

Nov. 8, 1938.

J. ROBINSON

2,135,535

ELECTRIC VAPORIZER

Original Filed Oct. 10, 1935

Fig. 1.

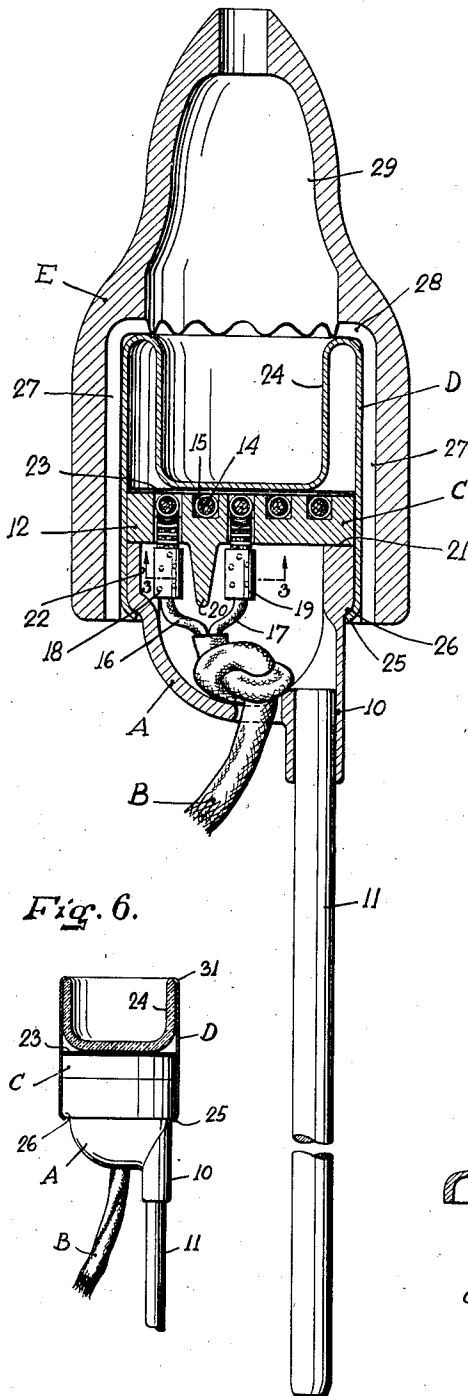


Fig. 2.

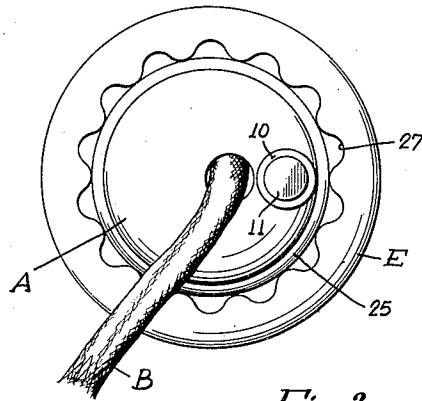


Fig. 3.

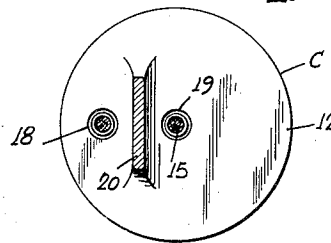


Fig. 4.

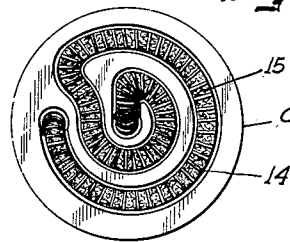


Fig. 5.

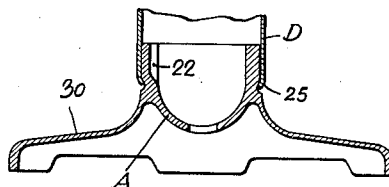
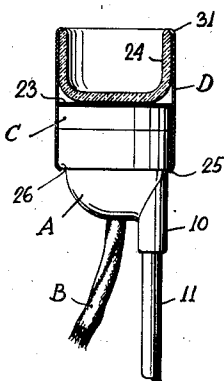


Fig. 6.



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UNITED STATES PATENT OFFICE

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ELECTRIC VAPORIZER

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Application October 10, 1935, Serial No. 44,362

Renewed November 4, 1937

6 Claims. (Cl. 128—192)

This invention relates to electrical vaporizer of the individual or portable hand type. Among the objects are to simplify this type of vaporizer and reduce its cost of manufacture so that the instrument may be available to the masses.

With these and other objects in mind the invention resides in the constructions, arrangements and improvements hereinafter described, pointed out in the appended claims and illustrated in the accompanying drawing in which

Figure 1 is a vertical section through my improvement;

Figure 2 is a bottom plan view of the construction shown in Figure 1;

Figure 3 is a sectional plan view taken on approximately the line 3—3 of Figure 1;

Figure 4 is a plan view of the improved heater employed with my invention;

Figure 5 is a vertical section through a base or stand for supporting my improvement, and

Figure 6 is a modification of the retainer or member D and the cup 24 of my improvement wherein the cup is formed separately of the member D and is made preferably of pyrex glass.

In carrying out my invention I provide a simple cup-shaped hollow base A from one side of which a cylindrical hollow shank or seat 10 extends downwardly a short distance and tightly receives a suitable stem 11 made of wood or any other desirable material. Adjacent this seat 10 an opening is provided in the bottom of the base A and through this opening the usual electric cord B is passed. The cord is knotted inside the base A to relieve my improved heating element C of strains when in use. The heating element comprises a support 12 made of suitable material such as porcelain or thermorock. In the upper face of the support I provide a spiral or staggered way which receives a suitable resistance coil 14 wound on a suitable asbestos core 15. One end of this coil extends downwardly through an opening arranged at approximately the center of the support 12, and the other end extends downwardly through the support at a point near the periphery of the latter. Thus both ends of the resistance coil project downwardly through the support 12 and are spaced apart, the base A being provided with a groove 22 to receive the outer end of the coil. The coil ends are firmly anchored to the cables 16 and 17 of the cord B by means of tubular metal shields or anchors 18—19. To prevent these shields contacting with each other causing a short circuit, I provide the support 12 with a downwardly extending lug or lip 20. The heater C when thus

assembled and connected to the cord B is set on the flat upper face 21 of the base A with the terminal 18 occupying a part of the groove 22. An insulating disc 23 is placed on top of the heater C and serves to retain the coil 14 at its groove or way in the heater. A retainer or member D, which includes an integral cup 24 formed by turning one end of the retainer back into itself, is set over the heater C and the upper end of the base A. The lower edge 25 of the retainer D is then spun or crimped tightly around a shoulder 26 on the base. This crimping or spinning should be such as to draw the flat bottom surface of the heater C tightly against the upper face 21 of the base A, and such as to prevent a liquid seeping up between the retainer or member D and the base A into contact with the heater C. The hollow cap E is then set in place over the retainer or member D, its series of long vertical grooves or serrations 27 admitting air currents to the cup 24 on inhalation. These currents are heated as they pass along the outer hot surface of the retainer or member D, and are turned into the cup by the inward curve 28 at the top of the grooves. There the air currents pick up the hot vapors of the medicament being vaporized in the cup 24 and carry them up through the hollow nasal member 29 to the nasal passages of the user.

Ordinarily it is preferable to empty my improved vaporizer after each application, but occasionally it is desired to maintain it vertical between treatments. For this purpose the stem 11 is provided and by it my improved vaporizer may be supported approximately upright in a tumbler or other hollow receptacle which will suitably receive the stem 11. It will be understood that while the stem shown in the accompanying drawing extends parallel to the vertical center line of my improved vaporizer, the stem may if desired be inclined to such line.

In the modification shown in Figure 5 the base A terminates in an enlarged position or integral stand or base 30 which effectively supports the vaporizer upright. In the modification shown in Figure 6 the retainer or member D is formed separately of the cup and is turned in at 31 to grip the top of the cup 24 to support and lock the latter in place. With this form of my improvement the cup may be, and preferably is, formed of suitable glass.

The electric current is admitted to the heater C, and turned off, by the usual electric light socket switch, or plug-in terminal on the lower end of the cord B. A switch may be arranged

in the cup-shaped base A but to do so adds considerably to the cost of manufacturing my improvement, and is in the manner stated omitted for that reason.

5 What I claim is:

1. An electric vaporizer, comprising in combination, a hollow base, a heater mounted on the top of said base, said heater including a horizontally arranged support and a resistance coil, said coil being wound into a seat formed in the upper side of said support, the opposite ends of said coil being extended downwardly through openings in said support, an electric cord extending into said base, securing devices for anchoring the strands of said cord to the opposite ends of said resistance coil, insulating means between said securing devices to prevent their engaging one another, and means for locking said heater to said base, said means including a cup mounted on said heater, and a retaining member connected at its upper end with said cup and interlocked at its lower end with said base.

2. An electric vaporizer, comprising in combination a short cup-shaped hollow base, a heater mounted on the top of said base, said heater including a support and a resistance coil, said coil being wound into a seat formed on the upper side of said support, the opposite ends of said coil being extended downwardly through openings in said support, an electric cord extending into said base and secured in the latter against undue service strains, devices for connecting said cord into operative relation to said resistance coil, a glass container mounted on said heater in retaining relation to said coil, means for holding said coil in said seat and for locking said container and said heater to said base, said means including a metallic retaining member set over said heater and over the upper end of said base and having at its upper end a part which grips said container and having at its lower end a part which is turned inwardly against said base into positive interlocked engagement therewith to clamp the several parts in place.

3. An electric vaporizer, comprising in combination, an elongated hollow cap having the general outline of a funnel, a stubby cup-shaped hol-

low base projecting a short distance below the bottom of said cap, a container mounted on said base, an electrical heater between the top of said base and the bottom of said container, an electric cord extending into said base and knotted to engage the latter to relieve the cord of undue service strains, and a relatively long stem connected to said base adjacent said cord and extending downwardly from the base, said stem serving as a handle for holding said vaporizer in the hand and for supporting the vaporizer when not in use.

4. A vaporizer of the class described, comprising a hollow base having a handle receiving socket, a handle removably received in said socket, a heating element mounted on said base, and a medicament container disposed above said heating element and having a sleeve extension attached to the upper portion of the base for securing said container and heating element to said base.

5. A vaporizer of the class described, comprising a hollow base having a handle receiving socket, a handle removably received in said socket, a heating element mounted upon said base, a medicament container disposed above said heating element and having a sleeve extension attached to the upper portion of the base for securing said container and heating element to said base, and a removable cap member adapted to fit over said container and about said sleeve to insulate the same and having a nasal portion positioned above said container, and a skirt portion providing a passage to admit air currents to the nasal portion.

6. A vaporizer of the class described, comprising a hollow base having a handle receiving socket, a handle in said socket, a heating element mounted upon said base, a cup-shaped medicament container of heat-resistant material disposed above said heating element, a retainer sleeve encircling the medicament container, the heating element, and the upper portion of the base, and gripping the rim of the cup at its upper extremity and gripping the base at its lower extremity.

JOSEPH ROBINSON.