Aug. 1, 1950 C. W. AHMER 2,517,158

KNIFE HANDLE

Filed April 12, 1946

Fig. 1.

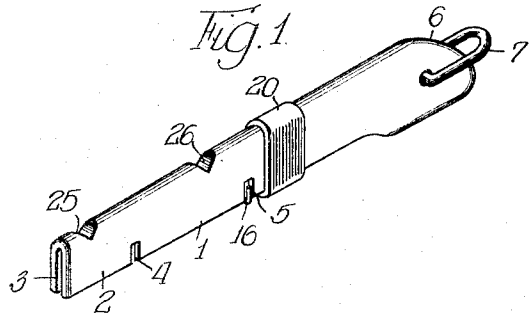


Fig. 2.

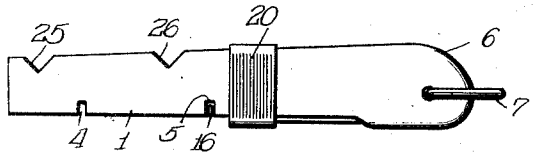


Fig. 3.

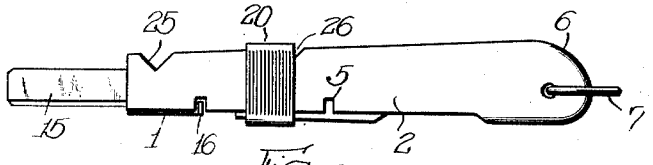


Fig. 4

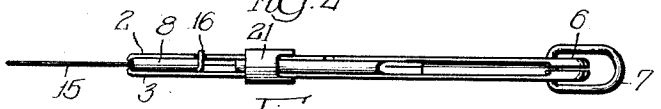


Fig. 5.

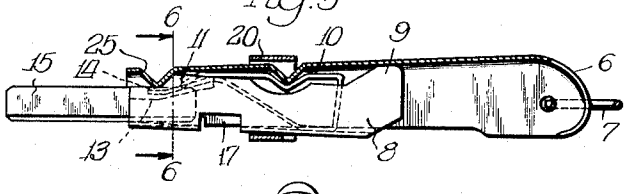
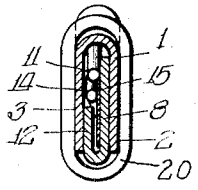


Fig. 6.



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Patented Aug. 1, 1950 2,517,158

UNITED STATES PATENT OFFICE

2,517,158

KNIFE HANDLE

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Application April 12, 1946, Serial No. 661,673

3 Claims. (Cl. 30—162)

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This invention relates to a knife handle for holding safety razor type blades and has for its principal object the provision of a new and improved device of this type.

It is a main object of the invention to provide handle for safety razor type blades that will hold the blade securely, thereby forming a serviceable knife.

A further object of the invention is to provide a blade holder into which the blade may be telescoped so that the knife may be carried safely.

Another object of the invention is to provide a blade holder in which the blade is securely clamped by pressures exerted edgewise on the blade.

Another object of the invention is to provide a blade holder that can be manufactured as a serviceable unit at low cost.

Other objects of the invention not specifically mentioned here will be apparent from the detailed description and claims which follow, reference being had to the accompanying drawings in which a preferred embodiment of the invention is shown by way of example and in which:

Fig. 1 is a perspective view of the holder in closed position;

Fig. 2 is a side elevational view of the holder in closed position;

Fig. 3 is a side elevational view of the holder with the blade in extended position;

Fig. 4 is a bottom side plan view of Fig. 3;

Fig. 5 is a side elevational view similar to Fig. 3 but with the front face of the outer member removed, the better to show the internal construction; and

Fig. 6 is a cross sectional view taken substantially along the line 6—6 of Fig. 5 looking in the direction of the arrows.

It is old in the prior art of which I am aware to provide holders for forming a knife from discarded safety razor blades. In most of these prior art devices the blade is clamped in the holder by pressure exerted on the flat faces of the blade, with the result that a member of the holder, or in some cases members of the holder, are placed alongside the flat faces of the blade and interfere with its use as a cutting tool. In other prior art devices of which I am aware blades have been held by endwise clamping, but here again it has been necessary to place members of the holding structure alongside of the faces of the blade, with the result that use of the blade as a cutting instrument has been impaired.

The present invention provides a holder in which the blade is clamped by edgewise pressure

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exerted between the cutting edge of the blade on the one side and the back edge of the blade on the other, these pressures being applied only at one end of the blade, leaving the major portion thereof projecting from the holder where it may be used as a cutting instrument under many conditions heretofore impossible.

Thin perforated double edged blades of the so-called "Gillette" type when used in the holder of the present invention are split substantially along the longitudinal median line of the blade, and owing to the shape of the blade and the perforations contained in it it is not difficult to break it in two along this line. There are also available single edged blades of the so-called ejector type which may be used in the holder of the present invention without modification. These latter blades are substantially thicker and consequently much stiffer than the blades of the so-called "Gillette" type and are advantageous in instances where a stiffer blade is desirable.

Referring now to the drawings in more detail, the holder of the present invention consists of an outer member 1 which is of U-shaped cross section, as will best be seen in Figs. 1 and 6, and contains substantially parallel side walls 2 and 3, one of which is perforated with slots 4 and 5. The rear or butt end of the handle is rounded as shown at 6 and may be provided with a ring 7 to permit attaching the knife to a chain or other suitable cord means.

Located within the channel-like outer member 1 is a blade holder 8 which is likewise generally U-shaped and is disposed with its closed edge coinciding with the open edge of the outer member 1. The inner member 8 is provided at one of its ends with a fulcrum 9 which bears against the inside surface of the closed side of the outer member, for a purpose which will presently appear. Carried by and clamped between the two side wall portions of the inner member 8 is a spring 10, one portion 11 of which bears against the closed side of the outer member and is tensioned to rotate the inner member in a counterclockwise direction, Fig. 5, around the fulcrum point 9.

One side wall member 12 of the inner member 8 is cut away as shown at 13 and the other end 14 of the spring 10 extends into and above this cutaway portion 13 and is tensioned to bear laterally against the other side wall section of the member 8. A blade 15 is pushed into the space between the side wall sections of the member 8 and between the end portion 14 of the spring and the one side wall section, being held

against that section by the tension in the spring.

Member 8 also carries an ear 16 formed by bending a section of one side wall section of the member across the groove thereon to form a stop against which the innermost end of the blade 15 may be projected to limit the inner movement of the blade with respect to the member 8. Adjacent to the ear 16 is a slot 17.

Surrounding the outer member 1 is a collar 20 which has a narrowed portion 21 that bears against the closed edge of the inner member 8 and is adapted to fit into the slot 17 so as to permit the spring 10 to rotate the inner member and blade carried thereby counter-clockwise, as seen in Fig. 5. The member 8 may then be moved longitudinally of the member 1 to draw the blade 15 into that member, thereby to register the ear 16 with the slot 5. If the collar 20 is then moved to the right, Figs. 2 to 5, member 8 will rotate clockwise around the fulcrum 9 to move ear 16 into the slot 5 and to clamp the two members 1 and 8 securely together so that the instrument may be safely carried.

When it is desired to open the knife for use, collar 20 is moved to the left, Fig. 3, first to permit spring 10 to push the inner member and ear 16 out of the slot 5 and then to move the inner member 8 to the left, Fig. 5. When the ear 16 is aligned with the slot 4, a slight pressure on the bottom closed edge of the member 8 will force ear 16 into the slot 4, after which the collar 20 is moved to the right, thereby to rotate the inner member 8 clockwise around the fulcrum 9. This latter movement clamps the blade edgewise between the closed side of the inner member 8 and the boss 25 in the closed side of the member 1. The farther to the right that the collar 20 is moved the tighter this clamping action and the blade 15 may readily be clamped to permit it to be used for cutting, slitting, etc., without movement with respect to the holder.

In case the blade 15 is of the so-called "Gillette" type, it will contain a notch into which the boss 25 will fit, thereby to provide an additional endwise lock for the blade. Since notched blades of this type are usually relatively thin, this engagement of the boss and notch is useful in securely holding the blade in the handle since the thinness of the blade does not permit applying thereto the same edgewise pressure that can be applied to a thicker blade. The handle member 1 may be provided with a second inwardly projecting boss 26 that will register with the notch in the blade when the blade is telescoped into the outer member to permit more securely locking the assembly together in closed position.

As will be seen best in Fig. 4, the ends of the side sections 2 and 3 of the outer member 1 are bent inwardly to form flanges against which the end of the inner member 8 is abutted when the blade is in extended position. This flange prevents the two members from being separated and also serves to stop movement of the inner member to the left, when the knife is being opened.

The blade holder of the present invention may be made of metal, plated and polished if necessary, or in the case of a non-corrosive metal, such as, for example, stainless steel, merely polished to give it a pleasing appearance. When so constructed the knife is a sturdy, serviceable unit, capable of being put to many uses where a sharp relatively light blade is advantageous. When the blade becomes dull it can be discarded and another one substituted without difficulty.

While I have chosen to show my invention by illustrating and describing a preferred embodiment of it, I have done so by way of example only, as there are many modifications and adaptations which can be made by one skilled in the art within the teachings of the invention.

Having thus complied with the statutes and shown and described a preferred embodiment of my invention, what I consider new and desire to have protected by Letters Patent is pointed out in the appended claims.

What is claimed is:

1. A knife handle for holding a safety razor type blade comprising an outer member of generally U-shape section, an inner member fitted within said outer member and movable longitudinally thereof, there being a slot in said inner member adapted to receive one end of a razor blade, spring means carried by said inner member adapted to press laterally against said blade to hold the blade in the inner member, a fulcrum on said inner member adapted to bear against the closed edge of said outer member and a clamping ring encircling said outer member and engaging said inner member and slidable lengthwise on said members thereby to rotate said inner member on said fulcrum to clamp said blade between the members by pressure exerted edgewise on the blade.

2. A knife handle, comprising an outer member of U-shape section, an inner member of U section fitted in said outer member with the closed edge of the inner member adjacent the open edge of the outer member, said inner member being slidable longitudinally of said outer member, an ear projecting laterally from said inner member, there being slots in said outer member into which the ear is projected to limit the movement of the inner member, means in the inner member adapted to receive a blade, spring means carried by the inner member and adapted to bear against the side of a blade to hold the same in the member, a fulcrum on said inner member engaging the closed edge of said outer member, and means engaging said members and operable to rotate the inner member on said fulcrum to move said ear into one of said slots and to clamp a blade in the handle by pressure exerted edgewise on the blade.

3. In combination, a handle of generally U-shaped cross section, a blade holder of generally U-shaped section fitted within said handle with its closed side coinciding with the open side of said handle, a fulcrum on one end of said blade holder adapted to engage the closed side of said handle, a spring carried by said blade holder and pressing against the closed side of said handle and tensioned to urge said members apart, a blade disposed in said blade holder and extending therefrom, said spring pressing against said blade on one side thereof to hold the blade in the holder, and means for rotating said blade holder around said fulcrum and toward said handle thereby to clamp said blade in the handle by pressure exerted edgewise on the blade.

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The following references are of record in the file of this patent:

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