T. BARRETT.

THILL LUGS

No. 182,401. Patented Sept. 19, 1876.

Fig. 1.

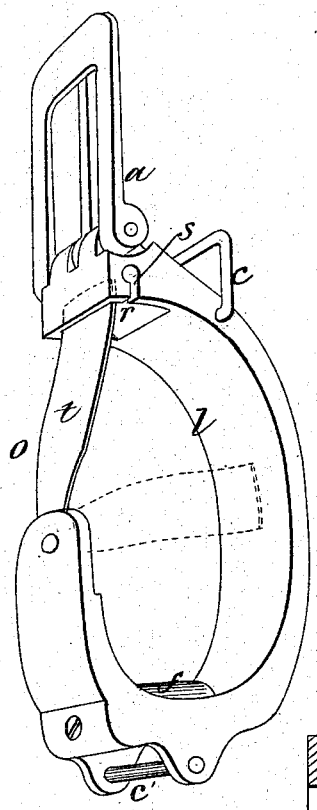


Fig. 2.

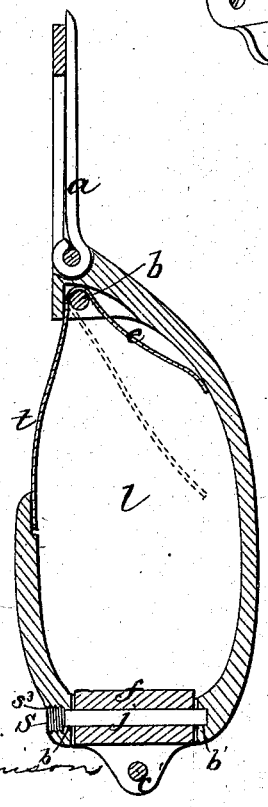
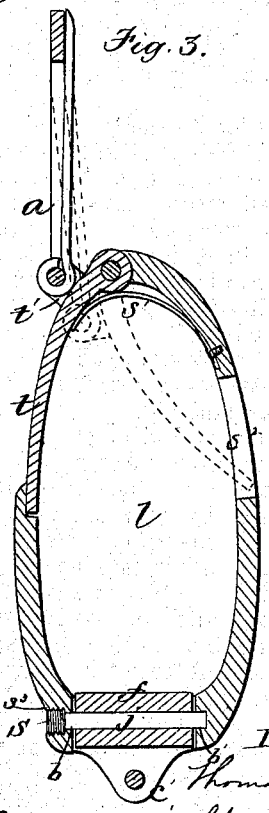


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

THOMAS BARRETT, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO JOHN S. FOLSOM, OF SAME PLACE.

IMPROVEMENT IN THILL-LUGS

Specification forming part of Letters Patent No. **182,401**, dated September 19, 1876; application filed July 3, 1876.

To all whom it may concern:

Be it known that I, THOMAS BARRETT, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Thill-Lugs for Harness, of which the following is a specification:

In the accompanying drawing, forming a part of this specification, Figure 1 represents a perspective view of a thill-lug embodying my invention, and Figs. 2 and 3 represent sectional views of modifications.

This invention relates, mainly, to that class of thill-lugs in which the lug is constructed wholly, or in part, of metal or other rigid material, and has a side opening adapted to receive the thill laterally, and a movable locking tongue or plate, adapted to cover said opening, and make the lug continuous when thethill is in place.

The invention has for its object to improve the construction of thill-lugs of this class with respect to the locking tongue or plate, and also to provide improved means for detachably connecting a friction-roller to a metallic lug.

To these ends my invention consists in certain details of construction, which will be fully described in the following specification, and pointed out in the claims.

In the drawings, *l* represents the thill-lug, which is made of metal or other rigid material, of any suitable size and shape, and is provided with a buckle, *a*, and loops *c c'*, for the attachment of the usual harness-straps, and also with a side opening, *o*, which is adapted to admit a thill laterally into the lug, the opening being made in the upper part of the lug, so that when the thill is in place it will rest in the lower part. *t* represents a swinging tongue or plate, which is composed of metal, and is adapted to cover the opening *o*, so as to prevent the thill from escaping, and also to be displaced, so as to permit the thill to be introduced through the opening. This tongue or plate is attached at one end only to the lug, at one side of the opening, in such manner as to swing freely in being displaced and returned to place, and, when in place, to extend across the opening and bear at its free end against the inside of the lug, so that any pressure exerted outwardly from the inside of the lug, such as a sudden upward movement of the thill, will be resisted by the inside bearing of the tongue. The tongue may be applied to the lug in several ways, as shown in the drawings. Fig. 1 represents the tongue as made of a strip of elastic metal, pivoted to the lug in such manner as to be adapted to swing away from the lug in being displaced, as shown in dotted lines. In this method of attachment I pivot the tongue-lug at the lower end of the opening *o*, and provide the lug with a recess, *r*, at the upper end of said opening.

The tongue *t* is of sufficient length to extend across the opening and enter the recess *r*, which is so formed as to constitute an abutment or bearing, which limits the outward movement of the free end of the tongue. The recess is provided with a slot, *s*, through which the tongue enters, this slot being located back from the face or bearing-surface of the recess, so that when the tongue has entered the recess its elasticity will cause it to bear against the said face or bearing, which will prevent it from swinging outwardly, while the ends of the recess will prevent it from turning on its pivot until it is sprung back far enough to enable it to pass through the slot *s*. To admit a thill laterally into the lug it is therefore necessary to disengage the tongue from the recess, and swing it downwardly, as shown in dotted lines, until the opening is clear. Then, when the thill is in place, by turning up the tongue, and springing it into place in the recess, the opening is securely covered.

In the construction shown in Fig. 2 I pivot the tongue to the lug at the upper end of the opening *o*, so that it will extend across the opening and bear at its lower end against the inside of the lug with a yielding pressure, swinging inwardly across the lug when pressure is exerted from the outside, and returning to its position by its own elasticity when the pressure is removed.

The tongue is, preferably, pivoted to the lug by means of a bolt or rivet, *b*, the tongue being bent around the rivet, and provided with an extension, *e*, which bears against the inside of the lug, and acts as a spring to hold the tongue in place.

In the construction shown in Fig. 3 the

tongue is made rigid, and is pivoted or jointed to the upper end of the lug, so as to swing inwardly, its lower end bearing against the inside of the lug at the lower end of the opening *o*. The tongue is curved somewhat, and is provided with lugs *t*, to which the buckle *a*, which supports the lug *l*, is jointed, the joint of the buckle being so located with relation to the joint of the tongue *t'* that the downward draft exerted on the lug by the weight of the thill will hold the swinging end of the tongue in contact with the side of the lug, thus in a great measure obviating the necessity of a spring to hold the tongue in place. If desired, however, a small spring, s^1, may be employed to hold the tongue when the weight of the thills is not sustained by the lugs, as when the horse is backing.

To provide for sufficient displacement of the tongue to admit a large-sized thill, or when the tongue is of considerable thickness, a slot, s^2, is formed in the lug on the side opposite the opening *o*, the tongue projecting into or through this slot when displaced by the entrance of the thill.

It will be seen from the foregoing that the tongue *t*, when in place, constitutes an effectual barrier to the opening *o*, and cannot be displaced by outward pressure without being broken.

The lower portion of the lug is provided with a friction-roller, *f*, which supports the weight of the thill, and allows the lug to travel back and forth freely without binding or jerking on the saddle. A mortise is formed in the lug to receive this roller, and in the opposite ends of this mortise two sockets, *b b'*, are formed, which receive the ends of the pin *j*, in which the roller revolve, this pin being removable from the roller. The socket *b'* terminates in the material of the lug, while the socket *b* terminates in a screw-socket, s^3, which extends to the outside of the lug.

S represents a short screw-plug, which is inserted into the socket s^3 after the roller *f* and pin *j* are in place, and, bearing against the end of the pin, keeps it from coming out. In the present instance the screw S and pin *j* are made in separate parts; but it is obvious that they may be in one piece, if desired. The screw-plug should be made of such length that its outer end shall be slightly countersunk, and the material around the socket may be upset enough to keep the screw from working loose, but not so much as to prevent it from being removed by a screw-driver.

I claim as my invention—

1. The lug *l*, having the side opening *o*, recess *r*, and slot *s*, combined with the elastic swinging tongue or plate *t*, adapted to enter and bear outwardly against one side of the recess *r*, as set forth.

2. The combination of the friction-roller *f*, the removable pin *j*, the screw S, and the sockets *b b'* and s^3, of the lug *l*, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS BARRETT.

Witnesses:

C. F. BROWN,

A. E. DENNISON.