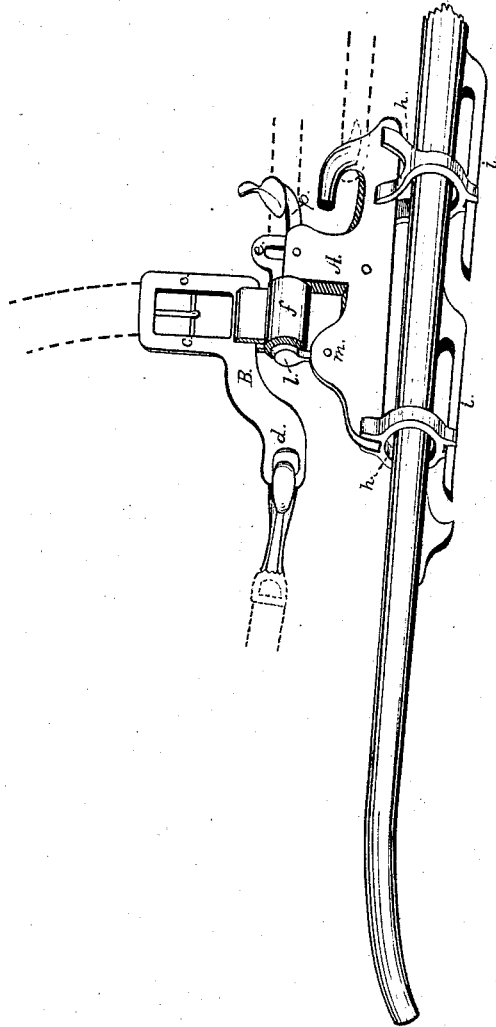


I. L. FALLIS.

APPARATUS FOR DETACHING HORSES FROM CARRIAGES.
No. 169,685. Patented Nov. 9, 1875.



Witnesses:

Albert Kern
E. Thompson

Inventor:

Isaac L. Fallis
by his Atty.
Chas. M. Peck

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Fig. 1.

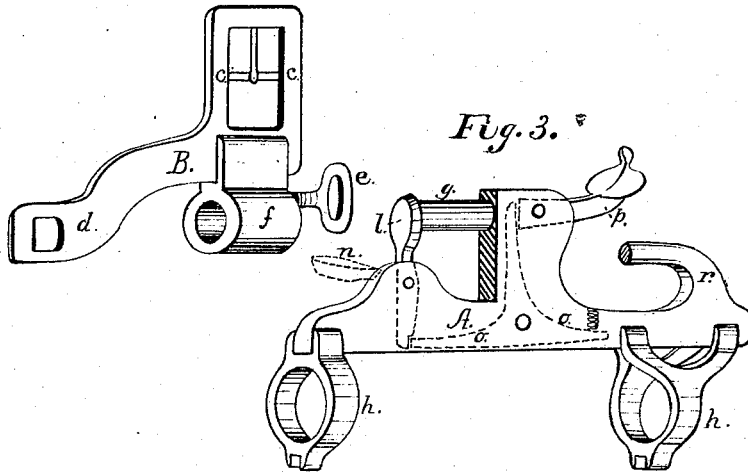


Fig. 2.

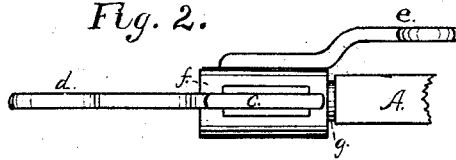
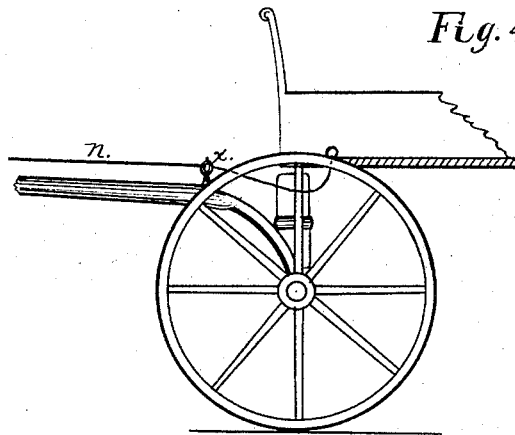


Fig. 4.



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UNITED STATES PATENT OFFICE.

ISAAC L. FALLIS, OF DAYTON, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT
TO FERDINAND STEPHAN, OF SAME PLACE.

IMPROVEMENT IN APPARATUS FOR DETACHING HORSES FROM CARRIAGES.

Specification forming part of Letters Patent No. 169,685, dated November 9, 1875; application filed
January 16, 1875.

To all whom it may concern:

Be it known that I, ISAAC L. FALLIS, of Dayton, State of Ohio, have invented a new and useful improvement in apparatus for the speedy attachment of a horse to a carriage, and the method of instantly releasing him at the option of the driver; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Plate 1 represents a side elevation of my apparatus attached to a broken section of a carriage-shaft. Plate 2 shows the various parts in detail, and will be referred to by the respective figures.

In the following description reference will be made to the equipment of but one side of the horse, and it will be understood that the opposite side is to be similarly equipped.

My invention has for its object the method of hitching a horse to a carriage in such a way that there shall be but two points of connection, which points shall be under the control of the driver, so that, in case of the horse taking fright and becoming unmanageable, the driver can instantly break the points of connection and allow the horse to leave the carriage. It also has in view the speedy attachment of the horse to the carriage.

My apparatus consists of two essential parts, the one, A, attached to the shaft, and the other, B, to which the harness is secured, attached to the part A, and capable of being detached from it at will. The part B, Figure 1, is an irregularly-shaped piece of metal, consisting of three buckles or rings, to which are fastened, respectively, the harness-saddle or girth-band to the buckle *c*, the tug-strap to the forwardly-projecting buckle *d*, and the backing-strap to the buckle *e*, which extends laterally in an opposite direction from the buckle *d*, and is bent, as seen in Fig. 2, so as not to interfere with or touch the part A. Thus it will be seen that all the parts of the harness, which ordinarily are fastened to the shafts in several places, are brought together, and are united by means of the part A. To the under side of the upright buckle *c* is a sleeve, *f*. By slipping same upon the stud *g*, Fig. 3,

forms the connection of the parts A and B, and, as will be seen hereafter, the only points of connection between the horse and the carriage. The part A, Fig. 3, occupies a position upon the shaft about its middle, where, by means of the slotted collars *h h*, it can slip upon the guide-stays *i i*, backward and forward, to a limited extent. At its forward end is a latch, *l*, pivoted at *m*, and capable of being depressed to the position shown by the dotted lines *n*, to allow the sleeve *f* to be slipped upon the stud *g* in making the connection between the horse and the carriage. When so slipped on the latch is to be raised, and will be fastened by a spring, represented by the dotted lines *o*. This spring is operated by the trigger *p*, which terminates in a knob or eyelet, for the suitable connection of a cord or wire. The circular face of the latch rests against the end of the stud *g*, and prevents the sleeve from slipping off when the horse is traveling. At the rear of the part A is the hook *r*, bent forward, as seen, for the purpose of retaining upon it the forward end of the trace, represented by the dotted lines. The other end of the trace is fastened to the whiffletree in the customary manner.

The operation of my invention may be described as follows: We will suppose the harness to be placed upon the horse in the usual manner. It will be noticed that the forward end of the trace—that is to say, the tug-strap—is fastened to the buckle *d*, the girth-band or harness-saddle to the buckle *c*, and the backing-strap to the buckle *e*. It will also be noticed that the part A is upon the carriage-shafts, and that the traces are fastened to the whiffletree and to the hooks *r*. Now, upon backing the horse into the shafts, and slipping the sleeves *f* upon the studs *g*, and springing the latches *l*, the connection between the horse and carriage is made complete.

It will be further noticed that, by the above-described method, the perfect freedom of movement allowed the horse in the ordinary method of harnessing is still retained in this my improvement, for the collars *h h* upon the part A serve the purpose of the ordinary leather loops in sustaining the weight of the shafts;

and, although the trace is separated by my apparatus, yet it is, in effect, as if it were not so separated, and has the same play backward and forward given it by the motion of the horse in traveling. The backing-strap is also secured to bear the necessary strain in backing. In other words, the mechanical relations between the horse and carriage are not interfered with by the application of my apparatus.

The other part of my invention, which relates to the mechanism for releasing the horse from the carriage by means of pulling the triggers *t*, can be accomplished in various ways—as, for instance, having a cord from each trigger passing to the hand of the driver, so that, by a slight pull, the latches may be instantaneously released, and, the sleeves being no longer held upon the studs, the horse will thus be detached from the carriage. Or, again, the cords may pass over pulleys at or near the single-tree, and be operated by means of an upright lever. The way that I would

suggest as best would be as illustrated in Fig. 4, where *n n* represent the cords attached to the triggers, and passing through the pulleys *x x*. A single cord, *y*, passes from them, and through the bottom of the carriage, where it is attached to a button or ring, by pulling which both triggers would be acted on at the same instant, and the horse be freed from the carriage.

Having fully described my invention, I claim and desire to secure by Letters Patent—

1. In apparatus for detaching horses from vehicles, the part A, consisting of the collars *h h*, latch *l*, trigger *p*, bent hook *r*, and stud *g*.

2. In combination with the tug or part A, as described, the part B, composed of the buckles or rings *c, d*, and *e*, and sleeve *f*, substantially as and for the purpose specified.

ISAAC L. FALLIS.

Witnesses:

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CHAS. M. PECK.