

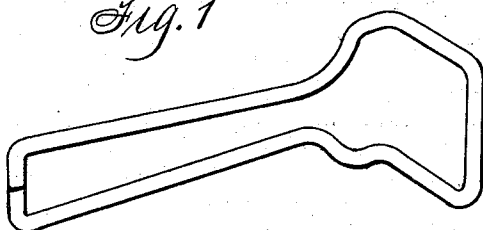
(No Model.)

F. D. STALFORD.  
TRACE FASTENER.

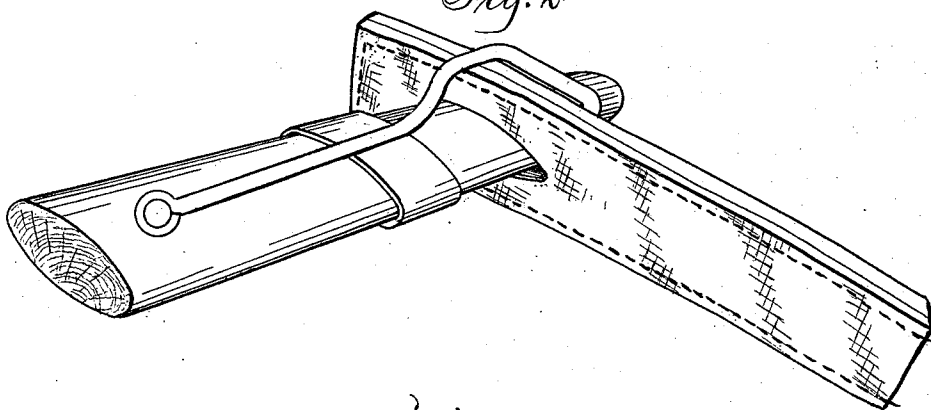
No. 523,780.

Patented July 31, 1894.

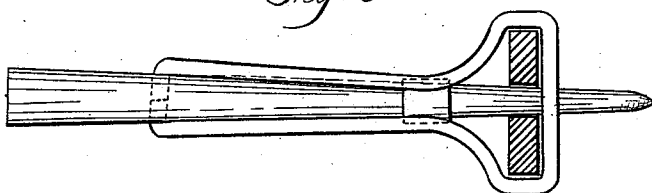
*Fig. 1*



*Fig. 2*



*Fig. 3*



Witnesses:  
C. F. Wilson  
R. C. Orwig

Inventor: *Fredrick D. Stalford,*  
By *Thomas G. Orwig, Attorney,*

# UNITED STATES PATENT OFFICE.

FREDRICK D. STALFORD, OF DES MOINES, IOWA.

## TRACE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 523,780, dated July 31, 1894.

Application filed November 28, 1893. Serial No. 492,211. (No model.)

*To all whom it may concern:*

Be it known that I, FREDRICK D. STALFORD, a citizen of the United States of America, residing at Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Trace-Fastener, of which the following is a specification.

Heretofore a trace-holder has been made from a single piece of spring metal in such a manner that the parts pivotally connected with a single tree extended transversely thereto and the main portion terminating in a loop at the free end extended longitudinally relative to the end of the singletree and at the side of the single tree.

My invention consists in a device adapted to be readily attached to a singletree in such a manner that the main portion will extend from its pivotal point on a singletree parallel with the longitudinal central line of the singletree and clasp fast thereto by spring force and a loop adapted to admit a trace will project at right angles therefrom in such a manner that the top and bottom portion of the loop will be at right angles to the end of the singletree and parallel with a trace passed through the loop and attached to the end of the single tree as hereinafter set forth, pointed out in my claim and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the device ready to be applied to a single tree. Fig. 2 is a perspective view showing the device applied to the end of a single tree and the end of a trace secured to the single tree therewith as required in practical use. Fig. 3 is a side view of the end portion of a single tree and cross section of a trace attached thereto and securely retained thereon by means of my device pivoted to the single tree and clasped fast thereto by the spring force of the parallel lengths thereof that overlie the single tree.

In making the device I take a single piece of spring wire and bend it into the form of a loop A that is elbow-shaped and contracted at its open end and adapted to admit the end of a trace to be passed therethrough and then extend the end portions, B and B<sup>2</sup>, in practically parallel positions from the contracted

open end portion of the loop A. The extremities of the parallel parts are bent at right angles and toward each other to produce terminal pivots, C and C<sup>2</sup>, that can readily be introduced into a bore in the single tree D, as indicated by dotted lines in Fig. 3, by simply pressing the ends of the parallel parts B and B<sup>2</sup> apart and then placing the pivots C and C<sup>2</sup> in the bore and allowing the parallel parts B and B<sup>2</sup> to resume their normal positions and to overlie the top and bottom sides of the single tree and clasp fast thereto. By thus bringing the parallel parts B and B<sup>2</sup> close together and bending their ends at right angles and toward each other into the same plane the terminal pivots C and C<sup>2</sup> can be readily separated and allowed to enter a bore in the single tree and when the separating force is relaxed the spring force of the two parallel parts B and B<sup>2</sup> will securely retain the device connected with the single tree in such a manner that the said parallel parts will clasp fast to the single tree when in parallel position therewith to retain the complete device stationary and also in such a manner that it can be readily adjusted as required to pass the end of a trace through the loop A as required in hitching and unhitching a horse from a vehicle.

H represents a metal band or ferrule fixed on the single tree in such a position that it will prevent the wood from becoming worn by the pressure and friction of the parallel parts B and B<sup>2</sup> that slide back and forth thereon when the device is turned forward and backward relative to the pointed end of the single tree as required in attaching and detaching a trace.

It is also obvious that my device can be readily and advantageously secured to a single tree without any extraneous fastening device.

It is obvious a metal band or ferrule may be dispensed with and that a metal ferrule may extend and cover the entire end portion of the single tree to which my device is pivoted.

It is also obvious that by thus constructing and applying a trace fastener so that the main body portion will normally clasp the

top and bottom of a singletree and extend a loop at right angles thereto in such a manner that the loop can be readily brought forward relative to the end of the single tree to admit  
 5 the end of a trace and then be returned to its normal position so that the complete device will be clasped fast to the singletree and the loop extend transversely across the end of the single tree and parallel with the trace (to  
 10 retain the trace fastened to the end of the single tree) and in a right angled position relative to the single tree.

To fasten a trace I press the loop A of my device forward to free it from the single tree  
 15 and then pass the end of the trace rearward through the loop A and the pointed end of the single tree D through the slot in the trace and bring the trace into a right-angled position to the single tree, as shown in Fig. 2,  
 20 and then pass the loop A backward until the parallel parts B and B<sup>2</sup> extend parallel with the single tree D and clasp fast thereto as shown in Fig. 3.

To detach the trace I simply pull the loop

A forward and then slip the end of the trace 25 off from the single tree and out of the loop.

I claim as my invention—

An improved trace fastener, made of a single piece of spring wire, consisting of an elbow-shaped loop that is contracted at its open  
 30 end, two mating lengths of straight wire extending from the open end of the loop and adapted to clasp fast their entire lengths upon the opposite sides of a single tree, as shown, and pivots extending at right angles from  
 35 their free ends to enter a bore in a single tree in such a manner that the mating straight lengths will be normally retained in parallel position with the end portion of a single tree  
 and the main part of the elbow-shaped loop 40 project forward at right angles to the single tree, as and for the purposes shown and described.

FREDRICK D. STALFORD.

Witnesses:

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