

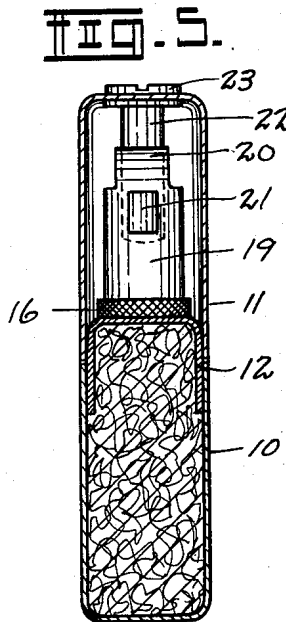
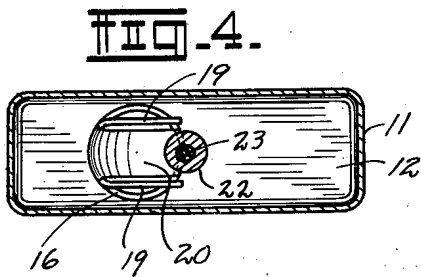
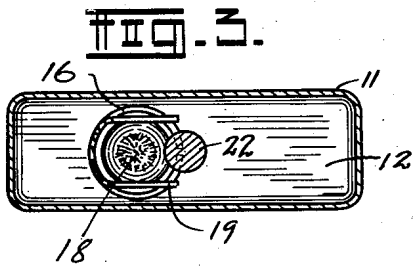
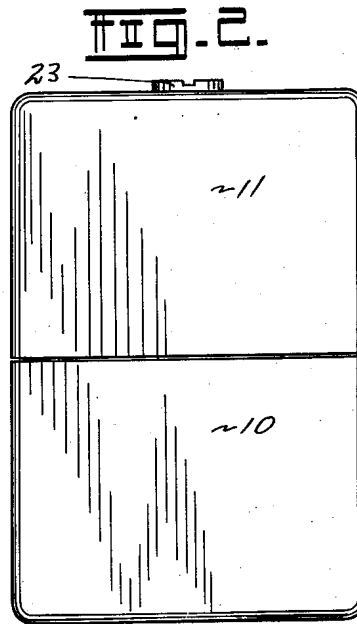
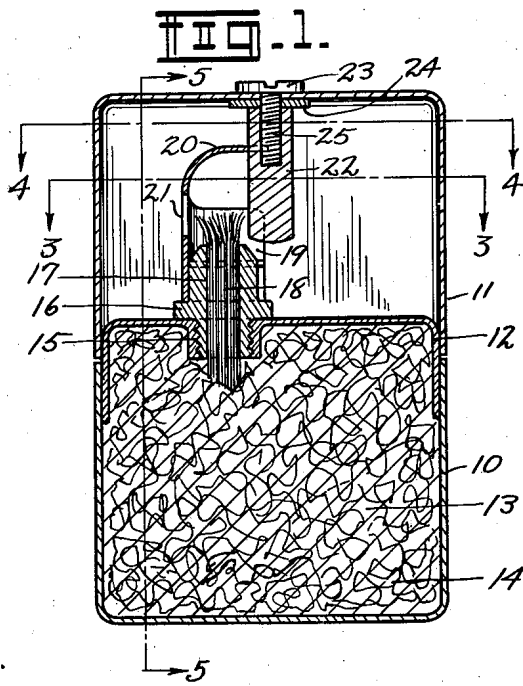
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2,469,768

LIGHTER

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# UNITED STATES PATENT OFFICE

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LIGHTER

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2 Claims. (Cl. 67-7.1)

1

This invention relates to a lighter and more particularly to a lighter designed to ignite by separating two parts thereof, such as a body and a cap portion.

The principal object of the invention is the provision of a self-igniting lighter.

A further object of the invention is the provision of a lighter utilizing motion of removing a cap portion from a body portion thereof to institute ignition of a wick therein.

A still further object of the invention is the provision of a lighter having means for creating sparks in connection with a lighter stone and said means formed to direct the said sparks against a wick in the said lighter.

A still further object of the invention is the provision of means for guarding a flame of a lighter from wind so as to prevent the flame from being accidentally extinguished.

The lighter shown and described herein has been designed to form a simple and efficient pocket lighter which is ignited by the motion of removing a cap portion from a body portion thereof. The cap portion is provided with a depending flint stone and the body portion is provided with an upright curved scraper positioned for registry with the stone when the cap is in position on the lighter. Removal of the cap from the body portion of the lighter will of necessity cause the wick to ignite by reason of the respective positioning of the flint stone and scraper of the lighter.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a side elevation with parts in cross section illustrating a lighter.

Figure 2 is a side elevation of the lighter shown in Figure 1.

Figure 3 is a horizontal cross section taken on line 3-3 of Figure 1.

Figure 4 is a horizontal cross section taken on line 4-4 of Figure 1.

Figure 5 is a vertical cross section taken on line 5-5 of Figure 1.

By referring to the drawings and Figures 1 and 2 in particular, it will be seen that a pocket lighter has been disclosed which consists of a body por-

2

tion 10 having a cap portion 11 for registry with an upper portion 12 of the body portion 10. The upper portion 12 with the body portion 10 defines a chamber 13 in which suitable fluid is positioned and, as is customary in lighter constructions, this chamber 13 is supplied with a filling of fibrous material 14. A threaded orifice 15 is provided in the upper portion 12 of the body 10 and serves to position a fitting 16 having a threaded extension depending therefrom. The fitting 16 and the threaded extension have a vertically positioned passageway 17 therein in which a wick 18 is positioned. The lowermost end of the wick 18 extends downwardly into the passageway 17 of the body portion 10 of the lighter. The upper end of the wick 18 extends above the uppermost, tapered end of the fitting 16.

The fitting 16 is provided with a flame guard member 19 which is affixed to the upper portion of the fitting 16 and which guard member 19 is U-shaped in horizontal cross section and has an upwardly and inwardly curved extension 20 which forms a scraper. An opening 21 is formed in the back of the guard member 19 and serves to admit air into the combustion chamber defined by the extending arms of the U-shaped body members of the flame guard 19 which partially surround the upper end of the wick 18.

The cap portion 11 of the lighter has a flint containing stone 22 positioned therein in depending relation thereto by means of a bolt 23. A washer 24 is provided between the uppermost end of the flint containing stone 22 and the inner portion of the cap 11. The bolt 23 threadably engages a threaded opening 25 in the flint carrying stone 22. The chamber 13 of the body member 10 of the lighter is filled with a suitable fluid by the removal of the fitting 16 from the threaded orifice 15 thereby providing access to the chamber 13.

It will be observed that the upper, outermost end of the scraper portion 20 of the guard member 19 is in engagement with the vertically positioned, depending flint containing stone 22 affixed within the cap portion 11 of the lighter. The positioning of the scraper 20 adjacent the stone 22 is such that when the cap portion 11 is removed, sparks are caused by the engagement of the upwardly and inwardly curved end of the scraper with the stone 22, which sparks are directed downwardly to the wick 18 by the curved shape of the scraper 20 and thus concentrate the sparks against the wick 18 insuring immediate ignition thereof. Thus, when the cap 11 is removed manually from the body portion 10 of the

3

lighter, the wick 18 is ignited. The flame is extinguished by simply replacing the cap 11 on the lighter.

In Figure 3 of the drawings, a horizontal cross section of the lighter is shown and the protected positioning of the wick 18 is clearly disclosed.

In Figure 4 of the drawings, the scraper portion 20 of the guard member 19 of the lighter is shown with the tip of the curved end section shaped to correspond to the round exterior of the stone 22 which provides a relatively large area of contact between the scraper 20 and the stone 22 thereby insuring sufficient sparking to cause ignition of the wick 18.

In Figure 5 of the drawings, which is a vertical section, the opening 21 in the back portion of the guard member 19 is shown. The opening 21 provides for the admittance of air to the area of the wick 18 to maintain combustion.

It will thus be seen that a simple and efficient pocket lighter has been disclosed which is ignited when the cap and body portions thereof are separated. The lighter may be simply and inexpensively formed and, by reason of its compact design, forms an attractive article of commerce. It will also be seen that the ignition of the wick portion of the lighter is insured by the novel formation of the guard and scraper portions 19 and 20, respectively, thereof, the scraper portion 20 being so designed as to provide wide surface contact with the depending flint carrying stone member of the lighter and at the same time to cause the direction of sparks created by the movement of these parts to the wick lying in under the scraper where the sparks are concentrated to insure the ignition thereof. The guard member 19 protects the flame and yet provides for necessary air for combustion by reason of the opening 21 therein. In refilling the lighter it is only necessary to unscrew the fitting 16 to gain access to the interior of the body portion and thus a lighter possessing clean exterior lines has been devised which is not dependent in operation upon rotating of wheels, pressing of levers or tripping of springs, as customarily employed with lighter mechanisms.

Having thus described my invention, what I claim is:

1. In a lighter including a body member comprising a fluid chamber, a threaded orifice in said body member communicating with said fluid chamber, a threaded fitting positioned in said

4

threaded orifice, a wick positioned through said threaded fitting, said threaded fitting being removable to provide access to said chamber for refilling the same with lighter fluid, a combination guard and scraper member affixed to said threaded fitting at one side thereof and including flame shields and an upwardly extending portion curving over and crossing the said wick and spaced thereabove, a cap portion for said lighter having a depending stone positioned therein for axial engagement with the outermost end of the said curved portion of the combination guard and scraper member when the cap portion is engaged on said body member.

2. In a lighter including a body portion and a cap portion, a wick mounted on the upper most part of the said body portion and a depending stone mounted in said cap portion, the said wick and stone being in adjacent position when the cap portion is engaged on said body portion, a combination flame guard and scraper partially enclosing said wick and for engaging said stone to create sparks to ignite said wick, said combination guard and scraper comprising a cross sectionally U-shaped body having an upwardly extending arm curved over and crossing the said wick and terminating on the other side of the said wick adjacent said depending stone for registry therewith, an opening formed in the said guard to admit air to the said wick for combustion purposes, the said stone engaging end of the upwardly extending curved arm being formed in a radius to engage a wide area of the said depending stone.

FREDRICH HEYDLE.

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