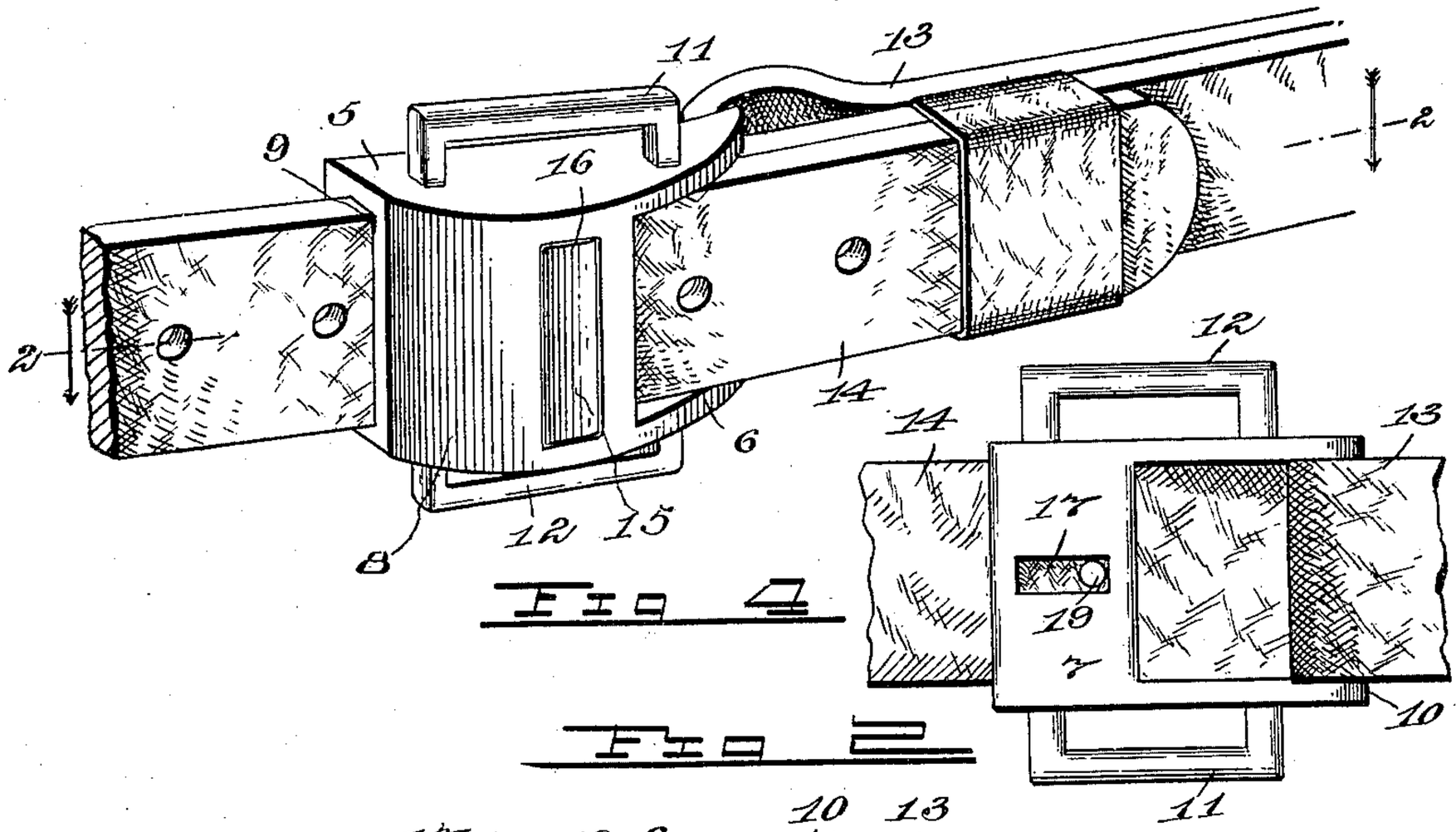
No. 688,654 Patented Dec. 10, 1901.

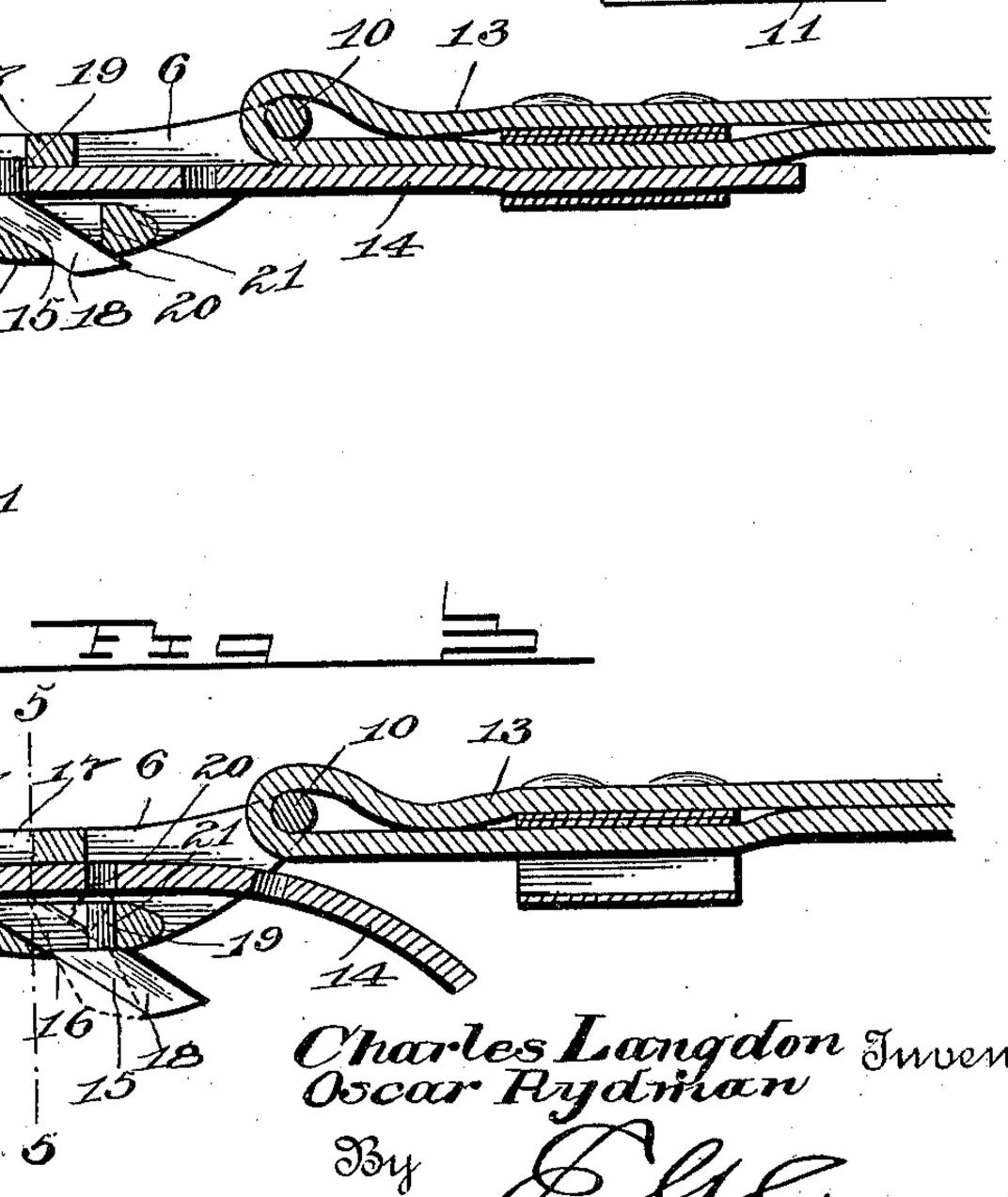
C. LANGDON & O. RYDMAN.

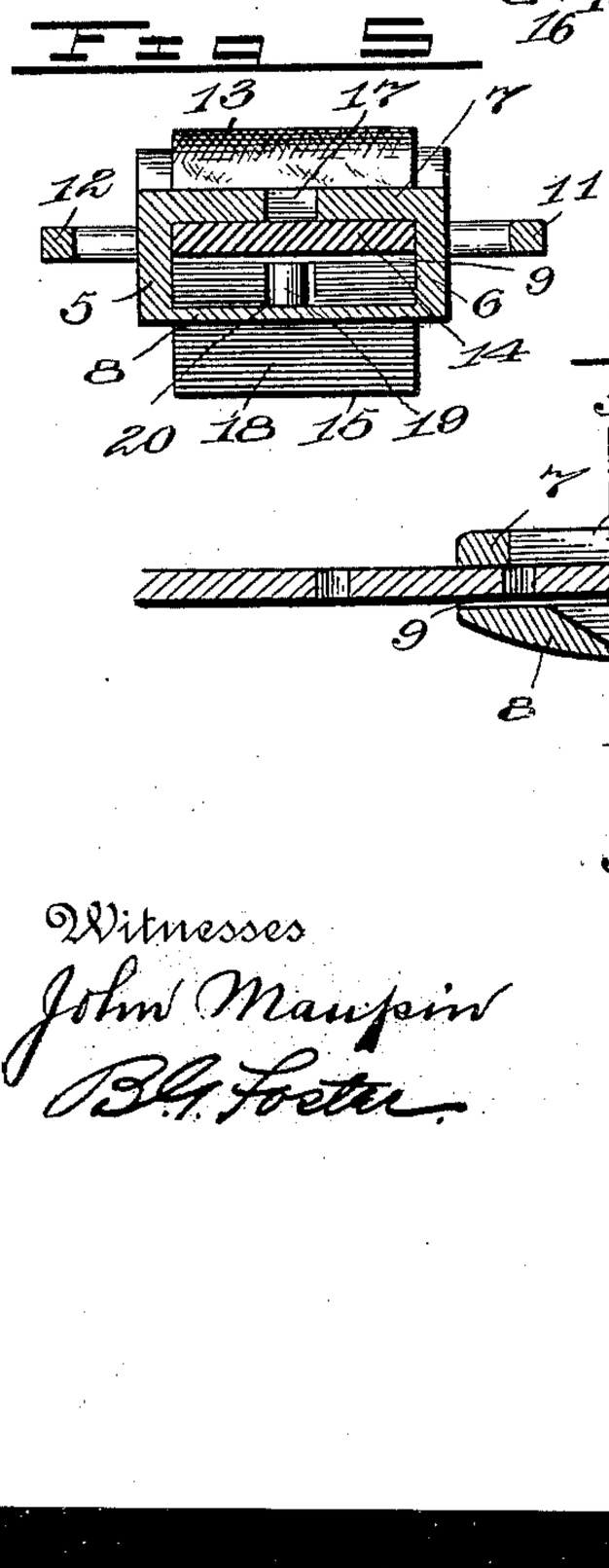
BUCKLE.

(Application filed Mar. 30, 1901.)

(No Model.)







Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES LANGDON AND OSCAR RYDMAN, OF MISSOURI VALLEY, IOWA.

BUCKLE.

SPECIFICATION forming part of Letters Patent No. 688,654, dated December 10, 1901.

Application filed March 30, 1901. Serial No. 53,698. (No model.)

To all whom it may concern:

Be it known that we, CHARLES LANGDON and OSCAR RYDMAN, citizens of the United States, residing at Missouri Valley, in the county of Harrison and State of Iowa, have invented a new and useful Buckle, of which the following is a specification.

The present invention relates to buckles, and although designed more especially for use as a trace-buckle it may be used for connecting various kinds of straps.

One of the objects of the invention is to provide a buckle which will securely fasten a strap and will provide a clamping engagement therewith, so that the strain will be distributed across the entire width of the strap and the harder the pull that is exerted thereon the tighter will be said clamping engagement.

A further object is to so construct the buckle that the strap may be readily disengaged and released therefrom by a simple manipulation of the strap.

To the accomplishment of these several objects the construction set forth in the following specification and shown in the accompanying drawings is preferred, although this construction shown and described may be modified slightly, provided said change is within the scope of the claims hereto appended.

In the drawings, Figure 1 is a perspective view of the preferred form of buckle. Fig. 2 is a longitudinal sectional view of the same, taken on the line 2 2 of Fig. 1. Fig. 3 is a view similar to Fig. 2, but showing the locking-tongue in inoperative position. Fig. 4 is a rear elevation of the buckle. Fig. 5 is a vertical cross-sectional view through the same, taken on the line 5 5 of Fig. 3.

Similar numerals of reference designate similar parts throughout the several figures of the drawings.

The buckle, as shown, comprises a frame and a strap-engaging tongue slidably mounted on the frame. The frame comprises an open-ended casing having side walls 5 and 6, connected by the two face-plates 7 and 8, thus forming an intermediate passage-way 9. The side walls 5 and 6 project beyond the ends of the casing and are connected by a cross-bar 10. The usual side loops 11 and 12 are provided on the exterior faces of the sides 5 and 6. One end of a strap—as, for instance, a hame-strap 13—is secured about the cross-bar 10, and the end of the other strap 14 is passed through the passage-way of the frame. For the purpose of holding this strap in place the tongue 15 is provided, which is mounted in the frame in the following manner: The face-plate 8 is thicker at its intermediate portion than at its ends, and this thickened portion is provided with a transverse opening 16, which opens into the interior passage-way and inclines toward the end of the frame which is opposite the cross-bar 10. A longitudinal slot 17 is arranged in the opposite face-plate 7. The tongue is slidably mounted in the transverse opening and comprises a clamp-plate 18, having its inner edge beveled, so that it will be substantially parallel with the interior walls of the passage-way, said beveled end carrying an offset stud 19, which is arranged to project across the passage-way and engage in the slot 17. When in this position, the outer end of the tongue is substantially flush with the outer face of the plate 8. The tongue can be moved outwardly in the inclined slot, so that the stud 19 will be located out of the plane of the passage-way, and a notch 20 is therefore provided in the wall of the inclined opening 16, which receives said stud, as clearly shown in Fig. 3. The wall 21 therefore forms a stop which limits the vertical movement of the tongue, and thus prevents its displacement.

In addition to its sliding movement, the tongue, when in its inoperative position, has a rocking movement also, so that by tilting it toward a position at right angles to the frame the lower portion of the stud will be projected beyond the inner face of the plate 8, as indicated in dotted lines in Fig. 3.

In inserting a strap, as 14, the tongue is moved to its inoperative position and an inward pressure is applied to the projecting portion thereof, so that the passage-way through the tongue is entirely free and unobstructed, as shown in Fig. 3. The end of the strap is then passed through the passage-way until the desired adjustment thereof is obtained, whereupon the exposed portion of the tongue is swung around until the end of the stud is projected into the passage-way and in en-

gagement with the strap. The strap is then moved in a reverse direction and the tongue will be consequently moved down the incline until its inner edge binds tightly upon the strap. At the same time the stud will pass through the strap and securely hold it against further retrograde movement. To release the strap it is only necessary to draw the strap through, whereupon the tongue will be forced to its inoperative position and can be held there by a slight inward pressure upon the exposed portion, as before described. By this construction several important advantages are obtained. In the first place, a strap may be readily and securely fastened and as readily released. Furthermore, the strap is clamped across the entire width by the broad bearing end of the tongue, so that the stud is relieved of a great deal of the strain, which is thus distributed. Finally, the device is very simple in operation and construction and is therefore a useful and inexpensive article to manufacture.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what we claim is—

1. In a buckle, the combination with a frame comprising a casing having a longitudinally-disposed passage-way therethrough for a strap and being provided in one wall with an opening that communicates with the passage-way and is disposed at an inclination thereto, said opening having a notch in its rear face contiguous to the passage-way, of a tongue slidably mounted in the opening and located at an inclination to the walls of the passage-way, the inner end of said tongue forming a clamping portion which is arranged to engage the strap which is passed through the frame, and having an offset strap-engaging stud located intermediate the side edges of the tongue and at substantially right angles to the walls of the passage-way, said stud fitting in the notch of the opening when the tongue is moved outwardly.

2. In a buckle, the combination with a frame comprising a casing having an interior passage-way for a strap, one wall of said casing being provided with an opening that inclines toward one end thereof, the opposite wall being also provided with an opening, of a tongue slidably mounted in said inclined opening and provided with an offset strap-engaging stud arranged to project into the passage-way of the casing and engage in the opening of the opposite wall thereof.

3. In a buckle, the combination with a frame comprising a casing having an interior passage-way therethrough for the reception of a strap, one wall of said casing being provided with a transverse opening that inclines toward one end thereof, the opposite wall having a longitudinal slot, of a tongue slidably mounted in said inclined opening and having its inner end beveled and substantially parallel with the interior walls of the passage-way, and an offset strap-engaging stud carried by the inner end of the tongue and adapted to project across the passage-way and engage in the slot of the opposite wall thereof, said stud also forming a stop to limit the outward sliding movement of the tongue.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

CHARLES LANGDON.
OSCAR RYDMAN.

Witnesses:
W. H. WITHROW,
F. S. BURBANK.