Jan. 20, 1942. C. R. KEERAN 2,270,655

POCKETKNIFE

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Fig. 1.



Fig. 2.

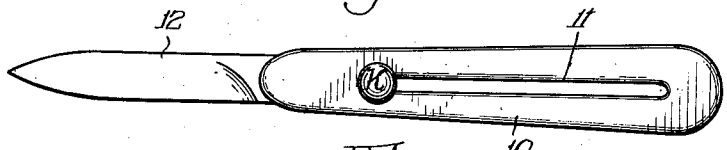


Fig. 3.

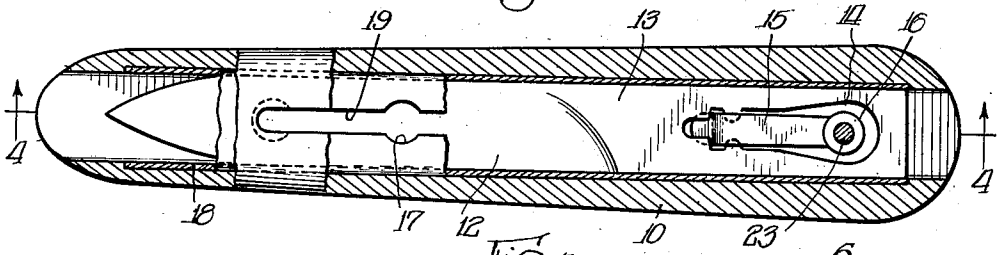


Fig. 4

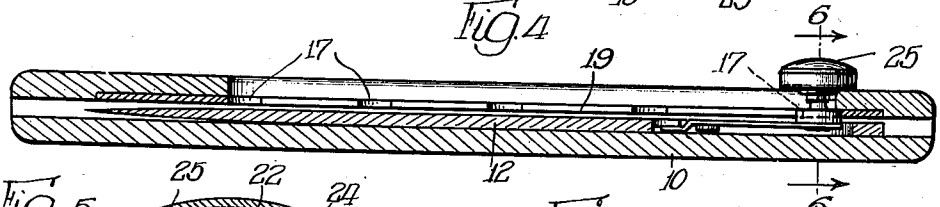


Fig. 5.

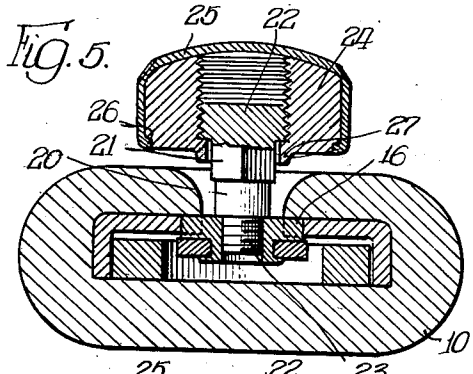


Fig. 7.

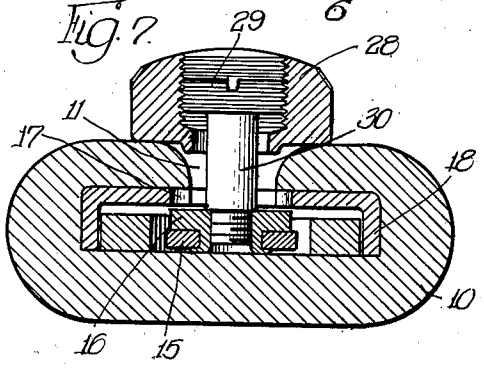
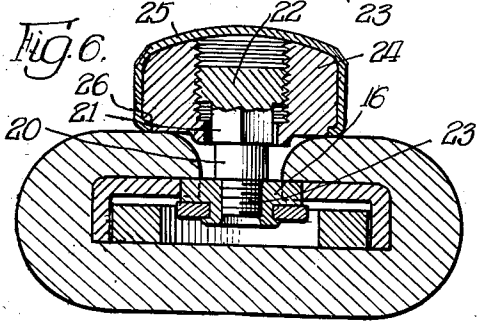


Fig. 6.



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Fig. 8.

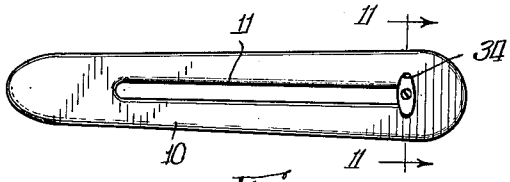


Fig. 9

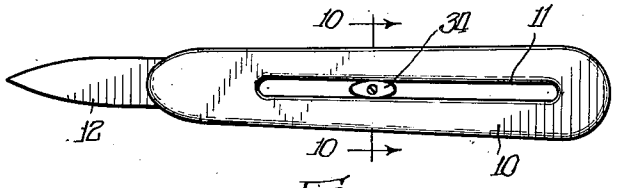


Fig. 10.

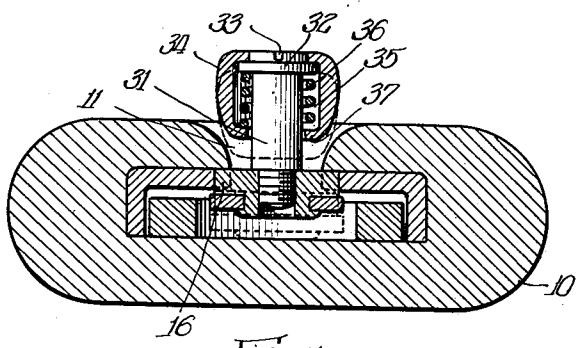
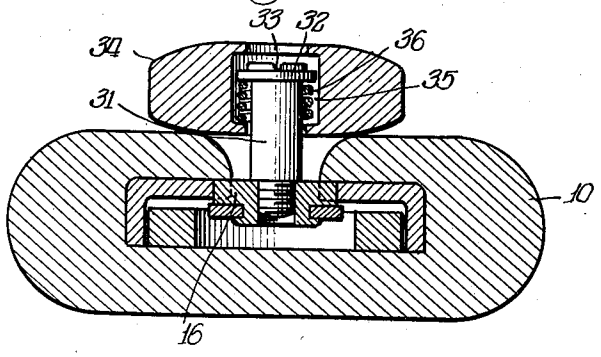


Fig. 11.



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UNITED STATES PATENT OFFICE

2,270,655

POCKETKNIFE

Charles R. Keeran, Evanston, Ill.

Application February 1, 1941, Serial No. 376,944

9 Claims. (Cl. 30—162)

My invention relates to pocket knives, and particularly to an improvement on the construction illustrated in Patent No. 1,960,130, dated May 22, 1934, to Trubel.

An object of my invention is to provide locking means in connection with pocket knives of the type illustrated in the foregoing patent in order to avoid both inconvenience and danger to the user.

In the described construction the blade is adapted to slide in the handle and to be held in various adjusted positions, including that of complete enclosure within the handle, by means of a spring-actuated detent operated by an exterior projection in the form of a button. It is not unusual, however, when the article is in the pocket, for pressure to be applied accidentally in such manner that the detent is displaced and the blade caused to project beyond the limits of the handle, with the possibility of injury to the person. Furthermore, it is not unusual when the blade is projected and the knife is in use for pressure to be exerted on the button, due to the grasp of the user, and the blade caused to be displaced.

In the construction here disclosed, I provide for locking in any one of the adjusted positions by a simple rotation of the button which may be accomplished in one hand, as the result of which the blade may be locked in any of its possible positions. Furthermore, I provide a construction in which the button presents an imperforate top surface adapted to receive an imprint or insignia.

The invention will be mode readily understood by reference to the accompanying drawings, in which,

Fig. 1 is a plan view of the knife of my invention in closed position;

Fig. 2 is a similar view in operating position;

Fig. 3 is a view considerably enlarged and with parts broken away to show the interior construction;

Fig. 4 is a sectional view on the line 4—4 of Fig. 3;

Figs. 5 and 6 are sectional views, very greatly enlarged, on the line 6—6 of Fig. 4, the parts being shown in different operating positions;

Fig. 7 is a view similar to Fig. 5 showing a slightly modified form;

Figs. 8 and 9 are plan views showing a modified form of lock, the blade being in closed and partly opened positions respectively;

Fig. 10 is a sectional view very greatly enlarged, on the line 10—10 of Fig. 9; and,

Fig. 11 is a sectional view on the line 11—11 of Fig. 8.

In the drawings I have illustrated a pocket knife having a handle 10, preferably of some form of decorative molded material, the handle having a longitudinal slot 11 therein. The knife blade has a cutting portion 12 and a rear or shank portion 13, the latter portion having a punched out opening 14, in the forward end of which a flat spring 15 is interlocked, as best shown in Figs. 3 and 4. The rear end of the spring 15 is adapted to swing freely in the opening 14 and carries a washer 16 adapted to act as a detent for engagement with the notches 17 provided in a U-shaped metal lining 18 seated within the hollow handle. The tubular member has a slot 19 that registers with the slot 11 in the handle, the notches 17 appearing beneath the molded material of the handle, as best shown in the left-hand portion of Fig. 3.

The operating means for the blade includes a shank 20 having a squared portion 21 and a threaded head 22. The lower extremity 23 of the shank is likewise threaded and slightly tapered and is seated tightly in the washer 16 by means of a thin, flat wrench that may be applied to the squared portion 21.

The button is in the form of a nut 24 having a threaded bore adapted to be engaged by the threaded head of the shank, the nut being covered by a thin shell 25, the lower edge 26 of which is crimped inward. In order to prevent the escape of the nut by backing it off from the head 22, the margin 27 of the nut around the lower opening is turned in, as best shown in Figs. 5 and 6.

This assembly is completed before the shank is seated in the operating portion, thus necessitating the provision of the squared portion on the shank for engagement by a wrench beneath the nut. However, this provides a surface on which insignia may be displayed, such as initials, emblems, etc., for identification.

In the construction shown in Fig. 7 all the foregoing parts remain the same except that the nut 28 is not closed at its top and the threaded head 29 of the shank 30 has a slot for engagement by a screw driver. By this means the shank is seated in the washer 16, thereby avoiding the necessity for the squared portion for engagement by a wrench. This, however, precludes the display of insignia on the top of the button.

In the position of Fig. 4 the button has been rotated and the blade is locked against outward

movement. In the position of Fig. 5 the nut is in an elevated position ready to be depressed in order to slide the blade outwardly. The position of Fig. 6 is the same as in Fig. 4, the nut having been turned to clamp the detent in its locking position, thus preventing removal of the blade.

In the construction of Figs. 8 to 11 a lock is provided in which the action is that of a thumb nut. The projecting portion is preferably cigar-shaped and, in a position in which the blade may be caused to slide, the projecting portion lies parallel to the axis of the slot in the handle. In order to function as a lock the portion is swung cross-wise of the slot, locking the detent against displacement.

In the construction shown in Figs. 8 to 11 all the parts except the locking element remain the same as before described. In this instance, however, the shank **31** which engages the nut **16** has a flange **32** at its upper end, the shank having a screw driver slot **33** in its upper end. The cross piece or actuating member **34** is preferably of elongated form having a recess **35** at its middle portion within which the shank and its flange **32** are received. Within the recess **35** a spring **36** is confined, the upper portion of the spring abutting the flange **32** while the lower end is held against escape by the inturned flanges **37**, the spring being under slight compression. In the position of Fig. 9, the operating button lies within the tapered slot **11** with sufficient clearance to permit the button and shank to be depressed into the dotted line position of Fig. 10 in order to free the blade from its adjusted position, thus enabling it to be slid outward or inward, as desired. When however, the detent occupies any notch in the handle, the button **34** may be swung 90° into the position shown in Figs. 8 to 11, the curved sides of the button riding upward on the inclined sides of the slot. This will place the spring **36** under further compression and will so locate the button that it cannot be depressed to free the blade.

The construction just described provides a simple and practical locking device and in addition, furnishes an indication to the user as to whether the blade is locked or not, this feature being absent in the constructions shown in Figs. 1 to 7.

It will be noted that in all of the forms, the blade may readily be removed for replacement or repair or for replacement of the spring. In the form shown in Figs. 1 to 6, the shank is disconnected from the detent by wrench engagement of the squared portion, whereby the shank is backed out of the washer **16**. Thereafter the blade and its attached spring may be slipped out of the handle. In the construction of Fig. 7 and Figs. 8 to 11, the same result is accomplished by means of a small screw driver applied to the head of the shank.

I am aware that other modifications may be made than those shown in the drawings and I do not wish to be limited except as indicated in the appended claims.

I claim:

1. In a knife having a hollow, slotted handle, and a blade adapted to slide in the handle, the combination of an operating button having a shank projecting into the slot in the handle and engaging the blade, and rotatable means in the connection between the button and the shank adapted to operate to lock the blade in different positions in the handle.

2. In a knife having a hollow, slotted handle, and a blade adapted to slide in the handle, the combination of an operating button having a shank projecting into the slot in the handle and engaging the blade, and screw means in the connection between the button and the shank adapted to operate to lock the blade in different positions in the handle.

3. In a knife having a hollow, slotted handle provided with notches adjacent to said slot, and a blade adapted to slide in the handle, said blade having a spring actuated detent for engagement with said notches, the combination of a blade-operating button having a shank projecting into the slot in the handle and engaging said detent for depressing the same to permit the blade to occupy different positions in the handle, and rotatable means associated with said button adapted to prevent the depressing of the button and thereby to lock the blade in different positions in the handle.

4. In a knife having a hollow, slotted handle provided with notches adjacent to said slot, and a blade adapted to slide in the handle, said blade having a spring actuated detent for engagement with said notches, the combination of a blade-operating button having a shank projecting into the slot in the handle and engaging said detent for depressing the same to permit the blade to occupy different positions in the handle, and screw means associated with said button adapted to prevent the depressing of the button and thereby to lock the blade in different positions in the handle.

5. In a knife having a hollow, slotted handle provided with notches adjacent to said slot, and a blade adapted to slide in the handle, the combination of a separate spring interlocked with the blade and carrying a detent for engagement with said notches, a blade-operating button having a shank projecting into the slot in the handle and engaging said detent for depressing the same to permit the blade to occupy different positions in the handle, and screw means associated with said button adapted to prevent the depressing of the button and thereby to lock the blade in different positions in the handle.

6. In a knife having a hollow, slotted handle provided with notches adjacent to said slot, and a blade adapted to slide in the handle, the combination of a separate spring interlocked with the blade and carrying a detent for engagement with said notches, a blade-operating button having a shank projecting into the slot in the handle and engaging said detent for depressing the same to permit the blade to occupy different positions in the handle, and locking means associated with said button adapted to prevent the depressing of the button and thereby to lock the blade in different positions in the handle.

7. In a knife having a blade and a hollow, slotted handle provided with a plurality of notches adjacent the slot and said blade carrying a resilient detent, the combination of a shank projecting through the slot and engaging said detent and having a screw threaded head, and a button engaging said head and adapted to be rotated to lock the detent in any selected notch.

8. In a knife having a blade and a hollow, slotted handle provided with a plurality of notches adjacent the slot and said blade carrying a resilient detent, the combination of an operating button having a shank projecting into the slot and engaging the detent, said button having an imperforate upper face and having screw threaded engagement with the upper end of

said shank, the face of said button being adapted to receive insignia.

9. In a knife having a blade and a hollow, slotted handle provided with a plurality of notches adjacent the slot and said blade carrying a resilient detent, the combination of an operating button having a shank projecting into the slot and engaging the detent, said shank having a square portion near the upper end and having screw thread engagement with the button, said shank also having screw thread engagement with the detent, and being seated in the detent by wrench means applied to said squared portion.

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