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1) Family number: 49997922 (US2013167854A)

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Title: ELECTRONIC CIGARETTE

**Abstract:** An electronic cigarette includes a housing having an opening, an ascending/descending means which is positioned inside the housing in order to move a cartridge up or down, the cartridge which contains a solution therein, and is moved up or down by the ascending/descending means so that the cartridge is positioned inside the housing or protrudes from the housing through the opening, an opening/closing means which opens or closes the opening by operating in cooperation with the ascending/descending means, and an ultraviolet (UV) lamp which is positioned inside the housing, and sterilizes the cartridge by irradiating the cartridge with UV radiation. When the electronic cigarette is not being used, the cartridge can be positioned inside the housing in order to prevent the cartridge from being contaminated by impurities such as dust and the cartridge can be sterilized by UV radiation emitted from the UV lamp.

**Classifications:**

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A61L2/10 (Advanced/Non-invention)

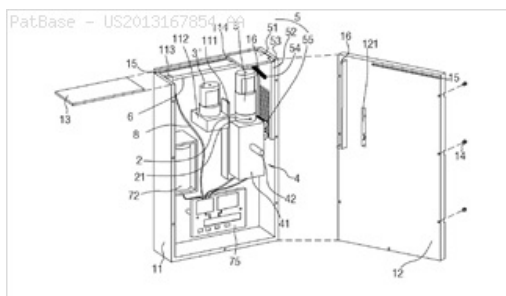
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2) Family number: 4026244 (JP48030569A)

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Title: The sintered filter 201, giving up smoking (Machine translation)

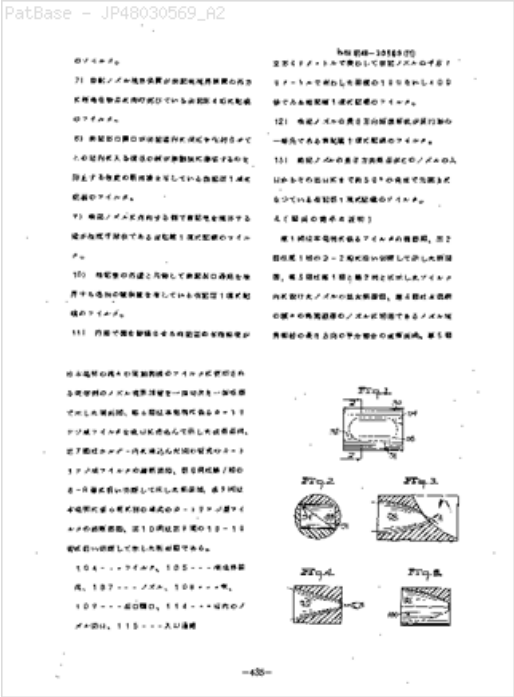
**Abstract:** Source: JP48030569A **Machine translation:** The invention described in claim 1 [Source: circumference of the invention#39;s address, the number 4, the direcway have pledget Haven, USA, Kimi Raikkonen. Main Street 228, patent application, Attorney Docket No. 4 5 9 0 The Japan Patent Office Patent Publication (JP-a 48..30569 have in-house review all 12 pages) 2 / 10 of the docket number of classification and cut I I Japan specification for the name of the invention] The sintered 1 cigarette filter 2 (1) smoke is the scope of the appended claims so as to expand in the internal chamber wall in the field of view, the indoor inlet passage device and the boundary extending in the nozzles, the chamber communicating with the outlet opening of the nozzle made and the indoor the wall smoke is disposed from the wall in contact with the nozzle apparatus previously smoke coming from the room, to be able to variable becomes a distance sufficient expansion at intervals in the inlet opening and the outlet opening is provided with a opening of the nozzle on the upstream side of the indoor room, the the flue gas inlet opening and an outlet opening so as to reverse between the direction positioned on the outlet chamber of the volume, which is the opening of the smoke of the chamber relative to the outlet opening over when being introduced into the pressure drop occurs in the sized to sintering, characterized in that filter for tobacco (2) Internal smoke is the boundary so as to expand in the indoor, the indoor inlet passage wall device and extending the boundary

nozzles, the chamber communicating with the outlet opening of the nozzle made and the indoor the wall smoke is disposed from the wall in contact with the nozzle device previously formed in the smoke coming from a indoor expansion to be able to spaced apart a distance sufficient inlet opening is provided on the outlet chamber of the reeds, opening of the upstream side of the opening of the nozzle, the smoke entering between the inlet opening and an outlet opening is positioned so as to reversing the direction of the palm, and the outlet opening of the chamber of the volume of the chamber relatively when being introduced into the smoke of a Endpage:1 this out of the 9 such that the pressure drop occurs, and the outlet opening, the back pressure in the indoor is fed into the passenger compartment by rise to tobacco smoke of the extent to prevent unlimited expansion cross-sectional area that sintered, characterized in that filter for tobacco (3) Internal smoke is the boundary so as to expand in the indoor, the indoor inlet passage wall device and extending the boundary nozzles, the chamber communicating with the outlet opening of the nozzle made and the indoor the wall smoke is disposed from the wall in contact with the nozzle apparatus previously smoke chamber, coming from variable becomes be inflated at a sufficient distance intervals gold inlet opening is provided on the outlet opening of the chamber reeds, on the upstream side of the opening of the nozzle in the military smoke is between the opening and an outlet opening direction so as to dress up and positioned, and opening and closing the outlet opening 48-30s69(2) II of the chamber of the volume of the chamber relatively when being introduced into the smoke outlet opening such that the pressure drop occurs across, the chamber inside expansion and smoke in the effective volume of the nozzle cubic millimeters square millimeters expressed in, expressed in area of 100 to 400 times with sintered, characterized in that filter for tobacco (4) inside the expansion chamber smoke so as the boundary wall, the indoor inlet passage device and the boundary extending in the nozzles, the chamber communicating with the outlet opening of the nozzle made and the indoor the wall smoke is disposed from the wall in contact with the nozzle apparatus previously coming from the expansion chamber, so that it can be variable becomes smoke is sufficient to the distance interval th inlet opening is provided with, the outlet opening of the chamber of the supply passage of the opening of the nozzle to increase the Endpage:2 decreased resistance very hate this smokers. General seems fila type filter more effectively. Another type of cigarette smoke cigarette filter is drawn from is passed through from the small orifice to increase its speed to become the rear of the orifice Town Distance 1 then probably about short 0.7611J(0,050 / H) or deflecting member is provided at ?? directing it is a filter. In such a filter cigarette tobacco smoke from the QL, 5m(100 feet per second) can pass through the orifice. A collision between the smoke ?? ?? grilled meat of heavier particles, there is a tendency that the gas flow is integrated around changing the direction to ?? further flow is discharged from the gas stream. This type of filter is heavy tar tobacco smoke to remove from the static pressure loss of this type of filter is to increase the amount of discomfort to the viewer, that is, the smokers attack. This is substantially in contact with the ?? ?? the orifice by colliding with the gas is deposited on the tar ?? continues to flow at a gap of about does not block f, given that will be easily understood. For example, U.S. Patent No. 2,954,779 arcuate such as those described herein, this type of filter as a result of the measurement, the static pressure of the percent weight loss was found to normal 28-40M This static pressure the amount of loss of several paper cigarette smoking for a time at a increases when the spaced apart. The smoking during the time between deposited tar is condensed partially in place, the ophthalmologist will narrow gap This is because the resistance to air flow is increased. Other types of smoke filter is made of metal, to cool the part. This type of filter is used primarily East pipe pattern in addition to spiral passage is provided, which is 0. However, if the smoke smoke excessively cooled, smokers in the cooling preferably a false by the tobacco smoke particles it from another method of particles to remove heavy expansion cooling and the gas precipitated from the. This type of filter, the inventors of the present invention know, so far limit slightly elongated structure and therefore require considerable length was not much acceptance Furthermore, in the hitherto known filter removal of this type was not effectively cool Cigarette tar from the so-called gaseous or exits as fine droplets The tobacco smoke and water, tar fine droplets suspended other particles, is considered a composition consisting tar aerosol smoke from O to precipitate the complex, the method are a number of factors. One of these factors with respect to air flow caused by the flow resistance being noisy. Another factor is the surface properties, the amount of gas flow, or a direction of the water vapor produced by the rapid change of the noisy flow and condensation, and, due to the expansion of the cooling effect of the smoke, and the like. The flow of the steam and smoke virtually tar of distilled water is condensed phenomenon similar to the kinetic energy of the particles and the particles are aggregated tar sufficient reduced. This is because, the surface of the solid tar tar in order to deposit it is necessary to expose the. Otherwise, the gas remains in the tar-like carrier it degrees t-0Endpage:3 smokers sucking The present invention relates generally to the principle that to precipitate the tar group acts, to provide a filter for tobacco sintered cigarette. Smoking cigarettes or other combustion at the time of soak up product, water vapor is generated. Such a tobacco smoke containing water vapor under appropriate conditions or under reduced pressure and the gas in the expansion to the hence the gas is reduced, the temperature of resulting in the water vapor is condensed contained in the gas, to reduce the kinetic energy of the fine droplets or particles of solid or liquid is set in contact with the surface and the particles are further This is because is set to tar to form a liquid surface using the principle of the present invention, or a gas precipitation or filter by particles suspended in a gas expansion into a reduced pressure or just to release the principle that acts on the basis of the precipitate in the filter, the filter tar. The resistance effect, it is very important to limit smoked were found in the filter resistance is too large, the present invention is discarded in the gas stream 0 to flow by being noisy, to rise to the ability to filter the precipitate, it can improve the tar, it was found a very. However, such a flow resistance being noisy it is preferably so as not to increase to the extent that does not rise to a sufficient smoke that has been introduced into the expansion chamber is caused to the relative capacity to determine the amount of tar is precipitated, it is also found that this on the other hand, the size of the surface area expansion chamber, also the boundary has a relationship of the expansion chamber is too small, the static pressure is reduced to about unfavorable for the expansion chamber is too large, the particles suspended in a tar smoke filter while not Endpage:4 does not precipitate, it is one object of the present invention, tar and other particulate material to increase the surface area of the precipitation of the type, is to provide a device. Of the present invention. Another aim is the static pressure does not occur undesirable loss of about 4.5L the slight flow in order to promote improved about to rise to a SAW device, the type of the new improved apparatus of the present invention is to provide a new feature of. seems to be the scope of the appended claims have been described. Other objects and features of the present invention. Additionally, it will be described in detail with reference to the surface can be understood by considering that cigarette filter according to the present invention enters an appropriate condensing chamber being noisy tobacco smoke in the filter flow tube pressure to rise to about unfavorable for energy without reducing the cool to condense the water vapor and droplets of the expansion joint set or vertical diameter to protrude to shrink slightly as it goes to the nozzle it can be achieved by providing a tobacco smoke is almost without a high speed, a thin layer, it is shrinking a little goes through the cross-sectional area of the nozzle is sucked accelerated. The average amount of smokers smoke in the smoking. 2 seconds 35g/ nozzles nozzle orifice of the flue gas is accelerated, expansion chamber then to enter the smoke is rapidly decelerated, dimensions of the nozzle the nozzle. Exiting smoke and smoke in the room by diffusing the spread of expansion to promote such a shape, as a result for condensing the water vapor is preferred. Also, the #39;expansion chamber (the capacity of the chamber, the water vapor is condensed in the soil as a boundary the wall smoke at the time of drops to lose the kinetic energy to set the tar selected so as to form a wet surface. to the expansion chamber, in particular the relatively to the inlet opening and an outlet opening, and a material having a low heat transfer rate, it is preferable to use a high heat transfer rate material in particular inlet nozzle and the nozzle in the droplet using the tar is condensed partially or completely smoke as a result interfere with the passage of the decrease in the pressure in the nozzle greatly increased in the boundary Furthermore, the material of the expansion chamber water vapor and condensation of tar droplets and expansion effect due to the cooling effect of the wall of the chamber due to the fact that the heat is transferred to the heat transfer characteristics so as not to relatively low is preferable. inlet nozzle in the droplet boundary tar is precipitated, not just the receiving member is partially so as to extend in the cigarette of the indoor, it is very preferably flow chamber or the cigarette receiver is a spacer by a small amount of tar is always to some extent precipitated. However, if the boundary extending nozzle member is within this space around which the trap is formed in a tobacco slightly protruding by being noisy precipitate easily can not be drawn into the inlet nozzle in this embodiment, the receiver is a cigarette filter by fiddling with chamber holder in the boundary separating the cigarette from the filter, the filter inlet, the shape of the nozzle shape, in particular the precipitation efficiency related to the inlet opening of the inlet direction of the expansion chamber is narrower It is formed by a nozzle-like passage when the smoke is further diffused into the room, the pressure loss due to quickly nozzle is reduced. Such an opening device having a Endpage:5 Figure 1 and Figure 2 and 2, the portion of the device is formed separately along the line 91 which is joined to the cartridge-type filter 90 inlet passage 92 consisting of inlet nozzle 93 or is expanded or condensing chamber extends to the outlet opening is also provided. Conversely, however, outlet nozzle 94 will be shown as outlet nozzle, it may be a cylindrical shape as shown in Fig. 1 cartridge-type filter is outleted two-part the second separately as described with reference to Fig. 92 together with the smoke from the expansion chamber inlet nozzle 93 placed in its speed to decrease the formation when it enters a ?, that is, the smoke is reduced and expansion. cooled water vapor contained precipitated tar chamber boundary wall 93Fe. 7 to integrate the small nozzle opening 92, in the population is relatively large, the expansion degree of this also increases the air resistance to the flow of the general of the smokers once a time of about 2 seconds of the average 651f of the air and the amount of smoke and suck the air sucking smoke and the chamber for 2 seconds, 93 nozzle 92 communicating with the

opening hole or opening population is about 0.74 to 0.64) to the diameter of the ? ? (0.025 0.055 will have a resistance to the flow of air the opening is too small to perform diameter of ml should not be, when the units of measure the volume of the expansion chamber and 6 a nozzle communicating with the cross-sectional area of the opening of about 100 to 400 times, the effect is superior tar precipitation was found. Do the opening 94 of the outlet nozzle 9 chamber 93 is an opening communicating with the opening hole - the area of the inlet nozzle opening hole communicating with at least 2 times the size, there is a need to have a shown in Fig. 1, so that the smoke inlet nozzle and the outlet nozzle exit nozzle inlet nozzle i.e. direct from linearly so as not to flow to the biased to " relatively inlet nozzle and the outlet nozzle may also be the cross-sectional area of greater than or equal to the ratio of the precipitation amount of the negligible tar water vapor droplets to precipitate the tar in order along with it, in order to maximize the surface area required for the inner surface of the cartridge-type filter possible it is necessary to increase. However, if the volume of the expansion chamber is excessive, precipitation of the performance, water vapor is insignificant. in accordance with the volume of the expansion chamber is increased from the amount of gas inlet nozzle was placed in almost all of smoke smoke inflating cooling becomes large, to the extent that does not is due to the fact that it is believed that precipitation. Therefore, the water vapor amount is reduced, efficiency is reduced expansion filter. On the other hand, in a narrow place, entering into the room the smoke and where they are located in the pressure (back pressure) - the resistance to the expansion of the molecules of the internal itself to rise to separate the effect of cooling this is because, in the droplets of water vapor efficiently and tar-set results in the actual dimensions of the exit nozzle to the expansion chamber of large volume to give the effect of the size of about 9 good unless is not critical, the gourd-clad resistance coming into the smoke chamber expands in a certain degree of back pressure to the expansion chamber outlet nozzle for holding the Koku? Endpage:6 transformer therein. I force enough it is necessary to have a lowering effect is that it is the material of the heat is radiated from the wall filter and are not smoke is excessively cooled so as not to select a material having a low heat transfer coefficient, it is preferable to use smoke is susceptible to many smokers too cold. For the purposes of the volume of the precipitate over the cooling effect of the smoke to control the expansion of the expansion chamber is achieved through the wall of the #39;L filter f of the heat transfer cover, so as to Kyokugen inlet nozzle nozzle in accordance with the volume selected. Another preferred types of population of the article 6 are illustrated, the nozzle 96 is a first passage having scraping area consists of @ along the length direction of the nozzle wheel The contour is oval in nature of the nozzle in such a shape, the pressure loss of protocol and its internal 1 by reducing the amount of the wall of the furthermore, such a nozzle shape, as shown in arrow A sinker electric branch 1-clad immediately the effect of entering the smoke is reduced. In this way, precipitation of drops of water vapor and tar to help the flow set to rise to some extent of the expansion chamber in the inlet nozzle by a separate member it can project. Fig. 4 boundary of the shape of the nozzle 99 substantially truncated conical nozzle member 98, the boundary boundary is shown. This member is made separately from the filter to the filter can be combined to the effect shown by arrow B. The nozzle branch. in Figure 5, oval, the nozzle 100, the nozzle the boundary boundary member 101 is shown. Made a boundary member separately in the case of using a nozzle, the expansion chamber in communication with the opening hole or opening of the droplets of the diameter of the precipitated tar is preferred so as not to cause excessive pressure loss, i.e., about the degree to which 0.74ssa(0.025 to 0.64 to it is necessary to make the 0.055-a) nozzle on the opposite side of the opening of the expansion chamber has a diameter of about population"), 1.27ssa(0.50 is preferably set to about 4 and 5, the nozzle shown in view and a boundary member length of about 2.29 to 0.045 to Lee Soon-1.14+u(0.09 can be within a range of the principles of the present invention smoke flow direction is reversed after the expansion, the cartridge-type filter to be brought may be embodied as a fill one such type, a smoke by reversing the flow direction of the flue gas particles are accelerated thereby particles such acceleration forces due to the wall of the chamber, to expansion direction of pushed to the preferred embodiment of the present invention car-type filter 1 is mouthpiece dumping sites having a cigar cigarette tobacco holder part 105 or 102 shown in Fig. 6 provided in the filter 104 is a filter member, it is also be of wrap-ku, also good as shown in Figure 6 -102 is the holder can also be made as it is full size, it is necessary to also be understood that filter 104 and the nozzle 107 of the expansion chamber 105 to support the boundary member 106, and a end piece shown. a portion such that the chamber 108 is a cylindrical shape, one end is formed by a substantially hemispherical dome 10. 107 resulting in smoke smoke chamber 108 when entering the out from it. for diffusing to maximize Figure 5 is formed in a shape such as shown in smoke's really thick." to enter the chamber 108 and the expansion of the hemispherical portion together with water vapor steam temperature decreases Endpage:7 power! the droplet and the smoke and tar is separated from the gas then precipitated remaining around to reverse the direction of the nozzle 107 through an opening formed in the part 103, suction port 1094 formed in the low pressure portion of the suction or nozzle 107 and flows. aperture 109 facing each other extend lunge bounded by 7. 110 and the filter is provided with a side wall of the hole 111, these holes and the holder 102, the chamber boundary member 105 around a portion of the gas passage 112 flows into the suction port 103 to be able to support the outer wall or spacing member 105 for the purpose of convenient chamber boundary portion of the plurality of blades 113 (urine, it is possible to provide opening 109 is inflated, the static pressure of the smoke about unfavorable for lowering the temperature without lowering the desired degree, the back pressure chamber 108 can be dimensioned to hold the made. In this embodiment, the dimensions of the holes 111 is not important. For the volume of the expansion chamber 108 is greater than the volume expansion of the smoke and the gas chamber 108, in particular the nozzle orifice 114 and the hemispherical all occurred between the walls of the effective volume of the orientation for the expansion ratio of the area of the pair 7 and also in this embodiment, the chamber 108 as described above. The nozzle 107 from the rear wall of the end portion of the nozzle distance d ? is, too close to the chamber to the rear wall of the air flow resistance, therefore, the pressure loss is increased, the amount of the extent that is not important. Other than all of the hemispherical portion of the J-) chamber 108 in.) in diameter of about 2.16+u(0.125 filter shown in Figure 6, the distance d1 from about 1:1, respectively, JX 4.68Ma(()) 2.38m 2.16F, 093 inches, about 156 inches 0.125 inches), (), the recovery amount of tar there was no difference in the much. This short distance d ? is the resistance of the air flow is increased, the more the nozzle chamber 108. In addition, 107 is a distance d2 extend longer extending into precipitated with tar, it was found that the recovery amount of the droplet is increased to give the effect of high coating royal distance d is increased, the volume is increased, the gas pressure during the expansion chamber does not vary much smoke smoke is expanded by being let into the passenger compartment more uniform resistance back pressure rise due to the room, the monkey, it is believed that precipitated in these tests all nine droplet surface cool hemispherical, this is due to the expansion of the collection of droplets smoke tar precipitated as a result the system, immediately to the volume expansion room, energy loss occurs, it was found that the length of the nozzle chamber 108 107 extending into the nozzle opening 109 to short-circuit path from 107 to the extent that does not form a short hidden. in addition, 110 filter 104, therefore, the opening 109 is 7 lunge can also be modified so as to omit such a modification, the holes 109 and 111 back pressure chamber 108 so as to hold the required in the appropriate size, to rise to the structure of this modification backflow gas flow there is a possibility without expansion, also direct that it does not set the tar droplets are precipitated more large surface area for the advantage of the results of the test. However, a large amount of smoke much the droplet immediately after the tar expansion, it is hemispherical portion was found 4.5L Endpage:8 nozzle extends to the outside of the boundary member 115a of the filter wall in the shorter passage bounded by 115. Reference numeral 115b in This is because, in the precipitated tar points indicated droplets nozzle 107 will be Tadashisa holder to obstruct the filter when it is supported in the holder, a spacer for cigarette tobacco it is possible to provide an application of the principle of the present invention yet another embodiment and Fig. 8 is shown in Fig. 7, this filter chamber 117 to the boundary of the cylindrical shape of the housing chamber 116, the wall 118 of the housing 117 of the passage 116 and 119, in cooperation with the boundary wall 118, the nozzle 121 is Yes and in cooperation with the exit opening 120 is provided the boundary hole 121. In order to simplify the drawing nozzle cylindrical passage shown by the shape of the nozzle 121. However, the Figure 5 and Figure 6 the same shape as shown in it will be appreciated that it is preferable to enter the smoke chamber 107, mainly of the end portion and the nozzle 121 between the walls of the back of the expansion chamber, the gas stream passes through the opening 120 in the mouthpiece passage 112 part 103 next passes through the nozzle 121, for the purposes of the portion projecting to the outside, it is possible to have the extension 122 itself is 0 tapered is substantially laminar flowing in the nozzles to the smoke in the same of the present invention reverse flow principle of this embodiment is further modified figure 9 shown in 0 and Fig. 10. In this embodiment, the housing member 124 of the expansion chamber 125 and the outlet passage 126 and boundary around it. wall 127 is around the nozzle 128 of the nozzle, in cooperation with the exit opening 129 gas passage boundary boundary directivity 132.135t-. condensed working surface, in order or more large curved vanes or straight deflector is provided nozzle 128 is 11.131. For simplicity, it is shown in the form of a cylindrical shape of the passage nozzle of Fig. 4. However, in a preferred or view and figure 5 and 6, such as shown in it will be appreciated that the smoke chamber 125 and the nozzle 128 through the nozzle 128, the inflated, thus water vapor with too large to precipitate to set the gas tar 130 and droplet 131, the process proceeds to blade between the passage opening 129 passes through toward the flow back to the 132.133 flows. Then, the gas passes through the passage 126 of the mouthpiece passage 112 part 103 is drawn into the nozzle 128, for the purposes of the outer side of the extension portion 134, it is possible to provide the first to 10 Figure 6 cartridge-type filter is shown in FIG holder that can easily Dari replacement difference in addition it will be appreciated that the results of the test, such a filter, the size of the paper take-section, Iwayuru yawing Tobacco use was found to be particularly suitable for the results of the test, also precipitation) principle on

the basis of the expansion and the principle of the type of the collision on the basis of the filter action, over the filter of the present invention filter pressure reduction is the same as in U.S. Pat. No. 2,954,779 herein, such prior art commercially available from tobacco smoke and other than tar ? quality and 30 to 50 to recover the Endpage:9 rate is high, it was found to be effective the filter of the present invention above-mentioned U.S. patent which is commercially available, the pressure reduction amount than the commercially available also be less about 25 Moreover The filter has a same tar recovery was confirmed. "Kent] have been sold under the trade name is a cigarette filter is mounted cigarette filter from King removed the penetrator lowered with respect to the filter shown in Figure 6. No. 4,313,124 and U.S. Patent No. 2,954,779 is to be a type filter and comparative tests have been carried out using In this comparison test was carried out under the conditions, such as: A) as each 35g/ rounds of each household a tob) fu, amount of exercise rounds of time is 2 seconds. C) by changing the gradually pressure loaded. E)8 times with one sucked deep in the finished. The cable tie of Figure 6 shown in this test, for filter is described in U.S. Pat. At least 50 percent more than average, it was found that to remove tar Therefore, in the present invention, from the description of the various and the port as is clear is efficiently achieved. Description will be given of a preferred embodiment of the present invention, the present invention without departing from the scope of the principles of the embodiments described above can be added to various modifications to those skilled in the art will recognize. Therefore, the scope of the appended claims modification of its scope it is intended to cover. Below, summarizes the technical content of the present invention, it is as follows: 1) smoke in the interior chamber so as to expand in the boundary wall, in the indoor passage device and the boundary extending in the nozzles, the population chamber communicating with the outlet opening, and a said nozzle forming the apparatus is disposed in a room, the wall smoke from the wall in contact with the nozzle apparatus previously smoke coming from the room, to be able to variable becomes a distance sufficient expansion at intervals in the inlet opening and the outlet opening is provided with a opening of the nozzle on the upstream side of the indoor room, the the flue gas inlet opening and an outlet opening so as to reverse between the direction positioned on the outlet chamber of the volume, which is the opening of the smoke of the chamber relative to the outlet opening over when being introduced into the pressure drop occurs in the sized to sintering, characterized in that filter for tobacco 2) is concentric with the exit opening of the nozzle, the filter according to the first 3) the outer wall of the passage chamber in cooperation with the boundary wall, further comprising apparatus and the the outlet of the nozzle opening is in the passenger compartment is in communication with the first passageway, the filter according to 4) the nozzle is about 1 degrees to 14 inches to 2.54 0.10 ? (10,045) in length along the direction of decreasing the exit nozzle cross-sectional area that, the filter according to the first 5) the nozzle is about 0.035 inches (0.84m(0,025) 0.64 to to have a diameter of an opening communicating with the chamber, has a filter according to the fourth 6) the nozzle diameter of the end portion of the smoke inlet is adapted approximately twice the diameter of the outlet end of the first Endpage:10. The filter of claim 4, 7) the nozzle chamber boundary boundary to the outside of the smoke generation device direction of the fourth article extends. The filter of claim 8) the outlet opening, the back pressure in the indoor is fed into the passenger compartment by rise to tobacco smoke to prevent the unlimited or expansion of the cross-sectional area that, the filter according to the first 9) the nozzle on the side opposite to the boundary of the chamber wall is substantially hemispherical, the filter of claim 10) the first of the chamber outer wall and one in cooperation with the passage boundary delo alkenyl additional wall has a filter according to the first The chamber 11) to expand the internal effective volume of smoke is expressed in square millimeters cubic millimeter of the nozzle 100 to 400 times was expressed in area of the filter according to claim 1. 12) The length of the nozzle direction is part of a cross-sectional shape is oval, the filter according to the first 13) The length of the nozzle of the nozzle the outlet direction cross-section is about 300 from the inlet to an angle in a), the filter according to the first 4, the brief description of the drawings] Fig. 1 filter according to the present invention is a side view of Fig. 1 Fig. 2 the 2-2 cross-sectional view taken along the line, Fig. 3 is a first view and a second view and a nozzle provided in the filter shown in Fig. 4 is an enlarged sectional view of various embodiments of the present invention can be used in the nozzle of the length direction of the nozzle boundary member half portion of the present invention longitudinal sectional view, Figure 5 various embodiments of the nozzle used to filter boundary member of a modification @ a part cutaway side view, a part and shows a figure 6 according to the present invention, cartridge-type filter, insert it into the mouthpiece 1, 7 showing a vertical cross-sectional view diagram of another type of holder cartridge-type filter crowded the difference between the vertical side view, Fig. 7 8 l@ Figure 8-8@ cross-sectional view taken along the achieving the present invention, the 7) the 9th not yet another type of cartridge-type filter is a longitudinal sectional view, Fig. 10 along the line 10-10 of Figure 9 is a cross-sectional view taken{cs6}\f 104--- 105---4.107----wall filter, 108-- perimeter devices chambers nozzle outlet openings, a -109--- 114-- chamber of the nozzle opening, Endpage:116, 115-- populous country. (1) accompanying the passage of each of the inventory application proxy (2) ? translation review and one (3) (4) 1 1 1 7 specification, drawings or agent (1), other than the present inventors invention#39;s address in connecticut orange. 44 Russell Street Name: Warren jet head address (2) Earl oxalic attorney, Chiyoda-ku, Tokyo Otemachi 1-chome, Shin Otemachi Bldg. 7F, Room 355) name (206', or attorney Ikenaga Mitsuya Chief Editor, the orthotopic Lj #39;-11, 1971 address knee procedure amendment on February 7, the Taro gluteal secretary Takehisa Patent Office 1971 1 display 63671, the name of the invention Patent application No. 2 cigarette filter for correction of the sintered 6, the relationship between the name and address, and applicant Nagisa William F.4, the "Han Man Nick attorney's docket PHNLO030384

**Classifications:**  
**International (IPC 8-9):** A24F1/16 A24F13/04 (Advanced/Invention); A24F1/00 A24F13/00 (Core/Invention)  
**International (IPC 1-7):** A24F1/16



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| JP48030569 A2      | 19730421         | JP19710063671      | 19710823         |
| JP51030829 B4      | 19760903         | JP19710063671      | 19710823         |

**Priority:**

**3) Family number: 43945212** (US2009272379A)

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**Title:** ELECTRICALLY HEATED SMOKING SYSTEM HAVING A LIQUID STORAGE PORTION

**Abstract:** An electrically heated smoking system includes a shell and a replaceable mouthpiece. The shell includes an electric power supply and electric circuitry. The mouthpiece includes a liquid storage portion and a capillary wick having a first end and a second end. The first end of the wick extends into the liquid storage portion for contact with liquid therein. The mouthpiece also includes a heating element for heating the second end of the capillary wick, an air outlet, and an aerosol forming chamber between the second end of the capillary wick and the air outlet. When the shell and mouthpiece are engaged or connected, the heating element is in electrical connection with the power supply via the circuitry, and a flowpath for air is defined from at least one air inlet to the air outlet via the aerosol forming chamber. In use, liquid is transferred from the liquid storage portion towards the heating element by capillary action in the wick. Liquid at the second end of the capillary wick is vaporized by the heating element. The supersaturated vapor created, is mixed and carried in the air flow from the at least one air inlet to the aerosol forming chamber. In the aerosol forming chamber, the vapor condenses to form an aerosol, which is carried towards the air outlet.

**Classifications:****International (IPC 8-9):** A24D1/00 A24D1/14 A24D1/18 A24D3/18

A24F A24F47/00 A61M15/06 H05B3/00 H05B3/02 H05B6/00

H05B6/02 H05B6/10 H05B6/36 (Advanced/Invention);

A24F47/00 A61M15/06 (Advanced/Non-invention);

A24F47/00 A61M15/06 H05B3/02 (Core/Invention);

A24F47/00 (Core/Non-invention);

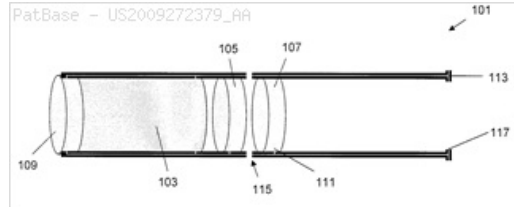
A24D A24F (Subclass/Invention)

**International (IPC 1-7):** A24F47/00**CPC:** A24D1/14 A61M15/06 H05B6/00 H05B6/02 H05B6/108

H05B6/36 A24F47/00 A24F47/008 A24D3/18 H05B3/00

**European:** A24F47/00B2E**US:** 1/1 128/202.21 128/202.210P 131/329 219/535 219/535S 392/395

PatBase - US2009272379\_AA

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AR072355 AA        | 20100825         | AR2009P101534      | 20090429         |
| AU2009242409 AA    | 20091105         | AU20090242409      | 20090422         |
| AU2009242409 BB    | 20141204         | AU20090242409      | 20090422         |
| BRPI0911581 A2     | 20160105         | BR2009PI11581      | 20090422         |
| CA2720293 AA       | 20091105         | CA20092720293      | 20090422         |
| CA2720293 C        | 20161122         | CA20092720293      | 20090422         |
| CN102014677 A      | 20110413         | CN200980115315     | 20090422         |
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| CN106510005 A      | 20170322         | CN201710037013     | 20090422         |
| CO6321203 A2       | 20110920         | CO20100145073      | 20101119         |
| DE602009021300 D1  | 20140220         | DE200960021300T    | 20090422         |
| DK2282649 T3       | 20140127         | DK20090737837T     | 20090422         |
| EP2113178 A1       | 20091104         | EP20080251579      | 20080430         |
| EP2282649 A1       | 20110216         | EP20090737837      | 20090422         |
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| EP2712511 A1       | 20140402         | EP20130194529      | 20090422         |
| ES2457217 T3       | 20140425         | ES20090737837T     | 20090422         |
| HK1190890 A1       | 20140718         | HK20140104253      | 20140505         |
| IL208485 A0        | 20101230         | IL20090208485      | 20090422         |
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| IN07021DN2010 A    | 20110909         | IN2010DN07021      | 20101004         |
| IN324469 B         | 20191108         | IN2010DN07021      | 20101004         |
| JP2011518567 T2    | 20110630         | JP20110506600T     | 20090422         |
| JP2014158470 A2    | 20140904         | JP20140055789      | 20140319         |
| JP5507542 B2       | 20140528         | JP20110506600T     | 20090422         |
| JP5889941 B2       | 20160322         | JP20140055789      | 20140319         |
| KR101614172 B1     | 20160420         | KR20107024404      | 20090422         |
| KR101690389 B1     | 20161227         | KR20147010230      | 20090422         |
| KR20100135865 A    | 20101227         | KR20107024404      | 20090422         |
| KR20140068203 A    | 20140605         | KR20147010230      | 20090422         |
| MX2010011974 A1    | 20101202         | MX20100011974      | 20090422         |
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| PT2282649 T        | 20140212         | PT20090737837T     | 20090422         |
| RU2010148832 A     | 20120610         | RU20100148832      | 20090422         |
| RU2014101970 A     | 20150727         | RU20140101970      | 20140122         |
| RU2514220 C2       | 20140427         | RU20100148832      | 20090422         |
| RU2646554 C2       | 20180305         | RU20140101970      | 20140122         |
| RU2646554 C9       | 20190708         | RU20140101970      | 20140122         |
| TW201012400 A      | 20100401         | TW20090113962      | 20090428         |
| TWI484921 B        | 20150521         | TW20090113962      | 20090428         |
| UA100734 C2        | 20130125         | UA20100014086      | 20090422         |
| US2009272379 AA    | 20091105         | US20090432215      | 20090429         |
| US2014318559 AA    | 20141030         | US20140324473      | 20140707         |
| US2016135507 AA    | 20160519         | US20160001596      | 20160120         |
| US2018206556 AA    | 20180726         | US20180928387      | 20180322         |
| US8794231 BB       | 20140805         | US20090432215      | 20090429         |
| WO09132793 A1      | 20091105         | WO2009EP02923      | 20090422         |
| ZA201006930 A      | 20110629         | ZA20100006930      | 20100929         |

**Priority:**

|               |          |                |          |                |          |
|---------------|----------|----------------|----------|----------------|----------|
| EP20080251579 | 20080430 | CN200980115315 | 20090422 | EP20090737837  | 20090422 |
| EP20130194529 | 20090422 | JP20110506600  | 20090422 | JP20110506600T | 20090422 |
| WO2009EP02923 | 20090422 | US20090432215  | 20090429 | US20140324473  | 20140707 |
| US20160001596 | 20160120 | US20180928387  | 20180322 |                |          |

**Probable Assignee:** PHILIP MORRIS INT INC**Assignee(s):** (std): FLICK JEAN MARC ; PHILIP MORRIS INT INC ; PHILIP MORRIS PROD ; PHILIP MORRIS PRODUCTS SA ; COCHAND OLIVIER YVES ; FILIP MORRIS PRODAKTS S A ; PHILIP MORRIS USA INC ; THORENS MICHEL**Assignee(s):** PHILIP MORRIS PRODUCTS S A CH ; FILIP MORRIS PRODAKTS SA ; PHILIP MORRIS PRODUCTS S A**Inventor(s):** (std): COCHAND OLIVER ; KOSHAN OLIVE IV ; COCHAND OLIVIER YVES ; THORENS MICHEL ; FLICK JEAN MARC ; OLIVER YVES COCHAND ; JEAN MARE FLICK ; KOSHAN OLIV E IV ; TORANS MISHL ; FLIK ZHAN MARK ; JEAN MARC FLICK ; MICHEL THORENS ; YVES COCHAND OLIVIER ; OLIVIER YVES COCHAND**Inventor(s):** THORENS, Michel ; FLICK, Jean-Marc ; COCHAND OLIVIER ; THE DESIGNATION OF THE INVENTOR HAS NOT YET...**Agent(s):** CALLINANS; SPRUSON AND FERGUSON; FISHER ADAMS KELLY CALLINANS; RIDOUT AND MAYBEE LLP; LUZ CLEMENCIA DE PAEZ; ABITZ AND PARTNER PATENTANWAELTE MBB; BRADFORD VICTORIA SOPHIE; LOUSTALAN PAUL WILLIAM; DE ELZABURU ALBERTO; CLT PATENT AND TRADEMARK HK LTD; REINHOLD COHN AND PARTNERS; NISHIJIMA TAKAKI; OHTSUKA FUMIAKI; KUMAKURA YOSHIO; SUDA HIROYUKI; KONDO NAOKI; UESUGI HIROSHI; OOO YURIDICHESKAYA GORODISSKI I PARTNERY FA; YURIDICHESKAYA GORODISSKI I PARTNERY OOO FA; BUCHANAN INGERSOLL AND ROONEY PC**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**4) Family number: 20730097 (WO9934098A1)**

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**Title:** METHOD AND APPARATUS FOR REMOVING PARTICULATES FROM THE EXHAUST STREAM OF AN INTERNAL COMBUSTION ENGINE

**Abstract:** A method of removing particulates from the exhaust gas stream of an internal combustion engine (20) comprising the steps of combining the exhaust gas stream with a vaporised liquid; cooling the gas stream and vaporised liquid so that the vaporised liquid condenses onto the particulates; passing the gas stream and condensed liquid through a separating device (50) so that the condensed liquid and particulates are removed from the gas stream; removing the particulates from the condensed liquid; and recirculating the condensed liquid for reintroduction to the exhaust gas stream in order to effect removal of further particulates therefrom; characterised in that the liquid is an oil and all of the condensed oil is collected and recirculated for reintroduction into the gas stream so as to provide a transportable system suitable for use in motor vehicles. The invention also provides apparatus for removing particulates from the exhaust gas stream of an internal combustion engine (20) comprising; a flow path (21, 22, 23) for carrying the gas stream between an inlet and an outlet; introduction means (30) for introducing to the gas stream either a vaporised liquid or an atomized liquid which is subsequently vaporised; cooling means (40) for cooling the gas stream and vaporised liquid so as to condense the vaporised liquid onto the particulates entrained within the gas stream; a separating device (50) located downstream of the cooling means (40) for separating the condensed liquid and particulates from the gas stream; particulate removing means (80) for removing the particulates from the condensed liquid; and recirculation means (25, 26, 27, 70) for recirculating the condensed liquid back to the introduction means; characterised in that the liquid is an oil and the recirculation means (25, 26, 27, 70) are adapted to recirculate all of the condensed oil back to the introduction means (30) so that the apparatus (10) is transportable.

**Classifications:****International (IPC 8-9):** F01N3/04 (Advanced/Invention);

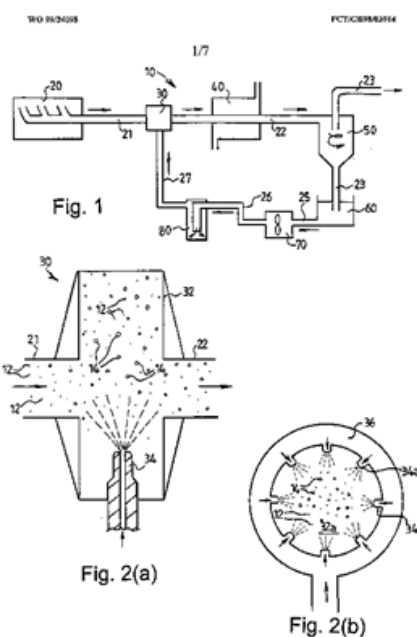
F01N3/04 (Core/Invention)

**International (IPC 1-7):** B01D47/05 B01D47/06 B01D50/00

F01N3/04

**CPC:** Y02T10/20 F01N3/04**European:** F01N3/04

PatBase - WO9934098\_A1



SUBSTITUTE SHEET (RULE 26)

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU199917759 A1     | 19990719         | AU19990017759      | 19981224         |
| GB2332631 A1       | 19990630         | GB19980009101      | 19980428         |
| GB2332631 A9       | 00000000         | GB19980009101      | 19980428         |
| GB2332631 B2       | 20020227         | GB19980009101      | 19980428         |

|              |          |               |          |
|--------------|----------|---------------|----------|
| GB9727406 A0 | 19980225 | GB19970027406 | 19971224 |
| GB9809101 A0 | 19980701 | GB19980009101 | 19980428 |
| TH39999 A    | 20000831 | TH19981004938 | 19981221 |
| TW413711 B   | 20001201 | TW19990101332 | 19990128 |
| WO9934098 A1 | 19990708 | WO1998GB03914 | 19981224 |

**Priority:**

GB19970027406 19971224 GB19980009101 19980428 WO1998GB03914 19981224

**Probable Assignee:** NOTETRY LTD

**Assignee(s):** (std): BOYES ALLYN ; BRIGGS ANDREW IAN ; NOTETRY LTD

**Assignee(s):** NOTETRY LIMITED

**Inventor(s):** (std): BRIGGS ANDREW LAN ; BOYES ALLYN ; BRIGGS ANDREW IAN ; ALLYN BOYES ; ANDREW IAN BRIGGS

**Designated states:** AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZW

**5) Family number: 69963447 (US9986769B)**

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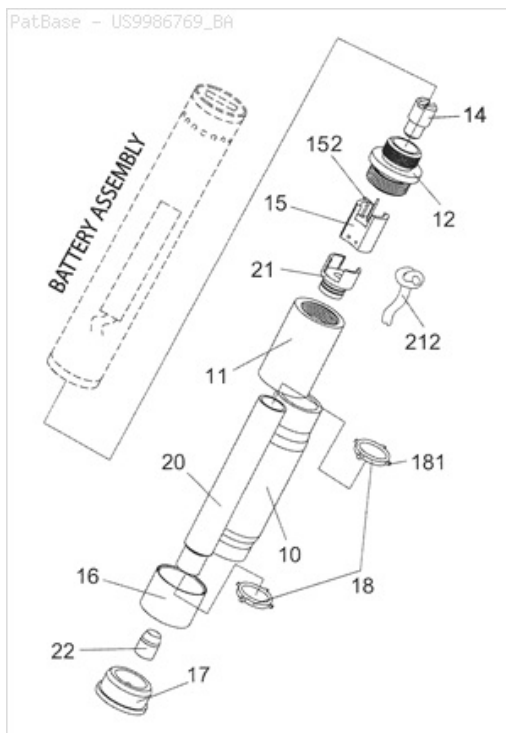
**Title:** ATOMIZER FOR AN ELECTRONIC CIGARETTE

**Abstract:** Disclosed is an atomizer that comprises a transparent, elongated e-liquid cartridge enclosed in a transparent, elongated outer cylinder that creates a well-defined smoke-flowing interlayer or pathway that leads from an atomization tube mounted on the distal end of the outer cylinder to a cigarette holder disposed at its proximal end. The atomization tube contains a heating coil in a porcelain cup in contact with an e-liquid rope or wick extruding from an e-liquid guiding head that seals the e-liquid cartridge at its distal end. Mounted on the atomization tube are two conductive members that connect with the heating coil and with an appropriate battery assembly containing an air-flow sensor that provides an electric charge when a smoker inhales. A smoker's inhalation also creates negative pressure within the interlayer pathway and the cartridge causing e-liquid to permeate the wick for vaporization. The resulting vapor or smoke travels to the cigarette holder and smoker via the interlayer. The cartridge is sealed at its proximal end by a sealing plug which is reinforced by a cap on the outer cylinder. The cap has smoke vents which communicate with the smoke-flowing interlayer. The separate smoke-flowing interlayer preserves the purity of the vapor, eliminates leaking, and allows the smoker better control of consumption through its transparency.

**Classifications:**

**International (IPC 8-9):** A24F47/00 (Advanced/Invention)

**CPC:** A24F47/008



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US9986769 BA       | 20180605         | US20170442188      | 20170224         |

**Priority:**

US20170442188 20170224

**Probable Assignee:** CAI FU YUAN

**Assignee(s):** (std): CAI FU YUAN ; HICKMAN BENJAMIN ; LIU LILY

**Inventor(s):** (std): CAI FU YUAN ; HICKMAN BENJAMIN ; LIU LILY

**6) Family number: 17752682 (DE20116953U1)**

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**Title:** BIOLOGISCHER RAUMFILTER (PFLANZENFILTER)

**Abstract:** Source: DE20116953U1 [DE] (Claim 1) a) der Ausfuehrungen der Einrichtung mit Umtopf (2) als Aussengefaess (1) (= Fig. 1 + 3a), und b) mit Aussengefaess (1) mit Umtopf (2) (= Fig 2) vorgesehen ist; und B) dass hierfuer geeignete Mittel

vorgesehen sind, wie a) ein Sicherungs-Einsatzgefäß (30a), das-im Abstand (9b2) zum Hauptgefäßsausschloß (1a, C) dass fuer diese Emrichtungsausführung (ca 1-33) a) wenigstens em Luefter (6/7/16f2) vorgesehen ist und/oder

#### Classifications:

**International (IPC 8-9):** B01D53/00 B01D53/84

F24F3/16 (Advanced/Invention);

B01D53/84 F24F3/16 (Core/Invention)

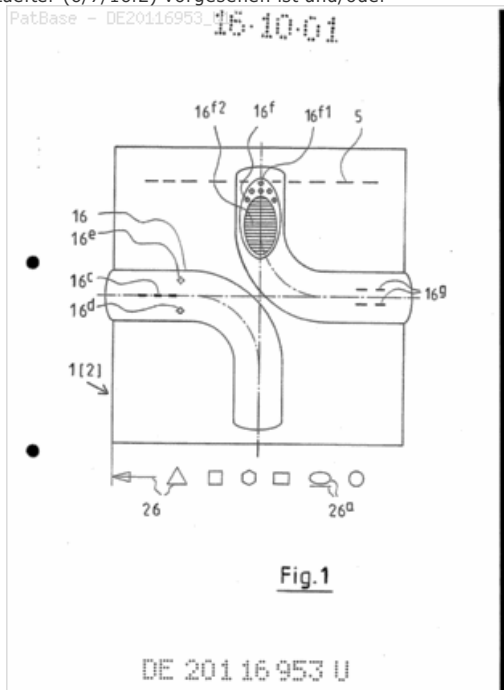
**International (IPC 1-7):** B01D53/84 F24F3/16

**CPC:** Y02A50/2358 Y02A50/2359 F24F3/1603 B01D53/84

F24F2003/1653 F24F3/16 B01D53/85 B01D2259/4508

**European:** B01D53/84 B01D53/85 F24F3/16 F24F3/16B

L01D259/45B L01D53/84 R24F3/16B25



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| DE10231041 A1      | 20101209         | DE20021031041      | 20020709         |
| DE20116953 U1      | 20020214         | DE20012016953U     | 20010820         |

#### Priority:

|                        |                         |                        |
|------------------------|-------------------------|------------------------|
| DE20011039366 20010820 | DE20012016953U 20010820 | DE20011059276 20011203 |
| DE20021004633 20020205 | DE20021007015 20020219  | DE20021021676 20020516 |
| DE20021024113 20020529 | DE20021024535 20020531  | DE20021026155 20020612 |
| DE20021031041 20020709 |                         |                        |

#### Probable Assignee:

BLOCK HUBERT K

#### Assignee(s): (std):

BLOCK HUBERT K

#### Inventor(s): (std):

BLOCK HUBERT K

#### 7) Family number: 42001176 (US2009301601A)

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**Title:** APPARATUS AND METHOD FOR USING TETRAZINE-BASED ENERGETIC MATERIAL

**Abstract:** The present invention comprises apparatus and methods employing a gas produced from a tetrazine-based energetic material such as that known as "BTATz" containing 3;6-BtS(1H-1,2,3,4-Tetrazol-5-ylamino)1-,2,4,5-tetrazine 3;6-BtS(1H-1,2,3,4-Tetrazol-5-ylamino)1-,2,4,5-tetrazine or salts thereof. The tetrazinebased energetic material is ignited through the use of a percussion cap, a piezoelectric crystal or a battery-supplied electric spark or by encapsulating it in a container that is then exposed to a burning flame. The gas produced upon ignition is employed a propellant such as to inflate life rafts, life vests, emergency evacuation slides, tires, air bags and other inflatable devices. The gas produced upon ignition is alternatively employed to power an engine and many other applications such as a fire suppressant.

#### Classifications:

**International (IPC 8-9):** A62C13/22 A62C13/62 A62C19/00

A62C39/00 A62C99/00 A62D1/00 A62D1/06 B01J7/00 B60R21/26

B60R21/264 B63C9/08 B65B31/00 C06B45/00 C06B45/10 C06D5/00

C06D5/04 F02B45/00 (Advanced/Invention);

A62C13/00 A62C19/00 A62C99/00 A62D1/00 B01J7/00 B60R21/26

B63C9/00 B65B31/00 C06B45/00 C06D5/00

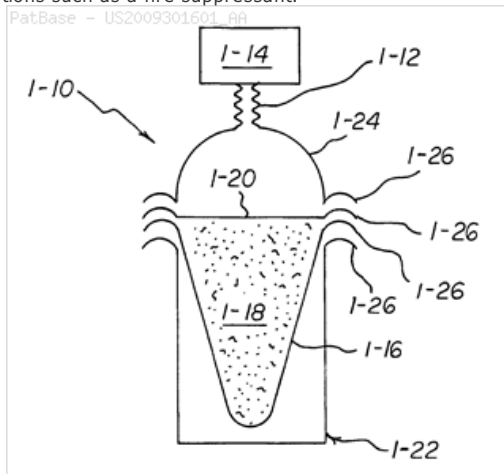
F02B45/00 (Core/Invention)

**CPC:** Y02P20/129 C06D5/06 C06B43/00 C06D5/04 Y02T10/16

**European:** C06B43/00 C06D5/04 C06D5/06

**US:** 102/530 102/530S 123/24.00RS 123/24R 141/38 141/38P

169/12 169/12S 280/741 280/741S



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU2007339414 AA    | 20080710         | AU20070339414      | 20070213         |
| CA2642760 AA       | 20080813         | CA20072642760      | 20070213         |
| EP1993977 A1       | 20081126         | EP20070861234      | 20070213         |

|                 |          |                |          |
|-----------------|----------|----------------|----------|
| EP1993977 A4    | 20100120 | EP20070861234  | 20070213 |
| JP2009526649 T2 | 20090723 | JP20080555332T | 20070213 |
| US2009301601 AA | 20091210 | US20070279005  | 20070213 |
| WO08082427 A1   | 20080710 | WO2007US03971  | 20070213 |

**Priority:**

US20060773382P 20060213 US20060855987P 20061101 US20060859058P 20061115  
WO2007US03971 20070213 US20070279005 20070213

**Probable Assignee:** HALKEY ROBERTS CORP

**Assignee(s):** (std): BATTAT DAVID ; BATTAT EMILE ; ENERSON JON R ; HALKEY ROBERTS CORP ; LUCIUS JOHN D ; LUCIUS JOHN H ; MACKAL GLENN

**Inventor(s):** (std): LUCIUS JOHN D ; MACKAL GLENN ; ENERSON JON R ; BATTAT DAVID ; BATTAT EMILE ; LUCIUS JOHN H

**Inventor(s):** DAVID BATTAT ; EMILE BATTAT ; JOHN D LUCIUS ; GLENN MACKAL ; JON R ENERSON

**Agent(s):** A J PARK; AJ PARK; OGILVY RENAULT LLP SENCRL SRL; SCHMID WOLFGANG ET AL; GRAY ROBINSON ATTN STEFAN V STEIN IP DEPT; STEIN STEFAN V ET AL

**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**8) Family number: 43685074 (CO4180423A)**

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**Title:** ELEMENTO CALENTADOR Y METODO DE FABRICACION DEL CONJUNTO CALENTADOR HEATER AND METHOD OF MAKING THE SET HEATER (Machine translation)

**Abstract:** Source: CO4180423A [ES] 1. UN ENCENDEDOR QUE COMPRENDE: - UN APARATO CALENTADOR PARA RECIBIR, A TRAVES DE UN PRIMER EXTREMO, UN CIGARRILLO RETIRABLE, TE- NIENDO DICHO APARATO CALENTADOR MEDIOS PARA PRO- PORCIONAR UN FLUJO DE AIRE, AL MENOS, A UNA PARTE DEL CIGARRILLO; Y - UNA PLURALIDAD DE ELEMENTOS DE CALDEO ELECTRICOS DISPUESTOS EN EL APARATO CALENTADOR, CADA UNO DE LOS CUALES TIENE UNA SUPERFICIE PARA QUEDAR DIS- PUESTA ADYACENTE A UNA SUPERFICIE DE LA PARTE DE CIGARRILLO AL QUE SE PROPORCIONA EL FLUJO DE AIRE; \Y MEDIOS PARA ACTIVAR DE MODO INDIVIDUAL LA PLU- RALIDAD DE LOS MEDIOS DE CALDEO, DE MODO QUE UNA CANTIDAD PREDETERMINADA DE RESPUESTA DE TABACO CON SABOR SE GENERE EN EL CIGARRILLO, Y EN EL QUE, CUANDO EL FUMADOR SUCCIONA SOBRE UN CIGARRILLO IN- SERTADO EN EL ENCENDEDOR, FLUYE AIRE TRANSVERSAL- MENTE AL INTERIOR DEL CIGARRILLO. **Machine translation:** 1. A lighter comprising: - HEATER APPARATUS FOR RECEIVING, THROUGH A first end, a CIGARETTE REMOVABLE, taking APPLIANCE said heater means for providing an air flow AT LEAST A PART OF CIGARETTE; And - a plurality of heating elements disposed therein ELECTRIC HEATER UNIT, EACH OF WHICH HAS AN AREA TO BE disposed adjacent a surface of the part of CIGARETTE TO AIR FLOW IS PROVIDED; \Y MEANS TO ENABLE THE INDIVIDUAL SO THE plurality of heating means, so that a predetermined amount RESPONSE TO TASTE SNUFF CIGARETTE generated in, and in which, when the smoker sucks IN- ON A CIGARETTE serted into the lighter, air flows transversely INSIDE THE CIGARETTE.

**Classifications:**

**International (IPC 8-9):** A24D1/08 A24F47/00 (Advanced/Invention);

A24D1/00 A24F47/00 (Core/Invention)

**International (IPC 1-7):** A24D1/08 A24F47/00

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CO4180423 A1       | 19950607         | CO19940026650      | 19940620         |

**Priority:**

CO19940026650 19940620

**Probable Assignee:** PHILIP MORRIS INT INC

**Assignee(s):** (std): PHILIP MORRIS INT INC ; PHILIP MORRIS PROD

**Assignee(s):** PHILIP MORRIS PRODUCTS INC ; PHILIP MORRIS PRODUCTS S A

**Inventor(s):** (std): NICHOLS CONSTANCE H ; LOSEE BRUCE D JR ; LIPOWICZ PETER J ; MISER DONAL E ; WATKINS MICHAEL L ; COLLINS ALFRED L ; R RAYMOND HYNH ; RITT RENZER R SR ; UTSCH FRANCIS V ; SPRINKEL F MURPHY ; KENN BILLY J JR ; AMITABH DAS ; ROBERT SCOTT G ; LAROE BERNARD C ; WRENN SUSAN E ; HAJALOGOL MOHAMMAD R ; HAYES PATRICK H ; FLEISCHHAUER GRIER S ; MCCAFFERTY HUGH J ; HIGGINS CHARLES T ; HOUCK JR WILLIE G ; LILLY CLIFTON JR ; DEEVI SEETHARAMA C ; SUBBIAH MANTHARAN ; STEVENS WILLIAM H ; RIPLEY ROBERT L ; COUNTS MARY ELLEN

**Inventor(s):** PATRICK H HAYES ; RAYMOND HYNH R ; L RIPLEY ROBERT ; JR LILLY CLIFTON ; GRIER S FLEISCHHAUER ; WILLIAM H STEVENS ; MURPHY SPRINKEL F ; J MCCAFFERTY HUGH ; DONAL E MISER ; SEETHARAMA C DEEVI ; DAS AMITABH ; MARY ELLEN COUNTS ; R SR RITT RENZER ; SUSAN E WRENN ; CONSTANCE H NICHOLS ; BERNARD C LAROE ; WILLIE G HOUCK JR ; MOHAMMAD R HAJALOGOL ; MICHAEL L WATKINS ; J JR KENN BILLY ; V UTSCH FRANCIS ; D JR LOSEE BRUCE ; PETER J LIPOWICZ ; CHARLES T HIGGINS ; MANTHARAN SUBBIAH ; SCOTT G ROBERT ; ALFRED L COLLINS

**Agent(s):** ERNESTO CAVELIER

**9) Family number: 29530455 (US2002036358A)**

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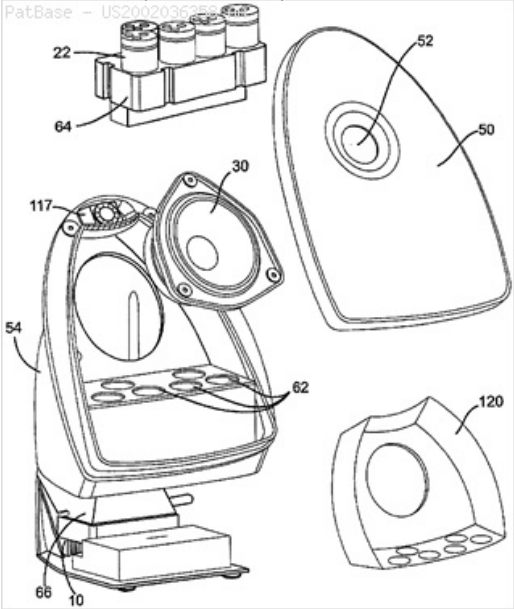
**Title:** METHODS AND APPARATUS FOR LOCALIZED DELIVERY OF SCENTED AEROSOLS

**Abstract:** The present invention provides systems and methods for delivering a controlled amount of scent to a target user. Such methods and systems will preferably provide carefully direct boluses or streams of scent(s) to a single or small group of individual(s) using a bolus generator so as to avoid cross-contamination of scents with other persons and other locations. The present invention preferably delivers the bolus of scent as an air ring. The scented air ring moves through the air between the scent generating device directly to the user as a cohesive unit of air. This phenomenon is similar to a "smoke ring" exhaled by a smoker. The scent ring can be directed with accuracy to a localized target as small as the nose of a single user, such that the entire dosage can be delivered to only the user's direct vicinity. Such targeted delivery minimizes the

amount of scent that must be delivered to achieve a desired level of scenting at the target location. Advantageously, the amount of scent that must be removed or dissipated from the user's area is also reduced. In another aspect, the present invention provides anti contamination devices that inhibit the contamination of the sequential delivery of scent chemicals.

Classifications:

**International (IPC 8-9):** A61L9/12 A61L9/14 B01F3/04 B05B1/08 (Advanced/Invention)  
**International (IPC 1-7):** A61L9/12 A63F13/08 B01F3/02 B01F3/04 B05B12/14 B05B7/04 B05C11/10  
**CPC:** Y10S261/65 Y10S261/88 A61L9/125 A61L9/122 A61L9/145 A61L2209/132 A61L2209/133 A61L2209/134 A61L2209/22 F24F2003/1689  
**European:** A61L9/12F A61L9/12M A61L9/14L K61L209/132 K61L209/133 K61L209/134 K61L209/220 R24F3/16G  
**US:** 239/102.1 26/17.82 26/18.1 261/115 261/115S 261/26 261/26P 261/30 261/30P 261/6 261/6S 261/78.2 261/782 261/81 261/DIG.088 261/DIG.65 261/DIG.88 261/DIG.88S 422/124 96/222 96/27



Family:

| Publication number | Publication date | Application number | Application date |
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| AU200037411 A5     | 20000928         | AU20000037411D     | 20000310         |
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| EP1169114 A4       | 20020529         | EP20000916283      | 20000310         |
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| US2003173685 AA    | 20030918         | US20030364670      | 20030210         |
| US2005046049 AA    | 20050303         | US20040889228      | 20040712         |
| US6357726 BA       | 20020319         | US20000522977      | 20000310         |
| US6536746 BB       | 20030325         | US20010000432      | 20011130         |
| US6786474 BB       | 20040907         | US20030364670      | 20030210         |
| US6994328 BB       | 20060207         | US20040889228      | 20040712         |
| WO0053301 A1       | 20000914         | WO2000US06490      | 20000310         |

Priority:

US19990123970P 19990312 US20000522977 20000310 WO2000US06490 20000310  
US20010000432 20011130 US20030364670 20030210 US20040889228 20040712

Probable Assignee: MICROSCENT LLC

Assignee(s): (std): MICROSCENT LLC

Inventor(s): (std): WATKINS CARL J ; LAW DAVID ; WATKINS J

Inventor(s): WATKINS CARL ; CARL J WATKINS

Agent(s): TOWNSEND AND TOWNSEND AND CREW LLP

Designated states: AE AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CR CU CY CZ DE DK DM EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

10) Family number: 19357477 (US2578858A)

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Title: FUMIGATING COMPOSITIONS

**Abstract:** A fumigating composition consists of a mixture comprising a thermally vaporisable pesticide, ammonium nitrate and at least one of the following solid sensitizers of the thermal decomposition of the ammonium nitrate:-a hypophosphite of an alkali metal, alkaline earth metal or ammonium, ferrous oxalate, stannous oxalate, ferrous formate, basic ferric acetate, ferric citrate, potassium chlorate, potassium nitrite, ammonium thiosulphate, anhydrous sodium thiosulphate, potassium permanganate, manganese dioxide, cuprous chloride, copper chromite, nickel chromite; the quantity of the solid sensitizer being sufficient to permit self-sustained gas producing thermal decomposition of the ammonium nitrate to take place readily in the presence of the pesticidal or insect repellent compound and the proportion of said pesticide being sufficient to ensure by its cooling effect that the reaction temperature will not be so high as to result in its destruction to any substantial degree during its vaporisation. The mixtures are preferably of such a composition that the temperatures produced during thermal decomposition are only slightly above the boiling point of the pesticide. One or more of the salts of chromic acid referred to in Specification 592,788 may also be incorporated in the above composition. D.D.T. and hexachlorocyclohexane are examples of suitable pesticides. The composition in the form of a loose powder or compact mass and provided with ignition means may be packed into cartridges having suitable moisture-proof wrappings.

Classifications:

**International (IPC 8-9):** A01N25/20 A61L9/02 (Advanced/Invention); A01N25/20 (Core/Invention)

**CPC:** A01N25/20 A61L9/02  
**European:** 45L3K1A A01N25/20 A61L9/02  
**US:** 424/42

**Family:**

| Publication number | Publication date | Application number | Application date |
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| US2578858 A        | 19511218         | US19490132632      | 19491212         |

**Priority:**

GB19460027956 19460918      DE1948P001028 19481224      US19490132632 19491212

**Probable Assignee:** ICI LTD

**Assignee(s):** (std): ALEXANDER CANTLAY HUTCHISON ; ICI LTD ; JAMES TAYLOR ; JOHN MACFIE HOLM

**Assignee(s):** IMP CHEMICAL IND LTD ; IMPERIAL CHEMICAL INDUSTRIES LIMITED

**Inventor(s):** (std): CANTLAY HUTCHISON ALEXANDER ; HOLM JOHN MACFIE ; JAMES TAYLOR ; MACFIE HOLM JOHN ; TAYLOR JAMES

**Inventor(s):** HUTCHISON ALEXANDER CANTLAY

**11) Family number: 20858174 (GB903292A)**

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**Title:** Method of and apparatus for distributing pesticides

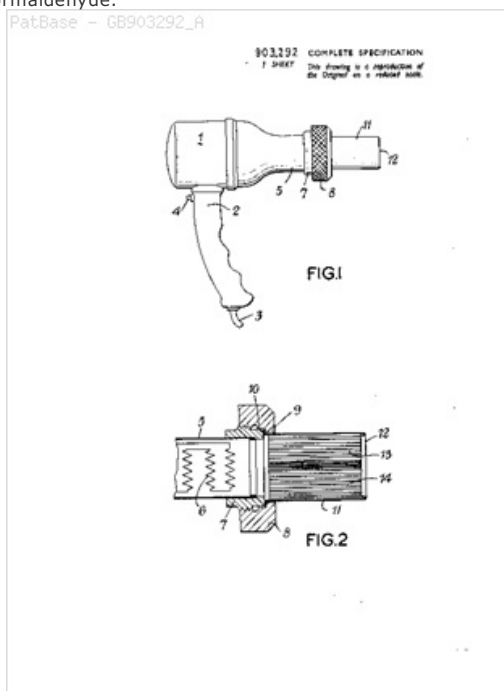
**Abstract:** 903,292. Apparatus and process for dissemination of volatile pesticides. AEROVAP HOLDINGS Ltd. Aug. 25, 1958 [Aug. 23, 1957], No. 26634/57. Class 81 (1). An apparatus for disseminating a volatile pesticide into the atmosphere or depositing it into a surface, comprises means for producing a forced draught of heated gaseous medium, e.g. air, and passing the heated gas through a foraminous structure on which is deposited the volatile material. A device which may be held in the hand is shown in the Figures, wherein a centrifugal blower driven by an electric motor, and an electric resistance heater are contained in the housing 1. The outlet section 5 is adapted to enable attachment of a metal cartridge 11 which is held in position by the threaded collar 8 acting on the cartridge flange 10. The cartridge holds a foraminous structure 13, e.g. glass wool, discrete particles which themselves may be foraminous or impervious, or preferably a self-supporting structure of, e.g. embossed, crepe or corrugated cardboard or filter paper on which is deposited the volatile material. The airflow may be controlled, e.g. by incorporating an adjustable opening in the inlet and/or outlet of the blower. The invention includes larger apparatus either portable or fixed which may be driven by an internal combustion engine. Specified volatile materials are DDT, lindane, aldrin, dieldrin, diazinon, dehydroacetic acid and formaldehyde.

**Classifications:**

**International (IPC 1-7):** B67D5/37

**CPC:** A01M1/2077 A61L9/14 B05B7/1626

**European:** 45L3K1A A01M1/20A1



**Family:**

| Publication number | Publication date | Application number | Application date |
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| CH363521 A         | 19620731         | CH19580063190      | 19580822         |
| GB903292 A         | 19620815         | GB19570026634      | 19570823         |

**Priority:**

GB19570026634 19570823

**Probable Assignee:** AEROVAP HOLDINGS LTD

**Assignee(s):** (std): AEROVAP HOLDINGS LIMITED ; AEROVAP HOLDINGS LTD

**Inventor(s):** (std): ARTHUR HOWARD BAKER ; BAKER ARTHUR HOWARD ; FITZWALTER HERRON WHITNEY GEOFF ; GRAHAM SAREL WHITFIELD FRANK ; WHITFIELD FRANK GRAHAM SAREL ; WHITNEY GEOFFREY FITZWALTER HE

**Inventor(s):** WHITNEY GEOFFREY FITZWALTER HERRON ; HERRON WHITNEY GEOFFREY FITZWALTER ; HOWARD BAKER ARTHUR ; SAREL WHITFIELD FRANK GRAHAM

**Title:** FLUID TREATMENT SYSTEM AND PROCESS

**Abstract:** A fluid treatment system and process includes structure and steps relating to a gravity fed fluid treatment system. A fluid inlet and a fluid outlet are provided, and an irradiation zone is disposed between the fluid inlet and the fluid outlet. The irradiation zone includes at least one radiation source and has a closed cross-section to confine fluid to be treated within a predefined maximum distance from the at least one radiation source. Cleaning structure is provided to remove undesired materials from an exterior of the radiation source. The cleaning structure comprises a cleaning sleeve surrounding the radiation source and movable with respect thereto. The cleaning solution includes a chamber surrounding and in contact with the exterior of the radiation source, the chamber being supplied with a cleaning solution suitable to remove undesired materials from the exterior of the radiation source.

**Classifications:**

**International (IPC 8-9):** B01J19/08 B01J19/12 B08B3/02 B08B3/04 B08B3/08 B08B9/02 C02F1/30 C02F1/32 G01J5/02 G02C5/00

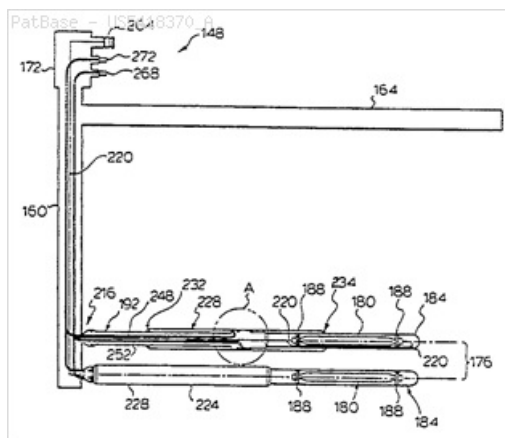
H01J61/00 H01J61/38 (Advanced/Invention);  
B01J19/12 B08B3/02 (Advanced/Non-invention);  
B01J19/08 B01J19/12 B08B3/02 B08B3/04 B08B3/08 B08B9/02  
C02F1/32 G01J5/02 G02C5/00 H01J61/00 (Core/Invention);  
C02F1/30 (Core/Non-invention);  
C02F (Subclass/Invention)

**International (IPC 1-7):** A61L2/10 B01J19/08 B01J19/12 B08B3/02 B08B3/04 B08B3/08 B08B9/02 B26F1/26 C02F1/30 C02F1/32 G01J5/02 G01N21/75 G01N250/431 G02C1/00 G02C5/02 G02C5/12 G02C5/16 H01J61/00 H01J61/38

**CPC:** G02C5/00 Y10S422/906 B01J19/123 C02F1/325 C02F2201/3227 C02F2201/324 C02F2201/326

**European:** B01J19/12D2 C02F1/32D G02C5/00 M02F201/322M M02F201/324 M02F201/326

**US:** 250/372 250/431 250/436 250/438 422/186.3 422/24 422/906

**Family:**

| Publication number | Publication date | Application number | Application date |
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| NO953451 L      | 19950901 | NO19950003451  | 19950901 |
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#### Priority:

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| AU19940061531 | 19940304 | CA19942239925 | 19940304 | CA19942117040 | 19940304 |
| CA19942286309 | 19940304 | CA19942286309 | 19940304 | NZ19940262088 | 19940304 |
| EP19970112786 | 19940304 | EP19940908240 | 19940304 | WO1994CA00125 | 19940304 |
| US19940318858 | 19941017 | US19950445767 | 19950522 | KR19950703725 | 19950904 |
| IL19970108709 | 19970714 | CA19982117040 | 19980819 | AU19980096100 | 19981204 |
| US19980224846 | 19981231 | CA19992239925 | 19991108 | AU20020029230 | 20020328 |

**Probable Assignee:** TROJAN TECHNOLOGIES INC

**Assignee(s):** (std): MAARSCHALKERWEERD JAN M ; TROJAN TECHN INC ; TROJAN TECHNOLOGIES INC ; TROJAN TECHNOLOGIES INC ; TROJAN TECHNOLOGIES INC LONDON ; CVI BETA VENTURES INC ; TROTAN TECHNOLOGIES INC

**Assignee(s):** TROTAN TECHNOLOGIES INCCA ; MAARSCHALKERWEERD JAN ; TROJAN TECHNOLOGIES INC CA ; TROJAN TECHNOLOGIES INC LONDON ONTARIO CA

**Inventor(s):** (std): MAARSCHALKERWEERD JAN M ; MAARSCHALKERWEERD J M ; MAARSCHALKERWEERD ; MAARSCHALKER WEERD JAN M ; MAARSCHALKERWEERD JAN ; JAN M MAARSCHALKERWEERD ; JM MAARSCHALKERWEERD ; MAARSCHALKERWEER VAN M ; ZIDER ROBERT B ; KRUMME JOHN F ; MAARSCHALKER JAN M ; MAARSCHALKER JAN M

**Inventor(s):** J M MAARSCHALKERWEERD ; JAN M ; JAN M MAARSCHALKER ; JAN M MAARSCHALKER

**Agent(s):** DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; GOWLING LAFLEUR HENDERSON LLP; GILBERTS LLP; SARGENT; ERNESTO CAVELIER; SANFORD TCOLB AND CO

**Designated states:** AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK ES FI FR GA GB GN GR HU IE IT JP KR KZ LI LK LU LV MC MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SI SK SN TD TG UA US UZ VN

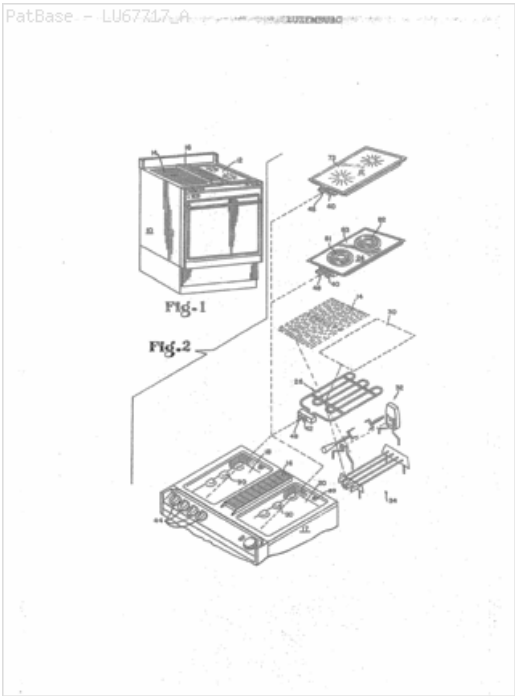
### 13) Family number: 6045811 (LU67717A)

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**Abstract:** Source: LU67717A [FR] [Source: Claim 1] 50 55 ' . REVENDICATIONS - ' 1. Fourneau de cuisine ou cuisiniere adaptable pour une conversion permettant d'offrir différents types de cuisson d1 alimente • du type comportant une enveloppe munie d'au moins un evidement en forme de poele a son sommet, un moyen formant sortie electrique isole electriquement et monte dans ladite " - • - . • enveloppe, accessible sur une paroi de chacun desdits | • evidements, caracterise en ce que des unites de cuisson interchangeable adaptees pour une fonction de cuisson. " distinct?, et contiennent des elements chauffants electriques, ont \_ des electrodes adaptees pour une insertion amovible | dans ledit moyen formant sortie electrique de ladite ' enveloppe, lesdites unites de cuisson pouvant ainsi etre inserees de facon amovible et interchangeable dans lesdits evidements de l'enveloppe, avec chaque surface superieure " d " unite de/6uissin disposee pratiquement sur le meme niveau ' • que le sommet de ladite enveloppe... \_ 2. Fourneau selon la revendication 1, caracterise en ce que l'une des unites de cuisson precites comporte un-moyen- chauffant electrique ouvert et un moyen supportant des ' \.. aliments adapte pour etre supporte pres du sommet de l'enveloppe precitee, lorsque ladite unite de cuisson est en place dans un evidement de ladite enveloppe pour supporter. - des aliments, ainsi, 'les graisses s'ecoulant des aliments ' ' peuvent tomber au-dela dudit moyen chauffant ouvert pour etre recueillies a 11 arriere de l'evidement de l'enveloppe, • • ' 5 • Fourneau selon la revendication 1, caracterise en ce ' que 5. l'une des unites aqueissin precitees comporte un ' certain nombre d1 elements, chauffants electriques enfermes dans une enveloppe formant cartouche delimitant plusieurs; ' zones de cuisson sur ladite enveloppe.. 1: ' 4ss Fourneau selon la revendication- 3, caracterise en ce • qu'un panneau transmettant la chaleur par radiation recouvre -. les elements" chauffants. et delimite un support pour recevoir des ustensiles de cuisson.. • - • 5. Fourneau selon la revendication 1, caracterise en ce que l'enveloppe precitee est munie d'un moyen pour former un. #: I vSi 'r =.-<• K • • • | r 9V courant d'air-de ventilation qui s'ecoule en contact avec "ss N les parois delimitant les" evidements, en forme de poele- ' •. precites, pour enlever la chaleur rayonnait des unites, • <i - de cuisson precitees. " • • . ' ' ' 5 6. Fourneau selon la revendication 1 caracterise en ce | ' • qu'il est muni d'un moyen pour attirer 11 air a travers, | chacune des unites de cuisson precitees dans son evidement :.. d'enveloppe pour -entraîner, la fumee, ' les graisses vaporisees, ' et

les gaz charges d'odeurs dus a"la cuisson, puis pour e ' 10 faire echapper l'air, avec entrainement, a travers une.. , ' • gaine, " vers ` 1 ' atmosphere. \_ | | . - Fourneau selon la revendication 6, caracterise ` . en ce qu'il est muni d'un moyen formant conduit adapte "pour diriger un courant.d'air au-dela et eh contact des : 15 parois delimitant ievidement en forme de poele precite pour - enlever la- chaleur rayonnee par les appareils de cuisson.- -, v t X **Machine translation:** [Source: Claim 1] | 50 • 55 ' . ' .REVENDICATIONS -' 1. adaptable stove or kitchen stove for conversion permettanUifferents -types de|cuisson feeds d1 • the type comprising a casing provided with at least one recess shaped heater its top, an electric output means electrically isolated and mounted in said:.. "- • • envelope, accessible on a wall of each of the | • recesses, characterized in that said interchangeable cooking units adapted to a cooking function." separate and contain?, Elements electric heater, have \_ of electrodes adapted for removable insertion | in said electrical output means of said envelope, said baking units can thus be inserted in a removable and interchangeable manner in said recesses "of the casing, with each top surface "of unity of / 6uisson extending substantially on the same level '• the tip of said jacket... \_ 2. Furnace according to claim 1, characterized in that said one of the ABOVE cooking units has a medium- -. open electric heating and a means of supporting "\.. food adapts to be supported near the top of IJ envelope cited above when said cooking unit is in place in a recess of said shell to withstand. - Food as well, 'fat FLOWING food' 'may fall beyond said open heating means to be collected • 11 back of 1'evidement of lIenveloppe, • •' 5 • Furnace according to claim 1, characterizes as 'the units that 5.'une aqueisson ABOVE includes a' number d1 Elements, electric heating enclosed in a cartridge casing forming several delimtant;'. 'Cooking zones on said shell.. 1:' 4 ss Furnace according to revendication- 3 'characterizes in a transmettant.la • heat radiation panel covers -.. The elements "Heated delimited precites'.et a support to receive cooking utensils.. • '- • 5. Furnace selon.la claim 1, characterized in that said' the above cited envelope is provided with means for forming a #. I VSI '... = r and lt; K • • • | r 9V-draft ventilation that will flow into contact with "N ss the walls delimiting the" recesses, in the form' of stove - '. • ABOVE, to remove heat radiated des.unites, • and lt; i - from ABOVE cooking "•.'.. " " 5 6. Furnace according to claim \$ 1 characterizes in | '• he has a way to draw air through 11, | each of the above cooking units in its recess:.. envelope for - entrainer, smoke, 'vaporized fat,' and loads of gas odors caused a "cooking and for e '10 to escape the air, with training, through a.. ' • sheath, "to '1' atmosphere \_ | | -... Furnace according to claim 6, characterizes' in that it has a suitable conduit means" to direct a courant.d'air and beyond eh Contact of 15 walls delimiting ievidement shaped stove cited above for - la remove heat radiated by cuisson.- devices - vt X

**Classifications:**  
**International (ipc 8-9):** F24C15/10 F24C15/18 F24C7/06 (Advanced/Invention); F24C15/00 F24C15/10 F24C7/00 (Core/Invention)  
**International (ipc 1-7):** F24C15/10 F24C15/18 F24C7/06 H05B  
**CPC:** F24C7/06 F24C15/101 F24C15/18  
**European:** F24C15/10B F24C15/18 F24C7/06



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| LU67717 A          | 19730816         | LU19730067717      | 19730601         |

**Priority:**

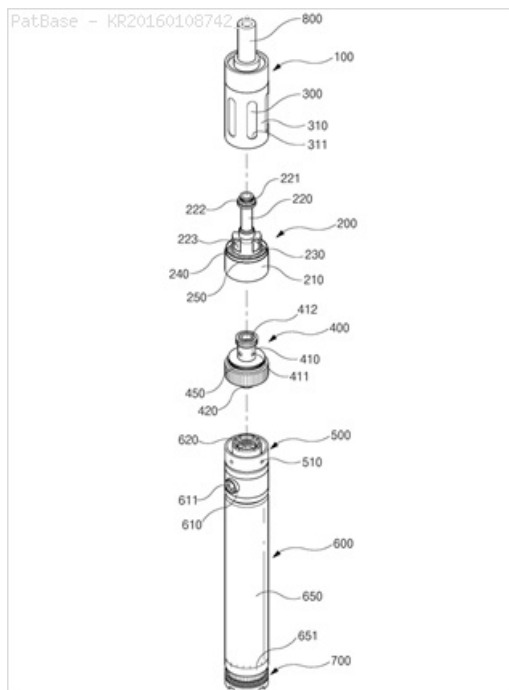
LU19730067717 19730601

**14) Family number: 63567794 (KR20160108742A)** © PatBase

**Title:** ELECTRONIC CIGARETTE OF MULTI-WICK

**Abstract:** The present invention relates to an electronic cigarette having multiple wicks including: a coupler having an upper portion penetrated by and connected to a suction port; a separator having an upper end communicating with the suction port through the coupler, a smoke movement portion being formed on one lower side of the separator such that a solution inflow hole is provided; a cartridge housing disposed such that airtightness is maintained between the coupler and the separator; a vaporizer having a smoke discharge unit at the center of an upper surface for connection to the smoke movement portion and an outside circumference coupled with a lower portion of the separator, multiple coil-wound wicks being alternately disposed in the smoke discharge unit and a solution supply hole of predetermined size being provided at one place outside the smoke discharge unit; and a power supply unit electrically connected to a lower side connection terminal of the vaporizer and applying electric power to the coil.

**Classifications:**  
**International (ipc 8-9):** A24F47/00 A61M15/06 (Advanced/Invention)  
**CPC:** A24F47/008 A61M15/06



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| KR20160108742 A    | 20160920         | KR20150031465      | 20150306         |

#### Priority:

KR20150031465 20150306

**Probable Assignee:** ALBATROSS CO LTD  
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**Inventor(s):** (std): KWON IN SUB

#### 15) Family number: 19442903 (GB713663A)

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**Title:** Improvements in high voltage electric current limiting fuses

**Abstract:** 713,663. Fusible cut-outs. E. M. P. ELECTRIC, Ltd. Aug. 1, 1952, [Aug. 3, 1951.] No. 18433/51. Class 38(I). In a high-voltage currentlimiting fuse comprising a fusible element 3 connected between end caps 4, 5 of a container 10, and wound on a hollow ceramic former 11, a short section of the element 3 is shunted by an element consisting of a heating wire 7 and an indicating device. The latter is in the form of a spring plunger 23 actuated by a capsule 21 containing explosive material 22 which is fired on the heating of the wire 7 when the main element 3 blows, the whole device being accommodated in the former 11. An external wire 25 passing through an insulating sleeve 27 and connected to the heating wire 7 is brought out through an aperture 29, in the former 11 and either connected to the element 3, or to a few turns of wire 30 wound round the former. The wires 7, 25 may be of platinum, and ceramic beads 31 may be provided on the element 3 as an auxiliary breaking means. Sealing rings 16, 17 are provided, as in the fuse described in Specification 665,052. The plunger 23 may trip or operate an isolating switch or alternatively actuate a device which produces discolouration of the fuse when it blows.

#### Classifications:

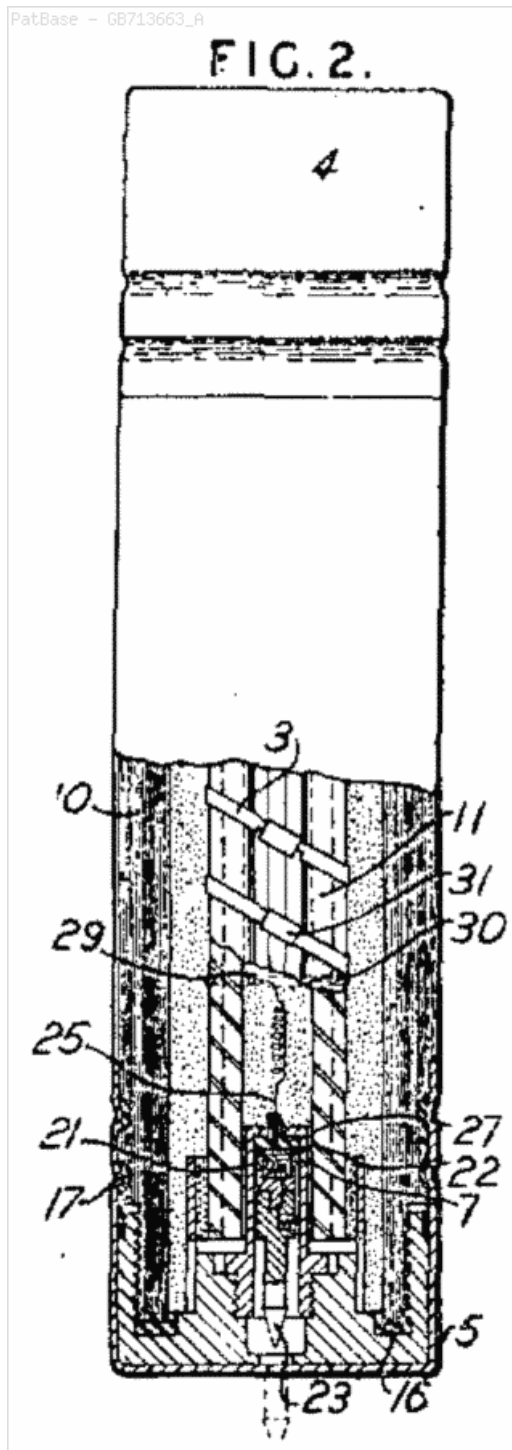
**International (IPC 8-9):** H01H85/30 (Advanced/Invention);

H01H85/00 (Core/Invention)

**International (IPC 1-7):** H01H85/30

**CPC:** H01H85/30

**European:** H01H85/30

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| GB713663 A         | 19540818         | GB19510018433      | 19510803         |

**Priority:**

GB19510018433 19510803

**Probable Assignee:**

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**Assignee(s):**

E M P ELECTRIC LIMITED

**Inventor(s): (std):**

DANNENBERG KURT

**16) Family number: 3985995 (GB1433354A)**

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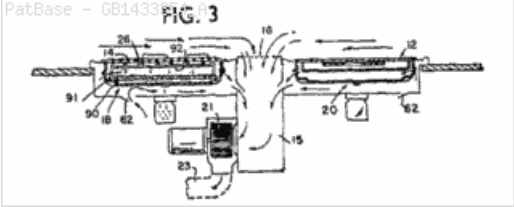
**Title:** STOVE WITH SELECTIVELY INTERCHANGEABLE COOKING APPARATUS

**Abstract:** 1433354 Hot plate units JENN-AIR CORP 4 May 1973 21256/73 Heading F4W A cooking stove includes at least one sheet metal recess 18, 20 having in the bottom thereof a grease outlet; an electrical bayonet-type connection means (46, Fig. 8) disposed within each recess; and first and second types of electrical cooking units either or both of which may be removably received in said recess or recesses with the terminals of each electrical cooking unit being disposed within the connection means with the aid of a locating pin. The first type of cooking unit, a unitized cartridge type cooking unit comprises an upper cooking surface heated by electrical resistance means, e.g. a glasscovered hot plate 12 or a hot plate having ring-shaped elements in the same plane as the cooking surface. The second type of cooking unit is for open broiling

and comprises an open spaced apart electric resistance element 26 which may be beneath a grill 14, a rotisserie or a kebab unit. The recesses include support surfaces 90 to enable the cooking units to be disposed in position. Ventilating air is drawn in through entrance 16 into a plenum chamber 15, thereby inducing air from beneath the cooking units via openings 62.

**Classifications:**

**International (IPC 8-9):** F24C15/10 F24C15/18 (Advanced/Invention);  
F24C15/00 F24C15/10 (Core/Invention)  
**International (IPC 1-7):** F24C15/10 F24C15/20  
**CPC:** F24C15/101 F24C15/18 F24C15/2042  
**European:** F24C15/10B F24C15/18



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| GB1433354 A        | 19760428         | GB19730021256      | 19730504         |

**Priority:**

GB19730021256 19730504

**Probable Assignee:**

JENN AIR CORP

**Assignee(s):** (std):

JENN AIR CORP

**17) Family number: 3395441 (US5060671A)**

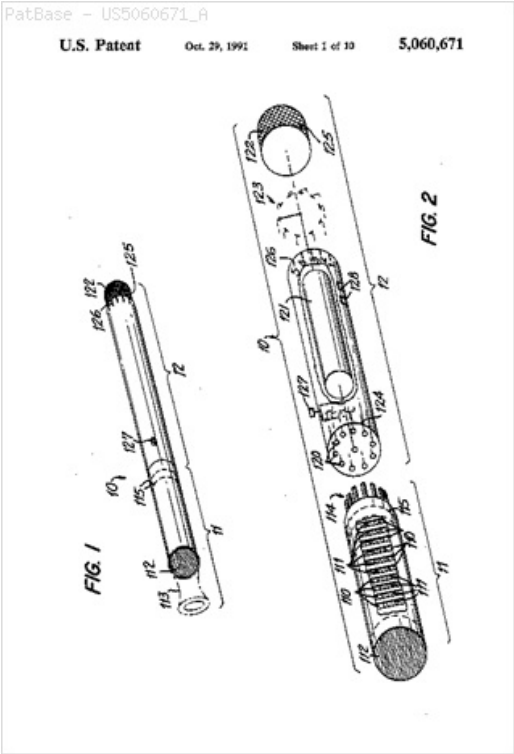
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**Title:** FLAVOR GENERATING ARTICLE

**Abstract:** An article is provided in which a flavor generating medium is electrically heated to evolve inhalable flavors or other components in vapor or aerosol form. The article has a plurality of charges of the flavor generating medium which are heated sequentially to provide individual puffs.

**Classifications:**

**International (IPC 8-9):** A24F47/00 A61M15/06 (Advanced/Invention);  
A61M15/06 (Advanced/Non-invention);  
A24F47/00 A61M15/06 (Core/Invention)  
**International (IPC 1-7):** A24D1/00 A24D1/18 A24F47/00 A47J27/026  
A61M15/06 H05B3/14 H05B3/40  
**CPC:** A24F47/008  
**European:** A24F47/00B2E  
**US:** 128/200.14 128/202.21 128/203.17 128/203.26 128/203.27  
131/128 131/194 131/195 131/196 131/200.14 131/202.21  
131/203.26 131/203.27 131/273 131/329 131/335



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AT120931 E         | 19950415         | AT19900312672T     | 19901120         |
| AU199067622 A1     | 19910606         | AU19900067622      | 19901130         |
| AU642448 B2        | 19931021         | AU19900067622      | 19901130         |
| CA2031227 AA       | 19910602         | CA19902031227      | 19901130         |
| CA2031227 C        | 19970624         | CA19902031227      | 19901130         |
| DE69018577 D1      | 19950518         | DE19906018577      | 19901120         |
| DE69018577 T2      | 19951130         | DE19906018577T     | 19901120         |
| DK0430566 T3       | 19950814         | DK19900312672T     | 19901120         |
| EP0430566 A2       | 19910605         | EP19900312672      | 19901120         |
| EP0430566 A3       | 19920603         | EP19900312672      | 19901120         |
| EP0430566 B1       | 19950412         | EP19900312672      | 19901120         |
| ES2071045 T3       | 19950616         | ES19900312672T     | 19901120         |
| JP3258657 B2       | 20020218         | JP19900341215      | 19901130         |
| JP3277265 A2       | 19911209         | JP19900341215      | 19901130         |
| KR0178387 B1       | 19990201         | KR19900019698      | 19901201         |
| KR19910011179 A    | 19910807         | KR19900019698      | 19901201         |
| NO176463 B         | 19950102         | NO19900005151      | 19901128         |
| NO176463 C         | 19950412         | NO19900005151      | 19901128         |
| NO905151 A         | 19910603         | NO19900005151      | 19901128         |

|             |          |               |          |
|-------------|----------|---------------|----------|
| NO905151 A0 | 19901128 | NO19900005151 | 19901128 |
| NO905151 L  | 19910603 | NO19900005151 | 19901128 |
| TR25309 A   | 19930101 | TR19900001146 | 19901130 |
| US5060671 A | 19911029 | US19890444746 | 19891201 |
| US5269327 A | 19931214 | US19910741736 | 19910807 |

**Priority:**

US19890444746 19891201 CA19902031227 19901130 US19910741736 19910807

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**Designated states:** AT BE CH DE DK ES FR GB GR IT LI NL SE