

Oct. 12, 1948.

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2,451,238

VAPORIZER

Filed May 20, 1946

Fig. 1.

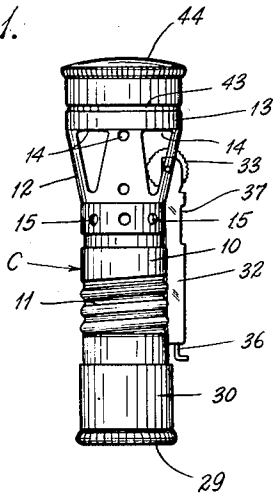


Fig. 2.

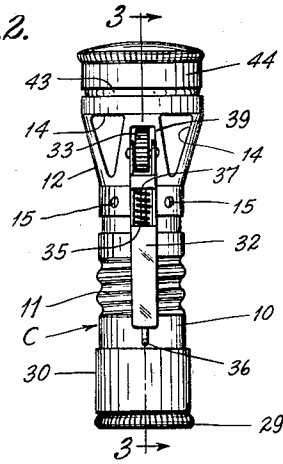


Fig. 3.

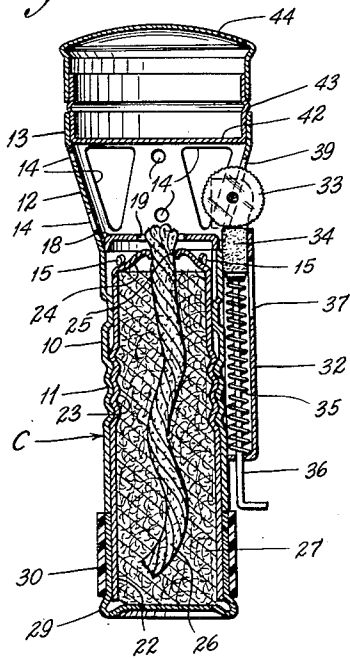
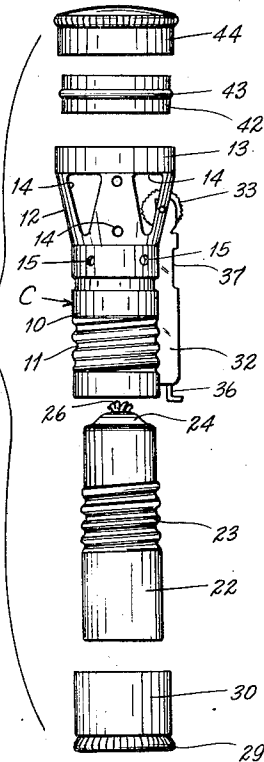


Fig. 4.



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UNITED STATES PATENT OFFICE

2,451,238

VAPORIZER

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Application May 20, 1946, Serial No. 671,086

6 Claims. (Cl. 21-117)

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The present invention relates to a vaporizer. More particularly, it relates to a vaporizer for inhalant material that usually is provided in a jelly or salve-like form, which vaporizer may conveniently be carried in the pocket, and which has an igniter and flame supporting means readily operable so that the medicine may be vaporized whenever it is needed.

This invention is an improvement upon copending application Serial No. 615,362, filed September 10, 1945, by this inventor.

It is an object of the present invention to provide a vaporizer of this type in which the height of the flame may be easily adjusted. A particular object is to provide for the flame adjustment by an adjustable connection between a casing and a fuel cartridge barrel, providing for adjustment of a wick.

A further object of the invention is to provide for the proper amount of both primary and secondary air to be available for the flame at the wick.

Further objects include the provision of a device of this kind that may be easily and inexpensively fabricated, and yet which will be durable and dependable in use.

Other objects will appear from the description to follow and from the drawings, in which:

Fig. 1 is an elevation of the device;

Fig. 2 is an elevation from the right side of Fig. 1;

Fig. 3 is a transverse section, taken on the line 3-3 of Fig. 2; and

Fig. 4 is an extended view of the several parts, showing the manner in which they interfit.

The device consists of an outer casing C that is generally tubular. It has a lower cylindrical part 10 with threads 11; and it has an upper flaring part 12 terminating in a sleeve-like portion 13. The upper part is provided with a suitable number of openings 14 which provide air to the wick, and also provide escape for combustion gases. The top part of the lower section 10 is also provided with additional openings 15 to provide air to the wick.

Immediately above the openings 15 and at the junction of the lower and upper sections 10 and 12 of the casing C, there is a flame baffle 18, in the form of a flanged disc that is permanently united to the casing C at the point indicated. The baffle 18 has a central opening 19. This central opening 19 receives the wick, as will appear.

The lower part 10 of the casing C is adopted to receive an inner cartridge 22 that is generally tubular. The cartridge 22 has threads 23 that are

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designed to inter-operate with the threads 11 on the lower casing section 10. By this means, the cartridge 22 may be adjustably located at a proper point within the lower section 10.

The cartridge 22 has a somewhat tapering upper end wall 24, which provides a center opening 25 to receive and hold a wick 26. This wick extends down into the cartridge 22 and is embedded in suitable liquid fuel holding means 27, such as cotton.

When the cartridge 22 is inserted into the casing 10 and the threads engaged, a closure cap 29 may be frictionally slid over the projecting part of the cartridge 22 and sealed tightly therewith. Preferably, the cap 29 has a band 30 of insulating material, such as plastic, around it. This furnishes a mean to hold the vaporizer even should it become hot.

The lower section 10 of the casing C at one side supports a flint sleeve 32. This sleeve, in turn, supports an abrasive wheel 33 at its top end. It also contains a flint 34 that is urged upwardly by a coil spring 35 under control of a plunger 36 with a suitable handle thereon. In order to permit convenient replacement of flints, an opening 37 is provided in the side of the sleeve 32. When the plunger 36 is drawn downwardly, a new flint may be inserted into place.

The wheel 33 projects through an opening 39 in the side of the upper section and is arranged so that, when the wheel is turned, it will deliver a spark to the wick.

The sleeve 13 at the top of the casing C supports a pan 42 that preferably is permanently attached into the casing, although it may be removable if desired. The pan 42 is flanged at 43 to limit its downward movement in the sleeve-like top section 13 of the casing. It is adapted also to receive a closure cap 44 that fits over it above the flange 43.

In operation, the pan 42 will contain a vaporizable medicine. This may be in the form of a jelly or it may be supplied as a disc readily insertable into the pan 42. For storage, such as for being kept in the pocket, the cap 44 will be disposed over the top of the pan 42, so that the material cannot escape therefrom. When it is desired to inhale fumes of the medicant, the cap 44 is removed. Then the wheel 33, which projects conveniently outside of the casing, is rotated to deliver a spark to the projecting part of the wick 26, which is, of course, supplied with suitable liquid fuel from the cartridge 22. This fuel ignites and thereby provides a flame on the bottom of the pan 42 which causes the jelly or

the like to vaporize and supply fumes that may be inhaled.

The primary air for the wick is supplied through the openings 15. These openings can deliver air to the wick owing to the fact that the center part of the top wall of the cartridge 22 projects upwardly, as appears clearly in Fig. 3. Secondary air is provided through the openings 14, these openings also providing for the escape of the gases of combustion from the wick itself.

When it is desired to refuel the cartridge, it is necessary only to pull the lower cap 29 off of the cartridge and pour in the necessary amount of fuel.

It will also be understood that the refueling of the medicine pan 42 is equally easy. This may be done by filling the pan with medicine in any well known way, or the medicine may be supplied in cartridges that fit readily into the pan 42.

One of the features of the present invention is the flame adjustment. It has been found that the amount of flame must be controllable in order to avoid the possibility, for example, of igniting the fumes of the medicine where the medicine consists of a combustible material. Also, it is desirable not to have excess flame because the same is awkward to handle and is apt to burn the user. And too much flame produces excess heating of the device itself.

On the other hand, too little flame will not provide adequate vaporization or will operate too slowly.

The proper flame can be obtained in the present device by adjusting the amount of projection of the wick 25 through the port 19 of the flame baffle plate 18. This adjustment is easily obtained by turning the cartridge 22 (or merely the lower cap 29), so that threads 23 in the cartridge interoperate with the threads 11 on the casing, move the wick upwardly or downwardly to dispose the wick 25 properly through the opening 19. As the wick is raised, the size of the flame is increased.

By the foregoing arrangement, which is obviously both inexpensive and durable, a proper flame may be provided. The danger of igniting the fumes is eliminated, and yet the vaporization may be obtained at desired speed.

It will be seen that this device accomplishes the objects set forth for it, and affords a convenient and satisfactory pocket type of vaporizer.

What is claimed is:

1. In a pocket vaporizer, an outer casing, a container for vaporizable material supported in the casing, a baffle means in the casing, a wick and fuel cartridge, a wick in the cartridge and projecting therefrom toward the baffle, the baffle having an opening through which the wick may project, and interengageable adjustable means between the casing and the cartridge whereby movement of the cartridge may regulate the projection of the wick through the opening in the baffle and thereby regulate the flame size.

2. In a pocket vaporizer, a casing, a container for vaporizable material supported on the casing, baffle means in the casing spaced below the container to provide a flame space therebetween, a wick supporting means, and means mounting the wick supporting means in the casing below the baffle means, said mounting means providing adjustment of the wick toward and from the baffle means to regulate its position relative to the flame space, and to adjust the size of the flame.

3. In a pocket vaporizer, a tubular casing, a container for vaporizable material at the upper end of the casing, a baffle below the container, providing a flame space therebetween, a hollow cylindrical cartridge interfitting into the casing below the baffle, the cartridge being adapted to hold a wick adjacent the baffle, and interengaging means between the cartridge and the casing for holding the two together, said interengaging means providing for adjustment of the cartridge in the casing.

4. In a pocket vaporizer, a tubular casing, a container for vaporizable material at the upper end of the casing, a baffle below the container, providing a flame space therebetween, a hollow cylindrical cartridge interfitting into the casing below the baffle, the cartridge being adapted to hold a wick adjacent the baffle, and interengaging means between the cartridge and the casing for holding the two together, said interengaging means comprising threads between the cartridge and casing, providing for adjustment of the cartridge in the casing.

5. In a pocket vaporizer, a tubular casing, a container for vaporizable material at the upper end of the casing, a baffle below the container, providing a flame space therebetween, a hollow cylindrical cartridge interfitting into the casing below the baffle, the cartridge being adapted to hold a wick adjacent the baffle, and interengaging means between the cartridge and the casing for holding the two together, said interengaging means providing for adjustment of the cartridge in the casing, and a cap closing the lower end of the cartridge.

6. In a pocket type of vaporizer, a casing, means for providing a flame within the casing, a container for vaporizable material disposed above said flame providing means, a baffle means adjacent said flame providing means, and means to adjust the relative positions of the baffle and flame providing means whereby the size of the flame obtainable from said flame providing means may be regulated.

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The following references are of record in the file of this patent:

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