

(No Model.)

L. M. DODDRIDGE.
BUCKLE.

No. 403,254.

Patented May 14, 1889.

Fig. 1.

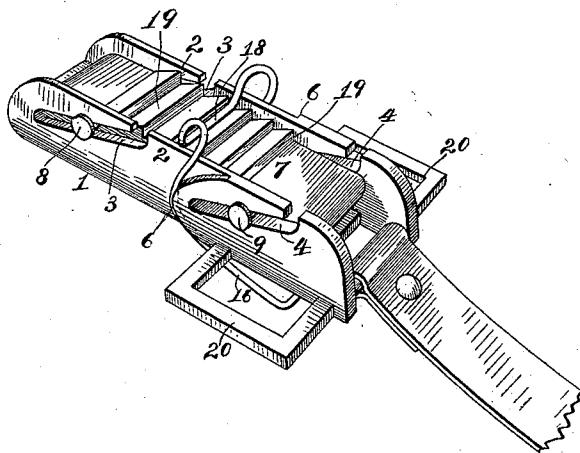


Fig. 2.

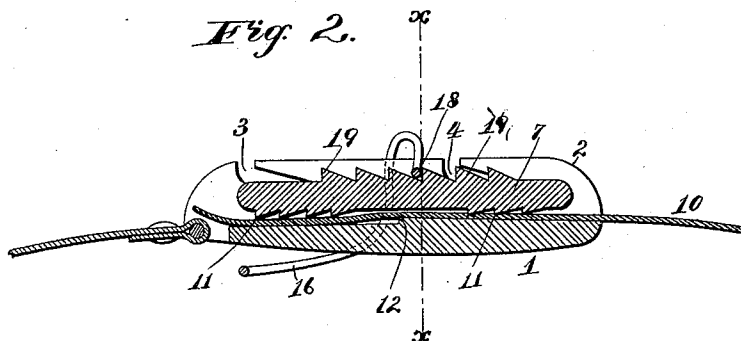


Fig. 3.

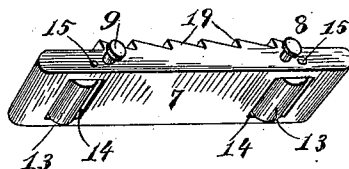
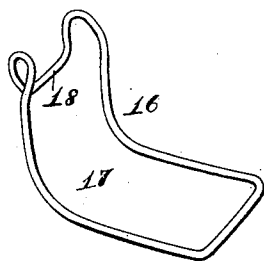


Fig. 4.

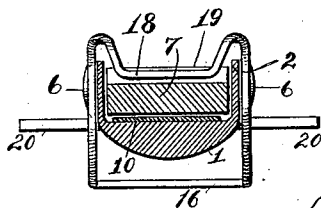


Fig. 5.

WITNESSES:

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UNITED STATES PATENT OFFICE.

LOYAL M. DODDRIDGE, OF STANTON, MICHIGAN, ASSIGNOR OF ONE-HALF TO
ELIAB EPLY, OF SAME PLACE.

BUCKLE.

SPECIFICATION forming part of Letters Patent No. 403,254, dated May 14, 1889.

Application filed February 9, 1889, Serial No. 299,234. (No model.)

To all whom it may concern:

Be it known that I, LOYAL M. DODDRIDGE, a citizen of the United States, residing at Stanton, in the county of Montcalm and State of Michigan, have invented certain new and useful Improvements in Harness-Buckles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in harness-buckles; and it has for its object to provide a tongueless buckle which is capable of securing and effectually holding a solid imperforate strap against displacement within itself, and which can be easily and expeditiously operated to release the strap.

With these ends in view, and such others as pertain to my invention, it consists of the peculiar construction and arrangement of parts, as will be hereinafter fully described and claimed.

To enable others to understand my invention, I will now proceed to describe the same in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of my harness-buckle. Fig. 2 is a vertical central longitudinal sectional view thereof. Fig. 3 is a detail perspective view of the lever. Fig. 4 is a detail view of a modified form of the clamping-slide. Fig. 5 is a vertical transverse sectional view on the line X X of Fig. 2.

Like numerals of reference denote corresponding parts in all the figures of the drawings, referring to which—

1 designates the frame of a harness-buckle embodying my invention. This frame 1 is provided with integral side flanges, 2, which depend therefrom and are arranged parallel with each other, and at each end of the frame is formed a pair of inclined or diagonal slots, 3 4, respectively, one slot of each pair being formed in each of the side flanges, 2, and the two slots of the pair being arranged diametrically opposite to each other, so as to be in line with each other. The lower extremities of the inclined slots terminate or open through the lower free edges of the side flanges, 2, to enable the guide-pins of the clamping-slide to

be readily inserted into or removed from said slots.

The buckle-frame is rounded or curved on its top side, (see Fig. 1,) and it has raised flanges or ribs 6, which are curved longitudinally, said curved ribs 6 being formed on opposite sides of the buckle-frame and arranged between the slots at opposite ends thereof, preferably close to one of said slots. These curved ribs form the bearings against which the lever, presently described, presses when manipulated to move the clamping-slide.

The clamping-slide 7 corresponds in width to the space between the side flanges, 2, of the frame, so as to fit snugly between the same, and this slide is provided with two pairs of laterally-projecting guide-pins, 8 9, which fit in the slots 3 4 of the buckle-frame to connect the slide to the frame and at the same time enable it to be adjusted to release or firmly clamp the strap without separating it from the frame.

The strap 10 is fitted or passed between the frame and clamping-slide, and the latter is provided with teeth or serrations 11 on its face, which bears against the strap to enable the slide to firmly clamp the strap between itself and the frame.

The frame is further provided on the lower face opposite the serrated face of the slide with a transverse rib or shoulder, 12, which assists the clamping-slide in holding the strap against displacement when the strap is gripped by the slide.

By providing the clamping slide and frame with the transverse ribs or teeth, as described, and fitting the slide in the inclined slots, I am enabled to securely clamp the slide against movement without perforating the strap, which enables me to preserve the strength of the strap.

By the use of the inclined slots and guide-pins at each end of the slide and frame I am enabled to hold the slide in a position parallel at all times with the frame, and to prevent either end of the slide from dropping below the other end, so that the slide will engage or bear on the strap throughout its length, and thus materially increase its clamping-surface and efficiency.

In lieu of providing the slide with the in-

tegral ribs or teeth, I may use friction-rollers 13, which are arranged in slots 14 near the ends of the slide and journaled on shafts or trunnions 15, to facilitate the adjustment of the slide over the strap without detracting from its efficiency.

I will now proceed to describe the lever 16 for operating the slide. (Shown in Fig. 3.) This lever is made of stout spring-wire and bent to form a bail, 17, which straddles or incloses the buckle-frame 1, the sides of the bail being curved to conform to the configuration of the curved ribs of said frame to adapt the bail to bear or rest firmly against the ribs in manipulating the lever to adjust the slide. The bail at one end is bent or recurved upon itself to provide a tongue, 18, which is arranged at one side of the bail and is of less width than the space between the parallel side flanges, 2, so that the tongue can be projected or forced between said flanges 2 to engage one of a series of raised ribs, 19, on the exposed face of the clamping-slide. In order to move the slide endwise, the lever is drawn down so that the curved part of the bail adjoining the tongue thereof rests on the curved ribs, and the tongue engages one of the ribs 19, after which the lever is moved toward the buckle to force the slide endwise until the adjoining rib 19 comes beneath the tongue, when the lever is again operated to feed the slide. As the slide works in the inclined slots it is moved laterally of the buckle-frame simultaneously with its endwise movement according to the direction in which it is forced by the lever.

The operation of my invention will be readily understood from the foregoing description, taken in connection with the drawings.

The buckle-frame 1 is provided with one or more integral loops, 20, to which straps can be connected, as is usual.

Slight changes in the form and proportion of parts can be made without departing from the spirit of my invention.

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

1. A harness-buckle consisting of a frame having the curved ribs or flanges 6 at its sides, the clamping-slide fitted between the sides of the frame and connected thereto, so as to be capable of movement laterally of the frame and in the direction of its length, said slide having serrations on its lateral faces, and the lever 16, having the bail which embraces the frame and is curved to fit closely against the curved ribs of said frame, said bail having the tongue 18, which is arranged between the sides of the frame and is adapted to take into the serrations on the outer face of the slide, substantially as and for the purpose described.

2. A harness-buckle consisting of a frame having the diagonal slots in its side flanges, and the curved flanges 6, on opposite sides thereof, at points between the slots, the serrated clamping-slide provided with pins or studs which fit in said slots, and a lever having a curved bail fitted on the frame to bear against the curved flanges 6 thereof and bent upon itself to form a tongue, 18, which fits between the side flanges of the frame and is adapted to engage the serrations on the clamping-slide, all arranged and combined for service, as herein shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

LOYAL M. DODDRIDGE.

Witnesses:

W. S. WHITTLESEY,
L. C. PALMER.