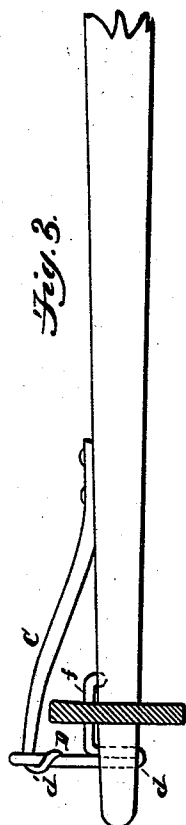
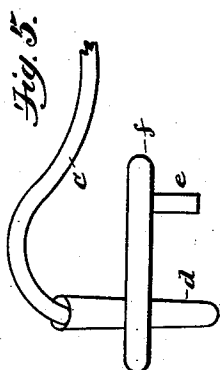


(No Model.)

S. COLE.
TRACE FASTENER.

No. 543,437.

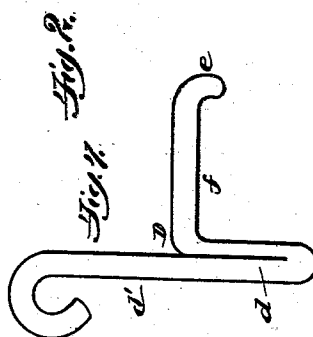
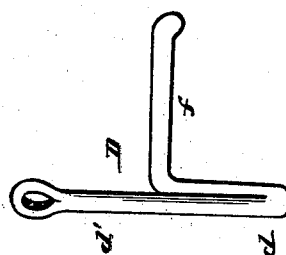
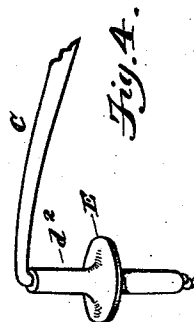
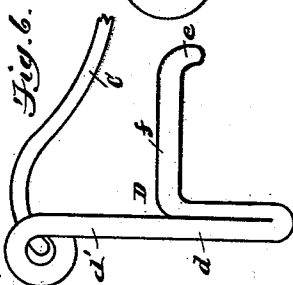
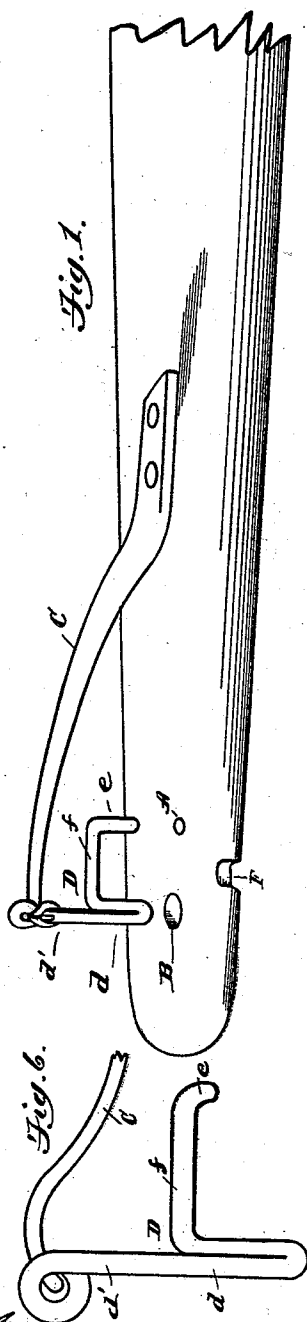
Patented July 23, 1895.



WITNESSES

W. Clough.

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UNITED STATES PATENT OFFICE.

SYLVESTER COLE, OF PONTIAC, MICHIGAN, ASSIGNOR OF ONE-HALF TO
SAMUEL W. SMITH, OF SAME PLACE.

TRACE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 543,437, dated July 23, 1895.

Application filed May 13, 1895. Serial No. 549,114. (No model.)

To all whom it may concern:

Be it known that I, SYLVESTER COLE, a citizen of the United States, residing at Pontiac, county of Oakland, State of Michigan, have
5 invented a certain new and useful Improvement in Trace-Fasteners; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to
10 make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to trace-fasteners, and has for its object an improvement in the
15 means by which the eye of a trace is secured to the end of the whiffletree.

In the drawings, Figure 1 shows the end of a whiffletree with the trace-fastening device secured thereto. Fig. 2 shows a slightly-modified form of securing-piece. Fig. 3 indicates
20 the trace in position. Fig. 4 shows a modified form. Figs. 5, 6, 7, and 8 indicate features of construction of the fastener in which the same invention is found.

25 The whiffletree used is the ordinary sword-ended whiffletree, provided near its terminal with a hole A, in addition to the usual hole B, through which the end of a string or small strap of leather is passed in the customary
30 form of attaching and securing the trace to the whiffletree.

C indicates a strap of leather fixed at one end in any suitable way to the whiffletree, and to the other end of which is secured in any
35 suitable way a double-pointed pin D. One of the points *d* of said pin registers with and is adapted to pass through the hole B. The other of the points *e* of said pin passes through the second hole A. Above the points
40 *d e* is a cross-bar *f*, uniting the two, which when in use lies through the eye of the tug, as indicated in Fig. 3. From the outer one of the points *d* extends a stem *d'* upward, terminating at its upper end with suitable means
45 for securing to it the end of the strap C. As shown in the drawings, this means for securing the strap to the standard *d'* is an eye.

As shown in the modified form, Fig. 4, the central post *D*² is hollow, and the end of the strap would be inserted into the hollow and
50 secured by wedges or by passing it entirely through and knotting the end of the cord where it emerges from the lower end of the pin *d*².

In the modified form shown in Fig. 4 the
55 second point of the pin is omitted, and in place of it a tubular plate *E* entirely surrounds the stem or pin *d*².

The object of the point *e* is to prevent the main stem or main pin *d* from turning in the
60 hole B, and thus twisting or turning the bar *f* out from the eye of the trace, and if the bar *f* be made in the form of a plate, as shown at *E* in Fig. 4, the possibility of its escaping from the eye of the trace is prevented, although,
65 for reasons of economy, the form shown in Fig. 1 is preferred. There is also a feature of utility in Fig. 1 not found in the form shown in Fig. 4, which arises from the fact that the form shown in Fig. 1 must be inserted and
70 extracted from its position by moving it in a line substantially parallel with the axis of the main pin *d*; but if any attempt be made to insert it or extract it while in a twisted position the parts bind and hold more tightly, and
75 inasmuch as liability to accidental extraction occurs generally from the pressure of the tug pushing outward against the stem *d* there is generally the binding of the parts engaging in the holes A and B, which aids in retaining
80 the fastening in place.

F indicates a notch at the rear of the whiffletree at the place where the tug is intended to rest.

The proper placing of the tug and the fastening are evident from the drawings, and it is evident that so long as the tug remains in engagement over the bar *f* the fastening cannot be removed and the tug cannot escape from the end of the whiffletree.
85

Figs. 6 and 7 indicate a way of securing the small tie-strap. The eye is left open until it is threaded through the eye in the strap. It is then closed down.
90

In Figs. 5 and 8 the cross-bar *f* is shown as made separate from the two pins *d e*.

What I claim is—

1. In combination with a whiffletree, a pin
5 provided with an arm adapted to extend through the eye of the tug, substantially as described.

2. In combination with a whiffletree, a double pointed pin, of which the points are united

by a bar adapted to traverse the eye of the tug, and means for securing the pin to the whiffletree, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

SYLVESTER COLE.

Witnesses:

J. E. SAWYER,

J. C. GAYLORD.