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W. E. KEENE

2,480,139

LIGHTER

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Fig. 1.

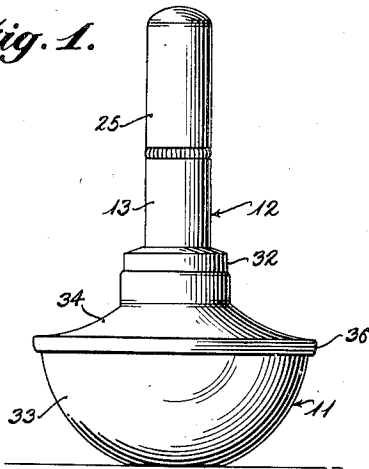


Fig. 2.

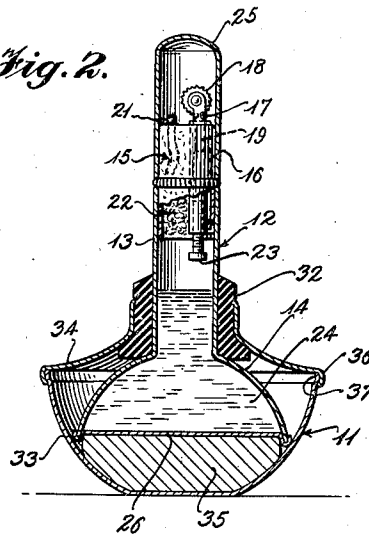


Fig. 3.

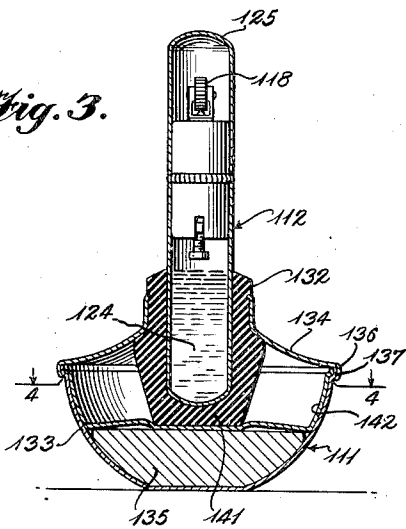


Fig. 5.

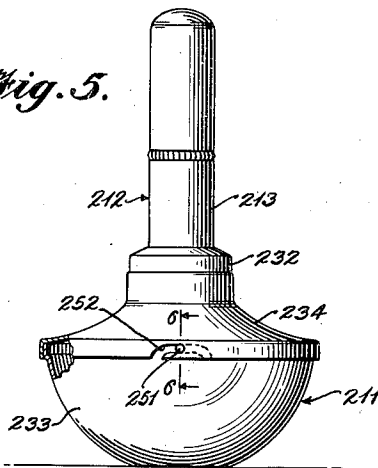


Fig. 4.

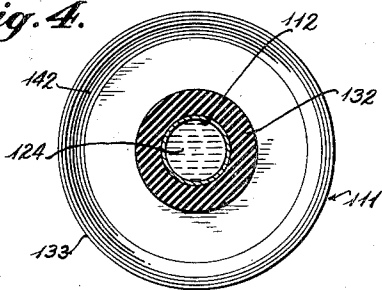
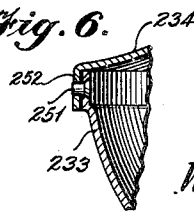


Fig. 6.



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LIGHTER

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5 Claims. (Cl. 67-4.1)

1

This invention relates to lighters, such as those ordinarily used for lighting cigars and cigarettes, and is especially directed to a lighter which is either permanently associated with or detachably mounted on a novel base particularly adapted to remain upon a counter, desk, table or other similar support.

One of the objects of my invention is the provision of the combination of a lighter most advantageously used in a vertical position, together with a base so arranged that the lighter is maintained by the base normally upright in said advantageous position, and if displaced is returned by the base to such position.

A further object of my invention is the provision in a lighter having an automatically returning base in combination therewith of resilient means for preventing shock to the lighter, should it be accidentally struck.

A further object of my invention is the provision in a combination including a vertical cigarette lighter and an automatically returning base therefor, of an enlarged reservoir capable of holding a relatively large amount of lighter fluid.

A further object of my invention is the provision in combination with an automatically returning base of a detachable cigarette lighter which may, if desired, be removed from the base and carried away by the user in his pocket.

Features of the invention include a novel resilient support adapted to hold the lighter in place supported in an upright position within the automatically returning base; and also adapted to seal the junction of the base and lighter against liquid; the utilization of a large portion of the interior of the base as a storage space for fluid for the lighter; and storage space being so designed as not to interfere with the balancing feature; a quickly detachable means for removing the upper portion of the lighter from the base; and provision whereby either the lower end of the lighter itself or the resilient support therefor maintains the weight of the automatically returning base in its proper position.

The above and other objects and novel features of the invention will appear more fully hereinafter from the following detailed description when taken in conjunction with the accompanying drawings.

It is to be expressly understood, however, that the drawings are employed for purposes of illustration only, and are not designed as a definition of the limits of the invention, reference being had for this purpose to the appended claims.

Prior hereto lighters have been proposed, in-

2

tended to be used on tables, cigar-stand counters, etc. and supports for various articles having a weighted base so arranged that whenever the article is displaced from the normal upright position it will, by gravity, immediately be returned thereto. However, so far as I am aware, no one prior to my invention has provided in combination a lighter together with a weighted base adapted to return automatically to its normal upright position, so that the lighter may normally be maintained in an upright position and cushioned against shocks, and so that the liquid thereof is normally prevented from flowing into the lighting end of the lighter with consequent disagreeable results.

The invention relates therefore to the combination of an automatically returning base with a device for producing a flame spark or other heat producing means which may be used for various purposes, such as the lighting of cigars, cigarettes, pipes, etc.

In the drawing, wherein like reference numerals indicate like parts:

Figure 1 is a view in elevation of one form of my invention;

Figure 2 is a view in vertical section of the embodiment of the invention illustrated in Figure 1, having a portion of the lighter unit, however, shown in full lines;

Figure 3 is a view in vertical section similar to Figure 2, showing an alternate form or embodiment of my invention;

Figure 4 is a view in horizontal section of the embodiment shown in Figure 3 taken substantially on the line 4-4 thereof;

Figure 5 is a view mainly in elevation but having parts broken away and having other parts in section and in dotted lines showing another alternate form of my invention; and,

Figure 6 is a fragmentary sectional view taken substantially on the line 6-6 of Figure 5.

Referring in detail to the drawings, it may be seen that I have shown in Figure 1 a cigar or cigarette lighter comprising a base portion 11 and a lighter portion 12. As disclosed more clearly in Figure 2, the lighter portion comprises a substantially cylindrical case 13 which is enlarged at its lower end as at 14. In the case 13, there is fitted a lighter unit 15 including a cylindrical casing 16 on which there is rotatably mounted on standards 17 an abrasive wheel 18 adapted to contact with a flint 19. Extending through the top of the casing 16 is a wick 21 which, at its opposite end, extends into the interior of the casing in intimate association with a mass of cot-

3

ton waste 22 designed to hold a portion of the liquid lighter fuel so that the fuel may be drawn by the wick 21 to the top thereof and may be ignited by a spark produced by the abrasive wheel 18 and the flint 19. A threaded screw 23 is provided for maintaining the flint 19 nearly in contact with the wheel 18. By reason of the enlargement 14 in the bottom of the case 13, a very much increased space is provided for lighter fuel than would be possible were the lighter wholly of cylindrical shape. This enlarged space is indicated by the numeral 24. The upper portion of the lighter is normally covered by a cap 25.

The lighter case 13 is resiliently mounted in a base generally designated as 11 by means of a rubber washer or gasket 32 which holds the lighter resiliently in place therein, prevents rattling of the parts, aids the lighter in absorbing shocks which otherwise might injure it, seals the joint against entrance of liquid and allows easy assembly even though the parts should be manufactured with much greater tolerances than would be otherwise possible. The base 11 comprises a lower portion or casing 33, a cover or upper portion 34 secured thereto, and a weight 35 of lead or other similar heavy material. It may be seen that the weight 35 is held against the lower portion 33 of the base by means of the enlarged lower end 14 of the case 13 and that this enlarged lower end 14 is held resiliently against the weight 35 by the gasket 32, which is, in turn, held in place by the upper portion 34. The upper portion 34 is secured to the lower portion 33 by a flange 36 of the portion 34 which is crimped over flange 37 at the upper edge of the portion 33.

In the embodiment shown in Figure 3 the lighter 112 having a cap 125 and an abrasive wheel 118 is formed at its lower end with a reservoir 124 uniform in cross section with the upper portion of the lighter. The resilient support 132 is closed at its lower end as at 141, so that the lighter 112, while it has a smaller reservoir space than that shown in my preferred embodiment, is insulated entirely from the base 111 and resiliently mounted in all respects within said base.

The cartridge-shaped lighter unit 112 may, if desired, be detached from the base 111 and used as a pocket lighter.

The weight 135 is resiliently held in place indirectly by the rubber mounting 132. The upper portion 134 of the base is secured to the lower portion 133 by the flange 136 crimped around the flange 137 at the upper end of said lower portion 133. A pan 142 is interposed between the rubber support 132 and the weight 135 and holds the weight 135 securely in place, the pan being held both by the resilient support 132 and by the upper portion of the casing 134.

The embodiment shown in Figures 5 and 6 correspond substantially to that shown in Figures 1 and 2. The case 213 of the lighter 212 mounted within the base 211 by means of a rubber washer 232, but the upper portion 234 of the base 231 is secured to the lower portion 233 thereof by bayonet joints, including pins, such as the pin 251 secured to the lower portion 233 and adapted to cooperate with slots such as the slot 252 formed in the upper portion 234.

In the assembly of the form of my invention illustrated in Figures 1 and 2, the bottom 26 is secured to the lower end 14 of the case 13 so as to form a liquid-tight joint. Then the washer 32 is placed around the lighter, the weight 35 is

4

positioned in the lower portion 33 of the base 11, the upper portion of the base 34 is placed over the washer 32 and the flange 36 is crimped over the flange 37. The lighter unit 15 is inserted in the case 13 and the cover 25 is placed in position.

In the assembly of the form shown in Figures 3 and 4, the weight 135 is placed in the lower portion of the base 133, the pan 142 is placed above the weight, the rubber support 132 is inserted upwardly through the upper portion 134 of the base 111. Then the flange 136 of the upper portion 134 is crimped over the flange 137 of lower portion 133.

The assembly of the form shown in Figures 5 and 6 is similar to that shown in Figures 1 and 2 except that the upper portion 234 is secured to the lower portion 233 by the bayonet joint 251—252 instead of by the crimping process.

In the operation of all of the forms of my invention the unit is adapted to remain upon a stationary support such as a desk, counter or table and should it be struck by any object it may turn upon the rounded bottom of its base, but by reason of the low center of gravity, will return immediately to its normal upright position, as shown in the drawings. The rubber mounting 32, 132 or 232 cooperates with the weighted base to allow the device to be struck without substantial injury, inasmuch as the device "gives" both by reason of the rounded base and by reason of the resilient mounting. The rubber mounting also aids in sealing against liquid leaks. The enlarged reservoir 24 of the embodiment shown in Figures 1 and 2 allows a much greater capacity of lighter fuel than would normally be contained in a lighter of this sort. To use the lighter it is only necessary to remove the cap 25 (or 125) and rotate the wheel 18 (or 118) whereupon a spark will ignite the lighter fluid being drawn up by the wick 21 to give a flame for appropriate use.

As has been previously pointed out, by my invention, I have provided a lighter adapted for use upon a flat support quite rugged in construction, which, by reason of its rounded weighted base, and resilient mounting, is adapted to withstand shocks which could not otherwise be withstood. In addition, in the preferred embodiment of my invention I have provided a lighter with a relatively large capacity for lighter fuel.

As previously pointed out, the lighter portion 112 may be detached from the base 111 and used as a pocket lighter. The lighters shown in Figures 1 and 2 and 5 and 6 may be similarly used. For example, in the form shown in Figures 1 and 2, the lighter unit 15 together with the cap 25 may be removed from the base 11 and the case 13 and used as a pocket unit. Because of the uniform shape, the cap 25 may, if desired, be then used as a lower casing.

It is to be understood that the above described embodiments of my invention are for the purpose of illustration only and various changes may be made therein without departing from the spirit and scope of my invention.

I claim:

1. In a cigarette lighter an assembly including a wick and spark producing means for igniting the same, the improvements that comprise a casing for holding said assembly, a tumbler type weighted base for holding said casing and resilient means intermediate said casing and said base for resiliently supporting the former in erect position and for establishing a seal between the casing

5

and the base, said casing including a fuel reservoir portion extending substantially below the upper end of said base, whereby the weight of the fuel augments the weight of the base in maintaining said casing in erect position.

2. In a cigarette lighter, an assembly including a wick and spark producing means for igniting the same, the improvements that comprise a casing for holding said assembly, an enlarged hemispherical tumbler type weighted base for said casing, a portion of said casing extending into said base and defining an enlarged hemispherical fuel reservoir, and an annular resilient seal means intermediate said base and casing at the zone where the casing extends into the base.

3. In a cigarette lighter, an assembly including a wick and spark producing means for igniting the same, the improvements that comprise, a cylindrical casing for holding said assembly, a tumbler type weighted base, and resilient means supported by said base and defining a vertically extending socket for quick detachably holding said casing, the portion of said casing that is received in said socket constituting a fuel reservoir whereby the weight of the fuel augments that of the base in maintaining the casing in erect position.

4. In a cigarette lighter, an assembly including a wick and spark producing means for igniting the same, the improvements that comprise, a casing for holding said assembly, said casing including a cylindrical upper portion and an enlarged hemispherical lower portion terminating in a flat base, said enlarged portion functioning as a fuel reservoir, a hemispherical tumbler type base por-

6

tion, resilient sealing means surrounding the lower cylindrical portion of said casing, and a cover for said base, said cover holding said resilient means and through it said casing with its enlarged portion within said base.

5. In a cigarette lighter, an assembly including a wick and spark producing means for igniting the same, the improvements that comprise, a casing for holding said assembly, said casing including a cylindrical upper portion and an enlarged hemispherical lower portion terminating in a flat base, said enlarged portion functioning as a fuel reservoir, a hemispherical tumbler type base portion, resilient sealing means surrounding the lower cylindrical portion of said casing, and a quick detachable cover for said base, said cover holding said resilient means and through it said casing with its enlarged portion within said base.

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