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PYROPHORIC LIGHTER

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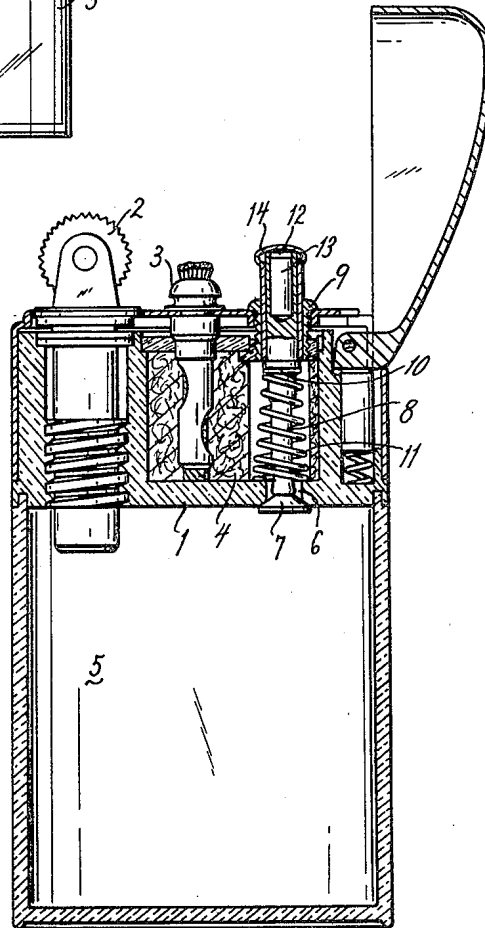
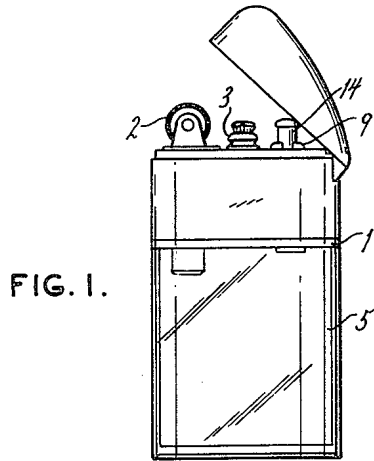


FIG. 2.

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PYROPHORIC LIGHTER

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1 Claim. (Cl. 67--7.1)

This invention pertains to an improvement in pyrophoric lighters whereby a spare flint for the lighter may be carried in the lighter structure so as to be conveniently accessible at any time.

The lighter has a service fuel chamber and an auxiliary or storage fuel chamber, which chambers are connected by a port. A manipulatable valve normally closes said port. Said valve has a stem by which it may be manipulated to open the port to permit fuel to flow from said storage chamber to said service chamber. Said valve stem is formed with a recess or chamber therein adapted to receive a spare flint for the lighter mechanism. A closure cap for said chamber fits on the stem and provides a manipulating button or handle whereby the valve may be operated.

A preferred embodiment of this invention is illustrated in the accompanying drawing, in which

Fig. 1 is a view in side elevation of a lighter embodying this invention, shown with the lid open; and

Fig. 2 is a central vertical section of the same.

In the embodiment shown in the drawing, a rigid body 1, of plastic or metal, supports the lighter mechanism including the spark wheel 2 and the wick holder 3. A fluid well or reservoir 4 is formed in the body 1 to provide a service chamber for fuel. This chamber may be filled with absorbent material, such as cotton. The body 1 is sealed to a transparent fluid reservoir 5 providing an auxiliary or storage chamber for the liquid fuel. The bottom of the body 1 provides a partition wall between the chambers 4 and 5 and in this wall a port 6 is formed connecting the two chambers.

A valve 7 normally closes the port 6. This valve has a stem 8 extending upward to traverse the chamber 4 and being guided for sliding movement in a suitable guide, such as a bushing 9, in the upper wall of said chamber. Said stem has a shoulder 10 engaging a spring 11 whose other end rests on the bottom of the chamber 4 as shown in Fig. 2. This spring functions to hold the valve 7 normally against its seat to close the port 6.

The upper end of the valve stem 8 is formed with a recess or chamber 12 therein adapted to receive a spare flint 13 for the lighting mechanism. A closure cap 14 is fitted on the upper end of the valve stem 8 to close the chamber 12 and retain the flint therein. The cap 14

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is arranged to fit the bushing 9 for sliding movement therein. Thus, the cap 14 provides a bearing member for the stem 8, in the bushing 9. The cap is rounded on top as shown in Fig. 2 and provides a manipulating button for pressing down the stem 8 to open the valve 7.

It will be noted that this invention provides for carrying a spare flint without requiring any extra space therefor, as the flint is housed within the compass of an element already provided, namely, the valve stem 8, and without increasing the bulk of that element. Also, the location of the storage point for this spare is in the normal operating region, just above the body 1, in which the manipulation of the ignition mechanism normally takes place. Accordingly, the spare unit is immediately available at any time by simply pulling off the cap 14, which otherwise serves as the push-button to operate the valve.

Various changes may be made in the details of construction, within the scope of the appended claim, without departing from the spirit of this invention. Parts of the invention may be used without the whole and improvements may be added while retaining some or all of the advantages of the invention.

I claim:

In a pyrophoric lighter of the character described having a service fuel chamber, a separate transparent fuel storage chamber connected with said service chamber by a port and pyrophoric ignition means positioned for operation in the region above said chambers, a cover member for said ignition means, a valve normally closing said port, resilient means normally urging said valve to its closed position, said valve having a stem with a hollow upper portion, said hollow upper portion protruding into said operating region for manipulation to open said valve, said hollow upper portion forming a chamber therein to receive a spare flint for said ignition means, a hollow closure cap for said flint chamber slidably mounted over said hollow upper portion of said stem and extending downwardly into said service chamber, said closure cap having an upper peripheral flange thereon in said operating region to aid in removing said closure cap from said hollow upper portion of said valve stem, said flange increasing the upper surface area of said valve stem thereby making said valve stem easier to manipulate.

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