

June 2, 1953

C. E. TAYLOR ET AL

2,640,260

RETRACTABLE POCKET KNIFE

Filed April 30, 1948

FIG. 1.

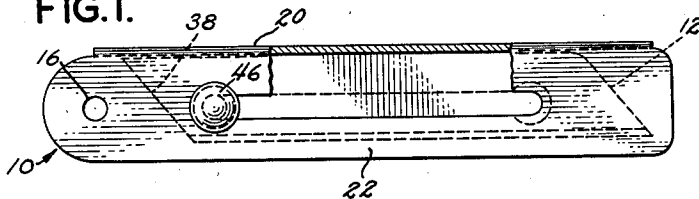


FIG. 2.

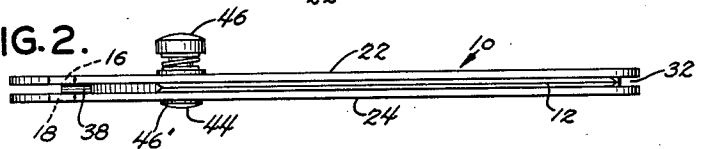


FIG. 3.

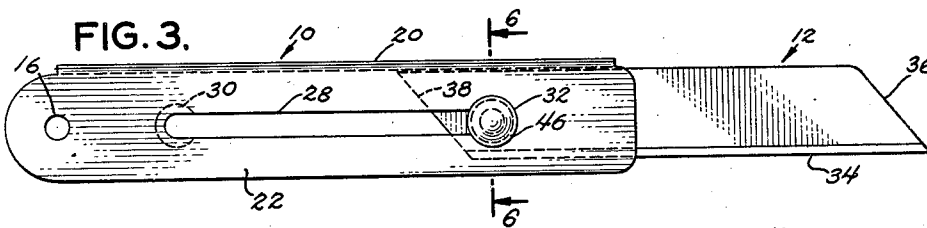


FIG. 4.

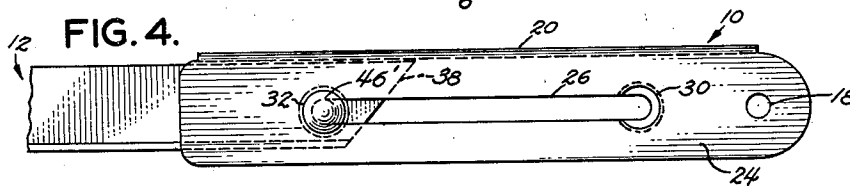


FIG. 5.

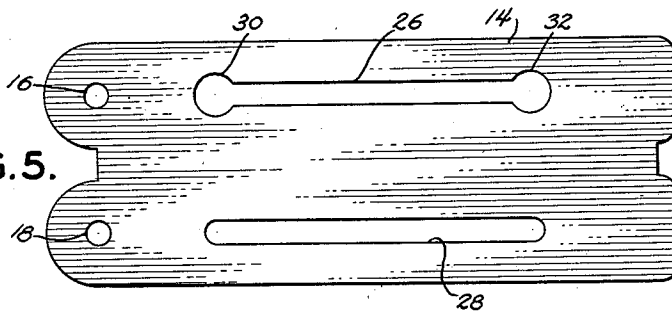


FIG. 6.

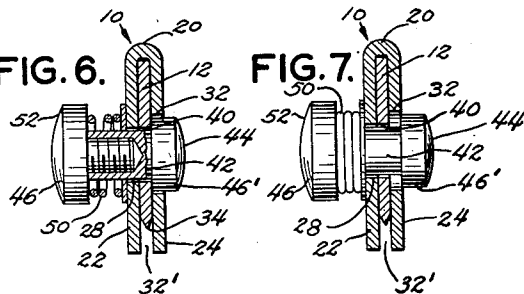
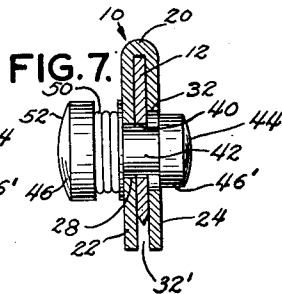


FIG. 7.



INVENTORS
CLARENCE E. TAYLOR
STEPHEN J. GWOOSH

BY

Alwinburn

ATTORNEY

UNITED STATES PATENT OFFICE

2,640,260

RETRACTABLE POCKET KNIFE

Clarence E. Taylor and Stephen J. Gwoosh,
Newark, N. J.

Application April 30, 1948, Serial No. 24,116

1 Claim. (Cl. 30—162)

1

This invention relates to pocket knives of the type having retractable blades.

An object of the invention is to provide a novel form of pocket knife comprising a housing forming a handle and adapted to receive a cutting blade so as to support the same while in use, the blade being also retractable inside the handle when not in use.

Another object of the invention is to provide an improved construction for a knife including a sheath having a hollow portion open on at least one end, with a knife blade slidably disposed in the hollow portion of the sheath, so that the blade may be alternately extended partly out of the open end of the sheath for use in cutting, or retracted entirely within the sheath, and also including motion limiting means carried jointly by the blade and sheath, so as to constrain the possible motion of the blade between a retracted position and an extended position.

Still another object of the invention is to provide a novel form of pocket knife in which the blade is retractable wholly within the handle, the blade having its cutting edge disposed so as to face an opening in the handle, to avoid impairment of the cutting edge.

A further object of the invention is to provide a novel form of pocket knife of the type described, which is simple in design, inexpensive to manufacture, and effective and safe to use, and which shall represent an advancement in the art.

Other objects and advantages of the invention will become apparent from the following description of a preferred embodiment thereof as illustrated in the accompanying drawings, and in which,

Fig. 1 is a top plan view of my improved form of pocket knife with the blade in retracted position,

Fig. 2 is a front elevation of the knife shown in Fig. 1,

Fig. 3 is a top plan view similar to that of Fig. 1, but showing the knife with the blade in extended position,

Fig. 4 is a fragmentary rear view of the knife shown in Fig. 3,

Fig. 5 is a face view of a blank which is used to form the handle or sheath of the knife,

Fig. 6 is a sectional view taken on line 6—6 of Fig. 3, with the locking means in engagement, and

Fig. 7 is a sectional view taken on line 6—6 of Fig. 3, but with the locking means pressed to unlocked position.

2

In the manufacture of pocket knives, it is necessary both that they be simple in design, and capable of manufacture at low cost, but also that they be safe in use, so as to avoid injury to the user due to slippage of the cutting blade. It is also of importance that the cutting edge be so positioned in the casing or sheath, as to avoid coming in contact with an inner wall, which would otherwise dull the blade. The present invention provides ample means to achieve these advantages, so as to produce a knife which is quite simple, yet structurally sound.

In order to understand clearly the nature of the invention, and the best means for carrying it out, reference may now be had to the drawings, in which like numerals denote similar parts throughout the several views.

As shown, our pocket knife includes a housing or sheath generally indicated at 10, a knife blade generally indicated at 12, and locking means which will be also described. The sheath 10 may be formed from a single blank 14, shown in face view in Fig. 5, the blank being of suitable sheet material, with holes punched out at 16 and 18, which are brought into axial alignment for engagement with a key chain or the like when the blank is bent to form the rounded web 20 interconnecting the two parallel sheath walls 22 and 24.

Mutually parallel elongated slots 26 and 28 are also formed in the blank as shown in Fig. 5, the ends of the slot 26 being enlarged as at 30 and 32, in the form of a circle or the like. When the blank is bent to bring the walls 22 and 24 into parallelism as in Fig. 6, then it is seen that the slots 26 and 28 are of the same size and overlie each other.

A knife blade 12 is disposed in the channel 32' between the inner surfaces of the walls 22 and 24 of the sheath or housing. The knife blade 12 is cut from a sheet or strip, and has a cutting edge 34 ground into one edge of the blade. It will be noted that the end edges 36 and 38 of the blade are mutually parallel and at an angle or bevel with the other edges of the blade. This is advantageous since, during manufacture of the blade from a long strip of steel, for example, a single inclined cutter blade may be employed to cut the strip into suitable lengths, thus forming the inclined or bevel edges 36 and 38. In the prior art, it has been customary not to make the edges 36 and 38 parallel, but to either round off the edge 38, or make it more nearly perpendicular to the axis of the blade.

From the construction above described it is

noted that the cutting edge 34 of the blade faces the open side of the channel 32' of the sheath and it is thus protected against damage. An aperture 40 is formed through the blade 12 in alignment with the slots 26 and 28, and the shank 42 of a stop shaft 44 inserted therethrough, the stop shaft 44 having an enlarged head 46' just great enough in diameter to be received in the circular ends 30 and 32 of the slot 26, but greater in diameter than the narrow intermediate portion of the slot between the end holes 30 and 32. The stop shaft 44 thus extends through both the walls of the sheath, and also through the blade opening 40, extending slightly beyond and to the left of wall 22 as seen in Fig. 6.

The shank of a push button screw 46 is threaded into an axial bore in the left end of the stop shaft 44, as shown in Fig. 6, and a spring 50 is disposed between the head 52 of the screw 46 and the wall 22, so as to bias the assembled screw and stop shaft 44 to the left with its head 46' normally seated in either opening 30 or 32. It is apparent that the blade 12 may be moved to retracted position as in Figs. 1 and 2, with the stop shaft head 46' seated in locking opening 30, or to extended position as shown in Fig. 4, with the stop shaft head 46' seated in locking opening 32.

Fig. 6 shows the position of the parts when the head 46' is seated in locking opening 32, and Fig. 7 shows what happens when the screw head 52 is depressed, moving locking head 46' out of seating engagement with opening 32, so as to permit moving the blade to another position.

Thus, by simple thumb pressure on head 52, the blade may be moved to either extended or retracted position, and automatically locked thereat.

Although we have described a preferred embodiment of our invention in specific terms, it is to be understood that various changes may be made in size, shape, materials and arrangement without departing from the spirit and scope of the invention as claimed.

We claim:

A knife comprising a sheath formed of a single piece of sheet material bent upon itself to form a channel between opposite first and second walls thereof, whereby to provide a closed longitudinal side and an open longitudinal side, a first longitudinal slot in said first wall of uniform width throughout, a longitudinal slot in

said second wall of equal length with said first longitudinal slot and equal in width thereto and in register therewith throughout except for a portion adjacent both ends of said slot in said second wall, said last named end portions being enlarged, a knife blade slidably disposed in said channel between said opposite sheath walls, said knife blade having a longitudinal sharpened cutting edge, a longitudinal non-sharpened edge, inner and outer transverse edges, stop means carried by said blade and engaging said slots, for guiding the motion of the blade between extended and retracted positions, a portion of said longitudinal non-sharpened edge of said blade adjacent said inner transverse edge projecting inwardly of said sheath walls a greater distance than that of said longitudinal cutting edge whereby to provide a better fulcrum for the blade when in said extended position, said knife blade having an opening formed therethrough, a stop shaft having its shank extending through said knife blade opening and both of said slots and having a first enlarged head adapted to be seated in either of said enlarged slot openings, spring means biasing said stop shaft in a direction normally to seat said first head in one of said enlarged slot openings when overlying the same, whereby the blade may be locked automatically in either position, a second enlarged head at the opposite end of said stop shaft from said first enlarged head, said spring means comprising a coil spring surrounding said stop shaft and interposed between said second enlarged head and the outer surface of said first sheath wall.

CLARENCE E. TAYLOR.
STEPHEN J. GWOOSH.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
470,777	Billings	Mar. 15, 1892
1,833,406	Bratrud	Nov. 24, 1931
1,906,573	Gits	May 2, 1933
2,107,736	Huber	Feb. 8, 1938
2,284,168	Rickenbacker	May 26, 1942
2,514,812	Thompson	July 11, 1950

FOREIGN PATENTS

Number	Country	Date
386,741	Great Britain	Jan. 26, 1933