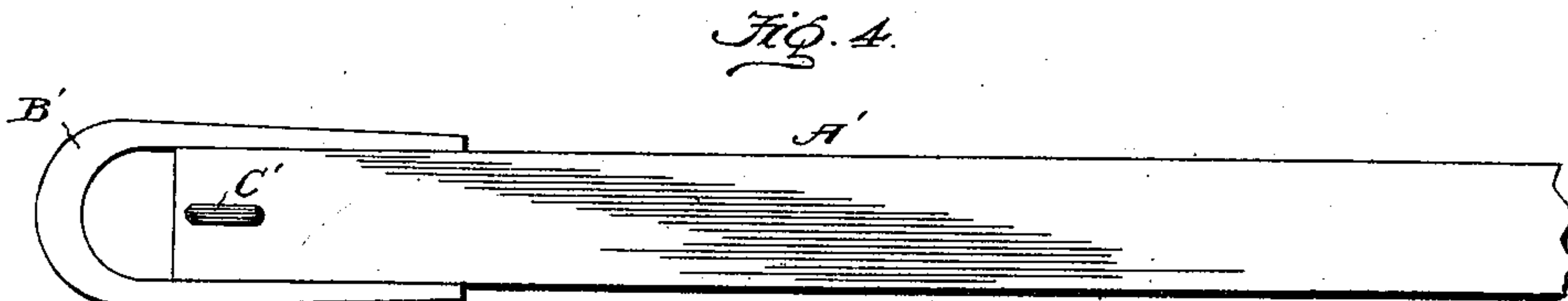
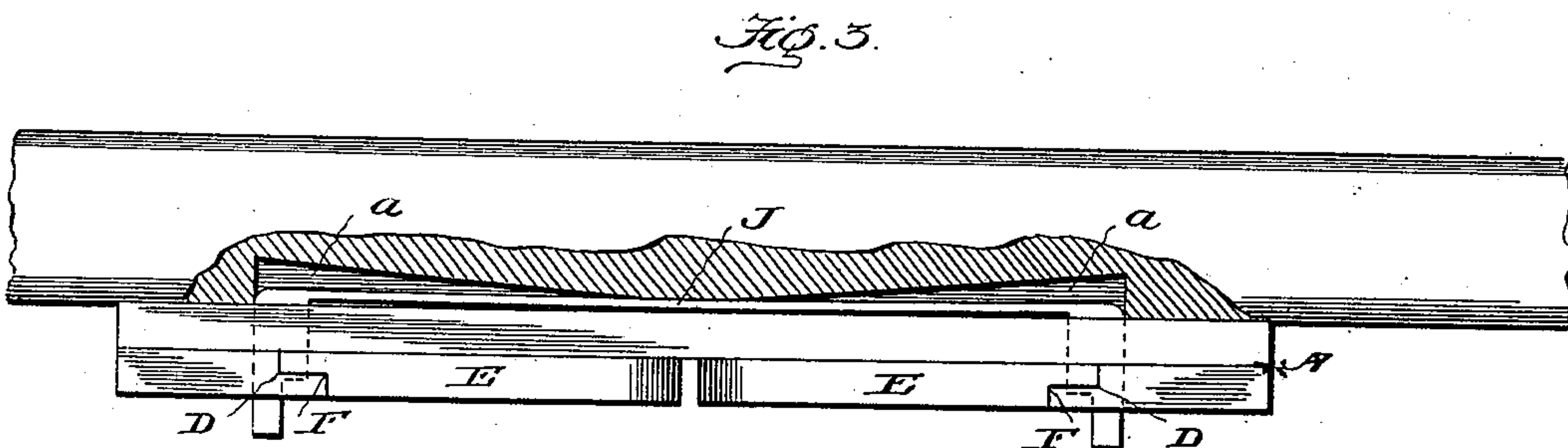
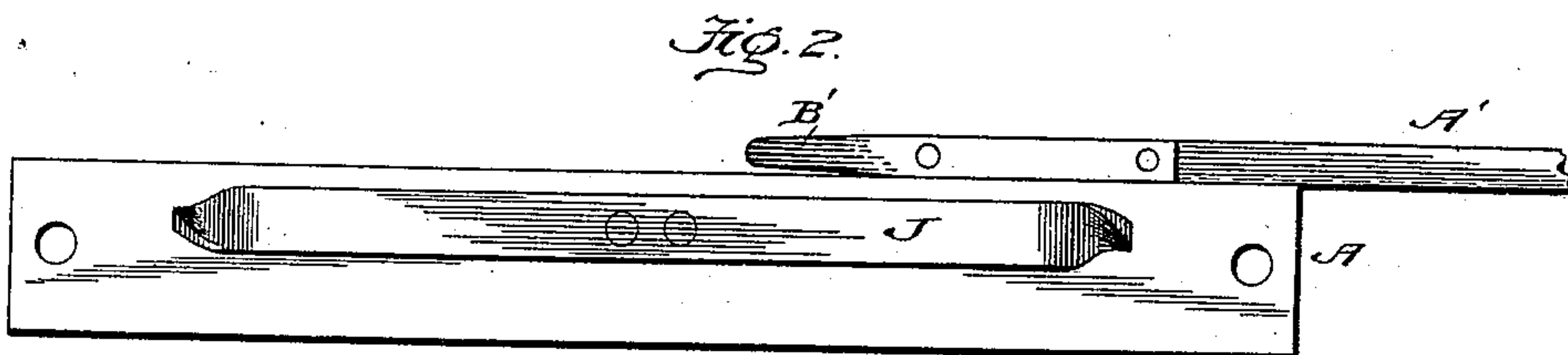
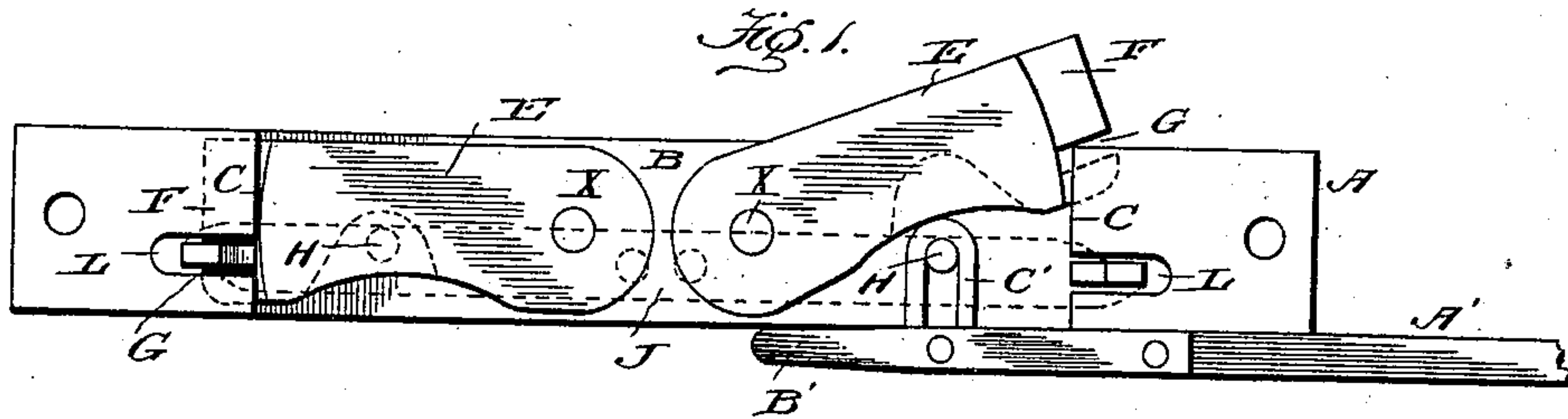


(No Model.)

W. S. ENDSLOW.  
HITCHING OR UNHITCHING DEVICE.

No. 602,313.

Patented Apr. 12, 1898.



Witnesses:

*Wm. C. Ashiee*  
*E. M. Threshed*

*William S. Endslow*  
— Inventor

By *Edw. M. D. S.*  
— Att'y.

# UNITED STATES PATENT OFFICE.

WILLIAM SAMUEL ENDSLOW, OF JACKSON, PENNSYLVANIA, ASSIGNOR TO  
ADDIE S. ENDSLOW, OF BLAIN, PENNSYLVANIA.

## HITCHING OR UNHITCHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 602,313, dated April 12, 1898.

Application filed July 29, 1897. Serial No. 646,400. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM SAMUEL ENDSLOW, a citizen of the United States, residing in Jackson township, in the county of Perry and State of Pennsylvania, have invented certain new and useful Improvements in Hitching or Unhitching Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention consists of a hitching and unhitching device to be secured to the under side of the shafts or thills of a vehicle and which when used in connection with a short tug or trace avoids the use of the customary long trace and single or double tree.

The object of the present invention is to facilitate the operation of hitching and unhitching, since but a single movement accomplishes this result, and by the use of the invention the harness is readily adjusted to any sized animal, and when once hitched needs no further change, and the pull is in a direct line, and in backing the pressure is overcome and all shock prevented.

I will now proceed to describe the invention in such full, clear, and exact terms that any person familiar with the art may make, construct, and use the same.

Referring to the drawings forming a part of this specification, and on which like letters of reference indicate corresponding parts in the different views, Figure 1 is a bottom plan view of the device with the short tug or trace attached and the latches partly open in condition for releasing the animal. Fig. 2 is a top plan view of the device with the tug or trace in position as when in use and showing the springs for securing and releasing the latches. Fig. 3 is a side elevation of the device secured to the shaft or thill and partly broken away to show the slight recesses on the under side of the shaft to allow of the upward movement of the spring or springs to release the latch, and Fig. 4 is a plan view of the short tug or trace.

A is the body portion of the device, which is rectangular in form or substantially of the

configuration of the shaft or thill to which it is to be applied. It is recessed or cut away on its under side, as at B, Fig. 1, leaving shoulders C C at each end. The parts C C at their inner ends, adjacent to the recessed portion B, are undercut, as shown at D D, for a purpose which will be presently explained.

Two latches E E are pivoted to the recessed portion B, and these latches are adapted to swing laterally for engaging or disengaging the tug or trace. The ends of the latches are rabbeted, as at F F, to fit and move freely into and out of the undercut parts D D. The ends of the latches are notched, as shown at G, to engage the bent ends of the spring to secure them in position and hold the tug or trace from being accidentally released. The latches are pivoted at X, and they are provided on their undersides with curved grooves or recesses, so that they will swing freely over the studs which engage the loops on the ends of the tug or trace, as will be now explained.

H H are studs or lugs on the face of the recess B, a suitable distance from the ends of the latches, practically about midway of their length, and these studs or lugs are for engaging the loop on the end of the tug or trace.

A spring J is secured to the top of the body A, near its center, to allow of the ends of said spring to be resilient. I have shown the spring J, Fig. 2, made of one piece with two resilient arms; but it is evident that it might just as well be made of two pieces of elastic material as of one. The ends of the spring J are bent at right angles, and these angular ends are passed through slots or apertures L in the body A and project below the lower surface of said body portion, so that they may be easily reached to attach or detach the tug or trace. The ends are preferably cut away to correspond with the cut-away or rabbeted ends of the latches E E.

The under sides of the shafts or thills are slightly recessed to allow of the operation of the springs in an upward direction in hitching or unhitching, as shown at a, Fig. 3.

Fig. 4 represents the short trace or tug A'. It is provided at its rear end with a metallic



loop or plate B', in the same plane with the strap, and is properly secured to the latter so as to leave a space between the end of the strap and the loop or an eye in a plate, if one  
 5 be used, in which to secure the back-strap. A small loop C' is secured, by means of a bolt or otherwise, near the rear end of the tug or trace, so as to project laterally therefrom, and the trace or tug is secured to or released from  
 10 the studs or lugs H H in hitching or unhitching through the medium of this loop C. Other means besides the studs and loops for securing the trace or tug will readily suggest themselves and may be adopted. For example, the  
 15 connecting means may be reversed—that is to say, a stud or analogous device may be used on the trace and the loop connected to the body A.

I have shown two latches and a double spring  
 20 and finger-pieces for operating them, and I prefer this form of the device, as such a structure provides adjustment for a larger or smaller animal; but it is clear that for the purpose of attaching and releasing the animal to  
 25 the vehicle a single spring and latch would be just as effective, as no adjustment would be required. The ends of the latches where they engage with the springs may be rounded, if desired, and the spring formed so as to en-  
 30 gage therewith in one of its notches by simply forcing the latch against it. In other words, if thus formed it would not be necessary to press against the end of the spring to fasten the trace or tug, but it would be to re-  
 35 lease it.

The device is capable of use on either shaft or thill by simply turning it end for end.

The operations of the device are as follows, viz: It may be secured to any vehicle, it only  
 40 being necessary to form the shallow recesses described on the under side of the shaft for the play of the springs. The short tug or trace is secured to the hames or breast-strap in any well-known manner and actually be-  
 45 comes a part of the harness. The spring is pressed upwardly and the latch turned laterally, and the small loop on the trace is engaged with the lug or stud on the bottom of the box or casing and the animal is hitched. To un-  
 50 hitch, the operation is substantially the same, the only difference being that the loop on the trace or tug is detached from the stud instead of being secured thereto. For a large animal the trace or tug is connected to the forward  
 55 stud or lug and for a smaller animal to the rear one. The back-strap is secured to the large loop on the end of the trace or tug.

The advantages of the invention will be apparent. The animal once hitched and the de-  
 60 vice adjusted the adjustment always remains the same. There is no possibility of hitching shorter one time and longer the next, as there are no buckles or other means to take up or lengthen the straps. The animal is quickly  
 65 and easily hitched and unhitched by any per-

son. The device is very secure and safe when the animal is hitched. The draft is direct and gives more ease and comfort to the horse than in the usual harness.

Minor changes within the scope of the in-  
 70 vention may be made without departing from the spirit or sacrificing any of the advantages thereof.

Having thus fully described the invention, what I claim as new, and desire to secure by  
 75 Letters Patent, is—

1. A hitching and unhitching device adapted to be secured to the shaft or thill of a vehicle and comprising a body portion or casing  
 80 having a recessed under surface, a stud or lug on said recessed portion, a latch pivoted in the recess and having a notched or slotted end, and a spring for engaging with said notch thus locking the latch when closed, substantially  
 85 as described.

2. A hitching and unhitching device adapted to be secured to the shaft or thill of a vehicle, comprising a body portion or casing  
 90 having a recessed under surface, undercut shoulders at each end thereof, studs or lugs on said recessed surface, latches pivoted thereto and having notched and rabbeted ends constructed to fit under said shoulders, and  
 95 springs for engaging and releasing the shoulders, substantially as and for the purposes de-

scribed.

3. A hitching and unhitching device adapted to be secured to the shaft or thill of a vehicle, comprising a body portion or casing  
 100 having undercut shoulders at each end thereof, studs or lugs on said recessed surface, latches pivoted thereto, and adapted to swing laterally and formed with notches and rabbeted ends to fit under said shoulders and  
 105 springs, with finger-pieces for engaging and releasing the latter, substantially as and for the purposes described.

4. A hitching and unhitching device adapted to be secured to the thill or shaft of a vehicle, comprising a body portion or casing  
 110 having a recessed under surface, studs or lugs depending therefrom, swinging latches pivoted thereto, and a spring on top of said box or casing having its ends bent and passed  
 115 through vertical slots in the body or casing forming finger-pieces for securing and releasing the latches, substantially as and for the purposes described.

5. A hitching and unhitching device adapted to be secured to the thill or shaft of a vehicle comprising a body portion or casing  
 120 having a recessed under surface, studs or lugs depending therefrom, swinging latches pivoted thereto and a spring on the top of said box or casing having its ends bent and passed  
 125 through vertical slots in the body or casing, in combination with a tug or trace having a laterally-projecting loop, substantially as and for the purposes described.

6. A hitching and unhitching device adapt- 130



ed to be secured to the thill or shaft of a vehicle comprising a body portion or casing having a recessed under surface, studs or lugs depending therefrom, swinging latches pivoted thereto, and a spring on the top of said box or casing having its end bent and passed through vertical slots in the body or casing, in combination with a tug or trace having a laterally-projecting loop, and a loop in the

plane of the trace for the back-strap, substantially as and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM SAMUEL ENDSLOW.

Witnesses:

S. W. BIXLER,  
G. W. SMITH.