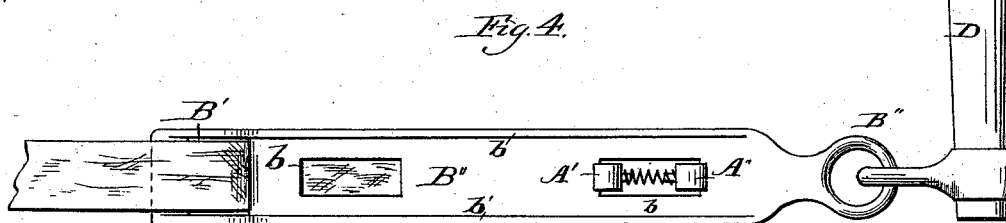
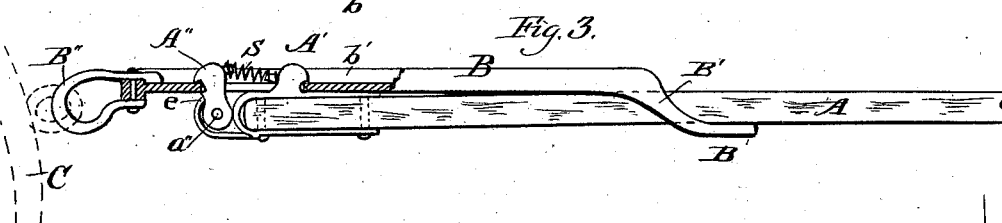
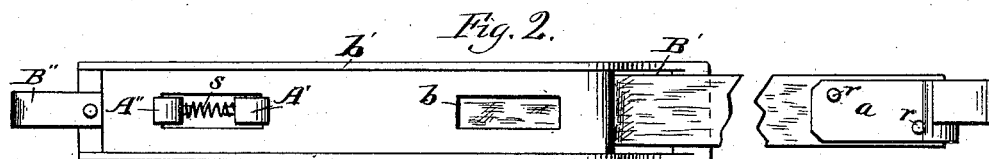
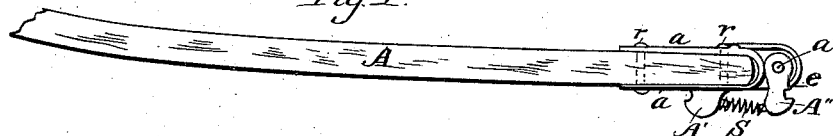
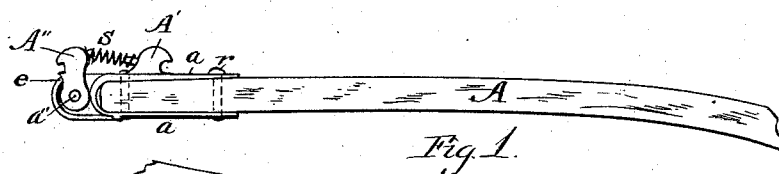


(No Model.)

L. A. BLOOD.
TUG FOR HARNESS.

No. 305,567.

Patented Sept. 23, 1884.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LYDIA A. BLOOD, OF CHICAGO, ILLINOIS.

TUG FOR HARNESS.

SPECIFICATION forming part of Letters Patent No. 305,567, dated September 23, 1884.

Application filed January 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, LYDIA A. BLOOD, of Chicago, State of Illinois, have invented certain new and useful Improvements in Tugs or
5 Traces for Harness, of which the following is a specification.

My invention relates to means for adjusting the length of the tug; and it consists in the features and parts hereinafter described and
10 claimed. The accompanying drawings illustrate the same.

Figure 1 is an edge view of a tug having a portion broken from the center and showing both ends. Fig. 2 is a top view showing the
15 tug and hame-tug attached to the hame. Fig. 3 is an edge view of Fig. 2, a portion of the plate being in section. Fig. 4 is a top view showing the lower end of the tug and cockeye attached to the whiffletree. Fig. 5 shows
20 another method of attaching the hook to the tug end.

A designates the tug or trace proper, one or both ends of which may be provided with a short hook, A', secured thereto by means of
25 a clasp, *a*, or a tongue, *a'*, and rivets *r r*. The clasp or tongue is extended beyond the hook, and provided with a recess, *c*, in which a supplemental hook, A'', facing in the opposite
30 direction from hook A', is confined and works on a pivot, *a''*. A spring, *s*, held in place by projections on or grooves in the backs of the hooks, exerts its force to throw the pivoted
hook away from the other one and against the side *e* of the recess, which confines it within
35 its proper scope.

B is the hame-tug, which has a curve at one end through which is an opening, B', sufficient to pass the end of the tug and its hooks
40 through. This may be a simple bridge for the tug to be passed under to confine it against the plate. At the other end the hame-tug is of the ordinary construction for attaching the same to the hame. The hame-tug also has
45 two or more slots, *b*, located between the ends, and adapted to receive the hooks A' A'' on the end of the tug, and the tug or trace is lengthened or shortened by shifting these hooks back or forth from one of these slots *b*
50 to the others, as required, to secure the proper length.

B'' is the cockeye, which is elongated and formed into a plate, and provided with two or more slots, *b*, and the opening similar to the hame-tug, and the tug having the hooks A' A''
55 at the lower end the length can be adjusted from the bottom end at the whiffletree as well as at the hame.

The operation is as follows: The tug end is passed through the opening B', and the pivoted hook A'' is first passed through the slot and
60 hooked over the edge of the opening at the farther end, and by then pressing it still farther against this hook the spring yields sufficiently to allow the hook A' to be passed into
65 and hooked over the opposite end of the slot, as seen in Fig. 3. When in, the hooks are held against the opposite ends of the slot by the action of the spring, thus preventing accidental displacement. The tug may be un-
70 hooked from the hame-tug or cockeye in the same manner that it is hooked. The hooks and plates are made of metal to afford the requisite strength. It is desirable, though not
75 essential, that the ends of the hooks which project through the slots *b* should be protected, and the flanges *b'* along the edges of the plates of the hame-tug and cockeye serve this purpose as well as strengthen said plates.

C is the hame, in dotted lines, and D the whiffletree, both of which are of the ordinary
80 construction.

What is claimed is—

1. The harness tug or trace provided with rigid hook A' and spring-hook A'', with the hame-tug or cockeye having two or more slots,
85 *b*, as and for the purpose specified.

2. A harness tug or trace having a rigid hook, as A', and a pivoted spring-hook, A'', facing in opposite directions, as and for the
90 purpose specified.

3. The clasp *a*, having hook A', flange *e*, pivoted hook A'', and spring *s*, combined and arranged as shown.

LYDIA A. BLOOD.

Witnesses:

JNO. H. WHIPPLE,
EDWIN J. BLOOD.