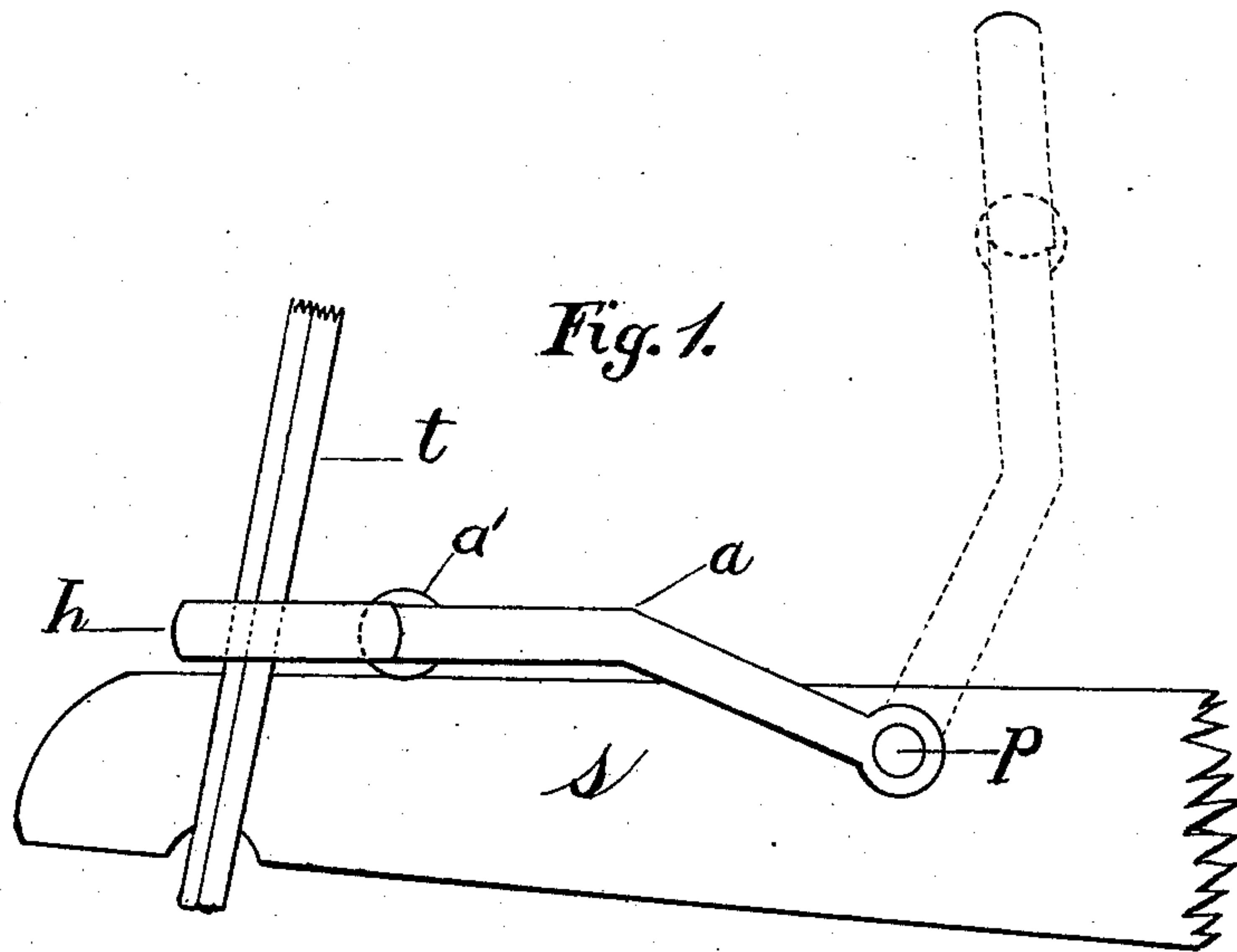
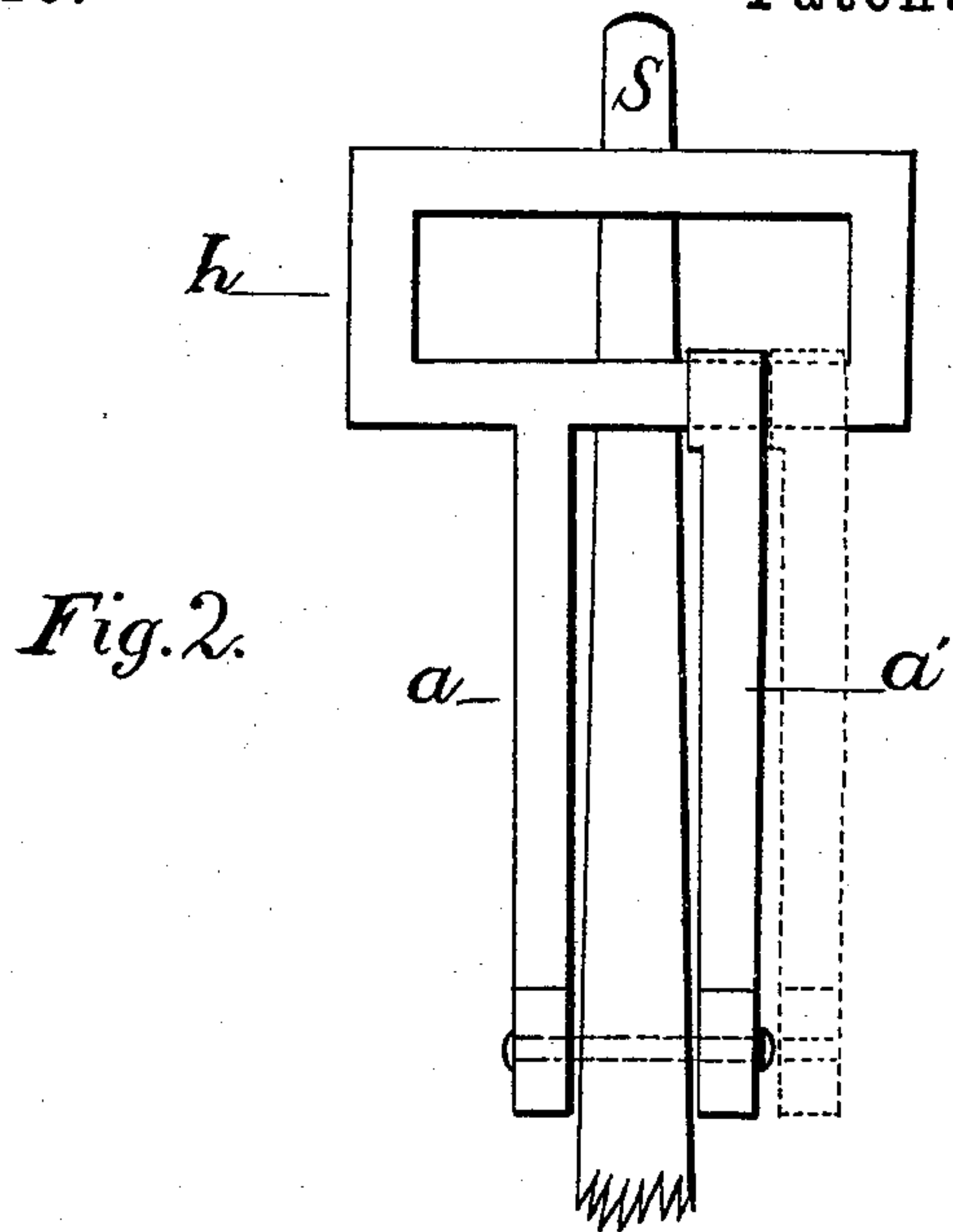


(No Model.)

E. A. BROWN.
TUG HOLDER.

No. 345,410.

Patented July 13, 1886.



WITNESSES.

Hattie Hurry
A. Miller

INVENTOR.

Ethan A. Brown
By C. F. Jacobs
Atty.

UNITED STATES PATENT OFFICE.

ETHAN A. BROWN, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF
TO WILLIAM MCGINNIS, OF SAME PLACE.

TUG-HOLDER.

SPECIFICATION forming part of Letters Patent No. 345,410, dated July 13, 1886.

Application filed May 5, 1886. Serial No. 201,248. (No model.)

To all whom it may concern:

Be it known that I, ETHAN A. BROWN, a resident of Indianapolis, Indiana, have made certain new and useful Improvements in Adjustable Tug-Holders, a description of which is set forth in the following specification, reference being made to the accompanying drawings, in the several figures of which like letters represent like parts.

My invention consists in a new form of device for holding tugs or traces upon the ends of single-trees and preventing them from slipping off, and will be understood from the following description.

In the drawings, Figure 1 represents a side view of one end of a single-tree, with the trace slipped over the end in the usual manner and through the holder. The dotted lines indicate the position of holder when thrown up. Fig. 2 is a front view of the holder itself, showing the fixed and also the adjustable arm, the dotted lines indicating the position the arm takes when slipped along the rod of the holder in order to admit a wider single-tree.

In detail, *s* represents the single-tree, and *t* the trace slipped over the end thereof in the usual manner.

h represents the holder, which is rectangular in form, having an opening in the center of the same shape, through which the trace passes, as shown in Fig. 1. This holder is pivoted at *p* to the side of the single-tree, and is provided with two arms, *a a'*, one of which, *a'*, is movable along the lower rod or part of the holder, being hinged thereon, the other one being rigidly connected with the holder itself. The object of having the arm *a'* loosely connected with the holder, is to provide for different widths of single-trees.

When in position for use, the single-tree passes between the fixed and loose arm of the holder, and a bolt or pivot, *p*, passes through both these arms and through the single-tree, and is secured on the outer side either by a

nut working on the threaded end of the bolt 45 or by riveting or clinching the end of the bolt down upon the arm, and in the latter case a little opening is left in the side of the arm to receive the upturned end of the bolt. These arms are preferably made in the shape shown 50 in Fig. 1, so that the pivot *p* may be at a sufficient distance below the edge of the single-tree to prevent weakening the wood, and yet allow the holder to lie flat upon the side. Instead of having an elbow in the arm it might 55 be made circular; but the elbow is, perhaps, a little preferable.

I am aware that trace-holders provided with guides to receive the strap are not new, and do not broadly claim the same as my invention; 60 but—

What I do claim as my invention, and desire to secure by Letters Patent, is the following:

1. The trace-holder *h*, having the central opening to admit the trace, and provided with 65 the arm *a*, rigidly connected with the holder, and the movable arm *a'*, loosely connected to the lower bar of the holder, substantially as described.

2. The trace-holder *h*, provided with an opening 70 to allow the trace to pass through, provided with the fixed arm *a*, and having the adjustable arm *a'* hinged to the bottom of the holder, in combination with a single-tree, *s*, and means for uniting the holder to the single- 75 tree, substantially as described.

3. The trace-holder *h*, pivoted at one end to the single-tree, having a central opening to admit the trace, and provided with angular arms, one of which, *a*, is fixed and the other, 80 *a'*, is movable and loosely connected with the holder, substantially as described.

In witness whereof I have hereunto set my hand this 24th day of April, 1886.

ETHAN A. BROWN.

Witnesses:

C. P. JACOBS,
HATTIE MURRY.