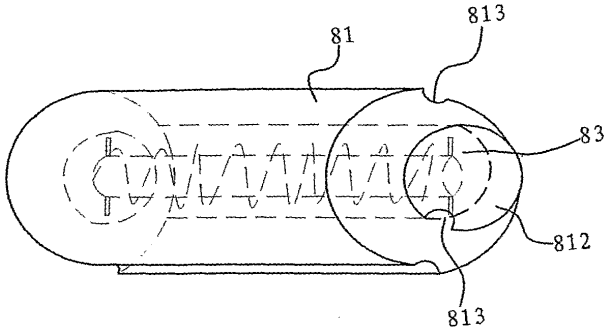

图8

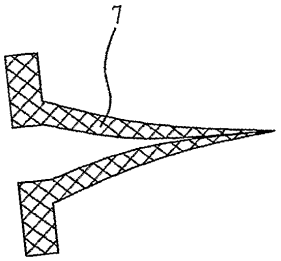

图9

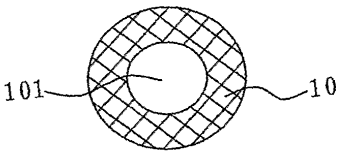

图10

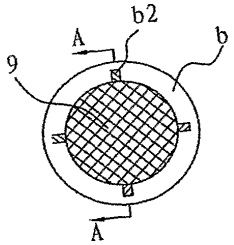

图11

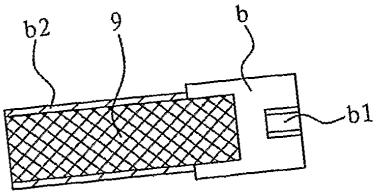

图12

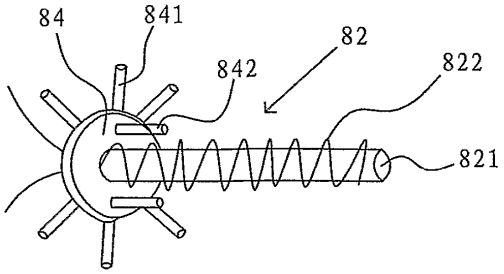

图13

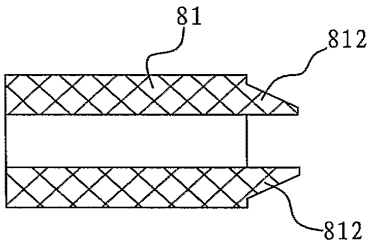

图14

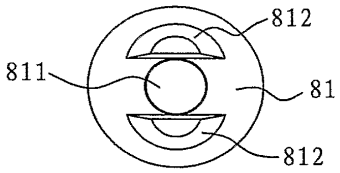

图15

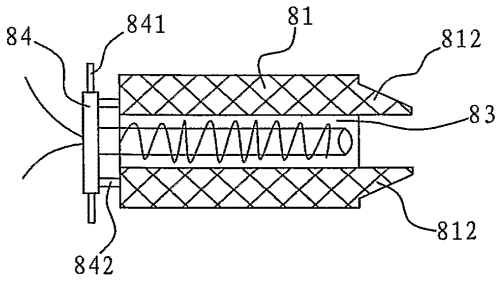

图16

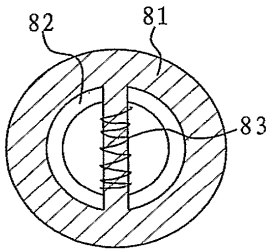

图17

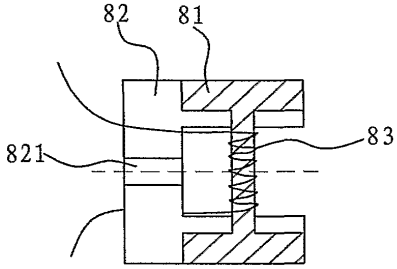

图18

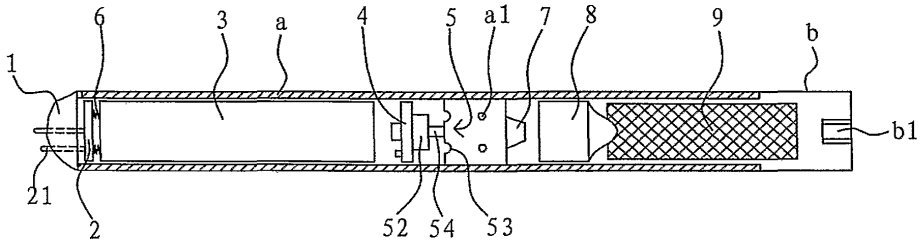

图19

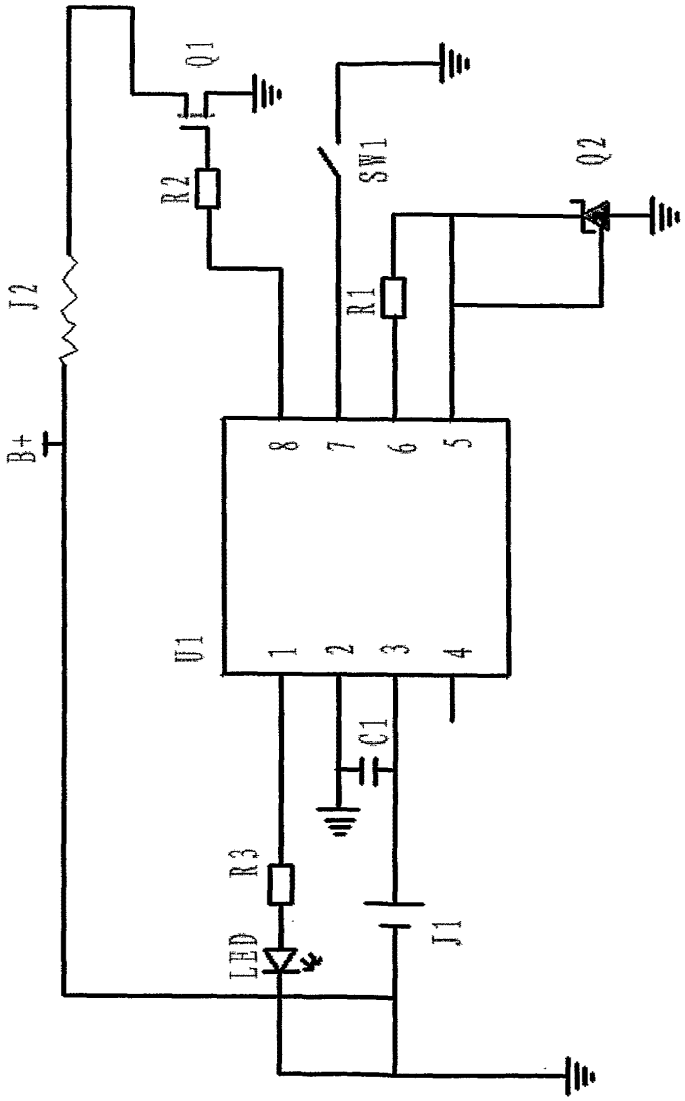

图20

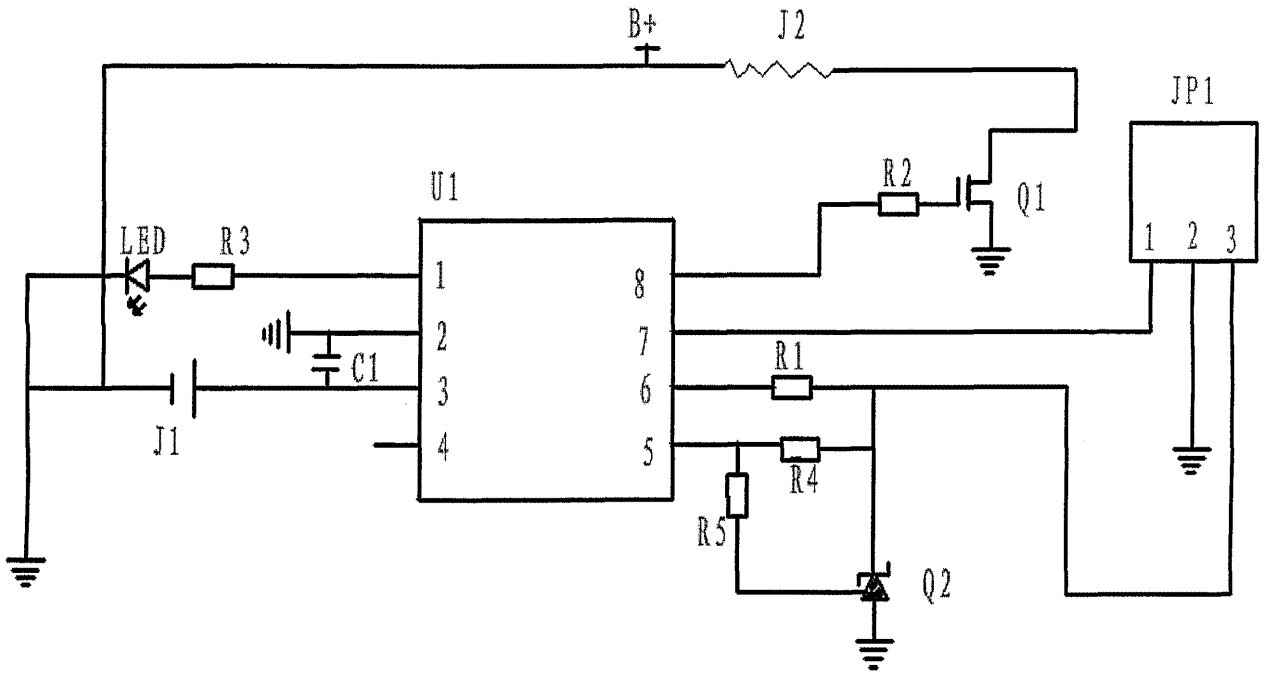

图21

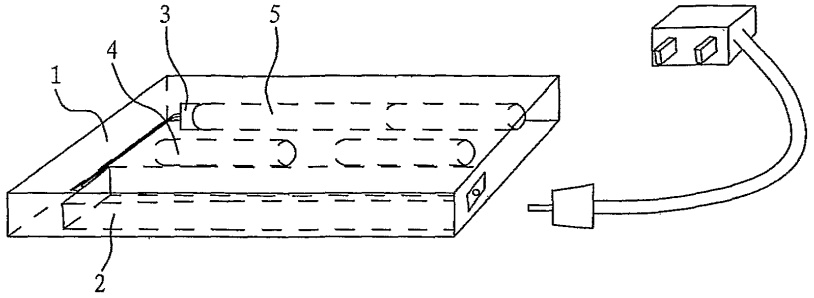

图22

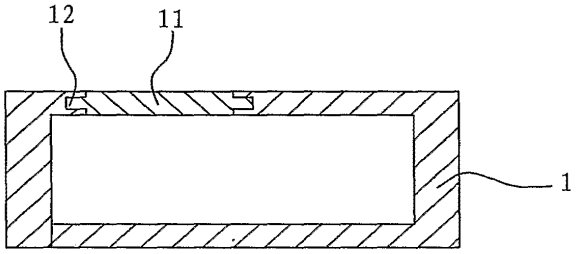

图23

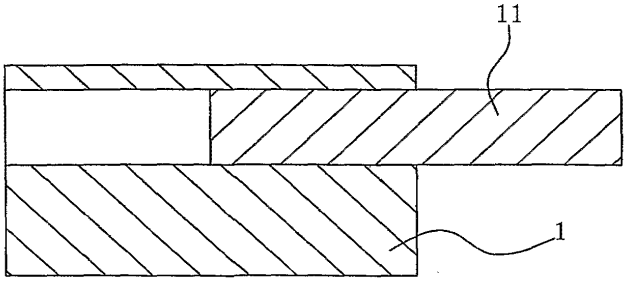

图24

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2007/001575

A. CLASSIFICATION OF SUBJECT MATTER

See extra sheet

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: A24D, A24F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI&EPODOC&PAJ Chinese Patent Document (1985~)

Electronic, pipe, cigarette

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN2719043Y(HAN Li)24 Aug. 2005(24.8.2005) Page 3 lines 5- page 4 lines 27;figures 1-5	1-10
A	CN1252961A(SONG Guoqiang)17 May 2000(17.05.2000) the whole document	1-29
A	US4945929A (BRITISH-AMERICAN TOBACCO CO., LTD.) 07 Aug. 1990(07.08.1990) the whole document	1-29
A	CN1575673A (SEIKO EPSON COR) 09 Feb.2005(09.02.2005) the whole document	1-29

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim (S) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
20 Jul. 2007(20.07.2007)	**16 Aug. 2007 (16.08.2007)**
Name and mailing address of the ISA/CN The State Intellectual Property Office, the P.R.China 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088 Facsimile No. 86-10-62019451	Authorized officer ZHAO,Xiaoyu Telephone No. (86-10)62085853

Form PCT/ISA /210 (second sheet) (April 2007)

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2007/001575

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN2719043Y	24 Aug.2005	AU2005232354A	27 Oct. 2005
		WO2005099494A	27 Oct. 2005
		CA2562581A	27 Oct. 2005
		EP1736065A	27 Dec. 2006
		CN1942114A	04 Apr.2007
		BRPI0506780A	22 May 2007
CN1252961A	17 May 2000	None	
US4945929A	07 Aug. 1990	GB2191718A	23 Dec. 1987
		DE3719718A	23 Dec. 1987
		GB2191718B	05 Sep. 1990
CN1575673A	09. Feb.2005	US2005016550A1	27 Jan. 2005
		JP2005034021A	10 Feb. 2005
		CN1284493C	15 Nov. 2006

Form PCT/ISA /210 (patent family annex) (April 2007)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2007/001575

According to International Patent Classification (IPC) or to both national classification and IPC

A24D1/18(2006.01) i

A24F47/00(2006.01) i

Form PCT/ISA /210 (extra sheet) (April 2007)

国际检索报告

国际申请号 PCT/CN2007/001575

A. 主题的分类

参见附加页

按照国际专利分类表(IPC)或者同时按照国家分类和 IPC 两种分类

B. 检索领域

检索的最低限度文献(标明分类系统和分类号)

IPC: A24D, A24F

包含在检索领域中的除最低限度文献以外的检索文献

在国际检索时查阅的电子数据库(数据库的名称，和使用的检索词（如使用）)

WPI&EPODOC&PAJ 中国专利文献（1985～）

Electronic, pipe, cigarette 电子、烟斗、烟

C. 相关文件

类 型*	引用文件，必要时，指明相关段落	相关的权利要求
X	CN2719043Y(韩力)24. 8 月 2005(24.8.2005) 说明书第 3 页第 5 行－第 4 页 27 行；图 1－5	1－10
A	CN1252961A(宋国强)17. 5 月 2000(17.5.2000) 全文	1－29
A	US4945929A (BRITISH-AMERICAN TOBACCO CO., LTD.）07. 8 月 1990(07.08.1990) 全文	1－29
A	CN1575673A（精工爱普生株式会社）09. 2 月 2005(09.02.2005) 全文	1－29

☐ 其余文件在 C 栏的续页中列出。 ☒ 见同族专利附件。

* 引用文件的具体类型：

"A" 认为不特别相关的表示了现有技术一般状态的文件

"E" 在国际申请日的当天或之后公布的在先申请或专利

"L" 可能对优先权要求构成怀疑的文件，或为确定另一篇引用文件的公布日而引用的或者因其他特殊理由而引用的文件

"O" 涉及口头公开、使用、展览或其他方式公开的文件

"P" 公布日先于国际申请日但迟于所要求的优先权日的文件

"T" 在申请日或优先权日之后公布，与申请不相抵触，但为了理解发明之理论或原理的在后文件

"X" 特别相关的文件，单独考虑该文件，认定要求保护的发明不是新颖的或不具有创造性

"Y" 特别相关的文件，当该文件与另一篇或者多篇该类文件结合并且这种结合对于本领域技术人员为显而易见时，要求保护的发明不具有创造性

"&" 同族专利的文件

国际检索实际完成的日期	国际检索报告邮寄日期
20.7 月 2007(20.07.2007)	16.8 月 2007 (16.08.2007)
中华人民共和国国家知识产权局(ISA/CN) 中国北京市海淀区蓟门桥西土城路 6 号 100088 传真号： (86-10)62019451	受权官员 赵晓宇 电话号码：(86-10) 62085853

PCT/ISA/210 表(第 2 页) (2007 年 4 月)

国际检索报告
关于同族专利的信息

国际申请号
PCT/CN2007/001575

检索报告中引用的专利文件	公布日期	同族专利	公布日期
CN2719043Y	24. 8 月 2005	AU2005232354A	27.10 月 2005
		WO2005099494A	27.10 月 2005
		CA2562581A	27.10 月 2005
		EP1736065A	27.12 月 2006
		CN1942114A	04.4 月 2007
		BRPI0506780A	22.5 月 2007
CN1252961A	17. 5 月 2000	无	
US4945929A	07. 8 月 1990	GB2191718A	23.12 月 1987
		DE3719718A	23.12 月 1987
		GB2191718B	05.9 月 1990
CN1575673A	09. 2 月 2005	US2005016550A1	27.1 月 2005
		JP2005034021A	10.2 月 2005
		CN1284493C	15.11 月 2006

按照国际专利分类表(IPC)或者同时按照国家分类和 IPC 两种分类：

A24D1/18(2006.01) i

A24F47/00(2006.01) i

PTO-1390 (Rev. 09-08)
Approved for use through 2/28/2010. OMB 0651-0021
U.S. Patent and Trademark Office; U.S. DEPARTMNT OF COMMERCE

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NUMBER JANLEA-001-US U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 12/226818
INTERNATIONAL APPLICATION NO. PCT/CN2007/001575	INTERNATIONAL FILING DATE May 15, 2007	PRIORITY DATE CLAIMED May 16, 2006
TITLE OF INVENTION: AEROSOL ELECTRONIC CIGARETTE		
APPLICANT(S) FOR DO/EO/US: Li HAN		

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. [x] This is a **FIRST** submission of items concerning a submission under 35 U.S.C. 371.
2. [ ] This is a **SECOND** or **SUBSEQUENT** submission of items concerning a submission under 35 U.S.C. 371.
3. [ ] This is an express request to begin national examination procedures (35 U.S.C. 371 (f)). The submission must include items (5), (6), (9) and (21) indicated below.
4. [ ] The US has been elected (Article 31).
5. [x] A copy of the International Application as filed (35 U.S.C. 371 (c)(2))
   a. [ ] is attached hereto (required only if not communicated by the International Bureau).
   b. [x] has been communicated by the International Bureau.
   c. [ ] is not required, as the application was filed in the United States Receiving Office (RO/US).
6. [x] An English language translation of the International Application as filed (35 U.S.C. 371 (c)(2)).
   a. [x] is attached hereto.
   b. [ ] has been previously submitted under 35 U.S.C. 154(d)(4).
7. [x] Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
   a. [x] are attached hereto (required only if not communicated by the International Bureau).
   b. [ ] have been communicated by the International Bureau.
   c. [ ] have not been made; however, the time limit for making such amendments has NOT expired.
   d. [ ] have not been made and will not be made.
8. [ ] An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. [x] An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. [ ] An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11 to 20 below concern document(s) or information included:

11. [ ] An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. [ ] An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. [x] A preliminary amendment.
14. [x] An Application Data Sheet under 37 CFR 1.76.
15. [ ] A substitute specification.
16. [x] A power of attorney and/or change of address letter.
17. [ ] A computer-readable form of the sequence listing in accordance with PCT Rule 13*ter*.2 and 37 CFR 1.821 – 1.825.
18. [ ] A second copy of the published International Application under 35 U.S.C. 154(d)(4).
19. [ ] A second copy of the English language translation of the International Application under 35 U.S.C. 154(d)(4).
20. [x] Other items or information: Return Receipt Postcard

PTO-1390 (Rev. 08-08)
Approved for use through 2/28/2010. OMB 0651-0021
U.S. Patent and Trademark Office; U.S. DEPARTMNT OF COMMERCE

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.

U.S. APPLICATION NO. (if known, see 37 CFR 1.5)	INTERNATIONAL APPLICATION NO.	ATTORNEY'S DOCKET NUMBER
12/226818	PCT/CN2007/001575	JANLEA-001-US

The following fees have been submitted		CALCULATIONS	PTO USE ONLY
21. [X] Basic national fee	$310.00	$ 330.00	
22. [X] Examination fee		$220.00	
If International preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4)	$0.00		
All other situations	$220.00		
23. [X] Search fee		$430.00	
Search fee (37 CFR 1.445(a)(2) has been paid on the international application to the USPTO has an International Searching Authority	$0.00		
International Search Report prepared and provided to the Office	$100.00		
ISR prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB	$430.00		
All other situations	$540.00		
TOTAL OF 21, 22 and 23 =		$980.00	

[ ] Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is **$270** for each additional 50 sheets of paper or fraction thereof.

Total Sheets	Extra sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE	
23 -100 =	0 /50 =	0	x $270.00	$ 0.00

Surcharge of **$130.00** for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(h)).	$ 0.00

CLAIMS	NUMBER FILED	NUMBER EXTRA		RATE	$
Total claims	32- 20 =	12	X	$52.00	$ 624.00
Independent claims	- 3 =	0	X	$220.00	$ 0.00
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+	$390.00	$ 0.00
				TOTAL OF ABOVE CALCULATIONS =	$1604.00
[x] Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by ½.					$802.00
				SUBTOTAL =	$802.00
Processing fee of **$130.00** for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).				+	$ 0.00
				TOTAL NATIONAL FEE =	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). **$40.00** per property				+	$ 0.00
				TOTAL FEES ENCLOSED =	$802.00
				Amount to be refunded:	$
				Amount to be charged:	$802.00

a. [ ] A check in the amount of $ _____ to cover the above fees is enclosed.

b. [ ] Please charge my Deposit Account No. _____ in the amount of $_____ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. [ ] The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. _____. A duplicate copy of this sheet is enclosed.

d. [X] Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. **Credit card information should not be included on this form.** Provide credit card information and authorization on PTO-2038.

NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.

SEND ALL CORRESPONDENCE TO:

CUSTOMER NO. 62008

SIGNATURE: Reg. #60,848 for

Timothy J. Maier
NAME

51,986
REGISTRATION NUMBER

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10/596818

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	JANLEA-001-US
	Application Number	
Title of Invention	AEROSOL ELECTRONIC CIGARETTE	

IAP05Rec'd PCT 29 OCT 2008

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1

Applicant Authority ◉ Inventor ○ Legal Representative under 35 U.S.C. 117 ○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Li		HAN	

Residence Information (Select One) ○ US Residency ◉ Non US Residency ○ Active US Military Service

City	Hong Kong	**Country Of Residence**[i]	CN
Citizenship under 37 CFR 1.41(b)[i]	CN		

Mailing Address of Applicant:

Address 1	1010-12 Room, West Tower, Shun Centre		
Address 2	168 Connaught Road, Mid-Gannuo		
City	Hong Kong	**State/Province**	
Postal Code		**Country**[i]	CN

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).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	62008		
Email Address	info@maierandmaier.com	Add Email	Remove Email

Application Information:

Title of the Invention	AEROSOL ELECTRONIC CIGARETTE		
Attorney Docket Number	JANLEA-001-US	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		**Sub Class (if any)**	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	8	**Suggested Figure for Publication (if any)**	1

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	JANLEA-001-US
	Application Number	
Title of Invention	AEROSOL ELECTRONIC CIGARETTE	

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S. C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	62008		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	a 371 of international		

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 benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

Remove

Application Number	Country i	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
200620090805.0	CN	2006-05-16	◉ Yes ○ No

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

Assignee Information:

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

Assignee 1

Approved for use through 06/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	JANLEA-001-US
	Application Number	
Title of Invention	AEROSOL ELECTRONIC CIGARETTE	

If the Assignee is an Organization check here. ☐				
Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information:			
Address 1			
Address 2			
City		**State/Province**	
Country [i]		Postal Code	
Phone Number		Fax Number	
Email Address			
Additional Assignee Data may be generated within this form by selecting the **Add** button.			

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.					
Signature	Reg. #60,848 for			Date (YYYY-MM-DD)	2008-10-29
First Name	Timothy	Last Name	Maier	Registration Number	51986

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.**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Li HAN Application No.: Not Yet Assigned Filed: Concurrent Herewith Title: AEROSOL ELECTRONIC CIGARETTE Attorney Docket No.: JANLEA-001-US	Art Unit: TBD Examiner: TBD

PRELIMINARY AMENDMENT

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

Dear Sir:

Prior to examination on the merits please amend the above-identified application as follows:

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

Remarks begin on page 6 of this paper.

Amendment to the Claims:

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

1. (Original) An aerosol electronic cigarette includes a battery assembly, an atomizer assembly and a cigarette bottle assembly, wherein further including a shell (a) that is hollow and integrally formed; the said battery assembly connects with the said atomizer assembly and both are located in the said shell (a); the said cigarette bottle assembly is located in one end of the shell (a), which is detachable; the said cigarette bottle assembly fits with the said atomizer assembly; the said shell (a) has through-air-inlets (a1).

2. (Original) The aerosol electronic cigarette of Claim 1, wherein the said battery assembly includes the battery, and the operating indicator (1), electronic circuit board (4), and airflow sensor (5), which are connected with the said battery; the signal output of the said airflow sensor (5) is connected with the said electronic circuit board (4).

3. (Original) The aerosol electronic cigarette of Claim 2, further including a check valve (7); the said battery is a rechargeable battery (3), which has a flexibly connected charging plug (2);the blades (21) of the said charging plug (2) come out of the other end of the said shell (a).

4. (Original) The aerosol electronic cigarette of Claim 3, wherein a spring (6) between the said charging plug (2) and rechargeable battery (3), which lies against the body of the said rechargeable battery (3) on one end, and its free end lies against the said charging plug (2).

5. (Original) The aerosol electronic cigarette of Claim 2, wherein the said battery is a rechargeable battery (3), which has a charging slot on it; the said operating indicator (1) is a LED.

6. (Original) The aerosol electronic cigarette of Claim 2, wherein the said airflow sensor (5) may be alternatively a semiconductor force-sensitive chip capacitance sensor or an inductance sensor.

7. (Original) The aerosol electronic cigarette of Claim 2, wherein the said electronic circuit board (4) includes an electronic switch circuit.

8. (Original) The aerosol electronic cigarette of Claim 2, wherein the airflow sensor (5) has a silica gel corrugated membrane (53), which connects with magnetic steel (54) with a reed relay (52) on one of its ends, both ends of the said reed relay (52) correspond to the relay electrodes (51) respectively.

9. (Original) The aerosol electronic cigarette of Claim 2, wherein the said airflow sensor (5) has a silica gel corrugated membrane (53), which connects with magnetic steel (54) with a Hall element (52) or a magneto-diode or a magneto-triode on one of its ends.

10. (Currently Amended) The aerosol electronic cigarette of Claim 3 ~~or 5~~, wherein the atomizer assembly is an atomizer (8), which includes a porous component (81) and a heating body.

11. (Original) The aerosol electronic cigarette of Claim 10, wherein the said atomizer (8) includes an electric heating rod (82); the body of the said porous component (81) has a run-through atomizing chamber (811); the diameter of the said electric heating rod (82) is less than the diameter of the said atomizing chamber (811);the said electric heating rod (82) enters into the said atomizing chamber (811), and there is a clearance between the said electric heating rod (82) and interior wall of the atomizing chamber (811); the said clearance forms a negative pressure cavity (83);one end of the said porous component (81) fits with the said cigarette bottle assembly.

12. (Original) The aerosol electronic cigarette of Claim 11, wherein the said electric heating rod (82) includes a cylinder (821); the said heating body is heating wire (822), which is wound on the wall of the cylinder (821); on the wall of both ends of the cylinder (821), there are mandrils (823) respectively; the said porous component (81) has a protuberance (812) on one end, and the protuberance (812) fits with the cigarette bottle assembly; the said protuberance (812) is a protruding half sphere, on the side of which there is a run-through hole (813) connecting to the atomizing chamber (811).

13. (Original) The aerosol electronic cigarette of Claim 11, wherein the said electric heating rod (82) includes a cylinder (821);the said heating body is made of electrically conductive ceramic PTC material; the said heating body is set on the wall of the said cylinder (821); on the wall of both ends of the said cylinder (821), there are mandrils (823) respectively; the said porous component (81) has a protuberance (812) on one end, and the said protuberance (812) fits with the said cigarette bottle assembly; the said protuberance (812) is a protruding half sphere, on the side of which there is a run-through hole (813) connecting to the said atomizing chamber (811).

14. (Original) The aerosol electronic cigarette of Claim 10, wherein the said heating body is heating wire; the said atomizer (8) includes a frame (82); the said porous component (81) is set on the frame (82); the heating wire (83) is wound on the porous component (81);the frame (82) has a run-through hole (821) on it; the porous component (81) is wound with heating wire (83) in the part that is on the side in the axial direction of the run-through hole (821); one end of the porous component (81) fits with the cigarette bottle assembly.

15. (Original) The aerosol electronic cigarette of Claim 10, wherein the said porous component (81) is made of foamed nickel, stainless steel fiber felt, macromolecular polymer foam or foamed ceramics.

16. (Original) The aerosol electronic cigarette of Claim 10, wherein the said heating wire is made of platinum wire, nickel-chromium alloy wire or iron-chromium alloy wire containing rare earth, or is flaked.

17. (Original) The aerosol electronic cigarette described in Claim 11 features that a restriction component, which is detachable, is set on one end of the said porous component (81); there is a restriction hole on the body of the said restriction component; the said restriction hole corresponds to the said atomizing chamber (811);the pore diameter of the said restriction hole is less than the inner diameter of the atomizing chamber (811).

18. (Currently Amended) The aerosol electronic cigarette of Claim 12 ~~and 14~~, wherein the said cigarette bottle assembly includes a hollow cigarette holder shell (b), and a perforated component for liquid storage (9) inside the shell (b);one end of the said cigarette holder shell (b) plugs into the shell (a), and the outer peripheral surface of the said cigarette holder shell (b) has an inward ventilating groove (b2); on one end surface of the cigarette holder shell (b), there is an air channel (b1) extending inward.

19. (Original) The aerosol electronic cigarette of Claim 18, wherein the said air channel (b1) is located in the center on one end surface of the said cigarette holder shell (b).

20. (Original) The aerosol electronic cigarette of Claim 18, wherein one end of the porous component (81) lies against one end surface of the said perforated component for liquid storage (9), and contacts the perforated component for liquid storage (9).

21. (Original) The aerosol electronic cigarette of Claim 18, wherein the said perforated component for liquid storage (9) is made of such materials as PLA fiber, terylene fiber or nylon fiber.

22. (Original) The aerosol electronic cigarette of Claim 18, wherein the said perforated component for liquid storage (9) is plastic foam molding or column of multi-layer plates made through plastic injection with polyvinyl chloride, ploypropylene and polycarbonate.

23. (Currently Amended) The aerosol electronic cigarette of Claim 11 ~~or 14~~, wherein the said aerosol electronic cigarette (5) is located in a charging device.

24. (Original) The aerosol electronic cigarette of Claim 23, wherein the said charging device includes a case (1), which contains an auxiliary charging storage battery (2) inside it, and holds the electronic cigarette (5) and the charger (3) for the rechargeable battery embedded in the electronic cigarette (5); the power inputs of the auxiliary charging storage battery (2) and charger (3) are connected with the power supply respectively.

25. (Original) The aerosol electronic cigarette of Claim 24, wherein the said case (1) has a spare liquid supply bottle in it.

26. (Original) The aerosol electronic cigarette of Claim 24, wherein the said power output of the auxiliary charging storage battery (2) is connected with the power input of the charger (3).

27. (Original) The aerosol electronic cigarette of Claim 24, wherein the power output of the said charger (3) is a charging slot (31), which fits with the charging plug of the rechargeable battery inside the electronic cigarette, or a charging plug, which fits with the charging slot of the rechargeable battery.

28. (Original) The aerosol electronic cigarette of Claim 26, wherein the said charger (3) is a constant voltage & current charger.

29. (Original) The aerosol electronic cigarette of Claim 24, wherein, on the body of the said shell (1), there is a pair of slide ways (12) corresponding to the position of the said electronic cigarette, and on the slide ways (12), there is a slide cover (11).

30. (New) The aerosol electronic cigarette of Claim 5, wherein the atomizer assembly is an atomizer (8), which includes a porous component (81) and a heating body.

31. (New) The aerosol electronic cigarette of Claim 14, wherein the said cigarette bottle assembly includes a hollow cigarette holder shell (b), and a perforated component for liquid storage (9) inside the shell (b);one end of the said cigarette holder shell (b) plugs into the shell (a), and the outer peripheral surface of the said cigarette holder shell (b) has an inward ventilating groove (b2); on one end surface of the cigarette holder shell (b), there is an air channel (b1) extending inward.

32. (New) The aerosol electronic cigarette of Claim 14, wherein the said aerosol electronic cigarette (5) is located in a charging device.

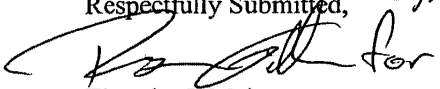
REMARKS

Favorable consideration of this Application as presently amended and in light of the following discussion is respectfully requested.

Upon entry of this Amendment, claims 1-32 are pending in the present Application. Applicants submit that no new matter has been introduced via this Amendment.

Should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Timothy J. Maier, Applicants' Attorney, at 1.703.740.8322 so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted, Reg. # 60,848



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Date: October 29, 2008

(12) International Application for Patent Filed in Accordance with Patent Cooperation Treaty

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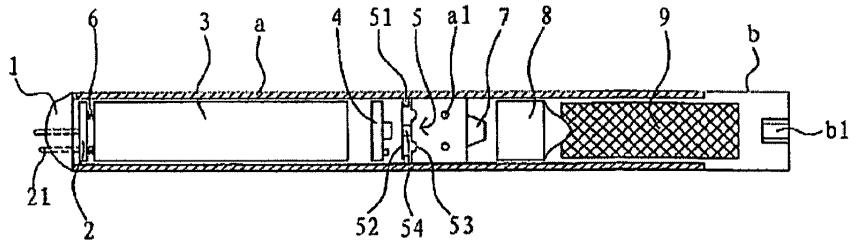
November 22, 2007 (22.11.2007)

(10) International Publication Number
WO 2007/131449 A1

(54) Title: Aerosol Electronic Cigarette



(57) Abstract: An aerosol electronic cigarette includes a battery assembly, an atomizer assembly and a cigarette bottle assembly and also includes a shell (a) which is hollow and integrally formed. Said battery assembly connects with said atomizer assembly and both are located in said shell (a). Said cigarette bottle assembly is located in one end of the shell (a), which is detachable. Said cigarette bottle assembly fits with said atomizer assembly. Said shell (a) has through-air-inlets (a1).

An aerosol electronic cigarette

Technical Field

The present invention relates to an electronic cigarette, in particular, an aerosol electronic cigarette that doesn't contain tar but nicotine.

Background Art

Today when "smoking is harmful to your health" has become a common sense, there are one billion people smoking cigarettes, and this figure is still rising. On March 1, 2003, the World Health Organization (WHO) issued the first international smoking ban – Framework Convention on Tobacco Control. According to WHO's data, smoking causes 4,900,000 deaths each year. Smoking causes serious respiratory system diseases and cancers, though it is a hard job to persuade the smokers to completely quit smoking.

Nicotine is the effective ingredient of cigarette, which produces a lot of tar mist as the cigarette burns. The tar mist accesses the pulmonary alveolus and is quickly absorbed into the blood. Nicotine thus acts on the receptor of the central nervous system, bringing the euphoria like stimulant drugs to the smokers, who feel light in the head and on wings as well.

Nicotine is a micromolecular alkaloid, which is basically harmless to human bodies with a small dosage. Plus, its half life period is extremely short in blood. Tar is the major harmful substance in tobacco. Tobacco tar comprises of several thousands of ingredients, dozens of which are carcinogenic substances. It has now been proved that second hand smoking is even more harmful to those who don't smoke.

To seek the cigarette substitutes that don't contain harmful tar but nicotine, many inventors have used the relatively pure nicotine to create such products as "Cigarette Patch", "Nicotine Gargle", "Aerosol Packed in the High Pressure Tank with Propellant", "Nicotine Chewing Gum", and "Nicotine Beverage". These products are not as harmful as tar, but are absorbed very slowly. As a result, its peak concentration can't be effectively established in blood, and the smokers can't be satisfied to the full. In addition, the smokers are deprived of the "smoking" habit. Therefore, the substituting products are not real cigarette substitutes or products helping to quit smoking.

The electronic cigarettes currently available on the market may resolve the above-mentioned issue, though they are complicated in structure. Their cigarette bodies can be roughly divided into three sections, which have to be connected through via plugging or thread coupling before use. Also, their batteries have to be changed frequently, making it inconvenient for the users. What's worse, the electronic cigarettes don't provide the ideal aerosol effects, and their atomizing efficiency is not high.

Contents of invention

To overcome the above-mentioned disadvantages, this invention has been designed to provide an aerosol electronic cigarette that substitutes for cigarettes and helps the smokers to quit smoking.

The purpose of this invention is fulfilled with the following technical solution: an aerosol electronic cigarette includes a battery assembly, an atomizer assembly and a cigarette bottle assembly, and also includes a shell, which is hollow and integrally formed. The said battery assembly connects with the said atomizer assembly and both are located in the said shell. The said cigarette bottle assembly is located in one end of the shell, which is detachable. The said cigarette bottle assembly fits with the said atomizer assembly. The said shell has through-air-inlets.

The additional features of this invention are as follows: the said battery assembly includes the battery, and the operating indicator, electronic circuit board, and airflow sensor, which are connected with the said battery; the signal output of the said airflow sensor is connected with the said electronic circuit board.

It also includes a check valve. The said battery is a rechargeable battery, which has a flexibly connected charging plug. The blades of the said plug come out of the other end of the said shell.

Between the said charging plug and rechargeable battery is a spring, which lies against the body of the said rechargeable battery on one end, and its free end lies against the said charging plug.

The said battery is a rechargeable battery, which has a charging slot on it. The said operating indicator is a LED.

The said airflow sensor may be alternatively a semiconductor force-sensitive chip capacitance sensor or an inductance sensor.

The said electronic circuit board includes an electronic switch circuit.

The said airflow sensor has a silica gel corrugated membrane, which connects with magnetic steel with a reed relay on one of its ends. Both ends of the said reed relay correspond to the relay electrodes.

The said airflow sensor has a silica gel corrugated membrane, which connects with magnetic steel with a Hall element or a magneto-diode or a magneto-triode on one of its ends.

The said atomizer assembly is an atomizer, which includes a porous component and a heating body.

The said atomizer also includes an electric heating rod. The body of the said porous component has a run-through atomizing chamber. The diameter of the said electric heating rod is less than the diameter of the said atomizing chamber. The said electric heating rod enters into the said atomizing chamber, and there is a clearance between the said electric heating rod and interior wall of the atomizing chamber. The said clearance forms a negative pressure cavity. One end of the said

porous component fits with the said cigarette bottle assembly.

The said electric heating rod includes a cylinder. The said heating body is heating wire, which is wound on the wall of the said cylinder. The said porous component has a protuberance on one end, and the said protuberance fits with the said cigarette bottle assembly. The said protuberance is a half sphere, on the side of which there is a run-through hole connecting to the said atomizing chamber.

The said electric heating rod includes a cylinder. The said heating body is made of electrically conductive ceramic PTC material. The said heating body is set on the wall of the said cylinder. On the wall of both ends of the said cylinder, there are mandrils respectively. The said porous component has a protuberance on one end, and the said protuberance fits with the said cigarette bottle assembly. The said protuberance is a half sphere, on the side of which there is a run-through hole connecting to the said atomizing chamber.

The said heating body is heating wire. The said atomizer assembly includes a frame. The said porous component is set on the said frame. The said porous component is wound with heating wire. The said frame has a run-through hole on it. The said porous component is wound with heating wire in the part that is on the side in the axial direction of the said run-through hole. One end of the said porous component fits with the said cigarette bottle assembly.

The said porous component is made of foamed nickel, stainless steel fiber felt, macromolecular polymer foam or foamed ceramics.

The said heating wire is made of platinum wire, nickel-chromium alloy wire or iron-chromium alloy wire containing rare earth, or is flaked.

A restriction component, which is detachable, is set on one end of the said porous component. There is a restriction hole on the body of the said restriction component. The said restriction hole corresponds to the said atomizing chamber. The pore diameter of the said restriction hole is less than the inner diameter of the atomizing chamber.

The said cigarette bottle assembly includes a hollow cigarette holder shell, and a perforated component for liquid storage inside the said cigarette holder shell. One end of the said cigarette holder shell plugs into the said shell, and the outer peripheral surface of the said cigarette holder shell has an inward ventilating groove. On one end surface of the said cigarette holder shell, there is an air channel extending inward.

The said air channel is located in the center on one end surface of the said cigarette holder shell.

One end of the said porous component lies against one end surface of the said perforated component for liquid storage, and contacts the said perforated component for liquid storage.

The said perforated component for liquid storage is made of such materials as PLA fiber, terylene

fiber or nylon fiber.

The said perforated component for liquid storage is plastic foam molding or column of multi-layer plates made through plastic injection with polyvinyl chloride, ploypropylene and polycarbonate..

The said electronic cigarette is held in a charging device.

The said charging device includes a case, which contains an auxiliary charging storage battery inside it, and holds the electronic cigarette and the charger for the rechargeable battery embedded in the electronic cigarette, as well as the power supply circuit. The power inputs of the said auxiliary charging storage battery and charger are connected with the power supply circuit respectively.

The said case has a spare liquid supply bottle in it.

The power output of the said auxiliary charging storage battery is connected with the power input of the said charger.

The power output of the said charger is a charging slot, which fits with the charging plug of the rechargeable battery inside the said electronic cigarette, or a charging plug, which fits with the charging slot of the rechargeable battery.

The said charger is a constant voltage & current charger.

On the body of the said shell, there is a pair of slide ways corresponding to the position of the said electronic cigarette, and on the slide ways, there is a slide cover.

This invention will bring the following benefits: (1) For this invention, the perforated component for liquid storage of the cigarette bottle assembly stores the nicotine liquid only, which doesn't contain cigarette tar, considerably reducing the carcinogenic risks of smoking. At the same time, the smokers can still enjoy the feel and excitement of smoking, and there is no fire hazard since there is no need for igniting. (2) For this invention, the battery assembly and atomizer assembly are directly installed inside the shell, and then connected with the cigarette bottle assembly. That is, there is just one connection between two parts, resulting in a very simple structure. For use or change, you just need to plug the cigarette holder into the shell, providing great convenience. When the nicotine liquid in the cigarette bottle assembly is used up or the cigarette bottle assembly is damaged and needs to be changed, the operation will be extremely easy. (3) For this invention, the rechargeable battery inside the battery assembly has a charging plug, whose blades come out of the shell. When the rechargeable battery inside the electronic cigarette runs out of power, it may be directly plugged into the charger for charging, with no need to remove the rechargeable battery, resulting in very easy use. (4) For this invention, the charging device includes the charger and the auxiliary charging storage battery. The electronic cigarette is put inside the charger when not in use, and then the charging device may be electrified to charge the electronic cigarette and the auxiliary charging storage battery as well. In the event that power

supply is not available for the charging device, the auxiliary charging storage battery may be used to charge the electronic cigarette. Therefore, the electronic cigarette can be charged anywhere you go, and it is very suitable for use when you are on a business or tourist trip. Further, the charging device includes a spare liquid supply bottle, which contains nicotine liquid for spare use when you are on a business or tourist trip. (5) For this invention, on one end of the shell of the cigarette bottle assembly, there is an air channel extending inward. The electronic cigarette works to produce mist, which flows to the shell, generating some fine drips; the fine drips are condensed into bigger drips, which fall along the exterior wall of the air channel into the cavity of the shell of the cigarette bottle assembly, so that they are not inhaled by the smoker out of the air channel. (6) In addition, with a little bit modification to the liquid storage, the unit and its connecting structure of this invention may also be loaded with drugs for delivery to the lung.

Description of Drawings

Figure 1 is the side section view of the electronic cigarette of this invention.

Figure 2 is the section view of the shell (a) separated from the cigarette bottle assembly of the electronic cigarette of this invention, illustrating the structure of the cigarette bottle assembly that is detachably plug in the shell (a).

Figure 3 is the diagram of the axial structure of the cigarette bottle assembly of this invention, illustrating the ventilating groove on the peripheral surface of the cigarette holder shell.

Figure 4 is the side section view of the cigarette bottle assembly of this invention, illustrating the structure of the air channel.

Figure 5 is the side section view of the porous component of the atomizer of this invention, illustrating the atomizing chamber, a protruding half sphere structure.

Figure 6 is the diagram of the structure of the electric heating rod of the atomizer of this invention.

Figure 7 is the side section of the atomizer of this invention, illustrating the locations of and connection relation between the electric heating rod and porous component.

Figure 8 is the diagram of the cubic structure of the atomizer of this invention, illustrating the locations of and connection relation between the electric heating rod and porous component.

Figure 9 is the section view of the check valve of this invention.

Figure 10 is the front section view of the restriction component in the second preferred embodiment of this invention, illustrating the structure of the restriction component.

Figure 11 is the diagram of the axial structure of the cigarette bottle assembly in the third preferred embodiment of this invention.

Figure 12 is the A-A section view of Figure 11.

Figure 13 is the diagram of the structure of the electric heating rod of the atomizer in the fourth preferred embodiment of this invention.

Figure 14 is the section view of the porous component of the atomizer in the fourth preferred embodiment of this invention.

Figure 15 is the diagram of the axial structure of Figure 14.

Figure 16 is the side section view of the atomizer in the fourth preferred embodiment of this invention, illustrating the locations of and connection relation between the electric heating rod and porous component.

Figure 17 is the diagram of the axial structure of the atomizer in the fifth preferred embodiment of this invention.

Figure 18 is the side section view of the atomizer in the fifth preferred embodiment of this invention.

Figure 19 is the side section view of the electronic cigarette in the sixth preferred embodiment of this invention, illustrating the diagram of the structure of the airflow sensor adopting Hall element.

Figure 20 is the electric circuit diagram of the electronic cigarette of this invention, with the airflow sensor adopting a reed relay structure.

Figure 21 is the electric circuit diagram of the electronic cigarette of this invention, with the airflow sensor adopting Hall element.

Figure 22 is the diagram of the cubic structure of the charging device of this invention, illustrating the locations of and connection relation of various internal parts.

Figure 23 is the side section view of the charging device of this invention, illustrating the structure of slide way and cover.

Figure 24 is the diagram of the front structure of the charging device of this invention, illustrating the structure of the sliding cover.

Specific Mode for Carrying Out the Invention

This invention is further described as follows on the basis of the drawings.

As shown in Figure 1-10, this utility model provides an aerosol electronic cigarette, which

includes a battery assembly, an atomizer assembly and a cigarette bottle assembly, and also includes a shell (a), which is hollow and integrally formed. The battery assembly connects with the atomizer assembly and both are located in the shell. The cigarette bottle assembly is located in one end of the shell, which is detachable. The cigarette bottle assembly fits with the atomizer assembly. The shell has through-air-inlets (a1).

In this specific embodiment, the battery assembly includes the battery, and the operating indicator (1), electronic circuit board (4), and airflow sensor (5), which are connected with the battery. It also includes a check valve (7). The signal output of the airflow sensor (5) is connected with the said electronic circuit board (4). The battery is a rechargeable battery (3), which may be either a rechargeable polymer lithium ion battery or a rechargeable lithium ion battery. The airflow sensor (5) may be alternatively a semiconductor force-sensitive chip capacitance sensor or an inductance sensor. The rechargeable battery (3) has a flexibly connected charging plug (2). The blades (21) of the charging plug (2) come out of the other end of the shell (a). Between the charging plug (2) and rechargeable battery (3) is a spring (6), which lies against the body of the rechargeable battery (3) on one end, while its free end lies against the charging plug (2), forming a flexible structure, which buffers the charging plug (2) when plugged for charging, thus protecting the rechargeable battery against any damage. Of course, the rechargeable battery (3) in this embodiment has a charging slot on it, which replaces the structure of charging plug (2) to perform the charging function and protect the rechargeable battery (3) against any damage. The operating indicator (1) is a LED. In this embodiment, there are two LEDs. The electronic circuit board (4) includes an electronic switch circuit, which controls the electric circuit according to the input signals, so that the rechargeable battery (3) electrifies the electric heating rod (82) inside the atomizer (8) and the LEDs as well.

As shown in Figure 1 and 2, the airflow sensor (5) has a silica gel corrugated membrane (53), which connects with magnetic steel (54) with a reed relay (52) on one of its ends. Both ends of the said reed relay (52) correspond to the relay electrodes (51) respectively.

As shown inFigure 5-8, the atomizer assembly is an atomizer (8), which includes a porous component (81) and a heating rod (82). The body of the porous component (82) has a run-through atomizing chamber (811). The diameter of the electric heating rod (82) is less than the diameter of the atomizing chamber (811). The electric heating rod (82) enters into the atomizing chamber (811), and there is a clearance between the electric heating rod (82) and interior wall of the atomizing chamber (811), which forms a negative pressure cavity (83). One end of the said porous component (81) fits with the said cigarette bottle assembly. As Figure 5, 7 and 8 show, the porous component (81) has a protuberance (812) on the other end, and the protuberance (812) fits with the cigarette bottle assembly. The protuberance (812) is a protruding half sphere, on the side of which there is a run-through hole (813) connecting to the atomizing chamber (811). Of course, the protuberance (812) may also be a taper, rectangle or any other shape. The porous component (81) is made of foamed nickel, stainless steel fiber felt, macromolecular polymer foam or foamed ceramics, providing the remarkable capabilities in liquid absorption and diffusion, and the ability to absorb the liquid stored in the cigarette bottle assembly.

As shown in Figure 6, the electric heating rod (82) includes a cylinder (821). The heating wire (822) is wound on the wall of the cylinder (821). On the wall of both ends of the cylinder (821), there are mandrils (823) respectively, which lie against the interior wall of the atomizing chamber (811) of the porous component (81). There is a negative pressure cavity (83) between the electric heating rod and interior wall of the atomizing chamber.

The heating wire is made of platinum wire, nickel-chromium alloy wire or iron-chromium alloy wire containing rare earth, or is flaked. The electric heating rod (82) may alternatively have on its peripheral wall the heating layer made of electrically conductive ceramic PTC material, to replace the heating wire.

Of this embodiment, the battery assembly and atomizer assembly are mutually connected and then installed inside the integrally formed shell (a) to form a one-piece part. The rechargeable battery (3) may be charged without frequent change of battery. The user just needs to plug the cigarette bottle assembly into the open end of the shell (a), for easy use and very easy change.

As shown in 3 and 4, the cigarette bottle assembly includes a hollow cigarette holder shell (b), and a perforated component for liquid storage (9) inside the shell (b). The perforated component for liquid storage (9) is made of such materials as PLA fiber, terylene fiber or nylon fiber, which are suitable for liquid storage. Alternatively, it may be plastic foam molding or column of multi-layer plates made through plastic injection with polyvinyl chloride, ploypropylene and polycarbonate. One end of the cigarette holder shell (b) plugs into the shell (a), and the outer peripheral surface of the cigarette holder shell (b) has an inward ventilating groove (b2). On one end surface of the cigarette holder shell (b), there is an air channel (b1) extending inward. The air channel (b1) is located in the center on the surface of one end of shell (b).

As shown in Figure 1-9, one end of the porous component (81) lies against one end surface of the said perforated component for liquid storage (9), and contacts the perforated component for liquid storage (9). It absorbs the cigarette liquid from the perforated component for liquid storage (9). When the smoker smokes, the cavity of the cigarette holder shell (b) is in the negative pressure state. In the shell (b), one end of the airflow sensor (5) forms a normal pressure cavity, while the other end forms a negative pressure cavity. The air pressure difference between the normal pressure cavity and negative pressure cavity or the high-speed airflow enables the magnetic steel (54) of the airflow sensor (5) to drive the reed relay(52) to contact the relay electrode (51). As shown in Figure 20, the electric circuit is electrified, and the electronic switch circuit on the electronic circuit board (4) is electrified. Thus, the rechargeable battery (3) starts to electrify the electric heating rod (82) inside the atomizer (8), and at the same time, the LEDs, which are electrified by the rechargeable battery (3), emit light. The air enters the normal pressure cavity through the air inlet (a1), passes the check valve (7) via the airflow passage in the airflow sensor (5), and flows to the negative pressure cavity (83) in the atomizer (8). Since the negative pressure cavity (83) provides the negative pressure compared with the outside, the air flow sprays into it, bringing the cigarette liquid from the porous component (81) to spray into the negative pressure cavity (83) in the form of fine drips. In the meantime, the electric heating rod (82) is electrified by the rechargeable battery (3) under the control of electronic circuit board (4), to heat the fine drips

for atomization. After atomization, the big-diameter fine drips are re-absorbed by the porous component (81) under the action of vortex, while the small-diameter fine drips are suspended in the airflow to form gasoloid, which is discharged through the negative pressure cavity (83) and run-through hole (813), flows into the cigarette holder shell (b) of the cigarette bottle assembly, and is absorbed by the air channel (b1). When the gasoloid enters the cigarette holder shell (b), multiple small liquid drips are condensed into bigger ones, which fall into the clearance between the cigarette holder shell (b) and air channel (b1) without being absorbed by the air channel (b1). The perforated component for liquid storage (9) of the cigarette bottle assembly and the porous component (81) of the atomizer (8) contact each other to achieve the capillary impregnation for liquid supply.

The unit and its connecting structure of this invention may also be loaded with drugs for delivery to the lung.

As shown in Figure 22, 23 and 24, the electronic cigarette (5) is held in a charging device. The charging device includes a case (1), which contains an auxiliary charging storage battery (2) inside it, and holds the electronic cigarette (5) and the charger (3) for the rechargeable battery embedded in the electronic cigarette (5), as well as the power supply circuit. The power inputs of the auxiliary charging storage battery (2) and charger (3) are connected with the power supply respectively. The charger (3) in this embodiment is a constant voltage & current charger. It may be a GY5210 charger, or any other constant voltage & current charger. The case (1) has a spare liquid supply bottle (4) in it. The power output of the auxiliary charging storage battery (2) is connected with the power input of the charger (3). The power output of the charger (3) is a charging slot (31), which fits with the charging plug of the rechargeable battery inside the electronic cigarette, or a charging plug, which fits with the charging slot of the rechargeable battery.

As shown in Figure 23 and 24 , on the body of the shell (1), there is a pair of slide ways (12) corresponding to the position of the electronic cigarette, and on the slide ways, there is a slide cover (11).

In the second preferred embodiment of this utility model, a restriction component (10), which is detachable, is set on one end of the said porous component (81). There is a restriction hole (101) on the body of the restriction component (10). The restriction hole (101) corresponds to the atomizing chamber (811). The pore diameter of the restriction hole is less than the inner diameter of the atomizing chamber (811) to the extent that the size of the restriction component (10) installed on the porous component (81) varies, for the purpose of airflow capacity control. On the basis of different applications, the restriction component of different sizes and pore diameters may be used.

In the third preferred embodiment of this utility model, as shown in 11 and 12, on the outer peripheral wall of the cigarette shell (b), there is a protruding rib (b2) that is evenly partitioned. The perforated component for liquid storage (9) enters the cigarette holder shell (b) and lies against the protruding rib (b2). Thus, there appears a clearance between the outer peripheral surface of the perforated component for liquid storage (9) and the interior wall of the shell (b). The

clearance is for connection the shell (a) and cigarette holder shell (b). When the user smokes, the air channel (b1) absorbs the air to cause airflow inside the shell (a), thus triggering the airflow sensor (5) and eventually starting the electronic cigarette. Also, the atomizer (8) works to atomize the cigarette liquid and produce gas flow, which enters the cigarette holder shell (b).

In the fourth preferred embodiment of this utility model, as shown in Figure 13, 14, 15 and 16, on one end of the cylinder (821), there is a fixed plate (84), whose outer peripheral wall has partitioned supports (841). The outer ends of the supports (841) lie against the interior wall of the shell (a), thus suspending the cylinder (821), which is connected with the fixed plate (84), in the cavity of the shell (a). On the surface of the fixed plate (84), there is a mandril (842), whose front end lies against one end of the porous component (81), so that the fixed plate (84) is separated from the atomizing chamber (811) of the porous component (81). As a result, the run-through hole on one end of the atomizing chamber (811) won't be blocked, and the mist generated in the atomizing chamber (811) can be dispersed. One end of the porous component (81) has two protuberances (812) at the outlet of the atomizing chamber (811). Between the two protuberances (812) is a clearance. The two protuberances (812) lie against the perforated component for liquid storage (9).

In the fifth preferred embodiment of this utility model, as shown in Figure 17 and 18, the atomizer assembly is an atomizer (8), which includes a frame (82), the porous component (81) set on the frame (82), and the heating wire (83) wound on the porous component (81). The frame (82) has a run-through hole (821) on it. The porous component (81) is wound with heating wire (83) in the part that is on the side in the axial direction of the run-through hole (821). One end of the porous component (81) fits with the cigarette bottle assembly. The porous component (81) is made of foamed nickel, stainless steel fiber felt, macromolecular polymer foam or foamed ceramics.

In the sixth preferred embodiment of this utility model, as shown in Figure 19, the airflow sensor (5) has a silica gel corrugated membrane (53), which connects with magnetic steel (54) with a Hall element (52), or a magneto-diode or a magneto-triode on one of its ends. Figure 21 shows the electric circuit of the electronic cigarette of this solution.

Claims

1. An aerosol electronic cigarette includes a battery assembly, an atomizer assembly and a cigarette bottle assembly, wherein further including a shell (a) that is hollow and integrally formed; the said battery assembly connects with the said atomizer assembly and both are located in the said shell (a); the said cigarette bottle assembly is located in one end of the shell (a), which is detachable; the said cigarette bottle assembly fits with the said atomizer assembly; the said shell (a) has through-air-inlets (a1).

2. The aerosol electronic cigarette of Claim 1,wherein the said battery assembly includes the battery, and the operating indicator (1), electronic circuit board (4), and airflow sensor (5), which are connected with the said battery; the signal output of the said airflow sensor (5) is connected with the said electronic circuit board (4).

3. The aerosol electronic cigarette of Claim 2 ,further including a check valve (7); the said battery is a rechargeable battery (3), which has a flexibly connected charging plug (2);the blades (21) of the said charging plug (2) come out of the other end of the said shell (a).

4. The aerosol electronic cigarette of Claim 3 ,wherein a spring (6) between the said charging plug (2) and rechargeable battery (3), which lies against the body of the said rechargeable battery (3) on one end, and its free end lies against the said charging plug (2).

5. The aerosol electronic cigarette of Claim 2 ,wherein the said battery is a rechargeable battery (3), which has a charging slot on it; the said operating indicator (1) is a LED.

6. The aerosol electronic cigarette of Claim 2 ,wherein the said airflow sensor (5) may be alternatively a semiconductor force-sensitive chip capacitance sensor or an inductance sensor.

7. The aerosol electronic cigarette of Claim 2 ,wherein the said electronic circuit board (4) includes an electronic switch circuit.

8. The aerosol electronic cigarette of Claim 2 ,wherein the airflow sensor (5) has a silica gel corrugated membrane (53), which connects with magnetic steel (54) with a reed relay (52) on one of its ends,both ends of the said reed relay (52) correspond to the relay electrodes (51) respectively.

9. The aerosol electronic cigarette of Claim 2 ,wherein the said airflow sensor (5) has a silica gel corrugated membrane (53), which connects with magnetic steel (54) with a Hall element (52) or a magneto-diode or a magneto-triode on one of its ends.

10. The aerosol electronic cigarette of Claim 3 or 5 ,wherein the atomizer assembly is an atomizer (8), which includes a porous component (81) and a heating body.

11. The aerosol electronic cigarette of Claim 10 ,wherein the said atomizer (8) includes an electric

heating rod (82);the body of the said porous component (81) has a run-through atomizing chamber (811); the diameter of the said electric heating rod (82) is less than the diameter of the said atomizing chamber (811);the said electric heating rod (82) enters into the said atomizing chamber (811), and there is a clearance between the said electric heating rod (82) and interior wall of the atomizing chamber (811); the said clearance forms a negative pressure cavity (83);one end of the said porous component (81) fits with the said cigarette bottle assembly.

12. The aerosol electronic cigarette of Claim 11 ,wherein the said electric heating rod (82) includes a cylinder (821); the said heating body is heating wire (822), which is wound on the wall of the cylinder (821); on the wall of both ends of the cylinder (821), there are mandrils (823) respectively; the said porous component (81) has a protuberance (812) on one end, and the protuberance (812) fits with the cigarette bottle assembly; the said protuberance (812) is a protruding half sphere, on the side of which there is a run-through hole (813) connecting to the atomizing chamber (811).

13. The aerosol electronic cigarette of Claim 11 ,wherein the said electric heating rod (82) includes a cylinder (821);the said heating body is made of electrically conductive ceramic PTC material;the said heating body is set on the wall of the said cylinder (821); on the wall of both ends of the said cylinder (821), there are mandrils (823) respectively; the said porous component (81) has a protuberance (812) on one end, and the said protuberance (812) fits with the said cigarette bottle assembly; the said protuberance (812) is a protruding half sphere, on the side of which there is a run-through hole (813) connecting to the said atomizing chamber (811).

14. The aerosol electronic cigarette of Claim 10,wherein the said heating body is heating wire; the said atomizer (8) includes a frame (82); the said porous component (81) is set on the frame (82); the heating wire (83) is wound on the porous component (81);the frame (82) has a run-through hole (821) on it; the porous component (81) is wound with heating wire (83) in the part that is on the side in the axial direction of the run-through hole (821); one end of the porous component (81) fits with the cigarette bottle assembly.

15. The aerosol electronic cigarette of Claim 10 ,wherein the said porous component (81) is made of foamed nickel, stainless steel fiber felt, macromolecular polymer foam or foamed ceramics.

16. The aerosol electronic cigarette of Claim 10 ,wherein the said heating wire is made of platinum wire, nickel-chromium alloy wire or iron-chromium alloy wire containing rare earth, or is flaked.

17. The aerosol electronic cigarette described in Claim 11 features that a restriction component, which is detachable, is set on one end of the said porous component (81); there is a restriction hole on the body of the said restriction component; the said restriction hole corresponds to the said atomizing chamber (811);the pore diameter of the said restriction hole is less than the inner diameter of the atomizing chamber (811).

18. The aerosol electronic cigarette of Claim 12 and 14 ,wherein the said cigarette bottle assembly

includes a hollow cigarette holder shell (b), and a perforated component for liquid storage (9) inside the shell (b);one end of the said cigarette holder shell (b) plugs into the shell (a), and the outer peripheral surface of the said cigarette holder shell (b) has an inward ventilating groove (b2); on one end surface of the cigarette holder shell (b), there is an air channel (b1) extending inward.

19. The aerosol electronic cigarette of Claim 18 ,wherein the said air channel (b1) is located in the center on one end surface of the said cigarette holder shell (b).

20. The aerosol electronic cigarette of Claim 18 ,wherein one end of the porous component (81) lies against one end surface of the said perforated component for liquid storage (9), and contacts the perforated component for liquid storage (9).

21. The aerosol electronic cigarette of Claim 18 ,wherein the said perforated component for liquid storage (9) is made of such materials as PLA fiber, terylene fiber or nylon fiber.

22. The aerosol electronic cigarette of Claim 18 ,wherein the said perforated component for liquid storage (9) is plastic foam molding or column of multi-layer plates made through plastic injection with polyvinyl chloride, ploypropylene and polycarbonate.

23. The aerosol electronic cigarette of Claim 11 or 14 ,wherein the said aerosol electronic cigarette (5) is located in a charging device.

24. The aerosol electronic cigarette of Claim 23 ,wherein the said charging device includes a case (1), which contains an auxiliary charging storage battery (2) inside it, and holds the electronic cigarette (5) and the charger (3) for the rechargeable battery embedded in the electronic cigarette (5); the power inputs of the auxiliary charging storage battery (2) and charger (3) are connected with the power supply respectively.

25. The aerosol electronic cigarette of Claim 24 ,wherein the said case (1) has a spare liquid supply bottle in it.

26. The aerosol electronic cigarette of Claim 24 ,wherein the said power output of the auxiliary charging storage battery (2) is connected with the power input of the charger (3).

27. The aerosol electronic cigarette of Claim 24,wherein the power output of the said charger (3) is a charging slot (31), which fits with the charging plug of the rechargeable battery inside the electronic cigarette, or a charging plug, which fits with the charging slot of the rechargeable battery.

28. The aerosol electronic cigarette of Claim 26 ,wherein the said charger (3) is a constant voltage & current charger.

29. The aerosol electronic cigarette of Claim 24,wherein, on the body of the said shell (1), there is a pair of slide ways (12) corresponding to the position of the said electronic cigarette, and on the

slide ways (12), there is a slide cover (11).

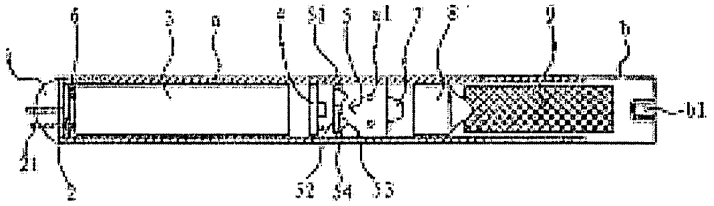


Figure 1

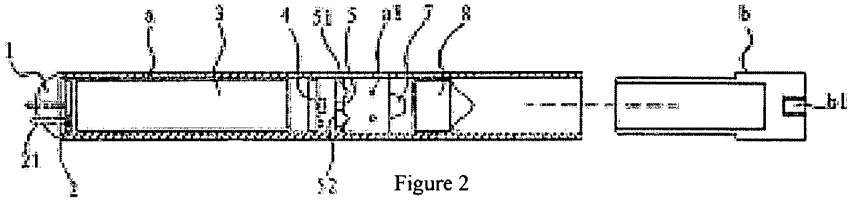


Figure 2

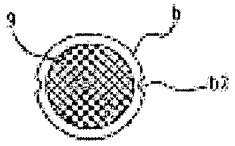


Figure 3

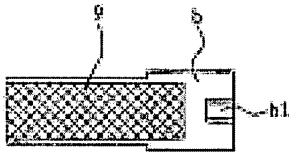


Figure 4

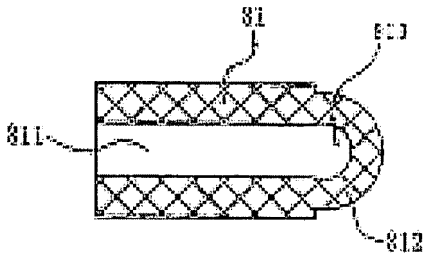


Figure 5

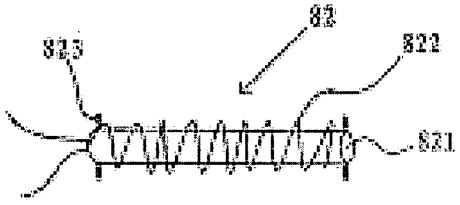


Figure 6

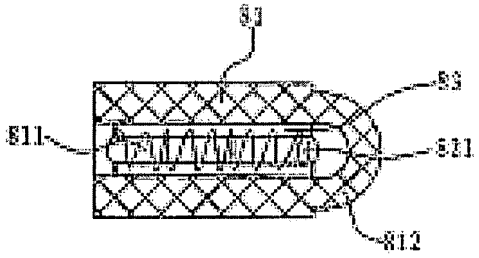


Figure 7

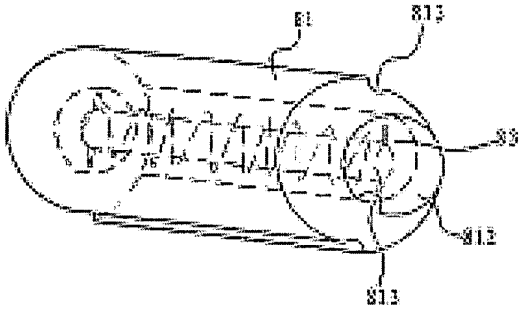


Figure 8

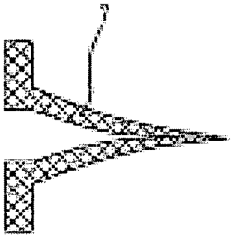


Figure 9

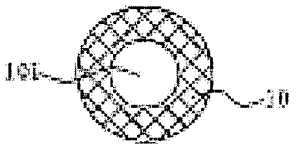


Figure 10

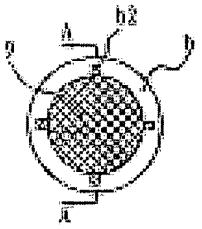


Figure 11

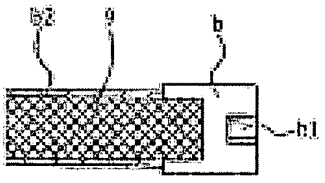


Figure 12

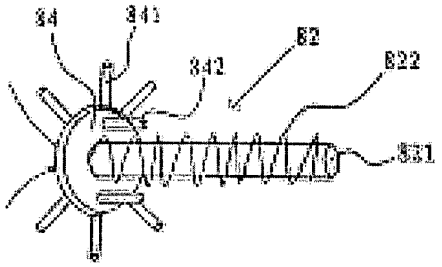


Figure 13

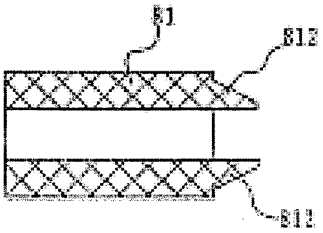


Figure 14

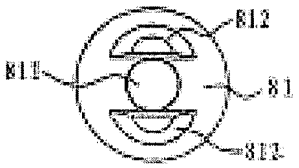


Figure 15

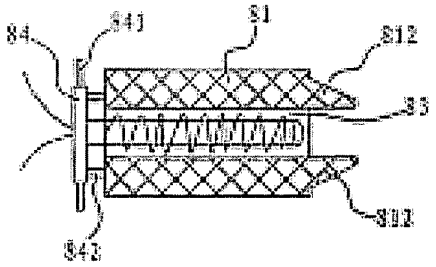


Figure 16

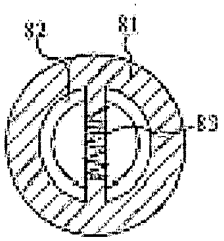


Figure 17

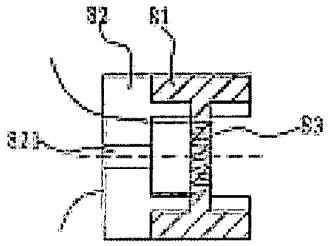


Figure 18

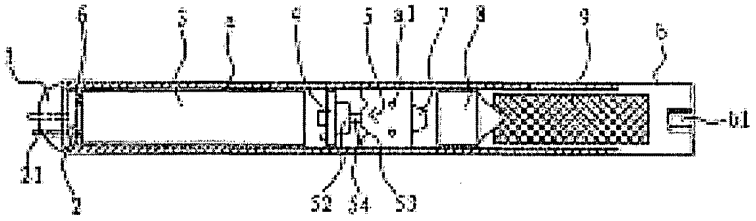


Figure 19

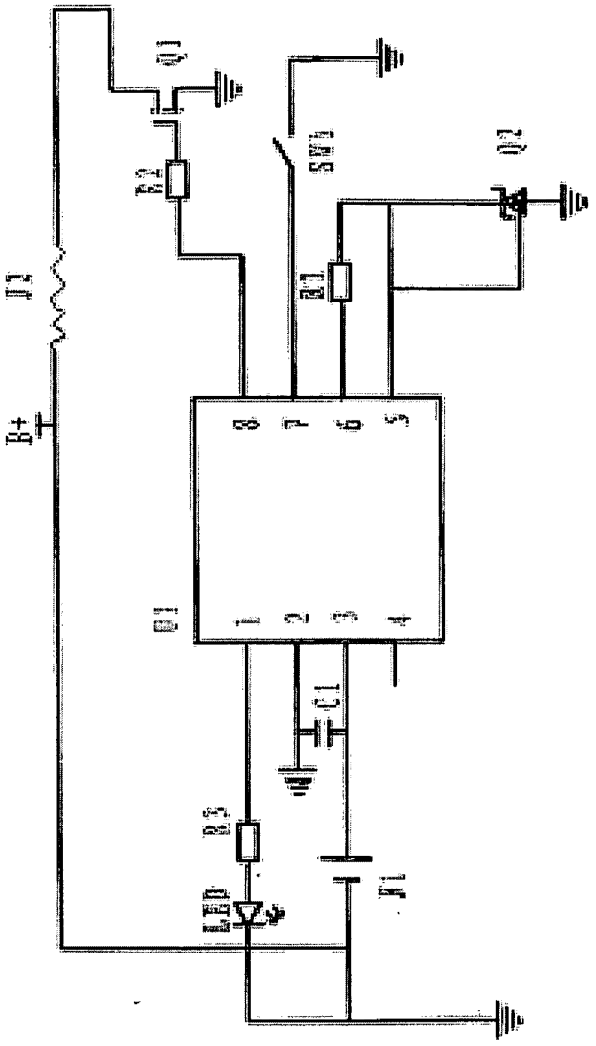


Figure 20

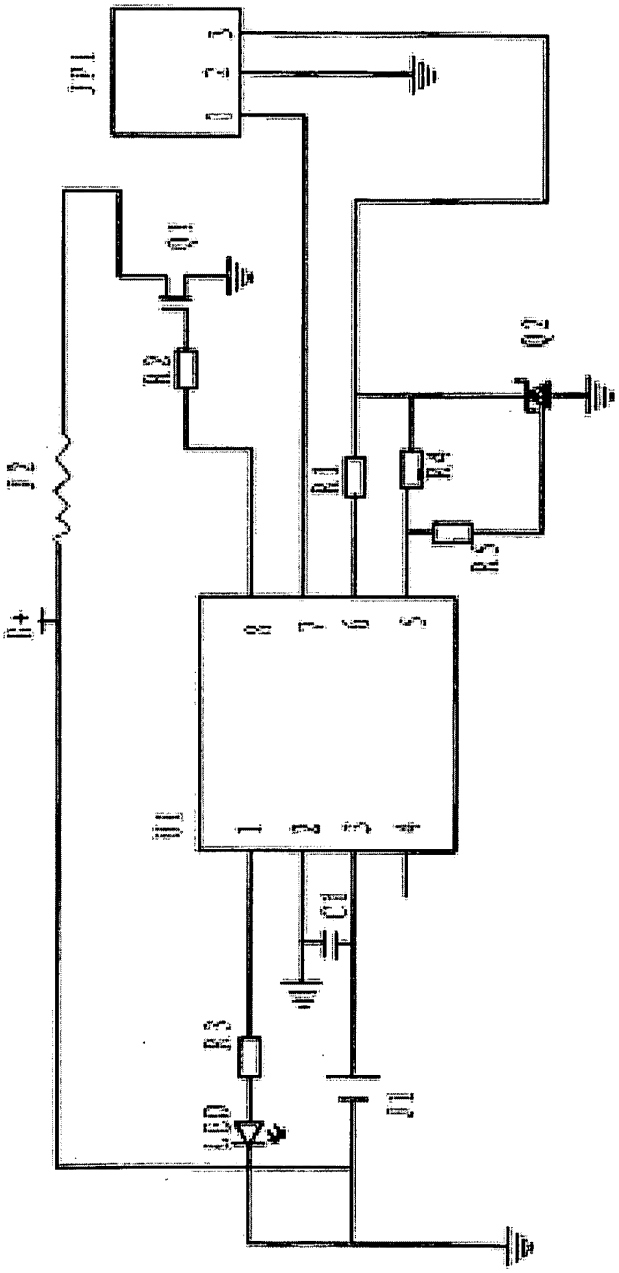


Figure 21

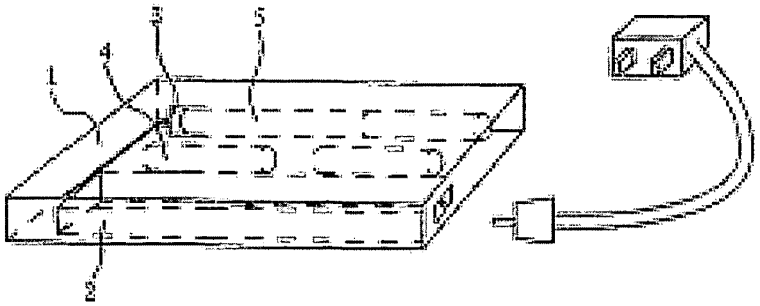


Figure 22

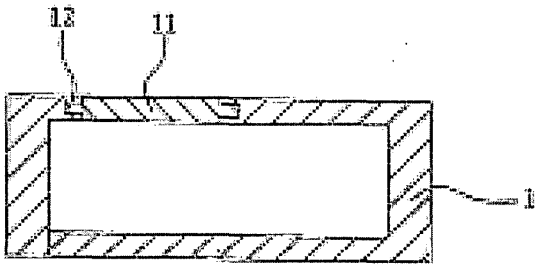


Figure 23

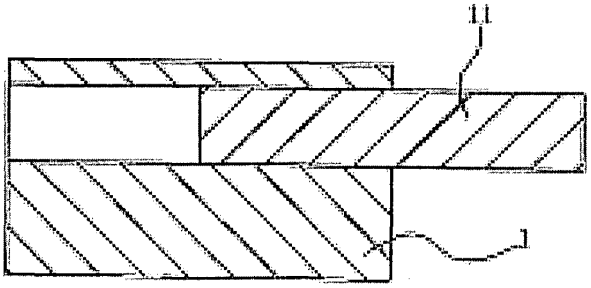


Figure 24

Declaration and Power of Attorney for Patent Application

專利申請聲明及委託書

Chinese Language Declaration

中文聲明

作為下述發明者，我在此宣告：

As a below named inventor, I hereby declare that:

我的住址、郵局地址和國籍均列在我名下，

My residence, post office address and citizenship are as stated next to my name.

我相信我是首創的、第一個和唯一的發明者(如只列出一人姓名)或是首創的、首位共同發明者(如列出數人姓名)，我提出作為專利申請權利要求的題目如下

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

_____ HAN Li

_____

如不在下面小方格中打叉則須將說明書附此：

the specification of which is attached hereto unless the following box is checked:

☐ 以美國申請號碼或PCT國際申請號碼 _____
立案于 _____
修正于(如適用) _____

☐ was filed on _____ as United States Application Number or PCT International Application Number _____ and was amended on _____ (if applicable).

我在此聲明我已閱畢并理解上述說明書的內容，包括上述任何修正案所修正的權利要求。

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

按照聯邦法規第三十七節第一．五六條，我有責任提供支持專利權的實質性資料。

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

Chinese Language Declaration

我申請享受按照美國法規第三十五節第一百一十九條(a)-(d)項或第365條(b)項列出的以下任何外國專利申請書或發明者證書或第365條(a)項列出任何PCT國際申請指定至少在美國以外的任何一個國家的外國優先權，並確認下列方格內打記號，具有優先權申請前立案日期的、任何外國專利申請書或發明者證書或是PCT國際申請書。

I hereby claim foreign priority under Title 35, United States Code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

不要求優先權
Priority Not Claimed

國外優先申請書

(號碼) (Number)	(國名) (Country)	(申請日/月/年) (Day/Month/Year Filed)	☐
(號碼) (Number)	(國名) (Country)	(申請日/月/年) (Day/Month/Year Filed)	☐
(號碼) (Number)	(國名) (Country)	(申請日/月/年) (Day/Month/Year Filed)	☐

我申請享受被美國法規第35節119(e)列出的以下任何美國臨時申請書的利益。

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below.

(申請順序號碼) (Application No.)	(Filing Date)	(申請順序號碼) (Application No.)	(申請日期) (Filing Date)

我申請享受按照美國法規第三十五節一百二十條或365條(c)項列出任何PCT國際申請所指定的美國列出的以下任何美國申請書的利益，如果此申請書中提出的每項權利要求的題目未按美國法規或是PCT國際申請第三十五節第一百二十條第一段的要求在以前的美國申請書中披露，則我有責任按照聯邦法規第三十七節第一．五六(甲)條提供支持專利權的實質性資料，這一法規條文生效于以前申請的立案日期之後，但在美國或PCT 國際申請立案日期之前。

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

(申請順序號碼) (Application No.)	(申請日期) (Filing Date)	(狀況) (已獲專利權、申請中、取消)	(Status) (patented, pending, abandoned)
(申請順序號碼) (Application No.)	(申請日期) (Filing Date)	(狀況) (已獲專利權、申請中、取消)	(Status) (patented, pending, abandoned)

我在此聲明根據我所知而作的所有聲明都真實無誤，所有有關資料和信息的聲明也真實無誤；我還知道，按照美國法規第十八節第一千零一項，任何蓄意偽造的聲明都將受到罰款或監禁，或同時受到兩種懲罰。這類蓄意偽造的聲明將危及此申請書或任何已頒發專利的效力。

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application of any patent issued thereon.

Chinese Language Declaration

委託書：

以列名發明者的身份，我在此指定下列律師和/或代理人執行此申請並從事與專利商標公署有關的所有業務(列出姓名和註冊號碼)：

I hereby grant power of attorney to the attorneys associated with Maier & Maier, PLLC's customer number 62008.

Maier & Maier, PLLC
1000 Duke St
Alexandria, VA 22314 USPTO Customer №62008

通訊地址

Timothy J. Maier 703-740-8322

直撥電話(姓名及電話號碼)

I authorize Maier & Maier, PLLC to add at any time their attorney docket number to this declaration.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: (*list name and registration number*)

I hereby grant power of attorney to the attorneys associated with Maier & Maier, PLLC's customer number 62008.

Maier & Maier, PLLC
1000 Duke St
Alexandria, VA 22314 USPTO Customer №62008

Send Correspondence to:

Timothy J. Maier 703-740-8322

Direct Telephone Calls to: (*name and telephone number*)

I authorize Maier & Maier, PLLC to add at any time their attorney docket number to this declaration.

第一個或唯一的發明者全名	Full name of sole or first inventor
發明者簽字 日期	Inventor's signature HAN Li Date
地址	Residence
國籍	Citizenship
郵局地址	Post Office Address
第二個共同發明者全名(如有)	Full name of second joint inventor, if any
第二個發明者簽字 日期	Second Inventor's signature Date
住址	Residence
國籍	Citizenship
郵局地址	Post Office Address

(第三個和其他共同發明者需提供同樣資料和簽字。) (Supply information and signature for third and subsequent joint inventors.)

PATENT APPLICATION SERIAL NO._____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

10/30/2008 GFREY1 00000016 12226818

01 FC:2631	165.00 OP
02 FC:2633	110.00 OP
03 FC:2642	215.00 OP
04 FC:2615	312.00 OP

PTO-1556
(5/87)

*U.S. Government Printing Office: 2002-489-267/69033

PATENT APPLICATION FEE DETERMINATION RECORD

Effective September 30, 2007 03 JAN 2009

Application or Docket Number: 12/226818

CLAIMS AS FILED - PART I

SMALL ENTITY TYPE ☐ OR OTHER THAN SMALL ENTITY

	(Column 1)	(Column 2)	SMALL ENTITY RATE	SMALL ENTITY FEE		OTHER THAN SMALL ENTITY RATE	OTHER THAN SMALL ENTITY FEE
U.S. NATIONAL STAGE FEES							
BASIC FEE	SMALL ENT. = $ 155	LARGE ENT. = $ 310	BASIC FEE	165	OR	BASIC FEE	
EXAMINATION FEE	Satisfies PCT Article 33(1)-(4) = $ 50 / $ 100	All other situations = $ 105 / $ 210	EXAM. FEE	110		EXAM. FEE	
SEARCH FEE	U.S. is ISA = $ 50 / $ 100 ALL other countries = $ 205 / $ 410	ALL other situations = $ 255 / $ 510	SEARCH FEE	215		SEARCH FEE	
FEE FOR EXTRA SPEC. PGS.	minus 100 =	/ 50 =	X $ 130 =			X $ 260 =	
TOTAL CHARGEABLE CLAIMS	32 minus 20 =	* — 12.	X $ 25 =	312	OR	X $ 50 =	
INDEPENDENT CLAIMS	1 minus 3 =	*	X $ 105 =		OR	X $ 210 =	
MULTIPLE DEPENDENT CLAIM PRESENT ☐			+ $ 185 =		OR	+ $ 370 =	
* If the difference in column 1 is less than zero, enter "0" in column 2			TOTAL	802	OR	TOTAL	

CLAIMS AS AMENDED - PART II

SMALL ENTITY OR OTHER THAN SMALL ENTITY

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE	SMALL ENTITY ADDITIONAL FEE		OTHER THAN SMALL ENTITY RATE	OTHER THAN SMALL ENTITY ADDITIONAL FEE
Total	*	Minus	**	=	X $ 25 =		OR	X $ 50 =	
Independent	*	Minus	***	=	X $ 105 =		OR	X $ 210 =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐					+ $ 185 =		OR	+ $ 370 =	
					TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE	SMALL ENTITY ADDITIONAL FEE		OTHER THAN SMALL ENTITY RATE	OTHER THAN SMALL ENTITY ADDITIONAL FEE
Total	*	Minus	**	=	X $ 25 =		OR	X $ 50 =	
Independent	*	Minus	***	=	X $ 105 =		OR	X $ 210 =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐					+ $ 185 =		OR	+ $ 370 =	
					TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than '20', enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than '3', enter "3".

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

MULTIPLE DEPENDENT CLAIM
FEE CALCULATION SHEET
(FOR USE WITH FORM PTO-875)

SERIAL NO. 12/226818

FILING DATE 03 JAN 2009

APPLICANT(S)

CLAIMS

	AS FILED		AFTER 1st AMENDMENT		AFTER 2nd AMENDMENT	
	IND.	DEP.	IND.	DEP.	IND.	DEP.
1	/		/			
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TOTAL IND.	1	⬇	1	⬇		⬇
TOTAL DEP.	36	⬅	31	⬅		⬅
TOTAL CLAIMS	37		32			

	AS FILED		AFTER 1st AMENDMENT		AFTER 2nd AMENDMENT	
	IND.	DEP.	IND.	DEP.	IND.	DEP.
51						
52						
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TOTAL IND.		⬇		⬇		⬇
TOTAL DEP.		⬅		⬅		⬅
TOTAL CLAIMS						

DO/ EO WORKSHEET

03 JAN 2009

Patent Application Specialist/ National Stage Division

U.S. Appl. No. 12/226818 International Appl. No. PCT/CN07/01575

WIPO PUBLICATION INFORMATION :

Publication No.: WO2007/131449 Publication Language : ☐ English (IA used as specification) ☐ German ☐ Japanese ☐ Chinese ☐ Korean ☐ French ☐ Spanish ☐ Russian ☐ Other : ___

Publication Date : 22 NOV 2007 Not Published : ☐ U.S. only ☐ Early Pub. Request Published : ☐ Early Pub.

INTERNATIONAL APPLICATION PAPERS IN THE APPLICATION FILE :

- ☑ International Application *(RECORD COPY)*
- ☐ Article 19 Amendments
- ☐ PCT/IPEA/409 - IPER (check Examination Authority) : ☐ EP ☐ JP ☐ SE ☐ AU ☐ US ☐ FR ☐ CN ☐ ES ☐ RU ☐ AT ☐ CA ☐ KR ☐ ___
- ☐ Annexes to 409
- ☐ PCT/ISA/237 (check Searching Authority) : ☐ EP ☐ JP ☐ SE ☐ AU ☐ US ☐ FR ☐ CN ☐ ES ☐ RU ☐ AT ☐ CA ☐ KR ☐ ___
- ☐ Other : _____
- ☐ PCT/IB/306
- ☐ Request form PCT/RO/101
- ☑ PCT/ISA/210 - Search Report (check Searching Authority) : ☐ EP ☐ JP ☐ SE ☐ AU ☐ US ☐ FR ☑ CN ☐ ES ☐ RU ☐ AT ☐ CA ☐ KR ☐ ___ ☐ NONE
- ☐ Search Report References
- ☑ Priority Document (s) No. 1 ☐ N/A ☐ Priority Document was NOT AVAILABLE at the time of paralegal review
- ☐ Other : _____

RECEIPTS FROM THE APPLICANT *(filed with the application unless noted otherwise) :*

- ☑ Basic National Fee (or authorization to charge)
- ☑ Description 12 ☑ Claims 4 (29) ☑ Abstract 1
- ☑ Number of Drawing Sheets : 8
- ☐ Translation of Article 19 Amendments ☐ entered ☐ not entered : ☐ not a page for page substitution ☐ replaced by Article 34 Amendment
- ☐ Annexes to 409 ☐ entered ☐ not entered : ☐ not a page for page substitution ☑ no translation ☐ other : _____
- ☑ Application Data Sheet 10/29/08
- ☑ Power of Attorney 10/29/08
- ☐ Change of Address
- ☐ PG Pub Early Publication Request
- ☐ Express Request to Begin Nat'l Examination Procedures
- ☑ Preliminary Amendment(s) Filed on : 1. ☐ same as 371 request date 10/29/08 2. _____ 3. _____
- ☐ Information Disclosure Statement(s) Filed on : 1. ☐ same as 371 request date 2. _____ 3. _____
- ☐ Assignee Statement Under 37 CFR 3.73(b)
- ☐ Assignee PG Publication Notice
- ☐ Substitute Specification Filed on : 1. ☐ same as 371 request date 2. _____ 3. _____
- ☑ Verified Small Status Statement 10/29/08
- ☑ Oath/ Declaration (executed) 10/29/08
- ☐ Defective Oath/ Declaration ☐ unsigned ☐ no citizenship ☐ other
- ☐ DNA Diskette ☐ Sequence Listing
- ☐ Other : _____
- ☐ Other : _____

NOTES :

35 U.S.C. 371 - Receipt of Request (PTO-1390)	10/29/08
Date Acceptable Oath/ Declaration Received	10/29/08
Date of Completion of requirements under 35 U.S.C. 371	10/29/08
Date of Completion of DO/ EO 903 - Notification of Acceptance	01/03/09
Date of Completion of DO/ EO 905 - Notification of Missing Requirements	
Date of Completion of DO/ EO 909 - Notification of Abandonment	
Date of Completion of DO/ EO 916 - Notification of Defective Response	
Date of Completion of DO/ EO 922 - Notification to Comply w/ Requirements for Patent Applications Containing Nucleotide and/or Amino Acid Sequence Disclosures	
Date of Completion of DO/ EO 923 - Insufficient Fees	

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	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
12/226,818	10/29/2008		802	JANLEA-001-US	32	1

CONFIRMATION NO. 2275

62008
MAIER & MAIER, PLLC
1000 DUKE STREET
ALEXANDRIA, VA 22314

FILING RECEIPT

OC000000033897590

Date Mailed: 01/07/2009

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Li Han, Hong Kong, CHINA;

Power of Attorney: The patent practitioners associated with Customer Number 62008

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/CN2007/001575 05/15/2007

Foreign Applications

CHINA 200620090805.0 05/16/2006

If Required, Foreign Filing License Granted: 01/03/2009

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/226,818**

Projected Publication Date: 04/16/2009

Non-Publication Request: No

Early Publication Request: No
** **SMALL ENTITY** **

Title

Aerosol Electronic Cigarette

Preliminary Class

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier

license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, 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).

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

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
12/226,818	Li Han	JANLEA-001-US

62008
MAIER & MAIER, PLLC
1000 DUKE STREET
ALEXANDRIA, VA 22314

INTERNATIONAL APPLICATION NO.	
PCT/CN2007/001575	
I.A. FILING DATE	PRIORITY DATE
05/15/2007	05/16/2006

CONFIRMATION NO. 2275
371 ACCEPTANCE LETTER

OC000000033897591

Date Mailed: 01/07/2009

NOTICE OF ACCEPTANCE OF APPLICATION UNDER 35 U.S.C 371 AND 37 CFR 1.495

The applicant is hereby advised that the United States Patent and Trademark Office in its capacity as a Designated / Elected Office (37 CFR 1.495), has determined that the above identified international application has met the requirements of 35 U.S.C. 371, and is ACCEPTED for national patentability examination in the United States Patent and Trademark Office.

The United States Application Number assigned to the application is shown above and the relevant dates are:

10/29/2008	11/16/2008
DATE OF RECEIPT OF 35 U.S.C. 371(c)(1), (c)(2) and (c)(4) REQUIREMENTS	DATE OF COMPLETION OF ALL 35 U.S.C. 371 REQUIREMENTS

A Filing Receipt (PTO-103X) will be issued for the present application in due course. **THE DATE APPEARING ON THE FILING RECEIPT AS THE " FILING DATE" IS THE DATE ON WHICH THE LAST OF THE 35 U.S.C. 371 (c)(1), (c)(2) and (c)(4) REQUIREMENTS HAS BEEN RECEIVED IN THE OFFICE. THIS DATE IS SHOWN ABOVE.** *The filing date of the above identified application is the international filing date of the international application (Article 11(3) and 35 U.S.C. 363).* Once the Filing Receipt has been received, send all correspondence to the Group Art Unit designated thereon.

The following items have been received:

- Indication of Small Entity Status
- Copy of the International Application filed on 10/29/2008
- English Translation of the IA filed on 10/29/2008
- Copy of the International Search Report filed on 10/29/2008
- Preliminary Amendments filed on 10/29/2008
- Oath or Declaration filed on 10/29/2008
- Small Entity Statement filed on 10/29/2008
- U.S. Basic National Fees filed on 10/29/2008
- Priority Documents filed on 10/29/2008
- Power of Attorney filed on 10/29/2008

FORM PCT/DO/EO/903 (371 Acceptance Notice)

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

WINSTON M ALVARADO

Telephone: (703) 308-9140 EXT 206

FORM PCT/DO/EO/903 (371 Acceptance Notice)

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
12/226,818	10/29/2008	Li Han	JANLEA-001-US

CONFIRMATION NO. 2275

62008
MAIER & MAIER, PLLC
1000 DUKE STREET
ALEXANDRIA, VA 22314

PUBLICATION NOTICE

OC000000035512236

Title: Aerosol Electronic Cigarette

Publication No.US-2009-0095311-A1
Publication Date:04/16/2009

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Li HAN	Confirmation No.: 2275
Application No.: 12/226,818	Art Unit: TBD
Filed: October 29, 2009	Examiner: TBD
Title: AEROSOL ELECTRONIC CIGARETTE	
Attorney Docket No.: JANLEA-001-US	

SECOND PRELIMINARY AMENDMENT

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

April 20, 2009

Dear Sir:

Prior to examination on the merits please amend the above-identified application as follows:

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

Remarks begin on page 6 of this paper.

Amendment to the Claims:

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

1-32. (canceled).

33. (new) An aerosol electronic cigarette, comprising:

a battery assembly, an atomizer assembly and a cigarette bottle assembly, and features a shell that is hollow and integrally formed: the said battery assembly connects with the said atomizer assembly, and both are located in the said shell; the said cigarette bottle assembly is detachably located in one end of the shell, and fits with the said atomizer assembly inside it; the said shell has through-air-inlets; the atomizer assembly is an atomizer, which includes a porous component and a heating body; the said atomizer also includes an electric heating rod; the principal part of the said porous component has a run-through atomizing chamber; the diameter of the said electric heating rod is less than the diameter of the said atomizing chamber; the said electric heating rod enters into the said atomizing chamber, and there is a clearance between the said electric heating rod and interior wall of the atomizing chamber; the said clearance forms a negative pressure cavity; and one end of the said porous component fits with the said cigarette bottle assembly.

34. (new) An aerosol electronic cigarette of Claim 33, wherein the said electric heating rod includes a cylinder; the said heating body is heating wire, which is wound on the wall of the cylinder; on the wall of both ends of the cylinder, there are mandrils respectively; the said porous component has a protuberance on one end, and the protuberance fits with the

cigarette bottle assembly; the said protuberance is a protruding half sphere, on the side of which there is a run-through hole connecting to the atomizing chamber.

35. (new) An aerosol electronic cigarette of Claim 33, wherein a restriction component is detachably set on one end of the said porous component; there is a restriction hole on the principal part of the said restriction component; the said restriction hole corresponds to the said atomizing chamber; the pore diameter of the said restriction hole is less than the inner diameter of the atomizing chamber.

36. (new) An aerosol electronic cigarette of Claim 33, wherein the said electric heating rod includes a cylinder; the said heating body is made of electrically conductive ceramic PTC material; the said heating body is set on the wall of the said cylinder; on the wall of both ends of the said cylinder, there are mandrils respectively; the said porous component has a protuberance on one end, and the said protuberance fits with the said cigarette bottle assembly; the said protuberance is a half sphere, on the side of which there is a run-through hole connecting to the said atomizing chamber.

37. (new) An aerosol electronic cigarette, comprising:

a battery assembly, an atomizer assembly and a cigarette bottle assembly, and features a shell that is hollow and integrally formed: the said battery assembly connects with the said atomizer assembly, and both are located in the said shell; the said cigarette bottle assembly is detachably located in one end of the shell, and fits with the said atomizer assembly inside it; the said shell has through-air-inlets; the atomizer assembly is an atomizer, which includes a porous

component and a heating body; the said heating body is heating wire; the said atomizer includes a frame; the said porous component is set on the said frame; the heating wire is wound on the said porous component; the said frame has a run-through hole on it; the said porous component is wound with heating wire in the part that is on the side in the axial direction of the run-through hole; and one end of the said porous component fits with the said cigarette bottle assembly.

38. (new) An aerosol electronic cigarette of Claim 33, wherein the said battery assembly includes the battery, and the operating indicator, electronic circuit board, and airflow sensor, which are connected with the said battery; the signal output of the said airflow sensor is connected with the said electronic circuit board.

39. (new) An aerosol electronic cigarette of Claim 38, wherein the said shell also includes a check valve; the said battery is a rechargeable battery, which has a flexibly connected charging plug; the blades of the said charging plug come out of the other end of the said shell.

39. (new) An aerosol electronic cigarette of Claim 38, wherein between the said charging plug and rechargeable battery is a spring, which lies against the principal part of the said rechargeable battery on one end, and against the said charging plug on the other free end.

40. (new) An aerosol electronic cigarette of Claim 33, wherein the said battery is a rechargeable battery, which has a charging slot on it; the said operating indicator is a LED.

41. (new) An aerosol electronic cigarette of Claim 33, wherein the said airflow sensor may be alternatively a semiconductor force-sensitive chip capacitance sensor or an inductance sensor.

42. (new) An aerosol electronic cigarette of Claim 33, wherein the said electronic circuit board (4) includes an electronic switch circuit.

43. (new) An aerosol electronic cigarette of Claim 33, wherein the said airflow sensor has a silica gel corrugated membrane, which connects with magnetic steel with a reed relay on one of its ends; both ends of the said reed relay correspond to the relay electrodes respectively.

44. (new) An aerosol electronic cigarette of Claim 33, wherein the said airflow sensor has a silica gel corrugated membrane, which connects with magnetic steel with a Hall element or a magneto-diode or a magneto-triode on one of its ends.

45. (new) An aerosol electronic cigarette of Claim 33, wherein the said porous component is made of foamed nickel, stainless steel fiber felt, macromolecular polymer foam or foamed ceramics.

46. (new) An aerosol electronic cigarette of Claim 34, wherein the said heating wire is made of platinum wire, nickel-chromium alloy wire or iron-chromium alloy wire containing rare earth, or is flaked.

47. (new) An aerosol electronic cigarette of Claim 33, wherein the said cigarette bottle assembly includes a hollow cigarette holder shell, and a perforated component for liquid storage inside the shell; one end of the said cigarette holder shell plugs into the said shell, and the outer peripheral surface of the said cigarette holder shell has an inward ventilating groove; on one end surface of the cigarette holder shell, there is an air channel extending inward.

48. (new) An aerosol electronic cigarette of Claim 47, wherein the said air channel is located in the center of one end surface of the said cigarette holder shell.

49. (new) An aerosol electronic cigarette of Claim 47, wherein one end of the said porous component lies against one end surface of the said perforated component for liquid storage, and contacts the perforated component for liquid storage.

50. (new) An aerosol electronic cigarette of Claim 47, wherein the said perforated component for liquid storage is made of such materials as PLA fiber, terylene fiber or nylon fiber.

51. (new) An aerosol electronic cigarette of Claim 47, wherein the said perforated component for liquid storage (9) is plastic foam molding, or column of multi-layer plates made through plastic injection with PVC, PP and PC.

52. (new) An aerosol electronic cigarette of Claim 33, wherein the said aerosol electronic cigarette is located in a charging device; the said battery is a rechargeable battery.

53. (new) An aerosol electronic cigarette of Claim 52, wherein the said charging device includes a case, which contains an auxiliary charging storage battery inside it, and holds the electronic cigarette and the charger for the rechargeable battery embedded in the electronic cigarette; the power inputs of the auxiliary charging storage battery and charger are connected with the power source respectively.

54. (new) An aerosol electronic cigarette of Claim 53, wherein the said case has a spare liquid supply bottle in it.

55. (new) An aerosol electronic cigarette of Claim 53, wherein the said power output of the auxiliary charging storage battery is connected with the power input of the charger.

56. (new) An aerosol electronic cigarette of Claim 53, wherein the power output of the said charger is a charging slot, which fits with the charging plug of the rechargeable battery inside the electronic cigarette, or a charging plug, which fits with the charging slot of the rechargeable battery.

57. (new) An aerosol electronic cigarette of Claim 56, wherein the said charger is a constant voltage & current charger.

58. (new) An aerosol electronic cigarette of Claim 53, wherein on the principal part of the said case, there is a pair of slide ways corresponding to the position of the said electronic cigarette, and on the slide ways, there is a slide cover.

59. (new) An aerosol electronic cigarette of Claim 36, wherein the said heating wire is made of platinum wire, nickel-chromium alloy wire or iron-chromium alloy wire containing rare earth, or is flaked.

REMARKS

Claims 33-59 are pending in the present application. Claims 1-32 have been canceled without prejudice or disclaimer and claims 33-59 have been added by way of the present amendment. Moreover, the Applicants submit that no new matter has been introduced by the foregoing amendments.

Claims 33-59 are ready to be examined on the merits.

Respectfully Submitted,

/Timothy J. Maier/
Timothy J. Maier
Reg. No. 51,986

Maier & Maier, PLLC
1000 Duke Street
Alexandria, VA 22314
Tel. 1.703.740.8322

Date: April 20, 2009

Electronic Acknowledgement Receipt	
EFS ID:	5182845
Application Number:	12226818
International Application Number:	
Confirmation Number:	2275
Title of Invention:	Aerosol Electronic Cigarette
First Named Inventor/Applicant Name:	Li Han
Customer Number:	62008
Filer:	Timothy Joseph Maier
Filer Authorized By:	
Attorney Docket Number:	JANLEA-001-US
Receipt Date:	20-APR-2009
Filing Date:	29-OCT-2008
Time Stamp:	15:42:02
Application Type:	U.S. National Stage under 35 USC 371

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	Preliminary Amendment	JANLEA-001-US-amd2ndpreliminary.pdf	276448 bc9c07c4391d8cb6c8dba0277a2cfb4f16c5fc1b	no	9
Warnings:					
Information:					

Total Files Size (in bytes):	276448

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.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
12/226,818	10/29/2008	

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)	SMALL ENTITY ☒		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 04/20/2009	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 28	Minus	** 32	= 0	X $26 =	0	OR	X $ =	
Independent (37 CFR 1.16(h))	* 2	Minus	***3	= 0	X $110 =	0	OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

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

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

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

Legal Instrument Examiner:
/MARCUS PRIDGEN/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/226,818	10/29/2008	Li Han	JANLEA-001-US	2275

62008 7590 02/02/2011

MAIER & MAIER, PLLC
1000 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
MAYES, DIONNE WALLS	
ART UNIT	PAPER NUMBER
1747	

MAIL DATE	DELIVERY MODE
02/02/2011	PAPER

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.

PTOL-90A (Rev. 04/07)

Office Action Summary	Application No.	Applicant(s)	
	12/226,818	HAN, LI	
	Examiner	Art Unit	
	DIONNE WALLS MAYES	1747	

-- 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 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

1)☒ Responsive to communication(s) filed on *20 April 2009*.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *33-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *33-59* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

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

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claims 33-36 and 38-59, drawn to an aerosol electronic cigarette, as embodied by Fig. 5.

Group II, claim 37, drawn to an aerosol electronic cigarette, as embodied by Fig. 17.

2. The groups of inventions listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The invention of Group I contains the special technical feature of a porous component and a heating body, wherein the heating body includes a heating *rod located inside/within the porous component*.

The invention of Group II contains the special technical feature of a porous component and a heating body, wherein the heating body is a heating *wire wound on/around the porous component.*

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does

not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention or species.

Should applicant traverse on the ground that the inventions have unity of invention (37 CFR 1.475(a)), applicant must provide reasons in support thereof. Applicant may submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. Where such evidence or admission is provided by applicant, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIONNE WALLS MAYES whose telephone number is (571)272-5836. The examiner can normally be reached on Monday thru Friday, 8:30A - 5:00P EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. 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.

/DIONNE WALLS MAYES/
Examiner, Art Unit 1747

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicants: Li HAN	:	Confirmation No.: 2275
U.S. Patent Application No.: 12/226,818	:	Art Unit: 1747
Filed: October 29, 2008	:	Examiner: DIONNE WALLS MAYES
For: AEROSOL ELECTRONIC CIGARETTE	:	Attorney Docket: JANLEA-001-US

RESPONSE TO RESTRICTION REQUIREMENT

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

February 22, 2011

Sir:

In response to the restriction requirement dated February 2, 2011, Applicant provisionally elects, with traverse, Group I, Claims 33-36 and 38-59, directed to an aerosol electronic cigarette, as embodied by Figure 5. Applicant makes this election based on the understanding that the Applicant is not prejudiced against filing one or more divisional applications that cover the non-elected claims.

Applicant traverses the outstanding Restriction Requirement as the outstanding Restriction Requirement has not established that an undue burden would be required if the Restriction Requirement was not issued and if all the claims were examined together. More particularly, MPEP §803 states:

> If the search and examination of an entire application can be made without serious burden, the Examiner must examine it on the merits, even though it includes claims to independent or distinct inventions.

In the present application, no undue burden has been established if each of the claims were examined together. In particular, as claimed, the specific apparatus of

Claims 33-36 and 38-59 relates to a tobacco users' appliance with a heating body, classified in class 131, subclass 194. Furthermore, as claimed, the specific apparatus of Claim 37 also relates to a tobacco users' appliance with a heating body, classified in class 131, subclass 194. In other words all the claims relate to the same class and subclass and thus no undue burden exists. In contrast, the present restriction requirement subjects the Applicant to the added financial burden of prosecuting Claims 33-36 and 38-59, and Claim 37 in separate proceedings.

Accordingly, it is respectfully requested that the requirement to elect a single group be withdrawn, and that a full examination on the merits of Claims 33-59 be conducted.

Respectfully submitted,
MAIER & MAIER, PLLC

/Timothy J. Maier/
Timothy J. Maier
Attorney of Record
Registration No. 51,986

MAIER & MAIER, PLLC.
1000 Duke Street
Alexandria, VA 22314
(703) 740-8322
Customer No. 62008
February 22, 2011

Electronic Acknowledgement Receipt	
EFS ID:	9491186
Application Number:	12226818
International Application Number:	
Confirmation Number:	2275
Title of Invention:	Aerosol Electronic Cigarette
First Named Inventor/Applicant Name:	Li Han
Customer Number:	62008
Filer:	Timothy Joseph Maier
Filer Authorized By:	
Attorney Docket Number:	JANLEA-001-US
Receipt Date:	22-FEB-2011
Filing Date:	29-OCT-2008
Time Stamp:	14:07:34
Application Type:	U.S. National Stage under 35 USC 371

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	Response to Election / Restriction Filed	JANLEA-001-US-ResponsetoRR-02-02-11.pdf	65269 eb09a38289133aa063ffcf0cda627d4c9bea236a	no	2
Warnings:					
Information:					

Total Files Size (in bytes):	65269

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
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/226,818	10/29/2008	Li Han	JANLEA-001-US	2275

62008 7590 04/12/2011

MAIER & MAIER, PLLC
1000 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
MAYES, DIONNE WALLS	
ART UNIT	PAPER NUMBER
1747	

MAIL DATE	DELIVERY MODE
04/12/2011	PAPER

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.

PTOL-90A (Rev. 04/07)

Office Action Summary	Application No.	Applicant(s)	
	12/226,818	HAN, LI	
	Examiner	Art Unit	
	DIONNE WALLS MAYES	1747	

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

Period for Reply

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

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

Status

1)☒ Responsive to communication(s) filed on *22 February 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *33-60* is/are pending in the application.

4a) Of the above claim(s) *37* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *33,35 and 38-60* is/are rejected.

7)☒ Claim(s) *34,36 and 60* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

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

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of the invention of Group I, claims 33-36 and 38-59 in the reply filed on February 22, 2011 is acknowledged. The traversal is on the ground(s) that all the claims relate to the same class and subclass and, thus, no undue burden exists. This is not found persuasive because of the reasons stated in the written restriction, mailed on February 2, 2011, that the two inventions lack the same or corresponding special technical features.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

2. There is an error with the numbering of the claims. It appears that a typographical error has resulted in two claim numbers having the same number of “39”. Therefore, for examination purposes, the second occurrence of “claim 39” will be renumbered as “claim 40”, and the subsequent claims will be renumbered accordingly which will result in the last claim being numbered as “claim 60”. This new claim numbering format should be incorporated in the form of an Amendment and reflected by Applicant in the response to this Office Action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 35, 38, 42 and 44-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 35, it is not clear what the “restriction component” and “restriction hole” features are of the claimed invention. Other than the fact that the “restriction component” is detachable set on the end of the porous component, it is not clear what the correlation is between the “restriction component", "restriction hole" and "atomizing chamber", as said correlation has not been clearly recited. Applicant has recited that the “restriction hole” *corresponds* to the “atomizing chamber”, but it is unclear what this recitation actually means. Further, the phrase “*pore* diameter” - as it relates to the restriction hole - does not seem to make sense.

Regarding claim 38, it recites the limitation "the battery", “the operating indicator”, “electronic circuit board”, and “airflow sensor”. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 42, the phrase "may be alternatively" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claims 44-45, the phrase “silica gel corrugated membrane” is unclear - even after a thorough reading on the instant disclosure. The structure and associated function needs to be clarified.

Claim Rejections - 35 USC § 103

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

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

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

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 33, 38, 41, 43 and 46-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hon ‘043 (CN 2719043 - the English equivalent of which is US. Pat. App. Pub. 2007/0267031). (Note: Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.)

Regarding claims 33, 38, 41, 43, 46, 47, 48-49, 51-52, Hon ‘043 discloses nearly all that is recited in the claims since it teaches an electronic atomization cigarette which includes a shell and a mouthpiece which is detachable. The electronic cigarette includes

an air inlet (4) provided on an external wall of a shell (14). An LED (1), a rechargeable battery cell (2), an electronic switching circuit/circuit board (3), a sensor (6), a check valve, an atomizer (9), a liquid-supplying bottle (11) (made of terylene fiber or nylon fiber or foam column) and a mouthpiece (15) are sequentially provided within the shell (14). As seen in Fig. 6, a heating element (26)(made of platinum wire, nickel chromium alloy, iron chromium alloy wire with rare earth element) is provided within a porous body (27) (made of foamed nickel, stainless steel fiber felt, polymer foam or foamed ceramics) that is arranged within the cavity of the atomizer, i.e. atomization cavity (see figures, abstract and paras. [0008]-[0009]). Also evident from Fig. 6, is the “clearance” that is between the heating element (26) (corresponding to the claimed "electric heating rod") and an upper or lower interior wall of the atomizing cavity. While not specifically articulated in the disclosure of Hon, it follows that the clearance “forms a negative pressure cavity” since there is no indication that any outside air is allowed to enter into the atomization cavity, which suggests, if not indicates, that the pressure inside of the cavity would be lower than the outside/atmospheric pressure.

. Regarding claim 50, as seen in Fgi.3, it is clear that the porous body lies against one end surface of the liquid-supplying bottle.

8. Claims 39-40 and 53-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hon ‘043 (CN 2719043 - the English equivalent of which is US. Pat. App. Pub. 2007/0267031) in view of Hon ‘955 (WO 2004/095955 – the English equivalent of which is US. Pat. App. Pub. 2006/0196518).

Regarding claims 39-40, while Hon ‘043 may not disclose the claimed features, Hon ‘955 serves as evidence that such features are already known in an electronic cigarette (see Fig. 1 and para. [0021]). Hence, it would have been obvious to one having ordinary skill in the art at the time of the invention to have incorporated these features into the device of Hon ‘043 as such is taught in Hon ‘955.

Regarding claims 53-59, the structural features recited in these claims are not deemed to impart any patentable distinction from the invention of Hon ‘043 modified by Hon ‘955 because all of the features are obvious one to one having ordinary skill to the art as the features are peripheral to the disclosed invention and would have been provided merely for the convenience of the end-user.

Allowable Subject Matter

9. Claims 34, 36 and 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Voges (US. Pat. No. 6,196,218)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIONNE WALLS MAYES whose telephone number is (571)272-5836. The examiner can normally be reached on Monday thru Friday, 8:30A - 5:00P EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/DIONNE WALLS MAYES/
Examiner, Art Unit 1747

Notice of References Cited	Application/Control No. 12/226,818	Applicant(s)/Patent Under Reexamination HAN, LI	
	Examiner DIONNE WALLS MAYES	Art Unit 1747	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2006/0196518	09-2006	Hon, Lik	131/360
*	B	US-2007/0267031	11-2007	Hon, Lik	131/273
*	C	US-6,196,218	03-2001	Voges, Robert Martin	128/200.14
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N	WO 2004/095955	11-2004	WIPO	Hon	
	O	CN 2719043	08-2005	China	Hon	
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

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

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12226818	HAN, LI
	Examiner	Art Unit
	DIONNE W MAYES	1747

SEARCHED			
Class	Subclass	Date	Examiner
131	194,270-273	4/11/2011	DWM

SEARCH NOTES		
Search Notes	Date	Examiner
EAST search conducted (see attached search strategy)	4/11/2011	DWM
Inventor search conducted	4/11/2011	DWM

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S152	1	"131"/$.ccls. and vosges	US-PGPUB; USPAT	ADJ	ON	2011/04/09 21:00
S153	0	("2007267031").PN.	US-PGPUB; USPAT	OR	OFF	2011/04/09 21:16
S154	1	("20070267031").PN.	US-PGPUB; USPAT	OR	OFF	2011/04/09 21:16
S155	1	("6196218").PN.	US-PGPUB; USPAT	OR	OFF	2011/04/09 21:18
S156	416	(131/194).CCLS.	US-PGPUB; USPAT	OR	OFF	2011/04/10 18:52
S157	358	((131/270) or (131/271) or (131/272) or (131/273)).CCLS.	US-PGPUB; USPAT	OR	OFF	2011/04/10 18:56
S158	1	(12/226818).APP.	US-PGPUB; USPAT	OR	OFF	2011/04/10 19:28
S159	3	"131"/$.ccls. and sensor near50 silica gel	US-PGPUB; USPAT	ADJ	ON	2011/04/10 19:49
S160	10	(han near3 li or lik near3 hon).in. and cigarette	US-PGPUB; USPAT	ADJ	ON	2011/04/10 19:50
S161	6	(han near3 li or lik near3 hon).in. and cigarette and (atom$5).clm.	US-PGPUB; USPAT	ADJ	ON	2011/04/10 19:51
S162	5	("2004095955").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/04/10 20:09
S163	2	("20060196518").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/04/10 20:51

4/11/2011 11:22:43 AM
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BIB DATA SHEET

CONFIRMATION NO. 2275

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/226,818	10/29/2008	131	1747	JANLEA-001-US

APPLICANTS
Li Han, Hong Kong, CHINA;

**** CONTINUING DATA **************************
This application is a 371 of PCT/CN2007/001575 05/15/2007

**** FOREIGN APPLICATIONS **************************
CHINA 200620090805.0 05/16/2006

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
01/03/2009

Foreign Priority claimed	Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
☑ Yes ☐ No	☐	CHINA	8	32	1
35 USC 119(a-d) conditions met ☑ Yes ☐ No					
Verified and Acknowledged /DIONNE WALLS MAYES/ Examiner's Signature	Initials				

ADDRESS
MAIER & MAIER, PLLC
1000 DUKE STREET
ALEXANDRIA, VA 22314
UNITED STATES

TITLE
Aerosol Electronic Cigarette

FILING FEE RECEIVED		
802	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

Attorney Ref. 76320.8012.US00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Li HAN	Confirmation No.: 2275
Application No.: 12/226,818	Art Unit: 1747
Filed: October 29, 2008	Examiner: Dionne Walls Mayes
Title: AEROSOL ELECTRONIC CIGARETTE	

AMENDMENT

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

Dear Sir:

In response to the Office Action April 12, 2011 please amend the application as follows:

Amendments to the Claims begin on page 2 of this paper.

Remarks begin on page 13 of this paper.

Amendment to the Claims:

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

1-32. (canceled).

33. (currently amended) An aerosol electronic cigarette, comprising:

a battery assembly, an atomizer assembly, ~~and~~ a cigarette ~~bottle assembly~~ solution storage area, and ~~features~~ a shell that is hollow and comprises a mouthpiece ~~and integrally formed~~: the said battery assembly connects with the said atomizer assembly, and both are located in the said shell; the said cigarette ~~bottle assembly~~ solution storage area is ~~detachably~~ located in one end of the shell proximal to the mouthpiece, and fits with at least a portion of the said atomizer assembly inside it; the said shell has through-air-inlets; the atomizer assembly is an atomizer, which includes a porous component and ~~a heating body; the said atomizer also includes~~ an electric heating rod; wherein the electric heating rod comprises a cylinder and a heating element provided at the wall of the cylinder, ~~the principal part of~~ the said porous component has a run-through atomizing chamber; the ~~diameter of the said~~ electric heating rod ~~is less than the diameter of~~ is in the said atomizing chamber~~; the said electric heating rod enters into the said atomizing chamber,~~ and there is a negative pressure cavity in ~~clearance between the said electric heating rod and interior wall of~~ the atomizing chamber~~; the said clearance~~

~~forms a negative pressure cavity; and one end of the said porous component fits with the said cigarette bottle assembly~~;.

34. (currently amended) An aerosol electronic cigarette, comprising:

a battery assembly, an atomizer assembly, a cigarette-solution storage area, and a shell that is hollow: the said battery assembly connects with the said atomizer assembly, and both are located in the said shell; the said cigarette solution storage area is located in one end of the shell, and fits with at least a portion of the said atomizer assembly inside it; the said shell has through-air-inlets; the atomizer assembly is an atomizer, which includes a porous component and an electric heating rod; wherein the electric heating rod comprises a cylinder and a heating element provided at the wall of the cylinder, the said porous component has a run-through atomizing chamber; the electric heating rod is in the said atomizing chamber and there is a negative pressure cavity in the atomizing chamber,

~~An aerosol electronic cigarette of Claim 33,~~ wherein ~~the said electric heating rod includes a cylinder; the~~ said heating ~~body~~ element is heating wire, which is wound on the wall of the cylinder; on the wall of both ends of the cylinder, there are mandrils respectively; the said porous component has a protuberance on one end, and the protuberance fits with the cigarette bottle assembly; the said protuberance is a protruding half sphere, on the side of which there is a run-through hole connecting to the atomizing chamber.

35. (currently amended) An aerosol electronic cigarette of Claim 33, wherein a restriction component is detachably set on one end of the said porous component; there is a restriction hole on the principal part of the said restriction component; the said restriction hole corresponds to the said atomizing chamber; the ~~pore~~ diameter of the said restriction hole is less than the inner diameter of the atomizing chamber.

36. (currently amended) An aerosol electronic cigarette, comprising:

a battery assembly, an atomizer assembly, a cigarette-solution storage area, and a shell that is hollow: the said battery assembly connects with the said atomizer assembly, and both are located in the said shell; the said cigarette solution storage area is located in one end of the shell, and fits with at least a portion of the said atomizer assembly inside it; the said shell has through-air-inlets; the atomizer assembly is an atomizer, which includes a porous component and an electric heating rod; wherein the electric heating rod comprises a cylinder and a heating element provided at the wall of the cylinder, the said porous component has a run-through atomizing chamber; the electric heating rod is in the said atomizing chamber and there is a negative pressure cavity in the atomizing chamber,

~~An aerosol electronic cigarette of Claim 33,~~ wherein ~~the said electric heating rod includes a cylinder; the~~ said heating ~~body~~ element is made of electrically conductive ceramic PTC material; the said heating ~~body~~ element is set on the wall of the said cylinder; on the wall of both ends of the said cylinder, there are mandrils

respectively; the said porous component has a protuberance on one end, and the said protuberance fits with the said cigarette bottle assembly; the said protuberance is a half sphere, on the side of which there is a run-through hole connecting to the said atomizing chamber.

37. (cancelled)

38. (currently amended) An aerosol electronic cigarette of Claim 33, wherein the said battery assembly includes ~~the~~ a battery, and ~~the~~ an operating indicator, an electronic circuit board, and an airflow sensor, which are connected with the said battery; the signal output of the said airflow sensor is connected with the said electronic circuit board.

39. (currently amended) An aerosol electronic cigarette of Claim 38, wherein the said shell ~~also includes~~ comprises a check valve; the said battery is a rechargeable battery, which has a flexibly connected charging plug; the blades of the said charging plug come out of the other end of the said shell.

40. (currently amended) An aerosol electronic cigarette of ~~Claim 38,~~ Claim 39, wherein between the said charging plug and rechargeable battery is a spring, which lies against the principal part of the said rechargeable battery on one end, and against the said charging plug on the other free end.

41. (currently amended) An aerosol electronic cigarette of Claim [[33]]38, wherein the said battery is a rechargeable battery, which has a charging slot on it; the said operating indicator ~~is~~ comprises a LED.

42. (currently amended) An aerosol electronic cigarette of Claim [[33]]38, wherein the said airflow sensor ~~may be alternatively~~ comprises a semiconductor force-sensitive chip capacitance sensor or an inductance sensor.

43. (currently amended) An aerosol electronic cigarette of Claim [[33]]38, wherein the said electronic circuit board ~~(4)~~ includes an electronic switch circuit.

44. (currently amended) An aerosol electronic cigarette of Claim [[33]]38, wherein the said airflow sensor has a silica gel corrugated membrane, which connects with magnetic steel with a reed relay on one of its ends; both ends of the said reed relay correspond to the relay electrodes respectively.

45. (currently amended) An aerosol electronic cigarette of Claim [[33]]38, wherein the said airflow sensor has a silica gel corrugated membrane, which connects with magnetic steel with a Hall element or a magneto-diode or a magneto-triode on one of its ends.

46. (previously presented) An aerosol electronic cigarette of Claim 33, wherein the said porous component is made of foamed nickel, stainless steel fiber felt, ~~macromolecular~~ polymer ~~foam~~ or ~~foamed~~ ceramics.

47. (currently amended) An aerosol electronic cigarette of ~~Claim 34,~~ Claim 61, wherein the said heating wire is made of platinum wire, nickel-chromium alloy wire or iron-chromium alloy wire containing rare earth, or is flaked.

48. (currently amended) An aerosol electronic cigarette of Claim 33, wherein the said cigarette ~~bottle assembly~~ solution storage area includes a hollow ~~cigarette holder~~ mouthpiece shell, and a perforated component for liquid storage inside the shell; one end of the said ~~cigarette holder~~ mouthpiece shell plugs into the said shell~~, and the outer peripheral surface of the said cigarette holder shell has an inward ventilating groove; on one end surface of the cigarette holder shell, there is an air channel extending inward~~.

49. (currently amended) An aerosol electronic cigarette of ~~Claim 47~~, Claim 48, wherein the said air channel is located in the center of one end surface of the said cigarette holder shell.

50. (currently amended) An aerosol electronic cigarette of ~~Claim 47~~, Claim 48, wherein one end of the said porous component lies against one end

surface of the said perforated component for liquid storage, and contacts the perforated component for liquid storage.

51. (currently amended) An aerosol electronic cigarette of ~~Claim 47~~, Claim 48, wherein the said perforated component for liquid storage ~~is made of such materials as~~ comprises PLA fiber, terylene fiber or nylon fiber.

52. (currently amended) An aerosol electronic cigarette of ~~Claim 47~~, Claim 48, wherein the said perforated component for liquid storage ~~(9) is~~ comprises plastic foam molding, or column of multi-layer plates made through plastic injection with PVC, PP ~~and~~ or PC.

53. (currently amended) An aerosol electronic cigarette of Claim 33, wherein the said aerosol electronic cigarette is ~~located in~~ configured to connect to a charging device; the said battery is a rechargeable battery.

54. (currently amended) An aerosol electronic cigarette of ~~Claim 52,~~ Claim 53, wherein the said charging device includes a case, which contains an auxiliary charging storage battery inside it, and holds the electronic cigarette and the charger for the rechargeable battery embedded in the electronic cigarette~~; the power inputs of the auxiliary charging storage battery and charger are connected with the power source respectively~~.

55. (currently amended) An aerosol electronic cigarette of ~~Claim 53,~~ Claim 54, wherein the said case has a spare liquid supply bottle in it.

56. (currently amended) An aerosol electronic cigarette of ~~Claim 53,~~ Claim 54, wherein the said power output of the auxiliary charging storage battery is connected with the power input of the charger.

57. (currently amended) An aerosol electronic cigarette of ~~Claim 53,~~ Claim 54, wherein the power output of the said charger is a charging slot, which fits with the charging plug of the rechargeable battery inside the electronic cigarette, or a charging plug, which fits with the charging slot of the rechargeable battery.

58. (currently amended) An aerosol electronic cigarette of ~~Claim 56,~~ Claim 57, wherein the said charger is a constant voltage [[&]] and current charger.

59. (currently amended) An aerosol electronic cigarette of ~~Claim 53,~~ Claim 54, wherein on the principal part of the said case, there is a pair of slide ways corresponding to the position of the said electronic cigarette, and on the slide ways, there is a slide cover.

60. (currently amended) An aerosol electronic cigarette of Claim [[36]]34, wherein the said heating wire is made of platinum wire, nickel-chromium alloy wire or iron-chromium alloy wire containing rare earth, or is flaked.

61. (new) An aerosol electronic cigarette of Claim 33, wherein the heating element comprises a heating wire.

62. (new) An aerosol electronic cigarette of Claim 33, wherein the heating element comprises a coiled heating wire, which is wound at the wall of the cylinder.

63. (new) An aerosol electronic cigarette of Claim 33, wherein the solution storage area comprises a cigarette-bottle assembly.

64. (new) An aerosol electronic cigarette of Claim 33, wherein the electric heating element is provided outside the wall of the cylinder.

65. (new) An aerosol electronic cigarette of Claim 33, further comprising a cigarette solution comprising nicotine.

66. (new) An aerosol electronic cigarette, comprising:

a battery assembly, an atomizer assembly, a cigarette-solution storage area, and a hollow shell having a mouthpiece: the battery assembly connects with the

atomizer assembly, and both are located in the shell; the cigarette solution storage area is located in one end of the shell adjacent to the mouthpiece, and fits with at least a portion of the said atomizer assembly inside it; the shell has through-air-inlets; the atomizer assembly includes an atomizer comprising an electric heating rod and a run-through atomizing chamber; the electric heating rod comprises a cylinder and a heating element provided at the wall of the cylinder, the electric heating rod is in the said atomizing chamber and there is a negative pressure cavity in the atomizing chamber.

67. (new) An aerosol electronic cigarette according to claim 66, further comprising a cigarette solution in the cigarette solution storage area, the cigarette solution comprising nicotine.

68. (new) An aerosol electronic cigarette according to claim 66, wherein the shell comprises first and second detachable sections.

69. (new) An aerosol electronic cigarette according to claim 66, wherein the heating element is a coiled wire.

70. (new) An aerosol electronic cigarette according to claim 69, wherein the coiled wire extends along the length of the cylinder.

71. (new) An aerosol electronic cigarette according to claim 69, wherein the coiled wire is on the outer surface of the cylinder.

72. (new) An aerosol electronic cigarette according to claim 66, wherein the cylinder is inside the run through chamber.

73. (new) An aerosol electronic cigarette of Claim 66, wherein the solution storage area comprises a cigarette-bottle assembly.

74. (new) An aerosol electronic cigarette of Claim 66, wherein the first detachable section comprises the mouthpiece.

REMARKS

The Office Action mailed on April 12, 2011 has been received and its contents carefully considered. Favorable reconsideration of this application, in light of the following discussion, is respectfully requested. Claims 33-60 are pending in the present application. Claims 33, 35 and 38-60 stand rejected. Claims 33–36, 38–45, and 47–60, are amended by way of the present Response. Claim 37 is cancelled due to the Restriction Requirement issued on February 2, 2011. And claims 61–74 are new.

Claims 33–36, 38–45, and 47–60 are amended to clarify the subject matter of applicants claims and not for patentability. Support for the claim amendments and new claims can be found in the originally filed claims and in the specification at Figures 5–8 and 13–16 and accompanying text. Thus, the Applicant submits that no new matter has been introduced by the foregoing amendments.

Applicant submits that upon entry of the present Reply, claims 33–36 and 38–74 are in condition for allowance.

Claim Objections

Applicant acknowledges the numbering error identified within the claim set. The “second” claim 39 has been renumbered claim 40, and each successive claim has been renumbered as well.

As a result, for at least the foregoing reasons, Applicant respectfully requests that the claim objections be withdrawn.

Rejections under 35 U.S.C. §112 Second Paragraph

In the outstanding Action, claims 35, 38, 42 and 44-45 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention.

With respect to claim 35, the Examiner alleges that the correlation between the restriction component, restriction hole and atomizing chamber is not clearly recited. In response, Applicant respectfully submits that the claim recites a restriction component, with a restriction hole (as shown in Fig. 8). The restriction hole, in turn, corresponds (i.e. communicates with) the atomizing chamber. As a result Applicant submits that the claim is clearly recited.

With respect to claim 38, Applicant has amended the claim to provide proper antecedent basis for the elements recited by the Examiner.

With respect to claim 42, Applicant has amended the claim to cancel the alleged indefinite language cited by the Examiner.

With respect to claims 44 and 45, Applicant respectfully submits that a "silica gel corrugated membrane," is adequately described at least in paragraphs [0015], [0065] and [0079].

As a result, Applicant respectfully requests that the rejections under 35 U.S.C. §112 Second Paragraph be withdrawn.

Rejections under 35 U.S.C. §103(a)

Claims 33, 38, 41, 43 and 46-52 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over CN 2719043 (as disclosed in equivalent U.S. Pub No.

2007/0267031) to Hon (hereinafter "Hon '043"). In response, Applicant files herewith a certified translation of a certified copy of the priority document for the above referenced application, namely, Chinese Application No. 200620090805.0, filed May 16, 2006, and submitted to the International Bureau on July 19, 2007. As shown by the translation, the priority document filed May 16, 2006 is substantially the same as the current specification and figures, such that the current claims are entitled to a priority date of May 16, 2006. Because Hon '043 issued August 24, 2005—less than one year prior to the priority date of the present application—Hon '043 is not prior art to the present claims. Accordingly, Applicant requests that the rejections of claims 33, 38, 41, 43, and 46-52 be withdrawn.

Claims 39-40 and 53-59 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Hon '043 in view of WO2004/095955 (as disclosed in equivalent U.S. Pub. No. 2006/0196518) to Hon (hereinafter "Hon '955").

As set forth above, Hon'043 is not prior art to the present claims. And, Hon '955 does not, by itself, anticipate or render obvious applicants claims. Accordingly, Applicant requests that the rejections of claims 39-40 and 53-59 be withdrawn.

Allowable Subject Matter

Applicant appreciates the Examiner's indication of Allowable Subject Matter in the most recent Office action with respect to claims 34, 36 and 60. Applicant has amended claims 34 and 36 to include all the limitations of amended claim 33. While claim 33 has been amended such that rewritten claims 34 and 36 are modified from the claims indicated as allowable, applicant has not modified the limitations of

previously presented claims 34 or 36 such that said claims are still in condition for allowance.

New Claims

New claims 61–65 depend from claim 33 and as such are patentable for at least the same reasons set forth with respect to claim 33.

New claim 66 recites in part "an electric heating rod and a run-through atomizing chamber; the electric heating rod comprises a cylinder and a heating element provided at the wall of the cylinder, the electric heating rod is in the said atomizing chamber." The cited prior art does not disclose said limitations. Thus claim 66 and claims 67–74, which depend therefrom, are patentable over the cited art.

CONCLUSION

In view of the present amendment and in light of the above discussions, the outstanding grounds of rejection are believed to have been overcome. The application, as amended, is believed to be in condition of allowance. An early and favorable action to that effect is respectfully requested.

Dated: October 12, 2011

Respectfully submitted,

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Electronic Patent Application Fee Transmittal	
Application Number:	12226818
Filing Date:	29-Oct-2008
Title of Invention:	Aerosol Electronic Cigarette
First Named Inventor/Applicant Name:	Li Han
Filer:	Joseph P. Hamilton/Amy Shields
Attorney Docket Number:	RUYAN-001-US
Filed as Small Entity	

U.S. National Stage under 35 USC 371 Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2615	9	30	270
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	2253	1	635	635
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**1085**

Electronic Acknowledgement Receipt	
EFS ID:	11175614
Application Number:	12226818
International Application Number:	
Confirmation Number:	2275
Title of Invention:	Aerosol Electronic Cigarette
First Named Inventor/Applicant Name:	Li Han
Customer Number:	62008
Filer:	Joseph P. Hamilton/Amy Shields
Filer Authorized By:	Joseph P. Hamilton
Attorney Docket Number:	RUYAN-001-US
Receipt Date:	12-OCT-2011
Filing Date:	29-OCT-2008
Time Stamp:	19:51:37
Application Type:	U.S. National Stage under 35 USC 371

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1085
RAM confirmation Number	6510
Deposit Account	502586
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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14	Foreign Reference	EP1618803A1.pdf	198539 37ba0e1089ca2f91434c10d0d43f63510afc7165	no	15
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	Applicant Arguments/Remarks Made in an Amendment	13	17

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New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

Electronic Acknowledgement Receipt	
EFS ID:	11175614
Application Number:	12226818
International Application Number:	
Confirmation Number:	2275
Title of Invention:	Aerosol Electronic Cigarette
First Named Inventor/Applicant Name:	Li Han
Customer Number:	62008
Filer:	Joseph P. Hamilton/Amy Shields
Filer Authorized By:	Joseph P. Hamilton
Attorney Docket Number:	RUYAN-001-US
Receipt Date:	12-OCT-2011
Filing Date:	29-OCT-2008
Time Stamp:	19:51:37
Application Type:	U.S. National Stage under 35 USC 371

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1085
RAM confirmation Number	6510
Deposit Account	502586
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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3	Translation of Foreign Priority Documents	2011-10-12_EnglishTranslation_CN200620090805_0_2.pdf	583429 a09da243e3390b36c52658f60b3f207306c57c14	no	27
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20	Foreign Reference	WO07131450.pdf	1056949 f1ddb0acc627d9d038c8187d7a857e5811ad7826	no	25
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21	Foreign Reference	WO08055423.pdf	620259 17d5c756f776f61aa7b5676401d0df6758aabd99	no	16
Warnings:					
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22	Non Patent Literature	ISR_PCT_CN07_001575.pdf	154104 c38043d9ba6622bc8a67febfa26c9a4177ed1d5f	no	6
Warnings:					
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23	Non Patent Literature	WO_PCT_CN07_001575.pdf	160050 354c7a1f541d4849ec20a6270f90126baec628ee	no	4
Warnings:					
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24	Non Patent Literature	ISR_PCT_CN07_001576.pdf	179211 8fe35f496e5235e85d17a429df3769d94c3e3eee	no	6
Warnings:					
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25	Non Patent Literature	WO_PCT_CN07_001576.pdf	151696 837e27dc85c5f8e752e5d0ae1eb501643bd6d42d	no	4
Warnings:					
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26	Non Patent Literature	eESR_EP07721148.pdf	112554 e8a9ca68c2aa9d6c10685a32f213a1cafa074da8	no	5
Warnings:					
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27	Non Patent Literature	eESR_EP11001479.pdf	128218 66e791a4ba702e6f0212f969386fa20a170343e1	no	4
Warnings:					
Information:					
28	Non Patent Literature	ISBN7-111-13752-3_Intro_Selecting_Using_Electronic_Components.pdf	1562503 d80af22426f6a9b8fceb68ef0ae99804ae307946	no	3
Warnings:					
Information:					
29	Non Patent Literature	Manual_Electric_Engineers_March_2000.pdf	2192000 eeebb5c148f8778cba42e3c2d15effb9a13b60b0	no	3
Warnings:					
Information:					
30	Non Patent Literature	Manual_Mechanical_Designers_Jan_2002.pdf	2985162 07a5be7617327b491d12aba96bed47de5e5f3307	no	4
Warnings:					
Information:					
31	Non Patent Literature	Materials_Manual_Nonmetal_Jul_1985.pdf	2347448 4a4e762ad09b0873c1cdfac38d550e1dbbd5abad	no	3
Warnings:					
Information:					
32		2011-10-12_Response_763208012US.pdf	70834 6e14a2ac9cc29afa99293107836b9cdf0c6c5423	yes	17

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	12
	Applicant Arguments/Remarks Made in an Amendment	13	17

Warnings:					
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33	Fee Worksheet (SB06)	fee-info.pdf	33729 f94ded47860d1fc85b32f3aab7f94263bb14570f	no	2
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			Total Files Size (in bytes):	19486516	

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New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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Attorney Ref. 76320.8012.US00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Li HAN	Confirmation No.: 2275
Application No.: 12/226,818	Art Unit: 1747
Filed: October 29, 2008	Examiner: Dionne Walls Mayes
Title: AEROSOL ELECTRONIC CIGARETTE	

REQUEST FOR EXTENSION OF TIME

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

Dear Sir:

A three-month extension of time up to and including October 12, 2011 is respectfully requested for responding to the Office Action April 12, 2011. The extension fee of $635.00 (small entity), along with any deficiency or overpayment, is authorized to be charged to our Deposit Account No. 50-2586 and is being paid herewith.

Dated: October 12, 2011

Respectfully submitted,

By: / Joseph P. HAMILTON /
Joseph P. Hamilton
Registration No.: 51770
PERKINS COIE LLP
P.O. Box 1247
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Attorney for Applicant

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	12226818
Filing Date	2008-10-29
First Named Inventor	Li Han
Art Unit	1747
Examiner Name	Dionne Walls Mayes
Attorney Docket Number	76320.8012.US00

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4945929		1990-08-07	British American Tobacco	
	2	5060671		1991-10-29	Counts et al.	
	3	5159940		1992-11-03	Hayward et al.	
	4	5249586		1993-10-05	Morgan et al.	
	5	5261424		1993-11-16	Sprinkel Jr.	
	6	5878752		1999-03-09	Adams et al.	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12226818
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	First Named Inventor	Li Han
	Art Unit	1747
	Examiner Name	Dionne Walls Mayes
	Attorney Docket Number	76320.8012.US00

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030108342	A1	2003-06-12	Sherwood et al.	
	2	20040261802	A1	2004-12-30	Griffin et al.	

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	1	1106812	CN	C	1998-10-21	Japan Tobacco Inc.		☐
	2	1252961	CN		2000-05-17	Guoqiang SONG		☐
	3	1530041	CN	A	2004-09-22	Li HAN		☐
	4	1541577	CN	A	2004-11-03	Li HAN		☐
	5	1575673	CN	A	2005-02-09	Seiko Epson Cor		☐
	6	2047485	CN	U	1989-11-15	Zhao Yuzhong		☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12226818
	Filing Date	2008-10-29
	First Named Inventor	Li Han
	Art Unit	1747
	Examiner Name	Dionne Walls Mayes
	Attorney Docket Number	76320.8012.US00

	7	2719043	CN	Y	2005-08-24	Li HAN		☐
	8	2777995	CN	Y	2006-05-10	Li HAN		☐
	9	2293957	CN	Y	1998-10-14	Zhao Yuzhong		☐
	10	0893071	EP	A1	1999-01-27	Japan Tobacco		☐
	11	1618803	EP	A1	2006-01-25	Lik HON		☐
	12	1736065	EP	A1	2006-12-27	Lik HON		☐
	13	04080216	WO		2004-09-23	Lik HON		☐
	14	04095955	WO		2004-11-11	Best Partners Worldwide		☐
	15	05099494	WO		2005-10-27	Lik HON		☐
	16	07131449	WO		2005-11-22	Li HAN		☐
	17	07131450	WO		2007-11-22	Lik HON		☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12226818
	Filing Date	2008-10-29
	First Named Inventor	Li Han
	Art Unit	1747
	Examiner Name	Dionne Walls Mayes
	Attorney Docket Number	76320.8012.US00

	18	08055423	WO		2008-05-15	Li HAN		☐

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	1	STATE INTELLECTUAL PROPERTY OFFICE (CHINA), International Search Report for PCT/CN07/001575, August 16, 2007	☐
	2	STATE INTELLECTUAL PROPERTY OFFICE (CHINA), English Translation of the Written Opinion for PCT/ CN07/001575, July 20, 2007	☐
	3	STATE INTELLECTUAL PROPERTY OFFICE (CHINA), International Search Report for PCT/CN07/001576, August 16, 2007	☐
	4	STATE INTELLECTUAL PROPERTY OFFICE (CHINA), English Translation of the Written Opinion for PCT/ CN07/001576, August 3, 2007	☐
	5	EUROPEAN PATENT OFFICE, extended European Search Report for EP 07721148, December 6, 2010	☐
	6	EUROPEAN PATENT OFFICE, extended European Search Report for EP 11001479, July 4, 2011	☐
	7	Introduction to Selecting and Using Electronic Components, ISBN7-111-13752-3,	☐
	8	Manual for Electric Engineers, 2nd Edition, March 2000	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12226818
	Filing Date	2008-10-29
	First Named Inventor	Li Han
	Art Unit	1747
	Examiner Name	Dionne Walls Mayes
	Attorney Docket Number	76320.8012.US00

	9	Manual for Mechanical Designers, 4th Edition, January 2002	☐
	10	Materials Manual-Nonmetal, July 1985	☐

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

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

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12226818
	Filing Date	2008-10-29
	First Named Inventor	Li Han
	Art Unit	1747
	Examiner Name	Dionne Walls Mayes
	Attorney Docket Number	76320.8012.US00

CERTIFICATION STATEMENT

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

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

OR

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

☐ See attached certification statement.

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

☐ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/ Joseph P. HAMILTON /	Date (YYYY-MM-DD)	2011-10-12
Name/Print	Joseph P. Hamilton	Registration Number	51770

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

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The 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:

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County of New York
State of New York

Date: October 6, 2011

To whom it may concern:

This is to certify that the attached translation from Chinese into English is an accurate representation of the documents received by this office.

The documents are designated as:

- Chinese Application no. 200620090805.0 Filed on May 16, 2006

David Druckman, Project Manager in this company, certifies that Jane Wei, who translated these documents, is fluent in Chinese and standard North American English and qualified to translate. David Druckman attests to the following:

"To the best of my knowledge, the aforementioned documents are a true, full and accurate translation of the specified documents."

Signature of David Druckman

Document made available under the Patent Cooperation Treaty (PCT)

International application number: PCT/CN2007/001575

International filing date: 15 May 2007 (15.05.2007)

Document type: Certified copy of priority document

Document details: Country/Office: CN
Number: 200620090805.0
Filing date: 16 May 2006 (16.05.2006)

Date of receipt at the International Bureau: 19 July 2007 (19.07.2007)

Remark: Priority document submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b)

World Intellectual Property Organization (WIPO) - Geneva, Switzerland
Organisation Mondiale de la Propriété Intellectuelle (OMPI) - Genève, Suisse

State Intellectual Property Office of the People's Republic of China

Certification

The annex of this certification is a copy of the following patent application filed with the Office

Filing Date: May 16, 2006

Application No. 200620090805.0

Category of the application: Utility Model

Title of the invention-creation: Emulation aerosol sucker

Applicant: Han Li

Inventor or designer: Han Li

Director of the State Intellectual Property Office of the People's Republic of China: Tian Lipu

July 04, 2007

What is claimed is:

1. An emulation aerosol sucker, characterized in that it comprises a battery assembly, an atomizing assembly and a cigarette bottle assembly, one end of the battery assembly is arranged with an external thread electrode (209), one end of the atomizing assembly is provided with an internal thread electrode (302), the battery assembly and the atomizing assembly are connected to become an emulation cigarette body via the thread electrodes, the cigarette bottle assembly is inserted into the other end of the atomizing assembly, thereby forming a cigarette type or a cigar type integration.

2. The emulation aerosol sucker according to claim 1, characterized in that the battery assembly comprises an indication light (202), a lithium battery (203), a MOSFET circuit board (205), a sensor (207), a silica gel corrugated separation membrane (208), a first thread electrode (209), a first negative pressure cavity hole (210) and a first housing (211), one end of the first housing (211) is arranged with the external thread electrode (209) and the other end thereof is installed with the indication light (202), in which one side of the light is provided with an indication light cap (201) with a fine hole (501) arranged thereon and the other side is connected with the lithium battery (203) and the MOSFET circuit board (205) in order, the sensor (207) is arranged on the MOSFET circuit board (205), the silica gel corrugated separation membrane (208) arranged with the first negative pressure cavity hole (210) thereon is disposed between the first thread electrode (209) and the sensor (207), and the sensor (207) is connected with the silica gel corrugated separation membrane (208) by a reed switch (212) fastened on the sensor (207).

3. The emulation aerosol sucker according to claim 2, characterized in that a MCU (206) is added between the MOSFET circuit board (205) and the sensor (207), and a display screen (204) is added on the surface of the first housing (211).

4. The emulation aerosol sucker according to claim 3, characterized in that the MCU (206) scans the sensor at a power saving mode of pulse, restricts an atomizing dosage with an integral function of frequency to single operation time according to the signal parameters

of the sensor, further, the MCU (206) completes the following control functions: the pulse width modulation and overdischarge protection for a constant power output of current, an automatic cleaning function per several thousands of times of work, gradual lighting up and dying down control of the indication light, display of work times and battery capacity, and self recovery from shut down due to malfunctions of the sensor.

5. The emulation aerosol sucker according to claims 2 or 3, characterized in that the sensor (207) is a switch type sensor made of an elastic alloy sheet, a Hall device with linear output, a semiconductor force sensitive chip, a semiconductor matrix thermoelectric bridge chip or a capacitive and inductive sensor.

6. The emulation aerosol sucker according to claims 2 or 3, characterized in that the indication light (202) is two red light emitting diodes.

7. The emulation aerosol sucker according to claims 2 or 3, characterized in that the silica gel corrugated separation membrane (208) is further made of fluorine rubber, butyronitrile rubber or elastic alloy membrane.

8. The emulation aerosol sucker according to claims 2 or 3, characterized in that the external thread electrode (209) is made of a gold coated stainless steel or brass part with a central hole arranged thereon.

9. The emulation aerosol sucker according to claims 2 or 3, characterized in that the lithium battery (203) is a rechargeable polymer lithium battery or a rechargeable lithium ion battery.

10. The emulation aerosol sucker according to claim 1, characterized in that the atomizer assembly comprises an internal thread electrode (302), an air-liquid separator (303), an atomizer (307) and a second housing (306), one end of the second housing (306) is connected with the cigarette bottle assembly through insertion and the other end thereof is arranged with an internal thread electrode (302) provided with a second negative pressure cavity hole (301) thereon, the air-liquid separator (303) and the atomizer (307) are

connected to the internal thread electrode (302) in sequence, and an air entry passage (502) is provided on the second housing (306).

11. The emulation aerosol sucker according to claim 10, characterized in that the internal thread electrode (302) is made of a gold coated stainless steel or brass part with a central hole arranged thereon.

12. The emulation aerosol sucker according to claim 10, characterized in that the air-liquid separator (303) is made of stainless steel or plastic with a hole arranged thereon.

13. The emulation aerosol sucker according to claim 10, characterized in that the atomizer (307) is a capillary impregnation type atomizer or a spray type atomizer, a heating element (305) is arranged in the atomizer (307), and a spray hole (304) is arranged on the spray type atomizer.

14. The emulation aerosol sucker according to claim 13, characterized in that the spray hole (304) is formed by opening a hole on foam ceramics, micro-porous glass, foam metal, stainless steel fibrofelt or chemical fiber.

15. The emulation aerosol sucker according to claim 13, characterized in that the heating element (305) is made by winding nichrome wire, aludirome wire or platinum wire on a micro-porous ceramics frame, it can also be a porous element made of conducting ceramics or PTC ceramics and having a sintered electrode, the surface of the heating element (305) is sintered to be high temperature glaze to secure zeolite particles made of natural zeolite, artificial organic micro-porous ceramics or aluminium oxide particles.

16. The emulation aerosol sucker according to claim 1, characterized in that the cigarette bottle assembly comprises a cigarette liquid bottle (401), a fiber (402) and a suction nuzzle (403), the fiber (402) containing cigarette liquid is contained in one end of the cigarette liquid bottle (401) which is inserted into the second housing (306) and abuts on the atomizer (307), the suction nozzle (403) is arranged on the other end of the cigarette

liquid bottle (401), and an air entry passage (503) is arranged between the fiber (402) and the interior wall of the cigarette liquid bottle (401).

17. The emulation aerosol sucker according to claim 16, characterized in that the cigarette liquid bottle (401) and the suction nozzle (403) are made of non-toxic plastic.

18. The emulation aerosol sucker according to claim 16, characterized in that the fiber (402) is made of polypropylene fiber or nylon fiber.

19. The emulation aerosol sucker according to claim 16, characterized in that the cigarette liquid for atomizing in the fiber (402) contains 0.1- 3.5 % of nicotinamide, 0.05- 5% of essence for cigarette, 0.1- 3% of organic acid, 0.1-0.5% of stabilizing agent and the rest of propylene glycol.

20. The emulation aerosol sucker according to claim 1, characterized in that the sucker and the connection structure can be loaded with conventional medicines to be used as an intrapulmonary inhalation medicine administration device.

Emulation Aerosol Sucker

Technical field

The present utility model relates to an electronic suction device, and particularly to an emulation aerosol sucker which does not contain tar but only nicotinamide (nicotine).

Background

Under the current situation that "smoking is harmful to health" has been well known knowledge, there are still one billion smokers in the whole world and the number of smokers is still rising every year. The first international anti-smoking convention Framework Convention on Tobacco Control has been established by the World Heath Organization (WHO) on March 01, 2003. A number provided by the WHO indicates that smoking causes death of 4.9 millions of people every year. Although smoking can result in serious diseases of the respiratory system and cancers, it is very difficult to have smokers quit smoking.

The effective assembly of cigarette is nicotinamide (i.e. nicotine). During smoking, with the burning of cigarette, a large amount of atomized drops of tar produced by nicotinamide enter into the alveoli and is absorbed quickly, nicotinamide acts on the central nervous system of a receptor, causing "a feeling of inebriation" like exhilarant such as feeling light-headed or flying .

Nicotinamide is a micromolecule alkaloid, not harmful to human body with a small dosage and also it has a very short half life in blood. The harmful substance in tobacco mainly is tar comprised of thousands of assemblies and dozens of which are carcinogen. It is currently proved that passive smoking of non smokers is much more harmful.

In order to find cigarette substitutes having nicotinamide and being free of harmful tar, many inventions provide products made by pure nicotinamide such as " Smoking Quit Patch" , "Nicotinamide Gargle", "Spraying Agent Packed in a High Pressure Gas Tank Containing Propellent", "Nicotinamide Gum", "Nicotinamide Beverage", etc.. Although these products are free of harm of tar, they cannot cause the feeling of "satisfied"

produced by nicotinamide because an effective peak concentration cannot be created in blood due to a slow absorption of nicotinamide. Meanwhile, the habit of "draw" or "suction" established by smokers is deprived; hence similar products cannot be real products for stopping smoking or being substitutes of cigarette.

Summary of the utility model

An object of the present utility model is to provide an emulation aerosol sucker with a function of quitting smoking and being a substitute of cigarette.

The technical solution of the present utility model is a creation of the utility model "atomizing electronic cigarette" filed with the State Intellectual Property Office of China on April 14, 2000, with Chinese application No. 200420031182.0 and international application No. PCT/CN2005/000337.

The object of the present utility model is achieved by the following technical solution:

The present utility model includes a battery assembly, an atomizing assembly and a cigarette bottle assembly, one end of the battery assembly is arranged with an external thread electrode, one end of the atomizing assembly is provided with an internal thread electrode, the battery assembly and the atomizing assembly are connected to become an emulation cigarette body via thread electrodes, the cigarette bottle assembly is inserted into the other end of the atomizing assembly, thereby forming a cigarette type or cigar type integration.

In which, the battery assembly comprises an indication light, a lithium battery, a MOSFET circuit board, a sensor, a silica gel corrugated separation membrane, a first thread electrode, a first negative pressure cavity hole and a first housing , one end of the first housing is arranged with the external thread electrode and the other end thereof is installed with the indication light, in which one side of the light is provided with the indication light cap with a fine hole arranged thereon and the other side is connected with the lithium battery and the MOSFET circuit board in order, the sensor is arranged on the MOSFET circuit board, the silica gel corrugated separation membrane arranged with the

first negative pressure cavity hole thereon is disposed between the first thread electrode and the sensor, and the sensor is connected with the silica gel corrugated separation membrane by a reed switch fastened on the sensor. A MCU is added between the MOSFET circuit board and the sensor, and a display screen is added on the surface of the first housing. The MCU scans the sensor at a power saving mode of pulse, restricts an atomizing dosage with an integral function of frequency to single operation time according to the signal parameters of the sensor, at the same time, the MCU completes the following control functions: the pulse width modulation and overdischarge protection for a constant power output of current, an automatic cleaning function per several thousands of times of work, gradual lighting up and dying down control of the indication light, display of work times and battery capacity, and self recovery from shut down due to malfunctions of the sensor. The sensor is a switch type sensor made of an elastic alloy sheet, a Hall device with linear output, a semiconductor force sensitive chip, a semiconductor matrix thermoelectric bridge chip or a capacitive and inductive sensor. The indication light is two red light emitting diodes. The silica gel corrugated separation membrane is also made of fluorine rubber, butyronitrile rubber or elastic alloy membrane. The external thread electrode is made of a gold coated stainless steel or brass part with a central hole arranged thereon. The lithium battery is a rechargeable polymer lithium battery or a rechargeable lithium ion battery. The atomizer assembly comprises an internal thread electrode, an air-liquid separator, an atomizer and a second housing, one end of the second housing is connected with the cigarette bottle assembly by insertion and the other end thereof is arranged with an internal thread electrode provided with a second negative pressure cavity hole thereon, the air-liquid separator and the atomizer are connected to the internal thread electrode in sequence, an air entry passage is provided on the second housing. The internal thread electrode is made of a gold coated stainless steel or brass part with a central hole drilled thereon. The air-liquid separator is made of stainless steel or plastic with a hole drilled thereon. The atomizer is a capillary impregnation type atomizer or a spray type atomizer, a heating element is arranged in the atomizer, and a spray hole is arranged on the spray type atomizer. The spray hole is formed by opening a hole on foam ceramics, micro-porous glass, foam metal, stainless steel fibrofelt or chemical fiber. The heating element is made by winding nichrome wire, aludirome wire or platinum wire on a micro-porous ceramics frame, is also a porous

element having a sintered electrode which is made of conducting ceramics or PTC ceramics, the surface of the heating element is sintered to be high temperature glaze to secure zeolite particles made of natural zeolite, artificial organic micro-porous ceramics or aluminium oxide particles. The cigarette bottle assembly comprises a cigarette liquid bottle, fiber and a suction nuzzle, the fiber containing cigarette liquid is contained in one end of the cigarette liquid bottle, this end is inserted into the second housing and abuts on the atomizer, the suction nozzle is arranged on the other end of the cigarette liquid bottle, and an air entry passage is arranged between the fiber and the interior wall of the cigarette liquid bottle. The cigarette liquid bottle and the suction nozzle are made of non-toxic plastic. The fiber is made of polypropylene fiber or nylon fiber. The cigarette liquid for atomizing in the fiber (402) contains 0.1- 3.5 % of nicotinamide, 0.05- 5% of essence for cigarette, 0.1- 3% of organic acid, 0.1-0.5% of stabilizing agent and the rest of propylene glycol. The sucker and the connection structure can load conventional medicines to be used as a medicine administration device for intrapulmonary inhalation.

The advantages and beneficial effects of the present utility model are as follows: according to the present utility model, there is no tar produced when one smokes; the risk of causing cancer is greatly reduced; a user still obtains the feeling and excitement of smoking; there is no need of lighting, and there is no harm of fire disaster. The device and connection structure of the present utility model can load conventional medicines to be used as a medicine administration device for intrapulmonary inhalation.

Brief description of the drawings

Figure 1 is an exterior schematic view of the cigarette type of the present utility model.

Figure 2A is a structural schematic view of a battery assembly according to the present utility model.

Figure 2B is another structural schematic view of a battery assembly according to the present utility model.

Figure 3 is a schematic view of an atomizing assembly according to the present utility model.

Figure 4 is a schematic view of a cigarette bottle assembly according to the present utility model.

Figure 5A is an interior structural schematic view of the present utility model.

Figure 5B is another interior structural schematic view of the present utility model.

Figure 6 is a structural schematic view of a power charger according to the present utility model.

Figure 7 is a diagram of circuit principle of a MCU and a MOSFET according to the present utility model.

Figure 8 is a structural schematic view of a capillary impregnation type atomizer according to the present utility model.

Figure 9 is a left view of figure 8.

Figure 10 is a structural schematic view of a spray type atomizer according to the present utility model.

Figure 11 is a left view of figure 10.

Figure 12 is a structural schematic view of a cigar exterior of the present utility model.

Detailed description of the utility model

The present utility model will be further described in detail with reference to the drawings.

Embodiment 1

As shown in figure 1, an exterior of the present utility is similar to a cigarette inserted into a cigarette holder; a battery assembly, an atomizing assembly and a cigarette bottle assembly are included. One end of the battery assembly is arranged with an external thread electrode 209, and one end of the atomizing assembly is provided with an internal thread electrode 302; the both assemblies are connected to become an emulation cigarette body via the thread electrodes, the cigarette bottle assembly is inserted into the other end of the atomizing assembly, thus forming a cigarette type emulation aerosol sucker together.

As shown in figure 2A, the battery assembly includes an indication light 202, a lithium battery 203, a MOSFET circuit board 205, a sensor 207, a silica gel corrugated separation membrane 208, a first thread electrode 209, a first negative pressure cavity hole 210 and a first housing 211. One end of the first housing 211 is arranged with the external thread

electrode 209 and the other end thereof is installed with the indication light 202, in which one side of the light is provided with an indication light cap 201 arranged with a fine hole 501 thereon and the other side is connected with the lithium battery 203 and the MOSFET (metallic oxide semiconductor field effect transistor) circuit board 205 in order. The sensor 207 is arranged on the MOSFET circuit board 205, the silica gel corrugated separation membrane 208 arranged with the first negative pressure cavity hole 210 thereon is disposed at between the first thread electrode 209 and the sensor 207, and the sensor 207 is connected with the silica gel corrugated separation membrane 208 by a reed switch 212 fastened on the sensor 207.

Wherein: the sensor 207 can be a switch type sensor made of an elastic alloy sheet, a Hall device with linear output, a semiconductor force sensitive chip, a semiconductor matrix thermoelectric bridge chip or a capacitive and inductive sensor. The indication light 202 is two red light emitting diodes. The lithium battery 203 can be a rechargeable polymer lithium battery or a rechargeable lithium ion battery. The external thread electrode 209 is made of a gold coated stainless steel or brass part with a central hole arranged thereon. Silica gel corrugated separation membrane 208 can also be made of fluorine rubber, butyronitrile rubber or elastic alloy membrane.

As shown in figure 3, the atomizer assembly includes an internal thread electrode 302, an air-liquid separator 303, an atomizer 307 and a second housing 306. One end of the second housing 306 is connected with the cigarette bottle assembly by insertion and the other end thereof is arranged with an internal thread electrode 302 provided with a second negative pressure cavity hole 301 thereon. The air-liquid separator 303 and the atomizer 307 are connected to the internal thread electrode 302 in sequence. An air entry passage 502 is provided on the second housing 306. Wherein: the air-liquid separator 303 is made of steel or plastic with a hole drilled. The internal thread electrode 302 is made of stainless steel or plastic with a central hole drilled therein.

Atomizer 307 can be the ones as shown in figures 8 and 9 being a capillary impregnation type atomizer, or can be the ones as shown in figures 10 and 11 being a spray type atomizer. In the present embodiment, it is a spray type atomizer.

As shown in figure 4, the cigarette bottle assembly includes a cigarette liquid bottle 401, fiber 402 and a suction nuzzle 403. The fiber 402 containing cigarette liquid is contained in one end of the cigarette liquid bottle 401; this end is inserted into the second housing 306 and abuts against the atomizer 307. The suction nozzle 403 is arranged on the other end of the cigarette liquid bottle 401, and an air entry passage 503 is arranged between the fiber 402 and the interior wall of the cigarette liquid bottle 401.

As shown in figure 5A, the battery assembly fully charged as shown in figure 2A is tightly screwed into the atomizer assembly as shown in figure 3, and then the cigarette bottle assembly as shown in figure 4 is inserted therein, thereby forming a work ready status of the present utility model. When a user slightly sucks the nozzle 403, a negative pressure is formed on the silica gel corrugated separation membrane 208 via the air entry passage 503 and the first and second negative pressure cavity holes 210 and 301, the silica gel corrugated separation membrane 208 changes its shape under the function of the difference in suction pressures to act on the reed switch 212 and the sensor 207 to activate the MOSFET circuit board 205. At this moment, the indication light 202 gradually lights up, the lithium battery 203 supplies power to a heating element 305 in the atomizer 307 through the MOSFET circuit board 205 and the internal and external thread electrodes 302 and 209, causing the heating element 305 in the atomizer 307 to produce heat. The fiber 402 in the cigarette liquid bottle 401 contains cigarette liquid which impregnates the micro-porous ceramics 801 in the atomizer; air enters through the air entry passage 502 to form a mixture of air and liquid in a spray hole 304 of the atomizer 307 through an air through hole on the air -liquid separator 303. The mixture of air and liquid is sprayed onto the heating element 305 to be gasified, quickly absorbed into the airflow and condensed to be aerosol, which is sucked out through the suction nozzle 403 via the air entry passage 503 to form a white mist type aerosol.

When suction stops, the reed switch 212 and the sensor 207 are reset, the atomizer 307 stops working, the indication light 202 gradually dies down. When work times reach a preset value, the atomizer 307 provides a word delay of 5 to 20 seconds per time to clean a small amount of dirt accumulated on the heating element 305.

Besides micro-porous ceramics, foam ceramics, micro-porous glass, foam metal, stainless steel fibrofelt, dacron fiber, nylon fiber, acrylics fiber, aramid fiber, or rigid porous plastic can be used as a liquid supply material of the atomizer 307. A micro-porous ceramics frame wound with a thermo electric material such as nichrome wire, aludirome wire, platinum wire can be used as the heating element 305, and a porous element made of conducting ceramics or PTC (Positive Temperature Coefficient temperature sensitive ceramics) material carrying a sintered electrode can also be used. The surface of the heating element 305 is sintered to be high temperature glaze to secure zeolite particles made of natural zeolite, artificial organic micro-porous ceramics or aluminium oxide particles. The cigarette liquid bottle 401 and suction nozzle 403 in the cigarette bottle assembly made of non-toxic plastic are internally pasted with fiber 402 made of polypropylene fiber or nylon fiber to absorb cigarette liquid. In the battery assembly, a micro-porous 501 is arranged on the indication light cap 201 for balancing the difference of pressures on both sides of the silica gel corrugated separation membrane 208.

The cigarette liquid for atomizing contains 0.1- 3.5 % of nicotinamide, 0.05- 5% of essence for cigarette, 0.1- 3% of organic acid, 0.1-0.5% of stabilizing agent and the rest of propylene glycol.

The first housing 211 and the second housing 306 of the present utility model are made of stainless steel pipes or copper alloy pipes, and coated with baked-enamel for simulating the color of cigarette.

As shown in figure 12, according to the present utility model, the diameter of the battery assembly can be increased by proportion so as to be consistent with the diameter of the atomizing assembly, and leaf veins and matte brown yellow baked-enamel can be covered on the housing to create a cigar type emulation aerosol sucker.

For recharging of the lithium battery 203 of the present utility model, a thread electrode 601 matched with the external thread electrode 209 on the battery assembly as shown in figure 6 can be used as an interface to charge.

Embodiment 2

As shown in figure 2B, a difference between this embodiment and the embodiment 1 is as follows: a MCU206 is added between the MOSFET circuit board 205 and the sensor 207; a display screen 204 is added on the surface of the first housing 211 for displaying power capacity of the lithium battery 203 and times of smoking.

As shown in figure 5B, the battery assembly fully charged as shown in figure 2B is tightly screwed into the atomizer assembly as shown in figure 3, and then the cigarette bottle assembly as shown in figure 4 is inserted therein, forming a work ready status of the present utility model. When a user slightly sucks the nozzle 403, a negative pressure is produced on the silica gel corrugated separation membrane 208 via the air entry passage 503 and the first and second negative pressure cavity holes 210 and 301, the silica gel corrugated separation membrane 208 changes its shape under the function of the difference in suction pressures to act on the reed switch 212 and the sensor 207 to activate the MOSFET circuit board 205. Meanwhile, the indication light 202 gradually lights up, the lithium battery 203 supplies power to the heating element 305 in the atomizer 307 through the MOSFET circuit board 205 and the internal and external thread electrodes 302 and 209, causing the heating element 305 in the atomizer 307 to produce heat. The fiber 402 in the cigarette liquid bottle 401 contains the cigarette liquid which impregnates the micro-porous ceramics 801 in the atomizer; air enters in through the air entry passage 502 to form a mixture of air and liquid in the spray hole 304 of the atomizer 307 through an air through hole on the air -liquid separator 303. The mixture of gas and liquid is sprayed to the heating element 305 to be gasified, quickly absorbed into the airflow, and condensed to be aerosol, which is sucked out through the suction nozzle 403 via the air entry passage 503 to form a white mist type aerosol.

As shown in figure 7, when a suction action causes the sensor to be activated, MCU206 scans the sensor 207 at a power saving mode of pulse, and restricts the atomizing dosage with the integral function of frequency to single operation time according to the signal parameters of the sensor 207. Meanwhile, MCU206 completes the following control functions: the pulse width modulation and overdischarge protection for a constant power

output of current, an automatic cleaning function per several thousands of times work, gradual lighting up and dying down control of the indication light, display of work times and battery capacity, self recovery from shut down due to malfunctions of the sensor.

The device and connection structure of the present utility model can load conventional medicines to be used as an intrapulmonary inhalation medicine administration device.

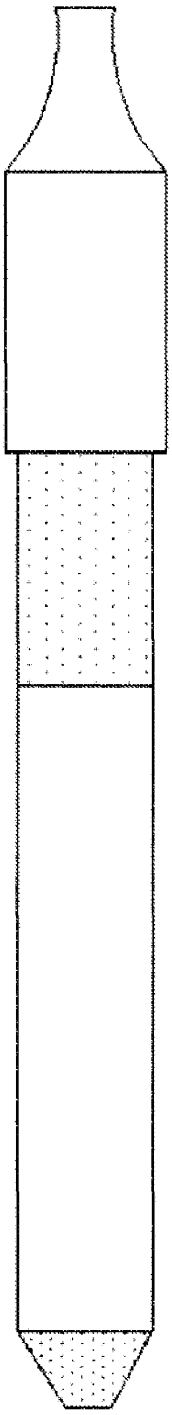


Figure 1

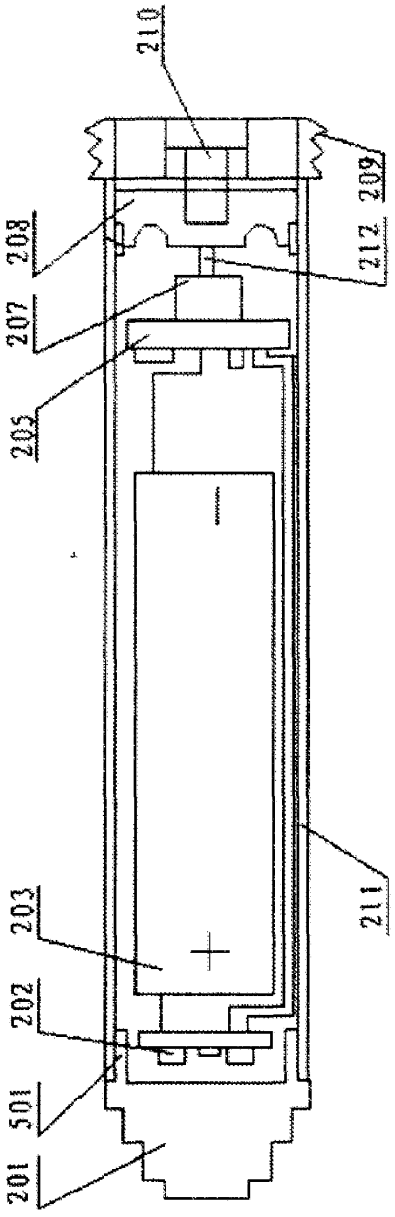


Figure 2A

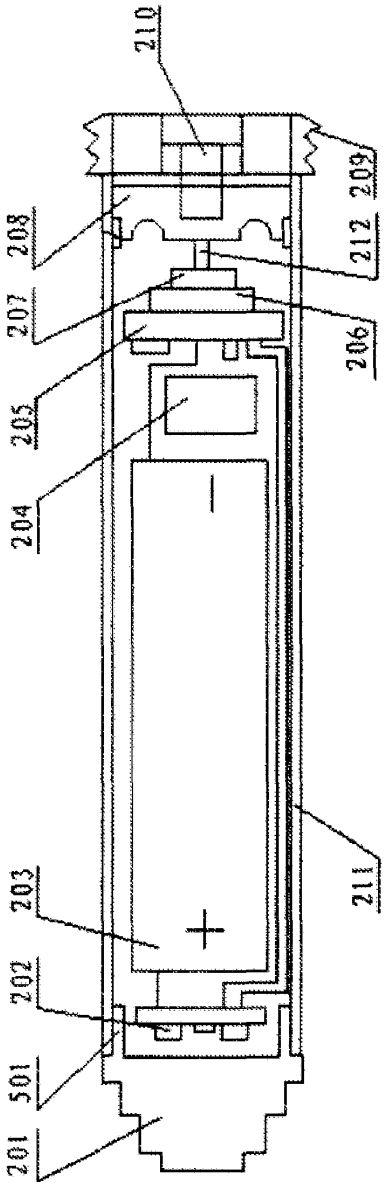


Figure 2B

Figure 4

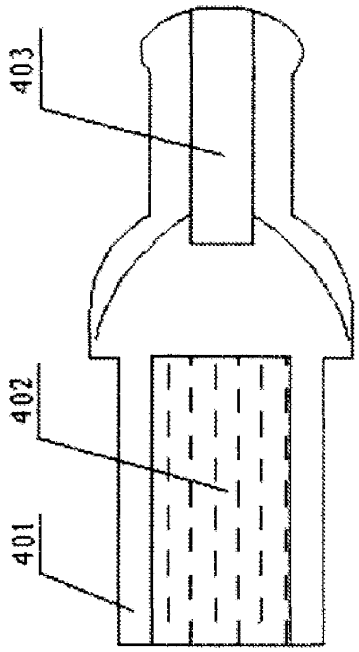
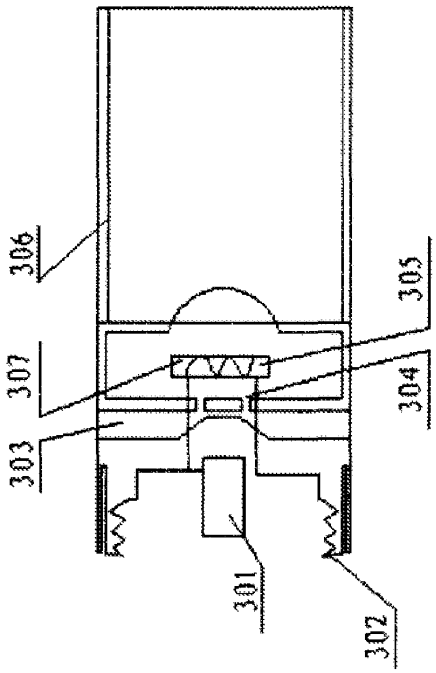


Figure 3



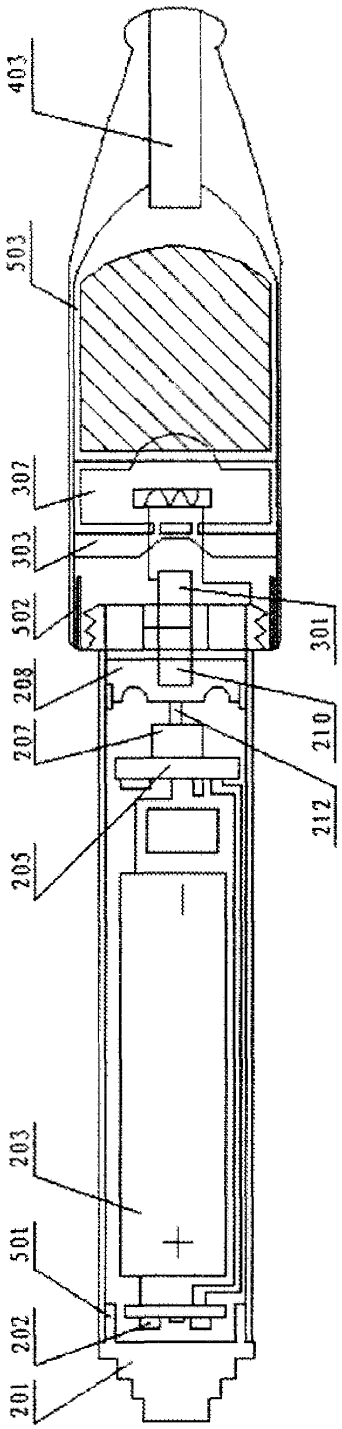
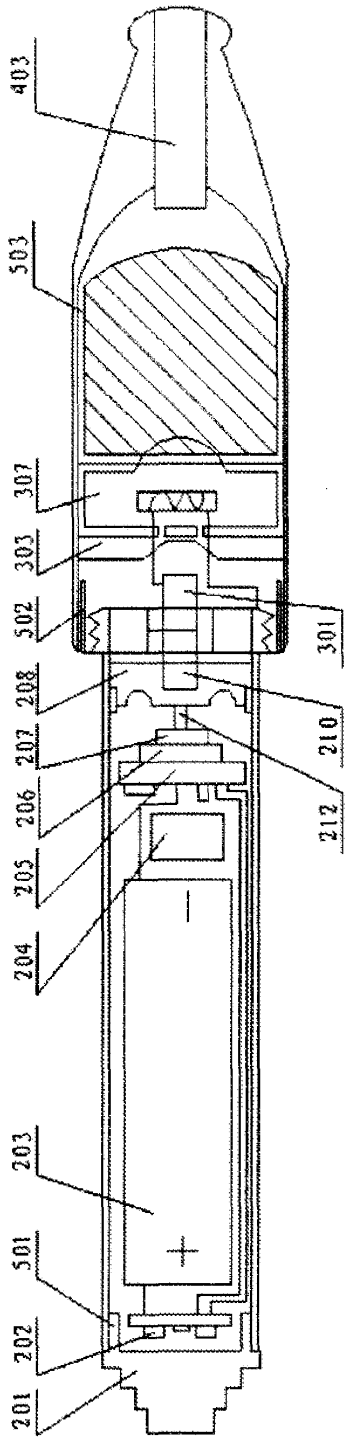


Figure 5A


403
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201

Figure 5B

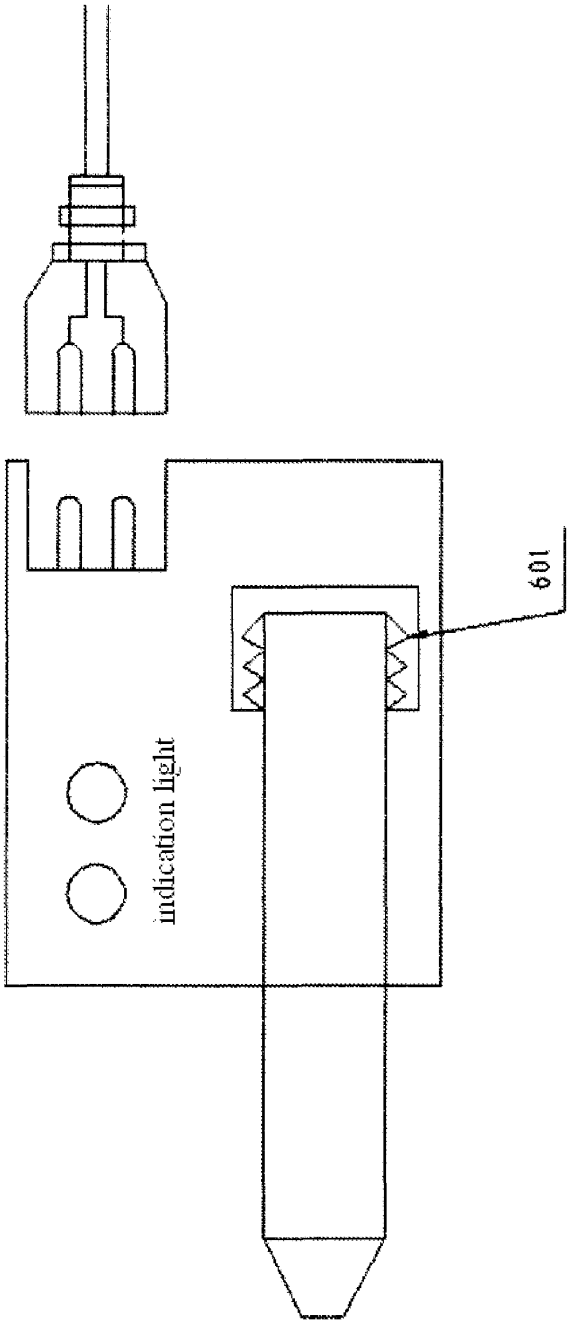

Figure 6

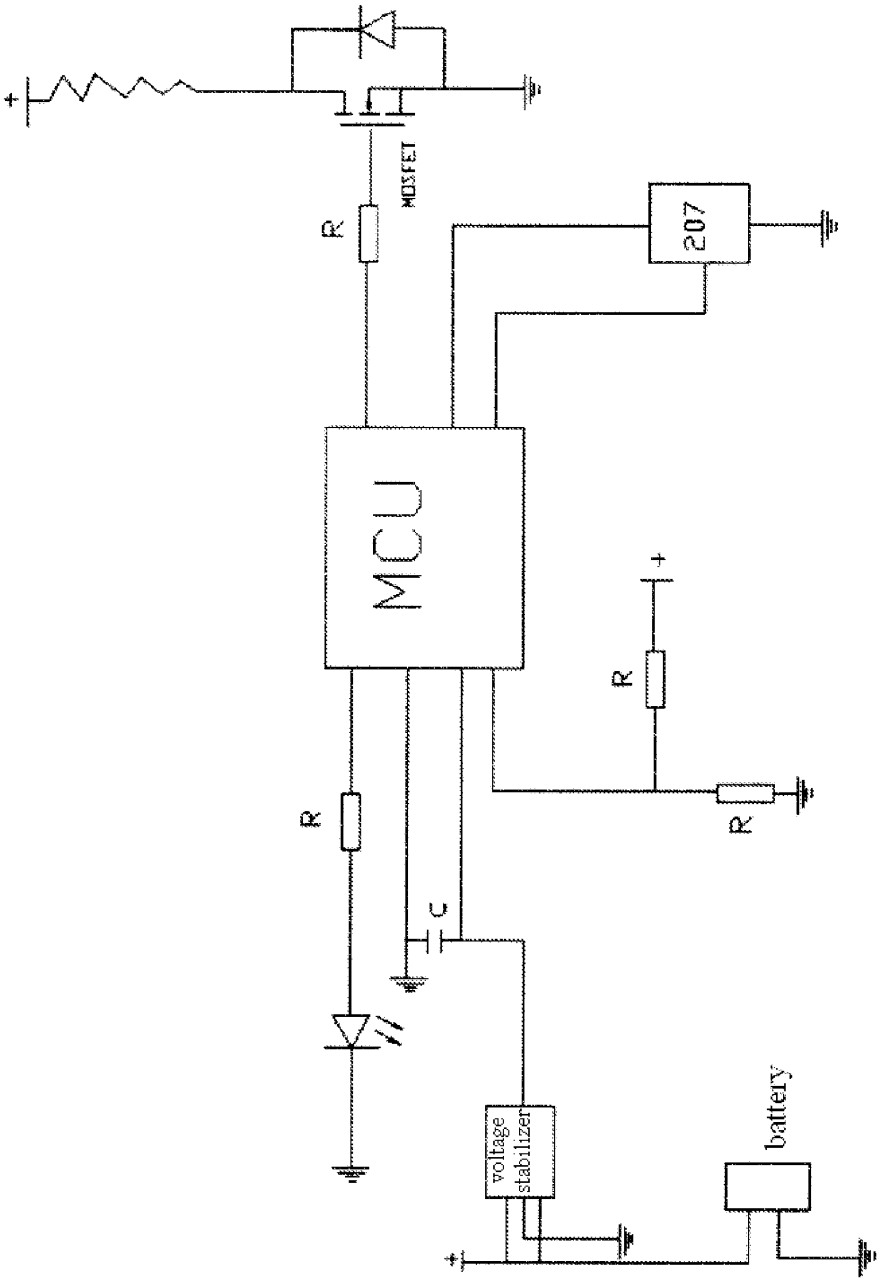

Figure 7

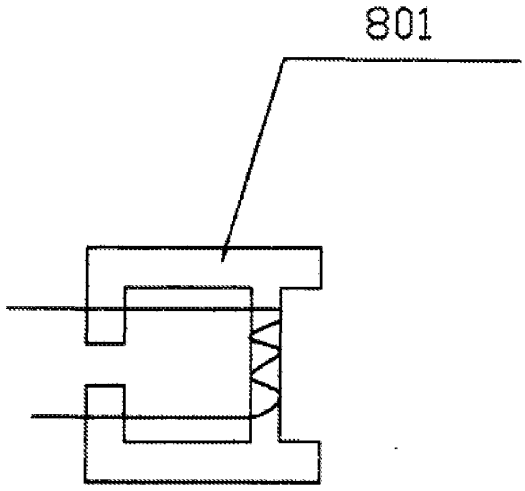

Figure 8

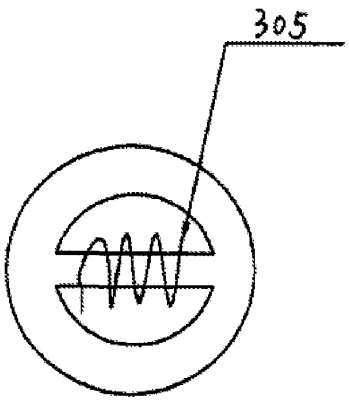

Figure 9

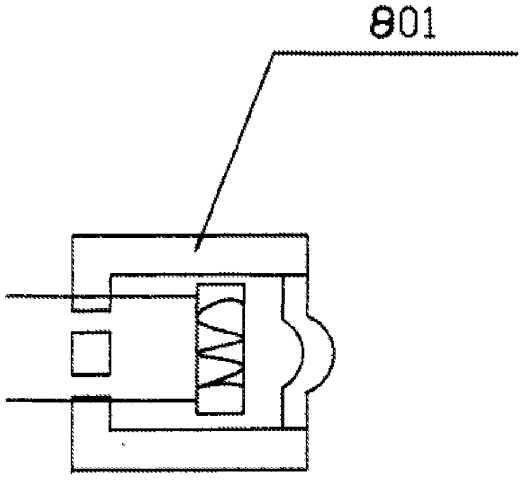

Figure 10

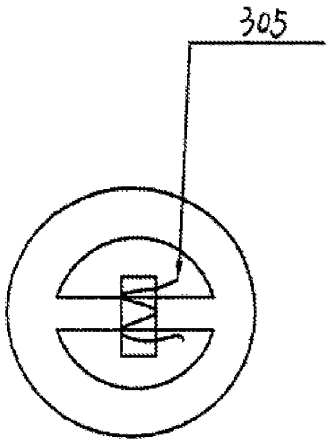

Figure 11

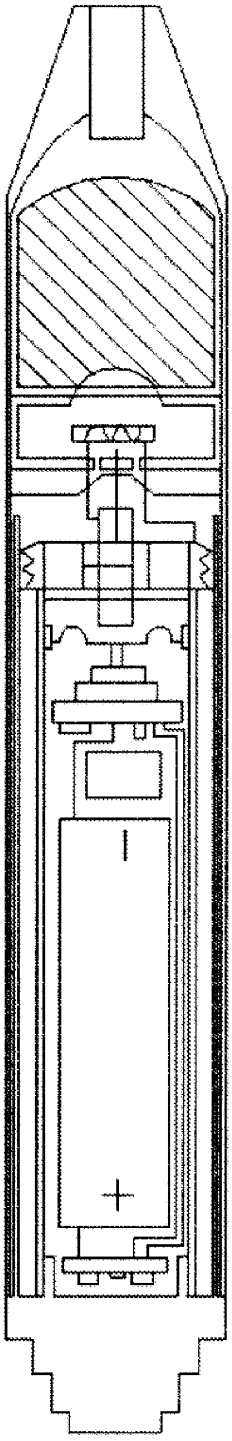

Figure 12

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/226,818	Filing Date 10/29/2008	☐ To be Mailed

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)	SMALL ENTITY ☒		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

		(Column 1)		(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
	10/12/2011	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
AMENDMENT	Total (37 CFR 1.16(i))	* 41	Minus	** 32	= 9	X $30 =	270	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 4	Minus	***3	= 1	X $125 =	125	OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE	395	OR	TOTAL ADD'L FEE	

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

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/KELLY HARRIS/

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

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Examiner-Initiated Interview Summary	Application No. 12/226,818	Applicant(s) HAN, LI	
	Examiner DIONNE WALLS MAYES	Art Unit 1747	

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

(1) *DIONNE WALLS MAYES*. (3)_____.

(2) *JOSEPH HAMILTON*. (4)_____.

Date of Interview: *01 December 2011*.

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: *Those of Record*.

Identification of prior art discussed: *None*.

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...)

Examiner Mayes requested,of Applicant's representative, Mr.Joseph Hamilton, if she could make minor changes to some of the instant claims to eliminate potential "lack of antecedent basis" issues. Mr. Hamilton agreed to all of the changes and such is reflected in the attached "Examiner's Amendment" .

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of 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

/DIONNE WALLS MAYES/ Examiner, Art Unit 1747	

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62008 7590 12/06/2011

MAIER & MAIER, PLLC
1000 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
MAYES, DIONNE WALLS

ART UNIT	PAPER NUMBER
1747	

DATE MAILED: 12/06/2011

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/226,818	10/29/2008	Li Han	RUYAN-001-US	2275

TITLE OF INVENTION: AEROSOL ELECTRONIC CIGARETTE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$870	$300	$0	$1170	03/06/2012

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 SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

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: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 02/11)

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (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)

62008 7590 12/06/2011
MAIER & MAIER, PLLC
1000 DUKE STREET
ALEXANDRIA, VA 22314

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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/226,818	10/29/2008	Li Han	RUYAN-001-US	2275

TITLE OF INVENTION: AEROSOL ELECTRONIC CIGARETTE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$870	$300	$0	$1170	03/06/2012

EXAMINER	ART UNIT	CLASS-SUBCLASS
MAYES, DIONNE WALLS	1747	131-202000

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 03-02 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 _____
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 has been filed for recordation as set forth in 37 CFR 3.11. 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. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- ❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information 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 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, 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.

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 NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/226,818	10/29/2008	Li Han	RUYAN-001-US	2275

62008 7590 12/06/2011

MAIER & MAIER, PLLC
1000 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
MAYES, DIONNE WALLS	
ART UNIT	**PAPER NUMBER**
1747	

DATE MAILED: 12/06/2011

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

The Patent Term Adjustment to date is 290 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 290 day(s).

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 Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 02/11)

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.

Notice of Allowability	Application No.	Applicant(s)	
	12/226,818	HAN, LI	
	Examiner	Art Unit	
	DIONNE WALLS MAYES	1747	

-- 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 Amendment filed on 10/12/11*.

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 *33-36 and 38-74*.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of 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. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ 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).

7. ☐ 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. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/DIONNE WALLS MAYES/ Examiner, Art Unit 1747	/Richard Crispino/ Supervisory Patent Examiner, Art Unit 1747

EXAMINER'S AMENDMENT

1. 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 a telephone interview with Mr. Joseph Hamilton on Thursday, December 1, 2011.

The application has been amended as follows:

IN THE CLAIMS:

In claim 34, line 16, "cigarette bottle assembly", has been changed to -- cigarette solution storage area --,

In claim 36, line 17, "cigarette bottle assembly", has been changed to -- cigarette solution storage area --,

In claim 39, line 3, "the blades", has been changed to -- wherein blades --,

In claim 44, line 4, the word "the" has been deleted before the word "relay",

In claim 56, line 2, the word "said" has been deleted before the word "power",

In claim 57, line 3, "the charging plug", has been changed to -- a charging plug --,

In claim 74, line 1, change "66" to -- 68--.

2. The following is an examiner's statement of reasons for allowance: The Examiner agrees with Applicant, in the "Remarks" filed on October 12, 2011, that the closest prior art of record neither teaches nor reasonably suggests an aerosol electronic cigarette having "an electric heating rod and a run-through atomizing chamber; the electric

heating rod comprising a cylinder and a heating element provided at the wall of the cylinder, the electric heating rod is in the said atomizing chamber and there is a negative pressure cavity in the atomizing chamber" as is currently claimed. Hence, the instant claims are allowable over the said prior art.

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."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIONNE WALLS MAYES whose telephone number is (571)272-5836. The examiner can normally be reached on Monday thru Friday, 8:30A - 5:00P EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. 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.

/DIONNE WALLS MAYES/
Examiner, Art Unit 1747

/Richard Crispino/
Supervisory Patent Examiner, Art Unit 1747

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(**Not for submission under 37 CFR 1.99)**

Application Number	12226818
Filing Date	2008-10-29
First Named Inventor	Li Han
Art Unit	1747
Examiner Name	Dionne Walls Mayes
Attorney Docket Number	76320.8012.US00

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4945929		1990-08-07	British American Tobacco	
	2	5060671		1991-10-29	Counts et al.	
	3	5159940		1992-11-03	Hayward et al.	
	4	5249586		1993-10-05	Morgan et al.	
	5	5261424		1993-11-16	Sprinkel Jr.	
	6	5878752		1999-03-09	Adams et al.	
	7	6443146	B1	2002-09-03	Voges	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.W.M./

Receipt date: 10/12/2011	Application Number	12226818	12226818 - GAU: 1747
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Filing Date	2008-10-29	
(Not for submission under 37 CFR 1.99)	First Named Inventor	Li Han	
	Art Unit	1747	
	Examiner Name	Dionne Walls Mayes	
	Attorney Docket Number	76320.8012.US00	

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030108342	A1	2003-06-12	Sherwood et al.	
	2	20040261802	A1	2004-12-30	Griffin et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] ¡	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	1106812	CN	C	1998-10-21	Japan Tobacco Inc.		☐
	2	1252961	CN		2000-05-17	Guoqiang SONG		☐
	3	1530041	CN	A	2004-09-22	Li HAN		☐
	4	1541577	CN	A	2004-11-03	Li HAN		☐
	5	1575673	CN	A	2005-02-09	Seiko Epson Cor		☐
	6	2047485	CN	U	1989-11-15	Zhao Yuzhong		☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.W.M./

EFS Web 2.1.17

Receipt date: 10/12/2011	Application Number	12226818 12226818 - GAU: 1747
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)	Filing Date	2008-10-29
	First Named Inventor	Li Han
	Art Unit	1747
	Examiner Name	Dionne Walls Mayes
	Attorney Docket Number	76320.8012.US00

	7	2719043	CN	Y	2005-08-24	Li HAN		☐
	8	2777995	CN	Y	2006-05-10	Li HAN		☐
	9	2293957	CN	Y	1998-10-14	Zhao Yuzhong		☐
	10	0893071	EP	A1	1999-01-27	Japan Tobacco		☐
	11	1618803	EP	A1	2006-01-25	Lik HON		☐
	12	1736065	EP	A1	2006-12-27	Lik HON		☐
	13	04080216	WO		2004-09-23	Lik HON		☐
	14	04095955	WO		2004-11-11	Best Partners Worldwide		☐
	15	05099494	WO		2005-10-27	Lik HON		☐
	16	07131449	WO		2005-11-22	Li HAN		☐
	17	07131450	WO		2007-11-22	Lik HON		☐

EFS Web 2.1.17 ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.W.M./

Receipt date: 10/12/2011	Application Number	12226818 12226818 - GAU: 1747
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Filing Date	2008-10-29
(Not for submission under 37 CFR 1.99)	First Named Inventor	Li Han
	Art Unit	1747
	Examiner Name	Dionne Walls Mayes
	Attorney Docket Number	76320.8012.US00

	18	08055423	WO		2008-05-15	Li HAN		☐

If you wish to add additional Foreign Patent Document citation information please click the Add button **Add**

NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	STATE INTELLECTUAL PROPERTY OFFICE (CHINA), International Search Report for PCT/CN07/001575, August 16, 2007	☐
	2	STATE INTELLECTUAL PROPERTY OFFICE (CHINA), English Translation of the Written Opinion for PCT/CN07/001575, July 20, 2007	☐
	3	STATE INTELLECTUAL PROPERTY OFFICE (CHINA), International Search Report for PCT/CN07/001576, August 16, 2007	☐
	4	STATE INTELLECTUAL PROPERTY OFFICE (CHINA), English Translation of the Written Opinion for PCT/CN07/001576, August 3, 2007	☐
	5	EUROPEAN PATENT OFFICE, extended European Search Report for EP 07721148, December 6, 2010	☐
	6	EUROPEAN PATENT OFFICE, extended European Search Report for EP 11001479, July 4, 2011	☐
	7	Introduction to Selecting and Using Electronic Components, ISBN7-111-13752-3,	☐
	8	Manual for Electric Engineers, 2nd Edition, March 2000	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.W.M./

EFS Web 2.1.17

Receipt date: 10/12/2011	Application Number	12226818 12226818 - GAU: 1747
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**	Filing Date	2008-10-29
	First Named Inventor	Li Han
	Art Unit	1747
	Examiner Name	Dionne Walls Mayes
	Attorney Docket Number	76320.8012.US00

	9	Manual for Mechanical Designers, 4th Edition, January 2002	☐
	10	Materials Manual-Nonmetal, July 1985	☐

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature	/Dionne Walls Mayes/	Date Considered	12/01/2011

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

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

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.W.M./

EFS Web 2.1.17

Receipt date: 10/12/2011	Application Number	12226818 12226818 - GAU: 1747
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)	Filing Date	2008-10-29
	First Named Inventor	Li Han
	Art Unit	1747
	Examiner Name	Dionne Walls Mayes
	Attorney Docket Number	76320.8012.US00

CERTIFICATION STATEMENT

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

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

OR

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

☐ See attached certification statement.

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

☐ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/ Joseph P. HAMILTON /	Date (YYYY-MM-DD)	2011-10-12
Name/Print	Joseph P. Hamilton	Registration Number	51770

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

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The 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.

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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.

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12226818	HAN, LI
	Examiner	Art Unit
	DIONNE WALLS MAYES	1747

ORIGINAL		INTERNATIONAL CLASSIFICATION	
CLASS	SUBCLASS	CLAIMED	NON-CLAIMED
131	273	A 2 4 F 47 / 00 (2006.01.01)	
		A 2 4 F 1 / 32 (2006.01.01)	
CROSS REFERENCE(S)		A 6 1 M 15 / 06 (2006.01.01)	

CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
131	360	194			
128	202.21				

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

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		17	10	33	22	49	38	65						
	2		18	39	34	23	50	1	66						
	3		19	11	35	24	51	2	67						
	4		20	41	36	25	52	3	68						
	5		21		37	26	53	5	69						
	6		22	12	38	27	54	6	70						
	7		23	13	39	28	55	7	71						
	8		24	14	40	29	56	8	72						
	9		25	15	41	30	57	9	73						
	10		26	16	42	31	58	4	74						
	11		27	17	43	32	59								
	12		28	18	44	40	60								
	13		29	19	45	33	61								
	14		30	20	46	35	62								
	15		31	34	47	36	63								
	16		32	21	48	37	64								

/DIONNE WALLS MAYES/ Examiner.Art Unit 1747	12/1/11	Total Claims Allowed:	
(Assistant Examiner)	(Date)	41	
/RICHARD CRISPINO/ Supervisory Patent Examiner.Art Unit 1747	12/04/2011	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	(han near3 li or lik near3 hon).in. and (battery or cell) and ((heating or electric) near5 rod) and (negative pressure)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/12/01 15:01
L2	556	("128"/$ or "131"/$).ccls. and (negative pressure).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/12/01 15:03
L5	2640	(131/273 or 131/360 or 131/194 or 128/200.14 or 128/202.21).ccls.	US-PGPUB; USPAT	ADJ	ON	2011/12/01 15:05
L8	13	(131/273 or 131/360 or 131/194 or 128/200.14 or 128/202.21).ccls. and (aerosol or aerosoliz$5) and atomiz$5 and heat$3 and negative pressure and (rod or cylind$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2011/12/01 15:25
S152	1	"131"/$.ccls. and vosges	US-PGPUB; USPAT	ADJ	ON	2011/04/09 21:00
S153	0	("2007267031").PN.	US-PGPUB; USPAT	OR	OFF	2011/04/09 21:16
S154	1	("20070267031").PN.	US-PGPUB; USPAT	OR	OFF	2011/04/09 21:16
S155	1	("6196218").PN.	US-PGPUB; USPAT	OR	OFF	2011/04/09 21:18
S156	416	(131/194).CCLS.	US-PGPUB; USPAT	OR	OFF	2011/04/10 18:52
S157	358	((131/270) or (131/271) or (131/272) or (131/273)).CCLS.	US-PGPUB; USPAT	OR	OFF	2011/04/10 18:56
S158	1	(12/226818).APP.	US-PGPUB; USPAT	OR	OFF	2011/04/10 19:28
S159	3	"131"/$.ccls. and sensor near50 silica gel	US-PGPUB; USPAT	ADJ	ON	2011/04/10 19:49
S160	10	(han near3 li or lik near3 hon).in. and cigarette	US-PGPUB; USPAT	ADJ	ON	2011/04/10 19:50

S161	6	(han near3 li or lik near3 hon).in. and cigarette and (atom$5).clm.	US-PGPUB; USPAT	ADJ	ON	2011/04/10 19:51
S162	5	("2004095955").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/04/10 20:09
S163	2	("20060196518").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/04/10 20:51

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L4	759	(131/273 or 131/360 or 131/194 or 128/200.14 or 128/202.21).ccls.	US-PGPUB; UPAD	ADJ	ON	2011/12/01 15:05
L6	12	(131/273 or 131/360 or 131/194 or 128/200.14 or 128/202.21).ccls. and (aerosol or aerosoliz $5) and atomiz$5 and heat$3 and negative pressure	US-PGPUB; UPAD	ADJ	ON	2011/12/01 15:09
L7	7	(131/273 or 131/360 or 131/194 or 128/200.14 or 128/202.21).ccls. and (aerosol or aerosoliz $5) and atomiz$5 and heat$3 and negative pressure and (rod or cylind$5)	US-PGPUB; UPAD	ADJ	ON	2011/12/01 15:24

12/1/2011 6:44:32 PM
H:\Workspaces\12226818.wsp

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12226818	HAN, LI
	Examiner	Art Unit
	DIONNE W MAYES	1747

SEARCHED			
Class	Subclass	Date	Examiner
131	194,270-273	4/11/2011	DWM
131	273, 360,194	12/1/2011	DWM
128	200.14, 202.21	12/1/2011	DWM

SEARCH NOTES		
Search Notes	Date	Examiner
EAST search conducted (see attached search strategy)	4/11/2011	DWM
Inventor search conducted	4/11/2011	DWM
EAST search conducted (see attached search strategy)	12/1/2011	DWM
Inventor search conducted	12/1/2011	DWM

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
131	273, 360, 194	12/1/2011	DWM
128	200.14, 202.21	12/1/2011	DWM

PTO/SB/08b (07-09)
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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 4

Complete if Known	
Application Number	12/226,818 – Conf. #2275
Filing Date	October 29, 2008
First Named Inventor	Li HAN
Art Unit	1747
Examiner Name	Dionne Walls Mayes
Attorney Docket Number	76320.8012.US00

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	20050016550	1/1/2005	Katase	
	A2	20080276947	11/13/2008	Martzel	
	A3	20090151717	6/18/2009	Bowen	
	A4	20090230117	9/17/2009	Fernando	
	A5	20090260642	10/22/2009	Monsees	
	A6	20090272379	11/5/2009	Thorens	
	A7	20100031968	2/11/2010	Sheikh	
	A8	20100126505	5/27/2010	Rinker	
	A9	20100181387	7/22/2010	Zaffaroni	
	A10	20100200008	8/12/2010	Teieb	
	A11	20100242974	9/30/2010	Pan	
	A12	20100307518	12/9/2010	Wang	
	A13	20110005535	1/13/2011	Xiu	
	A14	20110036346	2/17/2011	Cohen	
	A15	4228925	10/21/1980	Mendelovich	
	A16	4641053	2/1/1987	Takeda	
	A17	4848374	7/1/1989	Chard	
	A18	4945929	8/7/1990	British American Tobacco Co. Ltd	
	A19	4945931	8/7/1990	Gori	
	A20	5042470	8/1/1991	Kanesaka	
	A21	5080114	1/14/1992	B. A. T. Cigarettenfabriken GmbH	
	A22	5095921	3/17/1992	Losee	
	A23	5190060	3/2/1993	Gerding	
	A24	5285798	2/15/1994	Banerjee	
	A25	5322075	6/21/1994	Deevi	
	A26	5666978	9/16/1997	Counts	
	A27	5743251	4/28/1998	Howell	
	A28	5894841	4/20/1999	Voges	
	A29	6040560	3/21/2000	Fleischhauer	
	A30	6041789	3/28/2000	Bankert	

Examiner Signature		Date Considered	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 4

Complete if Known	
Application Number	12/226,818 – Conf. #2275
Filing Date	October 29, 2008
First Named Inventor	Li HAN
Art Unit	1747
Examiner Name	Dionne Walls Mayes
Attorney Docket Number	76320.8012.US00

	A31	6164287	12/26/2000	White	
	A32	6178969	1/30/2001	St. Charles	
	A33	6196218	3/6/2001	Voges	
	A34	6357671	3/2/2005	Cewers	
	A35	6443146	9/3/2002	Voges	
	A36	6532965	3/18/2003	Abhulimen	
	A37	6532965	3/18/2003	Abhulimen	
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	A39	6803545	10/12/2004	Blake	
	A40	6854461	02/15/2005	Nichols	
	A41	7131599	11/7/2006	Katase	
	A42	7845359	12/7/2010	Montaser	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document: Country Code[3]-Number[4]-Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	B1	CA2562581	10/27/2005	Hon		
	B2	CN101084801	12/12/2007	Li, Han		
	B3	CN1135860	11/20/1996	Du, Xu		
	B4	CN1196660	3/26/2010	Japan Tobacco		
	B5	CN1252961	5/17/2000	Guoqiang, Song		
	B6	CN2047485U	11/15/1989	Yuzhong, Zhao		
	B7	CN2643681	9/29/2004	Li, Han		
	B8	CN2648836	10/20/2004	Li, Han		
	B9	CN97216131.7	10/14/1998	ZHAO YUZHONG		
	B10	DE10051792	5/8/2002	Rainer, Puellen		
	B11	EP0295122	12/14/1988	Imperial Tobacco Co Ltd		
	B12	EP0342538	11/23/1989	R. J. Reynolds Tobacco Co.		
	B13	EP0545186	6/9/1993	R. J. Reynolds Tobacco Co.		
	B14	EP0824927 A	2/25/1998	Belli, Guido		
	B15	EP0845220 A1	6/3/1998	Japan Tobacco Inc.		

Examiner Signature		Date Considered	

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PTO/SB/08b (07-09)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 3 of 4

Complete if Known	
Application Number	12/226,818 – Conf. #2275
Filing Date	October 29, 2008
First Named Inventor	Li HAN
Art Unit	1747
Examiner Name	Dionne Walls Mayes
Attorney Docket Number	76320.8012.US00

	B16	EP0893071 A1	1/27/1999	Japan Tobacco Inc.		
	B17	EP0970627 A1	1/12/2000	Pu, Danming		
	B18	GB1528391 A	10/11/1978	Gildemeister		
	B19	JP06114105	4/26/1994	Masanobu		
	B20	JP07506999	8/3/1995	Medix Electronics		
	B21	JP09075058	3/5/1997	Masaya		
	B22	JP64000498	1/5/1989	N/A		
	B23	UA47514	12/29/1997	Brown & Williamson Tobacco		
	B24	WO1997048293	12/24/1997	Susa		
	B25	WO2000049901	8/31/2004	Weber-Quitzau		
	B26	WO2000050111	8/31/2000	Voges, Robert Martin		
	B27	WO2003022364	3/20/2003	Marioff Corporation		
	B28	WO2003034847	1/5/2003	British America Tobacco (Investments) Limited		
	B29	WO2003055486	7/10/2003	Pharmacia AB		
	B30	WO2003101454	12/11/2003	Pharmacia AB		
	B31	WO2004001407 A1	12/31/2003	ASTHMA ALERT LIMITED		
	B32	WO2004080216	9/23/2004	Best Partners Worldwide		
	B33	WO2006082571	8/10/2006	Oglesby		
	B34	WO2007078273	7/12/2007	Liu		
	B35	WO2008077271	7/3/2008	Maas		
	B36	WO2008130813	10/30/2008	Paterno		
	B37	WO2009118085	10/1/2009	Greim		
	B38	WO2009135729	11/12/2009	Murphy		
	B39	WO2010052323	5/14/2010	Lugtigheid		
	B40	WO2010145805	12/23/2010	Trescher		
	B41	WO2011010334	1/27/2011	Luise		
	B42	WO2011022431	2/24/2011	Chong		

Examiner Signature		Date Considered	

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Substitute for form 1449/PTO				***Complete if Known***	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	12/226,818 – Conf. #2275
				Filing Date	October 29, 2008
				First Named Inventor	Li HAN
				Art Unit	1747
(Use as many sheets as necessary)				Examiner Name	Dionne Walls Mayes
Sheet	4	of	4	Attorney Docket Number	76320.8012.US00

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	C1	Australian Patent Office, Examination Report for SG 200505930-8, May 4, 2006	
	C2	Australian Patent Office; Exam Report for AU2004234199, August 14, 2009	
	C3	Australian Patent Office; Search and Examination Report for SG200604498-6, April 16, 2008	
	C4	Australian Patent Office; Singapore Examination Report for Singapore Patent Application No. 0604498-6 SG 200505930-8, May 13, 2008	
	C5	Chinese Patent Office, International Search Report for International Application No. PCT/CN2004000182, June 10, 2004	
	C6	Chinese Patent Office, International Search Report for International Application No. PCT/CN2005/000337, July 14, 2005	
	C7	European Patent Office, Supplementary European Search Report for EP05729107, July 31, 2007	
	C8	European Patent Office, Supplementary European Search Report for EP04718242, July 27, 2007	
	C9	European Patent Office, Supplementary Partial European Search Report for EP04718242, May 22, 2007	
	C10	European Patent Office, Supplementary Partial European Search Report for EP05729107, May 22, 2007	
	C11	Japanese Patent Office; Office Action for JP2006504199, October 30, 2009 (with English translation)	
	C12	Korean Patent Office; Notice of Preliminary Rejection for KR1020057009767, July 27, 2009	
	C13	Macau Patent Office; Official Communication for MOI121, April 17, 2009	
	C14	Malaysia Intellectual Property Office; Examiner's Report for Malaysian Application No. PI 20041407, September 28, 2007	
	C15	Taiwan Intellectual Property Office; Official Letter for TW093111573, April 24, 2009	
	C16	Ukrainian Patent Office; Examination Report for UA200511258, February 4, 2009	

Examiner Signature		Date Considered	

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Electronic Patent Application Fee Transmittal	
Application Number:	12226818
Filing Date:	29-Oct-2008
Title of Invention:	AEROSOL ELECTRONIC CIGARETTE
First Named Inventor/Applicant Name:	Li Han
Filer:	Joseph P. Hamilton/Amy Shields
Attorney Docket Number:	RUYAN-001-US
Filed as Large Entity	

U.S. National Stage under 35 USC 371 Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

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

Electronic Acknowledgement Receipt	
EFS ID:	11566162
Application Number:	12226818
International Application Number:	
Confirmation Number:	2275
Title of Invention:	AEROSOL ELECTRONIC CIGARETTE
First Named Inventor/Applicant Name:	Li Han
Customer Number:	62008
Filer:	Joseph P. Hamilton/Amy Shields
Filer Authorized By:	Joseph P. Hamilton
Attorney Docket Number:	RUYAN-001-US
Receipt Date:	07-DEC-2011
Filing Date:	29-OCT-2008
Time Stamp:	17:24:20
Application Type:	U.S. National Stage under 35 USC 371

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$180
RAM confirmation Number	4775
Deposit Account	502586
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	2011-12-07_IDSTransmittal_763208012US.pdf	14309 20090571461d69e972e1a51708ad10e238905102	no	1
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	2011-12-07_IDSSB_763208012US.pdf	68011 7734f095fb0b218ed09c94113dd94b4b5f85362f	no	4
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	CA2562581_A1.PDF	827717 4c9be3c73e19a8c913a79c719b3d6c72b4065b2c	no	20
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4	Foreign Reference	CN101084801.PDF	2247064 2757d2158fa621aa97b2a31bf39b6a4ff7f29cef	no	17
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5	Foreign Reference	CN1135860.PDF	122057 c075f9ac4d213428dbb86c85524b7e7742f549a5	no	2
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6	Foreign Reference	CN1196660.pdf	44873 54a8e97061cbeef4d0903d1d7603d988dfadab99	no	1
Warnings:					
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7	Foreign Reference	CN1252961.PDF	122485 fc27a11eba022861928c9bdcb267ace11249f46a	no	2
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8	Foreign Reference	CN2047485.PDF	214428 cde17e8e44a13583936124d0bd429ce1b39ccba0	no	7
Warnings:					
Information:					

9	Foreign Reference	CN2643681Y.PDF	473941 1cb6c95b57b0d20bec894e59886b81186ceaee94	no	7
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Information:					
10	Foreign Reference	CN2648836Y.PDF	785102 8f8aa35627f87d98a8b4b6331c841f924b924537	no	15
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12	Foreign Reference	DE10051792A1.PDF	75680 d4ddae7dc944de24e1eda3b026c38b7ebe409ba5	no	3
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13	Foreign Reference	EP0295122B1.PDF	481944 419eb4ce5412e881a15dcb39cb2170f8d1477cb4	no	9
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14	Foreign Reference	EP0342538.PDF	1514975 96511ec6fbb4e44b7728c2fce706f4b416172966	no	20
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17	Foreign Reference	EP0845220A1.pdf	1089635 aa2dd74d4381c20170373e5855ce2477916e6ea5	no	21
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31	Foreign Reference	WO2003055486.PDF	2376748 e4bb23b5f07d66189497cfe2c27af1ea1983e915	no	50
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44	Foreign Reference	WO2011022431.pdf	611814 a18d4114294d76e1e1023bc977f91972791bfcec	no	17
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45	Non Patent Literature	NPL_AUPO_SGSearch20050593 0-8_2006-05-04.PDF	55907 f0f28d66fd2202887855499b7906d98c9185 8efc	no	3
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47	Non Patent Literature	NPL_AUPO_SGSearch2006-044 98_2008-04-16.PDF	285630 25c295f4e1b608559d5c0d02ce90abcceaff9f 5f2	no	8
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48	Non Patent Literature	NPL_AUPO_SG200604498-6_Ex amReport_2008-05-13.PDF	4754624 35bfc04e109a23f3e859f2cadfe68959ae317 af3	no	76
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49	Non Patent Literature	NPL_CNPO_ISR_PCTCN040001 82.pdf	75064 e9ef35b4e52069edde592be523408e14e1d 441c1	no	2
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53	Non Patent Literature	NPL_EPO_EPSearch04718242_ 2_2007-05-22.PDF	178656 2a9deb0015fc61a1b85bb0c7a9a6d2a5370 3834c	no	5
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Information:					

54	Non Patent Literature	NPL_EPO_EPSearch04718242_2007-07-27.PDF	116797 f0c2118ad523d096ff025950eb7de2eec1cd55eb	no	3
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56	Non Patent Literature	NPL_KRPO_KR1020057009767_OA_w_Translation.PDF	291605 5c78c7d75d499e8658bf64ebb81aeb79035b39c3	no	13
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57	Non Patent Literature	NPL_MOPO_MO000121_Report_2_2009-04-17.PDF	554893 df63a9d2e53b8fe99d0be1689c7c7b815a6e7bb8	no	14
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58	Non Patent Literature	NPL_MYPO_MY_ExamReport_2007-09-28.PDF	111852 8d2d9bfcee23bf7d28b27d84142727cc397d1a1f	no	2
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59	Non Patent Literature	NPL_TWPO_TW093111573_ExamReport.PDF	86437 01d3394fe479f89c8979ec0eed5e30fda013c348	no	3
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Information:					
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61	Fee Worksheet (SB06)	fee-info.pdf	30129 0f9a60a443a82cdbf5287d5712cbcb074dc2d51b	no	2
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		Total Files Size (in bytes):	43303843		

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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
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Docket No.: 76320.8012.US00
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Li HAN

Application No.: 12/226,818 Confirmation No.: 2275

Filed: October 29, 2008 Art Unit: 1747

For: AEROSOL ELECTRONIC CIGARETTE Examiner: Dionne Walls Mayes

INFORMATION DISCLOSURE STATEMENT

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

Sir:

The references listed on the enclosed Form PTO-SB/08 may be material to the examination of this application; the Examiner is requested to make them of record in the application. Copies of all foreign and non-patent literature cited references are enclosed.

The Information Disclosure Statement submission fee of $180.00 is authorized to be charged to our Deposit Account No. 50-2586 and is being paid herewith.

Dated: December 7, 2011

Respectfully submitted,

Electronic signature: / Joseph P. HAMILTON /
Joseph P. Hamilton
Registration No.: 51,770
PERKINS COIE LLP
P.O. Box 1208
Seattle, Washington 98111-1208
(310) 788-3250
(206) 332-7198 (Fax)
Attorney for Applicant

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(**Not for submission under 37 CFR 1.99)**

Application Number	12226818
Filing Date	2008-10-29
First Named Inventor	Li HAN
Art Unit	1747
Examiner Name	Dionne Walls Mayes
Attorney Docket Number	76320.8012.US00

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5746251		1998-05-05	Bullard	

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	1	20050236006	A1	2005-10-27	Cowan	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12226818
	Filing Date	2008-10-29
	First Named Inventor	Li HAN
	Art Unit	1747
	Examiner Name	Dionne Walls Mayes
	Attorney Docket Number	76320.8012.US00

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Examiner Signature		Date Considered	

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12226818
	Filing Date	2008-10-29
	First Named Inventor	Li HAN
	Art Unit	1747
	Examiner Name	Dionne Walls Mayes
	Attorney Docket Number	76320.8012.US00

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

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

OR

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

☐ See attached certification statement.

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

☐ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/ Joseph P. HAMILTON /	Date (YYYY-MM-DD)	2011-12-09
Name/Print	Joseph P. Hamilton	Registration Number	51770

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

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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Electronic Patent Application Fee Transmittal	
Application Number:	12226818
Filing Date:	29-Oct-2008
Title of Invention:	AEROSOL ELECTRONIC CIGARETTE
First Named Inventor/Applicant Name:	Li Han
Filer:	Joseph P. Hamilton/Amy Shields
Attorney Docket Number:	RUYAN-001-US
Filed as Large Entity	

U.S. National Stage under 35 USC 371 Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

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

Electronic Acknowledgement Receipt	
EFS ID:	11581648
Application Number:	12226818
International Application Number:	
Confirmation Number:	2275
Title of Invention:	AEROSOL ELECTRONIC CIGARETTE
First Named Inventor/Applicant Name:	Li Han
Customer Number:	62008
Filer:	Joseph P. Hamilton/Amy Shields
Filer Authorized By:	Joseph P. Hamilton
Attorney Docket Number:	RUYAN-001-US
Receipt Date:	09-DEC-2011
Filing Date:	29-OCT-2008
Time Stamp:	13:04:10
Application Type:	U.S. National Stage under 35 USC 371

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$180
RAM confirmation Number	9837
Deposit Account	502586
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1	Information Disclosure Statement (IDS) Form (SB08)	2011-12-09_IDS_763208012US.pdf	612292 3446c477222ef333658399b14696998d84fa71ec	no	4
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/226,818	10/29/2008	Li Han	RUYAN-001-US	2275

62008 7590 12/23/2011

MAIER & MAIER, PLLC
1000 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
MAYES, DIONNE WALLS	
ART UNIT	PAPER NUMBER
1747	

MAIL DATE	DELIVERY MODE
12/23/2011	PAPER

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
12/226,818	29 October 2008	HAN, LI	RUYAN-001-US

MAIER & MAIER, PLLC
1000 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
DIONNE WALLS MAYES

ART UNIT	PAPER
1747	20111220-A

DATE MAILED:

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Commissioner for Patents

The information disclosure statements (IDS) submitted by Applicant on December 7, 2011 and December 9, 2011 were filed after the mailing date of the "Notice of Allowance" on December 6, 2011. The IDS submissions are in compliance with the provisions of 37 CFR 1.97 and, accordingly, have been considered by the Examiner. Please see the initialed PTO/SB/08a forms which are attached to this communication.

/DIONNE WALLS MAYES/
Examiner, Art Unit 1747

PTO-90C (Rev.04-03)

PTO/SB/08b (07-09)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 4

Complete if Known	
Application Number	12/226,818 – Conf. #2275
Filing Date	October 29, 2008
First Named Inventor	Li HAN
Art Unit	1747
Examiner Name	Dionne Walls Mayes
Attorney Docket Number	76320.8012.US00

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	20050016550	1/1/2005	Katase	
	A2	20080276947	11/13/2008	Martzel	
	A3	20090151717	6/18/2009	Bowen	
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Examiner Signature	/Dionne Walls Mayes/	Date Considered	12/20/2011

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Sheet 2 of 4

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First Named Inventor	Li HAN
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Examiner Name	Dionne Walls Mayes
Attorney Docket Number	76320.8012.US00

	A31	6164287	12/26/2000	White	
	A32	6178969	1/30/2001	St. Charles	
	A33	6196218	3/6/2001	Voges	
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Examiner Initials*	Cite No.[1]	Foreign Patent Document: Country Code[3]-Number[4]-Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	B1	CA2562581	10/27/2005	Hon		
	B2	CN101084801	12/12/2007	Li, Han		
	B3	CN1135860	11/20/1996	Du, Xu		
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	B15	EP0845220 A1	6/3/1998	Japan Tobacco Inc.		

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Art Unit	1747
Examiner Name	Dionne Walls Mayes
Attorney Docket Number	76320.8012.US00

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Examiner Signature	/Dionne Walls Mayes/	Date Considered	12/20/2011

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	12/226,818 – Conf. #2275
				Filing Date	October 29, 2008
				First Named Inventor	Li HAN
				Art Unit	1747
(Use as many sheets as necessary)				Examiner Name	Dionne Walls Mayes
Sheet	4	of	4	Attorney Docket Number	76320.8012.US00

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	C1	Australian Patent Office, Examination Report for SG 200505930-8, May 4, 2006	
	C2	Australian Patent Office; Exam Report for AU2004234199, August 14, 2009	
	C3	Australian Patent Office; Search and Examination Report for SG200604498-6, April 16, 2008	
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	C6	Chinese Patent Office, International Search Report for International Application No. PCT/CN2005/000337, July 14, 2005	
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	C9	European Patent Office, Supplementary Partial European Search Report for EP04718242, May 22, 2007	
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	C11	Japanese Patent Office; Office Action for JP2006504199, October 30, 2009 (with English translation)	
	C12	Korean Patent Office; Notice of Preliminary Rejection for KR1020057009767, July 27, 2009	
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	C16	Ukrainian Patent Office; Examination Report for UA200511258, February 4, 2009	

Examiner Signature	/Dionne Walls Mayes/	Date Considered	12/20/2011

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62008 7590 02/03/2012

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EXAMINER	
MAYES, DIONNE WALLS	
ART UNIT	PAPER NUMBER
1747	

MAIL DATE	DELIVERY MODE
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PTOL-90A (Rev. 04/07)

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12/226,818	29 October, 2008	HAN, LI	RUYAN-001-US

MAIER & MAIER, PLLC
1000 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
DIONNE WALLS MAYES	
ART UNIT	PAPER
1747	20120201

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/DIONNE WALLS MAYES/
Examiner, Art Unit 1747

PTO-90C (Rev.04-03)

Receipt date: 12/09/2011

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	12226818
	Filing Date	2008-10-29
	First Named Inventor	Li HAN
	Art Unit	1747
	Examiner Name	Dionne Walls Mayes
	Attorney Docket Number	76320.8012.US00

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	1	20050236006	A1	2005-10-27	Cowan	
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Receipt date: 12/09/2011	Application Number	12226818
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Filing Date	2008-10-29
(Not for submission under 37 CFR 1.99)	First Named Inventor	Li HAN
	Art Unit	1747
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	Attorney Docket Number	76320.8012.US00

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Examiner Signature	/Dionne Walls Mayes/	Date Considered	12/20/2011

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	Filing Date	2008-10-29
	First Named Inventor	Li HAN
	Art Unit	1747
	Examiner Name	Dionne Walls Mayes
	Attorney Docket Number	76320.8012.US00

CERTIFICATION STATEMENT

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

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

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☐ See attached certification statement.

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

☐ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/ Joseph P. HAMILTON /	Date (YYYY-MM-DD)	2011-12-09
Name/Print	Joseph P. Hamilton	Registration Number	51770

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

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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.

PTO/SB/80 (11-08)
Approved for use through 11/30/2011. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

☑ Practitioners associated with the Customer Number: 34055

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

☑ The address associated with Customer Number: 34055

OR

☐ Firm or Individual Name			
Address			
City		State	Zip
Country			
Telephone		Email	

Assignee Name and Address:
BUYAN INVESTMENT (HOLDINGS) LIMITED
Room 1101, 11/F, China United Center
28 Marble Road, North Point, Hong Kong

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	[signature]	Date	2 MAR 2012
Name	GARY DREW DOUGLAS	Telephone	+852 92652850
Title	PRESIDENT		

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.

PTO/SB/96 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Han Li

Application No./Patent No.: 12/226,818 Filed/Issue Date: October 29, 2008

Titled: AEROSOL ELECTRONIC CIGARETTE

RUYAN INVESTMENT (HOLDINGS) LIMITED , a Corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.

states that it is:

1. ☒ the assignee of the entire right, title, and interest in;

2. ☐ an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____ %); or

3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 027776, Frame 0722, or for which a copy therefore is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (*i.e.*, a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Kenneth H. Ohriner/ March 2, 2012

Signature Date

Kenneth H. Ohriner Attorney

Printed or Typed Name Title

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.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (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)

62008 7590 12/06/2011
MAIER & MAIER, PLLC
~~1000 DUKE STREET~~
ALEXANDRIA, VA 22314

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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/226,818	10/29/2008	~~Li Han~~ Lik Hon	~~RUYAN-001-US~~ 76320.8012.US00	2275

TITLE OF INVENTION: AEROSOL ELECTRONIC CIGARETTE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$870	$300	$0	$1170	03/06/2012

EXAMINER	ART UNIT	CLASS-SUBCLASS
MAYES, DIONNE WALLS	1747	131-202000

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 03-02 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 Perkins Coie LLP
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 has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: RUYAN INVESTMENT (HOLDINGS) LIMITED
(B) RESIDENCE: (CITY and STATE OR COUNTRY): Hong Kong, HONG KONG

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

4a. The following fee(s) are submitted:
☒ Issue Fee
☒ Publication Fee (No small entity discount permitted)
☒ Advance Order - # of Copies 3

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 502586 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature Kenneth H. Ohriner Date 2/29/2012
Typed or printed name Kenneth H. Ohriner Registration No. 31,646

This collection of information 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 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, 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.

Electronic Patent Application Fee Transmittal	
Application Number:	12226818
Filing Date:	29-Oct-2008
Title of Invention:	AEROSOL ELECTRONIC CIGARETTE
First Named Inventor/Applicant Name:	Li Han
Filer:	Kenneth H. Ohriner/Amy Shields
Attorney Docket Number:	RUYAN-001-US
Filed as Small Entity	

U.S. National Stage under 35 USC 371 Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	2501	1	870	870
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**1170**

Electronic Acknowledgement Receipt	
EFS ID:	12217157
Application Number:	12226818
International Application Number:	
Confirmation Number:	2275
Title of Invention:	AEROSOL ELECTRONIC CIGARETTE
First Named Inventor/Applicant Name:	Li Han
Customer Number:	62008
Filer:	Kenneth H. Ohriner/Amy Shields
Filer Authorized By:	Kenneth H. Ohriner
Attorney Docket Number:	RUYAN-001-US
Receipt Date:	02-MAR-2012
Filing Date:	29-OCT-2008
Time Stamp:	18:38:09
Application Type:	U.S. National Stage under 35 USC 371

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1170
RAM confirmation Number	5565
Deposit Account	502586
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	2012-03-02_ADS_763208012US.pdf	490608 f8899495d00a1e80d0845d3fe4cf94ef21205007	no	4
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
2	Power of Attorney	2012-03-02_POA_763208012US.pdf	94378 78d9170ecb7243739317a2ca91dd4514c23cefee	no	2
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73(b).	2012-03-02_373_Statement_763208012US.pdf	422800 4bb1db5c381af7fb726d2e990474a450e4cbbec3	no	2
Warnings:					
Information:					
4	Issue Fee Payment (PTO-85B)	2012-03-02_IssueFee_763208012US.pdf	173920 d7b424ff95260ed0929f655d8d7a0618bc870a89	no	1
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	31609 0f9506c48d9a52407243047bb91b8cce3b8a0d3c	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1213315		

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.

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

SUPPLEMENTAL APPLICATION DATA SHEET

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	76320.8012.US00
	Application Number	12226818
Title of Invention	AEROSOL ELECTRONIC CIGARETTE	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1

Applicant Authority ◉ Inventor ○ Legal Representative under 35 U.S.C. 117 ○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Lik [[Li]]		Hon [[HAN]]	

Residence Information (Select One) ○ US Residency ◉ Non US Residency ○ Active US Military Service

City	Hong Kong	Country Of Residence	HK
Citizenship under 37 CFR 1.41(b)	CN		

Mailing Address of Applicant:

Address 1	Room 1101, 11/F, China United Center [[1010-12 Room, West Tower, Shun Centre]]		
Address 2	28 Marble Road [[168 Connaught Road, Mid-Gannuo]]		
City	North Point, Hong Kong	State/Province	
Postal Code		Country	HK [[CN]]

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).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	34055 [[62008]]		
Email Address	patentprocurement@perkinscoie.com	Add Email	Remove Email

[[info@maierandmaier.com]]

Application Information:

Title of the Invention	AEROSOL ELECTRONIC CIGARETTE		
Attorney Docket Number	76320.8012.US00 [[JANLEA-001-US]]	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	8	Suggested Figure for Publication (if any)	1

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	76320.8012.US00
	Application Number	12226818
Title of Invention	AEROSOL ELECTRONIC CIGARETTE	

Publication Information:

☐	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐	**Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S. C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	34055 [[62008]]		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
12226818	a 371 of international	PCT/CN2007/001575	2007-05-15

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 benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

Remove

Application Number	Country[1]	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
200620090805.0	CN	2006-05-16	◉ Yes ○ No

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

Assignee Information:

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

Assignee 1

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	76320.8012.US00
	Application Number	12226818
Title of Invention	AEROSOL ELECTRONIC CIGARETTE	

If the Assignee is an Organization check here. ☒			
Organization Name	RUYAN INVESTMENT (HOLDINGS) LIMITED		
Mailing Address Information:			
Address 1	Room 1101, 11/F, China United Center		
Address 2	28 Marble Road		
City	North Point, Hong Kong	**State/Province**	
Country	HK	Postal Code	
Phone Number		Fax Number	
Email Address			
Additional Assignee Data may be generated within this form by selecting the **Add** button.			

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.					
Signature	/Kenneth H. Ohriner/			Date (YYYY-MM-DD)	2012-02-28
First Name	Kenneth H.	Last Name	Ohriner	Registration Number	31646

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.

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/226,818	10/29/2008	Li Han	

CONFIRMATION NO. 2275

34055
PERKINS COIE LLP
POST OFFICE BOX 1208
SEATTLE, WA 98111-1208

POA ACCEPTANCE LETTER

OC000000052976881

Date Mailed: 03/07/2012

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/02/2012.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/cbowen/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/226,818	10/29/2008	Li Han	RUYAN-001-US

CONFIRMATION NO. 2275

POWER OF ATTORNEY NOTICE

62008
MAIER & MAIER, PLLC
1000 DUKE STREET
ALEXANDRIA, VA 22314

OC000000052976802

Date Mailed: 03/07/2012

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/02/2012.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/cbowen/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	12226818
Filing Date	2008-10-29
First Named Inventor	Li Han
Art Unit	1747
Examiner Name	Dionne Walls Mayes
Attorney Docket Number	76320.8012.US00

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
Change(s) applied to document, /T.M.F./ 1/10/2012	1	4945929		1990-08-07	~~British American Tobacco~~ Egilmex	
	2	5060671		1991-10-29	Counts et al.	
	3	5159940		1992-11-03	Hayward et al.	
	4	5249586		1993-10-05	Morgan et al.	
	5	5261424		1993-11-16	Sprinkel Jr.	
	6	5878752		1999-03-09	Adams et al.	
	7	6443146	B1	2002-09-03	Voges	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.W.M./

EFS Web 2.1.17

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/226,818	04/17/2012	8156944		2275

34055 7590 03/28/2012

PERKINS COIE LLP
POST OFFICE BOX 1208
SEATTLE, WA 98111-1208

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 395 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):

Li Han, Hong Kong, CHINA;

IR103 (Rev. 10/09)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: LI HAN
U.S. PATENT NO.: 8,156,944 B2
ISSUED: APRIL 17, 2012
FOR: AEROSOL ELECTRONIC CIGARETTE

REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 C.F.R. § 1.322

Attn: Certificate of Corrections Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

1. Applicants request a Certificate of Correction to correct the errors in the above-identified patent listed on the enclosed Form PTO/SB/44.

2. The requested corrections do not constitute new matter or require reexamination of the patent.

3. The errors listed on Form PTO/SB/44 are believed to be due to mistake on the part of the USPTO (37 C.F.R. § 1.322). Accordingly, no fee is believed to be due.

4. Please send the Certificate of Correction to the undersigned at the address shown below.

Dated: June 11, 2012

Respectfully submitted,

PERKINS COIE LLP

By: Kenneth H. Ohriner
Kenneth H. Ohriner
Reg. No. 31,646

Customer No. 34055
Perkins Coie LLP
Patent - LA
P.O. Box 1208
Seattle, WA 98111-1208
Phone: (310) 788-9900
Fax: (310) 788-3399

PTO/SB/44 (04-05)
Approved for use through 04/30/2007. OMB 0651-0033
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO:	:	8,156,944 B2
APPLICATION NO.	:	12/226,818
ISSUE DATE	:	April 17, 2012
INVENTOR(S)	:	Li Han

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:

Cover page, at (75), replace "Li Han" with -- Lik Hon --.

Cover page, at (73) replace "Ruyan Investments (Holdings) Limited, Hong Kong (HK)" with -- Ruyan Investment (Holdings) Limited, Hong Kong (HK) --.

MAILING ADDRESS OF SENDER (Please do not use customer number below):
Customer Number 34055
Perkins Coie LLP
P.O. Box 1208
Seattle, WA 98111-1208
Phone: (310) 788-9900

Electronic Acknowledgement Receipt	
EFS ID:	12991424
Application Number:	12226818
International Application Number:	
Confirmation Number:	2275
Title of Invention:	AEROSOL ELECTRONIC CIGARETTE
First Named Inventor/Applicant Name:	Li Han
Customer Number:	34055
Filer:	Kenneth H. Ohriner/Amy Shields
Filer Authorized By:	Kenneth H. Ohriner
Attorney Docket Number:	
Receipt Date:	12-JUN-2012
Filing Date:	29-OCT-2008
Time Stamp:	13:54:50
Application Type:	U.S. National Stage under 35 USC 371

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	Request for Certificate of Correction	2012-06-12_CertificateCorrection_763208012US.pdf	79966 b1b8d07dad8106667b7cedd5d523923baf2f1e50	no	2
Warnings:					
Information:					

Total Files Size (in bytes):	79966

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 DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY OF COMMERCE AND
COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, VA 22313-1450

June 21, 2012

Patent No.: 8,156,944 B2
Applicant : Li Han
Issued : April 17, 2012
For : **AEROSOL ELECTRONIC CIGARETTE**
Atty Docket No.:

Re: Request for Certificate of Correction

Consideration has been given your request for the issuance of a certificate of correction for the above-identified patent under the provisions of Rules 1.322.

Respecting the alleged error in changing the inventor name on the title page of patent from "Li Han" to "Lik Hon". The patent was printed in accordance with the Declaration submitted to the application officially filed with the USPTO, October 29, 2008. There is no evidence in office records that a petition to correct inventorship was filed or acted on reflecting the name of inventor as requested by applicant. Therefore, no correction is in order here under Rule 1.322.

However, your attention is directed to C.F.R. 1.324, wherein a request is being made to change, add or delete inventor(s), after issuance of the patent. If petition is granted, application will be forwarded for correction of Office records to reflect the inventorship as corrected and to the Certificate of Correction Branch for issuance of certificate of correction.

In view of the foregoing, your request in this matter is hereby denied.

A certificate of correction will be issued to correct the remaining errors in your request.

A petition under C.F.R. 1.324 should include:

A. the processing fee set forth in 37 CFR 1.20(b) (currently $130);
B. a statement from each person being added as an inventor that the inventorship occurred without any deceptive intention on his or her part, a statement from the current inventors agreeing to the change of inventorship of stating that they have no disagreement in regard to the requested change, and a statement from all assignees of the current inventors agreeing to the change of inventorship in the patent.

Further correspondence concerning this matter should be filed and directed to Supervisory Patent Examiner of Technology Center 2826 at the U.S. Patent and Trademark Office.

Antonio Johnson
For Mary F. Diggs
Decisions & Certificates

of Correction Branch
(571)272-0483

PERKINS COIE LLP
POST OFFICE BOX 1208
SEATTLE WA 98111-1208