K. FRAZER.

Buckles for Harness.

No. 142,907. Patented September 16, 1873.

Fig. 1.

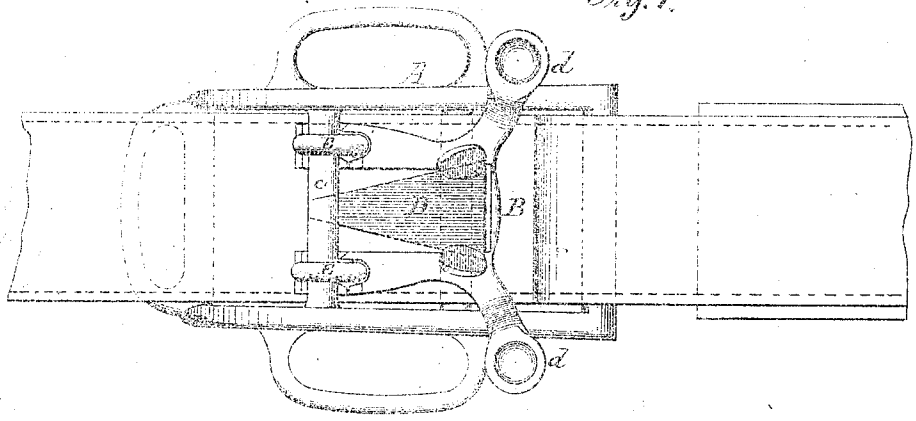


Fig 2.

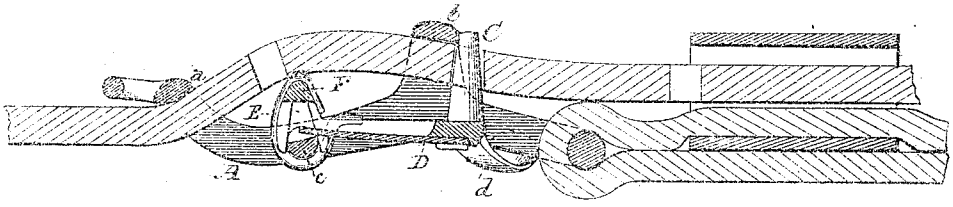
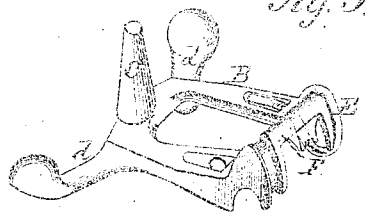


Fig. 3.



Witnesses.
J. Ruppert.
D. Howe

Inventor.
Kasson Frazer

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-cam 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.