April 1, 1930. C. S. MORRISON 1,753,058

TOGGLE

Filed Aug. 10, 1928

Fig. 1.

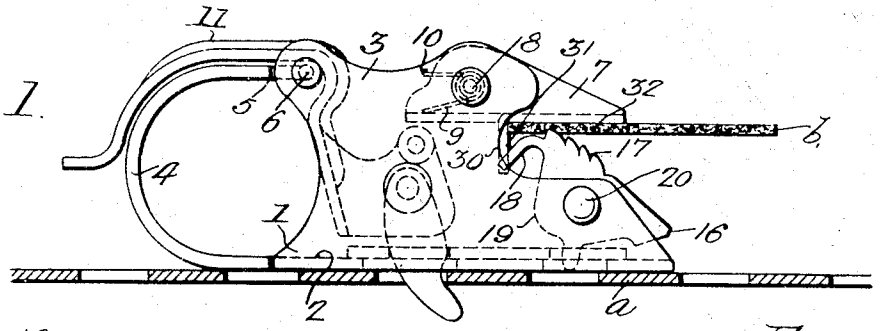


Fig. 5.

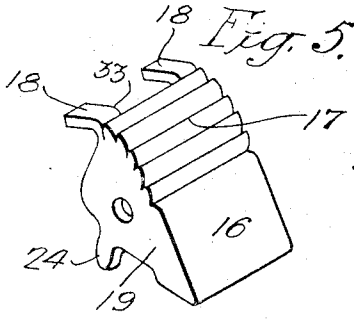


Fig. 4.

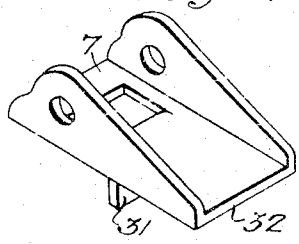


Fig. 2.

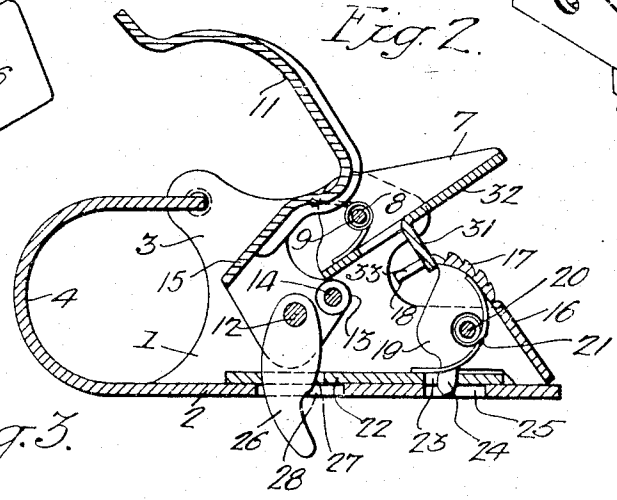


Fig. 3.

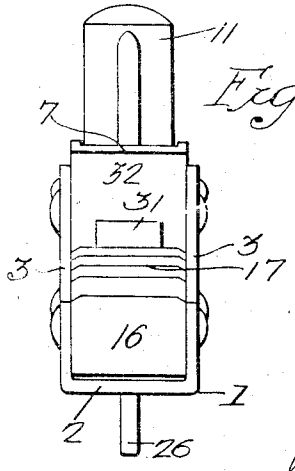
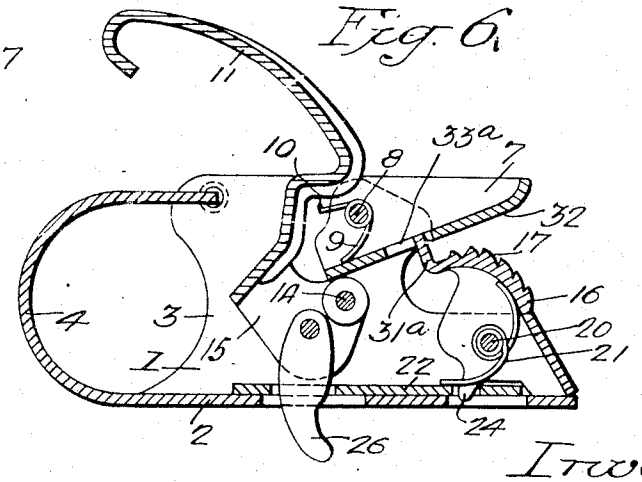


Fig. 6.



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UNITED STATES PATENT OFFICE

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TOGGLE

Application filed August 10, 1928. Serial No. 298,785.

My invention relates to certain improvements in toggles used in stretching leather on frames, such as shown and described in my co-pending application, Serial No. 273,352, filed April 27, 1928.

In this type of toggle there is a hook at the back of the toggle which extends through one of the perforations in a supporting plate or through the meshes of a wire screen, so that after the toggle has been operated to grip the leather the leather can be drawn tight, and when the hook engages the frame the tension of the leather through the hook actuates the gripping mechanism, so that as the leather shrinks, the grip of the toggle will be correspondingly increased.

The present invention relates to certain improved details of construction which will be fully described hereinafter.

In the accompanying drawings:

Figure 1 is a side view of a toggle made in accordance with my invention;

Fig. 2 is a longitudinal sectional elevation;

Fig. 3 is a front end view of the toggle in its open condition to receive a leather;

Fig. 4 is a detached perspective view of the upper jaw;

Fig. 5 is a detached perspective view of the lower jaw; and

Fig. 6 is a longitudinal sectional elevation of a modified form of the invention.

Referring to the drawings, 1 is the body of the toggle which is made of pressed sheet metal having a base 2, integral sides 3—3, and a looped rear section 4 which forms a handhold for the operator when using the toggle.

The upper portion of the handhold 4 is cut away at 5 to form lateral projections 6, which extend through perforations in the side members 3—3 and are riveted as shown so as to rigidly secure the upper portion of the handhold to the sides.

7 is an upper jaw mounted on a transverse pivot pin 8 which extends through two side members 3—3, the ends being riveted as shown in Fig. 1. The upper jaw is U-shaped in cross-section, and mounted on the pivot pin 8 is a coil spring 9, one end of which rests upon the jaw as shown in Fig. 2 and the other end bent to extend through a hole 10 in one of the side members 3.

The jaw 7 is held in the open position as shown in Fig. 2 by the spring 9, and is closed by an operating lever 11. The lever 11 is pivoted on a cross-bar 12 which extends from one side member to the other, the lever being provided with a roller 13 mounted on a cross-bar 14 extending from one side flange 15 of the lever to the other side flange. This roller 13 rests under the heel of the jaw 7 and when the lever 11 is moved from its raised position shown in Fig. 2 to the position shown in Fig. 1, it closes the jaw 7 and holds it in its closed position as shown in Fig. 1.

The lower jaw 16 is shaped as shown in Fig. 5 and has a serrated surface 17, the rear end of the jaw being rounded as shown at 18 so as to prevent the jaw cutting the leather when pressure is applied. The jaw has side members 19 which are perforated for the passage of a pivot pin 20. The serrated surface of the jaw is eccentric to this pivot, so that when it is turned on the pivot it will grip the leather when the upper jaw 7 is closed.

A coil spring 21 is mounted on the pin 20. One end of this spring rests against the underside of the lower jaw 16 while the other end of the spring rests against a plate 22 which is mounted on the base 2 of the body portion.

The plate 22 is notched at each side as shown at 23, and extending into each notch is a tongue 24 which projects from each side 19 of the lower jaw 16. These tongues preferably extend into slots 25 in the base 2 of the toggle.

Mounted on the cross-bar 12 is a hook 26. This hook extends through a slot 27 in the plate 22 and through a slot 28 in the base 2 of the body portion. The hook is shaped as shown in Fig. 2, and when the toggle grips the leather *b*, the hook 26 is passed through one of the perforations in a supporting plate *a* as shown in Fig. 1. As the leather contracts the pull of the leather tends to cause a rotation of the hook 26, the hook in turn moving the plate 22, and as the plate 22 is engaged by the tongues 24 the

plate 22 will turn the lower jaw on its pivot and increase its pressure upon the leather, thus increasing the grip of the toggle. The leather can be quickly released from the toggle by turning the lever 11 to the position shown in Fig. 2, when the upper jaw will be raised.

Upon referring to Fig. 1, it will be noted that the side members 3—3 are cut away as at 30 to form a throat into which the edge of the leather projects when gripped between the jaws 7 and 16.

In moving from the open leather-receiving position to the closed leather-gripping position the leather-engaging face of the upper jaw 17 and the leather-engaging face of the lower jaw 16 move toward the rear edge of the throat 30, and carry the leather with and between them toward said edge.

To prevent the leather from engaging the said rear edge of the throat 30, which would effect a crimping of the edge of the leather when the jaws are closed, I provide, on one of the jaws, a stop adapted to be engaged by the edge of the leather. This stop is adapted to move with the leather during the gripping operation and to assume a position in front of, or at least in line with, the said rear edge of the throat 30, when the jaws are closed. Thus the edge of the leather is prevented from engaging the said rigid inner or rear edge of the throat, consequently the leather remains flat and no crimping of the edge of the leather occurs.

In Figs. 1 and 2, I have shown this stop as consisting of a projection 31 extending from the leather-engaging plane portion 32 of the upper jaw 7 into a cavity 33 formed between the curved portions 18 of the lower jaw 16.

As shown in Fig. 4, the projection 31 is formed integral with the plane portion 32 of the jaw 7 by cutting the jaw as shown and bending the portion outlined by the cut at substantially a right angle to the plane portion 32 of the jaw.

As shown in Fig. 5, the cavity 33 is formed between the curved portions 18 of the lower jaw 16 by cutting said curved portion away from its rear edge inwardly.

In Fig. 6, I have shown the stop as being carried by the lower jaw 16, and consisting of bending the rear edge of the curved portions 18 of the jaw 16 upwardly to form the stop 31^a, which is adapted to fit into a cavity or slot 33^a formed in the plane portion 32 of the upper jaw 7.

I claim:

1. The combination in a toggle of a body portion, a pair of spaced jaws carried by and movable toward said body portion and movable toward each other to grip a sheet of material between the jaws, and a stop carried by one of said jaws and extending toward the other of said jaws, said stop being movable with said jaws toward said body portion and adapted when said jaws are in the material gripping position to prevent the gripped material from engaging the body portion of the toggle.

2. The combination in a toggle of a body portion, a pair of spaced jaws carried by and movable toward said body portion and movable toward each other to grip a sheet of material between the jaws, and a stop carried by one of said jaws and extending toward the other of said jaws and into a cavity formed in said second jaw, said stop being movable with said jaw toward said body portion and adapted when said jaws are in the material gripping position to prevent the gripped material from engaging the body portion of the toggle.

3. The combination in a toggle of a body portion having a throat formed therein, a pair of jaws pivotally mounted in said body portion at the opposite sides of said throat respectively and movable toward the rear edge of said throat and toward each other to grip a sheet of material between the jaws, and a stop carried by one of said jaws and extending toward the other of said jaws, said stop being movable with said jaw toward the rear edge of said throat and adapted when the jaws are in the material gripping position to prevent the edge of the gripped material from engaging the said rear edge of said throat.

4. The combination in a toggle of a body portion having a throat formed therein, a pair of jaws pivotally mounted in said body portion at the opposite sides of said throat respectively and movable toward the rear edge of said throat and toward each other to grip a sheet of material between the jaws, and a stop carried by one of said jaws and extending between said jaws and into a cavity formed in said second jaw, said stop being adapted when the jaws are in the material gripping position to prevent the edge of the gripped material from engaging the said rear edge of said throat.

5. The combination in a toggle of a frame comprising a base, side members on said base, each side member having a throat formed therein, a pair of jaws pivotally mounted in said frame between said side members and at the opposite sides of said throat respectively, said jaws being movable toward the rear edge of said throat and toward each other to grip a sheet of material between the jaws, and a stop carried by one of said jaws and extending into a cavity formed in the second jaw, said stop being adapted when the jaws are in the material gripping position to prevent the edge of the gripped material from engaging the said rear edge of the throat in each of said side members of the frame.

CHARLES S. MORRISON.