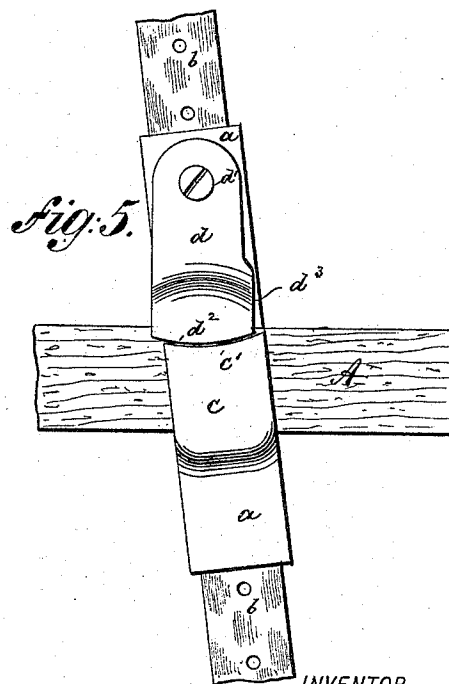
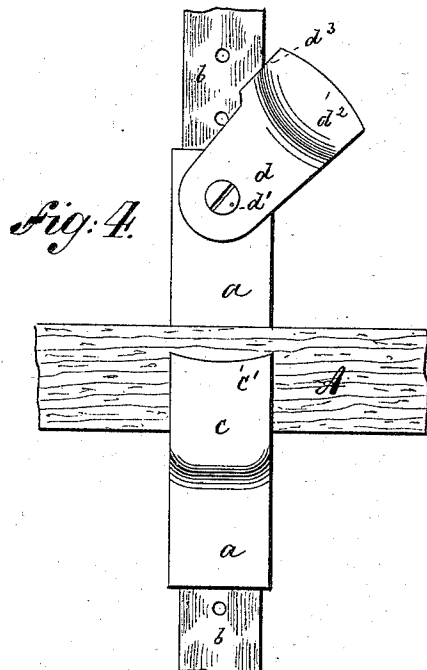
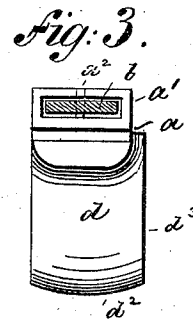
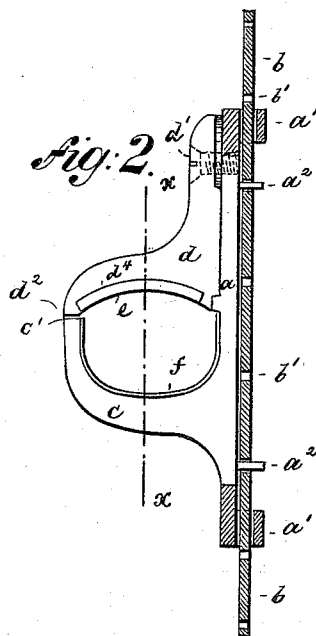
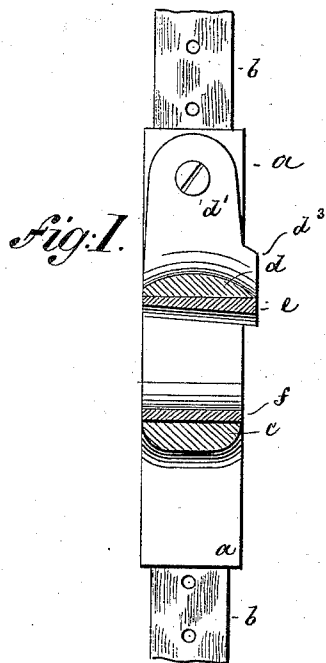


(No Model.)

M. POTTER.  
THILL TUG.

No. 493,837.

Patented Mar. 21, 1893.



WITNESSES:  
A. Schehl.  
Wm. Schulz.

INVENTOR  
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ATTORNEYS.

# UNITED STATES PATENT OFFICE.

MAYNES POTTER, OF ORANGE, NEW JERSEY.

## THILL-TUG.

SPECIFICATION forming part of Letters Patent No. 493,837, dated March 21, 1893.

Application filed June 30, 1892. Serial No. 438,495. (No model.)

*To all whom it may concern:*

Be it known that I, MAYNES POTTER, of Orange, Essex county, New Jersey, have invented an Improved Thill-Tug, of which the following is a specification.

This invention relates to a metallic thill tug so constructed that it can be swung open for the introduction of the thill and that under a strain to slip, it will firmly grasp the thill.

The invention consists in the various features of improvement more fully pointed out in the claims.

In the accompanying drawings: Figure 1 is a section on line  $x-x$ , Fig. 2. Fig. 2 is a side elevation partly in section of the thill tug; Fig. 3 a top view of the same. Figs. 4 and 5 are front views of the same, showing it open and closed.

The letter  $a$ , represents a bar which may be either straight or curved, and which is provided on one side with a pair of eyes  $a'$ ,  $a'$ , through which passes the strap  $b$ , by which the tug is secured to the harness. This strap is provided with a series of perforations  $b'$ , adapted to be engaged by rearwardly projecting pins  $a^2$ , on bar  $a$ . Thus the tug may be adjusted at different elevations as will be readily understood. The bar  $a$ , is provided with two jaws  $c$ ,  $d$ , of which the lower jaw  $c$ , is fixed and concaved for the thill while the upper jaw  $d$ , is movable. The lower jaw  $c$ , is made in one piece with the bar  $a$ , from which it projects outwardly and upwardly in the form of a hook. The upper edge of this hook is concave as at  $c'$ , Figs. 4 and 5. The upper jaw  $d$  is also made in the form of a hook and is pivoted to the bar  $a$ , by a pivot or screw  $d'$ . This jaw projects first downwardly to lie close against the bar  $a$ , and thence it projects outwardly, to engage with the free edge  $c'$ , of lower jaw  $c$  (Fig. 2). This free edge of the upper jaw  $d$ , is made convex as at  $d^2$ , to fit into the concavity of the lower jaw. The up-

per jaw  $d$ , is pivoted eccentrically being made wider at one side of the pivot than at the other, at its lower edge as indicated at  $d^3$ . Within the lower face of the jaw  $d$ , is formed a groove  $d^4$ , (Fig. 2) for the reception of a leather pad  $e$ . This pad is made of tapering form, being thicker at one side of the hook than at the other (Fig. 1). The lower hook  $c$ , is provided with a suitable leather or similar lining  $f$ . When the horse is backed up between the thills, the upper jaw  $d$ , is swung open (Fig. 4) until the horse has arrived at its proper position. Then the jaw is swung down to attach the horse to the wagon. In this way the troublesome slipping of the tugs along the thills is dispensed with. If there is a pull on the tug while driving, which would cause it to slip, the movable jaw will assume an inclined position in relation to the fixed jaw (Fig. 5). This will cause the tapering pad  $e$ , to bear firmly upon the thill  $A$ , and to thus hold the tug in place.

What I claim is—

1. A thill tug composed of a fixed jaw concaved for the thill and a laterally swinging movable jaw which has a tapering inner side for engagement with the thill, substantially as specified.

2. A thill tug composed of a bar having a lower fixed jaw, concaved for the thill an upper movable jaw and a tapering pad secured to the inner face of the movable jaw, substantially as specified.

3. The combination of bar  $a$ , provided with loops  $a'$ , pins  $a^2$ , and lower jaw  $c$ , having a concave upper edge with an eccentrically pivoted upper jaw  $d$ , having a convex lower edge and a groove  $d^4$ , and with a tapering pad  $e$ , within said groove, substantially as specified.

MAYNES POTTER.

Witnesses:

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