July 6, 1926. 1,591,047

H. L. MORSE

BLADE HOLDER

Filed Sept. 26, 1924

Fig. 1

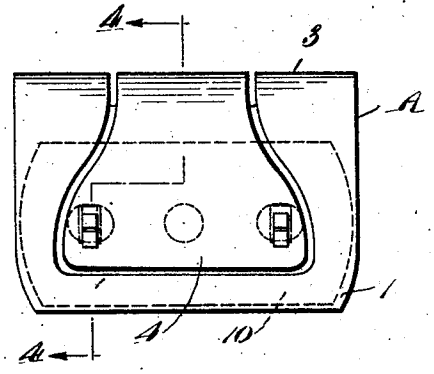


Fig. 3

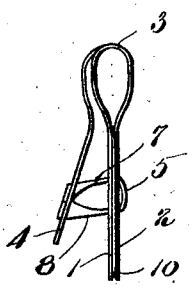


Fig. 2

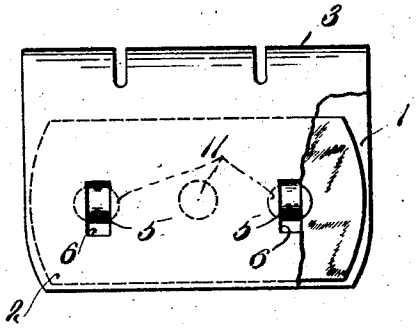
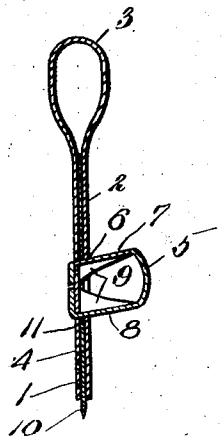


Fig. 4



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UNITED STATES PATENT OFFICE.

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BLADE HOLDER.

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This invention relates to cutting devices particularly useful for ripping seams in fabric goods, although also useful as a scraper for scraping paint or varnish from surfaces and for other purposes requiring a keep, sharply edged blade.

Objects of the invention are to provide a simple cutting device in which the sharp edge of the cutting blade is normally protected and which is constructed in such a manner that the blade may be moved to cutting position without the necessity of being handled by the user; and to provide a simple, compact and inexpensive cutting device having the new and improved features of construction and arrangement hereinafter described.

The invention comprises a holder which is constructed to receive a blade having a sharp cutting edge, a blade being normally held in inoperative or non-cutting position. Preferably a cam is arranged to engage the blade in such a manner that movement of the cam in one direction advances the sharp edge of the blade to cutting position and movement in the opposite direction retracts the blade to such a position that the sharp edge is protected. It will be evident that such a device is extremely useful for ripping seams in fabric goods, scraping paint or varnish from furniture, or removing paint or other spots from glass, and for other and varied purposes and may conveniently be handled and carried from place to place without danger to the user of being cut by the sharp edge of the blade. Furthermore, in accordance with this invention a cutting device may be constructed at a relatively low manufacturing cost because of its extreme simplicity of construction as will hereinafter be apparent.

The invention is shown by way of illustration in the accompanying drawings in which:—

Fig. 1 is a front view of the cutting device;

Fig. 2 is a rear view thereof;

Fig. 3 is a side edge view; and

Fig. 4 is an enlarged section on the line 4—4 of Fig. 1 showing the blade in advanced position.

In the embodiment of the invention illustrated the holder A is made from a single piece of relatively thin, stiff, and resilient sheet metal folded upon itself to form front and rear sides or flaps 1 and 2 respectively, the free edges of which are even and parallel. The metal in the region of the fold is forced outwardly as by a die in order to form a spring hinge 3 which serves to hold the side flaps 1 and 2 together and for another purpose hereinafter described.

The front flap 1 is slit or punched to form an actuator 4 in the form of a tongue which normally diverges from the flap 1, the slit extending a slight distance in the flap 2 as indicated in Fig. 2 in order to obtain maximum resilience and for the purpose of strength. It will be observed that the slit is made a substantial distance from the sides of the flaps so that the connection between the flaps is sturdy and capable of resisting distortion to the maximum degree.

Secured to the inner face of the actuator 4 are a pair of offset ears or cam members 5 which are inclined upwardly toward spring hinge 3 and are arranged to extend through substantially rectangular apertures 6 in the flap 2. The lugs 5 are likewise constructed of sheet metal and may be formed by stamping out a strip of suitable dimensions and bending it upon itself to form opposed sides 7 and 8, the free ends extending through apertures in the flap 1 and bent toward each other upon the flap to hold the lug securely in place. For strengthening purposes the metal is bent on opposite sides to form flanges 9, so that the lugs are capable of withstanding hard usage. It will be observed that the sides 7 and 8 are not parallel, and as will hereinafter be described the side 8 serves to advance the blade and the side 7 serves to retract the blade.

By separating the flaps 1 and 2 slightly and moving the actuator to withdraw the lugs from the apertures 6, a blade 10 may be inserted into the holder. The particular blade 10 shown is of well known construction ordinarily used in safety razors and is provided with spaced apertures 11 and a double cutting edge. This blade is relatively thin and flexible and admirably serves as a seam ripper or scraper, being used as such in many places. As indicated, the lugs 5 are positioned to extend through two of the apertures 11 in the blade and in the normal position of the actuator 4 the cutting edge of the blade is held in retracted or non-cut-

ting position, the outer end portions of the side 7 of the lugs bearing against the upper side of the apertures 11 of the blade. It will be evident that in this position the device can be carried without danger to the user of being cut by a projecting sharp cutting edge.

When the user wishes to use the cutting edge of the blade the actuator 4 is depressed toward the side flap 1 in order to force the lugs 5 well into the apertures 6 in the side flap 2. Owing to the inclination of the lugs 5 the sides 8 thereof bearing against the lower side of the holes 6 in the blade force the cutting edge beyond the adjacent edges of the flaps 1 and 2 as shown in Fig. 4. As soon as the user releases the pressure on the actuator 4 the spring hinge automatically returns the actuator to normal position thereby retracting the cutting edge of the blade within the holder. The device is shaped to fit into a comfortable position in the user's hand so that it can be used for an extended period of time without discomfort.

Although I have shown and described but one form of the invention it will be understood that many changes in details of construction and arrangement may be made without departing from the spirit of the invention.

I claim:—

1. A device of the class described comprising a protective holder or sheath, a blade within the holder, the blade having a sharp cutting edge normally retracted within the holder, and means actuated by the pressure of the fingers of the user in grasping the holder to advance the cutting edge of the blade into operative position beyond the holder and for retracting the cutting edge of the blade to normal position when the pressure of the fingers is relaxed.

2. A device of the class described comprising a protective holder or sheath, a blade within the holder, the blade having a sharp cutting edge normally concealed within the sheath, means actuable by the pressure of the fingers of the user in grasping the holder for advancing the cutting edge of the blade into operative position beyond the holder, and spring means associated with the cutter advancing means for automatically restoring the blade to its normal inoperative position when the pressure of the fingers is relaxed.

3. A cutting device comprising a protective holder, a blade having a cutting edge in said holder, and cam means for advancing said blade to bring the cutting edge thereof beyond the adjacent edge of said holder, said means being actuated automatically to retract said blade away from the edge of the holder.

4. A cutting device comprising a protective holder, a blade having a relatively thin cutting edge in said holder, cam means for advancing said blade to bring the cutting edge thereof beyond the adjacent edge of said holder, and spring means arranged to return said cam means to normal position, thus to retract said blade within the edge of the holder.

5. A cutting device comprising a protective holder consisting of a pair of separable elements, a blade having a relatively thin cutting edge between said elements, cam means for advancing said blade to bring the cutting edge beyond the adjacent edges of said elements and retracting said blade from said edges, and means for normally holding said cam means in a position to hold said blade in retracted position.

6. A cutting device comprising a protective holder consisting of a pair of separable elements, a blade having a relatively thin cutting edge between said elements, a spring controlled actuator associated with said elements, and cam means on said actuator for advancing and retracting said blade relatively to said elements, whereby when said actuator is pressed toward said elements the cutting edge of said blade is advanced to cutting position and when pressure thereon is released said cutting edge is automatically retracted between said elements to non-cutting position.

7. A cutting device comprising a pair of connected plates, one of said plates having an aperture, cam means associated with one plate movable to extend into said aperture, and a relatively thin cutting blade between said plates having an aperture through which said cam means also extends whereby when said cam means is moved in one direction into both of the apertures the cutting edge of the blade is advanced beyond the adjacent edges of said plates and movement of said cam means in the opposite direction retracts the cutting edge between the edges of said plates.

8. A cutting device comprising a pair of connected plates, one of said plates having an aperture, cam means associated with said plates movable to extend into said aperture, a relatively thin cutting blade between said plates having an aperture to receive said cam means, and spring means associated with said cam means for holding the latter in retracted position whereby when said cam means is moved into both of the apertures the cutting edge of the blade is advanced beyond the adjacent edges of said plates and when pressure is released said spring means moves said cam means in the opposite direction thereby retracting the cutting edge between the edges of said plates.

9. A cutting device comprising a pair of plates having registering openings, an actuator associated with said plates, cam means

on said actuator arranged to extend into said openings, a thin cutting blade between said plates having an aperture against the sides of which said cam means bears, whereby when said actuator is moved toward said plates the cutting edge of the blade is advanced beyond the adjacent edges of the plates and movement of the actuator in the opposite direction retracts the cutting edge away from the edges of the plates.

Signed by me at Boston, Massachusetts, this 22nd day of September 1924.

HARRY L. MORSE.