

[54] SAFETY RAZOR BLADE HOLDER

[72] Inventor: Leonard J. Black, Arcadia, Calif.

[73] Assignee: Pacific Handy Cutter, Incorporated, El Monte, Calif.

[22] Filed: May 12, 1971

[21] Appl. No.: 142,792

2,304,332 12/1942 Bodkin30/335
 2,336,284 12/1943 Nelson.....30/333
 2,580,142 12/1951 Voight.....30/162

Primary Examiner—Granville Y. Custer, Jr.

Assistant Examiner—J. C. Peters

Attorney—Miketta, Glenny, Poms and Smith

Related U.S. Application Data

[63] Continuation of Ser. No. 815,300, Apr. 11, 1969, abandoned.

[52] U.S. Cl.30/286, 30/335

[51] Int. Cl.B26b 29/02

[58] Field of Search.....30/162, 293, 332, 333, 335

[57] ABSTRACT

A safety razor blade holder comprising a longitudinally extending handle, a threaded stud carried by the handle, a guard member slidably mounted on the stud, a lock nut for clamping the guard member and handle together, a safety razor blade, and means for permitting the guard member to be positioned relative to the safety razor blade when such blade is in an operative position so as to expose or temporarily shield the edge of such blade and preventing movement of the guard member, even when the lock nut is slightly loosened, from allowing the edge of the blade to be exposed when such blade is in a second position.

[56] References Cited

UNITED STATES PATENTS

854,814 5/1907 Durham.....30/332

9 Claims, 6 Drawing Figures

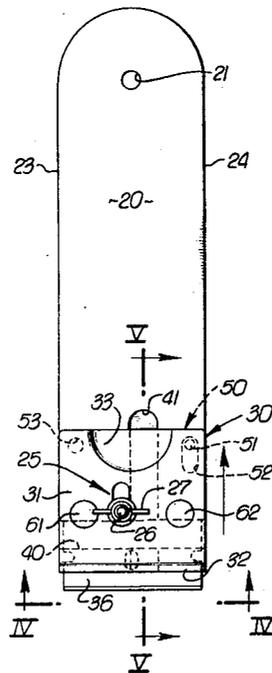


FIG. 1.

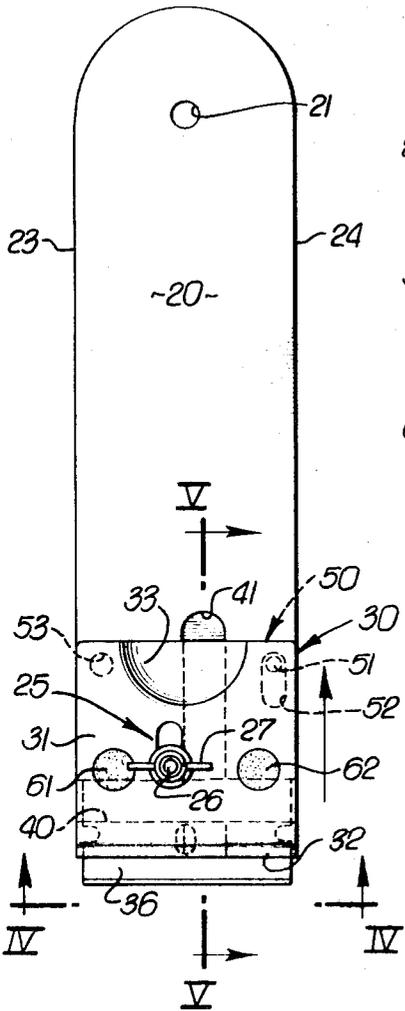


FIG. 2.

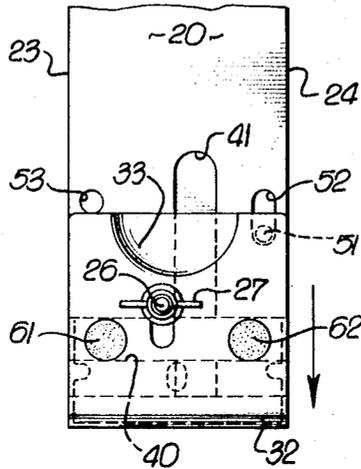


FIG. 3.

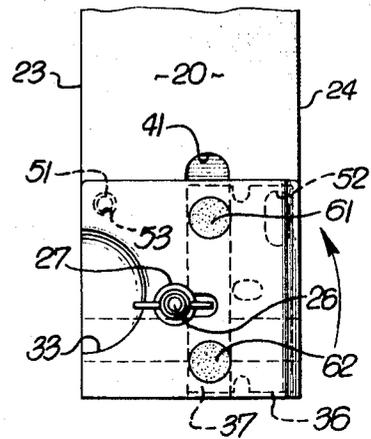


FIG. 4.

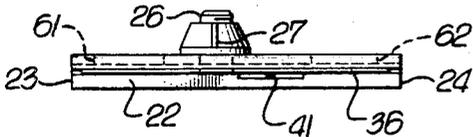


FIG. 5.

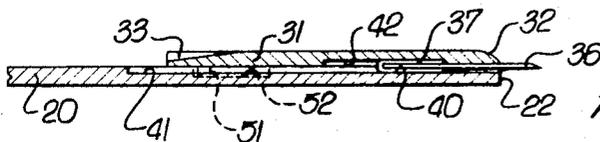
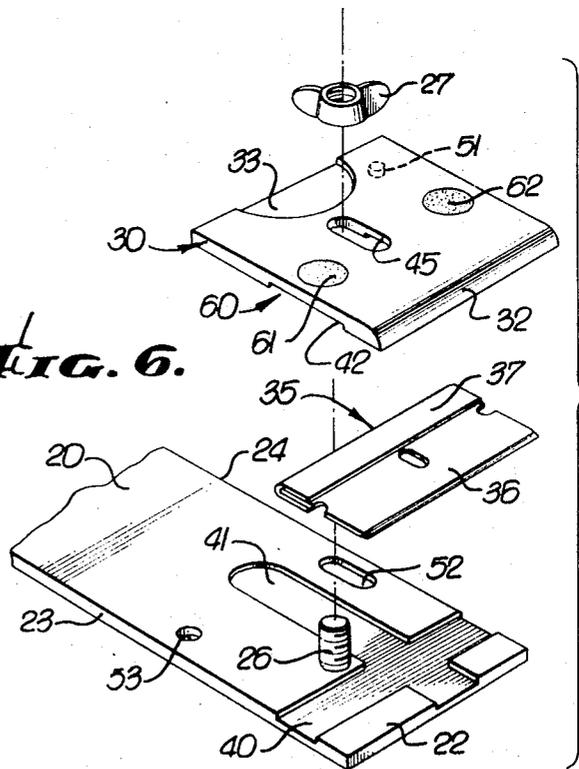


FIG. 6.



INVENTOR.

LEONARD BLACK

By

Miketta, Gray, Pome & Smith
ATTORNEYS.

SAFETY RAZOR BLADE HOLDER

this is a continuation of application Ser. No. 815,300, filed Apr. 11, 1969, now abandoned.

The prior art is replete with devices used for scraping, cutting or the like and employing an ordinary safety razor blade, usually of the single edge type. It will be readily apparent that such a tool may be exceedingly dangerous because of the sharpness of the ordinary razor blade edge. The primary problem is to provide for quick and convenient blade edge exposure when the holder is in use but the provision of means for securely and reliably shielding the razor blade edge when the holder is not in use. In many such prior art devices, there is used a holder comprising two pieces, one of which is clamped with respect to the other in various positions through a threaded stud or screw and a complementary locking nut.

The difficulty with these last-mentioned devices of the prior art, is that slight loosening of the lock nut when the holder is not in use will allow one of the holder pieces to move relative to the other, or allow the blade to move relative to the two holder pieces, so that the edge of the razor blade is exposed. When such a device is not in use and is being carried in a person's pocket or is carelessly left lying around, this inadvertent blade exposure can cause severe injury. On the other hand, prior art devices which have attempted to solve the above-discussed problem, have employed safety means which have been cumbersome, time consuming, and otherwise inconvenient to move the blade from the operative to the shielded position.

Accordingly, it is a principal object of the present invention to provide a safety razor blade holder wherein a safety razor blade may be exposed for use and temporarily shielded by suitable positioning of two holder pieces clamped together by threaded means and wherein the safety razor blade may be moved to a second position which more reliably assures the nonexposure of the blade edge.

It is another object of the present invention to provide a safety razor blade holder of the above-described type wherein the threaded means comprises a stud or screw and lock nut which are used to clamp the two holder pieces together and wherein the blade may not be inadvertently exposed through accidental loosening of the stud and lock nut.

Yet another object of the present invention is to provide a safety razor blade holder of the above-described type wherein means are provided to facilitate repositioning of the blade and shield or guard member relative to the handle so as to move the blade from a first position to a second position wherein the edge of the blade cannot be inadvertently exposed.

Still another object of the present invention is to provide a safety razor blade holder wherein a safety razor blade edge may be exposed for use in a first position of a guard member and shielded when the guard member is in a second position, the blade being held so that the edge thereof remains perpendicular to the longitudinal axis of the holder.

One more object of the present invention is to provide a safety razor blade holder which is constructed of metal and is easy and inexpensive to manufacture, reliable in operation, and has a long useful life.

Generally, the present invention relates to a safety razor blade holder comprising a longitudinally extending handle carrying a threaded stud, a guard member having an opening for receiving the stud, a lock nut adapted to threadedly engage the stud for clamping the guard member and handle together, a safety razor blade having a backing member, and wherein the guard member has a laterally extending channel with a width greater than the width of the backing member on the safety razor blade, the handle has a longitudinally extending channel and a laterally extending channel, each of which has a width substantially equal to the width of the backing member of the blade, the longitudinally extending channel being spaced from the side edge of the handle so that when the safety blade is received therein the edge is spaced inwardly from the side edge of the handle and is thereby unexposed,

and wherein the laterally extending channel is spaced from the forward edge of the handle so that when the safety blade is received therein the edge thereof extends beyond the forward edge of the handle, and means for preventing slidable movement of the guard member relative to the handle in a direction normal to the longitudinal axis of the handle but permitting slidable movement in a direction parallel to the longitudinal axis of the handle when the lock nut is slightly loosened.

Other objects and many of the attendant advantages of this invention will be readily appreciated as the same become better understood by reference to the following detailed description when considered in connection with the accompanying drawing.

In the drawing:

FIG. 1 is a top plan view of an exemplary embodiment of a safety razor blade holder constructed in accordance with the present invention, with the razor blade shown in exposed condition;

FIG. 2 is a partial top plan view of the holder of FIG. 1 with the blade shown in the temporary shielded position;

FIG. 3 is a view as in FIGS. 1 and 2 with the blade shown in the reliably unexposed condition;

FIG. 4 is a sectional view taken along the plane IV—IV of FIG. 1;

FIG. 5 is a sectional view taken along the plane V—V of FIG. 1; and

FIG. 6 is a partial exploded perspective view of the exemplary embodiment of the safety razor blade holder shown in FIG. 1.

In the drawing, there is shown an exemplary embodiment of a safety razor blade holder which comprises a handle, indicated generally at 20; means 25 for clamping the handle 20 together with a guard member indicated generally by the reference numeral 30; a safety razor blade, indicated generally at 35; means 50 selectively preventing slidable movement of the guard member relative to the handle; and means 60 for holding the blade on the guard member.

The handle 20 in the exemplary embodiment of the safety razor blade holder is a longitudinally extending, preferably metal, planar member having a rounded rearward edge and a hole 21 for convenient hanging in such rearward edge. The handle 20 has a forward edge 22 perpendicular to the longitudinally extending side edges 23, 24.

The safety razor blade holder also includes means 25 for clamping the guard member 30 and handle 20 together. In the exemplary embodiment, such means comprises the threaded stud 26 carried adjacent the forward end of handle 20 and disposed off center from the longitudinal axis of the handle. A lock nut, in the form of wing nut 27, is threadedly received on stud 26 and may be manually threadedly engaged thereon so as to clamp guard member 30 to handle 20. It will of course be understood that various types of clamping means, such as various over-center clamps, and various other devices, may be used as a substitute for the stud and lock nut as illustrated in the exemplary embodiment.

The guard member, indicated generally by the reference numeral 30, comprises a square plate 31 having a width and length substantially equal to the width of handle 20. Thus, regardless of the position of plate 31 with respect to handle 20, opposing side edges of the guard member will be even with the side edges 23, 24 of handle 20. Forward edge 32 of plate 31 is beveled or rounded to eliminate any sharp edges from the holder. The rearward portion of plate 31 is provided with a depression 33 for receiving the thumb of the manual operator of the holder to facilitate repositioning of the guard member 30 relative to handle 20.

The holder in the exemplary embodiment also includes safety razor blade 35 of a construction well known in the art and comprising a blade portion 36 and a backing member 37. Backing member 37 includes a rectangular strip of metal folded around and secured to one edge of the blade in a manner well known in the art.

Guard member 30 and handle 20 are provided with blade receiving channels for positioning the blade in its various operative and inoperative orientations. Handle 20 is provided with an elongated transverse channel 40 extending entirely across the width of handle 20. Channel 40 has a depth substantially equal to one half the thickness of the backing member 37 of razor blade 35, and a width which is substantially equal to the width of backing member 37. The channel is spaced forwardly of the stud 26 and is spaced away from the forward edge 22 of handle 20 a distance so that the edge of the razor blade 35 is exposed when the backing member 37 is received in the channel.

Handle 20 also is provided with a longitudinally extending elongated channel 41 having a length at least equal to the length of backing member 37 of razor blade 35 and having a depth substantially equal to one half the thickness of backing member 37. Like transverse channel 40, longitudinally extending channel 41 has a width approximately equal to the backing member 37 of the blade. Such channel 41 is off center on the opposite side of threaded stud 26. The longitudinally extending channel 41 is spaced from the longitudinal side edge of handle 20 a distance so that the edge of razor blade is not exposed when the backing member 37 of the safety razor blade 35 is received in such channel 41.

The guard member 30 also has a transverse channel 42 having a length which extends entirely across the width of the guard member, a depth equal to substantially one-half the thickness of the backing member 37, and a width which is substantially twice as large as the width of backing member 37.

The greater width of the transverse channel 42 permits the guard member 30 to be moved relative the razor blade 35 between the positions shown in FIGS. 1 and 5 and the position shown in FIG. 2, although the upper half of the backing member 37 of the razor blade 35 extends into the guard member 30. This construction assures that the exposed edge of the blade will remain perpendicular to the handle 20 during use.

Guard member 30 also has an opening 45 through which stud 26 passes which in the exemplary embodiment is elongated in the direction perpendicular to the transverse channel 42. In this manner, it will be seen that the guard member 30 may be slidably moved with respect to handle 20 by virtue of the elongated opening.

The safety razor blade holder of the present invention is also provided with means 50 preventing slidable movement of the guard member relative to the handle when the guard member is in a first position and permitting slidable movement of the guard member with respect to the handle when in the second position. In this manner, notwithstanding loosening of the clamping means, when the safety razor blade is positioned in the longitudinal channel 41 of the handle 20 such that the edge thereof is not exposed, this second position wherein the blade edge is shielded will prevent disengagement of the guard member and handle which would allow the blade to slip out. On the other hand, when the guard member is in the first position wherein the blade is positioned in the transverse channel 40 of handle 20, the guard member is permitted to move longitudinally when the clamping means is unloosened. In the exemplary embodiment of the present invention, such means 50 comprises a pin 51 located in one corner of the guard member 30 and projecting or depending downwardly from the mating face of the guard member. Such means further comprises an elongated recess 52 for receiving pin 51, located near the longitudinal side edge 24 of handle 20. Recess 52 is elongated in the direction parallel to the longitudinal channel 41 in handle 20. Such means further comprises a circular recess 53 for receiving pin 51 located adjacent the other longitudinal edge 23 of handle 20.

Finally, the exemplary embodiment of the safety razor blade holder of the present invention includes means 60 for holding, engaging, or supporting the blade 35 to the guard member 30. In the exemplary embodiment of this invention, such means is magnetic and comprises a pair of magnetic buttons 61, 62

mounted in guard member 30 and positioned so as to overlie the transverse channel 42 whereby the magnetic buttons may engage the backing member 37 of safety razor blade 35.

In operation, the holder is shown ready for use in FIG. 1 wherein the forward edge of blade portion 36 is exposed and is generally normal to the longitudinal axis of handle 20 as desired for a scraping operation. In FIG. 2, guard member 30 had been repositioned with respect to handle 20 by sliding the guard member forwardly so that the forward edge thereof shields or covers the forward edge of blade portion 36 of the safety razor blade. The lock nut 27 may be tightened so as to clamp guard member 30 to handle 20 thereby preventing the blade from being inadvertently exposed. However, it will be seen that if wing nut 27 becomes slightly unloosened, guard member 30 may easily slide backward thereby exposing the sharp edge of the blade. However, where the holder is being used frequently, where ready access to the exposed blade is desired, this temporary shielded position, while not completely reliable for safety purposes, will be sufficient. It should be noted that the guard member 30 may slide relative to handle 20 by virtue of the elongated opening therein and the fact that the width of the transverse channel 42 allows the guard member to receive the upper side of the backing member in more than one position.

Also, it will be noted that the elongated recess 52 receiving pin 51 being aligned with the longitudinal axis of the handle, allows the pin to slide forwardly and rearwardly in such recess.

On the other hand, where it is desired that the safety razor blade be firmly, reliably, and securely positioned so that the edge thereof may not be exposed, the guard member and blade are moved to the second position. Such movement is facilitated by the magnetic buttons 61, 62 whereby upon loosening of wing nut 27 guard member 30 may be raised on stud 26 away from handle 20 and the blade 35 will be held through the magnetic button. Thus, when the guard member is rotated 90 degrees, the blade rotates therewith, and the guard member may then be rejoined to the handle 20 wherein the backing member 37 of the blade 35 will be received in the longitudinally extending channel 41 of handle 20. In this position, as seen in FIG. 3, the edge of the safety razor blade 35 is not exposed. Moreover, the guard member 30 overlies this unexposed edge of the blade and when the clamping means is tightened, the blade is prevented from extending over the edge of the handle. It should also be seen that when the lock nut becomes slightly unloosened, the guard member may not move laterally and will not disengage the handle whereby the blade could be exposed since the pin 51 on guard member 30 will remain inserted in circular recess 53 thereby assuring that the blade will not be exposed.

It will now be seen that all of the above-mentioned objects are accomplished by the invention and the preferred embodiment described and illustrated herein. Other modifications and variations of the present invention are possible in light of the above teachings and it is therefore to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

I claim:

1. In a safety razor blade holder including a longitudinally extending handle, a safety razor blade with a backing member, a guard member, and means for clamping said guard member and handle together, the provision of:

a transverse channel in said handle having a depth substantially equal to one-half the thickness of said backing member and being spaced in the forward edge of said handle a distance so that the edge of the razor blade is exposed when the backing member is received therein; and
a transverse channel in said guard member having a depth substantially equal to one-half the thickness of said backing member and a width no more than twice the width of said backing member, said guard member being slidably longitudinally movable relative to said handle and said razor blade when said clamping means is loosened so as to expose said blade edge when in the rear-

ward position, and cover said blade edge when in the forward position, whereby said razor blade may be positioned with the backing member in said transverse channel so that the edge may be partially or fully exposed or shielded.

2. A safety razor blade holder for carrying a safety razor blade with a backing comprising:

a longitudinally extending handle with a channel having a depth substantially equal to one-half the thickness of said backing member and spaced from a forward edge of said handle a distance so that the edge of said razor blade is exposed when the backing member is received within the channel;

a guard member having a channel in registry with said backing member channel having a depth substantially equal to one-half the thickness of said backing member and a width approximately equal to twice the width of said backing member, said guard member being slidably movable relative to said handle and said razor blade mounted to said handle so as to expose the blade edge when in the rearward position and cover said blade edge when in the forward position;

a longitudinally extending recess in said handle and a pin projecting from said backing member into said recess for limiting the forward and rearward movement of said guard member relative to said handle; and

means to selectively prevent sliding of the guard member relative to the handle and the razor blade mounted therein whereby the edge of the razor blade may selectively be exposed or protected.

3. A safety razor blade holder comprising:

a longitudinally extending handle carrying a threaded stud; a guard member having both length and width substantially equal to the width of said handle and an opening for receiving said stud;

means engaging said stud for clamping said guard member and said handle together;

a safety razor blade having a backing member, said guard member having a laterally extending channel, said channel having a width greater than the width of said backing member;

said handle having a longitudinally extending channel and a laterally extending channel, said channels having a width substantially equal to the width of said backing member, said longitudinally extending channel being spaced a distance from the side edge of said handle so that when said safety blade is received therein the edge thereof is spaced inwardly from the side edge, said laterally extending channel being spaced a distance from the forward edge of said handle so that when said safety blade is received therein the edge thereof extends beyond the forward edge; and

means carried by said guard member for releasably engaging said safety razor blade so that rotation of said guard member effects rotation of said safety razor blade from the exposed to the retracted position.

4. The safety razor blade holder of claim 3 wherein said guard member opening is elongated for permitting slidable

movement thereof relative to said handle.

5. The safety razor blade holder of claim 1 wherein said guard member includes a pin disposed in one corner and projection from the inner face thereof and said handle includes an elongated recess for receiving said pin when said guard member is oriented for slidable longitudinal movement relative to said handle and a circular recess for receiving said pin when said guard member is oriented 90 degrees to said first mentioned orientation.

6. The safety razor blade holder of claim 1 wherein said means carried by said guard member for engaging said razor blade comprises at least one magnet.

7. In a safety razor blade holder including a longitudinally extending handle, a safety razor blade including a backing member, a guard member, and means for clamping said guard member and handle together, the provision of:

a transverse channel in said handle having a depth substantially equal to one-half the thickness of said backing member and spaced from the longitudinal edge of said handle a distance so that the edge of the razor blade is not exposed when received therein;

said guard member having a transverse channel having a depth substantially equal to one-half the thickness of said backing member and a width substantially equal to twice the width of said backing member;

said guard member being slidably longitudinally movable relative to said handle and to said razor blade when said means for clamping is loosened so as to expose said blade edge when in the rearward position and cover said edge when in the forward position;

means preventing slidable movement of said guard member relative to said handle in a direction normal to the longitudinal axis of said handle and permitting slidable movement of said guard member in a direction parallel to the longitudinal axis of said handle when said means for clamping is slightly loosened, said means comprising a pin projecting from the corner of the mating surface of said guard member and an elongated recess in said handle, parallel to the longitudinal axis of said handle, for receiving said pin when said guard member's position with its transverse channel normal to the longitudinal axis of said handle, and a circular recess in said handle for receiving said pin when said guard member is positioned with its transverse channel parallel to the longitudinal axis of said handle,

whereby said razor blade may be positioned with the backing member in said transverse channel so that the edge may be exposed or temporarily protected and may be positioned in said longitudinal channel so that the edge is firmly protected.

8. The provision of claim 7 wherein said guard member additionally comprises magnetic means for holding said safety razor blade.

9. The provision of claim 8 wherein said means for clamping said guard member and said handle together comprises a threaded stud carried by said handle and a lock nut threadedly received thereon.

* * * * *

60

65

70

75