

No. 632,793.

Patented Sept. 12, 1899.

W. E. SELL & W. C. MAYNARD.

CLAMPING BUCKLE.

(Application filed Nov. 25, 1898.)

(No Model.)

Fig. 1.

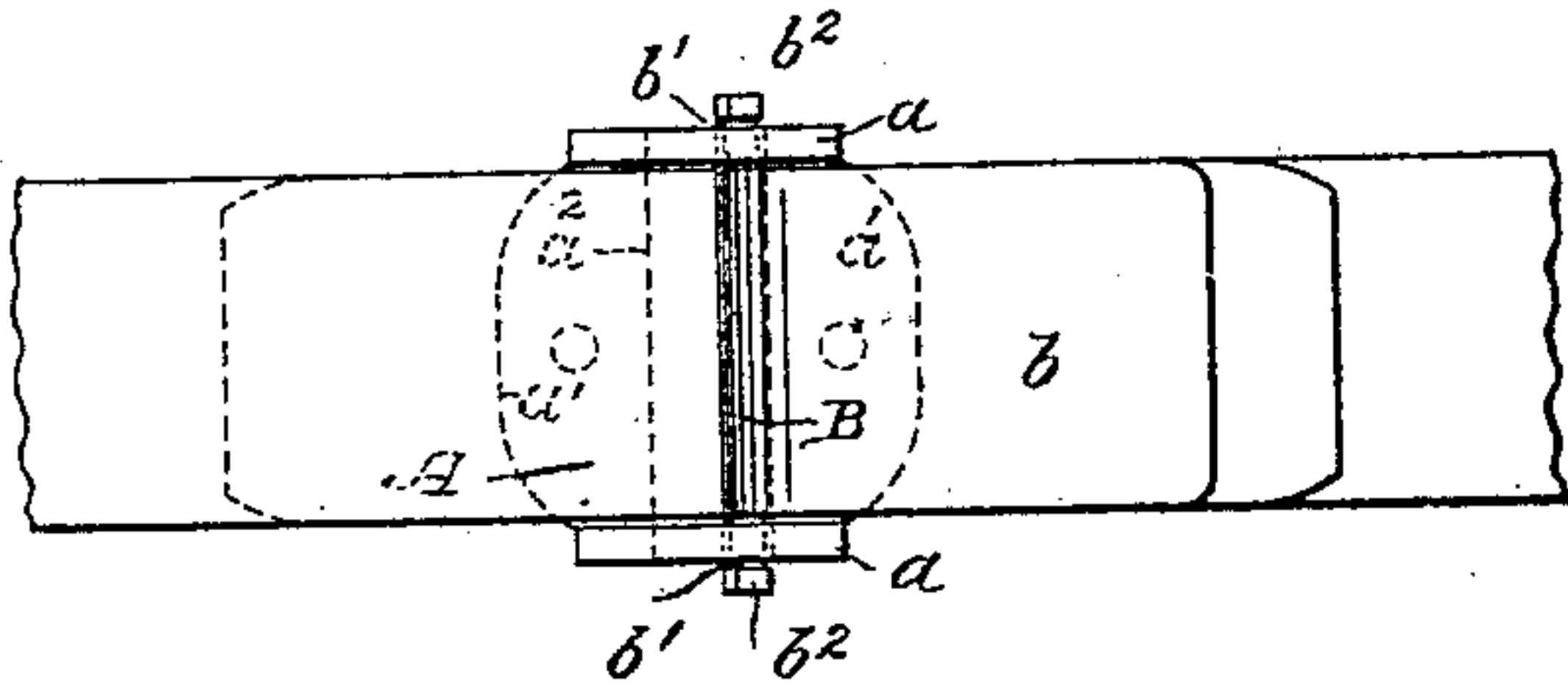


Fig. 2.

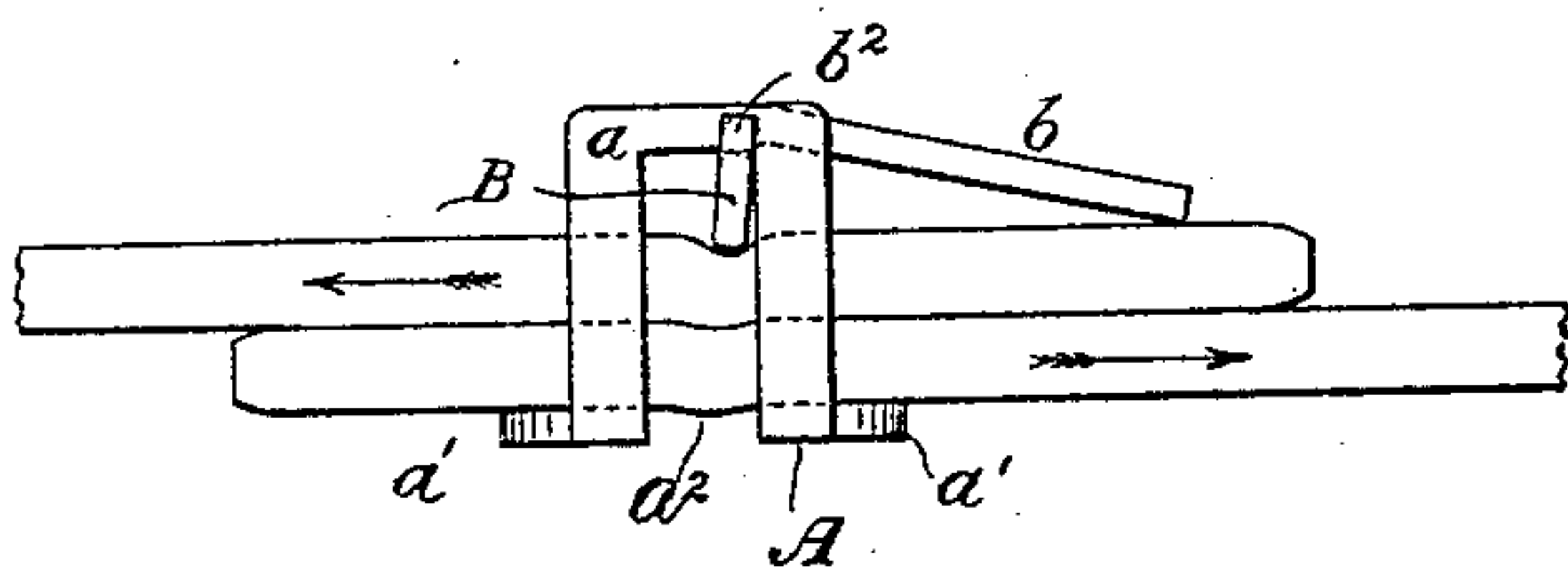


Fig. 3.

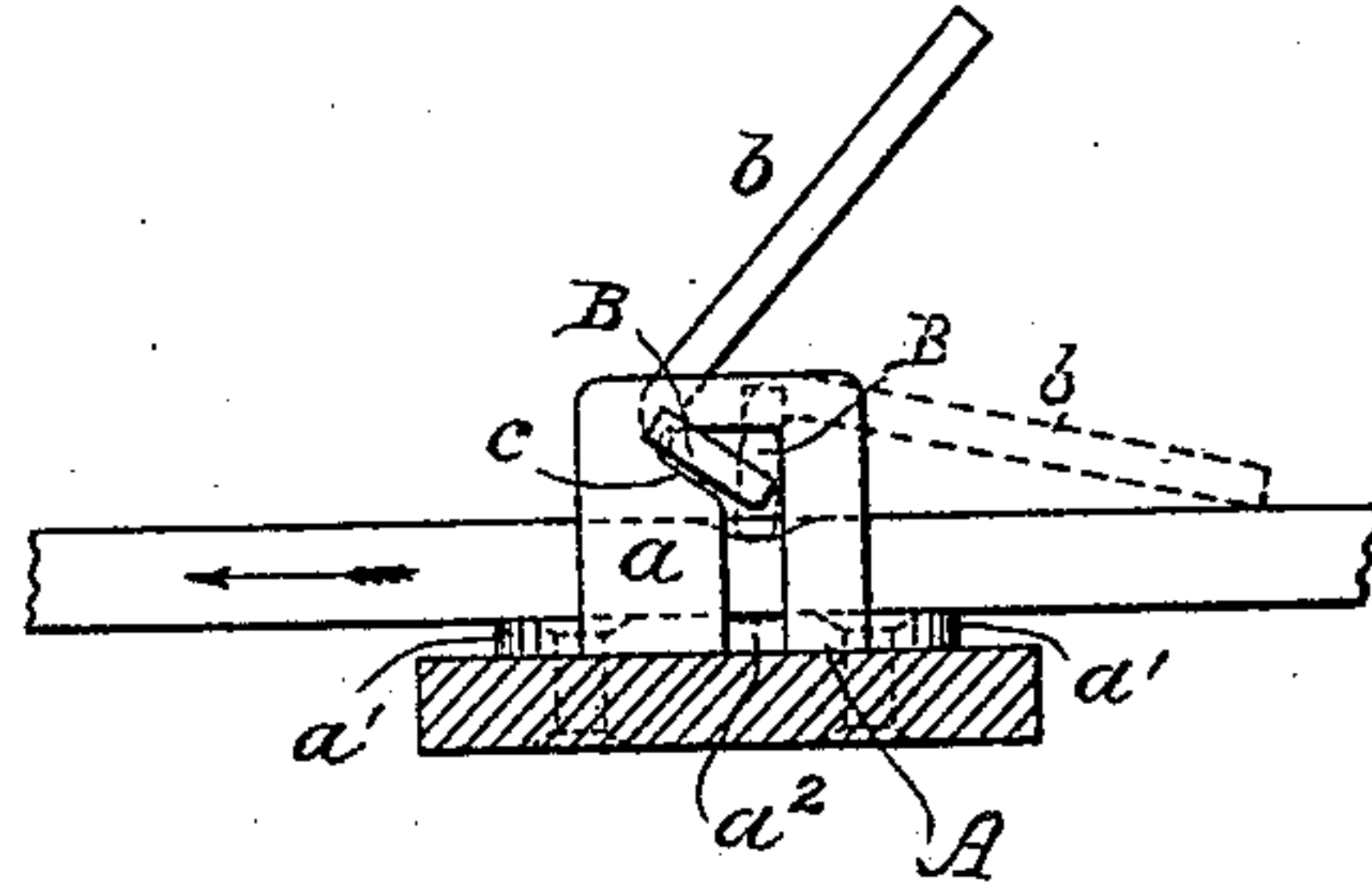


Fig. 6.

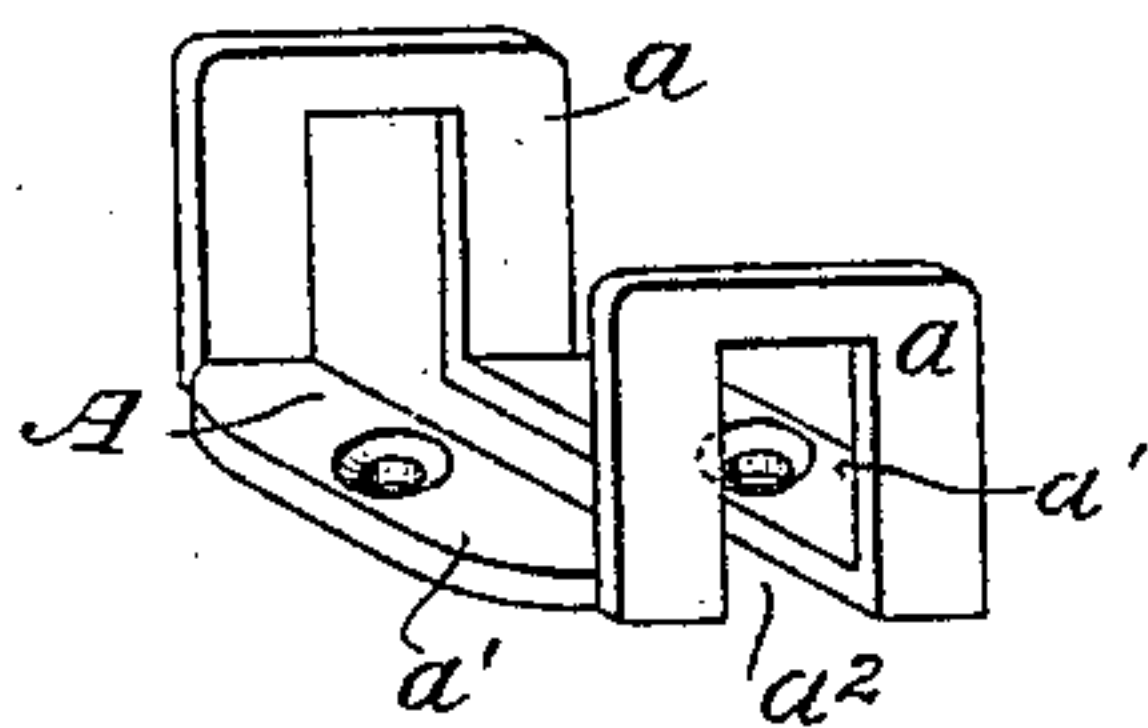


Fig. 4.

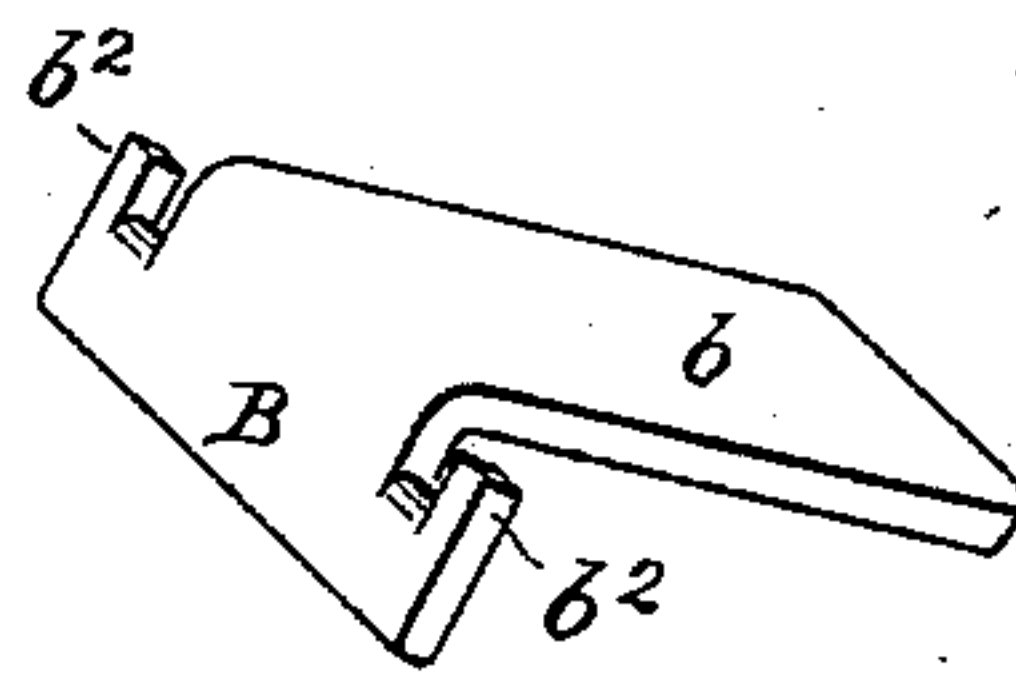


Fig. 7.

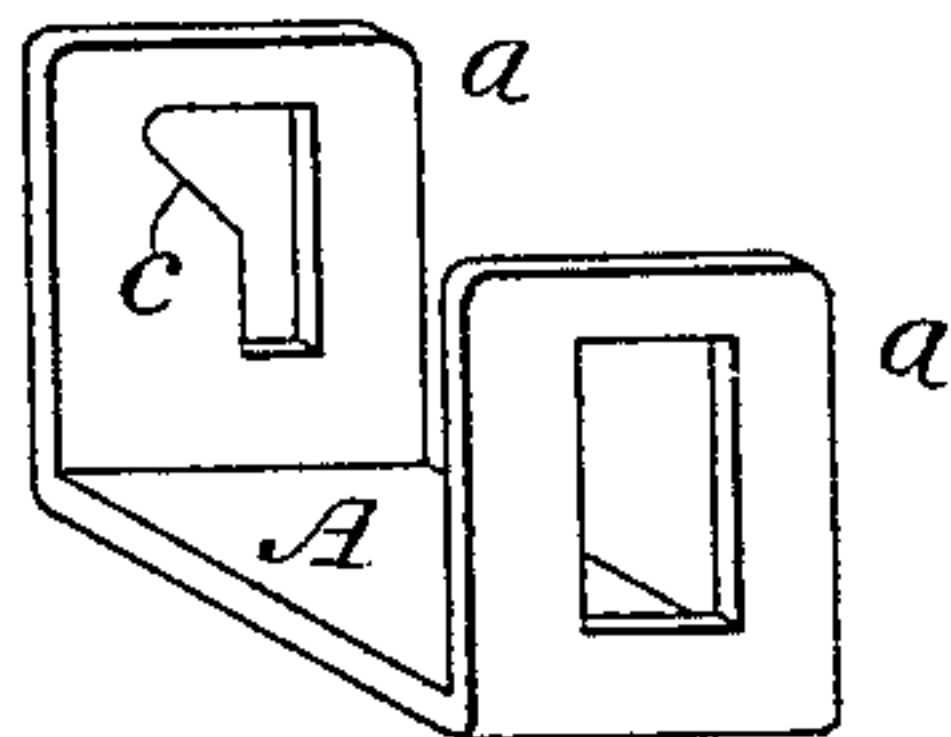
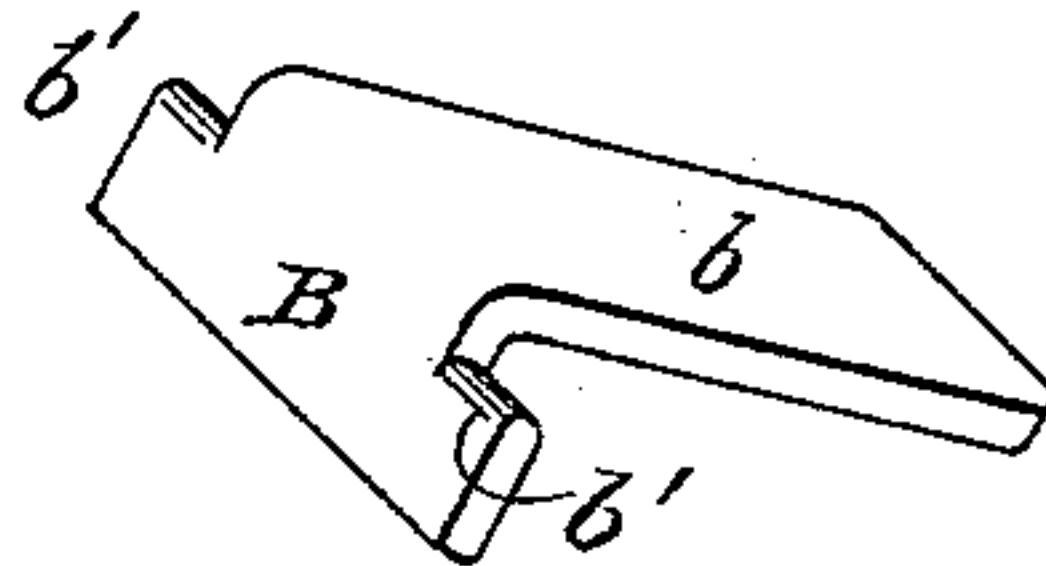


Fig. 5.



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WILLIAM E. SELL AND WILLIAM C. MAYNARD, OF CANTON, OHIO.

CLAMPING-BUCKLE.

SPECIFICATION forming part of Letters Patent No. 632,793, dated September 12, 1899.

Application filed November 25, 1898. Serial No. 697,315. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM E. SELL and WILLIAM C. MAYNARD, citizens of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Clamping-Buckles, of which the following is a specification, that will enable those skilled in the art to which our invention pertains to make and use the same.

Our invention relates to that class of buckles that act to clamp straps or other articles of like nature together or to any object upon which the base of the buckle may be affixed. Its objects are to avoid the perforation of the straps usual with tongued buckles and also the mutilation or abrasion of the surface of the strap usual with buckles having serrated or sharp-toothed clamping edges. Its further object is to so arrange the parts that clamping force may be applied to the strap without slipping or moving it backward in the buckle—in other words, the strap may be drawn up tightly, as desired, and not retreat or slip backward upon the application of the clamping mechanism of the buckle; and its further object is to so shape and arrange all the parts as to produce a cheaply-constructed and effective clamping-buckle that will carry out the objects before mentioned.

It consists of a main frame or plate of metal extending transversely across the line of the strap and having upturned ears or lugs at each side, said ears or lugs having suitable perforations to receive the ends of a clamping-tongue, which extends across the strap and is provided with an extension or lever, by means of which it is operated or locked into clamping position.

The accompanying drawings show our invention in the best forms now known to us; but certain changes in the details of construction and arrangements of the parts might be made within the skill of a good mechanic and without departing from the spirit of our invention as set forth in the claims at the end of this specification.

Figure 1 is a plan view of one form of our improved clamping-buckle. Fig. 2 is a side elevation of the same, showing the parts in operative clamping position. Fig. 3 is a similar view showing a modification of the shape

of the aperture in the ears or lugs of the main frame of the buckle. Fig. 4 is a detached perspective view of the clamping-tongue and its lever. Fig. 5 is a modification of the same. Fig. 6 is a detached perspective view of the main frame or plate. Fig. 7 is a similar view of the main frame, showing modifications of the forms of apertures in its side lugs or ears.

A is the plate or main frame having upturned side lugs or ears *a*, which are apertured to receive the ends of a rolling or rocking clamping-bar B, which extends across the space between the ears and through the apertures therein, as shown. The main plate or frame A is preferably stamped from a flat piece of sheet metal, and its ears or lugs *a* are afterward bent up to the positions shown. The plate may be a plain piece extending across the space between the lugs, or it may be widened out between the lugs, as shown at *a'* in Figs. 1, 2, 3, and 6, to form a broader base, which may, if desired, be riveted or otherwise secured to one of the straps or members to be united by the buckle. The apertures in the ears may be continuations of a slot *a²*, extending across the entire base, as shown in Figs. 1, 2, 3, and 6, or they may be individual openings formed in each lug, as shown in the modifications in Fig. 7. They may also be square or rectangular or formed with sloping back sides *c* at their upper ends, as shown in Figs. 3 and 7, for a purpose to be more fully hereinafter set forth.

The clamping bar or tongue B and its lever *b* are preferably made of a single piece stamped from a sheet of metal and bent at substantially a right angle, as shown, the tongue being wider than the lever to form projections *b'*, which extend into the apertures of the upright lugs *a*. The bar or tongue B, as here shown, is made flat and of sufficient width to extend from the tops of the slots in the lugs downward sufficiently far to clamp the straps in contradistinction to being rounded at the ends, so as to have only a turning movement, as has heretofore been the case. By thus making the tongue B flat and of sufficient width to clamp the strap the turning or sliding movement which always takes place in the pivoted levers is entirely done away with and the lower edge

of the lever remains comparatively stationary, while its upper edge alone has a sliding movement. We may also have at the ends of these projections lugs or shoulders ⁵ b^2 to embrace the outer sides of the ears and prevent them from spreading or bending away from each other at their tops. The lower edge of the tongue is smooth and may be slightly rounded at its corners to avoid abrading or tearing the strap, its office being to ¹⁰ clamp the strap or straps so firmly against the base as to prevent slippage in the direction to the strain to which they are to be subjected. To this end the length of the slots ¹⁵ or apertures in the ears is so arranged that when the strap to be clamped is in place the distance from its upper surface to the top of the slots is less than the depth of the clamping-tongue, so that when the tongue is rocked ²⁰ into a vertical position the upper edges of its extensions slide upon and impinge with great force against the upper ends of the slots, while its lower edge bears upon the surface of the strap with a sufficient grip to hold it against ²⁵ slippage.

It will be observed by an inspection of the drawings that the lower edge of the clamping-tongue bears against the strap at a point near the front side of the slots and that as ³⁰ the tongue is rocked to clamp or loosen this its point of contact with the strap remains in the same relative position to the front side of the slots, while the top edge of the tongue or its extensions slide back and forth against ³⁵ the upper sides of the slots. By this means we are enabled to apply the clamping pressure of the rocking tongue to the strap without its slipping upon the strap or causing the strap to slip or give back slightly, as would ⁴⁰ be the case if the top edge of the tongue extensions were pivoted fulcrums, about which the bottom edge would move back and forth as the tongue was rocked by the lever. This, in fact, we consider the main feature of our ⁴⁵ clamping-buckle, which distinguishes it from other buckles more or less similar in construction, but in all of which, so far as our knowledge extends, there is a certain retreat or slippage of the strap when the clamping- ⁵⁰ pressure is applied. This feature is particularly valuable where the straps are to be tightly drawn to embrace a hard unyielding substance and remain secured at the utmost limit to which they can be drawn. In fas-

tening on horse-boots, for instance, we find it ⁵⁵ specially desirable. The modification of the ear-slots having sloping or angular back sides c , as shown in Fig. 3, and in one of the ears of the base (shown in Fig. 7) may be of particular value in this connection, as the bottom ⁶⁰ edge of the tongue is held positively against any backward motion, while the top edge constitutes the moving fulcrum which slides along the upper sides of the slots.

Having thus described our invention, what ⁶⁵ we claim as new and useful, and desire to secure by Letters Patent, is—

1. A clamp-buckle, comprising a base-plate provided with upturned ears, and a coacting cam pivoted in said ears to coact with said ⁷⁰ base-plate, said cam being provided with an operating-lever adapted to lie parallel with the base-plate when the buckle is in its closed position, and with oblong trunnions, whose greatest width is in the direction at right ⁷⁵ angles to the length of the lever, said ears being provided with bearings of a width corresponding approximately to the width of the trunnions, whereby when the cam engages the surface of the article being clamped, said ⁸⁰ article will be held against movement with said cam, said cam moving longitudinally with relation to said base-plate, one of said bearings having a stop on its lower surface back of the front end thereof against which ⁸⁵ the trunnion is adapted to engage to limit its backward movement with relation to the base-plate in turning said cam, substantially as set forth.

2. In a clamp-buckle, a base-plate having ⁹⁰ upturned ears provided with bearings, combined with a cam, provided with an operating-lever which is adapted to lie parallel with the base-plate when the buckle is in its closed position, and oblong trunnions having pro- ⁹⁵ jections or ears on their outer upper corners; the trunnions being made to extend at an angle to the lever, and having a width that approximates to the width of the bearings, substantially as described. ¹⁰⁰

In testimony whereof we hereunto affix our signatures in the presence of two subscribing witnesses.

WILLIAM E. SELL.

WILLIAM C. MAYNARD.

Witnesses:

J. M. MYERS,

LULU RACKLE.