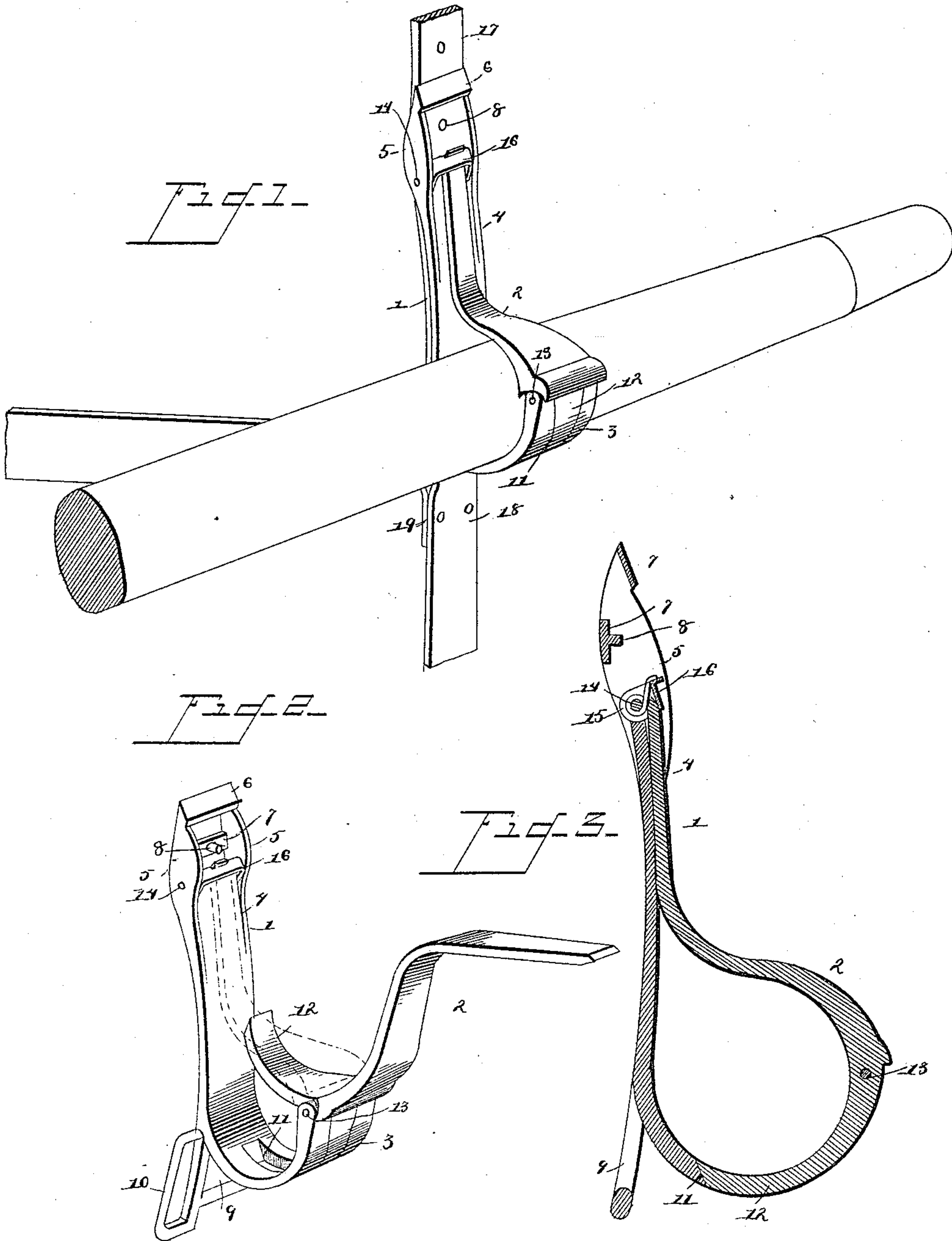


(No Model.)

M. CLIFFORD & H. L. WARNER.
THILL TUG.

No. 442,512.

Patented Dec. 9, 1890.



Witnesses:

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UNITED STATES PATENT OFFICE.

MICHAEL CLIFFORD AND HUGH LAWSON WARNER, OF BIRMINGHAM,
ALABAMA; SAID WARNER ASSIGNOR OF ONE-HALF TO SAID CLIFFORD.

THILL-TUG.

SPECIFICATION forming part of Letters Patent No. 442,512, dated December 9, 1890.

Application filed June 13, 1890. Serial No. 355,299. (No model.)

To all whom it may concern:

Be it known that we, MICHAEL CLIFFORD, a citizen of Ireland, county of Tipperary, and HUGH LAWSON WARNER, a citizen of the United States, both residing at Birmingham, in the county of Jefferson and State of Alabama, have invented a new and useful Thill-Tug, of which the following is a specification.

Our invention has relation to improvements in thill-tugs; and the objects in view are to provide a simple, cheap, and automatically-locking thill-tug adapted to snugly embrace the thills and to be easily operated so as to liberate the same in the act of unhitching the horse from the vehicle.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a portion of a thill and thill-tug, together with the usual straps, said tug being constructed in accordance with our invention. Fig. 2 is a detail in perspective of the tug, the straps removed. Fig. 3 is a longitudinal vertical section, the straps in position.

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

In practicing our invention we construct the tug of two sections or members, designated as the hook-section 1 and the locking-section 2. The hook-section 1 is, as its name would imply, of hook shape, the same consisting of the thill-receiving hook portion 3 and the rear shank portion 4, which latter is provided with a pair of rearwardly-disposed parallel guide-flanges 5, combined to form a strap-receiving passage. The strap-receiving passage is crossed by an upper cross-bar 6 and a lower cross-bar 7, said latter bar being slightly in rear of the former bar and provided with a stud 8, disposed to the front. The shank 4 projects below the lower portion of the hook 3 and is provided with a transverse slot or keeper 9 and a vertical slot or keeper 10, the latter being at a right angle to the former and located at one side thereof. The hook portion 3 is bifurcated for a portion of its length, as at 11, and in the same moves the reduced tongue portion 12, in which one end of the

locking member or section 2 terminates, and through the upper portion of said tongue portion and the bifurcations is passed a bearing-pintle 13.

14 designates a pin passing through the flanges 5, and upon the pin is coiled a spring 15, one end of which bears against the upper edge of a catch 16, the ends of which are bent rearwardly and pivoted upon said pin at each side of the spring. The lower edge of the catch is chamfered, and over the same is designed to ride the upper beveled edge of the locking member 2.

17 designates the back-band of the harness, each of the terminals of which pass through the strap-receiving passage at the upper end of the tug, down the rear side of the shank portion thereof, and forwardly through the loop or keeper 9, where it terminates. The strap 17 is perforated, and one of the perforations takes over the stud 8 of the bar 7, whereby the tug may be adjusted upon the strap.

18 designates a short girth-strap riveted, as at 19, in the keeper 9.

20 designates the holdback-strap, which is passed through the keeper 10, to which it is adjustably connected in the ordinary manner.

To place the thills within the tug the locking-sections 2 are disengaged from the snaps or catches 16 and are swung outwardly, the tongue portions 12 of each locking-section lying across the entrance to the hook of the opposite section. The thills are now placed upon the tongue portions, and the weight of the thills serves to depress the tongues between the bifurcations of the hook and throw the free ends of the locking-sections under the snap or catch, whereby said locking sections are automatically locked. To withdraw the thills the snaps or catches are raised and the upper portion of the locking-sections swung outwardly, they serving as levers whereby the tongue portions 12 act to elevate the thills from out of the hooks.

From the above construction it will be apparent that we provide a very simple automatically-locking thill-tug, which may be easily and conveniently applied to the harness and is very efficient in operation.

If desired, we may provide the inner sur-

faces of each of the sections or members with a coating or lining of rubber, leather, or other soft material adapted to conform to the exterior of the thills and serve as a means for snugly embracing the same. 21 designates the aforesaid lining, in this instance formed of rubber, though, as before stated, other materials may be substituted, or the lining may be omitted.

10 Having described our invention, what we claim is—

1. A thill-tug comprising the hook-section 1, having a substantially straight shank portion 4, provided with the strap-receiving loops, 15 the locking-section 2, hinged to the end of the hook of section 1 and extending inwardly over the hook, so as to close the entrance thereto, and having its inner end bent vertically upward, so as to lie flat against the vertical shank portion 4, and the automatically-locking catch 16, mounted on the shank portion and adapted to engage the tip of the locking-section to hold the latter in place, as set forth.

25 2. A thill-tug comprising the hook-section 1, the locking-section 2, and the automatically-locking catch 16, mounted on the hook-section

tion and adapted to be engaged by the tip of the locking-section to secure the latter in place, said catch comprising a pin 14, a coiled 30 spring mounted on the pin, and a flat plate pressed upon by the spring, the ends of which plate being bent inwardly and pivoted upon said pin, whereby the body of the plate conceals and protects the spring, as set forth. 35

3. The thill-tug comprising the hook-section 1, having the flanges 5 and the cross-bars 6 and 7, the latter provided with the stud 8, and below the hook portion provided with the horizontal keeper 9 and the vertical keeper 40 10, the locking-lever pivoted in the end of the hook-section, and a locking device located at the upper end of the hook and adapted to engage the free end of the lever, substantially as specified. 45

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

MICHAEL CLIFFORD.
HUGH LAWSON WARNER.

Witnesses:

W. L. HOWARD,
V. A. THOMSON.