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S. DONIGER

2,463,682

KNIFE WITH DETACHABLE BLADE

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Fig. 1.

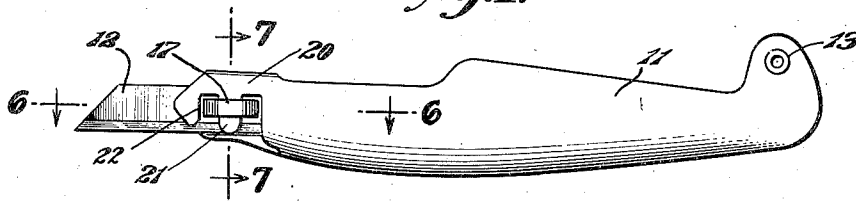


Fig. 2.

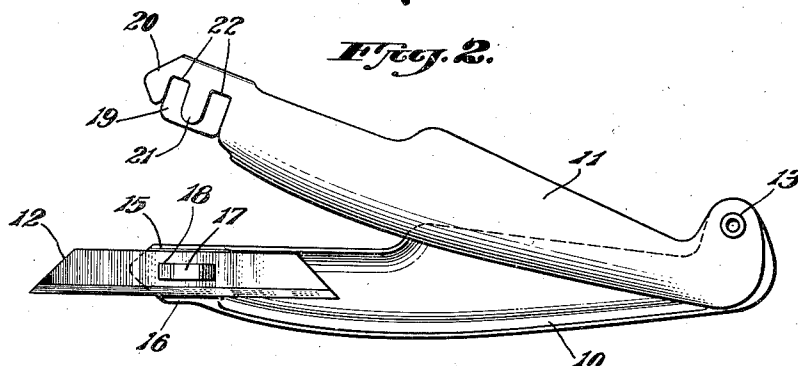


Fig. 3.



Fig. 4.

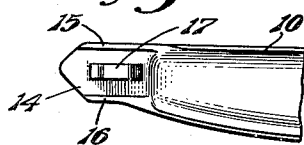


Fig. 5.

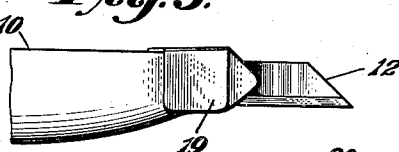


Fig. 6.

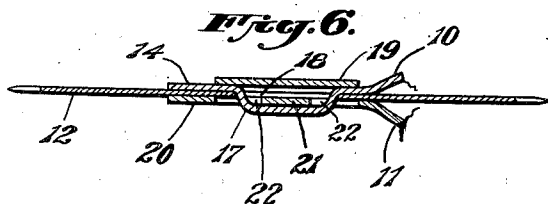
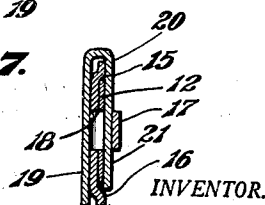


Fig. 7.



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KNIFE WITH DETACHABLE BLADE

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3 Claims. (Cl. 30—331)

1

This invention relates to knives and more particularly to knives with demountable blades.

In doing fine work with a knife, as in model carving and construction, a keen thin blade is highly desirable and practically essential, and the blade must be rigidly carried by the handle or hand-grip, and immovable in use with respect thereto no matter how severe a strain is applied or from what direction. Ability to substitute a fresh blade as needed will solve the problem of having a keen blade, but much more is involved to obtain means for convenient substitution of the blades which will, at the same time, obtain a secure and rigid mounting of the blade with a handle of appropriate size and shape to be readily grasped and used.

Generally, therefore, the objectives of the present invention are to accomplish the desiderata indicated above.

More specifically, an object of the invention is to provide a knife with a demountable blade wherein the blade is immovable in use with respect to the handle.

Another object of the invention is to provide a knife as characterized having improved blade-demounting and retaining structure.

A further object is to provide for employment of a double-ended blade and to protect the end thereof not in use.

Still further objects will appear to those skilled in the art to which the invention appertains as the description proceeds, both by direct recitation thereof and by implication from the context.

Referring to the accompanying drawing in which like numerals of reference indicate similar parts throughout the several views;

Figure 1 is a side elevation of the knife of the present invention assembled in condition for use;

Figure 2 is a similar side elevation showing the manner of release of the blade for substitution purposes;

Figure 3 is a view looking at the bottom or underside of the knife;

Figure 4 is a view looking at the inside face of the end portion of the handle section having the blade-receiving means;

Figure 5 is an elevation of the end portion of the knife having the blade and looking at the opposite side from that shown in Fig. 1;

Figure 6 is a longitudinal sectional view on line 6—6 of Fig. 1; and

Figure 7 is a cross sectional view on line 7—7 of Fig. 1.

In the specific embodiment of the invention illustrated in said drawing, the reference nu-

2

merals 10, 11 designate mating shell-like handle sections of the knife which are separable from each other on a plane, coincident with the plane of a blade 12, such that the handle is split from end to end and top to bottom. At what will be termed for convenience the rear end of the handle, that is, the end remote from blade 12, said handle sections are pivoted, as by eyelet 13, thereby enabling the handle sections to swing parallel to the said plane of their separation. While the handle sections bulge between longitudinal edges, thereby giving body to the handle for more readily grasping the same in use, the end portions of the sections where pivoted are preferably flat so that no wobbling or looseness will be present or be likely to develop at the pivot. Flatwise engagement of the flattened end portions under pressure of the riveting action of the eyelet, maintains ample friction so the sections will remain at any position to which they are swung until positively actuated to another position. The pivoted ends and greater part of the bulging body portions of the sections are preferably one the inverse of the other.

The nose or blade-mounting ends of sections 10, 11 differ one from the other, and for convenience of reference, the section 10 on which the blade is applied in assembly, will be referred to as the mounting section, whereas section 11 which retains the blade assembled will be referred to as the locking section. Accordingly, mounting section 10 has an end portion with a wall 14 in a plane (substantially the same plane of separation of the sections heretofore referred to). Blade 12 when applied in place, has a mid-portion of itself in flatwise engagement against said wall and clamped thereto. At the top and bottom edges of this wall 14 the metal is ridged inward to provide top and bottom shoulders 15, 16 between which to include the blade. The dimensions of the blade are such that its top and bottom edges will engage said shoulders when the blade is applied to the wall. At a mid-part of said wall 14 the same is provided longitudinally thereof with a staple 17 which may conveniently be formed by slitting the metal of the wall along two parallel lines and pressing the metal included between the slits outward from its original position.

The blade 12 is provided with a slot 18 at its middle, which nicely fits over said staple so that the blade may be situated flatwise against wall 14 with staple 17 protruding through the blade. By virtue of the nice fit between slot 18 in the blade and staple 17, the blade will be held against longitudinal or other movement in its own plane.

3

By having said slot at the middle of the blade, the blade may be reversed lengthwise as desired and the end not in use will be protected within the hollow of the handle between said sections.

Locking section 11 has its nose of channel formation with a resiliency between the channel walls which will enable the channel to grip other parts inserted therein. The construction is such that when the sections are swung to closed position, said channel overlaps on the face of the blade at one side and overlaps the blade-engaging wall 14 at its other side. The channel formation is obtained by means of an extensive rear flange 19 the dimensions of which are comparable to the size of wall 14, and by a front flange 20 which provides a tongue 21 to enter staple 17 and cut-outs 22 next the tongue to pass the legs of the staple. With the tongue in the staple, the blade is immovably mounted in the handle as shown in Fig. 1, but replacement or reversal is readily accomplished merely by swinging the locking section upward, thereby releasing the blade as shown in Fig. 2. Because of the locking of the blade by situation of the tongue in the staple, dislodgement of the blade is impossible while the handle is being grasped in using the knife.

I claim:

1. A knife comprising mounting and locking handle sections pivoted to each other and each having a nose end distant from the pivoting of said sections and adapted to receive a blade between said nose ends on a plane therebetween, a blade-positioning means on the nose end of the mounting section, said nose end of the locking section having resilient portions adapted to overlap on opposite sides of the mounting section with one of said portions next said plane for exerting resilient retaining pressure by said one portion of the nose end of the locking section in a direction normal to and against said blade, rigid means projecting from the mounting member through said plane, and said one section of the locking portion having a tongue engageable with said means for preventing displacement of

4

said pressure exerting portion both from the blade and from the mounting section in a direction normal to said plane.

2. A knife comprising mounting and locking handle sections pivoted to each other and each having a nose end distant from the pivoting of said sections and adapted to receive a blade between said nose ends on a plane therebetween, blade-positioning means on the nose end of the mounting section, said nose end of the locking section having resilient portions adapted to overlap on opposite sides of the mounting section with one of said portions next said plane for exerting resilient retaining pressure by said one portion of the nose end of the locking section in a direction normal to and against said blade, a staple projecting from the mounting member through said plane, and said one section of the locking portion having a tongue engageable with said staple for preventing displacement of said pressure exerting portion both from the blade and from the mounting section in a direction normal to said plane.

3. A knife comprising handle sections pivoted at one end and adapted to receive a blade between the other ends, one said section having a planar wall for receiving a blade flatwise thereagainst, a staple outstanding from said wall for engaging through the blade, and a fixed tongue on the other section movable into engagement with said staple in closing said sections together and thereby locking the blade.

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