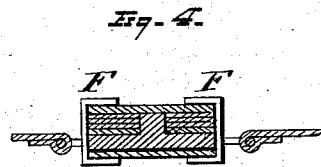
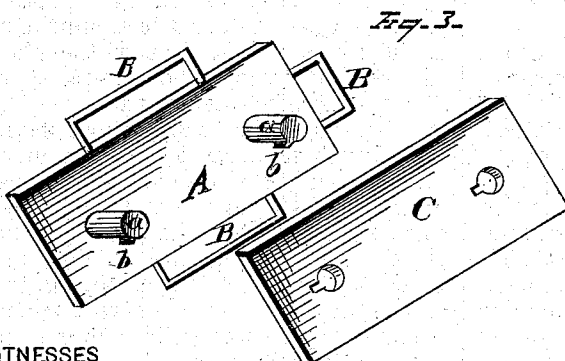
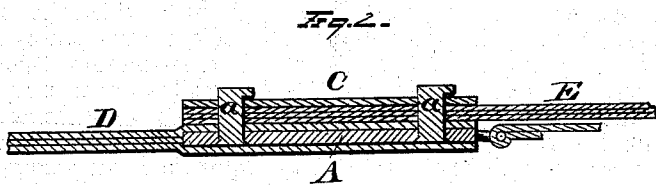
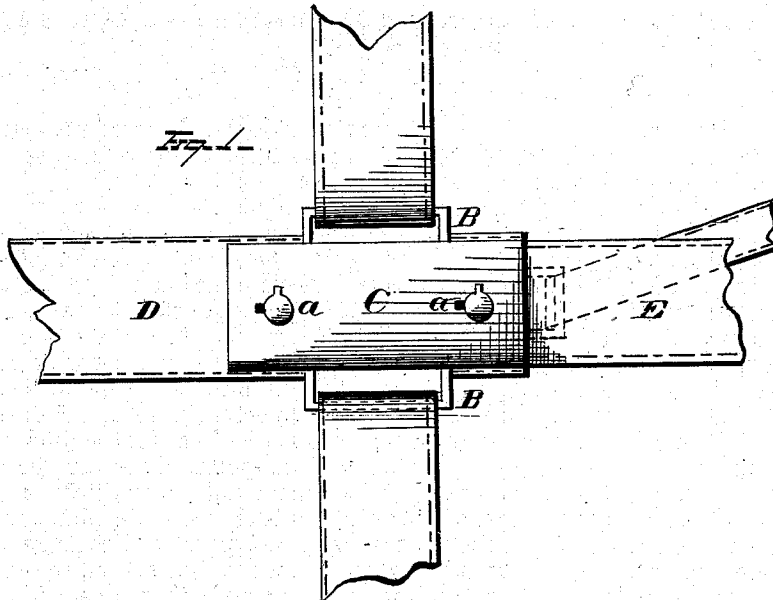


D. W. BRODNAX.

TUG-ATTACHMENT FOR HARNESS.

No. 186,457.

Patented Jan. 23, 1877.



WITNESSES

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UNITED STATES PATENT OFFICE

DAVID W. BRODNAX, OF ROCKDALE, TEXAS.

IMPROVEMENT IN TUG ATTACHMENTS FOR HARNESS.

Specification forming part of Letters Patent No. **186,457**, dated January 23, 1877; application filed November 3, 1876.

To all whom it may concern:

Be it known that I, DAVID W. BRODNAX, of Rockdale, in the county of Milam and State of Texas, have invented certain new and useful Improvements in Tug Attachments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to harness, and more especially to attachments for connecting the short hame-tug with the draft-trace, though the same is applicable to any and all parts of a harness which are to be relatively engaged, and my improvement be thus used in substitution of the old and common swinging tongue-buckle. The object in view is to provide a strap-engaging mechanism, constructed of a supporting-plate and rigid projecting pins, with a locking device, whereby the connecting parts may both be secured together, and also given an ornamental appearance.

My invention consists in the combination, with a metal plate provided with right-angular studs rigidly secured to its face, of a strap-locking plate, the latter constructed of dimensions counterpart to the former, whereby the engaging parts are both retained in place, and also concealed from view.

In the drawings, Figure 1 represents a part of a harness provided with my improvement, and Fig. 2 a section of same. Fig. 3 shows the supporting and locking plates disconnected, and Fig. 4 is a modification view of the manner of connecting the two plates.

A is the base or supporting plate, consisting of a metal piece of form a little narrower than the connecting-straps, and of suitable length, so as to admit of the easy engagement, and secure retention of the latter, one with another, by means of the protruding dowel-pins or embossed studs *a a*, rigidly secured to one face of this main plate. These latter studs are formed in transverse central line, approximately near the ends of the plate, one at either extremity, and project sufficiently out at right angles to the plate for the engaging purposes, as appears in the following description: They are provided with swivel-

latches *b b* at their outer extremities for engaging with the locking-plate, as also appears in further description.

B are looped catches or ring devices, connected at top, bottom, and rear edges, respectively, of the main plate, and adapted for securing to the plate the back-strap, belly-band, and breeching-strap, as they severally unite at this point therewith. C is the second or locking plate, and is made of a piece of metal corresponding in form and general outline to the first or supporting plate A, and of such special construction as to cover the different parts in their uniting-points. It is punctured or slotted at its central end extremities *c c* counterpart to the studs on the main plate, and adapted to receive said studs, with their swivel-catches, which latter are then turned so that they may not register with that eccentric part of the slots *c c* through which they found entrance, and thus lock the two plates together. This locking-plate may have its exposed faces plated with gold or silver, or in any way burnished or ornamented, so as to impart a pleasing appearance to same, and cover the otherwise unsightly exposure of the engaging mechanism.

The improvement is applied to harness by first inserting the plate A between the layers or leaves of the short hame-tug D, the outer layer or horizontal section of the latter being punctured or perforated to admit the passage of the studs on the face of the plate next adjacent to same. The several layers are then stitched together, as usual, thus binding in with same this supporting-plate, interleaved with same at the rear end of the tug. The forward end of the trace E is then secured to the tug by means of suitable holes in the trace engaging with the studs on the main plate. The locking-plate is then put over these parts, and attached to same by the latches, adjustable on the outer extremities of the studs. The harness is thus connected in a secure engagement, which allows of the strain being borne along an extended part of the tug-strap, and in different portions of the trace. The two studs cause the trace to be doubly attached to the plate, and thus ease and equalize the draft upon the trace-holes; while the interweaving of the main plate between the layers of the tug causes the labor

put upon same to be equably distributed throughout the plate's length of the tug.

By this construction the pieces of a harness are relatively secured without the many disadvantages attendant upon their engagement otherwise. The harness is improved and beautified in design, and the difficulty of adjusting and fastening the trace, experienced in the ordinary swinging tongue-buckle, is obviated.

Fig. 4 shows, in modification, the disconnected parts of my improvement. I here change the minor feature of the fastenings of the locking-plate, and hence make the studs of the main plate of shorter length, so that they may come just flush with the outer face of the trace. The locking-plate is then made of full surface, without the slots *c c* shown in the former views, and comes in close butt-contact with the plane surface of the trace and studs, and binds the two latter together by means of the catches *F*. These catches *F* are formed upon the upper and lower edges of the locking-plate, and are of length sufficient to clasp over onto the inner surface of the tug, and thus securely retain the plate in close impact up against the outer side of the trace and studs.

I may use loops of leather to aid in connecting the parts of the harness; it being apparent that loops such as are ordinarily in use with the tug and trace attachments would not be inappropriate in connection with my foregoing-described improvement. It is apparent that the main plate *A* may, if desired, be secured to one of the leaves of the tug, between which it is placed, by passing rivets through the plate and the leaf, and heading them, so as to lock the two together.

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

A tug attachment, consisting of the draft-plate *A*, provided with projecting studs, and a locking-plate, *C*, adapted to unite and securely hold the hame-tug and trace in position, all substantially as and for the purpose stated.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of October, 1876.

DAVID W. BRODNAX.

Witnesses:

F. A. HILL,
GUY C. HINMAN.