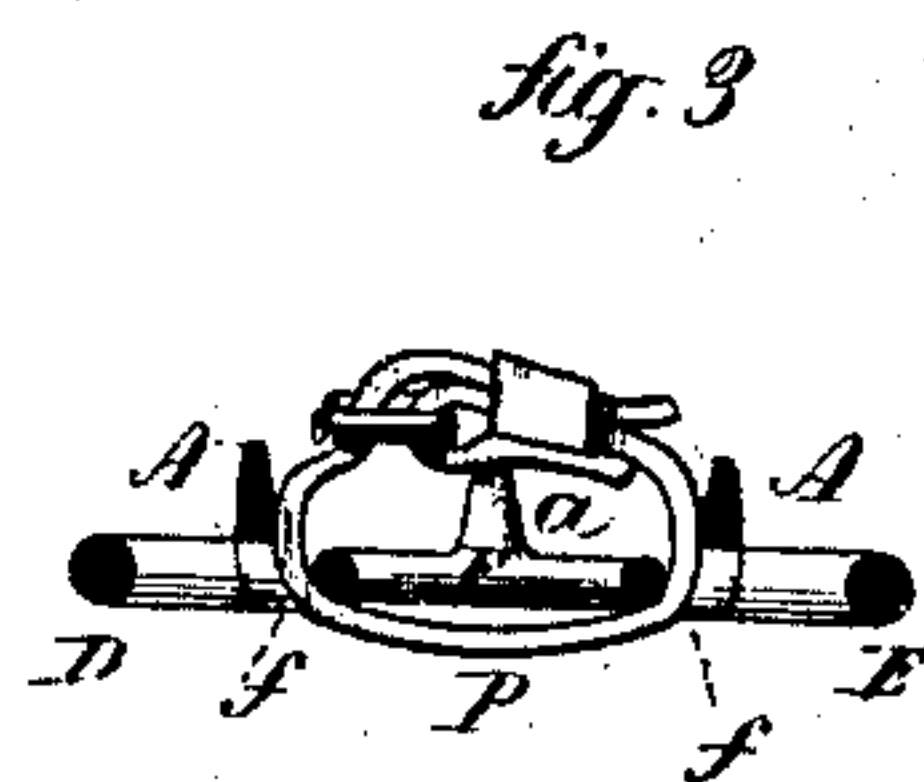
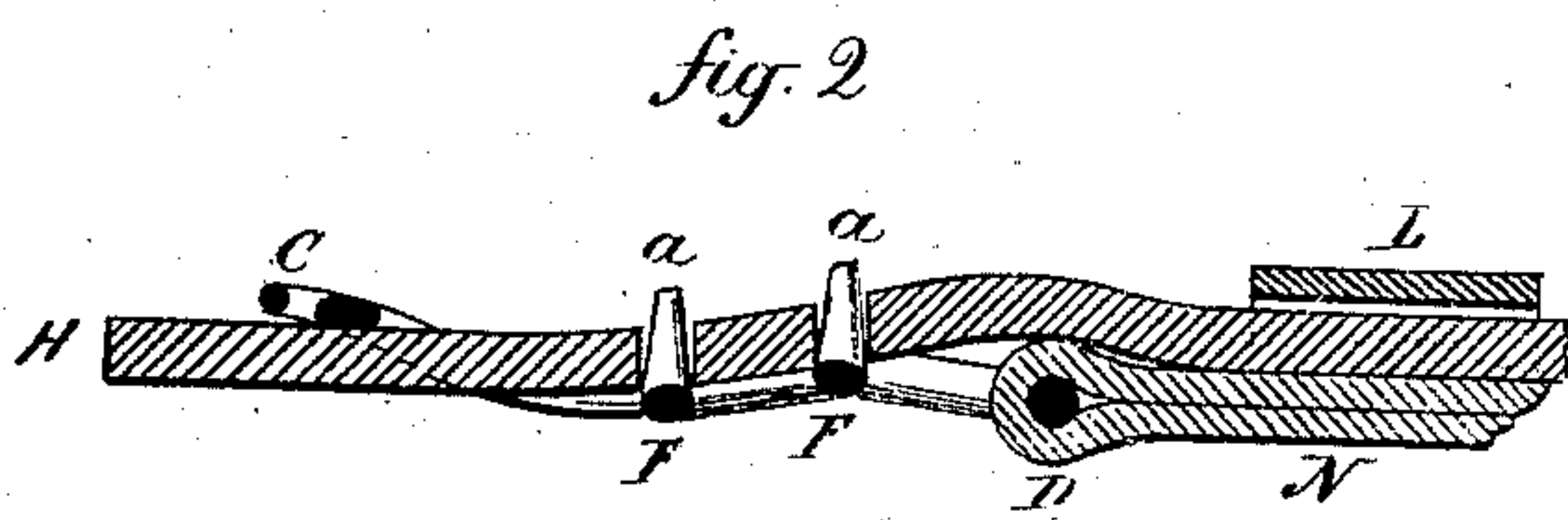
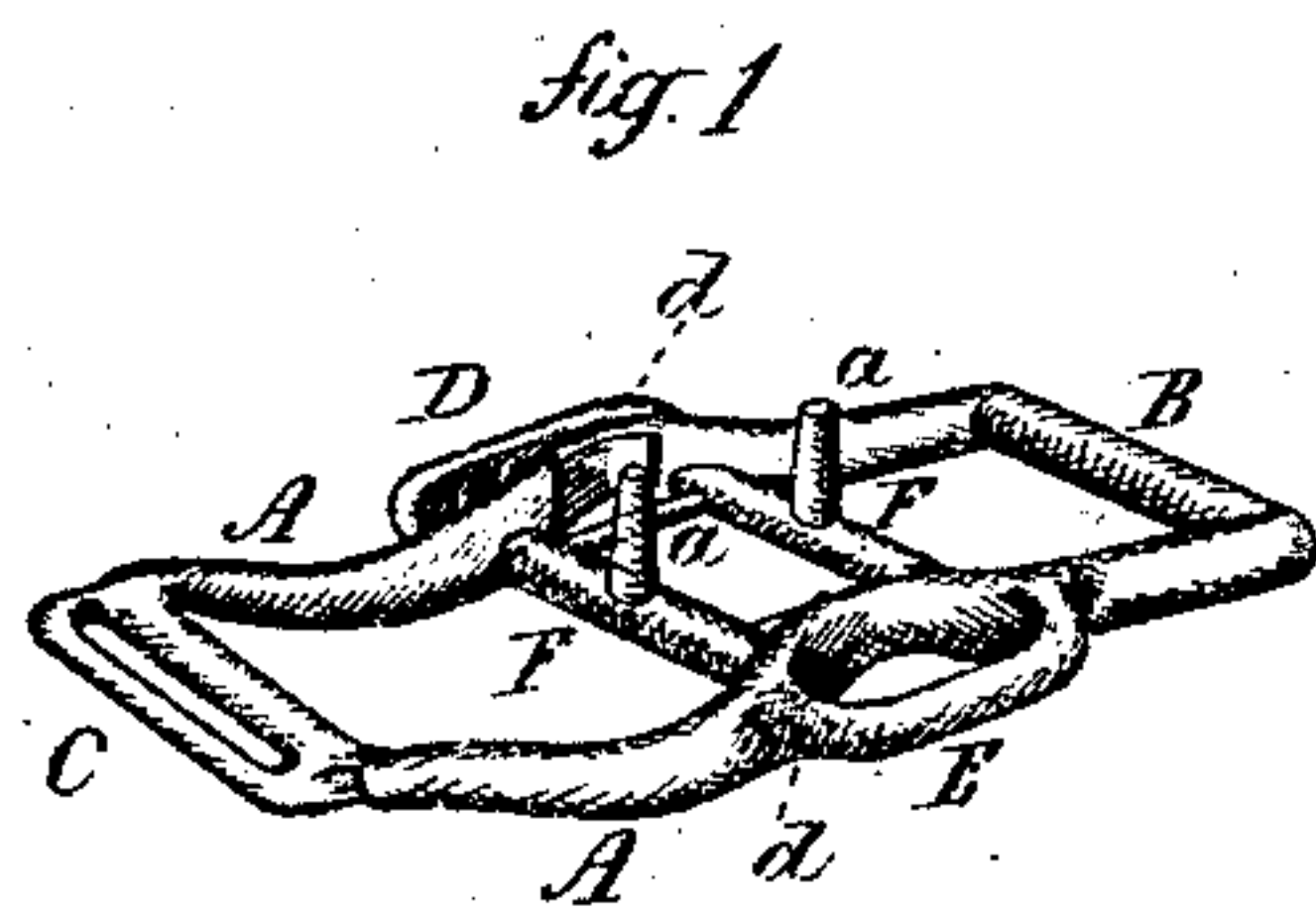


O. B. NORTH.
Harness Buckles.

No. 143,180.

Patented September 23, 1873.



Witnesses.
H. Shumway
A. J. Tibbitts

Oliver B. North
Inventor
By Atty.
J. E. Earle

UNITED STATES PATENT OFFICE.

OLIVER B. NORTH, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO O. B. NORTH & CO., OF SAME PLACE.

IMPROVEMENT IN HARNESS-BUCKLES.

Specification forming part of Letters Patent No. **143,180**, dated September 23, 1873; application filed February 21, 1873.

To all whom it may concern:

Be it known that I, OLIVER B. NORTH, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Harness-Buckles; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute a part of this specification, and represent in—

Figure 1 a perspective view; Fig. 2, a longitudinal central section; Fig. 3, a transverse central section.

This invention relates to an improvement in buckles used for the attachment of the trace to a horse's harness, the object being to facilitate the adjustment of the trace, the trace usually being so stiff that to bend it to the extent required for adjustment in ordinary buckles is extremely difficult.

My improvement consists in a buckle-frame provided with the usual loops for the attachment of the straps, and with a pair of cross-bars near the center provided each with a fixed stud, onto which the trace is fixed, the studs passing through corresponding perforations in the trace, as more fully hereinafter described.

A A are two sides of the frame of the buckle; B, the front end bar by which the buckle is attached to the harness or to that part of the harness upon which the draft comes. Upon the opposite end a bar or loop, C, is provided for the attachment of the breeching, and upon the upper and lower sides, respectively, other loops D and E are formed for the back and belly straps. Near the center two cross-bars, F F, are formed, or this

may be a plate in width about equal to the extent of two bars, on which one or more studs, *a*, are formed, which are in the longitudinal central line.

The trace H is passed beneath the bar C, over the studs *a*, and over the bar B, the studs passing through the perforations in the trace, as seen in Fig. 2, and thence through a loop, L, on the strap N. This loop may be sufficient to retain the trace upon the studs, but I prefer to make other provision as more secure, and hence I make the frame sufficiently wide at the center with notches, as at *d*, Fig. 1, that a strap, P, may encircle the trace between the sides of the buckle, and a slot, *f*, is formed at each side below the trace by bars running from one of the cross-bars, F, to the other, or by slots through the plate if the plate is used, which support the under side of the strap, and upon the outside the ends of the straps are buckled, as seen in Fig. 3, or otherwise secured together.

To adjust the trace, it is simply necessary to lift the trace from the studs *a*, which can be done with a slight bend only of the trace, and without difficulty.

I do not broadly claim a buckle having stationary studs or tongues rising from a transverse bar, as such, I am aware, is not new.

I claim as my invention—

In combination with a buckle consisting of the frame A B C, the bars or plate F F, and the studs *a*, a device substantially such as described, to transversely inclose the trace between the studs *a*.

OLIVER B. NORTH.

Witnesses:

J. H. SHUMWAY,
A. J. TIBBITTS.