

(No Model.)

N. F. MATHEWSON.

THILL TUG.

No. 479,603.

Patented July 26, 1892.

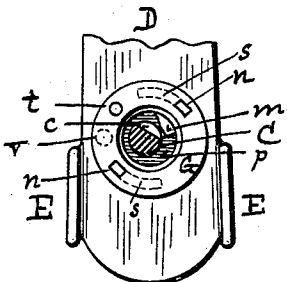
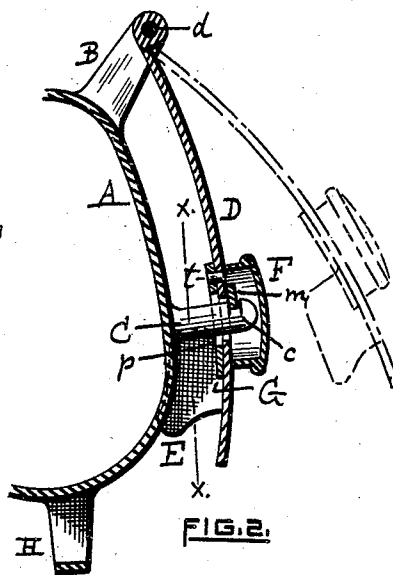
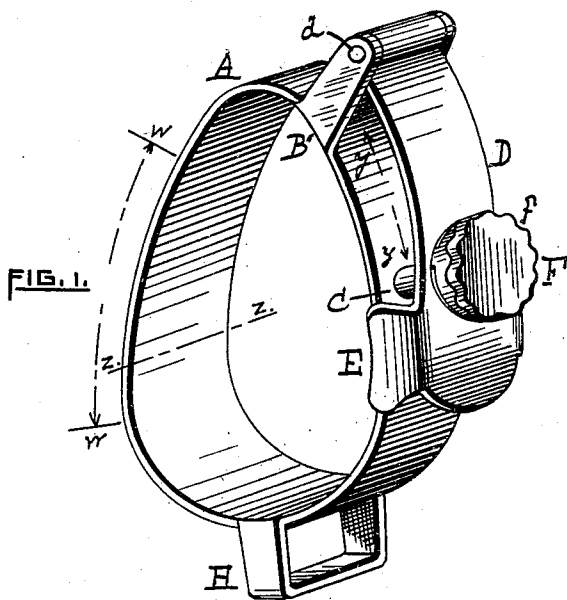


FIG. 3.

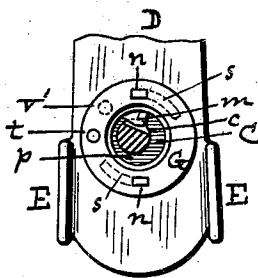


FIG. 4.



FIG. 5.

WITNESSES.

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THILL-TUG.

SPECIFICATION forming part of Letters Patent No. 479,603, dated July 26, 1892.

Application filed October 22, 1891. Serial No. 409,508. (No model.)

To all whom it may concern:

Be it known that I, NATHAN F. MATHEWSON, of the city and county of Providence, in the State of Rhode Island, have invented a certain new and useful Improvement in Thill-Tugs; and I declare the following to be a specification thereof, reference being had to the accompanying drawings.

Like letters indicate like parts.

Figure 1 is a perspective view of my improved thill-tug. Fig. 2 is a view of the same, partly in elevation and partly in section, on line *yy* of Fig. 1. Figs. 3 and 4 are views, partly in elevation and partly in section, on line *xx* of Fig. 2, the former showing the device locked and the latter showing it unlocked. Fig. 5 is a cross-section on line *zz* of Fig. 1.

My invention relates to the class of saddlery, and especially to that part of a harness known as the "thill-tug."

It consists of a metallic elliptical or oval ring or tug having a stud or pin with a slotted head and also having two side projections, in combination with a swinging clasp pivoted on said projections and provided with a locking device engageable with the slotted head of the stud or pin, as hereinafter particularly specified.

In the drawings, A represents the thill-tug proper, made oval or elliptical in form. It is metallic and may be cast; but is preferably made of rolled or "strap" iron with a central longitudinal corrugation *a* and turned edges *b*, as seen in cross-section in Fig. 5. In this manner the tug is made stiff and strong, notwithstanding that it is made of light stock. It is not necessary to extend the corrugation all along the tug, but only partially, as from *y* to *y* and from *w* to *w* in Fig. 1, though of course they may be extended all the way around, if desired. These bends *a* and *b*, besides stiffening the tug-iron, are useful otherwise. The turned edges *b* protect the thill from being cut or defaced in passing in and out of the thill-tug, as it would be liable to be if the edges were straight and square; but as these turned edges *b* would be apt to cut or deface the saddle I make the corrugation *a* sufficient to keep the saddle away from forcible contact with the edges *b*. At the upper

smaller end of the thill-tug A, on each side, is a projection B. A stud or pin C extends from the tug A at one side, and its head is transversely slotted at *c*, as seen in elevation in Fig. 2 and in plan in Figs. 3 and 4. A clasp-iron D is hinged by a pivot *d*, which passes through the projections B from side to side and is capable of a swinging movement, as indicated in Fig. 2.

The clasp D has two ear-pieces E on each side near the outer end. I provide the clasp with a locking device, which is engageable with the slotted head *c* of the stud C. The locking means consist of a knob F, having its edge indented or knurled, as seen at *f* in Fig. 1, and the locking-piece *m* within said knob and secured thereto.

The knob F is riveted at *n* to a washer G, of tempered metal, which rivets pass through curved slots *s* in the clasp D. Said clasp also has a circular opening *p*, somewhat larger in diameter than the stud C, and also two holes *v v'*. A teat *t*, having a rounded or beveled head, projects from the inner face of the washer G and is engageable in either one of the holes *v v'*. The tug A also has a loop H at its bottom.

Having thus specified the parts of my device, I will now explain its use. The thill-tug is supported by a tug-strap (not shown) from the saddle in the usual manner. The lower end of this strap is provided with a hole. The clasp D is swung outwardly into the position shown in dotted lines in Fig. 2. The free end of the strap is passed down between the projections B and beneath the clasp D. The strap is secured to the tug A by putting the perforated end of the strap on the stud C, so that the stud extends through the hole of the strap. The clasp D has its locking-piece *m* in the position shown in Fig. 3. The clasp is then swung down into the position shown in Fig. 2 and locked in place by turning the knob F.

The locking mechanism operates as follows: The knob F, with its locking-piece *m* in position as shown in Fig. 3, is turned by hand. The rivets *n* are moved along the slots *s*. The teat *t*, by the revolution of the washer G, (which turns with the knob F by reason of its

rivet connection,) is lifted out of the hole v' and moves toward and drops into the hole v of the clasp-iron D, the temper of the stock of the washer G allowing this rise and fall of the teat t out of and into the locking-holes. When the knob has been turned as far as the slots s allow the movement of the rivets n therein, the locking-piece m is swung into the slot c of the stud C. The parts are thus locked not only by the locking-piece m within the slot of the stud, but also by the engagement of the teat t in the hole v . The tug-strap is now securely held in place upon the stud and cannot be accidentally displaced or disengaged. The ear-pieces E prevent any lateral movement of the free end of the strap beyond the hole. The loop H is useful for the attachment of the girth.

I claim as a novel and useful invention and desire to secure by Letters Patent—

The combination of the thill-tug A, having a stud-pin C, with a slot c , a clasp D, pivotally mounted on projections of said tug and provided with an aperture p , slots s , and holes $v v'$, the knob F, having the interior locking-piece m , adapted to enter the slot c , the spring-washer G, connected with said knob F by rivets n through the slots s , and a teat t , attached to said washer and engageable with said holes $v v'$, substantially as specified.

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Witnesses:

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