

No. 682,148.

Patented Sept. 3, 1901.

T. J. MACCARTHY.
BUCKLE.

(Application filed Mar. 29, 1901.)

(No Model.)

Fig. 1.

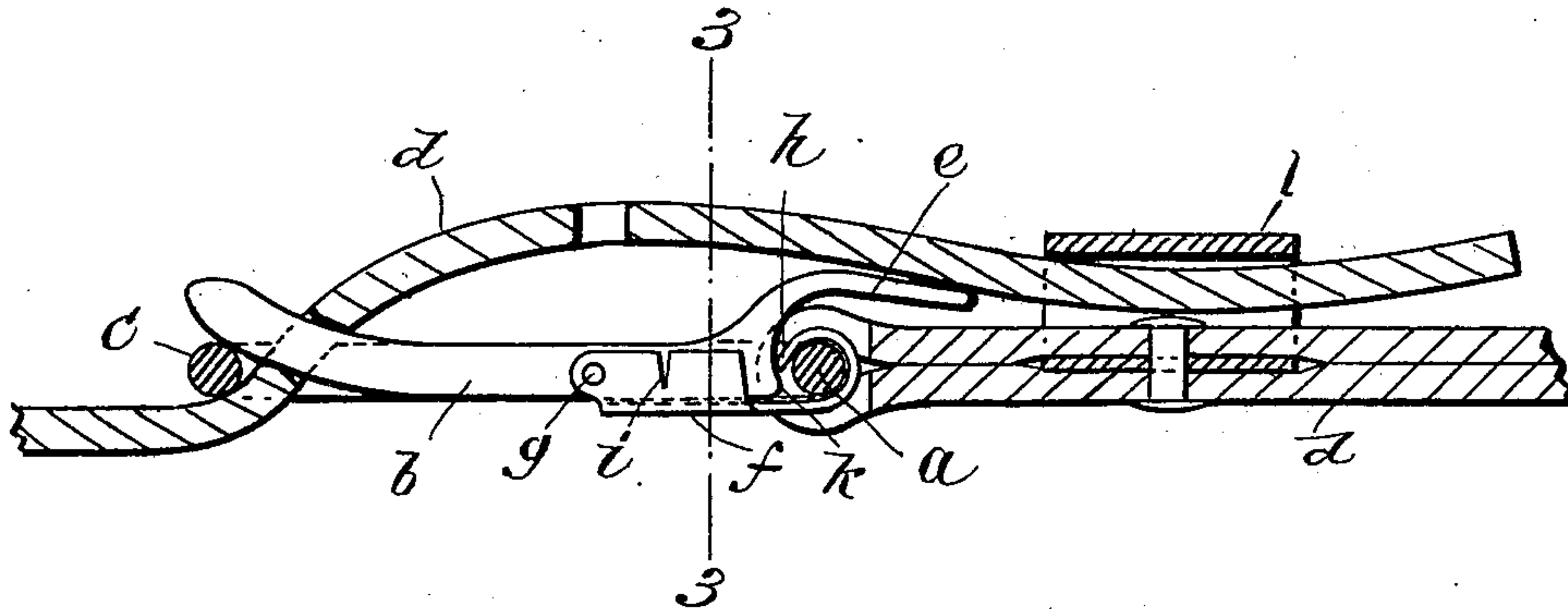


Fig. 2.

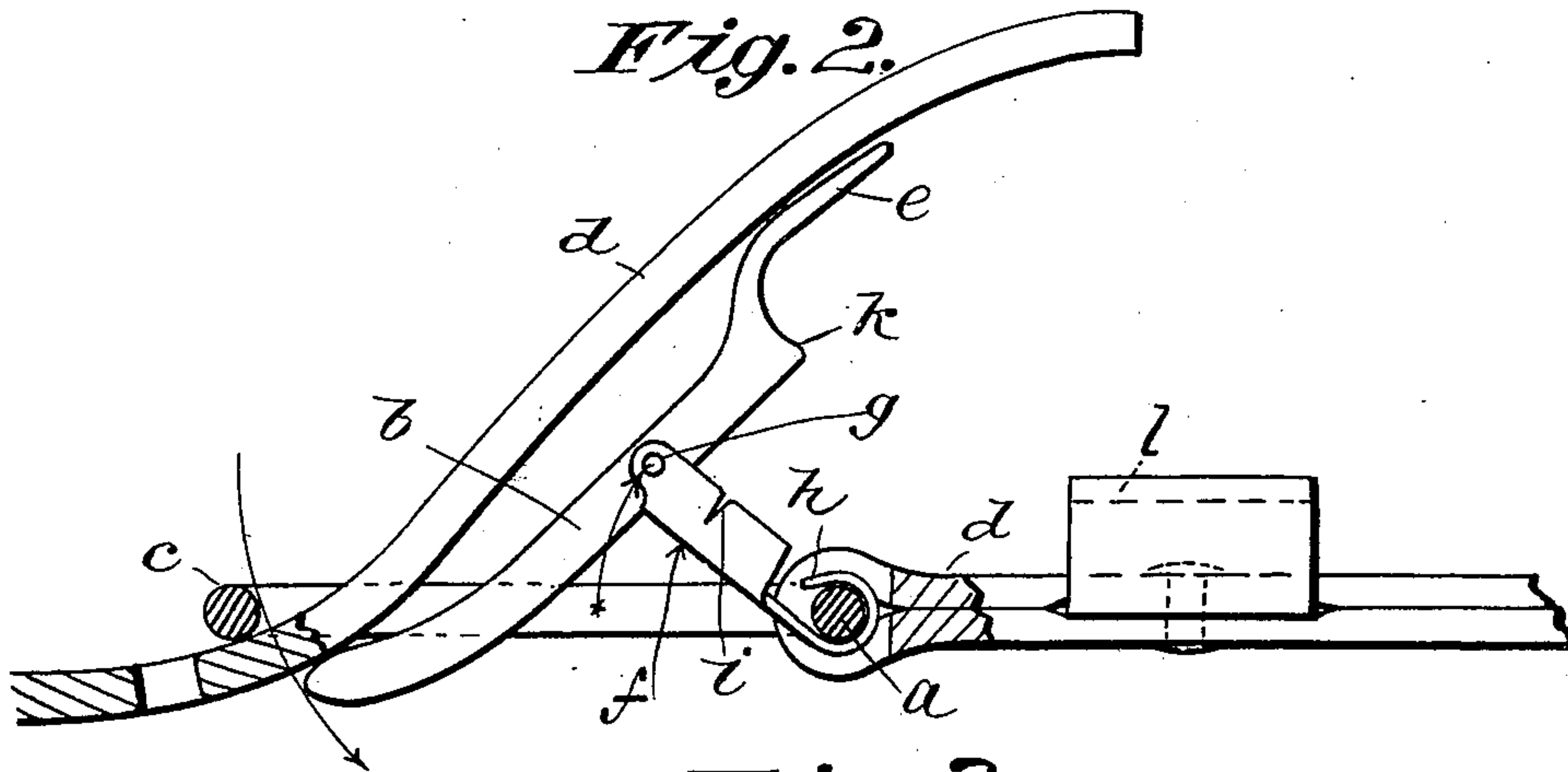
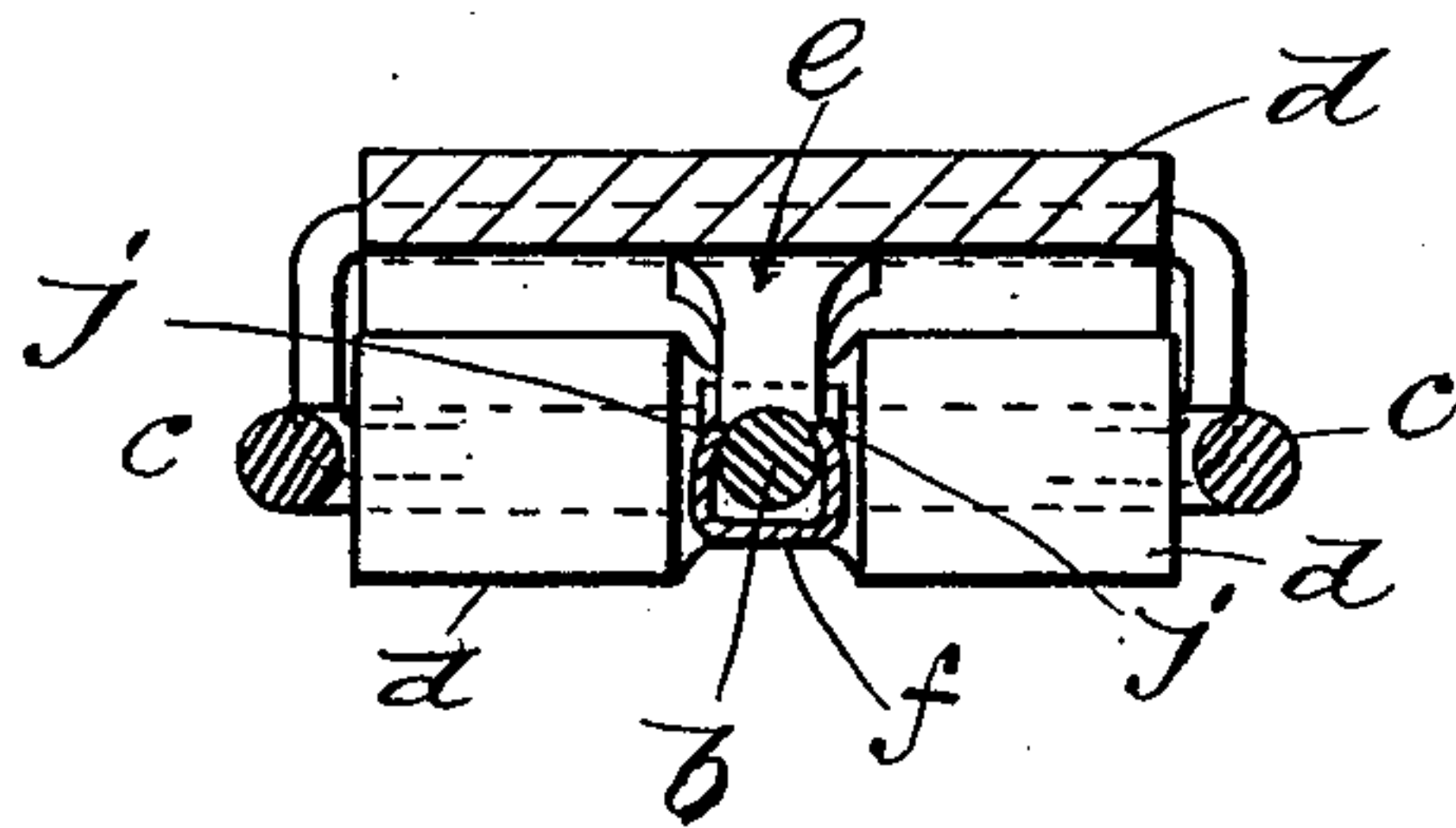


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

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BUCKLE.

SPECIFICATION forming part of Letters Patent No. 682,148, dated September 3, 1901.

Application filed March 29, 1901. Serial No. 53,462. (No model.)

To all whom it may concern:

Be it known that I, TIMOTHY J. MACCARTHY, a citizen of the United States of America, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Buckles, of which the following is a specification.

This invention relates to buckle constructions, and has for one object the construction of a buckle-tongue in a single piece, which is supported at each end on the buckle-frame and which is adapted to be moved endwise far enough to allow the strap-engaging end thereof to pass by one of the cross-bars constituting the ends of the frame, and thus allow the strap to disengage itself from the tongue.

A further object of the invention is to provide means for applying to the tongue a requisite degree of frictional engagement to hold the tongue in strap-engaging position.

With these ends in view the invention consists in hinging the tongue on a short arm, which is hinged on one of the cross-bars at or near one end of the frame, whereby when the parts are in operative position a toggle-joint is formed by the tongue and arm and whereby when the rear end of the tongue is sprung upward said arm will retract the tongue, allowing the strap-engaging end thereof to drop inside of the cross-bar, on which it normally rests, and thus permit the strap to slip off from the tongue.

In the drawings forming part of this specification, Figure 1 is a longitudinal sectional view of a buckle embodying my invention, showing the parts in strap-engaging position. Fig. 2 is a similar view showing the parts in strap-releasing position. Fig. 3 is a cross-sectional view of the buckle on line 3-3, Fig. 1.

In the drawings, *a* indicates the cross-bar of a buckle-frame, on which the tongue *b* swings, and *c* the opposite cross-bar, on which the strap-engaging end of the tongue bears when in engagement with one end of the strap, which is indicated by *d*, to the opposite end of which the buckle-frame is secured by the cross-bar *a*, as usual.

The frame and tongue of the buckle are made in the usual manner, except that the

tongue *b* is provided with a rearward extension *e*, whereby it may be manipulated, as hereinafter set forth.

The tongue *b* instead of being hinged on the cross-bar *a*, as in the ordinary manner, is pivotally supported at *g* on a short arm *f*, which swings on the cross-bar *a* at a point about midway between the sides of the buckle-frame, the strap being cut away at this point, as is usual when the tongue is attached directly to the cross-bar *c*. This arm *f* is connected with the tongue and cross-bar in such a manner that when the parts are in the position shown in Fig. 1 a toggle-joint will be formed.

The arm *f* is preferably struck up from sheet metal into a trough-shaped piece having a narrow tailpiece *h* adapted to be bent around the cross-bar *a* and whose extremity instead of being bent down close to the bar—is left in the form shown in Figs. 1 and 2, that is, extending toward the end of the arm *f*, to which the tongue is attached, for a purpose to be described farther on. Said trough-shaped portion of the arm *f* is divided by a transverse cut *i*, the outward portion of which is of such width as to receive freely the tongue *b* between its sides, but the inner portion of which has the upper edges of its sides bent inwardly somewhat, as shown at *j* in Fig. 3, whereby when the tongue is forced down into strap-engaging position, as shown in Fig. 1, the rear end thereof will have to be forced down between the said inbent sides of the arm, which will spring apart to receive it. This construction provides means for holding down the rear end of the tongue, so that it requires some application of force to raise it to release the strap.

To apply still more resistance to the raising of the rear end of the tongue, the latter is constructed with the shoulder *k*, formed by the up curve of the part *e* thereof, which as the tongue is forced downward encounters the end of the tailpiece *h* which projects across the path of movement of said shoulder and which will yield to the movement of the latter and apply more or less endwise pressure to the tongue.

Either one or both of the above-described

means of applying a certain degree of resistance to the disengaging movement of the tongue may be employed.

5 The shoulder *k* has another important function, and that is to prevent the disengagement of the tongue by means of a blow on the free end thereof which by the springing of the arm *f* might break the toggle; but as constructed it is seen that when the tongue
10 is in strap-engaging position the shoulder *k* practically has a bearing on the cross-bar *a*, which prevents any movement thereof endwise until the rear end of it has been raised far enough to escape the cross-bar and break
15 the toggle.

The usual loop *l* in the strap is provided, and when the free end of the latter is passed therethrough it holds the rear end of the tongue down and prevents it from catching
20 on anything which could effect the disengagement of the strap.

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

25 1. The combination with a buckle-frame, of a tongue therefor extending across the frame from end to end, one end of said tongue

constituting a thumb-piece whereby the tongue is operated; a short arm hinged on the frame by one end, and a pivotal connection between the other end and said tongue, 30 whereby the swinging movement of said arm in one direction will first raise the rear end of the tongue and then move it rearwardly; and a shoulder on the tongue whereby the 35 latter may be restrained against endwise movements to the rear, when in strap-engaging position, substantially as described.

2. The combination with a buckle-frame, of a short arm hinged on one of the cross- 40 bars thereof, a tongue made in one piece of greater length than said frame, a shoulder on said tongue, a pivotal connection between said tongue and arm, whereby the swing of 45 the arm in one direction will bring the shoulder on the tongue below the plane of the top of the buckle-frame, and the tongue in strap-engaging position, substantially as described.

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