E. M. KINNE.

TRACE-BUCKLES.

No. 194,248. Patented Aug. 14, 1877.

Fig. 1.

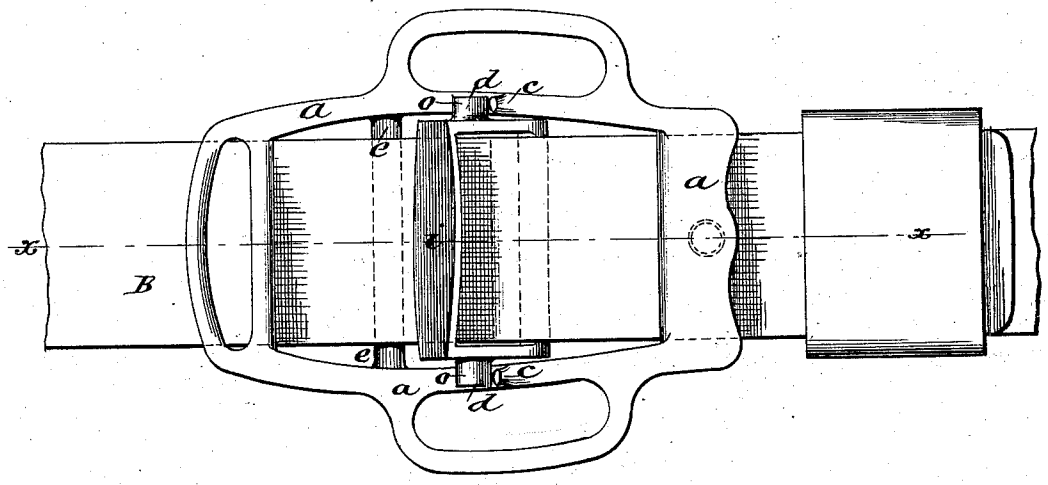


Fig. 2.

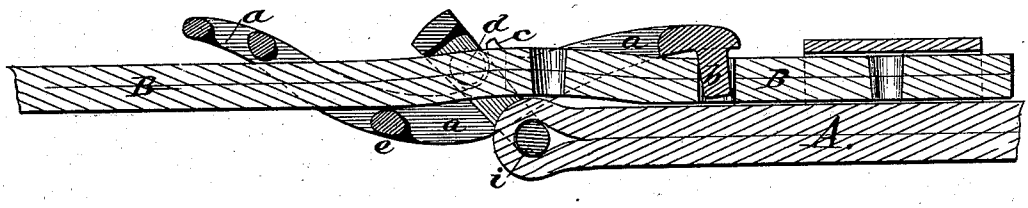
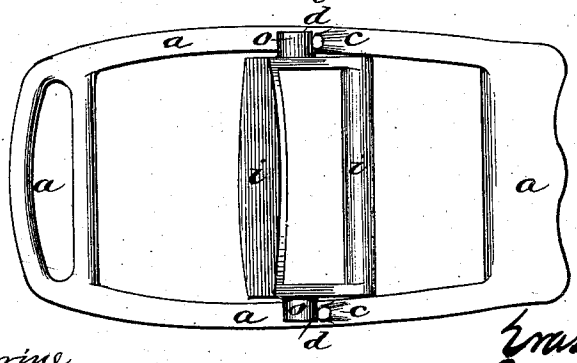


Fig. 3.



Attest:
H. L. Perrine
W. S. Hedgwood

Inventor,
Erastus M. Kinne
By C. W. Parker
Attorney.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ERASTUS M. KINNE, OF CUBA, NEW YORK.

IMPROVEMENT IN TRACE-BUCKLES.

Specification forming part of Letters Patent No. **194,248**, dated August 14, 1877; application filed December 13, 1876.

To all whom it may concern:

Be it known that I, ERASTUS M. KINNE, of Cuba, Allegany county, New York, have invented an Improvement in Trace-Buckles; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a top view. Fig. 2 is a longitudinal section; and Fig. 3 a top view of a modification.

My invention relates to that class of buckles used for securing the trace of a harness to the tug which attaches it to the collar, and is known as a trace buckle. It consists in combining a frame having the necessary braces and loops, and a tongue upon one end, and provided with a lug upon the top of each side, forming a shoulder, with a clamping-bail having lugs or pivots upon each side fitting into the shoulders formed by the lugs upon the frame.

In the drawings, A represents the trace-tug, and B a portion of a trace. *a* is the frame of the buckle, having a tongue, *b*, underneath one end, and the lugs *c c* upon the upper side, about midway the frame, forming shoulders *d d*. The frame *a* has the side and end loops necessary to trace-buckles. But if side loops are used it becomes necessary to have an under brace, *e*, to prevent the buckle from spreading. But if side loops are omitted, as in Fig. 3, the brace *e* may be omitted.

Attached to the trace-tug A is a clamping-bail, *i*, formed with two sides and two cross-pieces, and provided with lugs or pivots *o o*, which are intended to impinge against the lugs *c c* upon the frame *a* and into the shoulders *d d*, forming a fulcrum upon which the clamping-bail turns, and by which it is enabled to clamp and hold the trace.

The operation of my device is as follows: The clamping-bail *i* having been properly secured to the trace-tug A, and the frame *a* placed over said bail, with its convex side downward, the brace B is inserted underneath the front bar of the frame *a*, over the brace *e*, through the clamping-bail *i*, and under the back end of the frame *a*, the tongue *b* entering one of the holes in the trace. In this position the buckle is ready for use. It will be observed that when the draft is applied to the trace B the frame *a*, by means of the tongue *b*, is drawn backward, and the clamping-bail is bent down by the shoulders *d d* pressing against the lugs *o o*. This lever-function of the bail *i* raises its lower end, and with it the end of the trace-tug A, bending the trace B somewhat upward, while at the same time the upper end of the bail *i* is turned down upon the top of the trace B, with a tendency to bend it downward. The pressure with which the clamping-bail *i* presses upon both sides of the trace B is in proportion to the draft exerted upon said trace, and clamps it with sufficient power to hold it under all circumstances and contingencies.

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

1. A buckle-frame having a tongue upon the lower side of the front cross-bar, and provided with lugs upon the side bars, forming bearings, in combination with a rectangular clamping-bail having a pivot or fulcrum upon each side, substantially as and for the purpose described.

2. In a trace-buckle, a rectangular clamping-bail, provided with pivots or fulcra, in combination with a frame having lugs, forming stop-bearings for said pivots, substantially as described.

The above specification of my said invention signed and witnessed at Washington this 25th day of November, A. D. 1876.

E. M. KINNE.

Witnesses:
THOMAS C. CONNOLLY,
C. M. PARKS.