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3,314,148

RETRACTIBLE POCKET BLADE HOLDER

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2 Sheets-Sheet 2

Fig. 4

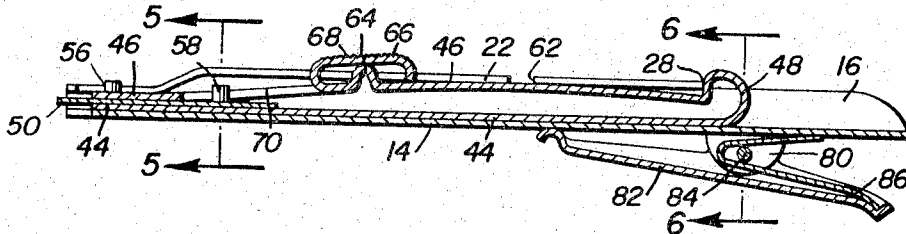


Fig.5

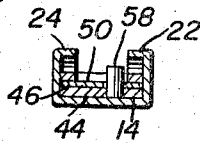


Fig. 6

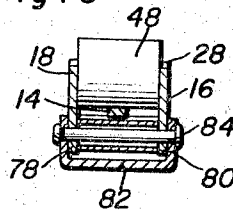


Fig. 7

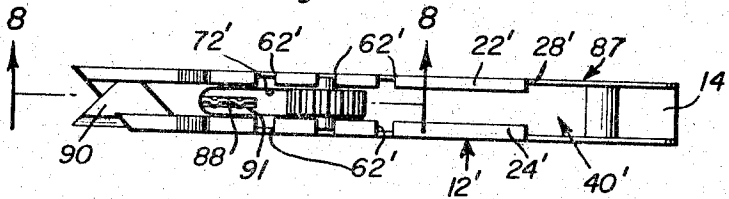


Fig. 8

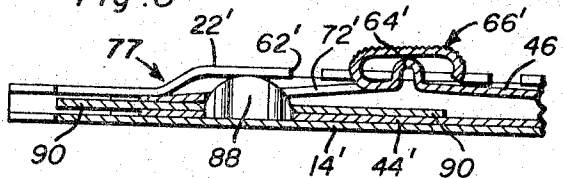


Fig. 9

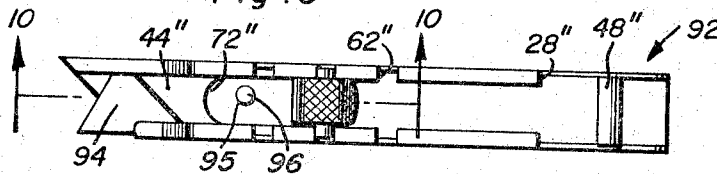
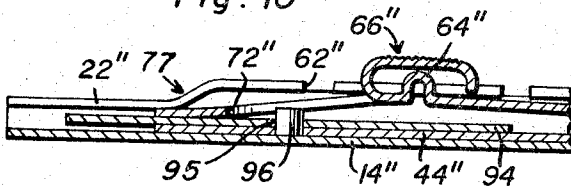


Fig. 10



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RETRACTIBLE POCKET BLADE HOLDER

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5 Claims. (Cl. 30-162)

This invention relates generally to blade holders, and more specifically to novel holders for blades whereby such blades may be readily carried on the person with the convenience of a pen or pencil or the like.

It is an object of the present invention to provide three embodiments of novel blade holders.

It is another object of the present invention to provide novel means for holding blades whereby the blades may be selectively moved between cased and uncased positions, and in which the blades are supported on both sides thus substantially eliminating blade breakage or undue wear.

It is a further object of the present invention to provide blade holders utilizing a minimum of parts and thus being relatively simple in construction and substantially free from wear or breakage.

It is a still further object of the present invention to provide blade holders which are relatively simple to operate and which allow for extremely quick changing of the blades carried thereby.

It is another object of the present invention to provide three embodiments of blade holders which utilize commercially available blades and which therefore are extremely versatile and have wide utility.

It is a further object of the present invention to provide blade holders having novel stop means and positioning means therein.

It is a final object of the present invention to provide blade holders having a novel head portion designed to eliminate any play or instability during use of the blade carried thereby.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of a first embodiment of blade holder comprising the present invention with the blade illustrated in cased position;

FIGURE 2 is a perspective view similar to that of FIGURE 1 illustrating the blade in uncased position;

FIGURE 3 is an exploded perspective view of the blade holder illustrated in FIGURES 1 and 2;

FIGURE 4 is an enlarged longitudinal sectional view taken through the blade holder illustrated in FIGURES 1 and 2;

FIGURE 5 is a vertical sectional view taken substantially on the plane of the line 5-5 of FIGURE 4;

FIGURE 6 is a vertical sectional view taken substantially on the plane of the line 6-6 of FIGURE 4;

FIGURE 7 is a top plan view of a second embodiment of blade holder comprising the present invention;

FIGURE 8 is an enlarged partial vertical sectional view taken substantially on the plane of the line 8-8 of FIGURE 7;

FIGURE 9 is a view to that of FIGURE 7 illustrating a third embodiment of the present invention; and

FIGURE 10 is a vertical sectional view taken substantially on the plane of the line 10-10 of FIGURE 9.

Referring now to the drawings with more particularity, and especially to FIGURES 1-6, reference numeral 10 generally denotes the blade holder comprising the first embodiment of the present invention including a hollow elongate body member generally denoted by the numeral

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12 and which is U-shaped or channel shaped in cross-section. The body member 12 includes a bottom wall 14, side walls 16 and 18 and a partial top wall assembly generally denoted by reference numeral 20 comprising intumed flanges 22 and 24 carried by the side walls 16 and 18 and extending substantially the full length of the body member 12. The flanges 22 and 24 define an elongate slot 26 between the free edges thereof. It will be observed in FIGURE 3 that the flanges 22 and 24 terminate rearwardly at points 28 and 29 and that the portions of the side walls 16 and 18 extending rearwardly therefrom define therebetween a widened rear end portion of the slot 26.

The body member 12 defines a channel or chamber 30 therein open at its opposite ends and is cut back at its forward end 32 along the line indicated by reference numeral 36.

Slidably mounted in the chamber 30 is a blade holding member generally denoted by reference numeral 40 which comprises a flat spring 42 of suitable metallic material. As will be observed in FIGURE 3 for example, the spring 42 is bent over upon itself and thus forms a lower spring arm 44 and a slightly bowed upper spring arm 46, the arms 44 and 46 normally being unbiased when in the position illustrated in FIGURE 3. Further, it will be observed that an enlarged upstanding hump or protuberance 48 is provided at the area in which the spring is bent. This hump 48 is provided so that the blade holding member or means 40, when mounted in the body member 12 as illustrated in FIGURES 1, 2 and 4, will be limited in its forward sliding movement by contact of the hump 48 with the rear ends of the flanges 22 and 24 at points 28 and 29.

A blade, such as the conventional commercially available ejector razor blade 50 having two slots 52 and 54 therein, is mounted in the blade holding means 40 upon the lower arm 44 and a pair of bosses 56 and 58 extending upwardly in spaced apart relationship from the arm 44 adjacent the free end thereof are received through adjacent ends of the slots 52 and 54. Further, the upper spring arm 46 has an aperture 60 in which the boss 56 is receivable when the spring arm 46 is moved downwardly toward the arm 44 over the blade 50. With the blade clampingly disposed between the arms 42 and 44 the blade holding means 40 may be slid into the open rear end 34 of the body member 12.

As will be readily apparent by viewing FIGURES 1 through 3, the flanges 22 and 24 have a plurality of pairs of transversely aligned outcuts 62 formed therein at points spaced longitudinally therealong. The upper spring arm 46 is provided with a series of reversely curving bends defining a raised portion or detent 64 extending thereacross and whose opposite ends are selectively receivable in each pair of outcuts 62. Thus, it will be observed that when the detent 64 is in the position illustrated in FIGURE 1, the slight bowed configuration of the arm 42 and the resiliency of the material of which the blade holding means 40 is constructed will retain the detent 64 in the corresponding outcuts 62 and the blade holding means 40 will be retained in position against shifting longitudinally of the body member 12.

Referring now specifically to FIGURE 3, it will be observed that a finger actuatable member 66 is struck-up out of the upper spring arm 46 and bent rearwardly and includes a serrated upper surface 68. An aperture or opening 72 is thereby defined in the arm 46 between a pair of narrow leg portions 70 of the arm 46. The finger member 66 projects upwardly through the slot 26 when the blade holding member 40 is mounted in place in the chamber 30, and thus is readily engageable by the thumb of a user of the holder 10 as a means for sliding the blade holding member 40 through the body member 12 in order

to shift the member 40 between the positions thereof illustrated in FIGURES 1 and 2. It will be appreciated that such movement may best be accomplished by first depressing the finger member 66 so as to flex the narrow leg portions 70 and unseat the detent 64 from the corresponding pair of cutouts 62. Thereafter, the member 40 may be readily shifted longitudinally of the body member 12 as desired. The positioning of the finger member 66 immediately rearwardly of the portions 70 adds to the ease of flexure of the latter and inasmuch as the blade 50 is retained substantially under the leg portions 70 the blade holder 40 may function effectively within the confines of the chamber 30.

The forward end of the body member 12 is reduced in height at the point generally denoted by reference numeral 74, thereby forming a reduced neck portion 76 which is joined to the main body portion by means of an inclined portion 77. Thus, it will be readily apparent by viewing FIGURES 2 and 4 in particular, that when the blade holding member 40 has been moved to its forwardmost position its arms 44 and 46 are disposed in the reduced neck portion 76 at the forward end of the body member 12 and any play or instability of the holding member 40 in the body member 12 and of the blade 50 in the holding member 40 during use of the holder 10 will be eliminated.

Near the rear end of the body member 12 are a pair of depending ears 78 and 80. A spring-biased clip 82 is mounted by a pivot pin 84 extending between the ears 78 and 80 and a leaf spring 86 is mounted, as indicated best in FIGURE 4, between the clip 82 and the body member 12 to bias the clip 82 to closed position. It will be readily appreciated that the clip 82 is of substantially conventional construction and utilized in the same manner as a pen clip for mounting the holder 10 in a user's pocket and also as a means to provide a larger finger grip during use of the blade holder. It will be further appreciated, that the hump portion 48 on member 40 will be useful to provide a reminder or indication that the blade 50 is not encased when the user is putting the device 10 in his pocket. Thus, when the device 10 is being so placed, if the hump portion 48 is all the way at the end of the body member 12, as illustrated in FIGURE 1, this will provide an indication that the blade 50 is sheathed or cased, and if it is against the stops 28, it will be readily apparent to the user without looking at the device that the blade is unsheathed or uncased. Incidentally, it should also be readily apparent that a number of intermediate positions for the blade holder 40 are possible merely by adding additional pairs of cutouts 62 along the flanges 22 and 24.

Referring now to FIGURES 7 and 8, it will be apparent that a second form of holder is illustrated, this form being generally denoted by reference numeral 87. The holder 87 is quite similar to the holder 10 illustrated in FIGURES 1-6, as will readily be appreciated, and portions of the holder 87 corresponding to similar portions of the holder 10 are designated by prime numerals corresponding to the reference numerals applied to the similar components of the holder 10. The differences in construction of the holder 87 reside chiefly in the addition of a third pair of cutouts 62' thereby allowing for one intermediate position for the blade. Further, the bosses 56 and 58 of the holder 10 are replaced by a struck-up tab or tab member portion 88 of the arm 44'. A somewhat different blade is provided and comprises an "X-Acto" blade having one elongate opening or slot 91 therein rather than the pair of shorter slots 52 and 54. The tab 88 extends upwardly through the one slot 91 and the aperture 72'. Further, the upper spring arm 46' does not include an aperture corresponding to aperture 60. Thus, it will be readily appreciated that this form of the invention is substantially similar to that described above, except that it is useful for accommodating a different

type of commercially available blade therein and includes an intermediate position not present in the above form.

Referring now to FIGURES 9 and 10, it will be apparent that a third form of the invention is illustrated, and is generally denoted by reference numeral 92. This form of the invention is provided to mount a further type of blade 94 therein, the blade 94 comprising a "Stanley No. 902" blade having a centrally located aperture or hole 95 therein. In this embodiment of the invention components thereof similar to the same components of the holder 10 are referred to by corresponding double prime numerals. There is a single boss 96 on the lower spring blade 44'' on which the blade 94 is mounted and which extends upwardly through the hole 95 and aperture 72''. In all other material aspects, other than dimensions and/or size, this embodiment of the invention is substantially identical to that disclosed in FIGURES 7 and 8 above.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A blade holder of the type having a retractable blade comprising, a hollow elongate body member, said body member open at both ends and having a slot extending the full length of one wall thereof, blade holding means slidably mounted within said body member and having means substantially intermediate the ends thereof extending upwardly through said slot for sliding said blade holding means through said body member, stop means substantially adjacent one end of said blade holding means extending upwardly through said slot, means adjacent one end of said body member cooperating with said stop means for limiting the forward sliding movement of said blade holding means in said body member, said blade holding means comprising spring plate means of substantially resiliently flexible construction, said spring plate means bent back on itself thereby forming a pair of spring arms, and a blade receiving head at the open end of said spring arms.

2. The combination of claim 1 wherein the lowermost of said spring arms includes means projecting upwardly therefrom for supporting a blade, the other of said spring arms having an aperture therein for receiving said projecting means whereby said other spring arm will contact and overlie a blade mounted on said lowermost spring arm.

3. The combination of claim 2 wherein said supporting means comprises a pair of spaced bosses extending perpendicularly upwardly from said lowermost spring arm.

4. The combination of claim 2 wherein said supporting means comprises a single boss extending perpendicularly upwardly from said lowermost spring arm.

5. The combination of claim 2 wherein said supporting means comprises a tab extending perpendicularly upwardly from said lowermost spring arm.

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