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J. R. HILSTAD
METAL BENDING TOOL
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Fig. 1.

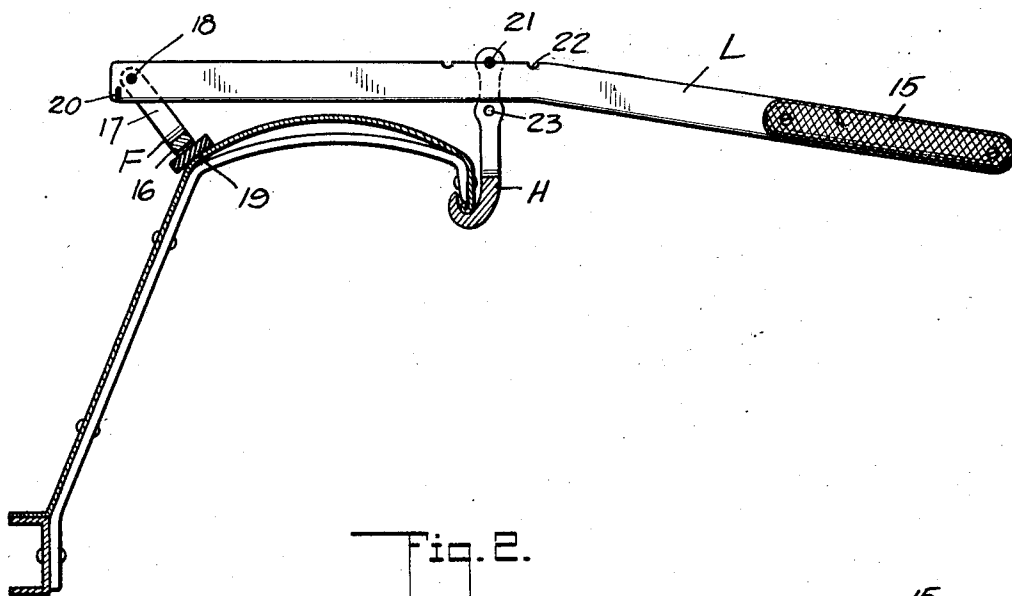
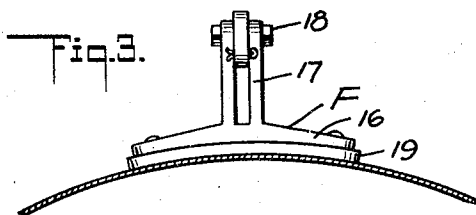
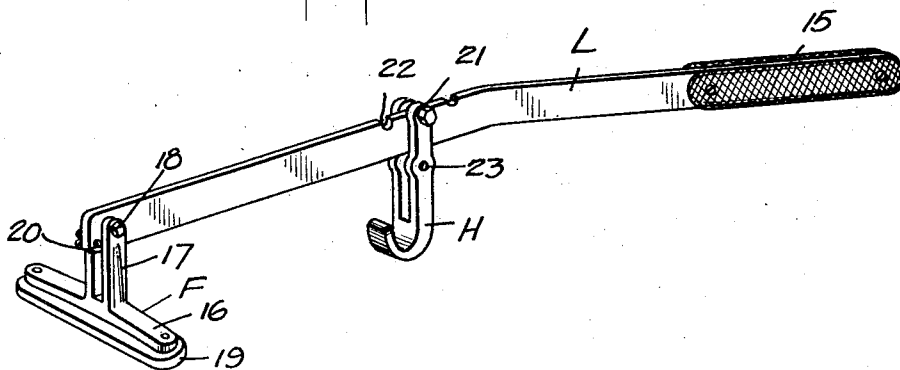


Fig. 2.



INVENTOR.
JOHN R. HILSTAD
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE

JOHN ROY HILSTAD, OF WHITTIER, CALIFORNIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO GEORGE G. GRIFFITH, OF MONROVIA, CALIFORNIA

METAL-BENDING TOOL

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My invention relates to and has for its purpose the provision of a metal bending tool particularly adapted, although not necessarily, for the straightening of bent or otherwise distorted automobile fenders and running board brackets, the tool being simple in construction and easily operated to restore any fender or bracket to its original form without the necessity of removing the fender or bracket from the vehicle and without scratching or otherwise disfiguring the fender.

I will describe only one form of metal bending tool embodying my invention and will then point out the novel features thereof in claims.

In the accompanying drawings—

Figure 1 is a view showing in longitudinal section one form of metal bending tool embodying my invention in applied position to a fender and bracket.

Figure 2 is a perspective view of the tool shown in Figure 1.

Figure 3 is a view showing the tool in end elevation and as applied to a fender.

Referring specifically to the drawings, in which similar reference characters refer to similar parts in each of the views, my invention in its present embodiment comprises a lever L one end of which is adapted to be pivotally supported in spaced relation to any support to which the tool is applied by a foot F and in such manner that a hooked member H may have operative engagement with the article to be bent so that by exerting a pull on the lever the hooked member will be actuated to bend the article as desired.

The lever L in the present instance comprises a flat bar of suitable length which is bent at a point intermediate of its ends so as to give the lever the form of an anticleine. Secured to opposite sides of the lever at one end thereof are a pair of plates 15, the outer surfaces of which are rounded and knurled as shown, so as to co-operate in providing a handle adapted to be gripped in the manipulation of the lever. Adjacent the opposite end of the lever, the foot F is pivotally connected thereto and this foot in the present instance comprises a casting including a base

16 extending transversely of the lever and provided on its upper side with a pair of arms or ears 17 through which is extended a pivot pin 18 to pivotally secure the end of the lever between the arms. The base 16 has secured thereto a pad 19 formed of any suitable soft material so as to prevent marring of the surface of the fender or any other article to which the tool is applied.

In order that the foot F may occupy proper operative position with respect to the lever L and to thus facilitate the application of the tool to an article to be bent, a stop pin 20 is extended through the lever so as to be engaged by the arm 17 and thus eliminate the outward swinging movement of the foot with respect to the lever.

The hooked member H is associated with the lever L so as to be capable of two adjustments, one longitudinal of the lever and the other transverse of the lever. The longitudinal adjustment of the hooked member is effected through the medium of a bolt 21 extending through the bifurcated end of the hooked member, with the lever received between the bifurcated end and formed at its upper edge adjacent the bent portion of the lever with a plurality of notches 22, the bolt being received within any one of the notches and thereby pivotally supporting the hooked member on the lever within any one of the notches. The transverse adjustment of the hooked member with respect to the lever is effected by an adjustment of the bolt longitudinal of the hooked member, and by providing the bifurcated portion of the hooked member with a plurality of openings 23, the bolt can be extended through any one of these openings thereby varying the position of the hooked end of the member with respect to the lever.

In practice, the tool is capable of being applied and manipulated to effect the bending of the fenders and the various brackets used in supporting fenders and other parts of an automobile. However, a description of the invention in one of its uses is being made as illustrated of all of its uses.

As shown in Figure 1, the tool is applied to an automobile fender for the straighten-

ing of one of the fender supporting brackets, and in this adaptation the foot F is applied to the inner edge of the crown of the fender so as to provide a pivotal mounting for the lever L with the latter extended transversely of the fender. In this position of the lever, the hooked member H depends from the lever and by proper horizontal adjustment may be positioned so that its hooked end engages the flange at the outer edge of the fender at a point directly beneath the point of connection of the bracket of the fender. With the tool applied in this manner, it will be clear that by gripping the handle and pulling upwardly a force will be exerted on the lever to swing the latter upwardly about the pivot 18 as a center thereby pulling the hooked member upwardly with sufficient force to bend the fender bracket and thus restore the latter to original form, assuming that the horizontal portion of the fender bracket has been previously bent downwardly or inwardly. Of course, it is to be understood that as the lever L is pulled upwardly its inner pivoted end pushes with downward force the foot F, but this force operates to no detriment in so far as bending the fender or bracket at the point of contact. In view of the spaced relation of the mounting for the lever and the hooked members, it will be clear that a greater leverage is produced which facilitates the bending of the brackets and fenders.

By virtue of the two adjustments of the hooked member as well as the adjustability of the foot, the tool is adapted to fenders and brackets of various proportions, and in any of its uses provides simple and effective means for restoring the original contour of a bracket or fender.

Although I have herein shown and described only one form of metal bending tool embodying my invention, it is to be understood that various changes and modifications may be made therein without departing from the spirit of the invention and the spirit and scope of the appended claims.

What I claim is:

1. A metal bending tool comprising a lever, a supporting foot pivoted on one end of the lever, a pin extending from the lever for limiting the swinging movement of the foot in one direction on the lever, and a hooked member bodily adjustable and pivoted on the lever at a point spaced from the foot.

2. A metal bending tool comprising a lever of antinatal form, a bifurcated foot pivoted on one end of the lever, means for limiting the swinging movement of the foot in one direction of the lever, said lever being formed with notches, and a bifurcated hooked member having a pivot pin extended through the bifurcated portion of the member and engaging with any one of said notches and adjust-

ably and pivotally supporting the member on the lever.

3. A metal bending tool as embodied in claim 2 wherein the pin is adjustable on the member to vary the position of the member with respect to the lever.

4. A metal bending tool comprising a lever, a bifurcated foot pivoted on one end of the lever, means for limiting the swinging movement of the foot in one direction of the lever, said lever being formed with notches, and a bifurcated hooked member having a pivot pin extended through the bifurcated portion of the member and engaging with any one of said notches and adjustably and pivotally supporting the member on the lever.

JOHN ROY HILSTAD.