J. T. SMITH.
Thill-Tug.

No. 198,702. Patented Dec. 25, 1877.

Fig. 1.

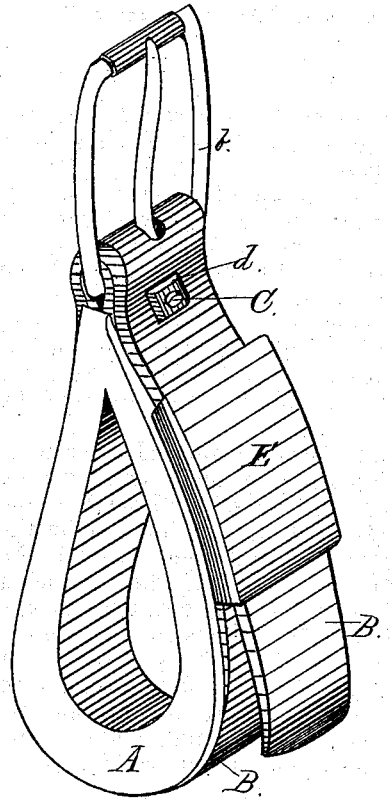
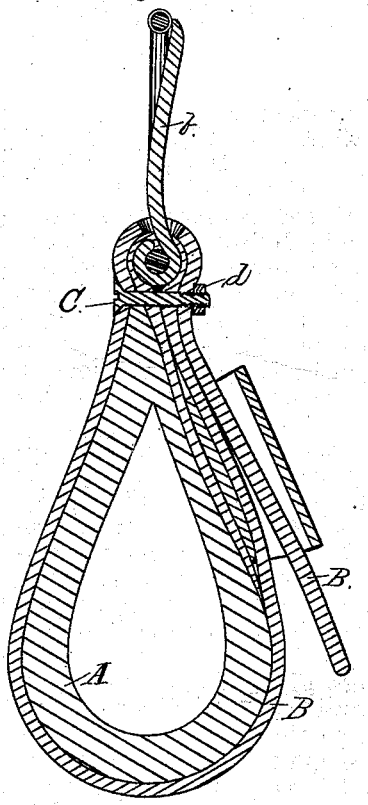


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN T. SMITH, OF AURORA, ILLINOIS, ASSIGNOR OF ONE-HALF HIS RIGHT TO WILLIAM G. MORRIS, OF SAME PLACE.

IMPROVEMENT IN THILL-TUGS.

Specification forming part of Letters Patent No. **198,702**, dated December 25, 1877; application filed November 23, 1877.

To all whom it may concern:

Be it known that I, JOHN T. SMITH, of Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Thill-Tugs or Shaft-Bearers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention aims to improve tugs or thill-carriers for single harness, and which, while not apt to wear the thills or shafts, or any leather covering thereon, affords a strong support for the buckle, and a means for tightening, adjusting, and securing the outer strap or loop of the tug to the inner rubber, wood, or other lining, the whole being simple, cheap, and reliable.

In the drawings, Figure 1 is a perspective, and Fig. 2 a central vertical section, of a tug illustrating my invention.

The frame or shaping piece of the loop is shown at A, and it may be made of wood, hard or soft rubber, or any other appropriate material; but I prefer soft rubber. It is flanged, as shown, at its edges, that the strap B may lie between such flanges, and be thus prevented from displacement laterally.

The strap is adapted to be entirely removed, and as readily applied to the frame or body, and is furnished with a buckle at *b*—one of its extremities. The strap passes entirely around the frame A, its buckle end being located at the top or smaller end of such frame, and the other end of the strap is then passed through the buckle, and the strap drawn up tightly and secured by the tongue of the buckle. No metallic plate is needed to hold the buckle down to the frame, inasmuch as the free end of the strap passing through the buckle may be tightened sufficiently to preclude the use of any such appliance, such plates, when employed, tending to weaken the frame, because of the screws or nails which fasten them down entering into the body of the wood or material of which such frame is composed.

By my construction, also, so far as described, I have all the advantage of strength due to the wrapping of the strap and the stitching of the same around the body of the buckle, which is not feasible in those cases where the tongue of the buckle merely projects through a hole in the strap, and the latter is not secured to the buckle by stitching, because both its ends are remote from the buckle.

In addition to the devices already described, however, I employ a screw-bolt, or a rivet, C, and a nut, *d*, the bolt passing through a hole in the body of the strap, and then under the body of the buckle, and then through the other part of the strap; and the nut being then applied, it may be tightened up to any degree desired. This provision for tightening or loosening at will affords a means for adjustments which may be desirable, due to different kinds of leather, or to their liability to stretch or to contract under variations of weather, such as wet or dry, hot or cold, &c.

The removability of the strap, also, without in any way injuring it, permits the ready removal of the flanged frame A in case of any repairs being needed, or in case of its breakage, and the instant substitution of another. So, also, one strap may be substituted for another at a moment's notice, and without the need of a skilled workman.

The soft-rubber lining, to a great degree, prevents the slipping and rubbing of the shafts on such lining, and the consequent wearing away of the shaft and of the lining where they come in contact, and it also greatly diminishes the noise and rattle.

The end of the strap, after the same is buckled to place, may be kept down by inserting the same within the keeper E, and by passing the bolt through this end, also, it will be seen that the strain and weight are not sustained, as is usual, by a single thickness of the strap, but, in addition thereto, the

security afforded by stitching the same to the buckle.

I claim—

1. In combination with the frame A, made of rubber, wood, or equivalent material, the strap B, provided with a buckle secured to one of its ends, and the strap passing around the frame, and removably secured thereto by its engagement with the tongue of the buckle, as shown and described.

2. The combination of the frame A, strap B, buckle *b*, bolt or rivet C, and nut *d*, substantially as and for the purpose described.

JOHN T. SMITH.

Witnesses:
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