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I. FLORMAN

2,471,206

FLINT HOLDER

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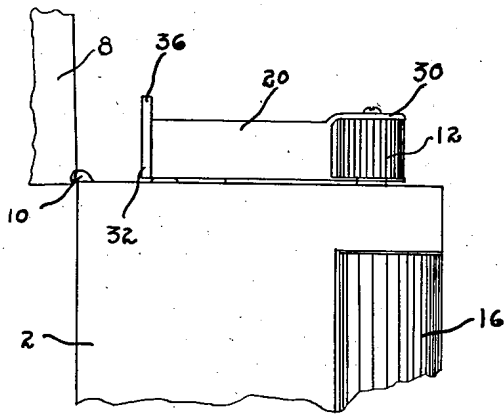


Fig. 1

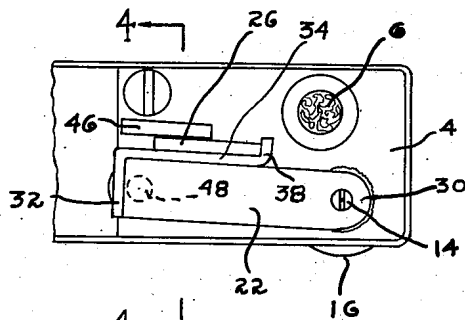


Fig. 2

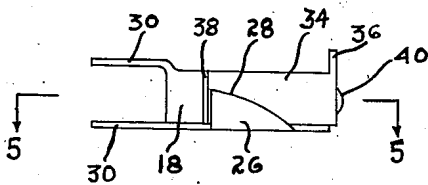


Fig. 3

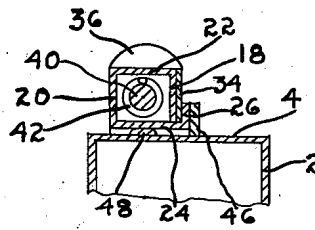


Fig. 4

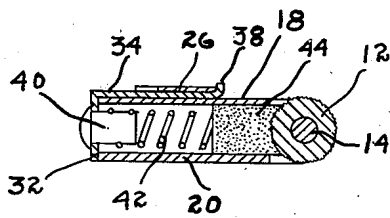


Fig. 5

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FLINT HOLDER

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2 Claims. (Cl. 67-7.1)

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The invention relates to pyrophoric lighters and especially to flint holders for such lighters.

Heretofore, flint holders for pyrophoric lighters have ordinarily relied on a threaded member for holding the flint in a flint tube. Other types of structure have been proposed, but these have been complex in manufacture and operation. Furthermore, flint tubes are usually formed by die-casting and drilling, and thus are expensive to manufacture.

The primary object of the present invention is to provide a flint holder which is easy and inexpensive to make, and which is simple in operation. In one aspect of the invention, the provision of a flint holder, which can be stamped out of metal and thus requires no die-casting or drilling, is important. Another aspect of the invention is the provision of a simple flint holder which does not utilize a screw for holding the flint or flint spring in position.

Another object of the invention is to produce a flint holder which can be used beneath a hinged cover, in a lighter having a flint wheel mounted on a vertical axis, which will permit ready removal and replacement of the flint. More particularly, the holder is so devised as to permit the replacement of the flint by a simple motion of the parts, without the necessity of unscrewing and replacing a screw or any other complex procedure.

Further objects and advantages of the invention will appear more fully from the following description, especially when taken in conjunction with the accompanying drawings, which form a part thereof.

In the drawings:

Fig. 1 shows in side elevation the top part of a cigarette lighter embodying my flint holder.

Fig. 2 is a top plan view thereof.

Fig. 3 is a side elevation of the opposite side from Fig. 1.

Fig. 4 is a cross-section on the line 4-4 of Fig. 2.

Fig. 5 is a cross-section on the line 5-5 of Fig. 3.

The lighter, which is shown merely by way of example, has a body 2 with a top wall 4 from which extends a wick 6. A cover 8 is hinged on the body at 10 in any suitable manner. The flint wheel 12 is mounted on a shaft 14 and can be turned by a roller 16.

The flint holder, which forms the subject matter of the invention, is, in the particular form shown, pivoted so as to swing around the flint wheel to move into a suitable position for removal and replacement of the flint. In the

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broader aspects of the invention, however, it may be arranged in any other suitable manner.

The body of the flint holder is composed of a tube, which in the particular embodiment shown is square in cross-section. This tube is formed of a single piece of sheet metal stamped and bent to the proper shape. The tube has side walls 18, 20, a top wall 22 and a bottom wall 24. The bottom wall extends outwardly beyond the side wall 18 and has an upwardly turned flange portion 26 parallel to but spaced slightly from the side wall. This flange does not extend the full length of the tube. Its upper edge 28 tapers downwardly away from the forward or flint-holding end of the tube towards the rear end. The front ends of the top and bottom walls 22, 24 extend beyond the main body of the tube to form ears 30 which engage the shaft 14 above and below the flint wheel 12.

The other part of the flint holder is the closure member, which is also formed, in the main, of a single piece of sheet metal. This consists of an end piece 32 and a side piece 34 at right angles to it. End piece 32 is of such size as to close the rear end of the flint tube, and has an upward extension 36 to permit it to be grasped by the finger. Side piece 34 is arranged to fit into the space between side wall 18 and flange 26, and has at its front end an outwardly turned flange 38 which lies in front of the front edge of flange 26.

The end piece 32 has a pin 40 riveted therein, this pin extending into the interior of the flint tube. A coil spring 42 is mounted on this pin, preferably with its coils arranged in a shallow spiral groove on the pin. The spring at its free end engages the flint 44 and presses it against the flint wheel.

Rotation of the flint holder in a clockwise direction in Fig. 2 is limited by a stop 46 carried on the top wall 4 of the lighter. The holder in normal position rests on a button 48 carried by the top wall, this preventing accidental displacement but permitting the holder to be swung counterclockwise when pushed by the finger so that flints can be removed and replaced.

The parts normally occupy the position shown in the drawings. In order to replace a flint, the holder is first swung counterclockwise, if it is used with a lighter having a hinged cover such as is shown herein. Then the finger piece 36 is grasped, and the forward end of side piece 34 is tilted upward until flange 38 clears the forward end of flange 26. Then the whole part is withdrawn and the spring 42 is pulled out of the tube. The flint can now be removed and a new one in-

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sented. The spring is then pushed into the tube and the closure member is slid forward until the flange 38 is in front of flange 26, whereupon side piece 34 is tilted down into the space between side wall 18 and flange 26. The parts are then secured in position for further operation of the lighter.

This structure has a number of advantages. The spring is secured on the closure member and is not likely to be dropped and lost when the flint is changed. The spring acts both to press the flint against the flint wheel and to hold flange 38 against the front edge of flange 26 so as to prevent accidental displacement of the closure member. The whole device is formed almost entirely of stamped sheet metal parts, so that no die-casting or thread cutting is required. Thus the arrangement is inexpensive to make, yet is simple and effective in operation.

While I have described herein one embodiment of my invention, I wish it to be understood that I do not intend to limit myself thereby except within the scope of the claims hereto or hereinafter appended.

I claim:

1. A flint holder for pyrophoric lighters comprising a piece of sheet metal bent to form a tube square in cross-section, one wall of said tube extending laterally beyond the adjacent wall and being bent upwardly parallel to such adjacent wall but spaced therefrom to form a space therebetween, and a closure part comprising a piece of

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sheet metal bent to form a first portion adapted to close one end of the tube and a second portion at right angles thereto adapted to fit into said space, said second portion having an outwardly turned flange at its free end arranged to engage the front edge of the upwardly bent part of the tube to hold said closure part in position to close the end of the tube.

2. In a flint holder as claimed in claim 1, the free edge of said upwardly bent part tapering downwardly towards the rear.

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REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
1,181,817	Wolf	May 2, 1916
1,718,902	Greene	June 25, 1929
1,764,897	Segal	June 17, 1930
2,168,732	Dubsky	Aug. 8, 1939
2,258,085	Bolle	Oct. 7, 1941

FOREIGN PATENTS

Number	Country	Date
56,374	Austria	July 15, 1912
83,102	Austria	Mar. 10, 1921
545,563	Great Britain	June 2, 1942