

(No Model.)

W. E. A. PIPHER.
HARNESS.

No. 523,778.

Patented July 31, 1894.

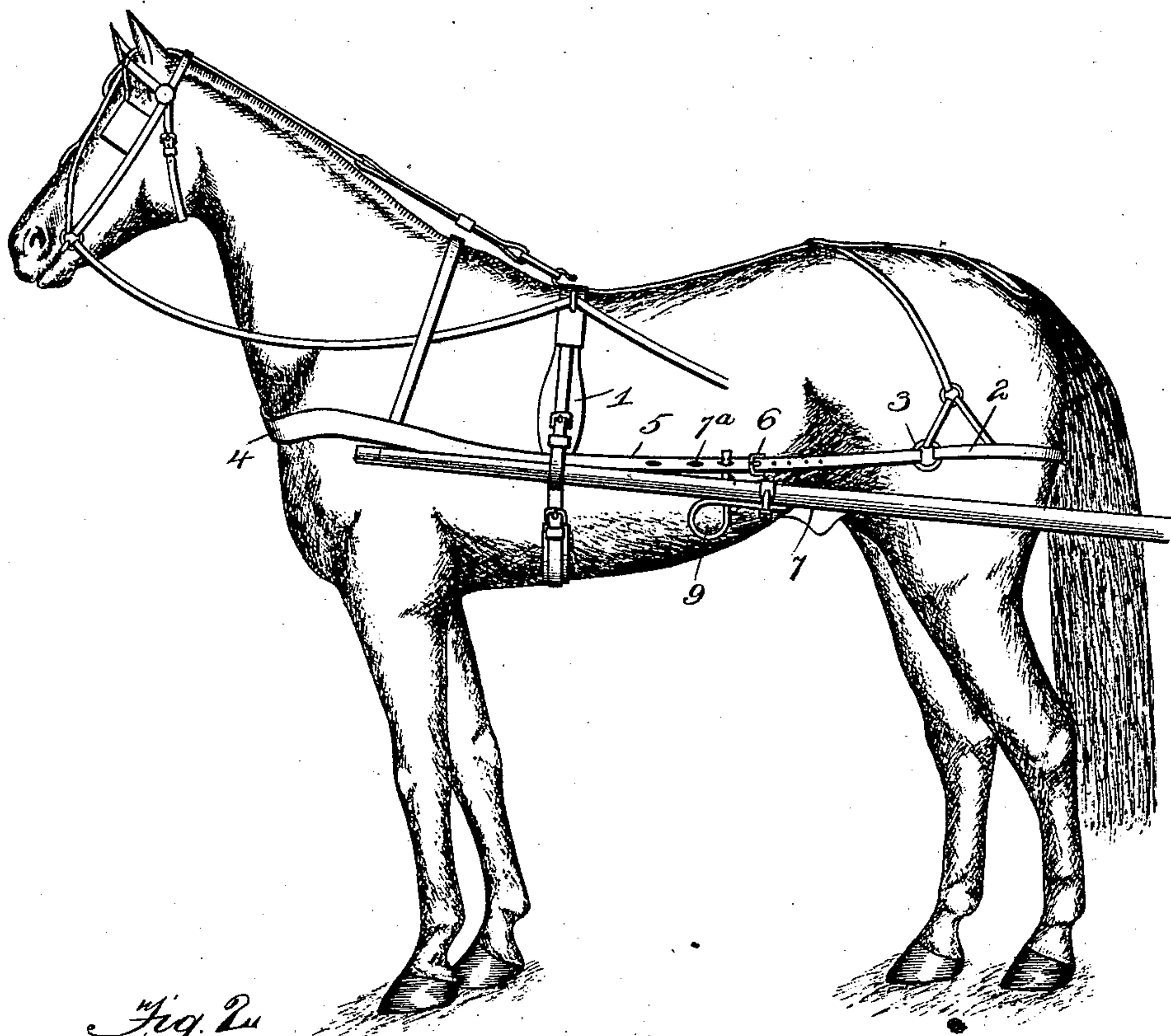
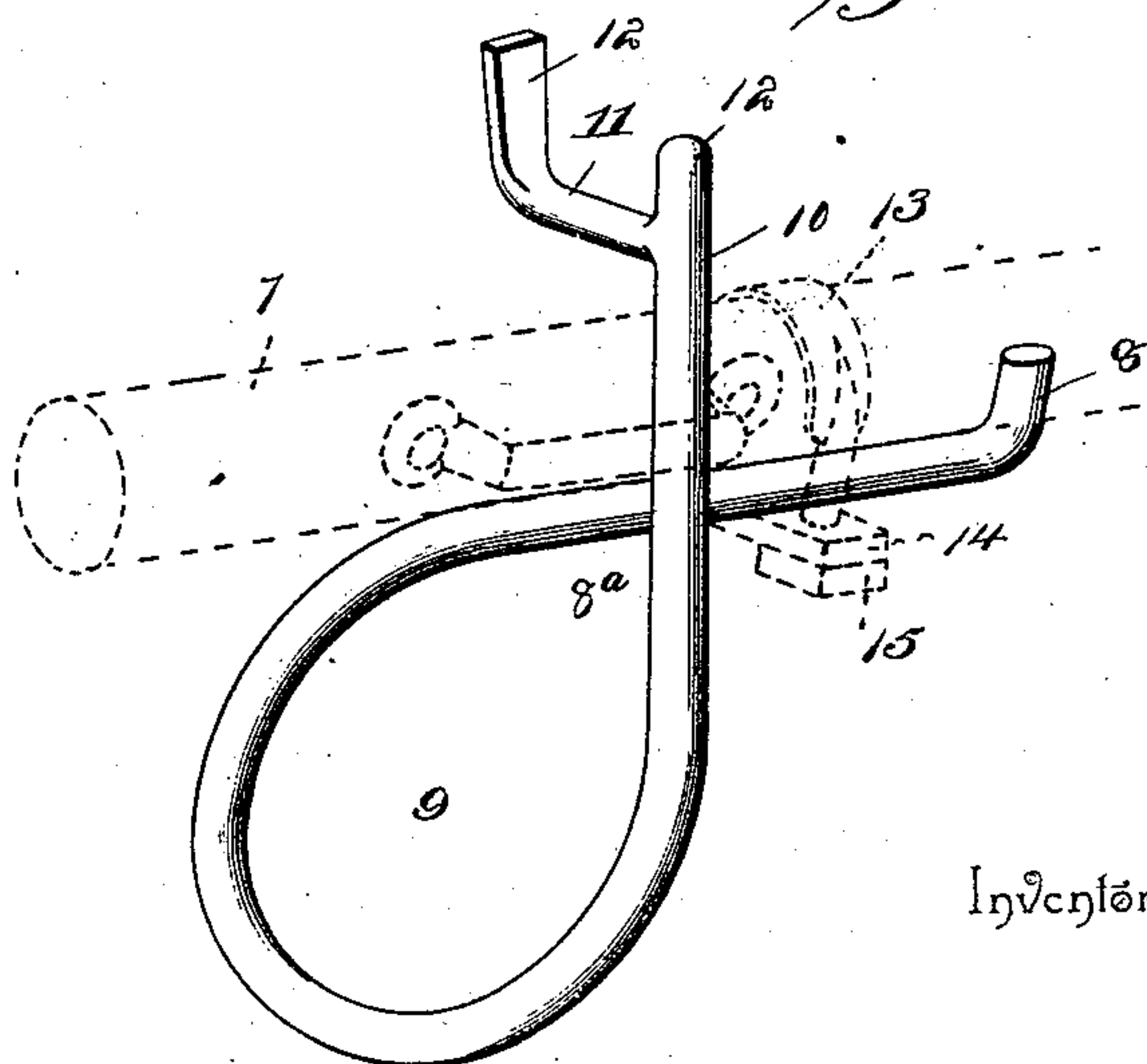
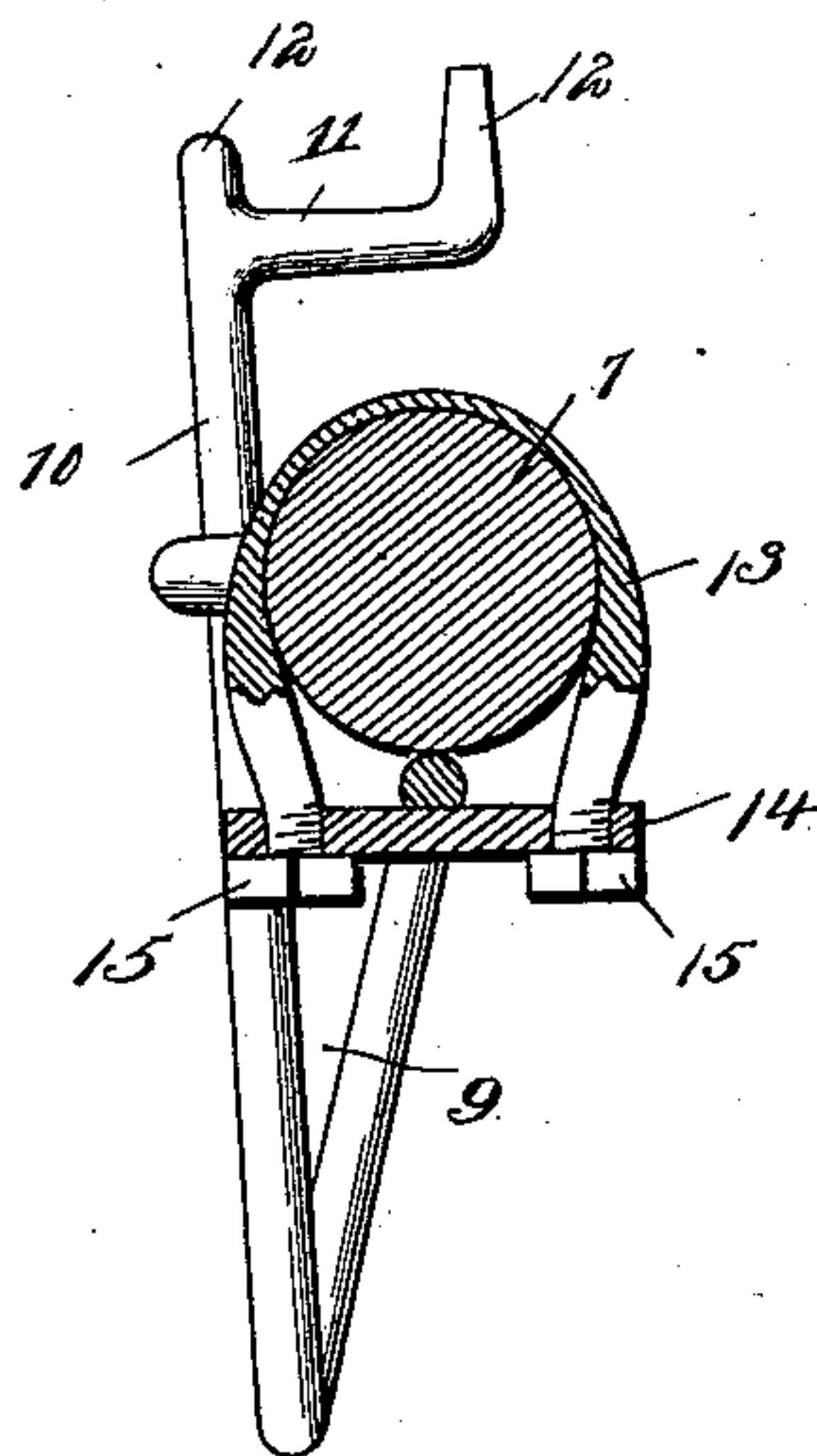


Fig. 2.

Fig. 1.

Fig. 3.



Inventor

Witnesses

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UNITED STATES PATENT OFFICE.

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HARNESS.

SPECIFICATION forming part of Letters Patent No. 523,778, dated July 31, 1894.

Application filed September 30, 1893. Serial No. 486,901. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. A. PIPHER, a citizen of the United States, residing at Parker's Landing, in the county of Armstrong and State of Pennsylvania, have invented a new and useful Harness, of which the following is a specification.

My invention relates to improvements in harness; the objects being to obviate the necessity of employing single-trees and traces, thereby lightening and reducing the expense of the harness and vehicle, and also the labor required to hitch and unhitch horses.

With these and other objects in view the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a general view of a horse, the same being hitched to a pair of thills in accordance with my invention. Fig. 2 is a transverse sectional view through one of the thills. Fig. 3 is a detail in perspective of the coupling-device adapted to be mounted upon a thill.

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

In the harness I employ the usual saddle 1, the breech-strap 2 which terminates in the usual ring 3; and the breast-strap 4. This breast-strap is provided at its opposite ends with a pair of short traces 5, which are provided with take-up buckles 6, and also with a series of perforations 7^a in advance thereof. The rear ends of the short traces in lieu of being connected to the usual single-tree are passed through the breeching-rings 3, are doubled upon themselves and secured to the buckles in an adjustable manner.

7 designates the thills, and to each is applied my improved coupler. The coupler is formed of a single piece of resilient wire-rod, whose rear end is let into the thill 7, for which purpose said rod is bent upwardly as at 8. The rod is then extended forward under the thill a short distance, as indicated at 8^a, and is then bent downward forming a spring-coil or loop 9, and slightly inward, and passing upward at the inner side of the thills in a straight-portion 10, terminates above said thill in a lateral, horizontally disposed arm 11, provided at its front and rear ends with shoulders 12. This construction of coupler

forms a horizontal rearwardly extending portion, which is arranged on the lower face of the thill, an approximately vertical portion which is arranged at the inner side of the thill and projects above the same, and a forwardly extending depending spring loop, which connects the vertical and horizontal portions yieldingly. A forward movement of the vertical portion tends to contract the spring loop, which is disposed to the greatest advantage for receiving the strain incident to its use.

A clip 13, embraces the thill, and has its terminals extending down below the same at opposite sides of the forward extended portion 8^a, which latter portion is embraced by a transverse clip-plate 14, perforated to receive the terminals of the clip, and below the same nuts 15, are applied to the clip, whereby the coupling-device is secured in position.

In operation the harness is placed upon the horse in the usual manner, the traces being connected to the breeching-rings in the manner described, after which one of the perforations 7^a of each trace is passed over the horizontal ends 11, and the traces rest between the stops or shoulders at the ends of said arms, whereby disengagement is prevented. It will be seen that either in holding back or going forward this draft-coupling will yield to the movements of the horse, thereby relieving his breast from sudden pulls and strains to which it would be subjected were the traces carried back to a rigidly connected single-tree. On the other hand, it will be further observed that the harness is lightened and cheapened, in that long traces are avoided and that time and labor may be saved in harnessing and unharnessing the animal.

I do not limit my invention to the precise details of construction herein shown and described, but hold that I may vary the same to any degree and extent within the knowledge of the skilled mechanic, as for instance I may provide one or more coils 9, and may apply the coupler to the upper instead of the under side of the thills; also, I may fasten the coupler on with screws instead of the clip.

Having described my invention, what I claim is—

1. The combination with a thill and a har-

ness having a short trace extending from the breast-strap to the breech-strap, of a coupler comprising a horizontal portion arranged longitudinally on the lower face of the thill and
5 secured thereto, intermediate of the ends thereof a vertically disposed portion located at the inner side of the thill adjacent to the front terminus of the horizontal portion and extending above the thill, and connected with
10 the short trace of the harness, and an integral spring loop connecting the horizontal and vertical portions and arranged below and in advance of the same, substantially as described.

15 2. The combination with a thill, and a harness having a short trace extending from the breast-strap to the breech strap, of the herein described coupler constructed of a single piece of resilient metal and comprising an approxi-
20 mately horizontal portion secured to the lower face of the thill, a vertically disposed portion located at the front terminus of the horizontal portion at the inner side thereof and provided at its top with a transverse arm 11 having
25 vertically disposed shoulders 12 at its ends, and engaging the short trace and the

integral spring loop connecting the vertical and horizontal portions and extending forward and downward therefrom, substantially as described.

3. The combination with a thill, of the herein described coupler, the same consisting of a metal rod having its rear end let into the thill and extending along the under side of the same as at 8^a, thence bent upon itself to
35 form the spring-coil 9 and extending upwardly at the inner side of the thill, and finally terminating in the transverse end 11 having opposite shoulders 12, and adapted to engage with the perforation of a trace, the
40 clip arranged upon the thill and having its opposite terminals embracing the rod, and the clip-plate arranged under the rod and receiving the terminals of the clip which are provided with nuts, substantially as specified. 45

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WM. E. A. PIPHER.

Witnesses:

CHARLEY C. MOORE,
B. F. FLEMING.