

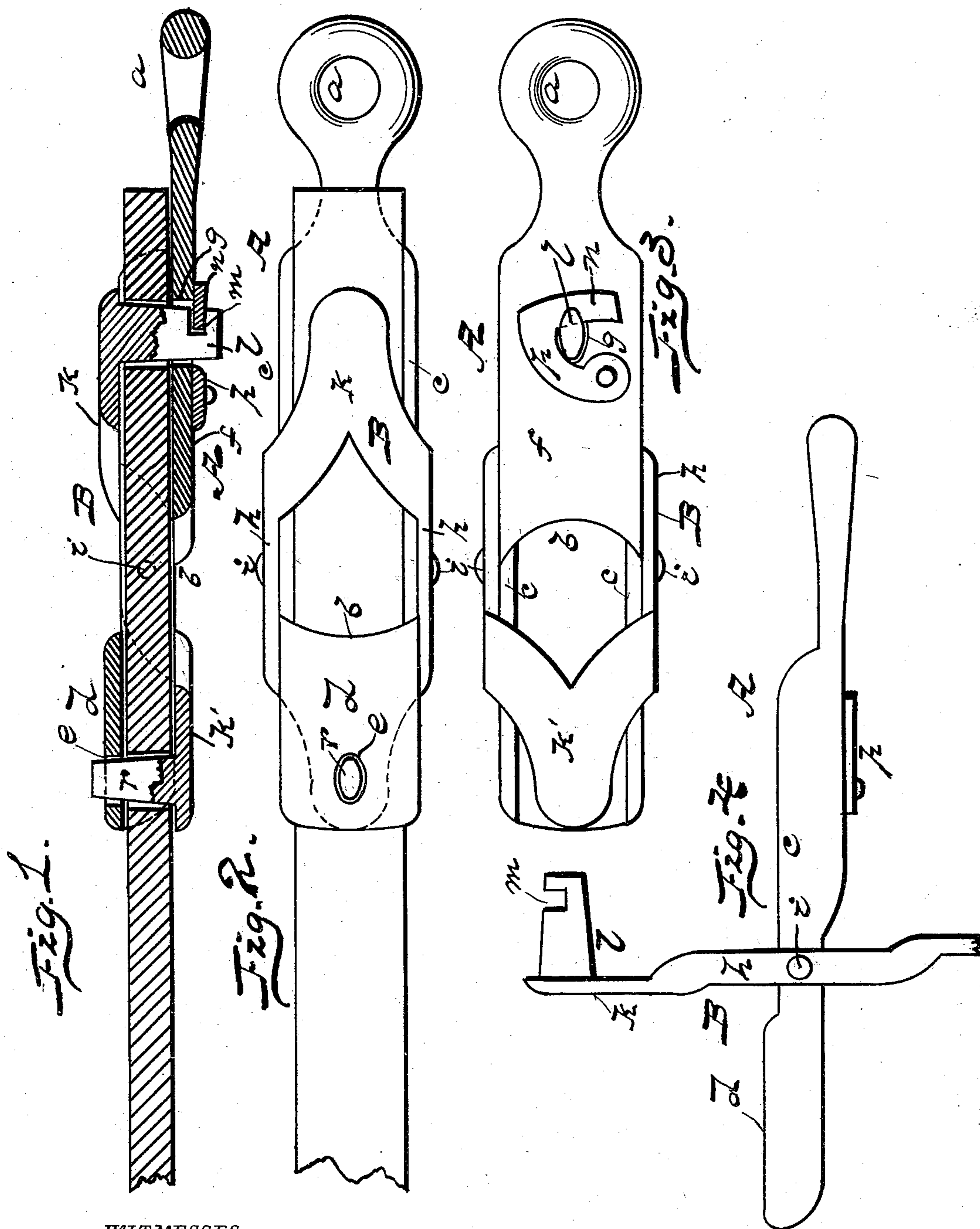
(No Model.)

E. C. J. TROXELL.

TRACE TUG.

No. 343,615.

Patented June 15, 1886.



WITNESSES

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EDWIN C. J. TROXELL, OF ALLENTOWN, PENNSYLVANIA.

## TRACE-TUG.

SPECIFICATION forming part of Letters Patent No. 343,615, dated June 15, 1886.

Application filed March 27, 1886. Serial No. 196,788. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN C. J. TROXELL, a citizen of the United States, residing at Allentown, in the county of Lehigh, State of Pennsylvania, have invented certain new and useful Improvements in Trace-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has relation to improvements in devices for fastening harness-traces to a single-tree; and it consists in the novel construction and arrangement of parts, whereby the trace can be lengthened or shortened either from the free end of the trace or the portion at the hame, all as will be hereinafter more fully explained.

The annexed drawings, to which reference is made, fully illustrate my invention, in which Figure 1 represents a vertical longitudinal sectional view of my device. Fig. 2 is a plan view. Fig. 3 is an under side view, and Fig. 4 is a side view.

Referring by letter to the accompanying drawings, A designates the main plate of the device, at one end of which is an eye, *a*, that is designed to be permanently attached to the hook or eye on a single-tree or hame, as may be desired, thus permitting the device to be operated at the hame or at the single-tree. The plate A is channeled longitudinally, and is cut away, as at *b*, the side flanges, *c c*, of which extend forwardly, and are connected to one another by a cross-plate, *d*, having a vertical perforation, *e*, through it, and the base portion *f* is also provided with a slot or perforation, *g*, all for a purpose hereinafter set forth.

B indicates a centrally-pivoted locking-lever. The side arms, *h h*, are pivoted at *i*, and they are arranged on the outer side of the flanges *c c* of the main plate. These arms *h h* are connected at each end by upper and lower cross-plates, *k k'*. The former is provided with a downwardly-projecting tongue, *l*, having near its lower end a transverse notch, *m*, which is engaged by the end *n* of the pivoted hook *p*, and the latter plate, *k'*, is also provided with an upwardly-projecting tongue, *r*, the end of which enters a slot or perforation, *e*, in the plate *d*. It will be seen that the trace lies within the channel and between the side flanges in a straight line, and the tongues pass through perfora-

tions in said trace, and the ends of which enter the slots in the main frame, and are secured in position by the pivoted hook *p*, thus firmly but removably securing the device to the trace.

In releasing the trace from the fastener, the operator throws back the pivoted hook *p*. The locking-lever is then swung upon its pivot into a vertical position, thus withdrawing the holding-tongues from engagement with the slots in the main frame and from engagement with the perforations in the trace, thus permitting the trace to be released therefrom, or to be lengthened or shortened by bringing other perforations into engagement with the tongues aforesaid.

In securing the device to the trace the latter is passed through the channel of the main frame until the perforations in said trace register with the slots in the cross-plates of said frame, after which the lever is turned on its pivot, thus bringing the same in a horizontal position, and forcing the tongues through said openings, when the pivoted hook is caused to engage the notch in the tongue *l*, and secures the parts to one another; and it will be further seen that a fastener constructed as herein shown and described can be readily attached or detached from the trace, and it is simple in construction, easily operated, and at the same time cheap to manufacture.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

The trace-fastener herein described, consisting of the main frame channeled and provided with the side flanges and perforations, the pivoted hook and connecting-eye *a*, the locking-lever, the side arms of which are pivoted to the main frame and connected at each end by the cross-plates *k k'*, provided with the tongues *l r*, the former provided with the notch *m*, and the pivoted hook *p*, which is adapted to engage with said notch and secure the fastener to the trace, the whole adapted to operate as shown, described, and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN C. J. TROXELL.

Witnesses:

HENRY E. LEHR,  
JACOB D. BURGER.