Jan. 2, 1923. 1,440,793

G. V. RASMUSSEN.
POCKET KNIFE.
FILED JULY 23, 1919.

Fig. 1.

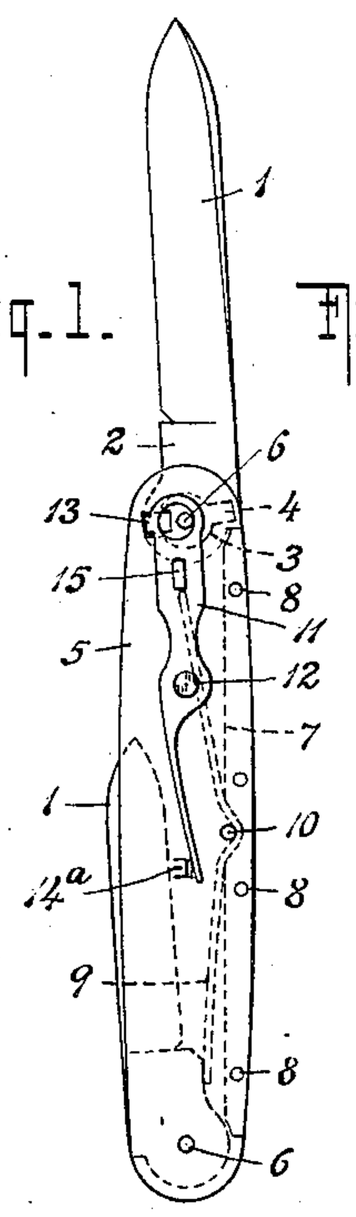


Fig. 2.

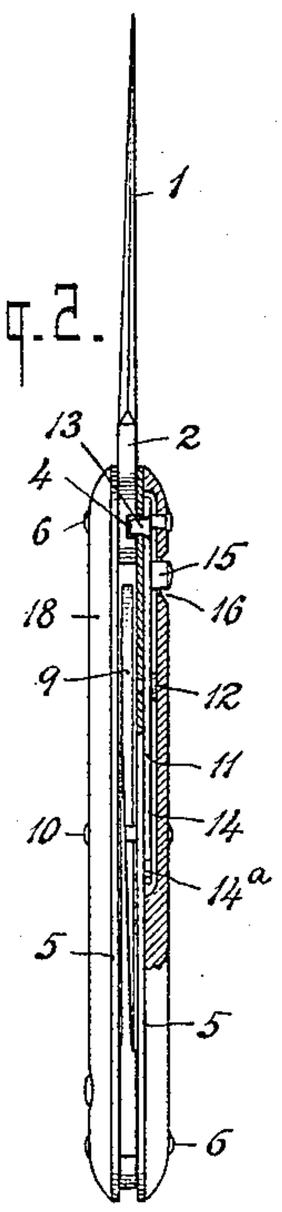


Fig. 3.

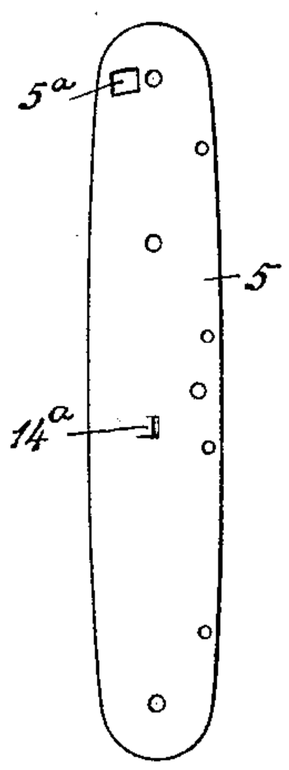


Fig. 4.

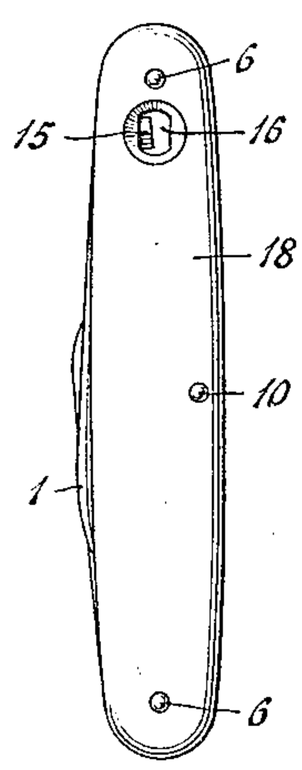


Fig. 5.

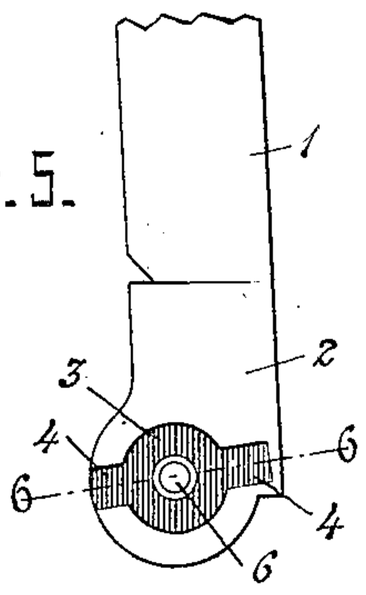


Fig. 7.

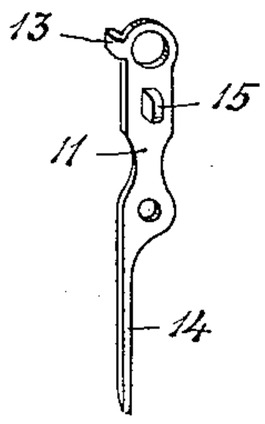


Fig. 9.

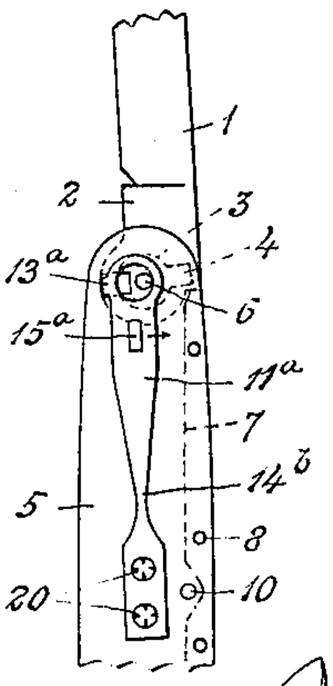


Fig. 10.

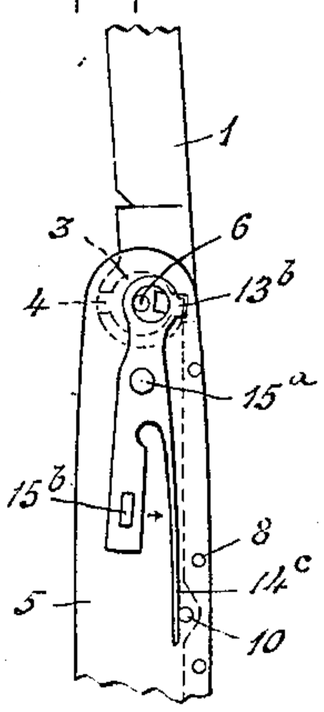


Fig. 6.

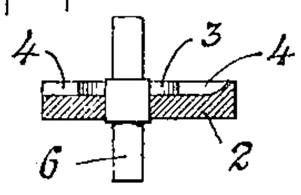
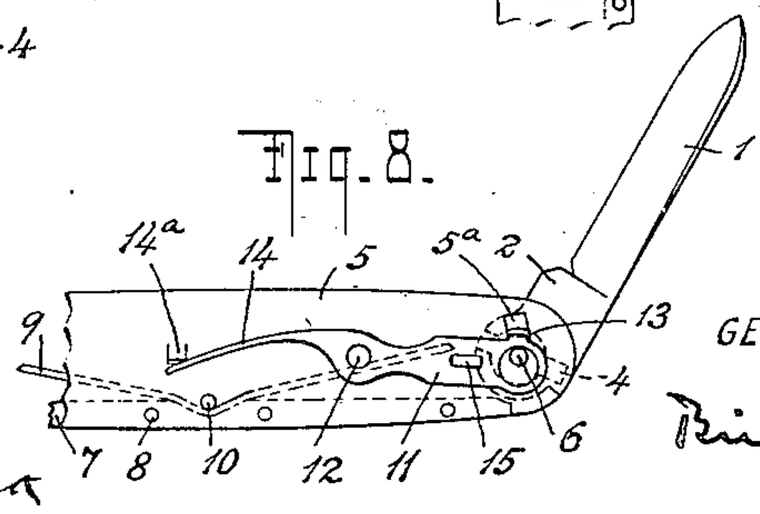


Fig. 8.



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UNITED STATES PATENT OFFICE.

GEORGE V. RASMUSSEN, OF NEW YORK, N. Y.

POCKETKNIFE.

Application filed July 23, 1919. Serial No. 312,660.

To all whom it may concern:

Be it known that I, GEORGE V. RASMUSSEN, a citizen of the United States, and resident of the borough of Richmond, city and State of New York, have invented certain new and useful Improvements in Pocketknives, of which the following is a specification.

My invention relates to knives of the type commonly known as self-opening, wherein the spring controlled blades are locked in either closed or open position.

Knives of this class, as generally made, are provided with locking means adapted to be operated by direct pressure upon the locking member and apt to be unintentionally released when the knife is carried in the pocket whereby the possibility exists that the one carrying the knife may be cut or injured by the accidentally opened blade.

The object of my invention is to overcome these objections by producing a knife of simple construction and operation in which the locking member is released by a sliding action to open the blade of the knife, thereby avoiding the possibility of the blade being unintentionally released by direct pressure on the locking member.

A further object of my invention is the production of a relatively thin, self-opening knife, the construction of which is reduced to the utmost simplicity and comprises a minimum number of very simple parts. Other more specific objects of my invention will appear from the description hereinafter and the features of novelty will be pointed out in the appended claims.

In the accompanying drawings, in which I have shown several examples of my invention, Figure 1 illustrates a side view of one form with the shell or handle removed; Fig. 2 is a front edge view partly broken away, showing one of the blades opened in locked position; Fig. 3 is a side view of one of the linings; Fig. 4 is a side view of the finished knife; Fig. 5 is an enlarged detail of one of the blades; Fig. 6 is a cross-section on the line 5—5 of Fig. 5; Fig. 7 is a perspective view of the operating lever and locking member; Fig. 8 is a side view showing one of the blades in the act of being released; and Figs. 9 and 10 are partial views similar to Fig. 1 illustrating two other forms of construction.

Referring to the drawings and more particularly to Figs. 1 to 8 inclusive, 1 represents the knife blades having shanks 2 provided with recesses 3 concentric to the blade pivots and rectangular notches or recesses 4 disposed oppositely thereto and adapted to receive the tongues of the locking members when the blades are in either open or closed position, as shown in Figs. 1, 2 and 4. The blades are secured between the lining members 5 and are held in place by means of the shoulder rivets 6 which acts as pivots for the blades. The back 7 is also secured between the lining members by the rivets 8 in the usual manner. Within the knife and near the back 7 thereof is located a double-ended leaf or fly spring 9 held in place about its center by a pin or rivet 10 substantially as illustrated in the drawings, the free ends of said leaf spring 9 exerting a pressure against the heels of the blades when the same are closed and serving to throw said blades to an open or partially open position when the locking member or lever 11 is released or withdrawn from the notches or recesses 4, as will be more fully explained hereinafter.

The locking member 11 may be constructed in several different ways, for instance, as indicated in the drawings. In the form shown in Figs. 1 to 7, the locking members or levers 11 and their actuating parts are made in the form of units which comprise preferably flat strips of spring metal in surface engagement with the linings 5 of the knife and pivoted thereto by means of pins or rivets 12. At one end the levers 11 are provided with locking lugs or tongues 13 bent at preferably right angles thereto and projecting through rectagular openings 5^a of the linings and into one or the other of the notches or recesses 4 of the blades for the purpose of locking the blades as hereinbefore described. The other ends of the locking levers 11 are continued in the form of resilient tongue springs 14 which are maintained under tension by having their outer ends abutting against lugs or pins 14^a of the linings of the knife, for the purpose of maintaining the locking lugs in their normal position as shown, and returning them thereto. The locking levers 11 are also provided near the locking ends thereof with finger pieces 15 adapted to project through openings 16 in the shells or handles, 18, of the knife, as shown.

To operate this form of knife, a lateral pressure is exerted upon the finger pieces 15 to move them transversely of the linings 5 whereby the locking levers 11 are similarly moved and the tongues 13 which partake of said movements are brought out of the recesses 4 and into the central recess 3 of the blade, as shown more clearly in Fig. 8 of the drawings. In this way, the blades are released and may be closed when in the open position or thrown open by means of the leaf spring 9 when in the closed position, as indicated. The scales or handles of the knife may be held in place by the rivets or pins 6 and 10.

In Fig. 9 of the drawings, I have shown the locking lever 11^a of slightly different shape and provided with a tongue 13^a similar to the tongue 13 shown in Figs. 1, 2 and 7; in the form being described, the body portion of the lever 11^a is shaped or thinned out to form a spring 14^b which is secured at one end to the lining by suitable fastening devices such as rivets 20. The lever 11^a is also provided with a finger piece 15^a which projects through an opening similar to the openings 16 and likewise formed in the handles of the knife for the purpose hereinbefore described. In this form the lateral movement of the lever 11^a through the medium of the finger piece 15^a and necessary to remove the locking tongue 13^a from the recesses 4 to permit an opening or closing of the blade, and which is the equivalent of the pivotal movement of the lever 11, is made possible because of the thinned portion 14^b which, in addition, acts as a spring to restore the lever 11^a to its normal position and to maintain it therein.

In Fig. 10 of the drawings, I have shown still another form of locking lever. In this form the locking lever 11^b is pivoted at 15^a to the lining of the knife and is provided with a locking tongue 13^b co-operating with one of the notches or grooves 4 of the blades. The lever 11^b in the form being described is provided also with a finger piece 15^b and with a resilient spring 14^c forming an integral continuation thereof for the purpose of holding and restoring the lever in and to its normal position. The pin 10 of the knife in this case serves as a bearing for the free end of the spring 14^c. The operation of this form of locking member is substantially the same as in Fig. 1 and will be readily understood from the drawings.

With these constructions it is obvious that I can construct a one, two, three or four-bladed knife, as desired, as all the mechanism is confined to one side and one end of the knife.

Various changes in the specific forms shown and described may be made within the scope of the claims without departing from the spirit of my invention.

Having described my invention, what I claim is:

1. In a pocket knife or the like, the combination of a spring-actuated, pivoted blade provided in its shank with an annular recess concentric with its pivot and with diametric locking recesses opening inwardly into said concentric recess in directions transverse to the length of the blade and parallel with the plane thereof, locking means co-operating with said locking recesses to lock said blade in its open and closed position and a finger piece carried by said locking means and projecting through the handle of the knife, said finger piece being movable within the transverse confines of said handle in a direction transverse to the length of the knife and parallel with the plane of the blade thereof, to correspondingly move said locking means inwardly out of said diametric recesses into said concentric recess to release the blade.

2. In a pocket knife or the like, the combination of a spring-actuated, pivoted blade provided in its shank with an annular recess concentric with its pivot and with diametric locking recesses opening inwardly into said concentric recess in directions transverse to the length of the blade and parallel to the plane thereof, a locking lever pivotally mounted on the lining of the knife and capable of pivotal movement in a plane parallel with the surface of said lining, said locking lever co-operating with said locking recesses to lock said blade in its open and its closed position, and a finger piece on said lever adapted by pressure in an inward direction with respect to the transverse confines of the knife and transverse to the length thereof to pivotally move said lever in a corresponding direction out of said locking recesses into said concentric recess to release said blade.

3. In a pocket knife or the like, the combination of a spring-actuated, pivoted blade provided, in its shank, with an annular recess concentric with its pivot and with diametric locking recesses opening inwardly into said concentric recess in directions transverse to the length of the blade and parallel to the plane thereof, a lining plate, a lever pivotally movable in a plane parallel with said lining plate and pivotally mounted therein, a locking device carried by said lever and co-operating with said locking recesses to lock said blade in its open and in its closed positions, a spring comprising an extension of said lever, a handle provided with a transverse opening located entirely within the transverse confines thereof, and a finger piece carried by said lever and extending through the opening in said handle, said finger piece being movable within the opening in a direction transverse to the length of the knife to move said lever in a

corresponding direction against the tension of said spring to move said locking device inwardly out of said locking recesses into said concentric recess to release the blade.

4. In a pocket knife or the like, the combination of a spring-actuated, pivoted blade provided with transverse locking recesses on one side of the shank thereof, said recesses opening at right angles to the length and face of the blade, a lining plate having an opening in registry with said locking recesses, a spring-actuated lever pivotally mounted upon the lining plate, a locking lug on said lever in registry with said opening and said locking recesses, a handle having a transverse opening, and a finger piece carried on said lever and projecting through said transverse opening in the handle, said finger piece being movable in a direction transverse to the length of the knife and parallel with the plane of the blade within the confines of said handle to correspondingly move said lever to release said blade.

5. In a knife, a combined locking and releasing unit mounted upon a lining plate and comprising a relatively rigid lever, a finger piece carried thereby, and an integral locking lug at one end of said lever, projecting at right angles therefrom, said lever having a reduced portion forming a resilient section constituting a spring whereby the latter may be placed under resilient tension.

In testimony whereof I have hereunto set my hand.

GEORGE V. RASMUSSEN.