April 1, 1952 L. F. G. FOLEY 2,591,655

SHEATHED KNIFE OR LIKE IMPLEMENT

Filed Feb. 9, 1948 2 SHEETS—SHEET 1

FIG. 1.

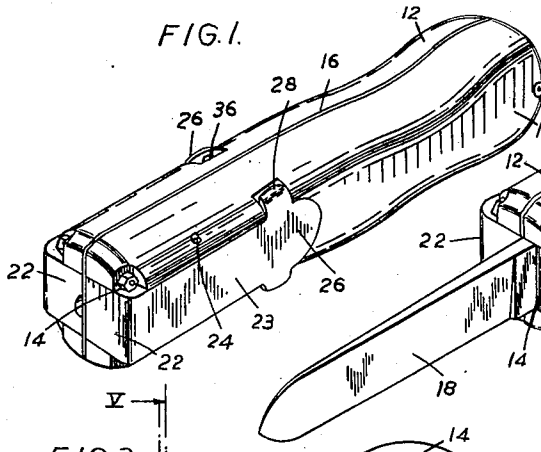


FIG. 2.

FIG. 3.

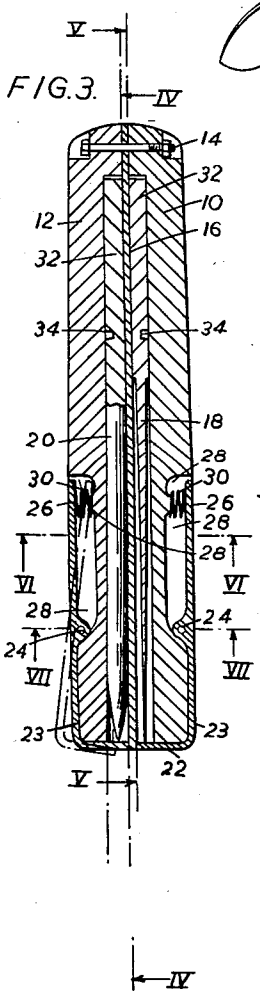


FIG. 4.

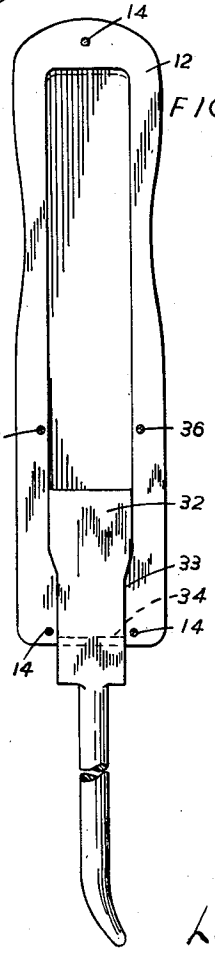
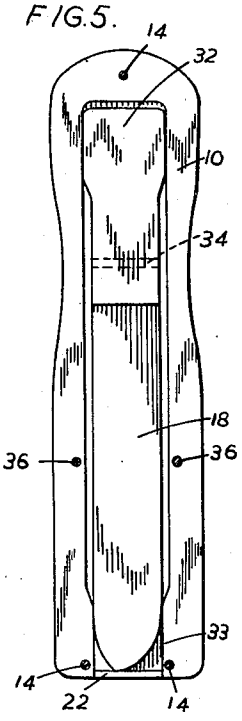


FIG. 5.



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FIG. 6.

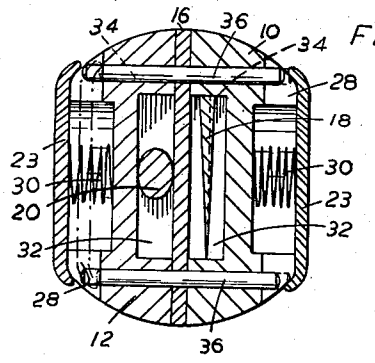


FIG. 7.

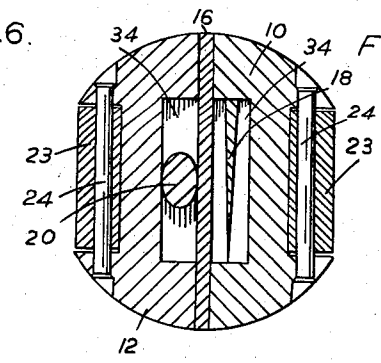


FIG. 9.

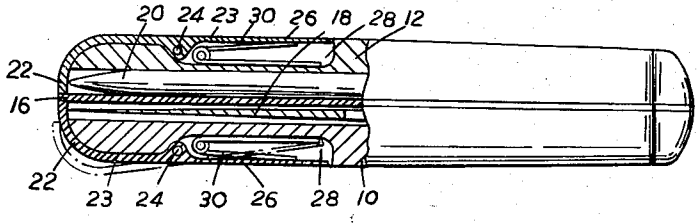


FIG. 8.

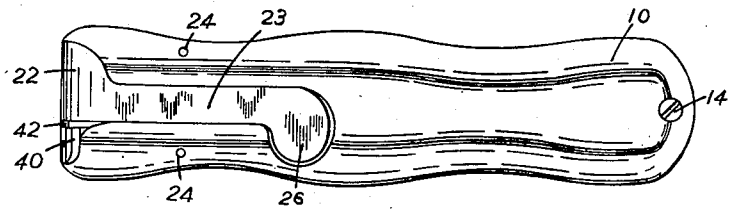
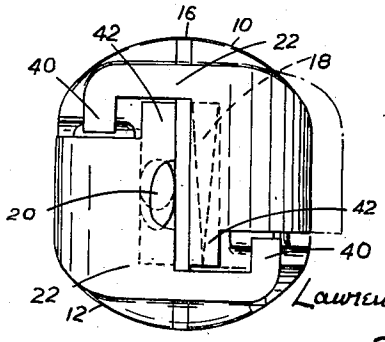


FIG. 10.



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SHEATHED KNIFE OR LIKE IMPLEMENT

Lawrence Fitz Gerald Foley, London, England

Application February 9, 1948, Serial No. 7,185
In Great Britain December 23, 1947

4 Claims. (Cl. 7—11)

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This invention relates to knives and like implements of the kind in which the blade or other "tool" is housed in a hollow handle having an opening in one end out of which the tool can be caused to project but through which it cannot pass completely, a "shutter" being also provided which closes the opening when the tool is completely within the handle and which can be caused to uncover the opening when the tool is to be projected from the handle, and serves to hold the tool against retraction into the handle.

The invention is concerned with improving the construction of implements of the above kind, both as regards their efficiency of operation and their general effectiveness.

In the implement in accordance with the invention, the shutter forms one end of a lever which is hinged to the handle so as not to project abruptly or at all substantially therefrom, the other end of which forms a thumb piece which can be depressed against the action of a spring to cause the opening to be uncovered.

Such a form of construction is quite simple and enables an implement to be produced which is convenient to carry and to use, and which cannot be opened accidentally as can happen when the means provided for opening the shutter project abruptly or substantially from the handle.

In the preferred form of the implement in accordance with the invention, the handle is divided by a longitudinal partition into two compartments each containing a tool and each provided with a shutter having the characteristics defined above. The two tools can be similar or dissimilar. For example, the implement may have a knife blade in one compartment and a marline spike in the other. Such an implement can be of great value in particular to the yachtsman, who can be called upon to use a knife in an emergency when having only one hand free. The invention is, however, not restricted to implements having tools in the form of, or including, knife blades. Among the many other kinds of tools which could be provided are screwdrivers, chisels, tin openers, corkscrews, crown cork openers and so on.

Where the implement carries two tools it is important that it should not be possible to cause the two tools to be projected simultaneously from the handle. This is ensured in accordance with the invention by providing means for interlocking the two shutters. Various kinds of interlocking means can be used. In particular, the two shutters can be made so that each of them has a

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part which, when the shutter on which it is formed is moved into the open position, is brought into a position in which it lies in the path of movement of the other shutter: alternatively, interlocking means in the form of a pin loosely mounted for axial movement between the two thumb pieces can be provided, the length of this pin being such as to allow full movement of one thumb piece only.

In order that the invention may be thoroughly understood and be more readily carried into effect, two examples of devices in accordance with it will now be described with reference to the accompanying drawings in which:

Fig. 1 is an outside perspective view of an implement in accordance with the invention containing two tools;

Fig. 2 is a fragmentary view showing one of the tools in the useful position;

Fig. 3 is an axial section through the implement shown in Fig. 1;

Figs. 4 and 5 are, respectively, sections taken on the lines IV—IV and V—V in Fig. 3;

Figs. 6 and 7 are cross-sections taken respectively on the lines VI—VI and VII—VII in Fig. 3;

Fig. 8 is an outside elevation of a second form of implement in accordance with the invention.

Fig. 9 is a part-axial section through the implement shown in Fig. 8 and

Fig. 10 is an end view to a larger scale of the implement shown in Fig. 8.

The device shown in Figs. 1 to 7 has a hollow handle made up of two parts **10**, **12**, which are held together by means of bolts **14**. The space for the handle is divided into two compartments by means of a central partition **16**, which is clamped between the two handle sections **10** and **12**.

In each of the compartments in the handle there is housed a tool. In the example shown here, these tools consist one of a knife blade **18**, and the other of a marline spike **20**.

The two compartments are permanently closed at the back end and are open at the front end. The open end of each compartment is covered by a shutter **22**, forming part of a lever **23**, hinged to the handle sections at **24**. The tail **26** of each lever forms a thumb piece which can be depressed into a cavity **28** in the handle against the action of a coiled spring **30**.

The normal condition of the device is shown in Fig. 1 and in full lines in Fig. 3.

When it is desired to use one of the tools, the appropriate thumb piece **26** is depressed as shown in Figs. 2 and 3, so that shutter **22** is swung away

from the open end of the compartment housing the tool. The tool can then emerge from its compartment under gravity, which movement can be assisted by shaking or flicking the device.

Each of the tools has an enlarged tang end **32** and each of the compartments in the handle has a restricted portion **33** near its open end, so that the tool cannot be removed completely from the handle. When the tool reaches its limit of movement out of the handle, a groove **34** in it can be engaged by the shutter so that to hold the tool in the projected position it is necessary only to release the thumb piece **26**.

To cause the tool to be retracted into the handle, it is necessary only to press the thumb piece **26** and apply end pressure to the tool.

In order that it may not be possible to cause the two tools to emerge from their compartments at the same time, interlocking means are provided in the form of a pair of pins **36**, loosely mounted for axial movement in the handle between the two thumb pieces **26**. The length of the pins is such as not to interfere with the movement of one of the shutters **22** to the extent necessary to uncover the open end of the associated tool compartment, but is such that when one of the shutters has been so operated the other shutter cannot be moved to an extent sufficient to open the associated compartment.

It will be seen from the drawings that the handle has a smooth outline with no parts which project abruptly or at all substantially from it. In particular, it will be noted that the thumb piece, by means of which a shutter is opened, is located so that it is not likely to be operated accidentally as would be the case were the shutter to be provided with a projecting part which, in order to make a tool available for use, had to be pressed away from the handle.

The arrangement shown in Figs. 8 to 10 differs essentially from that shown in Figs. 1 to 7 only in that the interlocking means provided for preventing simultaneous operation of the two shutters is of a different kind. The corresponding parts of this second form of construction bear the same reference numerals as appear in Figs. 1 to 7.

Here the interlocking is provided by a pair of projections **40**, **42** from each of the shutters. As will be seen, particularly in Fig. 10, when one of the shutters is moved into the open position its projection **42** is brought alongside the projection **40** on the other shutter, and its projection **40** is brought alongside the projection **42** of the other shutter. If, therefore, one of the shutters has been opened the other shutter cannot be opened.

In Fig. 9 the levers **23** are shown as having torsion springs **30** beneath their tail pieces instead of the coiled springs shown in Figs. 3 and 6. Clearly, any form of spring can be used.

I claim:

1. A knife or like implement comprising a hollow handle, a partition dividing said handle longitudinally into two compartments, a tool housed in each of said compartments, an opening at one end of each of said compartments through which said tools can be caused to project, means for positively holding said tools against complete removal out of said compartments and a pair of shutters mounted on said handle, one for each of said compartments, to close and to open said compartments when desired and to hold said tools in the projected position, each of said shutters being in the form of a lever, one end of which is pivotally mounted on said handle so as not to project abruptly or at all substantially therefrom and the other end of which forms a thumb piece which can be depressed to cause the associated compartment to be opened, a spring between each of said thumb pieces and said handle whereby to urge said shutters constantly into the closed position and means for interlocking said shutters to prevent them from being both opened at the same time.

2. A knife or like implement as claimed in claim 1 in which said interlocking means comprises a part of one of said shutters which, when said shutter is opened is brought into the path of movement of the other shutter.

3. A knife or like implement as claimed in claim 2 in which said interlocking means comprises a part which is brought, when one of said thumb pieces is depressed, into a position in which it prevents movement of the other of said thumb pieces to the extent required to enable it to open its associated shutter.

4. A knife or like implement as claimed in claim 3 in which said part is in the form of a loosely mounted pin arranged lengthwise between the two thumb pieces.

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