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2,134,973

KNIFE

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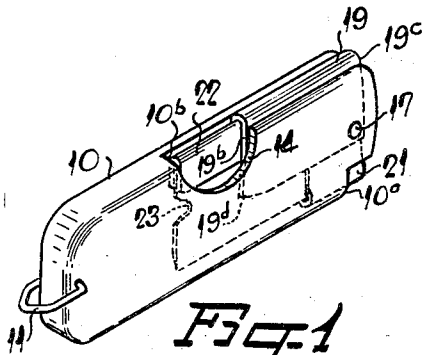


Fig. 1

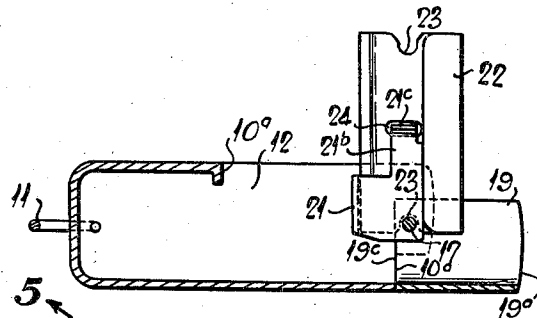


Fig. 5

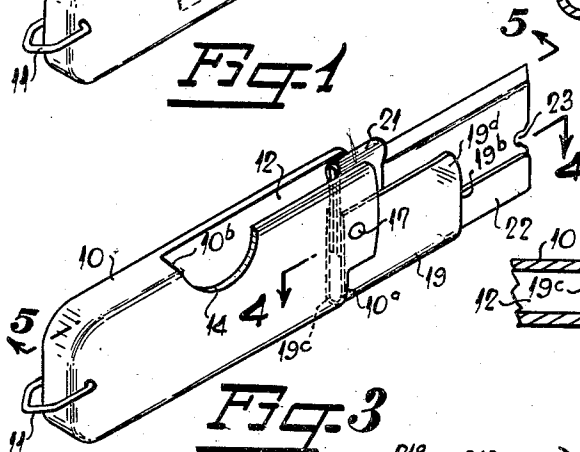


Fig. 3

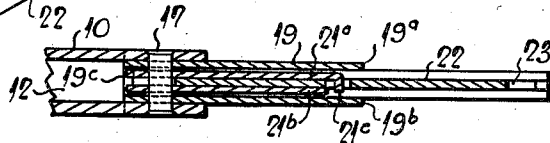


Fig. 4

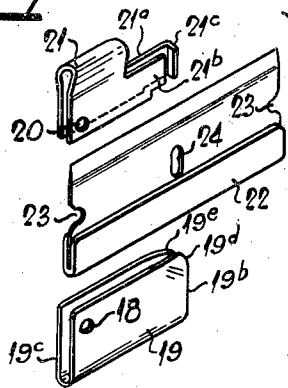


Fig. 2

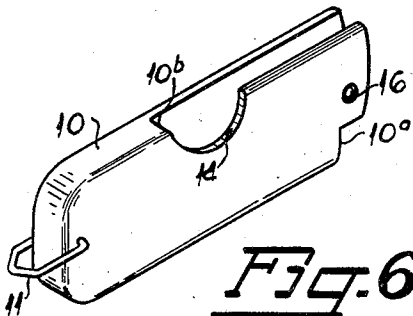


Fig. 6

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KNIFE

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5 Claims. (Cl. 30—156)

This invention relates to a knife and more especially to one having a detachable blade therein which resembles the type used in an ordinary safety razor. These blades are adaptable for shaving purposes for a limited length of time only, and after which the blades are usually discarded as useless, resulting in waste and destruction of material that might be used to an advantage. My invention is particularly adaptable for use in combination with a safety razor blade commercially known as "Gem" razor blade. When a suitable handle is provided for mounting this blade the assembly may be used to an advantage in cutting paste board or other soft materials from which cartons are made.

It is, therefore, an object of this invention to provide a handle in combination with a safety razor blade with means associated with the handle for detachably securing the blade thereto. It is a further object of this invention to provide a combination of a handle and a safety razor blade with means for pivotally and detachably securing one end of the razor blade to the handle, leaving the outermost or free end of the blade exposed so that it may penetrate the material which is being severed.

It is a still further object of this invention to provide a knife comprising a handle and a safety razor blade pivoted thereto with a cuff encircling the pivoted end of the razor blade, said cuff acting as a guiding means to limit the depth that the blade is allowed to penetrate the article which is being severed.

Some of the objects of the invention having been stated other objects will appear as the description proceeds, when taken in connection with the accompanying drawing, in which—

Figure 1 is an isometric view of my invention;

Figure 2 is an enlarged end view looking at the right-hand end of Figure 1;

Figure 3 is an isometric view similar to Figure 1 but showing the blade in an open position and ready for use;

Figure 4 is an enlarged sectional view taken along the line 4—4 in Figure 3;

Figure 5 is a longitudinal sectional view taken along the line 5—5 in Figure 3, but showing the position occupied by the blade just prior to its removal or attachment to the handle;

Figure 6 is an exploded isometric view of the assembly.

Referring more specifically to the drawing, the numeral 10 denotes a suitable handle which is preferably made of sheet metal and welded together with the proper exterior contour. This

handle has an ordinary ring 11 pivoted in one end thereof to which a chain may be attached if desired. A longitudinal slot 12 is provided in this handle and also a cut-away portion 14, said portion 14 being used as a cavity into which the thumb of the user is inserted when it is desired to open the knife.

The right-hand end of the handle 10 (Figure 6) has suitable transversely disposed holes 16 therein which are penetrated by a rivet 17. This rivet is also adapted to penetrate transversely disposed holes 18 of U-shaped cuff member 19 and transversely disposed holes 20 of U-shaped locking member 21. The cuff member 19 fits within the slot 12 with the holes 18 coinciding with the holes 16 and a suitable razor blade 22, such as that used in an ordinary "Gem" razor, is inserted in the U-shaped cuff member 19 in such a position that the slot 23 in the end of the blade will coincide with the holes 18. Also the short U-shaped locking member 21 is inserted over the cutting edge of the blade with the transversely disposed holes 20 coinciding with the holes 16 and 18 and the notch 23.

It should be noted that the U-shaped member 21 has prongs 21a and 21b and when this member is inserted to its proper position over the blade 22, these prongs will be disposed on the opposed sides of the blade. The prong 21a has integral with its end a projection 21c extending substantially at right angles to the portion 21a. This projection is adapted to fit into a slot 24 of the razor blade 22. When in this position, it is seen that the U-shaped locking portion 21 shields the cutting edge of the blade 22 in the vicinity adjacent the handle, but leaves the outer portion of the blade exposed. At the same time the U-shaped cuff 19 presses against both the prongs 21a and 21b and the pivoted end of the blade 22, and this member 19 is adapted to clamp over the back edge of the blade 22 so that when the blade is opened or closed the member will carry the blade with it.

The right-hand end of the U-shaped cuff member 19 has shoulder portions 19a and 19b, one on each side of the blade. These shoulder portions act as a guide and also limit the depth to which the blade may be inserted into a piece of material which is being cut.

It is also seen that the handle 10 has a cut-away portion in its right-hand portion so as to form a suitable abutment shoulder 10a against which surfaces 19c of the cuff 19 rests when the blade is in an open position. In other words, when the surface 19c contacts the surface 10a, 55

the blade cannot be further rotated and any force thereafter applied against the cutting edge of the blade will be transmitted to the handle.

When the blade is in a closed position as shown in Figure 1, the shield 21 protects the sharp corner of the blade 22 which extends outside of the slot 12 and prevents this blade from cutting or injuring the user of the knife when in this position.

Also when the blade is in a closed position the portion 10b of the knife is contacted by the free end of the blade 22 thereby preventing the sharp edge of the blade from engaging the bottom portion of the cavity 12.

If it is desired to attach or remove a blade, the knife is opened to the position shown in Figure 3. Then one will grasp the U-shaped member 19 holding the contact surface 19c against the shoulder 10a and at the same time rotating the blade 22 and locking member 21 to the position shown in Figure 5 or to a position substantially at right angles to the member 19. At this time, the blade may be twisted so that the prong 21a and its associated projection 21c may be moved laterally so that the projection 21c will be removed from slot 24. Since the notch 23 merely fits over the rivet 17, it is seen that the blade may be easily removed and another blade inserted in position.

If desired, the blade may be reversed and the other end used, since a notch 23 is provided in each end of the blade. After a new blade is inserted, then, of course, it is necessary to return the blade to the position shown in Figure 3, at which time the U-shaped member 19 will clamp the opposed sides of the blade. This clamping action is effected by the converging ends 19d and 19e of the locking member 19.

It is, therefore, seen that I have provided a safety blade knife which has means for pivotally and detachably securing a razor blade thereto in such a manner that one end of the blade will be entirely exposed and capable of use, and which can be shielded when not in use.

In the drawing and specification there has been set forth a preferred embodiment of the invention, and although specific terms are employed, they are used in a generic and descriptive sense only, and not for purposes of limitation, the scope of the invention being set forth in the appended claims.

I claim:

1. A device comprising a handle member, a blade holding member having one end disposed within the handle member and pivotally connected thereto, a blade locking member having one end pivotally mounted within the handle on the same pivot as the blade holding member, said blade having a hole intermediate its ends, said blade locking member having outwardly extending prongs disposed on each side of the blade, and one of the prongs having a projection adapted to fit into said hole so that when the outer ends of the blade locking member are positioned within the blade holding member, the blade will be locked in position within the blade holding member.

2. A device comprising a handle member, a blade holding member having one end disposed within the handle member and pivotally connected thereto, a blade locking member having

one end pivotally mounted within the handle on the same pivot as the blade holding member, said blade having a hole intermediate its ends, said blade locking member having outwardly extending prongs disposed on each side of the blade, and one of the prongs having a projection adapted to fit into said hole so that when the outer ends of the blade locking member are positioned within the blade holding member, the blade will be locked in position within the blade holding member, the blade locking member having a portion shielding the cutting edge of the blade disposed next to the handle member.

3. A device comprising a handle member, a blade holding member having one end disposed within the handle member and pivotally connected thereto, a blade locking member having one end pivotally mounted within the handle on the same pivot as the blade holding member, said blade having a hole intermediate its ends, said blade locking member having outwardly extending prongs disposed on each side of the blade, and one of the prongs having a projection adapted to fit into said hole so that when the outer ends of the blade locking member are positioned within the blade holding member, the blade will be locked in position within the blade holding member, the blade holding member being of less overall length than the blade to limit the depth of cut of the blade.

4. A device comprising a handle member, a blade holding member having one end disposed within the handle member and pivotally connected thereto, a blade locking member having one end pivotally mounted within the handle on the same pivot as the blade holding member, said blade having a hole intermediate its ends, said blade locking member having outwardly extending prongs disposed on each side of the blade, and one of the prongs having a projection adapted to fit into said hole so that when the outer ends of the blade locking member are positioned within the blade holding member, the blade will be locked in position within the blade holding member, the blade locking member having a portion shielding the cutting edge of the blade disposed next to the handle member, and the blade holding member being of less overall length than the blade to limit the depth of cut of the blade.

5. A safety razor blade knife comprising a handle member having a cavity therein open on one side and one end, a razor blade having a cutting edge and a rib on its opposite edge, a blade holding member, U-shaped in cross-section and having one end pivotally mounted in the open end of said cavity and having its other end constricted near its outer edges and being of substantially less length than the blade, said blade having a notch in each end and having a hole intermediate its ends, a blade locking member pivoted on the same pivot as the blade holding member and having a portion shielding the cutting edge of the base of the blade and having prongs, at least one of which is provided with an extension for fitting into said hole in said blade for holding the blade in position when the blade locking member is disposed inside the blade holding member.