

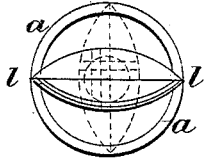
D. E. HOLMES.

Whiffletree.

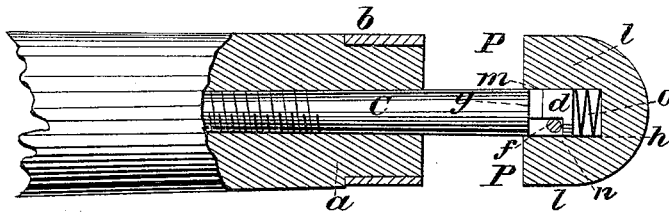
No. 50,585.

Patented Oct. 24, 1865.

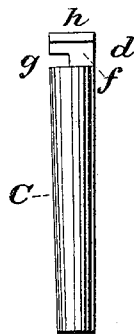
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:

*W. E. Dearn*

*F. W. Fitch*

Inventor:

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*By [Signature]*

*Att'y*

# UNITED STATES PATENT OFFICE.

D. E. HOLMES, OF HALIFAX, MASSACHUSETTS.

## IMPROVED TRACE-FASTENING.

Specification forming part of Letters Patent, No. 50,585, dated October 24, 1865.

*To all whom it may concern:*

Be it known that I, D. E. HOLMES, of Halifax, in the county of Plymouth and State of Massachusetts, have invented a new and Improved Trace-Fastening; 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.

The most common mode of securing harness-traces to the whiffletree of carriages, wagons, and other vehicles has been to cut a short slit at or near the inner ends of the traces and in the direction of their length, by which slits the trace is placed upon and over the ordinary fixed hook attached to the ends of the whiffletree, between which and the shoulders of the hook the trace is held upon the shaft or stock connecting the same, the hook-shoulders being in the same direction as that of the trace-slit. The disadvantages of this mode are many and evident to all familiar with the same, but among which may be here mentioned as the most prominent that it was not secure or reliable, the trace often becoming unfastened; that it was necessary to make the slit a little shorter than that of the hook, which in time, from frequently fastening and unfastening the traces, caused the slit to be torn or so increased in length that the traces would finally become useless; and, lastly, that it was oftentimes quite difficult, especially if the traces were made of stiff and thick leather or other material, to place them on or detach them from the hooks.

To avoid and remedy the above is the object of the present invention, and is satisfactorily accomplished thereby, it consisting in forming the shaft and its hook-shaped end, constituting the ordinary trace-fastenings heretofore used, made of the same form, or nearly so, in two separate and distinct parts or pieces, which are attracted together in such a manner that after the trace, by its slit, has been placed over the hook and upon its shaft or stock the hook can be sufficiently turned or revolved to bring it into a position at right angles, or nearly so, to the direction of the slit, where it is securely held until desired to unfasten the

trace, when it can be readily and easily revolved or turned back, so as to be in the same direction with that of the trace-slit, the trace then being removed therefrom as with the whiffletree-hooks arranged and constructed in the ordinary manner.

In accompanying plate of drawings my improvement is illustrated, Figure 1 being a view of one end of a whiffletree having my new trace-fastening hook applied thereto, and showing the hook in its two positions with regard to the trace-slit; Fig. 2, a top view of a portion of the whiffletree, showing its end in partial horizontal section; Fig. 3, a detail view of the stock or shaft of the trace-hook.

*a a* in the drawings represents a whiffletree of a wagon, carriage, or other vehicle, made of any of the ordinary styles and materials in each of the outer ends, *b*, of which is inserted by screwing, or in any other proper manner, a short shaft or rod, *c*, projecting a short distance beyond and from the same.

*d* is a right-angular slot formed at or near the outer ends of the rods and across, with their angle toward and at or near the center of the same. One side, *f*, of the slot is made a little wider than the other, *g*, it extending entirely across the rod, with its additional portion toward the outer end of the same, but leaving a lip, *h*.

*l* is the trace-hook, made of the ordinary form, with a socket, *m*, fitting loosely over the outer end of the rod *c*, on which it is secured by a rivet or pin, *n*, driven through it and across the wider portion *f* of the rod-slot, bearing against the lip *h* of the same, a spiral spring, *o*, in the socket, by acting against the end of the shaft, keeping the hook thrown out with its pin against the lip, as above explained, in which position the hook extends in the same direction as the ordinary slit of a trace. The trace, by its slit, is first placed over the hook as with ordinary hooks heretofore used, and upon the rod or stock *c* of the same, between the projecting shoulders *p p* of the hook and the end of the whiffletree, after which the hook is moved upon its stock toward the whiffletree, compressing the spiral spring *o* sufficiently to bring the rivet *n* in the same plane with the narrow portion of the slot, into which,

by partially turning or revolving the hook, the pin is then brought, the elasticity of the spring firmly and tightly holding the same therein, whereby the hook is brought to and firmly held in a position at right angles to the length of the trace and its slit, thus obviating all liability and possibility of the trace working off or over its hook, the advantages of which are many and manifest.

To unfasten or remove the trace from the whiffletree, first turn the hook upon its shaft or stock sufficiently to bring its rivet into the wide portion of the right-angular slot, the spring then throwing it out against the lip *l*, when the hook is in the same direction as the trace-slit, thereby allowing it to be easily and readily slipped over the same.

I claim as new and desire to secure by Letters Patent—

1. The trace-fastening herein described, the same consisting of the right-angular slotted shaft or stock *c* and hook *r*, placed loosely upon and over the same, the two being arranged and operating together, substantially in the manner and for the purposes specified.

2. In combination with the above, the use of a spiral or other suitable spring, operating as and for the purposes specified.

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Witnesses:

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