May 14, 1957 J. N. HOLLIS 2,791,831

SHARPENING MEANS FOR JACKKNIVES AND OTHER KNIVES

Filed Aug. 27, 1954

FIG. 1

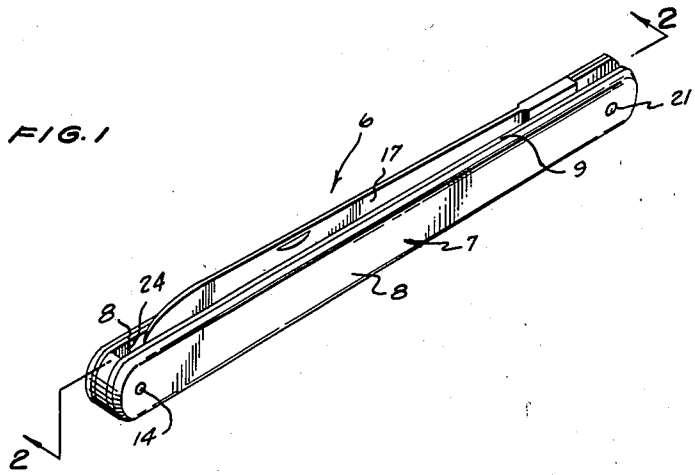


FIG. 2

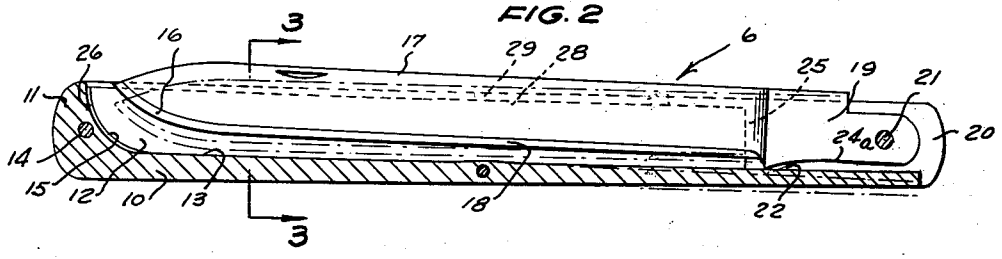


FIG. 3

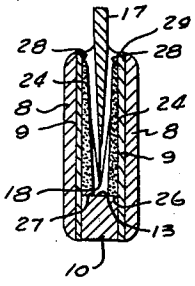
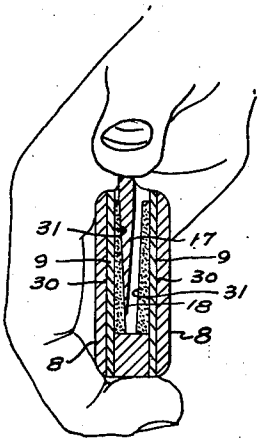


FIG. 4



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SHARPENING MEANS FOR JACKKNIVES AND OTHER KNIVES

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3 Claims. (Cl. 30—138)

This invention relates to improved sharpening means for jackknives and other knives, the primary object of the invention being to provide more efficient, more effective, and more easily used means of this kind.

Another important object of the invention is the provision of sharpening means of the character indicated above which are simpler in form, can be incorporated in knife structures with greater ease and without alteration of existing knife components.

A further important object of the invention is to provide sharpening means of the character indicated above which are composed of a minimum number of parts, and which can be produced in rugged and serviceable form at relatively low cost.

Other important objects and advantageous features of the invention will be apparent from the following description and the accompanying drawings, wherein, for purposes of illustration only, a specific form of the invention is set forth in detail.

Figure 1 is a perspective view of a jackknife incorporating the present invention;

Figure 2 is an enlarged longitudinal section, taken on the line 2—2 of Figure 1;

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

Figure 4 is a somewhat enlarged section similar to Figure 3, showing the blade of the knife manually engaged with one of the sharpening components.

Referring in detail to the drawings, wherein like numerals designate like parts throughout the several views, the numeral 6 generally designates a conventional jackknife, comprising an elongated handle 7 having laterally spaced side plates 8, 8 covered by metal liner plates 9, 9, with a longitudinal spacer 10 disposed between the liner plates 9, 9 along one edge thereof.

The spacer 10 has at one end a riser 11 which closes one end of the blade chamber 12, defined between the liner plates 9, 9 and the inner spacer surface 13. A rivet 14 traverses and secures together the riser 11 and the adjacent end portions of the side plates 8, 8 and the liner plates 9, 9. The inward edge of the riser 11 is concaved, as indicated at 15 to conformably clear the curved point 16 of the blade 17.

The blade 17 has a substantially straight cutting edge 18 extending from the point 16 to the blade tang 19 which is of reduced width and is positioned between the liner plates 9, 9 at the open end 20 of the handle 7, and is pivoted on a rivet 21 traversing the tang 19, the liner plates 9, 9 and the side plates 8, 8.

As in conventional pocket knives, a spring portion 22 of the spacer 10 is unconnected to the handle, and is positioned near the open end 20 of the handle along the bottom 13 of the blade chamber 12 and engages the adjacent edge 24*a* of the tang 19. The action of the spring portion 22 in the closed position of the blade 17 is to yieldably hold the cutting edge 18 out of contact with the blade chamber bottom 13, and to assist in moving the blade 17 to open position.

In accordance with the present invention, there are secured along the opposite sides of the blade chamber 12, similar sharpening members 24, 24 which are reversed with respect to each other.

Each sharpening member comprises an elongated strip of suitable abrasive material, has a squared end 25 and a curved end 26, a substantial straight lower edge 27, and a straight upper edge 28.

The curved end 26 of each abrasive strip conformably engages the concave edge 15 of the riser 11, the lower edge 27 rests upon the chamber bottom 13 and the squared strip end 25 terminates substantially at the rear end of the blade cutting edge 18.

The upper edge 28 of the strip is substantially parallel to and is spaced below or inwardly from the adjacent edge 29 of the adjacent liner plate 9, as shown in Figures 3 and 4 of the drawings.

The abrasive strips have outer sides 30, 30 which are secured in any suitable manner, as by cementing, to the exposed sides of the liner plates 9, 9.

The exposed inner sides 31, 31 of the abrasive strips, instead of being parallel to their outer sides 30, 30, decline downwardly and inwardly with respect to the outer sides 30, 30, so that the strips have wedge-shaped cross sections, and the inner or sharpening sides 31, 31 converge downwardly to the blade chamber bottom 13.

The sharpening sides 31, 31 are preferably spaced from each other at a greater distance than the thickness of the blade 17, so that, in a sharpening action, the blade may be engaged with one of the sharpening strips at a time while being disengaged with the other, and the sharpening members do not engage the blade 17 except when the blade is displaced for a sharpening operation.

As shown in Figure 4, and by phantom lines in Figure 2, a blade sharpening operation is carried out by manually depressing the blade 17, against the resistance of the spring 22, with the cutting edge 18 of the blade in engagement with the sharpening side 31 of one of the sharpening members 24, and then permitting the blade to rise to normal position, and repeating these steps as often as desired, to sharpen one side of the cutting edge 18. To sharpen the other side of the cutting edge, the same steps are performed with the blade engaged with the other sharpening member 24.

It is to be observed that similar sharpening means can be used with or incorporated in other forms of knives, such as sheath knives and Christy type knives.

What is claimed is:

1. In a jackknife, a handle having laterally spaced side plates having inward sides, a spacer extending along one edge of and between said side plates, said spacer serving to space the side plates apart and with the inward sides of said side plates to define a blade chamber, an edge of the spacer serving as a bottom for the chamber, a blade positioned in said chamber and having a cutting edge facing the chamber bottom, means at one end of the blade pivoting the blade to the handle for movement toward and away from the chamber bottom, said spacer being fixed at one end to the side plates and unconnected to the side plates at its other end, said spacer having a resilient portion at said other end defining spring means acting between the blade and the handle and yieldably and normally spacing the cutting edge of the blade from the chamber bottom, and an abrasive sharpening strip extending along and secured to the inward side of one of said side plates, said sharpening strip having an angulated side facing the adjacent side of the blade, and another similar sharpening strip extending along and secured to the inward side of the other side plate, the facing sides of said strips being sharpening sides and converging toward each other toward the bottom of the chamber, said blade normally spaced from and out

of contact with said sharpening sides and flexible to engage either of said sides.

2. In a jackknife, a handle having laterally spaced side plates having inward sides, a spacer extending along one edge of and between said side plates, said spacer serving to space the side plates apart and with the inward sides of said side plates to define a blade chamber, an edge of the spacer serving as a bottom for the chamber, a blade positioned in said chamber and having a cutting edge facing the chamber bottom, means at one end of the blade pivoting the blade to the handle for movement toward and away from the chamber bottom, said spacer being fixed at one end to the side plates and unconnected to the side plates at its other end, said spacer having a resilient portion at said other end and defining spring means acting between the blade and the handle and yieldably and normally spacing the cutting edge of the blade from the chamber bottom, and an abrasive sharpening strip extending along and secured to the inward side of one of said side plates, said sharpening strip having an angulated side facing a side of the blade, and another similar sharpening strip extending along and secured to the inward side of the other side plate, the facing sides of said strips being sharpening sides and converging toward each other toward the bottom of the chamber, said sharpening sides being spaced from each other at a greater distance than the thickness of the blade and the blade being normally out of contact with and flexible to engage either of said sharpening sides.

3. In combination, a jackknife handle having spaced side plates, a spacer between the side plates, said spacer

being laterally spaced from one edge of the side plates and positioned along the opposite edge of the side plates, said spacer being secured to the side plates at one end and unsecured to the side plates at its opposite end, said side plates having inner sides, a blade positioned between said side plates and having a cutting edge facing said spacer, said blade being pivoted at one end only to the side plates, and an abrasive strip positioned in the space between a side of the blade and the inner side of the adjacent side plate, said strip having a sharpening face facing the side of the blade and angulated relative to the adjacent side plate and toward the spacer, and means securing the abrasive strip in place, and another similar abrasive strip secured in position in the space between the other side plate and the other side of the blade, the sharpening faces of said abrasive strips being out of contact with each other.

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