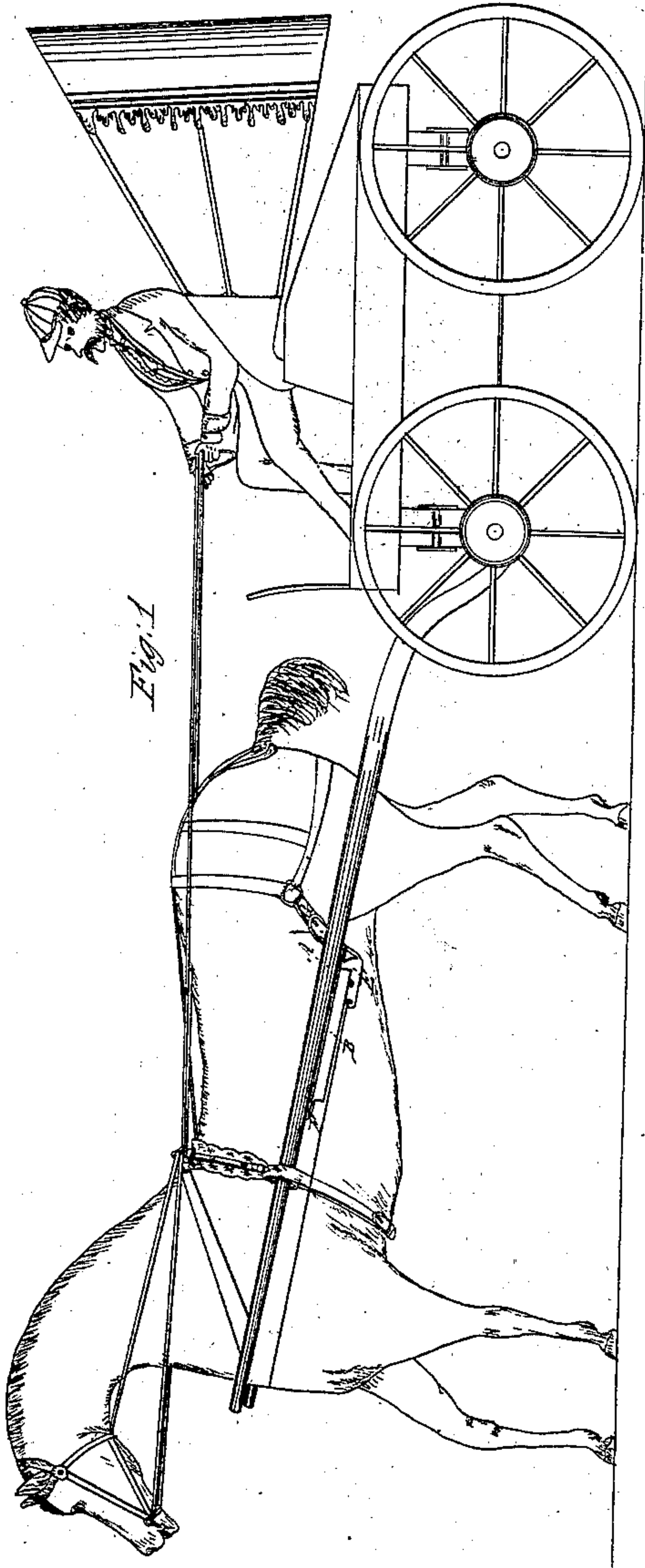


*O. V. Flora,*

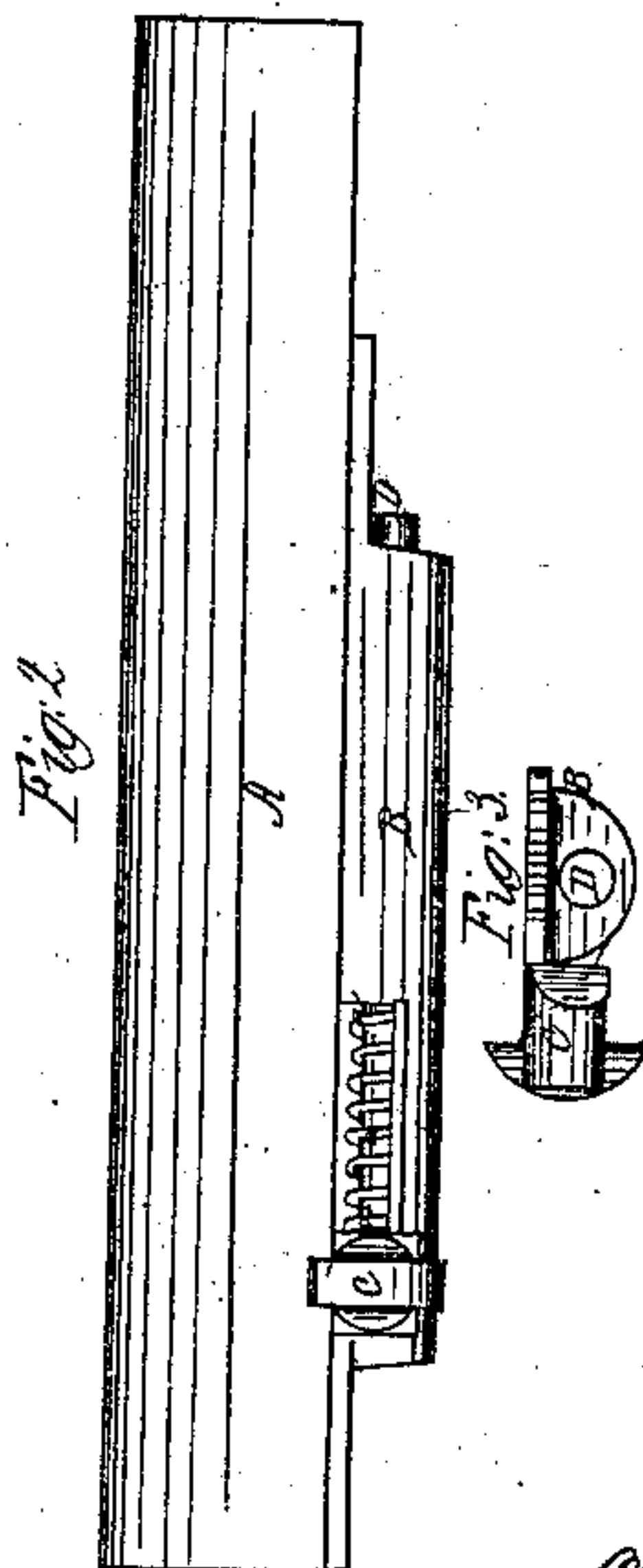
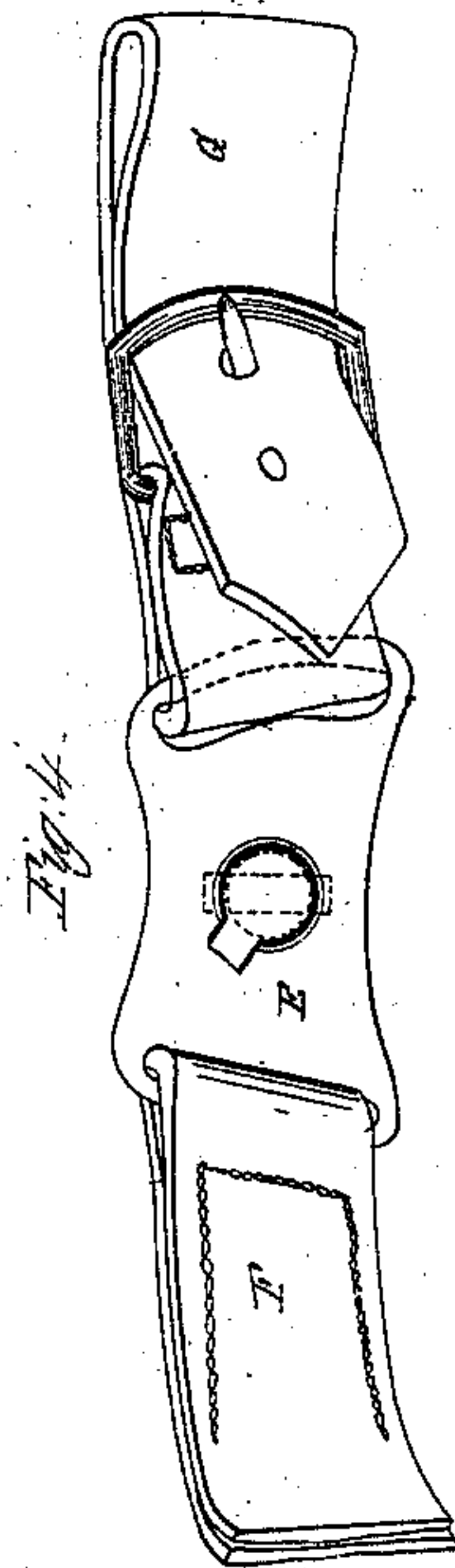
*Harness,*

*N<sup>o</sup> 79,745.*

*Patented July 7, 1868.*



*Witnesses:*  
*Henry C. Smith Jr.*  
*Jas. L. Bogle*



*Inventor:*  
*Orlando V. Flora*

# United States Patent Office.

ORLANDO V. FLORA, OF MADISON, INDIANA, ASSIGNOR TO HIMSELF, J. E. WITWER, AND J. S. BOYLE.

*Letters Patent No. 79,745, dated July 7, 1868; antedated June 27, 1868.*

## IMPROVEMENT IN SINGLE HARNESS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, ORLANDO V. FLORA, of Madison, in the county of Jefferson, and State of Indiana, have invented new and useful Improvements in Single Harness; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification.

This invention relates to a new mode of attaching single harness to the thills of a vehicle, and releasing it therefrom in a rapid, simple, and effective manner; also, making the attachment to the thills at or near the point where the hold-back strap is usually fastened, thus getting two bearings on the thills, viz, one at the fastenings, the other at the thill-bearers.

The accompanying drawings illustrate my invention.

Figure 1 is a side elevation of a horse and carriage, to show the place of attachment of the harness to the thills.

Figure 2 is a side elevation of the spring-draught bolt, attached in its proper place on the shaft, drawn full size.

Figure 3 is an end elevation of the same.

Figure 4 is an elevation of the draught-plate, with the straps attached, drawn full size.

A, in the drawings, is the shaft or thill.

B is the spring-case, secured to the under side of the thill by means of screws through the flanges on the ends of the case.

C is a bolt, with a T-shaped head, attached to one end of the rod D, and at a right angle thereto. The rod D passes through and has a bearing in the end of the case B. Around this rod is coiled a strong spiral spring, *a a a*, one end of which abuts against the bolt C, and the other against the forward end of the case B.

The rod D has a movement in the direction of its length, this movement compressing the spring just so far as the length of the slot in the spring-case will admit, the bolt C acting as a stop, to prevent the spring being compressed too much.

The movement of the bolt C in the slot, and the operation of the coiled spring *a a a*, are intended to compensate for the alternate motion of the horse's shoulders when walking, and to prevent his being injured by sudden jars or jolts.

E, fig. 4, is a plate, of metal, with a slight lateral curvature. In the rear end of this plate is a curved slot, by which to attach the hold-back strap G, and in the forward end a straight one, by which to attach the draught-strap or trace F.

In the centre of the plate E is a circular opening, of sufficient diameter to admit the shank of the bolt C, (figs. 2 and 3,) easily. Branching from this circular opening is a rectangular one, which is somewhat broader and deeper than a single branch of the T-head of the bolt C. This opening projects forward at an angle of about forty-five degrees.

The dotted lines show the position of the bolt C, when the harness is attached to the thills of a vehicle.

The operation of my invention is as follows:

The draught-strap or trace F is secured to the forward end of the plate E, as shown, and the hold-back strap G to the rear end of the same; the other end of this strap passing through the breeching-ring, as shown in fig. 1, and properly adjusted by the buckle.

The rear slot in the plate E is curved, to admit of such vertical adjustment as may be desired.

The spring-draught bolt, (figs. 2 and 3,) is fastened securely to the under side of the thill at the proper point, by means of screws or other device, so that the bolt C projects inward toward the horse.

When it is desired to attach the horse to the vehicle, the thills are passed through the thill-bearers, the plate E is turned until the rectangular opening coincides with the head of the bolt C, the bolt is passed through and the plate turns back to its natural position, thus making a firm and reliable fastening.



A similar operation releases the harness from the vehicle.

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

1. So arranging the circular opening in the draught-plate E, with a notch, extending forward at an angle of about forty-five degrees, that the draught-bolt C may be passed through by rotating the plate vertically, and, when passed through, will form a fastening, for the purpose and in the manner as set forth.

2. Placing the draught-plate E at or near the point where the hold-back strap is usually fastened, so as to allow an elastic bearing at that point on the shaft, while the other bearing of the shaft is arranged in the usual manner, for the purposes as described.

ORLANDO V. FLORA.

Witnesses:

H. C. SAUXAY,

C. E. WALKER.