

(No Model.)

G. SCHRADER.
POCKET KNIFE.

No. 470,605.

Patented Mar. 8, 1892.

Fig. 1.

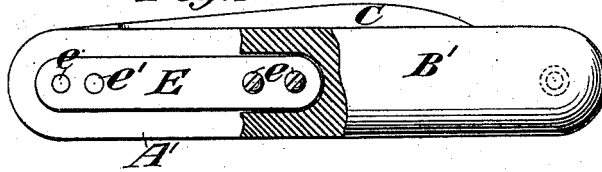


Fig. 2.

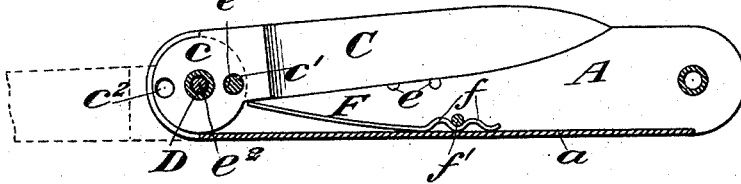


Fig. 3.

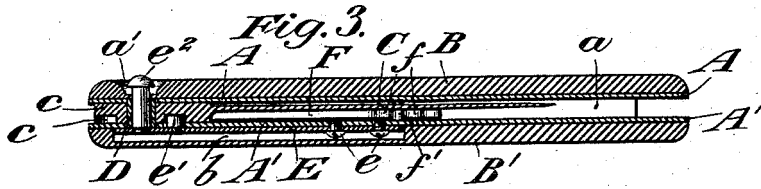


Fig. 4.

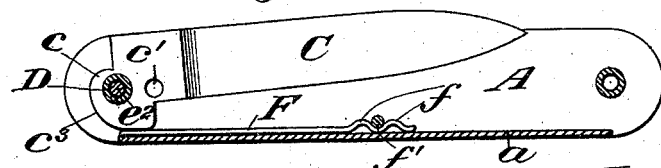


Fig. 5.



Witnesses:-
B. H. Maynard
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Inventor:-
George Schrade
by attorneys
Brown & DeWand

UNITED STATES PATENT OFFICE.

GEORGE SCHRADE, OF NEW YORK, N. Y., ASSIGNOR TO GOTTLIEB SCHRADE,
OF SAME PLACE.

POCKET-KNIFE.

SPECIFICATION forming part of Letters Patent No. 470,605, dated March 8, 1892.

Application filed December 4, 1891, Serial No. 413,980, (No model.)

To all whom it may concern:

Be it known that I, GEORGE SCHRADE, of New York, in the county and State of New York, have invented a new and useful Improvement in Pocket-Knives, of which the following is a specification.

My invention relates to an improvement in pocket-knives in which provision is made for the automatic opening of the blade when released and for locking the blade in both its open and closed adjustment.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

15 Figure 1 is a view of the knife in side elevation, a portion of the mounting being removed to show the locking and releasing spring. Fig. 2 is a longitudinal sectional view taken in the plane in which the blade
20 swings. Fig. 3 is a transverse longitudinal section. Fig. 4 is a longitudinal section showing the blade provided with cam-bearing for the actuating-spring, and Fig. 5 is a view in detail of the locking and releasing spring employed in connection with the form of shank
25 shown in Fig. 4.

The sides of the casing are represented by A and A', and its back by a. The sides and back are preferably formed of a single piece
30 of metal. The mountings B and B' may be of pearl, bone, wood, or any other suitable material.

The blade is represented by C, and its shank by c. The ring c of the blade is pivotally secured in position between the sides of the casing by a hollow pivot D. The shank c is provided with recesses c' and c², located upon opposite sides of the pivot D and adapted to receive a locking-pill, the one c' to hold the
40 blade closed and the other c² to hold it open. The recesses c' and c² are here shown as circular; but it is obvious that they might be oval or any desired polygonal shape in cross-section.

45 A locking-spring, consisting of a plate or bar spring E, is secured at one of its ends to the side of the casing, as shown at e, its opposite end being provided with a stud e', adapted to project through the side of the casing and into the one or the other of the re-

cesses c' or c², according as the blade is closed or open. The spring E is further provided with an operating-pin e², which projects through the hollow pivot D into a recess a', formed in the mounting B and in such position that it may be pressed upon by the finger to throw the spring E away from the side of the casing, and thereby withdraw the stud e' from the recess in the shank of the blade. The mounting B' is provided with a recess b
60 to permit the movement of the free end of the spring E away from the side of the casing.

The actuating-spring for throwing the blade when released from its closed to its opened position is represented by F in Figs. 1, 2, 3, 65 and 4. It consists of a bar-spring having one of its ends at the inner face of the back of the casing bent to form a pair of ridges f, between which a stud or pin f' extends transversely across the casing, and thereby secures
70 the spring in position. The free end of the spring bears against the under side of the shank of the blade, as clearly shown in Fig. 2, its tension being exerted in a direction to throw the blade up from the casing and over
75 into an extended or open position.

In the form shown in Fig. 4 the shank of the blade is provided with a cam-face c³, along which the free end of the actuating-spring F rides as the blade C swings open, the spring
80 itself when the blade is full open having a tendency to keep it open. In this form, where the shank is cut away to form the cam-face, I find it desirable to provide only one recess c' for the reception of the locking-stud on the
85 spring and to provide the spring with an additional locking-stud e^s, (see Fig. 5,) which when the blade is swung full open is received into the same recess c' in the shank of the blade which receives the locking-stud b' when
90 the blade is closed.

While I have shown a single blade secured to one end of the casing, it is obvious that another blade might be similarly secured at the other end of the casing and operated in a manner quite similar to that shown and described with respect to the blade C.

What I claim is—

1. The combination, with the casing, the pivoted blade, and its actuating-spring tend- 100

ing to throw the blade open, of a locking-
 spring having an engagement with the shank
 of the blade to lock it in closed and open ad-
 justment, and the push-pin located within the
 5 pivotal connection of the blade, with the cas-
 ing for operating the locking-spring, substan-
 tially as set forth.

2. The combination, with the casing, the
 blade pivoted therein, provided with a cam-
 10 surface on its shank, and the blade-actuating
 spring having an engagement with the cam-

face on the shank, of a locking and releas-
 ing spring secured to the casing and provided
 with studs, one in position to engage the blade
 when closed and the other in position to en- 15
 gage the blade when open, and a push-pin lo-
 cated within the pivotal connection with the
 blade and the casing, substantially as set forth.

GEORGE SCEIRADE.

Witnesses:

FREDK. HAYNES,
 C. E. SUNDGREN.

It is hereby certified that in Letters Patent No. 470,605, granted March 8, 1892, upon the application of George Schrade, of New York, N. Y., for an improvement in "Pocket-Knives," an error appears in the printed specification requiring correction as follows: In line 3, page 2, the comma after the word "blade" should be stricken out and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 15th day of March, A. D. 1892.

[SEAL.]

CYRUS BUSSEY,
Assistant Secretary of the Interior.

Countersigned:

W. E. SIMONDS,
Commissioner of Patents.