

K. FRAZER.
Buckles for Harness.

No. 142,907.

Patented September 16, 1873.

Fig. 1.

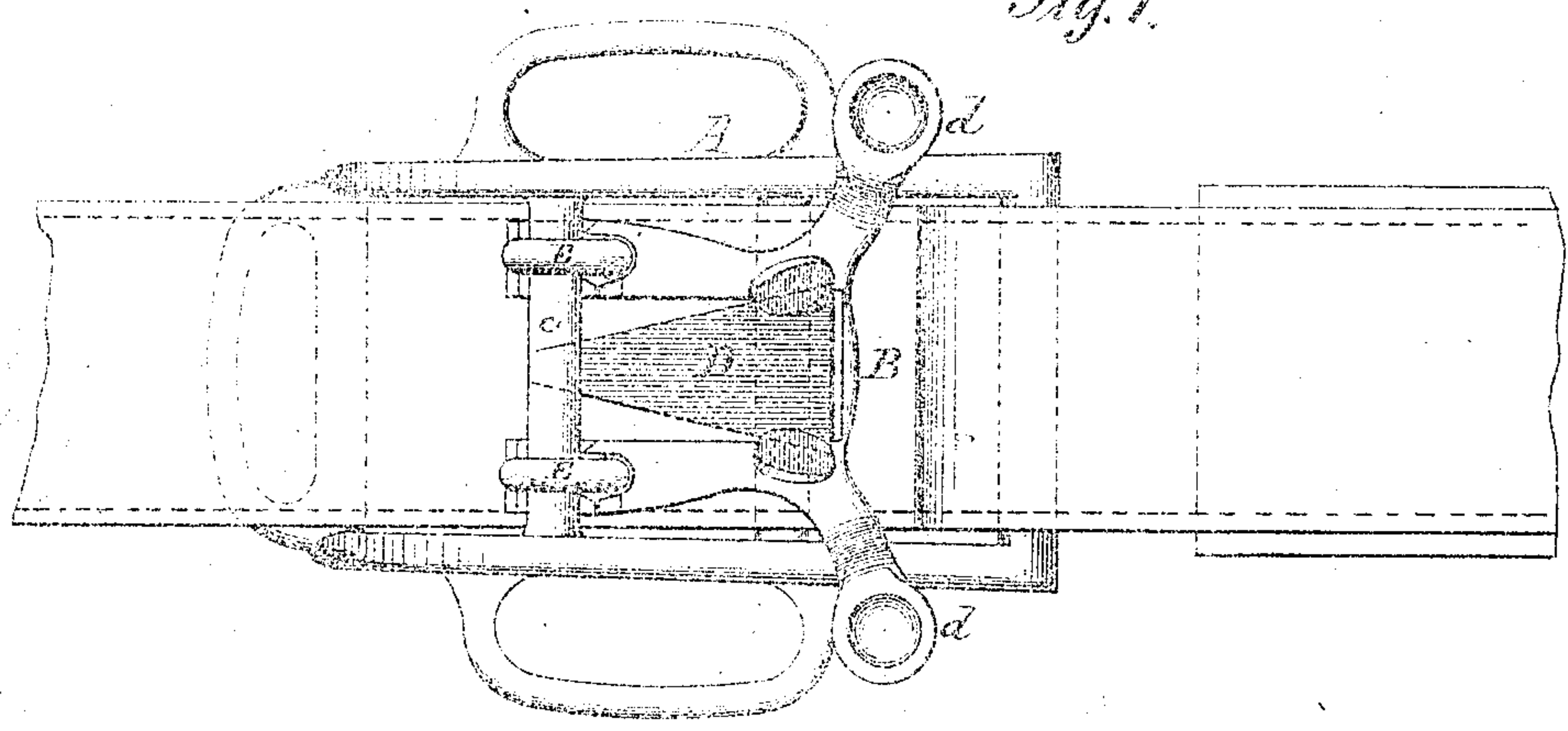


Fig. 2.

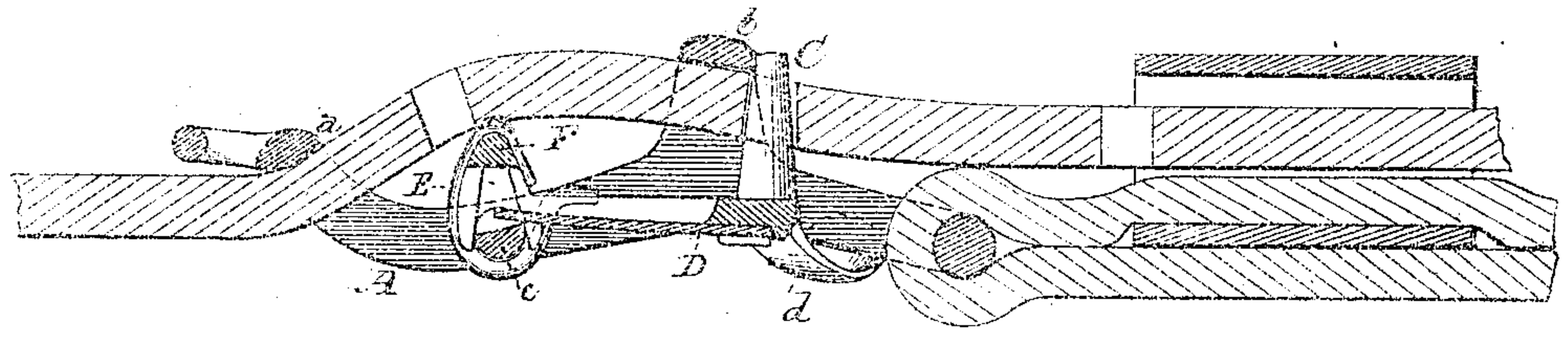
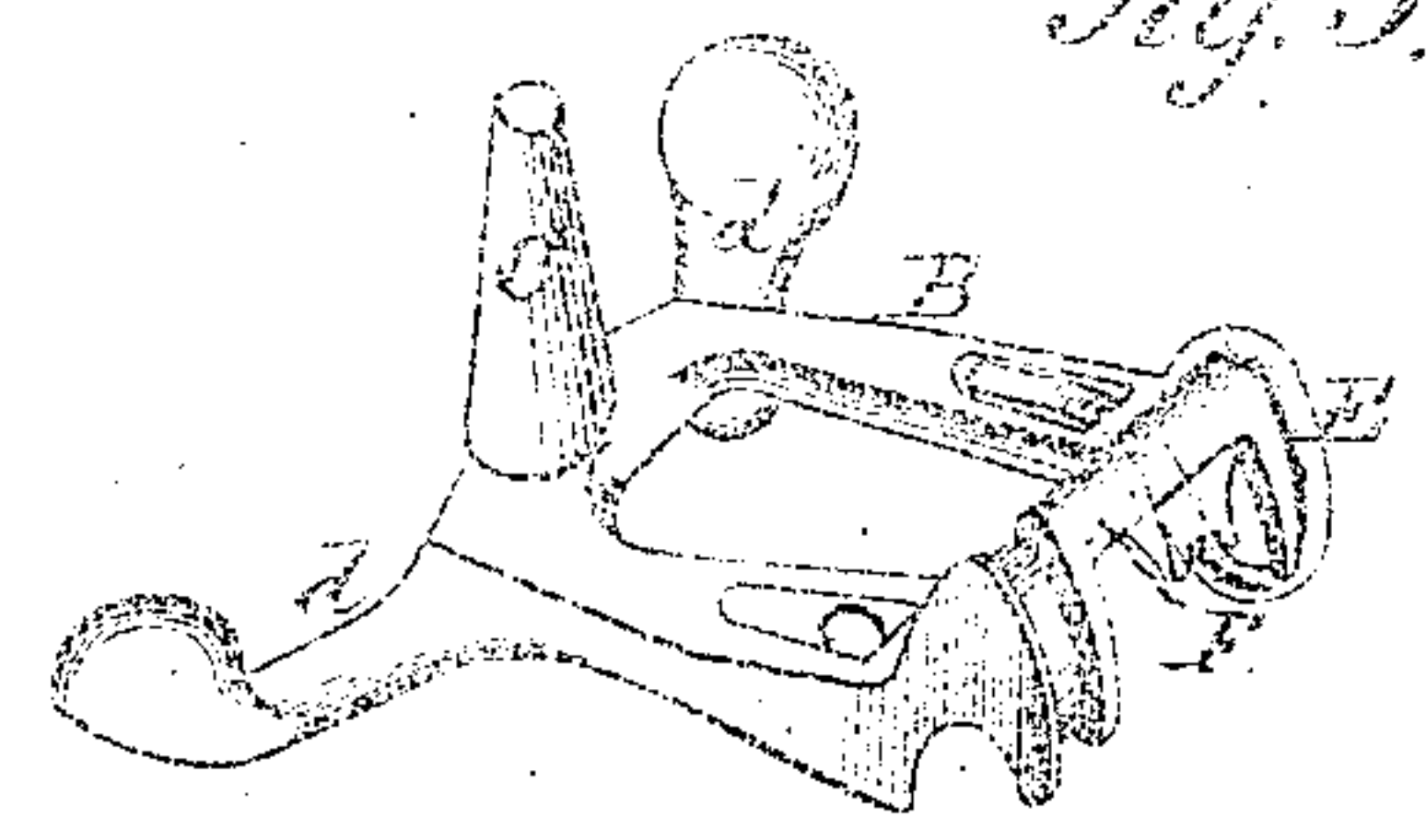


Fig. 3.



Witnesses.
A. Ruppert.
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UNITED STATES PATENT OFFICE.

KASSON FRAZER, OF SYRACUSE, NEW YORK.

IMPROVEMENT IN BUCKLES FOR HARNESS.

Specification forming part of Letters Patent No. 142,907, dated September 16, 1873; application filed May 29, 1873.

To all whom it may concern:

Be it known that I, KASSON FRAZER, of Syracuse, in the county of Onondaga and State of New York, have invented certain Improvements in Trace-Buckles, of which the following is a specification:

The first part of my invention consists in constructing the tongue-piece with one or two lever-arms projecting laterally underneath and beyond the side bars of the buckle-frame, for the purpose of providing means for facilitating the withdrawal of the tongue out of the tongue-holes in the trace when the latter is to be shifted while in use. The second part of my invention consists in fastening the tongue-piece to its supporting cross-bar by means of wire straps suitably bent around the cross-bar and secured to the tongue-piece, so as to clamp it with its semicircular bearings to the bar, the object being to get a stronger connection between these parts than can be obtained by bending short prongs cast on the tongue-piece around the cross-bar, which is now the usual method of attachment. The third part of my invention consists in constructing the pivoted end of the tongue-piece with a projecting knee, which, bearing against the inner side of the trace or strap, throws it into a curve and against the loop-bars of the frame, in such a manner that a portion of the strain upon the trace will be sustained by the mere friction between it and the knee of the tongue-piece and said loop-bars, and the strain at the point where the tongue passes through it will be proportionately reduced.

Figure 1 illustrates the inner or under side of my improved trace-buckle. Fig. 2 is a longitudinal section thereof. Fig. 3 is a detail view, illustrating the mode of attaching the tongue-piece to its supporting-bar.

The same letters of reference are used in all the figures in the designation of identical parts.

The frame A is of the ordinary construction, being provided with the loop-bars *a* and *b* and an intermediate cross-bar, *c*, for supporting the tongue-piece B, which is pivoted thereto with one end, and extends forward so that its tongue C will bear against the loop-bar *b* when drawn upon by the trace or strap. The tongue-piece, whether it consists of a plate or a frame,

as illustrated, is at its free end provided with lever-arms *d*, which project laterally underneath and beyond the side bars of the frame, and terminate in small buttons or thumb-pieces. By means of these lever-arms—two being shown for the sake of symmetrical appearance—the tongue can be readily operated from the outside of the frame of the buckle to release the trace. The tongue-piece is actuated by a spring, D, which is secured to it at the end from which the tongue projects, and bears with its other end against the cross-bar *c* of the frame. The side bars of the tongue-piece have semicircular recesses in their under side to partially embrace the cross-bar *c*, to which they are clamped by means of wire straps E, one end of which, after having been passed through an eye in the side bar, is bent over, down into a depression therein, while the other end is carried around the cross-bar and bent over the end of the tongue-piece. The wire straps lie in shallow grooves formed in the tongue-piece, and are thus prevented from becoming accidentally displaced. The side bars of the tongue-piece are connected above the cross-bar *c* of the frame by an elevated bar, F, which turns the trace or strap, inserted through the loop-bars *a* and *b*, into a curve, for the purpose already stated. This bar, being quite narrow, and being constructed so as to have a dull edge on top, will press slightly into the strap, and thus seat itself into the same in such a manner as to hold the strap with much greater force than a long-curve clamping-can can possibly hold it.

The tongue-piece terminates with the knee, and the latter is about radial to the axis of the pivot-bar of the frame, so that to release the trace or strap from the action of the knee it will only be necessary to turn the tongue-piece but a quarter-turn.

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

1. In a buckle, the tongue-plate B, constructed with one or more lever-arms, *d*, which project beyond the frame on its under side, so that the tongue-plate can be turned by them to draw the tongue out of the strap without requiring the bending of the latter, substantially as specified.

2. The tongue-piece B, seated on the cross-bar c of the frame of the buckle, and clamped thereto by independent wire straps E, substantially in the manner and for the purpose specified.

3. In a trace-buckle, a spring tongue-piece, B C, provided with a laterally-projecting lever-arm, d, and an elevated bar or knee, F, substantially as and for the purpose specified.

4. In a harness-buckle, a tongue having a knee or cam, F, constructed in such a manner

that it will embed into the trace in the rear of the tongue, substantially as and for the purpose set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

KASSON FRAZER.

Witnesses:

D. P. LOWE,

A. MOORE.