No. 699,099. Patented Apr. 29, 1902.

W. D. BUNN.

COMBINED TRACE HOLDER AND DETACHING MEANS.

(Application filed Jan. 9, 1902.)

(No Model.)

Fig. 1.

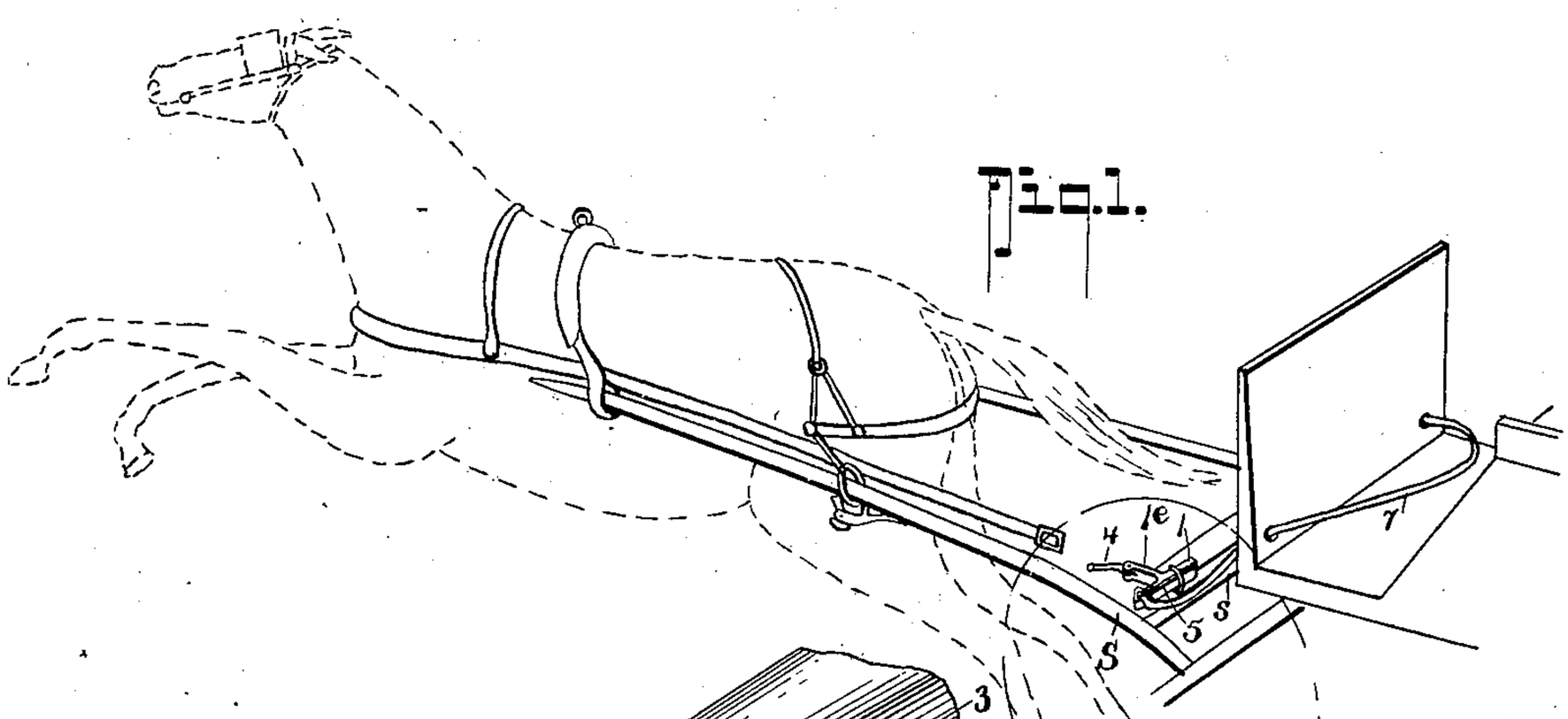

Fig. 2.

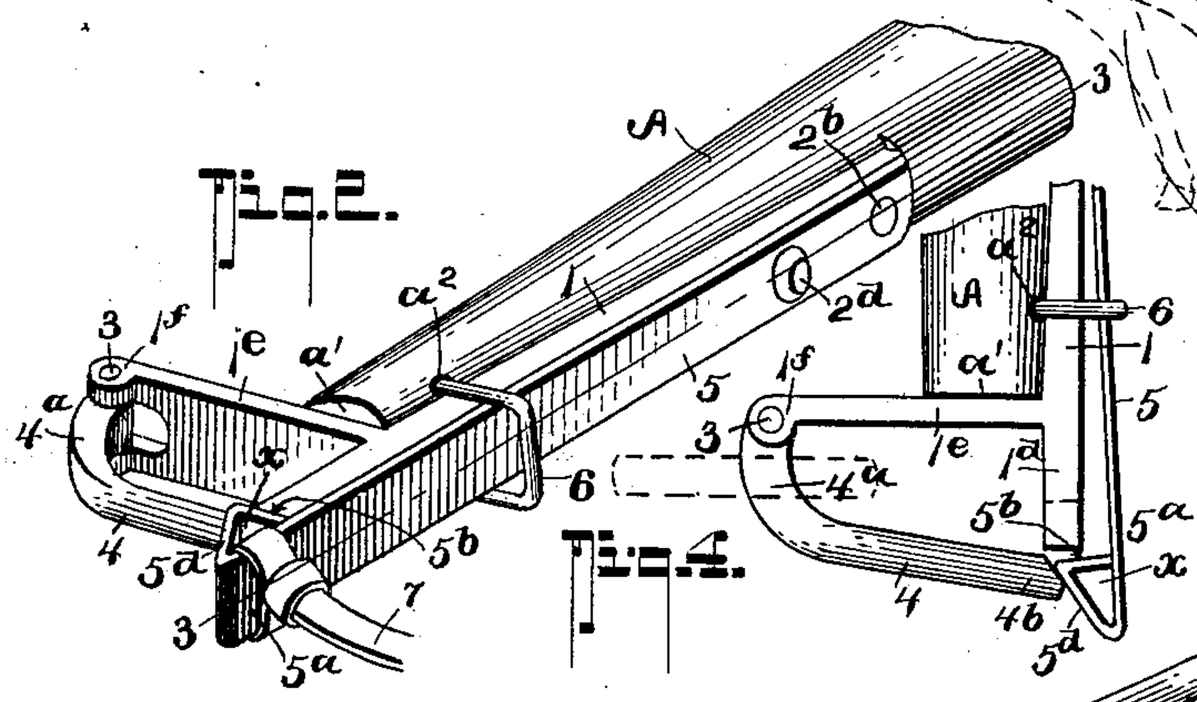

Fig. 4.

Fig. 3.

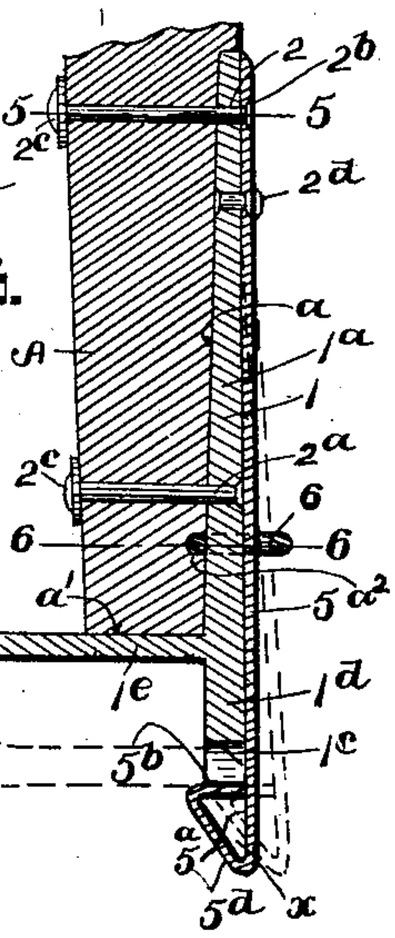

Fig. 5.

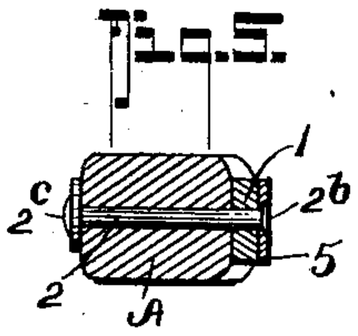

Fig. 6.

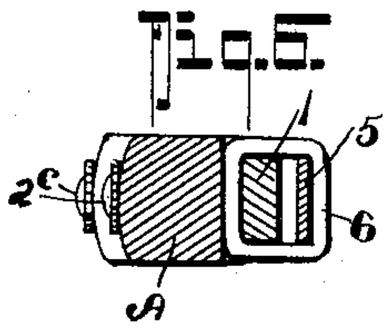

Fig. 7.

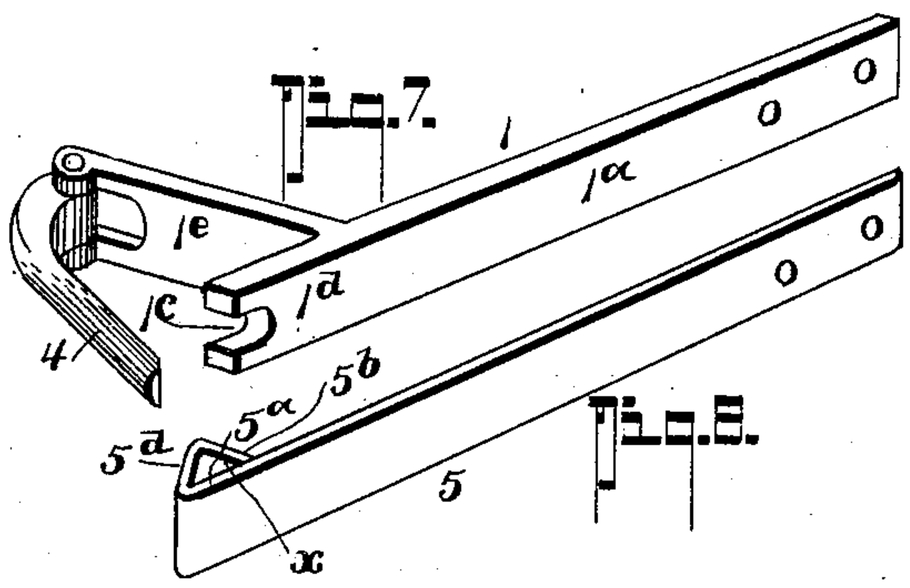

Fig. 8.

WITNESSES:

Guy D. Worthington

Louis Dieterich

INVENTOR

W. D. Bunn

BY

Fred G. Dieterich & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM DAVID BUNN, OF NEWBERN, TENNESSEE, ASSIGNOR OF ONE-HALF TO W. T. BUNN, OF NEWBERN, TENNESSEE.

COMBINED TRACE-HOLDER AND DETACHING MEANS.

SPECIFICATION forming part of Letters Patent No. 699,099, dated April 29, 1902.

Application filed January 9, 1902. Serial No. 88,998. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM DAVID BUNN, residing at Newbern, in the county of Dyer and State of Tennessee, have invented a new and Improved Combined Trace-Holder and Detaching Means, of which the following is a specification.

This invention relates to improvements in that class of horse-detaching appliances which include pivotally-held trace-holders and spring-clamps for sustaining the holders in their normal or locked position and in which suitable devices adapted to be conveniently operated by the occupant of the vehicle for moving the said clamps to a "released" position are provided, whereby the holders are freed to admit the traces pulling off as the animal leaves the shafts; and the said invention primarily has for its purpose to provide a trace-holding and detaching means of the character stated of a very simple and inexpensive nature, which can be easily manipulated and which will act positively and effectively for its intended purposes.

My invention in its more general nature comprehends a novel construction of a single metal plate having a body portion adapted to conveniently fit and be secured to the whiffletree, and especially constructed for coöperation with a simple type of clamp member, an integral forked head portion to receive the free end of the trace hook or holder, and an integral bracket projected at right angles from the body to form a pivotal member to receive the hinge end of the trace hook or holder.

In its more specific nature my invention consists in certain novel details of construction and peculiar combination of parts, all of which will hereinafter be fully explained, and particularly pointed out in the appended claim, reference being had to the accompanying drawings, in which—

Figure 1 is a view illustrating my invention as in use. Fig. 2 is a perspective view of one end of a whiffletree with my improved trace-holder and detaching devices applied. Fig. 3 is a horizontal section of the same, taken practically on the line 3 3 of Fig. 2, the trace-holder-hook clamp member being shown to a pulled-back position in dotted lines and the trace hook or holder likewise shown swung out. Fig. 4 is a plan view illustrating the automatic coaction of the trace-hook and clamp member during the movement of the said hook to a closed position. Figs. 5 and 6 are transverse sections on the lines 5 5 and 6 6 of Fig. 3, respectively. Fig. 7 is a detail view of the main or body member of my improved devices. Fig. 8 is a perspective view of the clamp or locking member.

In the accompanying drawings, in which like numerals and characters denote like parts in all the figures, A designates the whiffletree, which may be of ordinary construction and connected with the cross-bar *s* of the shafts S in the usual manner. The rear edge of the opposite ends of the whiffletree are flattened, as at *a*, to form suitable bearing-surfaces for the main plates or members 1 of my improved trace-holder and detacher devices. As the said devices at each end are constructed and act alike, a description of one set of said devices will suffice for both.

The main plate 1 of each device consists of a flat member 1^a, adapted to fit snugly against the bearing-surface *a* of the whiffletree A, to which it is made fast by the bolts 2 2^a, having countersunk heads 2^b and upset ends 2^c, as clearly shown in Figs. 5 and 6.

The outer part 1^d of the member 1^a projects beyond the whiffletree end and terminates in a forked end 1^c, the purpose of which will presently appear, and the said portion 1^d has an integral forwardly-extending right-angled extension 1^e, which in the practical application of the member 1 to the whiffletree lies snugly against the outer edge *a'* thereof, as clearly shown in Fig. 3, and the outer end of the extension terminates in apertured ears 1^f to receive the pintle 3, on which the trace-holder 4 is hinged to swing in a horizontal plane.

The member 4 comprises an outwardly-curved front or hinge end 4^a and a finger 4^b, adapted when the holder is in its closed position, as shown in Figs. 1 and 2, to seat in the forked outer end 1^c of the member 1.

5 designates a clamp or locking member, which consists of a stout flat spring-plate adapted to lie flatwise against the member 1, to which its inner end is made fast by the

bolt 2 and rivet 2^d. The outer end of the plate 5 projects over and beyond the forked part of the member 1 and is bent upon itself to form a right-angled detent or locking member 5^a for closing over the outer edge of the forked part of member 1 to secure the holder 4 from swinging out when adjusted to its closed position, and the said detent 5^a has a beveled surface 5^d, the inclination of which relative to the free end of the member 4 is such that as the member 4 is closed in it will engage said surface 5^d and automatically push the said end back, (see dotted lines, Fig. 3,) and thereby shifts the clamp 5 to permit the holder 4 to move to its closed position into engagement with forked end of the member 1, it being obvious that after passing the edge 5^b of the said detent the spring-clamp will resume its normal position for locking the holder 4 in place.

To limit the back pull on the spring-clamp member 5, a bail 6 is provided, which straddles the members 1 and 5 and has its inner edge seated in a notch a^2 in the rear edge of the whiffletree, as clearly shown in Fig. 3.

The beveled head of the member 5 is formed into an eye x for conveniently attaching the ends of the pull rope or strap 7, which extends up within convenient reach of the driver, as shown.

From the foregoing description, taken in connection with the accompanying drawings, it is thought the advantages and manner of operating my improved trace-holding and detaching devices will be readily understood.

I am aware that trace-holders and detaching means embodying pivotal trace hooks or holders and spring-plates for coöperating with the holders have heretofore been provided, and I broadly make no claim for such features.

My invention differentiates from what has heretofore been provided in this art, so far as I know, in the specific correlation of the member 1 with the whiffletree, the angle extension of the plate, its forked end, the special arrangement of the pivoted hook, and the peculiar construction of the spring-clamp 5.

Among the advantages of my invention is the ease in which the trace-hooks swing out when the clamps are pulled back and the manner in which the clamp-plates are automatically pressed back by reason of the holders or hooks engaging the beveled faces of the said plates. Furthermore, no ferrule is used and no special construction of the ends of the whiffletree is necessary further than flattening the rear edge to receive the member 1.

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

In combination with a whiffletree, a trace-holder and detaching device, consisting of the plate 1, adapted to be secured to the rear edge of the whiffletree; the projecting portion 1^d of said plate extending beyond the end of the whiffletree and terminating in a forked end; the integral, forwardly-extending member 1^e, engaging the end of the whiffletree and terminating in pivoted ears; the trace-holder 4, hinged to said ears and having its outer end provided with a beveled face; the locking member 5 suitably secured to the rear side of the plate 1, and having its outer end extending beyond the projecting member 1^d of the plate 1, and bent to form an eye to engage the pull-strap 7, one part of the bent portion extending at a right angle over the forked end of the member 1^d, and another part formed into a beveled face, adapted to coöperate with the beveled face of the trace-holder 4; the bail 6 seated in the rear edge of the whiffletree, straddling the members 1 and 5, all arranged as shown and for the purposes specified.

WILLIAM DAVID BUNN.

Witnesses:
W. W. GLASS,
O. J. RADFORD.