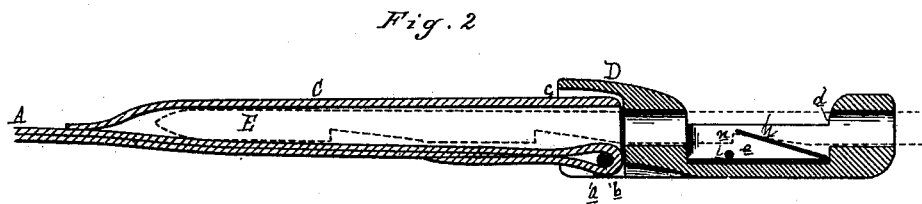
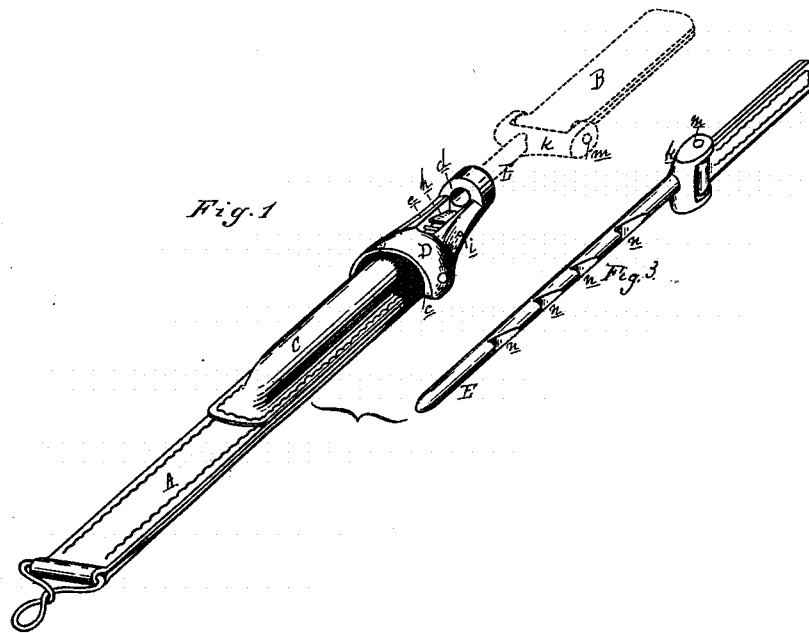


T. J. SMITH.
Trace-Buckles.

No. 221,623.

Patented Nov. 11, 1879.



Attest:
J. B. Barthel
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Inventor:
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UNITED STATES PATENT OFFICE.

THOMAS J. SMITH, OF DETROIT, MICHIGAN.

IMPROVEMENT IN TRACE-BUCKLES.

Specification forming part of Letters Patent No. **221,623**, dated November 11, 1879; application filed June 21, 1879.

To all whom it may concern:

Be it known that I, THOMAS J. SMITH, of the city and county of Jackson, and State of Michigan, have invented an Improvement in Trace-Buckles, of which the following is a specification.

The nature of my invention relates to certain new and useful improvements in the construction of trace-buckles, whereby, when desired, traces of harnesses may be lengthened and shortened at will, without the necessity of disengaging or engaging tongues or the ends of the traces with the loops or bars of a buckle, as ordinarily constructed.

The invention consists in the peculiar construction and combination of the various parts, as more fully hereinafter set forth.

Figure 1 is a perspective view. Fig. 2 is a longitudinal vertical section. Fig. 3 is a detached perspective of the bolt.

In the accompanying drawings, which form a part of this specification, A represents that part of a trace which is attached to the hames of a harness, and to which the trace proper, B, is ordinarily secured by a buckle and loop. This portion A has a loop, C, sewed onto its outer face, and it terminates in a loop, *a*, by means of which it is secured to the bar *b* of the socket D, which is provided with a flaring mouth, *c*, to receive and inclose the end of this portion A. The entrance to this loop C is within the socket, and is coincident with the hole *d* in the opposite end of the socket.

A slot or recess, *e*, is cut in the body of this socket, into which is placed a V-shaped spring, *h*, held in place by the pin *i*, and so arranged,

as shown, that one end of this spring projects above the plane of the loop C and hole *d*.

E is a bolt, provided with a loop-head, *k*, by means of which and the bar *m* the bolt is secured to the end of the trace B. This bolt is provided with a series of notches, *n*, the shoulders of which are designed to engage with the projecting end of the spring *h*, when the bolt is inserted through the hole *d* and into the loop C with the notch side presented to the action of the end of such spring.

In practice the tug can be lengthened by turning the bolt a quarter-turn, when it may be withdrawn as far as desired, turned to its original position, and locked. To shorten the tug simply requires the bolt to be forced further in until another notch engages with the spring.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A trace-buckle consisting of the socket D, recess *e*, spring *h*, and notched bolt E, the socket and bolt each being provided with bars or other devices for securing them to the adjacent parts of a harness, substantially as and for the purposes described.

2. In combination, the hame-tug A, the loop C, and socket D, constructed substantially as described, with the trace or tug proper, B, and notched bolt E, all constructed, arranged, and operating substantially as specified, and for the purposes set forth.

THOMAS J. SMITH.

Witnesses:

H. S. SPRAGUE,
A. BARTHEL.