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POCKETKNIFE

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This invention relates to pocketknives and more particularly to such knives of the type in which the blade is longitudinally slidable in the handle and is adapted to be projected beyond one end thereof.

It is the general object of the present invention to provide a novel and improved knife of the type described.

More particularly it is an object of the invention to provide, in a knife of the type described, a construction comprising a minimum number of simple parts and in which the blade itself can be readily detached from the remaining parts and replaced if it becomes dull, broken, or worn.

An important feature of the present invention resides in the provision of an extremely simple handle for a knife, of the type described, which is formed as a loop, from a single length of metal strip, with two portions thereof arranged parallel and comprising tracks for the guidance of the knife blades.

Another feature of the invention consists in the provision of a knife blade and shank of one piece and of substantially uniform thickness and width whereby both the edges of the shank and the back edge of the blade can be guided in grooves in the track members.

Still another feature of the invention resides in the provision of an open sided handle, between the track sides of which the shank of a blade is guided, and in the provision of a block secured to the blade shank between the tracks and serving to limit the outward movement of the blade as it is projected through an end member of the handle.

A still further feature of the invention resides in the novel means for locking the blade in any one of a number of positions, which means is substantially housed in a block secured to one face of the blade shank, and which comprises a laterally movable lug having a locking pin thereon and biased by means of a spring housed in the block toward locking position, with a button on the face of the block for operation of the lug.

Other and further features and objects of the invention will be more apparent to those skilled in the art upon a consideration of the accompanying drawing and following specification wherein is disclosed a single exemplary embodiment of the invention with the understanding that such changes may be made therein as fall within the scope of the appended claims without departing from the spirit of the invention.

In said drawing:

Figure 1 is a side elevation of a knife con-

structed in accordance with the present invention shown with the blade extended in solid lines and in dotted lines with the blade retracted;

Figure 2 is a longitudinal central section taken on line 2—2 of Figure 1;

Figure 3 is a transverse section taken on line 3—3 of Figure 2;

Figure 4 is a view, on an enlarged scale, of the inner face of the block intended to be mounted on the shank of the blade; and

Figure 5 is a view on an enlarged scale of the blade shown removed from the handle.

The present invention contemplates the provision of an extremely simple pocket knife which can be very cheaply made to sell at a low price, which has a blade which can, if desired, be removed and replaced by a new one when dull or worn and in which the blades can be made so cheaply and replaced so readily that changing is simpler than sharpening, very much as in the case of the present-day safety razor.

As shown in the drawing, the knife comprises two essential parts, an open sided handle 10 and a blade 11. As shown in dotted lines in Figure 1 the blade can be completely housed within the handle or it can be projected beyond one end of the handle for use as shown in Figures 1 and 2 in full lines. As seen in Figure 5, the blade comprises a suitable strip of steel of substantially uniform width and thickness, clipped at one end as at 12 to provide a suitable shape for the blade point and sharpened on one edge at 13 for a portion of its length to provide a cutting edge. The remaining portion 14 to the right of the sharpened part is the shank and this is perforated with two holes 15 and 16. The shank is guided in the handle and remains within the same when the blade is extended to form a rigid connection between the handle and the blade.

The handle 10 may be defined as open sided, i. e., the two faces thereof are open and in fact the whole handle consists in a simple loop having a pair of straight, spaced, track members 18 and 19 and the connecting end members 20 and 21 which are conveniently arcuate to give a configuration to the closed knife of desirable contour with no corners to catch in the pocket. This loop including parts 18, 19, 20 and 21 is formed from a single piece of strip or bar stock of substantially semi-circular cross-section as seen at 18 and 19 in Figure 3.

The track members 18 and 19 are grooved centrally of their inner flat faces 22 and 23, as at 24 and 25 to such a depth and of such a width as to snugly receive the shank of the blade and

to guide the same for longitudinal movement therein. The end 20 of the handle is slotted at 26 for its full width and in alignment with the grooves to permit the blade to protrude through this end and to provide a guide for the flat faces of the same.

The rear end 30 of the shank is curved to the same curvature as the inner face of end member 21 of the handle. Applied to each face of the shank is a metal block of such thickness that the outer faces thereof are in substantially the same planes with edges 31 of the bar forming the handle. One of these blocks 32 is perfectly plain and is perforated to pass the shanks of screws 33, the heads of which are countersunk into this block. These screws pass through openings 15 and 16 in the blade shank and are threadedly engaged in the companion block 35. The rear ends of blocks 32 and 35 are shaped to the same configuration as the end of the blade shank and their forward ends are given a similar configuration so that when the blade is extended to its full length these forward ends abut neatly against end member 20 of the handle and limit outward movement of the blade as seen in Figure 1. These blocks provide a convenient grip for the fingers in sliding the blade to its various positions and at the same time block 35 houses locking mechanism which selectively secures the blade in any of a number of positions.

Figure 4 clearly shows the structure of this locking mechanism. The inner face of the block 35 is transversely grooved at 36 and in this groove slides locking lug 37 carrying locking pin 38. The lug is biased to the position shown in Figure 4 by means of leaf spring 39, fitting in longitudinal groove 40 in block 35, and having a long and a short leg, the end of the long leg bearing on the rear face 41 of the locking lug while the short leg binds against the outer wall of groove 40 and with the struck-in parts 42 of the metal of the block serves to hold the spring in position.

The locking lug pin 38 is adapted to be engaged in any one of holes 44 on the inner face of track member 18 just slightly to one side of the groove therein. Preferably there is a locking recess 44 to hold the blade in its fully retracted position, one to hold it in its fully extended position and one or more to hold it in intermediate extended positions if this is found desirable.

In order to withdraw the locking pin there is provided button 45 transversely movable across the upper face of block 35 and connected to lug 37 by means of shank 46 passing through slot 48 in the block and secured in a hole in the lug.

In order to operate the knife, it is only necessary to hold the handle in the fingers of one hand, engage the button with the thumb of the same hand, and move it laterally to release the locking pin, and at the same time apply longitudinal movement to the button to slide the blade in either direction desired, releasing the button where it is wished to stop the blade.

As before mentioned, the handle is made from a single strip or bar of metal bent to the form of a loop. Conveniently the two ends of the bar meet at the center line of end 21 and are there welded together. If desired, during the construction, a slot may be formed in end 21 the same as in end 20 and tab 50 inserted therein and secured in position by the same material that welds the two ends of the bar together. A hole

51 in this tab then provides a convenient means for hanging the knife from a watch chain or similar device to prevent it from being lost.

Since the width of the blade of the knife is substantially the same as that of the shank it will be seen that the back of the blade will be guided in the slot in one of the track members and will help to support the blade when pressure is put on the edge during cutting so that there will be no canting of the same with a tendency to wear the corners of the shank and the track groove.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A knife comprising a handle, a blade longitudinally slidable in said handle and adapted to be projected beyond one end thereof, a shank on said blade, a block secured to one side of said shank to limit the outward movement of the blade in respect to the handle, a locking lug housed in said block and having movement laterally of the blade to engage the handle adjacent the shank edge to lock the blade in desired positions, and an operating button for said lug exposed on the face of said block.

2. A knife comprising an open sided handle, a blade longitudinally slidable in said handle and adapted to be projected beyond one end thereof, said handle comprising parallel, spaced, track members and connecting end members, one slotted for passage of the blade, said track members being grooved on their inner faces, a shank on the blade fitting between said tracks and guided in said grooves and a block secured to one side of said shank extending laterally from track to track and adapted to abut the inner face of the slotted end member to limit outward movement of the blade.

3. A knife including an open sided handle formed of parallel, spaced, track members and connecting end members forming an integral closed loop, the inner faces of said track members having shallow grooves and one end member being slotted in extension of said grooves, a blade having its faces substantially parallel to the plane of the handle loop and longitudinally slidable through said slot to be projected into operative position or retracted within the handle, a shank on said blade having its edges fitted in said grooves to guide the blade and means carried by said shank and extending to the face edges of the tracks to operate said blade.

4. A knife including an open sided handle formed of parallel, spaced, track members and connecting end members, the inner faces of said track members being grooved and one end member being slotted in extension of said grooves, a blade longitudinally slidable through said slot to be protected into operative position or retracted within the handle, a shank on said blade having its edges fitted in said grooves to guide the blade, a block covering one face of said shank, a locking lug slidable laterally in a groove in said block and having a pin thereon, recesses in the inner face of one track member to selectively receive said pin to lock the blade in any one of several positions and means on the face of said block to operate said lug.

5. A knife including an open sided handle formed of parallel, spaced, track members and connecting end members, the inner faces of said track members being grooved and one end member being slotted in extension of said grooves, a blade longitudinally slidable through said slot to be projected into operative position or retracted

within the handle, a shank on said blade having its edges fitted in said grooves to guide the blade, a block covering one face of said shank, a locking lug slidable laterally in a groove in said block and having a pin thereon, recesses in the inner face of one track member to selectively receive said pin to lock the blade in any one of several positions, and a spring housed in said block to bias said lug and pin to blade locking position.

6. A knife including an open sided handle formed of parallel, spaced, track members and connecting end members, the inner faces of said track members being grooved and one end member being slotted in extension of said grooves, a blade longitudinally slidable through said slot to be projected into operative position or retracted within the handle, a shank on said blade having its edges fitted in said grooves to guide the blade, a block for each face of said shank to fill it out to the thickness of the track members and extending laterally from one to the other, and a removable fastening means securing said blocks to the blade whereby the blade can be renewed.

7. A knife including an open sided handle formed of parallel, spaced, track members and connecting end members, the inner faces of said track members being grooved and one end member being slotted in extension of said grooves, a blade longitudinally slidable through said slot to be projected into operative position or retracted within the handle, a shank on said blade of the same thickness as the blade and having its edges fitted in said grooves to guide the blade, a removable block for each face of said shank to extend it to substantially the thickness of the track members and means housed by one of said blocks to selectively lock the blade in various positions.

8. A knife including an open sided handle formed of parallel, spaced, track members and connecting end members, the inner faces of said track members being grooved and one end member being slotted in extension of said grooves, a blade longitudinally slidable through said slot to be projected into operative position or retracted within the handle, a shank on said blade of the same thickness as the blade and having its edges fitted in said grooves to guide the blade, a removable block for each face of said shank to extend it to substantially the thickness of the track members, a lateral groove on the under face of one of said blocks, a lug slidable in said groove and having a pin engageable in holes in the inner face of one of said track members, a spring housed in said block and biasing said lug to locking position and a button on the face of said block and operatively associated with said lug.

9. A handle for a knife of the type having a blade longitudinally slidable and adapted to be projected beyond the end of the handle comprising a single piece of metal of suitable cross section formed into a rigid closed loop having two parallel side track members and connecting end members, one of said end members having a passage therethrough for the blade.

10. A handle for a knife of the type having a blade longitudinally slidable and adapted to be projected beyond the end of the handle comprising a single strip of metal of substantially semi-circular cross section formed and secured into a closed loop large enough to surround the blade in the plane thereof, said strip having its flat face inside and forming two parallel track members and connecting end members.

11. A handle for a knife of the type having a blade longitudinally slidable and adapted to be projected beyond the end of the handle comprising a single strip of metal of substantially semi-circular cross section formed and secured into a closed loop large enough to surround the blade in the plane thereof, said strip having its flat face inside and forming two parallel track members and connecting end members, said track members having their flat faces longitudinally grooved.

12. A handle for a knife of the type having a blade longitudinally slidable and adapted to be projected beyond the end of the handle comprising a single strip of metal of substantially semi-circular cross section formed and secured into a closed loop large enough to surround the blade in the plane thereof, said strip having its flat face inside and forming two parallel track members and connecting end members, said track members having their flat faces longitudinally grooved, and one of said end members being slotted in the plane of said grooves to permit the passage of the blade therethrough.

13. A handle for a knife of the type having a blade longitudinally slidable and adapted to be projected beyond the end of the handle comprising a single strip of metal of substantially semi-circular cross section formed and secured into a closed loop large enough to surround the blade in the plane thereof, said strip having its flat face inside and forming two parallel track members and connecting end members, said track members having their flat faces longitudinally grooved, one of said end members being slotted in the plane of said grooves to permit the passage of the blade therethrough, the other end member having an integral eye thereon.

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