May 16, 1961 R. V. MINTON 2,984,003

BLADE HOLDER

Filed Sept. 2, 1959

Fig. 1

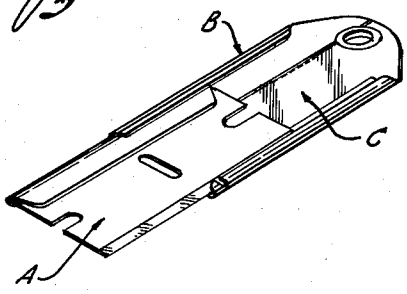


Fig. 2

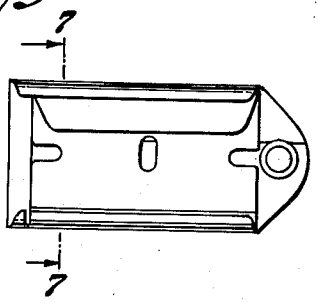


Fig. 3

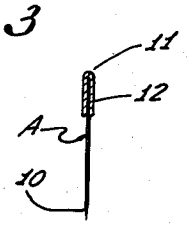


Fig. 4

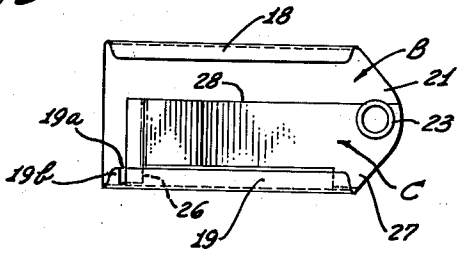


Fig. 6

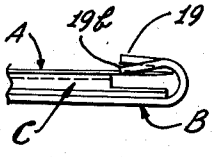


Fig. 5



Fig. 7

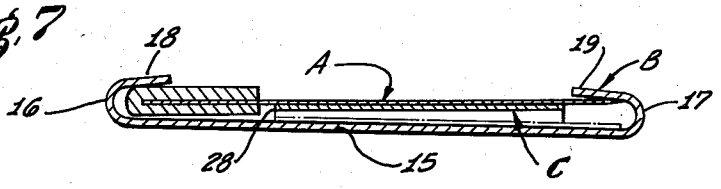
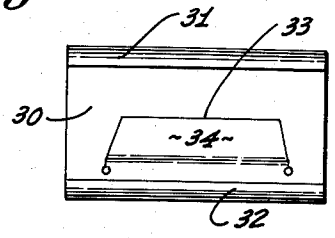


Fig. 8



INVENTOR:
Ronald V. Minton

By Gene W. Arant
Attorney

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BLADE HOLDER

Ronald V. Minton, 333 Clay St., Los Angeles 13, Calif.

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5 Claims. (Cl. 30—162)

The present invention relates to a holder for a single-edged razor blade, from which the blade may be completely removed for use as a scraper, or partially removed for cutting purposes, and which protects the cutting edge of the blade from damage.

One object of the invention is to provide a razor blade holder of the above type which is small and compact, cheap to manufacture, and easy to use.

Another object of the invention is to provide a razor blade holder of the above type which safely and securely retains the blade when not in use.

A further object of the invention is to provide a blade holder of the above type which operates as a sturdy, convenient handle when the blade is partially extended therefrom for cutting purposes.

The above and other advantages of the invention will be more readily apparent from the following description when considered in conjunction with the accompanying drawing, in which:

Figure 1 is a perspective view of the invention with the blade in partially extended position;

Figure 2 is a plan view of the invention showing the blade in carrying position;

Figure 3 is an enlarged cross-sectional view of the blade;

Figure 4 is an enlarged plan view of the invention without the blade;

Figure 5 is a side or elevational view of the holder of Figure 4;

Figure 6 is a fragmentary end view of the holder of Figure 4;

Figure 7 is a still further enlarged cross-sectional view of the invention with the blade confined therein, taken on the line 7—7 of Figure 2; and

Figure 8 is a plan view of an alternate form of the invention.

According to the basic concept of the invention a flat, substantially rectangular case member is provided with upwardly extending and inwardly curved side walls adapted to loosely receive the opposing edges of the blade. The blade is, therefore, longitudinally slideable within the confines of the case member. A spring member or guide means is longitudinally disposed within the case member and serves two significant functions. One of these functions is to frictionally retain the blade within the case member when not in use. The other significant function is to guide the blade, during its sliding movement into or out of the case member, so as to protect the cutting edge of the blade from being damaged by contact with the corresponding side wall of the case member.

Figures 1 through 7 of the drawing illustrate the presently preferred form of the invention, as well as the manner of its use with a blade designated as A. The case member of the invention is designated generally as B, while the spring member or guide means is designated as C.

Blade A is a flat rectangular blade having one longitudinal edge **10** sharpened as a cutting edge while the

opposing longitudinal edge **11** is adapted for gripping purposes. Cutting edge **10** is sharpened on both sides thereof to a symmetrical sharp point. Gripping edge **11** is provided with a U-shaped stiffener member **12** which is firmly bonded to both sides of the blade and extends throughout the entire length of the blade. It will be seen that blade A is of a type which is readily usable both for cutting purposes and for scraping purposes, and which therefore finds many industrial applications.

Case member B has a flat base portion **15** which is somewhat wider and somewhat longer than blade A. Parallel side walls **16** and **17** extend upwardly from the base portion **15**, and are turned inwardly at **18** and **19**, respectively. The turned-in portions of the side walls leave a space which is somewhat less than the width of blade A. At the same time the height of, and horizontal spacing between, the vertical side wall portions is sufficient to confine the blade therebetween. In the absence of spring member or guide means C, the side walls of the case member would provide a relatively loose fit for the corresponding blade edges.

Spring member or guide means C is an elongate metallic strip which extends for most of the length of case member B. The two ends of spring member C engage base portion **15** of the case member B, while its mid-section is bowed upwardly, as best seen in Figure 5. Spring member C is preferably made of spring steel so as to provide a strong spring action. It therefore pushes blade A upwardly, as viewed in Figure 7, so that blade edge **11** frictionally engages the undersurface of side wall **18** while blade edge **10** frictionally engages the undersurface of side wall **19**. It will be noted that the cutting point of cutting edge **10** does not engage vertical side wall portion **17**, but rather that the upper surface of the blade adjacent cutting edge **10** engages the substantially horizontal undersurface of the turned over wall portion **19**.

Spring member or guide means C also performs a guidance function in cooperation with stiffener portion **12** of blade A for preventing damage to the cutting edge **10**. As seen in Figure 4 spring member C is generally spaced away from wall **17**, **19** but is nevertheless provided at its two ends with outwardly projecting tabs **26**, **27**, which do engage vertical wall portion **17**. The total width of spring member C measured transverse to the case member B is slightly greater than the width of blade A measured from cutting edge **10** to the nearest edge of stiffener member **12**. A shown in Figure 7 the longitudinal edge of that portion of stiffener member **12** lying beneath blade A engages the adjacent longitudinal edge **28** of spring member C, or at least, its movement toward side wall **17** is limited by the position of the edge **28** of spring member C. It therefore follows that, when blade A is sliding into or out of case member B, cuting edge **10** is inhibited from engaging side wall **17**, and is thus protected from damage.

In the preferred form of the invention as illustrated, case member B has one end which is squared off while at its other end the base member **15** extends to form a rounded or V-shaped protrusion **21**. Spring member C extends longitudinally so that it is substantially coterminous with protrusion **21**, and a rivet **23** is utilized to securely fasten the two ends of the members together. As shown in Figure 5 rivet **23** extends upwardly higher than the side walls, hence it acts as a stop for inhibiting the removal of blade A from that end of case B.

When blade A is in firm contact with rivet **23** its opposite end falls well within the end of case member B. The turned-over wall portion **19** near its end opposite rivet **23** is cut away at **19***a*, and its remaining extremity **19***b* is depressed slightly downwardly as shown in Figure 6. Projection **19***b* acts as a stop for removing the blade

from the case member, since spring member C at all times urges the blade upwardly. However, by squeezing the blade and case member together the spring member C is flattened sufficiently so that the blade can clear the stop **19**, and be slidably moved out of the end of the case member opposite the end where rivet **23** is located.

It will be appreciated that rivet **23** is not necessary since spring member C may be secured to case member B by other means, such as spot welding. Also, although the rounded protrusion **21** is convenient and comfortable for manual gripping of the invention when the blade is in a cutting position as illustrated in Figure 1, it will nevertheless be appreciated that it is not an indispensable feature of the invention.

Spring member C is preferably made of stainless steel of such a quality as to provide a strong spring action, but aluminum or other materials may be used if desired. Case member B is also preferably made of stainless steel although other metals or even plastic may be used. While case member B and spring member C are preferably made separately because of the different quality of material desired, it is nevertheless possible to fashion them integrally from a single piece of metal, by using a long flat piece and folding part of it back upon itself to provide the spring member C.

The holder of the present invention may if desired be made of double length so as to accommodate two blades in end-to-end relationship. The same manner of construction may be used, with both the case member B and spring member C being made longer by the length of one blade.

Reference is now made to Figure 8 illustrating an alternate form of the invention. As shown in Figure 8 a single flat piece of metal **30** may be used to form the holder of the invention by first turning the longitudinal edges **31** and **32** upwardly and inwardly in the manner previously described. Thereafter, the work piece is cut along a line **33**, which extends parallel to the side walls throughout most of the length of the piece, and near the opposite ends of the work piece extends transversely toward one of the side walls. Thereafter, the portion **34** of the work piece which lies within the cutting line **33** is bent or deformed upwardly, in the same direction as the side walls, so as to provide a spring member or guide means in accordance with the invention.

It will be understood that the spring member or guide means need not be in the form of an elongated metal strip as shown in Figures 1 to 7, nor in the form shown in Figure 8, so long as the purposes of the invention are required. It is not necessary that the spring action and the guiding action be provided by the same member, so long as the guiding member and the case member are flexibly or springably mounted in a suitable manner with respect to each other.

Other forms and modifications of my invention will be readily apparent to those skilled in the art.

What I claim is:

1. A blade holder for a rectangular, single-edged razor blade of the type having a thickened stiffener portion on the longitudinal edge thereof opposite its cutting edge, said blade holder comprising, in combination: a flat case member on whose longitudinal edges are formed parallel side walls which extend upwardly and then inwardly, said case member being adapted to longitudinally slidably receive said blade with said blade edges being loosely confined by said side walls; and guide means extending longitudinally of said case member between said side walls and slidably engaging the under surface of said blade and the inner edge of said thickened blade portion for restricting said thickened blade portion to a position adjacent one of said side walls so as to inhibit said cutting edge of said blade from engaging the upwardly extending portion of the other side wall; said guide means and case member being flexibly supported with respect to each other so that said guide means exerts an upward force on said blade for normally maintaining said blade edges in frictional engagement with the under surface of said inwardly turned side wall portions and so that said frictional engagement may be released by the application of pressure to the upper surface of said blade.

2. A blade holder as defined in claim 1 in which said guide means comprises an elongate, flexible metallic strip having boths its ends in engagement with said case member and its mid-section bowed upwardly therefrom.

3. A blade holder as defined in claim 2 which includes a rivet fastening one end of said metallic strip to the corresponding end of said case member, said rivet also providing a stop for inhibiting removal of the blade from said corresponding end of said case member.

4. A blade holder as defined in claim 3 in which one of said inwardly turned side wall portions has a downwardly projecting portion providing a stop at the other end of said case member for normally inhibiting removal of the blade, the blade being removable past said last-named stop by squeezing the blade and said case member together so as to flatten said metallic strip.

5. A blade holder for a rectangular, single-edged blade of the type having a thickened longitudinal edge portion opposite its cutting edge, which provides a longitudinal shoulder, said blade holder comprising, in combination: a flat case member whose longitudinal edges are turned upwardly and inwardly to provide parallel side walls with inwardly extending upper edges, said case member being adapted to longitudinally slidably receive said blade with said blade edges being loosely confined by said side walls; and an elongated flat spring member longitudinally disposed within said case member, the distance between one side wall and the furthest longitudinal edge of said spring member being slightly greater than the width of said blade measured between its cutting edge and said shoulder; said spring member being flexed upwardly in the plane of said side walls so as to engage one flat surface of said blade for forcing the cutting edge portion and the thickened edge portion of the opposite surface of said blade into frictional engagement with the undersurfaces of the inwardly extending edge portions of said one side wall and the other side wall, respectively.

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