(No Model.)

W. S. CASSADY.

HARNESS TUG.

No. 415,381. Patented Nov. 19, 1889.

FIG. 1.

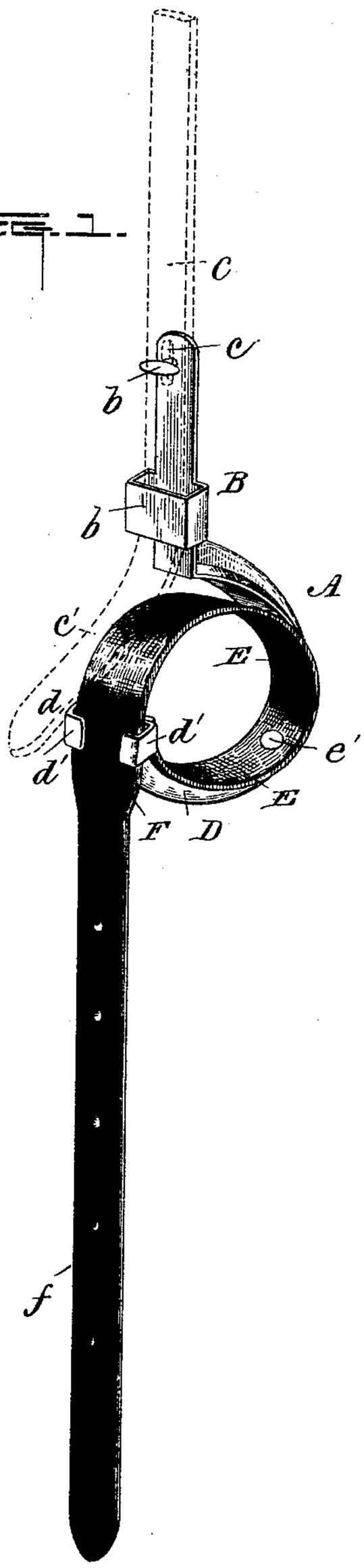


FIG. 2.

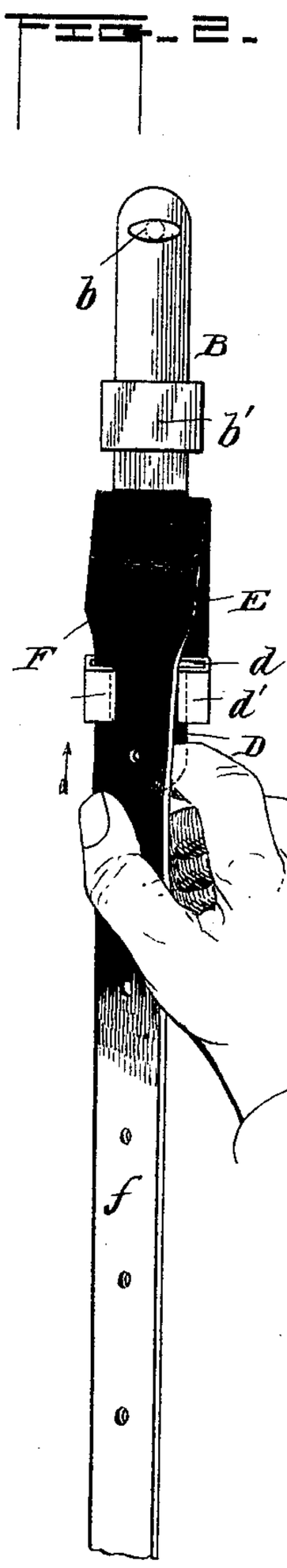
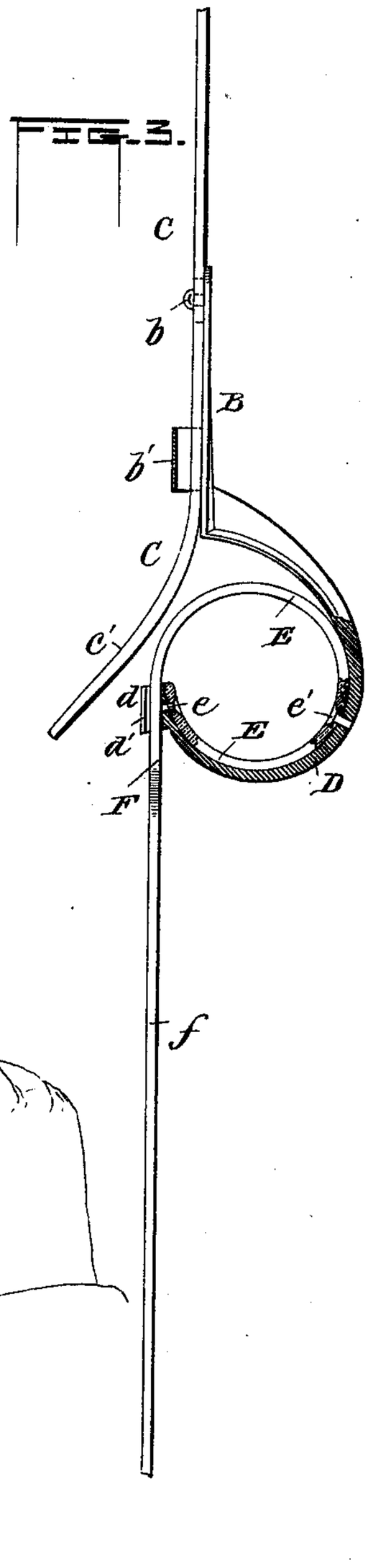


FIG. 3.



WITNESSES.

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HARNESS-TUG.

SPECIFICATION forming part of Letters Patent No. 415,381, dated November 19, 1889.

Application filed April 19, 1889. Serial No. 307,636. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. CASSADY, a citizen of the United States, residing at Millville, in the county of Cumberland and State of New Jersey, have invented a new and useful Improvement in Harness-Tugs, of which the following is such a description as will enable others skilled in the art to make and use the same.

The object of my invention is to provide a tug simple in construction and yet effective in accomplishing the desired end—viz., the ready attachment to and detachment from the shafts without slipping the tugs over the end of the same.

With these ends in view my invention consists in certain novel features of construction and combination of parts, which will be more fully described, and pointed out in the claim.

Reference being had to the accompanying drawings, Figure 1 is a perspective view of my device as it would appear when in act of gripping the shaft. Fig. 2 is a front elevation of same, showing manner of unfastening the billet-strap. Fig. 3 is a side elevation partially in section.

Like letters of reference indicate like parts wherever they occur.

In the drawings, A designates the tug, which is composed of the metal supporting hook-plate B. This hook-plate is provided upon its straight shank with button *b* near the top and near the lower portion with the loop *b'*. The tug-bearer C, which is attached to the harness-saddle, has a slot or opening *c*, which extends at right angles to the head of the button *b*, when the end *c'* has been passed through the loop *b'*, thus securing the strap C and preventing the unfastening of the same until the end *c'* has been withdrawn from the loop.

The curved lower portion D of the hook-plate B is substantially semicircular in that portion wherein the shaft is to lie and gradually lessening the curve until it joins the straight portion of the shank. Between the shank and the outer extremity of the curved supporting portion is sufficient space to allow the shaft to be inserted. The outer extremity of this curved portion is provided with a locking-loop *d*, which is preferably made open on its outer wall, thus forming two angular retaining lugs or lips *d'*. Upon the inner side of the hook, preferably, is riveted or otherwise secured the billet-strap E. One end of the billet-strap is riveted at *e* immediately behind the locking-loop and passes down upon the inner surface of the curved portion of the hook-plate, and is again riveted at *e'*, from which point the strap is free. The portion that forms the interior lining of the curved portion of the supporting-hook and enough to surround shaft when it is gripped and to extend below the locking-loop is wider than remaining portion of the free end. This wide portion of the strap E extends to the point F, when it is somewhat contracted for the remaining portion of the free end *f*.

The billet-strap is provided with the usual holes by which it is buckled to the girth or belly-band.

The operation of my device is as follows: Let it be supposed that it is desired to attach the tug to the shaft in order to support the same, and that the billet-strap is not within the locking-loop. The horse is now backed into place and the shafts are raised and inserted into the curved portion of the hook-shaped supporting-hook. The face portion of the billet-strap is passed over the shaft and one edge of the small or reduced portion just below where the enlargement begins is passed between the lips or lugs forming the locking-loop and pressed over against the side of one of said lips or lugs, when the other edge may be readily pushed entirely within the locking-loop. The strap is now given a slight downward pull, such as would be naturally exerted in buckling or bringing the billet-strap snugly around the shaft. This, it will be observed, brings the enlarged portion of said strap within and a slight distance below the lugs of the locking-loop. The strap is now securely fastened and cannot be released until it is desired to do so. From the foregoing it will be seen that the necessity of passing the ends of the shaft through supporting portion of the tug or shaft-carrier is entirely obviated.

The releasing is simply the reverse operation of what I have just described; but I desire to call particular attention to the fact that it requires but a slight upward movement of the billet-strap before the reduced portion may be withdrawn from the locking-loop, not

necessitating the withdrawal of a long strap for its entire length through a loop or slot in the plate or else slipping over end of shaft.

The manner of releasing is clearly illustrated in Fig. 2 of the drawings.

I prefer to secure billet-strap to the inner side of the supporting-hook; but it is obvious that it might be otherwise attached.

It is evident that slight changes might be made without departing from the spirit and scope of my invention; hence I not do wish to limit myself to the exact construction herein shown.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a harness-tug, a metallic supporting-hook, a tug-bearer secured thereto, an open securing-loop upon the outer end of the curved portion of said supporting-hook, a billet-strap secured to the said curved portion upon its inner surface, said strap being tapered at the desired point and the strap being securely held within the walls of the securing-loop, said walls embracing the wide portion of said billet-strap when the same embraces and grips the shaft, substantially as and for the purpose described.

In testimony whereof I have affixed my hand in the presence of two witnesses.

WILLIAM S. CASSADY.

Witnesses:

HARRY O. NEWCOMB,

SAMUEL M. SHELDON.