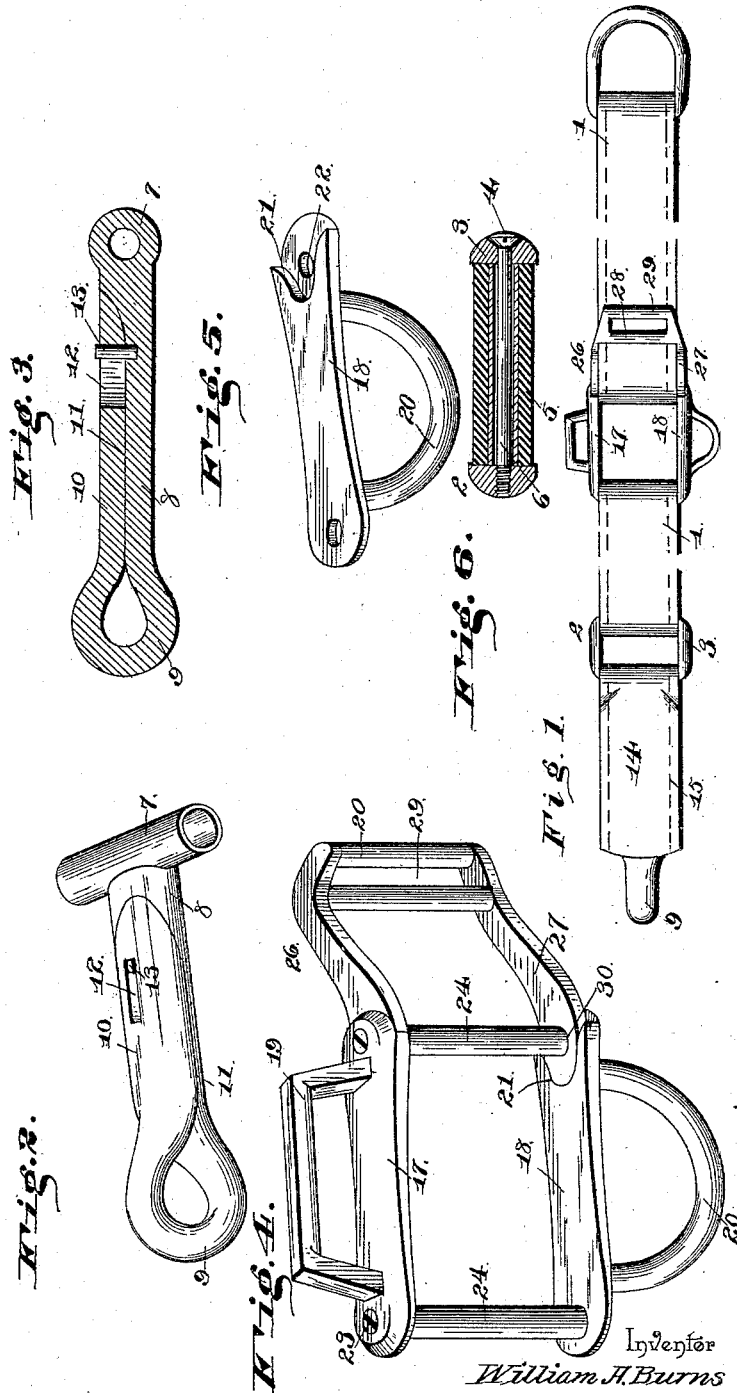


(No Model.)

W. A. BURNS.
HAME TUG.

No. 489,706.

Patented Jan. 10, 1893.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM A. BURNS, OF EAST HICKORY, PENNSYLVANIA.

HAME-TUG.

SPECIFICATION forming part of Letters Patent No. 489,706, dated January 10, 1893.

Application filed March 14, 1892. Serial No. 424,879. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. BURNS, a citizen of the United States, residing at East Hickory, in the county of Forest and State of Pennsylvania, have invented a new and useful Tug, of which the following is a specification.

This invention relates to improvements in tugs for draft-harness; and the objects in view are to provide a flexible tug of great strength and durability, and while principally formed of metal and therefore having the inherent strength thereof, to have the appearance of an ordinary leather tug, over which of course it is greatly advantageous in heavy draft harnesses.

With these objects in view the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is an elevation of a tug constructed in accordance with my invention. Fig. 2 is a detail in perspective of the hame-connecting device, the leather covering being removed. Fig. 3 is a longitudinal section of the same. Fig. 4 is a detail in perspective of the combined tug, belly-band and back-strap buckle. Fig. 5 is a similar view of the stationary portion of the frame thereof. Fig. 6 is a detail view of the removable or hinge-portion of said frame, or buckle.

Like numerals of reference indicate like parts in all the figures of the drawings.

The complete tug consists of a series of short leather loops or straps, 1, and are connected at their adjacent ends by metal links 2, preferably separable from the loops or sections, whereby any of them may be readily replaced when broken. In the present instance, however, there is but one link shown for lack of space.

The coupling comprises opposite side-bars 3, provided near their ends with perforations 4, those of one side-bar being threaded. Sleeves or rollers 5 are interposed between the side-bars, and bolts 6 are passed through the sleeves and perforations of the side-bars, and have their outer extremities threaded in the perforations of the side-bars. These sleeves not only serve as spacing-sleeves for

the side-bars of the couplings, but also as anti-wearing sleeves for preserving the leather links. The coupling has the bolt that passes through the front ends of its side-bars passed through a transverse eye 7, formed in a connecting-device, designed to engage with the hame-eye or staple. Integrally formed with the eye 7 and extending at a right angle thereto, is the shank 8 of the hame-connecting device, and the same at its front end is curved to form an eye 9 for engaging with the hame-eye and after being doubled upon itself for this purpose is rearwardly extended along the shank forming a flat tongue 10, which by the resiliency of the metal of which the connection is formed, is normally maintained flat upon the shank. In fact the shank being cut away upon its outer side as indicated at 11, the tongue 10 fits therein, and has the general appearance of being a part of the shank. The tongue is provided with a longitudinal slot 12, and a pin or stud 13 projects from the recessed face of the shank into the slot, said stud or pin acting as a stop to prevent the drawing out and destruction of the connection by the draft or strain to which it is subjected.

The manner of connecting this device to the hame-eye or staple will be at once obvious, and need not be especially described, nor its security, when connected, commented upon. When in position the device is covered with the exception of its eye 9, by a leather jacket or covering 14, doubled upon itself to fit around the rear eye 7 and having its longitudinal edges stitched as at 15, from the eye 7 to its ends.

At a proper point along the tug, I substitute for one of the couplings 2, a combined buckle, adapted to receive the tug, the belly-band, back-strap, and breeching, and I so construct this buckle that it may be readily reversed or adapted for either left or right-hand use. The buckle comprises an upper side-bar, 17, and a lower side-bar 18, the upper side-bar being provided with a rectangular loop 19 and the lower side-bar being provided with a curved loop 20. The upper loop receives the back-strap, and hence is rectangular, while the lower loop receives the belly-band, and is preferably curved as shown, in

order to adapt it to connect with the snap-hook which is located at the end of the belly-band, in which case the hook is always maintained at the center of the loop, and cannot
 5 slide from one end to the other and lodge in the corners of the loop as if the same were rectangular. The inner faces of the side-bars 17 and 18 are at their rear ends provided with curved recesses 21, and each of the side-bars
 10 near its ends is provided with openings or perforations 22, those at one end being concentric with the recesses 21. The perforations of one of the bars are threaded, and bolts 23 serve to connect the same, each bolt being
 15 provided with a sleeve 24 serving to space the bars apart, and as wearing-sleeves for the leather loops or sections of the tug. This constitutes the immovable portion of the buckle-frame. 26 designates what might be termed
 20 a V-shaped bail, comprising opposite side-bars 27, compoundly curved, connected at their front ends by an integrally-formed cross-bar 28, having a transverse breech-strap receiving opening 29. The rear ends of the
 25 side-bars have openings 30. These side-bars fit reversibly and somewhat loosely in the recesses 21 of the side-bars 17 and 18, and through the perforations 30 passes the transverse side-bar connecting-bolt 23. It will be
 30 seen that by removing this connecting-bolt, and reversing the bail, the same may be adapted for use at either side of the harness, or with either a right or left-hand tug.

From the foregoing description, in connection with the accompanying drawings, it will
 35 be seen that I have provided a tug-connection that may be easily applied by the teamster in case of breakage, and for such application simply the lower edge of the leather covering
 40 need be ripped, leaving the sewing of said edge for some subsequent time that may be convenient, or when the teamster is in town and can go to a harness-shop for this purpose.

Such neglect of sewing is permissible in that the leather covering is not subjected to any
 45 strain whatever, but is simply used more as an ornamentation than otherwise. Should any of the leather links break, the bolts connecting the ends of the same with two adjacent couplings may be removed, and new links substituted. Likewise may the rear bolt of the
 50 combination buckle be removed, and the bail reversed so as to form a buckle for right or left-hand use.

Having described my invention what I
 55 claim is:—

1. A tug composed of a series of leather-sections or links, combined with a combination buckle, consisting of opposite side-bars provided with back-strap and belly-band receiving loops, bolts connecting the side-bars and
 60 a breeching-strap receiving bail pivotally mounted upon one of the bolts, substantially as specified.

2. A tug composed of a series of leather sections or links combined with the herein-described combination buckle for connecting the same, the same consisting of the opposite side-bars, perforated near their ends and provided
 65 near one of their ends with recesses, and upon their outer sides with back-strap and belly-band receiving-loops, bolts connecting the side-bars, and threaded in the openings of one of the same, loose sleeves mounted upon the
 70 bolts and a bail of U-shape having curved side-bars perforated and connected with one of the bolts and adapted for movement in the recesses, and having a slotted connecting-bar integrally formed, substantially as specified.

In testimony that I claim the foregoing as
 80 my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM A. BURNS.

Witnesses:

A. E. SOUTHWORTH,
 JOHN W. BURNS.