Sept. 29, 1931. G. C. WEBSTER 1,825,108

TRIMMING KNIFE AND BLADE HOLDER

Filed July 3, 1931

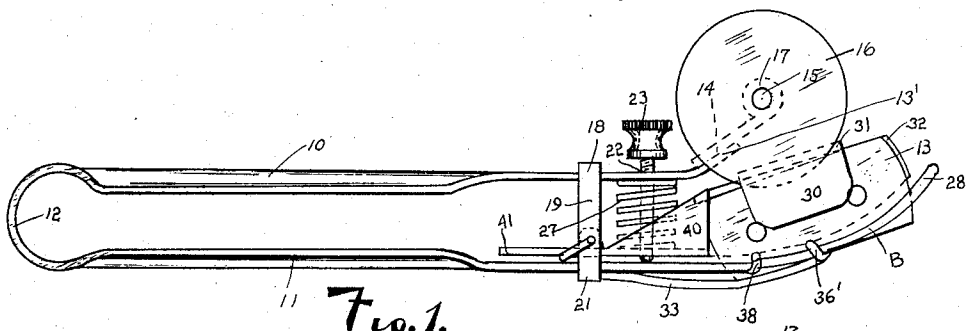


Fig. 1.

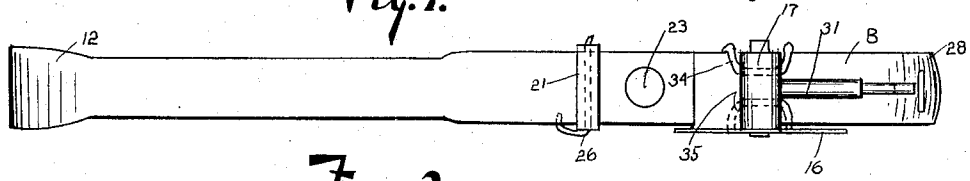


Fig. 2.

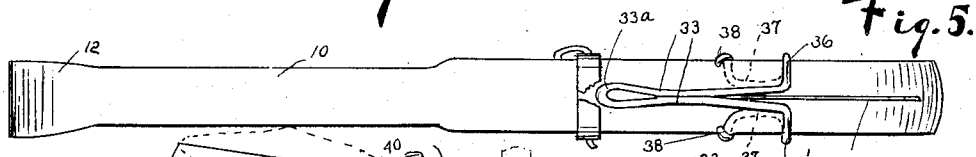


Fig. 5.

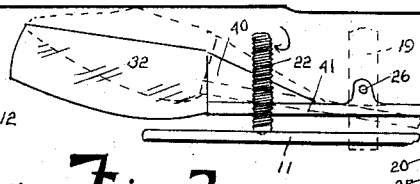


Fig. 3.

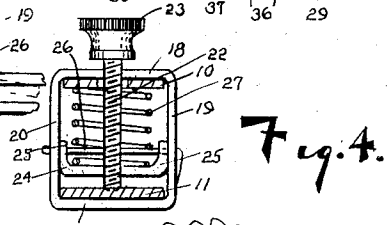


Fig. 4.

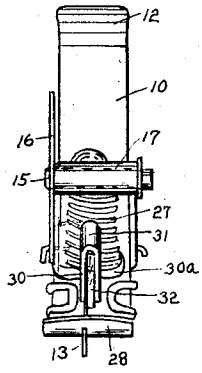


Fig. 6.

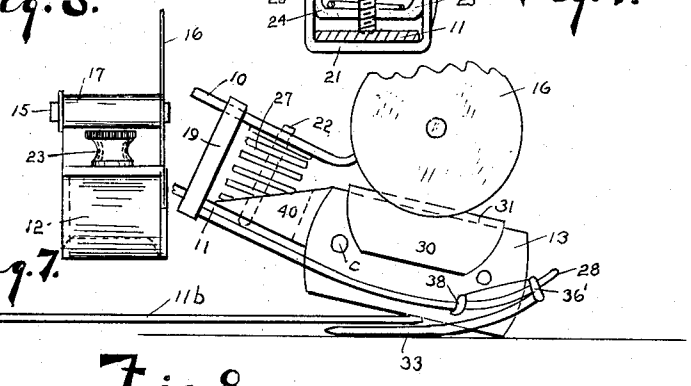


Fig. 7.

Fig. 8.

Geo C. Webster INVENTOR.

Patented Sept. 29, 1931

1,825,108

UNITED STATES PATENT OFFICE

GEORGE C. WEBSTER, OF LOS ANGELES, CALIFORNIA

TRIMMING KNIFE AND BLADE HOLDER

Application filed July 3, 1931. Serial No. 548,628.

This invention relates to improvements in cutting tools or implements for slitting purposes.

One of the objects of this invention is to provide a simple, efficient and inexpensive device designed for especial use among paper hangers, painters, and other artisans and mechanics who find occasion frequently to cut and slit paper, and other materials.

A further object of this invention is to provide a tool so designed, shaped and constructed that it will permit a slitting operation to take place quickly and accurately along a ruled line or without the aid of a ruled line.

A still further object of this invention is to provide an implement shaped to provide a curved rest at its front portion for the purpose of guiding the cutting blade held in the implement along the material to be cut.

A further object of this invention is to provide a spring metal strap doubled upon itself to provide a pair of squeezable handle bars in conjunction with one handle bar of which a rotary cutter is mounted and in conjunction with the other of which a safety razor blade is supported.

A still further object of this invention is to provide means for slitting materials together with means for engagement with the material to effectively guide the movement of the slitter.

Another important object of this invention is to provide a pair of squeezable handle bars, of which one is made longer than the other, the terminal of one bar curving upwardly and formed with a slit thru which the safety razor blade fits and projects to provide a cutting corner for slitting purposes.

A further important feature thereof is to provide a pair of squeezable handle members, means limiting the separation of the bars, a razor blade holder mounted upon one of the handle bars, and means for adjustably projecting the blade to vary the depth of the slitting stroke of the implement.

A still further object of this invention is to provide, in conjunction with the foregoing parts a gauge and guard for the slitting edge of the cutter blade designed to adjustably engage one of the handle bars in the vicinity of the cutter blade.

With the above and other objects in view my invention consists in the combination, arrangement and details of construction disclosed in the drawings and specifications, and then more particularly pointed out in the appended claims.

In the drawings, wherein similar reference characters designate similar parts thruout the respective views,

Figure 1 is a side elevation of my invention,

Figure 2 is a top plan view thereof,

Figure 3 is a fragmental detail view of a razor blade holder with adjusting means,

Figure 4 is a cross section taken thru the handle bars, showing the guard thereon, with the adjusting screw,

Figure 5 is a bottom plan view of my invention,

Figure 6 is a front end elevation of the cutting implement,

Figure 7 is another end elevation of said implement, and

Figure 8 is a fragmental detail view of the blade holder, and blade guard, the implement being tipped to rest the blade upon the guard, the guard being applied to the material to be cut.

Referring to the drawings, which are merely illustrative of my invention a spring metal strap is folded or doubled upon itself to provide the pair of parallel ribbed handle bars 10, 11 arranged in squeezable relation, the bight portion thereof being designated 12. The handle bar 10 is slightly raised at its outer end where its terminal curves up-

wardly 13′, to which is secured in overlying relation the bar 14, terminating in an eye 17 receiving the shaft 15 on which is suitably journaled a rotary cutter 16, to be used by paper hangers and the like.

The other handle bar 11 projects forwardly beyond the bar 10 and curves upwardly and forwardly to provide a foot rest B whose tip end is designated 28. This foot rest is formed with an elongated slit 29 therein. There is a flat lever member 41 operatively pivoted upon a pivot rod 21, whose ends are fixedly received in the opposite parallel arms 19, 20 of a saddle member also including the upper frame part 18 and the lower frame part 21. The bars 18 and 21 engage the outer faces of the handle bars 10, 11 to limit the distance of their separation.

The lever member 41 is flanked at its inner end with a pair of parallel triangular walls to which is integrally formed a forwardly projecting upright thin base 32, carrying a pair of pins C so that a safety razor blade may have its usual centering holes presented so the pins can project thru them to center the blade upon this base. It is to be noted however that the safety razor blade 13 when thus centered upon pins C of the base 32 is held against displacement from the base thru intervention of the resilient inverted U-shaped clamp 30 which straddles the blade 13 and holds it against the base, but allows this clamp to be removed from the base at random.

In order to permit the razor blade 13 to be adjusted relatively to the foot rest B of the implement it is necessary to provide means for raising or lowering the blade holder to assure that the cutting corner of the blade will project a greater or lesser distance thru the foot rest. For this purpose a set screw 22 is threaded thru the lever 41, so as to engage the handle bar 11, while its other end passes thru the other handle bar 10. A coiled spring is located so as to bridge the space between the handle bars 10, 11 so that it bears at one end against handle bar 10, and at its opposite end upon handle bar 11, there being a handle or head 23 on this set screw designed to be turned so as to rotate the threaded set screw in the lower handle bar 11. It follows, that, since the lever 41 is pivoted to the rod or wire 21, curled as at 26, externally of saddle plate, to confine this rod, when the set screw is rotated the lever 41 begins to have its forward portion move upwardly or downwardly, depending on the direction in which the set screw is turned. Hence if the lever moves downwardly the razor blade will be caused to project its greatest distance thru slit 29 of the foot rest end of the handle bar 11, and vice versa if the lever is moved upwardly. The spring 27 exerts pressure upon the lever so it is tensioned in the act of raising the lever 41, and this spring automatically assists the lever 41 is regaining its lowermost position.

I also provide a guard and centering device for the tool or implement. This device takes the shape of a long slender U-shaped member whose contacting rods 33 join the loop terminal 33*a*, the inner portions of these rods being separated apart, and having their extreme outer ends shaped to provide a pair of oppositely arranged transversely disposed U-shaped spring wire clamps 37, designed to snap frictionally but slidably into engagement with the opposing edges of the squeezable handle bars. The extreme outer points of these U-shaped clamps are shaped to provide the hooks or lugs 38 also engaging the edge of the tool or implement. In the slit of this guard the projecting cutting portion of the blade is caused to extend.

The tool is held with the rotary cutter wheel in engagement with the surface or material to be cut. If it is desired to guide the cutter blade 13 against the edge of the material to be cut as the blade is pulled along thereupon, the guard lip 33 is designed to be pushed or frictionally slid along the curved foot rest 28 of the implement to assume the position shown in Figure 8 where it will be seen that the clamps 37 are located at the extreme tip of the implement. If the implement be now tilted over as shown in Figure 8 and held at a bias it will be clearly seen that the corner cutting edge of the blade may project far enough, if desired, to clear the material to be cut, and the intermediate cutting edge of the blade may be presented against the edge of the paper or material to be cut, as the tool or implement is drawn against the paper or material, so as to slit the same, and at this time the guard 33 rests flat upon the supporting surface with the material directly over the same. The present implement does slitting by pulling against the material to be cut. All of the blade can be utilized, if need be, for cutting purposes, and its entire edge can be caused to project thru the slit 29. A complete cut can be made on the material by a pulling action. The implement is held against wobbling as the guard is adjusted in set position. The blade carrier can be adjusted to any desired position so the blade cuts a quick or slow stroke. The spring equalizes the pressure on the cutter blade, for any complete stroke of the blade, so the blade does not cut too deep in the material. The operator can also completely disengage the knife from the slit by depressing the finger in the proper way as both handle bars may be squeezed together. The rotary trimmer knife is an important adjunct. I do not

limit myself to the exact details of construction but intend to cover all variations set forth in the claims.

What I desire to claim is:—

1. A device as described consisting of a spring metal strap doubled upon itself to provide parallel handle bars, one of said bars extending beyond the other and curving upwardly and forwardly, the curved front portion of the mentioned bar having an elevated slit thru which a safety razor blade may adjustably project, a blade carrier having an inner saddle piece disposed between the handle bars, means pivotally mounting said saddle piece for swinging movement to adjustably position the razor blade, and manually operable means for actuating said blade carrier and for locking it in adjusted position.

2. A device as described consisting of a spring metal strap doubled upon itself to provide parallel handle bars yieldably disposed, a guard engaging the handle bars for limiting the outward separation of the handle bars, a safety razor blade carrier having an inner portion pivotally secured to said guard for a swinging movement, means carried by the outer end of said carrier for holding the razor blade, a spring bridged across the handle bars and bearing against the carrier to oppose its swinging movement, a set screw rotated to effect the swinging of the carrier upwardly at its forward end and formed with a slit thru which the blade projects for a cutting action.

3. A device as described consisting of a spring metal strap doubled upon itself to provide a pair of spaced parallel approachable handle bars, a guard engaging said handle bars to limit their separating movement, a razor blade carrier pivotally at its inner end to said guard for adjustably positioning the blade angularly of one of said arms, a set screw threaded thru said carrier and engaging at its inner end one of the handle bars to effect the swinging of the carrier when it is turned, means for turning said set screw, and resilient means between the handle bars against the tension of which the carrier is adjusted.

4. A device as described consisting of a spring metal strap doubled upon itself to provide a pair of spaced parallel yieldable handle bars, one of which projects beyond the other in a forward curved direction, the curved end of the mentioned bar having an elongated slit, thru which a razor blade may adjustably project, a blade carrier having an inner U-shaped saddle piece and forwardly extending flat upright web, pins on said web designed to project thru the centering holes of the razor blade, a resilient clamp for pressing the blade against the web, a coiled spring bearing on the floor of the saddle piece and against the lower handle bar and designed to raise and lower the web for adjustably positioning the blade in said slit, and a wire guard adjustably mounted on the curved end of the mentioned bar for yieldably propping the same bar for guiding one corner of the cutting edge of the blade.

5. As a new article of manufacture a spring metal strap doubled upon itself to provide a pair of squeezable handle bars, one bar projecting beyond the other and curving upwardly and forwardly therefrom and having a slit, a razor blade holder adjustably positioned between the bars to allow a blade to project yieldably thru said slit to present a cutting corner edge; means for adjusting the holder, and means for automatically locking the holder in adjusted position.

6. As a new article of manufacture a spring metal strap doubled upon itself to provide a long and short handle bar, said bars being yieldably squeezable towards each other, a coiled spring offering opposition to the squeezing of the bars, a razor holder pivotally mounted between the bars, means for manually effecting the swinging of the blade holder against the tension of said spring to adjustably position the blade relatively to one bar, and means holding the bars against outward separation.

7. As a new article of manufacture a spring strap doubled upon itself to provide a pair of parallel spaced handle bars, one bar having a curved terminal, bearing in said terminal, a shaft in said bearing, a cutting wheel on said shaft and means for separating said bars over variable distances.

8. As a new article of manufacture a spring strap doubled upon itself to provide a pair of parallel spaced handle bars squeezable towards each other, a razor blade holder carried by one handle bar and positioning the blade between both handle bars, means for variably separating the bars, means stopping the separating action of the bars, and means for locking the blade holder in adjusted position between the bars.

9. A device as described consisting of a pair of parallel handle bars, resilient means allowing said bars to flex towards each other, means holding the bars against separation a predetermined distance, a blade holder mounted between the bars at their outer ends, means caused by one bar and engaging said blade holder to swing its inner end to cause its outer end to be adjustably positioned, and rotary manually operated means for automatically restoring the blade holder to normal position.

10. In a device as described, a combination with squeezable spring handle, bars, means for locking the bars in variable separated distances, one bar projecting in front of the other bar and curving upwardly thereat, the curved bar having a slit, a wire

guard consisting of a looped tongue having a pair of yieldable contacting stems between which a razor blade may engage, and items diverging towards their outer end so as to adjustably flank any point in the length of said slit, and a pair of oppositely arranged U-shaped clips, having curved terminals resiliently gripped upon the opposing edges of the mentioned bar with the slit to frictionally hold the guard in adjusted position, said guard being arched in spaced relation beneath the adjacent bar.

In the witness whereof he has set his hand this 27th day of June, 1931.

GEO. C. WEBSTER.