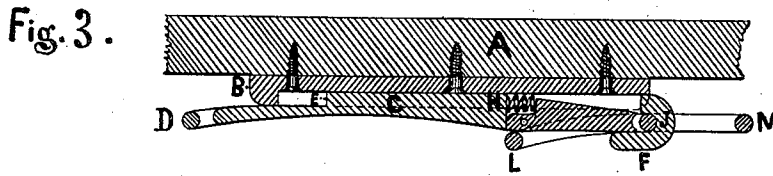
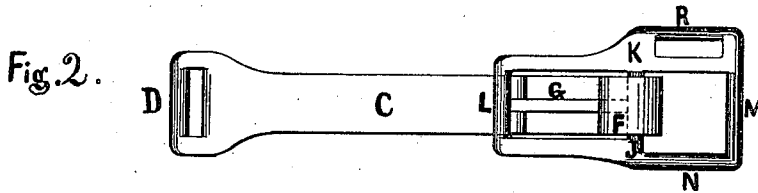
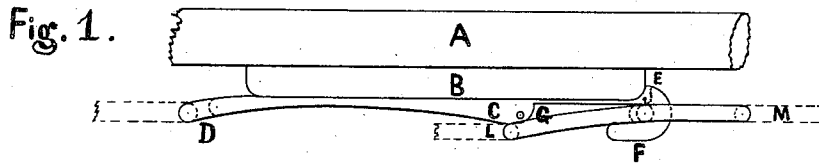


D. E. OWEN.
HORSE-DETACHER.

No. 170,389.

Patented Nov. 23, 1875.



WITNESSES.

A. S. Talbot
Edward Edmunds

INVENTOR.

Daniel E. Owen.
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Atty

UNITED STATES PATENT OFFICE.

DANIEL E. OWEN, OF CAMBRIDGE, MASSACHUSETTS, ASSIGNOR OF ONE-HALF HIS RIGHT TO DANIEL E. FRASIER AND ALPHEUS K. SMITH, OF SAME PLACE.

IMPROVEMENT IN HORSE-DETACHERS.

Specification forming part of Letters Patent No. **170,389**, dated November 23, 1875; application filed March 19, 1875.

To all whom it may concern:

Be it known that I, DANIEL E. OWEN, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Automatic Trace-Fasteners, of which the following is a specification:

The object of my invention is to provide a cheap, simple, and convenient means for instantly connecting the traces with the vehicle and harness. Being previously attached to the horse, the same are connected together for use instantaneously, so as to permit of the greatest dispatch in hitching a horse to a hose-carriage in case of an alarm given of fire; and it consists of a pair of metal plates, to be firmly secured to the inside of the shafts of the hose-carriage or vehicle, such plates being provided with dovetailed grooves, extending lengthwise of the same, into which are fitted a dovetailed tenon, formed upon a metal draw-bar, provided with a loop, with which the front end of the trace is permanently connected, the rear end being connected to the whiffletree in like manner. This metal draw-bar is provided at its front end with a hook-lever and spring, forming a snap-hook, which connects with a suitable loop upon the harness. This loop connects the hames and breeching-straps, also the girth and saddle-straps, having an extra cross-bar, which engages with the hook upon the draw-bar, and can be instantly freed from the same by pressing down the front end of the hinged spring-lever.

It will be understood that a pair of these self-operating fastenings are used, one upon the inside of each shaft of the vehicle, the loops of which are constructed in pairs, or rights and lefts, for the purpose. The draw-bars, sliding freely upon the plates, allow the free movement of the traces when the horse steps, oscillating the whiffletree.

Figure 1 is a top-plan view of my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a longitudinal central section. Fig. 4 is a

transverse section, showing the dovetailed sliding groove and tenon.

A is the shaft of the vehicle, to which the dovetailed grooved plate B is secured by screw-bolts passing through the same. C is the sliding metal bar, provided with a dovetailed tenon or projection, E, and loop D, its opposite end being formed into a hook, F, and having a hinged lever, G, pivoted to the draw-bar by a pin passing the same, and operating in a slot, I, by means of a spiral spring, H, fitted into the slot, and having a bearing at the end of the said slot, and a projection upon the hinged end of the lever G, thus forcing the free end of the lever up against the under side of the hook F, as shown in Figs. 2 and 3. Now, if the cross-bar J of the loop K be pressed upon the free end of the lever G it will yield, so as to permit the said bar J to pass into the hook F beyond the end of the lever G; then the spiral spring H recoils, and forces the free end of the lever G back into its former position, which end forms a stop or guard to prevent the bar J of the loop K from being disconnected by accident. The loop K is provided with a loop, L, for connecting the breeching-strap; also, a loop, M, for the draft-strap, connecting with the hames; also, a loop for the girth N, and one for the pad or saddle strap R.

Having thus described my invention, what I claim is—

In combination with the shaft A of a vehicle, the grooved plate B, draw-bar C, provided with projection E, loop D, hook F, and slot I, hinged lever G, and spiral spring H, constructed to operate with the cross-bar J of the loop K, as described, so as to form an automatic trace-fastener, substantially in the manner as and for the purposes set forth.

DANIEL E. OWEN.

Witnesses:

SYLVENUS WALKER,
NATHANIEL L. OWEN.