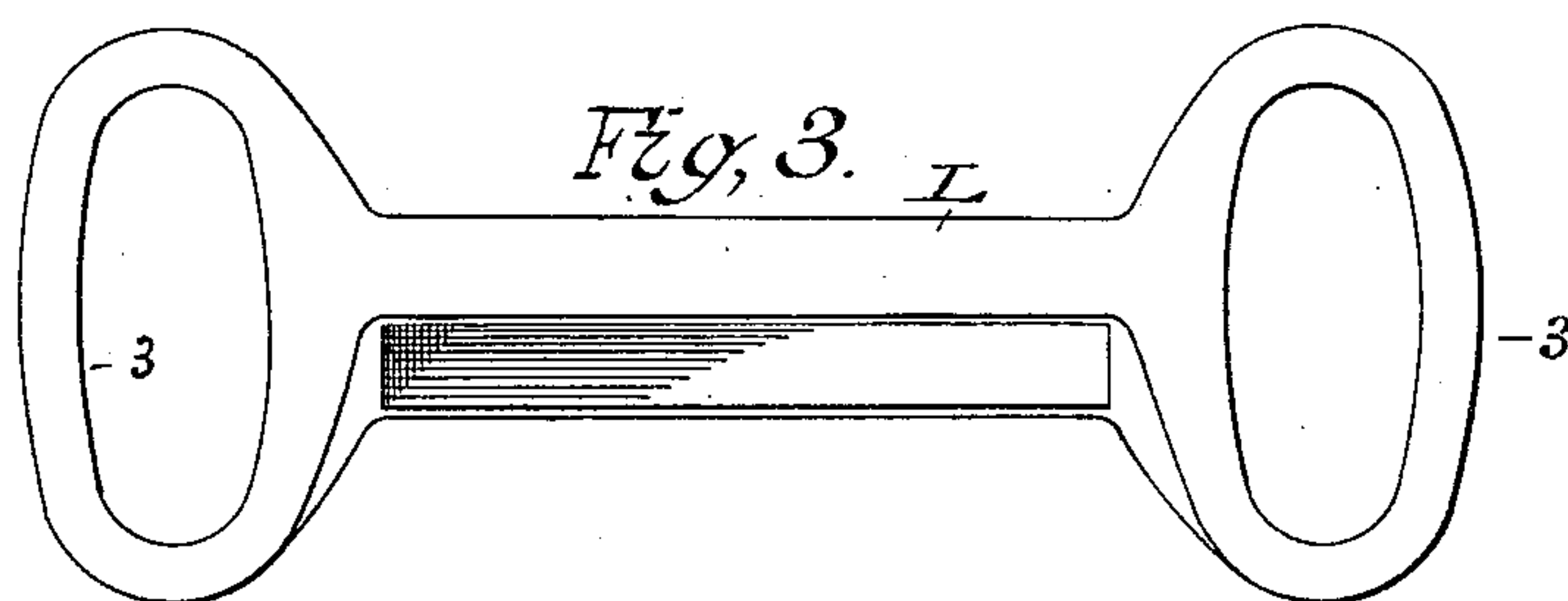
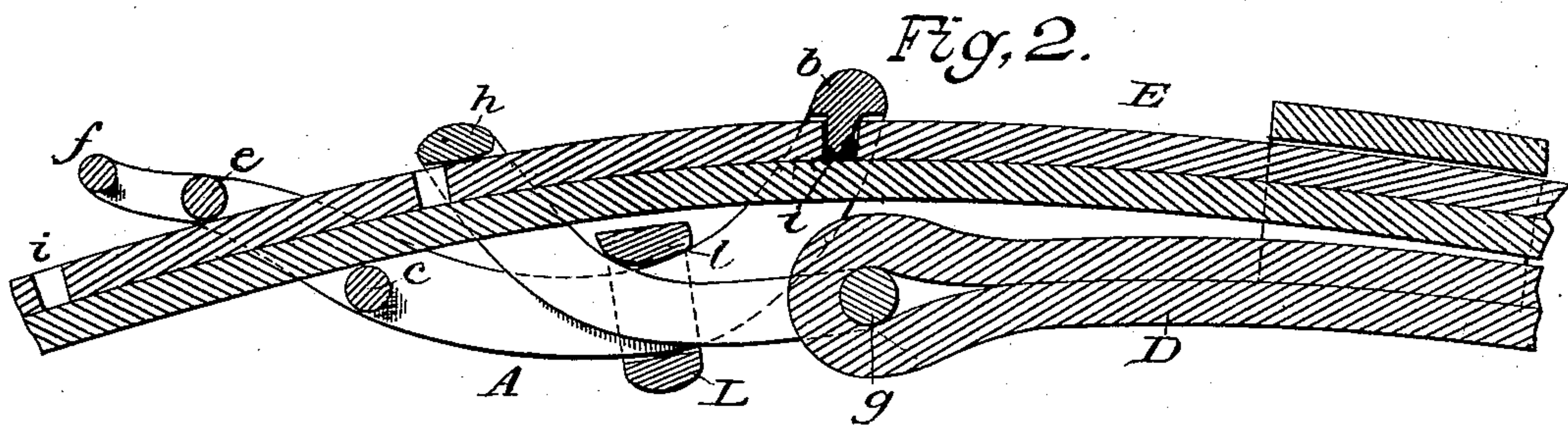
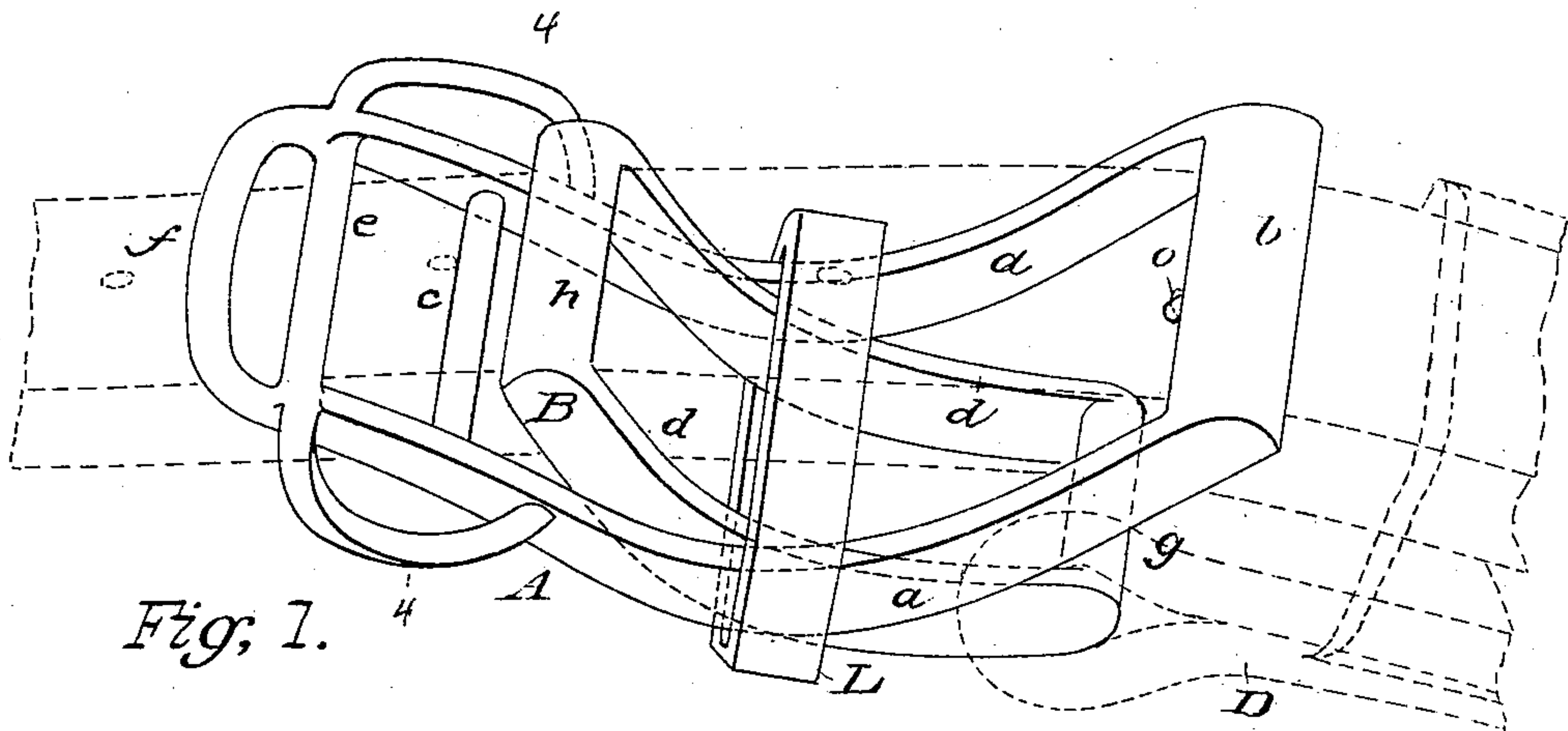


(No Model.)

A. B. WILHELM.
Buckle.

No. 243,667.

Patented June 28, 1881.



Witnesses:
L. W. Lacy
J. L. Middleton

Inventor:
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Att'y.

UNITED STATES PATENT OFFICE.

ADAM B. WILHELM, OF QUINCY, ILLINOIS.

BUCKLE.

SPECIFICATION forming part of Letters Patent No. 243,667, dated June 28, 1881.

Application filed April 30, 1881. (No model.)

To all whom it may concern:

Be it known that I, ADAM B. WILHELM, of Quincy, in the county of Adams and State of Illinois, have invented a new and useful Improvement in Buckles; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to an improvement in trace-buckles; and it consists, mainly, in a buckle composed of two rocking frames loosely inclosed in and secured together by a transverse strap, between which frames and strap the trace-leather is pinched; and, further, in combining with one of said frames a short tongue designed to pass only partially through the trace-leather and acting in connection with the binding-frames to hold the strap.

In the drawings, Figure 1 represents the device in perspective, showing the position of the trace in dotted lines. Fig. 2 shows a vertical longitudinal section through the center of trace and frames. Fig. 3 shows a modification of the transverse inclosing-strap.

The first to be described of what I have called the "frames," constituting the buckle, and which take the place of the loop in the ordinary buckle, is marked A. It is formed as shown clearly in Fig. 1, consisting of side bars, *a a*, which act as levers, of transverse bars *b c e*, and a loop, *f*. Of these transverse bars, *b* lies upon the outside of the trace and carries a short tongue, *o*, which takes the place of the ordinary tongue of a buckle; but it is made only long enough to go through one thickness of the leather of the trace, or but half-way through the whole, whatever the thickness. The trace passes through between the cross-bars *c* and *e*, as shown in dotted lines in Fig. 1; and the loop *f*, which is used only when the buckle is intended for double harness, is for the purpose of attaching the breeching. It is omitted in buckles for single harness, and *e* is in that case the end of the frame A.

It will be observed both in Figs. 1 and 2 that the side bars *a a* are curved. They are made a little wider apart than the width of the trace, and inclose a second frame, B, the side-bars *d d* of which are also curved and connect by transverse bars *g h*. Of these two *g* is connected in the ordinary manner to the hame-tug D. The other cross-bar, *h*, rests on

the outside of the trace. Cross-bars *h* and *b* are preferably made plain on their inner faces and rounded on their outer faces.

The two frames A B are connected to each other by means of a strap, L. The bar *l* of this strap L is rounded on its inner face, and is made flat upon the outer face, which bears against the surface of the trace. The strap is just wide enough between its two side bars to inclose the two frames and allow them to move freely. The frames and the strap are so adjusted to each other, as shown in Fig. 2, that when in position the trace will be curved over the side bar *l* of the strap L, and when draft is put upon the trace it will be pinched between the bar *l* underneath and the cross-bars *h* and *b* on the outside, and the greater the strain put upon the trace the greater the pinching force which will be applied thereto. In this case the crooked side bars *a a* of the frame first described, and the side bars *d d* of the inner frame last described, both act as levers, the force being applied to the outer-frame, A, by the trace, and to the frame B by the hame-tug. The same leverage forces the lug or tongue *o* into its hole in the trace.

The connecting and tightening strap L shown in Figs. 1 and 2 is designed when the buckle is to be used on single harness. When it is to be used on double harness the form shown in Fig. 3 is to be substituted for that shown at L in Figs. 1 and 2. The loops 3 on the end of L in Fig. 3 are for the pad-belts and belly-bands. If preferred, loops 4 4, as shown in Fig. 1, may be used instead.

The tongue E is of ordinary construction, except that it may be shorter than usual, as the perforations are made only half-way through, as shown at *i*. This saves a very considerable weakening of the trace, which occurs when the hole is cut quite through the whole, especially as the trace begins to break first on the inside. The pinching upon the trace by the curved side bars having their leverage in the loop *l* takes up the principal part of the strain, and for the greater part relieves the stud or tongue *o*, and the strain upon the hole in the trace.

Obviously, the parts may be made of any suitable kind of metal, and may be made plain, or ornamented in any suitable way.

In using the device it is not necessary to

pull the trace out of the loops or frames, it only being necessary to push the frame together, causing the cross-bars *b h* to approach each other and to rise when the trace is loosened, and may be taken up or lengthened at pleasure.

Having thus described my invention, what I claim is—

1. The combination, with the curved frames A and B, of the loose strap L, inclosing such frames and securing them loosely together.

2. The frames A and B, constructed as described to pinch the trace, and provided with

a short tongue, *o*, in combination with the trace having a hole in only one thickness of the leather, whereby the trace is held both by the tongue and the pinching of the frames, substantially as described.

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

ADAM B. WILHELM.

Witnesses:

WILLIAM F. BEMBROCK,
JAMES B. POLLOCK.