J. S. FOLSOM.
Thill-Tugs.

No. 214,120. Patented April 8, 1879.

Fig. 1.

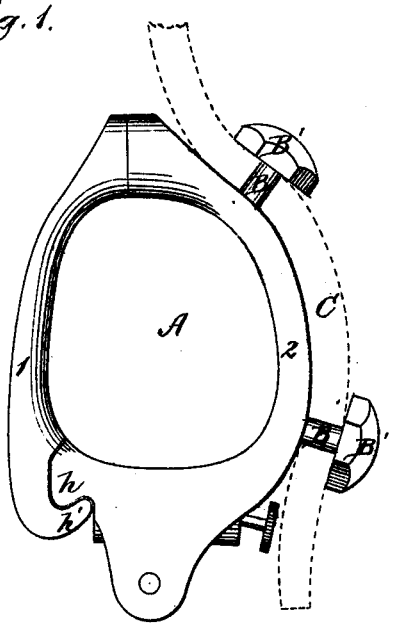


Fig. 4.

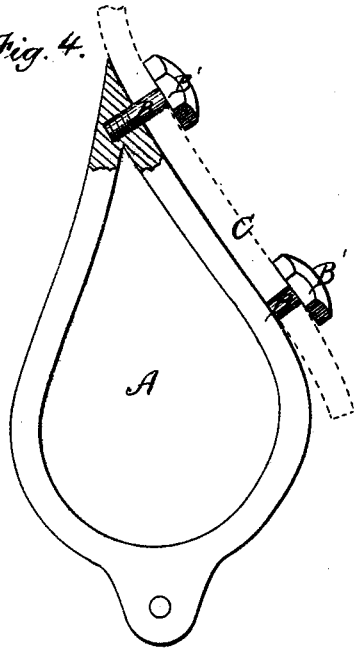


Fig. 2.

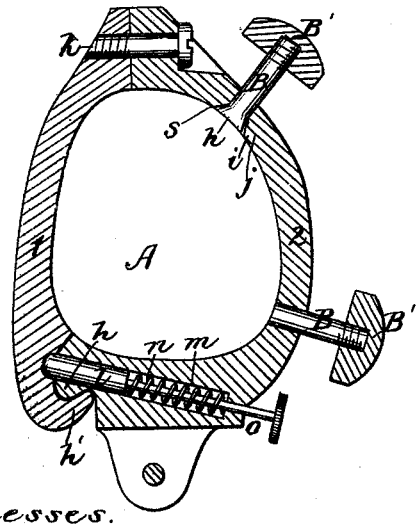
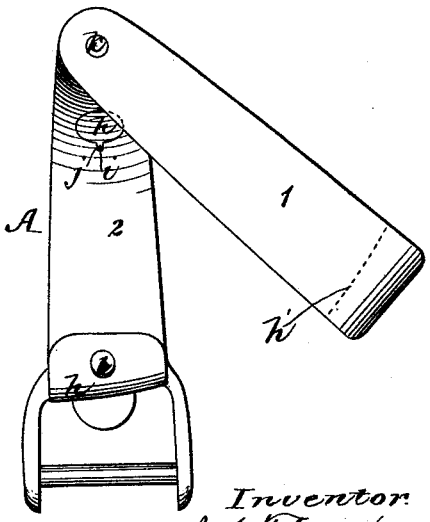


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN S. FOLSOM, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN THILL-LUGS.

Specification forming part of Letters Patent No. **214,120**, dated April 8, 1879; application filed January 29, 1879.

To all whom it may concern:

Be it known that I, JOHN S. FOLSOM, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Thill-Lugs, of which the following is a specification.

This invention relates to metallic or other thill-lugs for harness; and has for its object, first, to provide improved means for securing a lug to a saddle-strap of any width, and also to provide certain improvements relating to the construction of metallic lugs, which are made in two parts, so as to open and admit a thill through the side.

My invention consists, first, in providing a thill-lug with one or more headed bolts or pins projecting from the outer side of the lug, and adapted to pass through holes in the strap to which the lug is to be attached, the heads being removable either from the bolts or with the bolts from the lug, so as to permit the strap through which the bolts pass to be interposed between the lug and the heads.

My invention consists, secondly, in constructing a thill-lug in two rigid parts, one pivoted to the other in such manner as to be adapted to swing out of place to open said lug, said parts being so formed at their separable ends as to be securely connected when the swinging part is in place, and to hold the swinging part against outward lateral pressure, such as might be exerted against it by the thill.

My invention consists, thirdly, in the provision of a spring-bolt to automatically lock the separable ends of a two-part metallic lug together, all of which I will now proceed to describe.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side view of a thill-lug embodying my improvements. Fig. 2 represents a sectional view of the same. Fig. 3 represents an edge view of the same, showing the swinging part out of place. Fig. 4 represents a side view, partly in section, of a lug made in one piece.

Similar letters refer to like parts in all the figures.

In the drawings, A represents a thill-lug, and B B represent the headed bolts or pins whereby the lug is secured to the saddle-strap. These bolts or pins may be one or more in number, and project from the outer side of the lug—that is, from the side opposite to that which is nearest the horse. The bolts or pins B are of suitable size to pass through an ordinary buckle-tongue hole in a saddle-strap, C, (shown in dotted lines,) and the head B′ of each bolt is removable from the lug, so that the strap C can be interposed between the lug and the heads, as shown. I prefer to make the heads B′ in the form of nuts screwed onto the threaded ends of the bolts, as shown in Figs. 1 and 2, so as to be removable from the bolts; but a manifestly equivalent construction would be to form each head and its bolt in one piece, and screw the bolt into the lug, as shown in Fig. 4.

The bolts or pins may be secured to the lug in any suitable manner. When two bolts are used which are provided with detachable heads, and the surface of the lug from which they project is approximately straight, so that the bolts are about parallel, both bolts may be rigidly attached to the lug; but when said surface is convex and the bolts diverge, as shown in Figs. 1 and 2, one of the bolts should rest loosely in a socket, *s*, in the lug, so that it can be moved inwardly to permit the strap C to be laid against the lug after being engaged with one bolt before the other bolt is passed through. This arrangement prevents the strap from being made slack between the bolts, as it would be when pressed against the lug by the heads if both bolts were immovable.

The movable bolt is provided with a head, *h*, which prevents it from being moved outwardly through the lug, and with a stud, *i*, which enters a notch, *j*, in the lug when the bolt is in place, said stud and notch preventing the bolt from rotating while its head is being screwed on.

In attaching the lug to a strap, C, I remove the heads B′, pass the bolts B through the holes in the strap, and then apply the heads so as to clamp the strap tightly against the lug, the compression of the leather thus produced preventing the heads or bolts from working loose. This fastening is extremely simple, and its chief advantage is that it enables the lug to be attached to a strap of any width.

Heretofore the fastening devices of metallic

and other thill-lugs have been of such nature that they will not fit or be applicable to a strap exceeding a given width, so that the strap has to be either trimmed down or replaced by a narrower one. This difficulty my invention overcomes, and enables thill-lugs to be put upon the market as regular articles of manufacture and sold independently of the harness. This has been impracticable heretofore on account of the above-named objection to the fastening devices which have been used.

Figs. 1, 2, and 3 show a lug composed of two rigid parts, 1 2. The part 1 is pivoted at *k* to the part 2, and is adapted to swing, as shown in Fig. 3, so as to open the lug and admit the thill into the lug by a lateral movement of the thill or lug. The separable ends of the parts 1 2 are provided with hooks *h h'*, adapted to interlock, as shown in Figs. 1 and 2, and hold the part 1 against outward pressure, such as might be exerted by a lateral movement of the thill. These hooks are beveled or inclined, as shown in Fig. 3, so that the part 1 will be stopped by the meeting of said shoulders when it is swung to place.

l represents a bolt, located in a socket, *m*, in the part 2, and adapted to project into a recess in the part 1 when the latter is in place, and thus lock the part 1. The bolt is projected by a spring, *n*, and is provided with a handle, *o*, by which it may be retracted to unlock the part 1.

While the improvements described are intended especially for metallic thill-lugs, the first part—viz., the headed bolts—may be applied to leather or other lugs, if desired.

I claim—

1. As an improved article of manufacture, a thill-lug provided with one or more headed bolts, substantially as described, whereby the lug may be applied to straps of different widths, as set forth.

2. A thill-lug having two headed bolts, B, one of which is fixed and the other loose or movable inwardly, and provided with means whereby it is held from rotating and moving outwardly when in place, as set forth.

3. A metallic or rigid lug made in two parts, 1 2, pivoted at *k*, and provided with hooks *h h'*, substantially as and for the purpose specified.

4. In combination with the two-part lug, the spring-bolt *l*, as set forth.

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

JOHN S. FOLSOM.

Witnesses:

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