

J. A. WHEELER, JR.
BUCKLE.
APPLICATION FILED JUNE 19, 1908.

963,193.

Patented July 5, 1910.

Fig. 1.

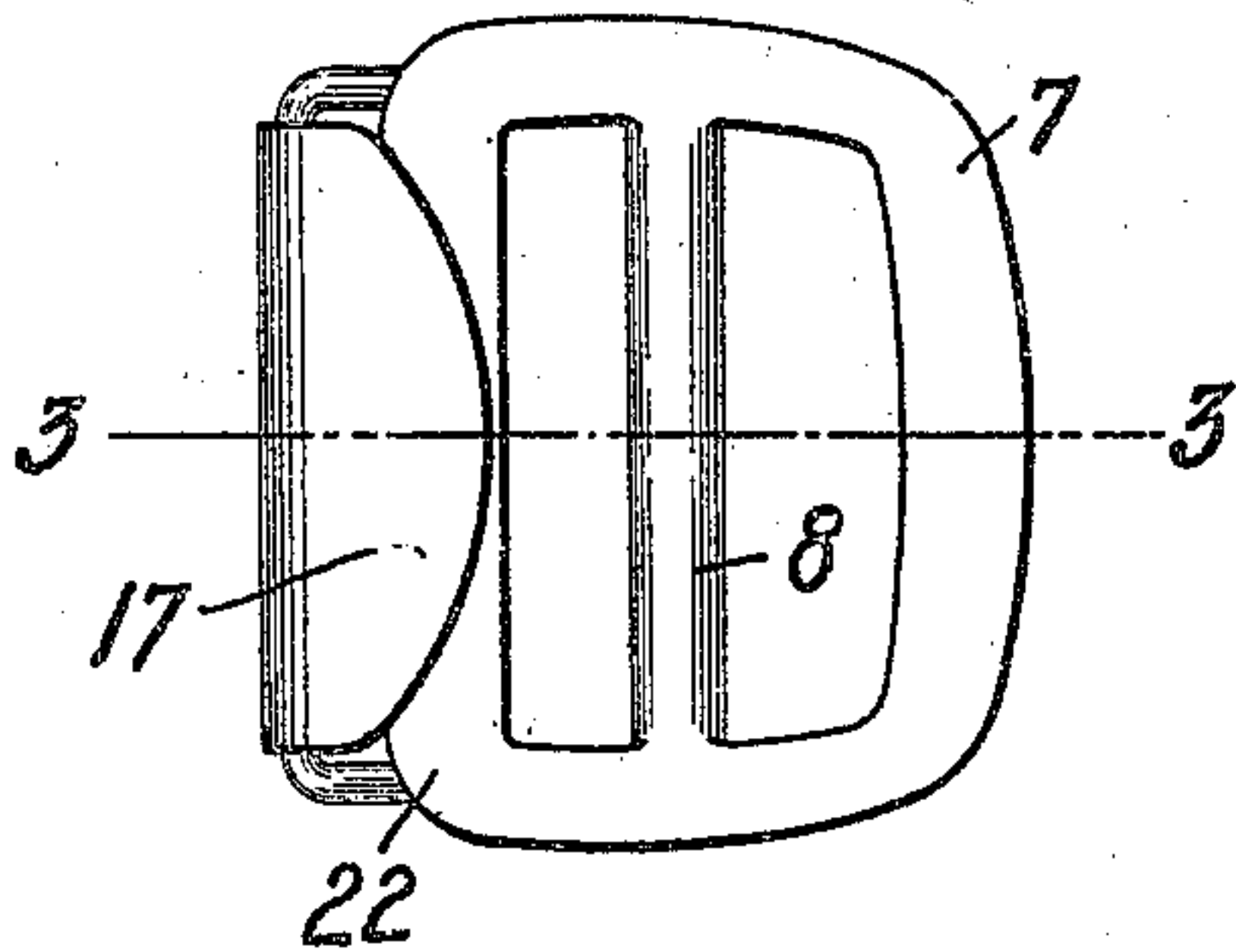


Fig. 2.

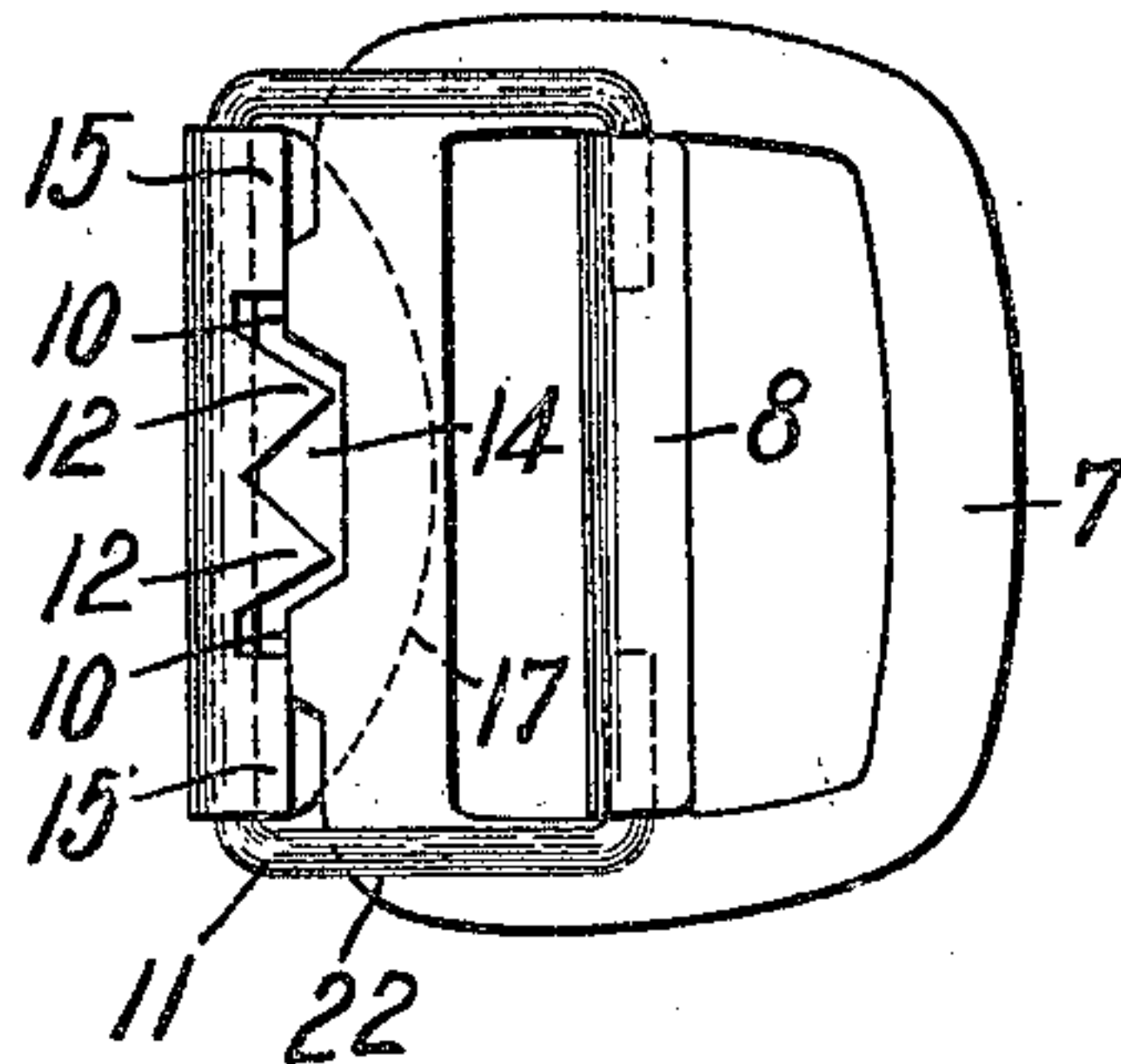


Fig. 3.

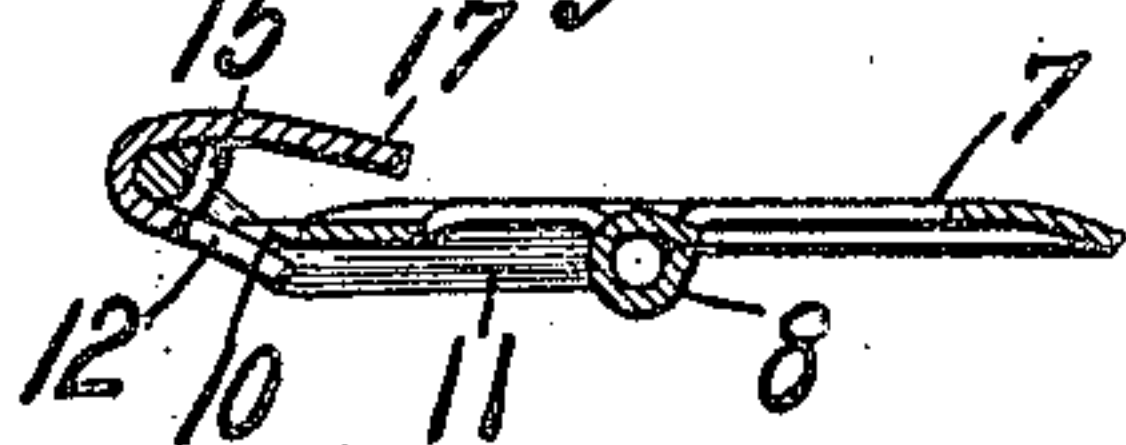


Fig. 4.

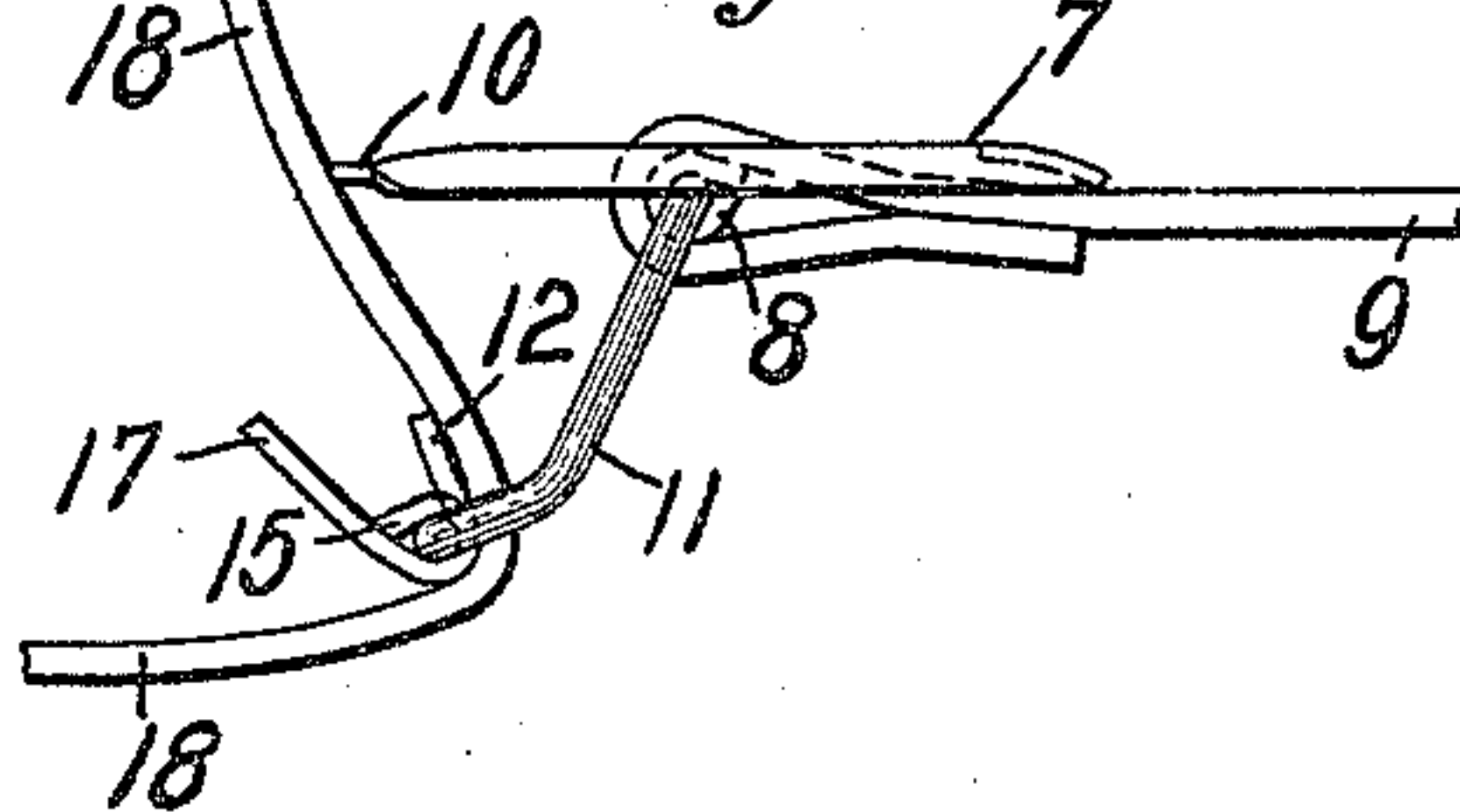


Fig. 5.

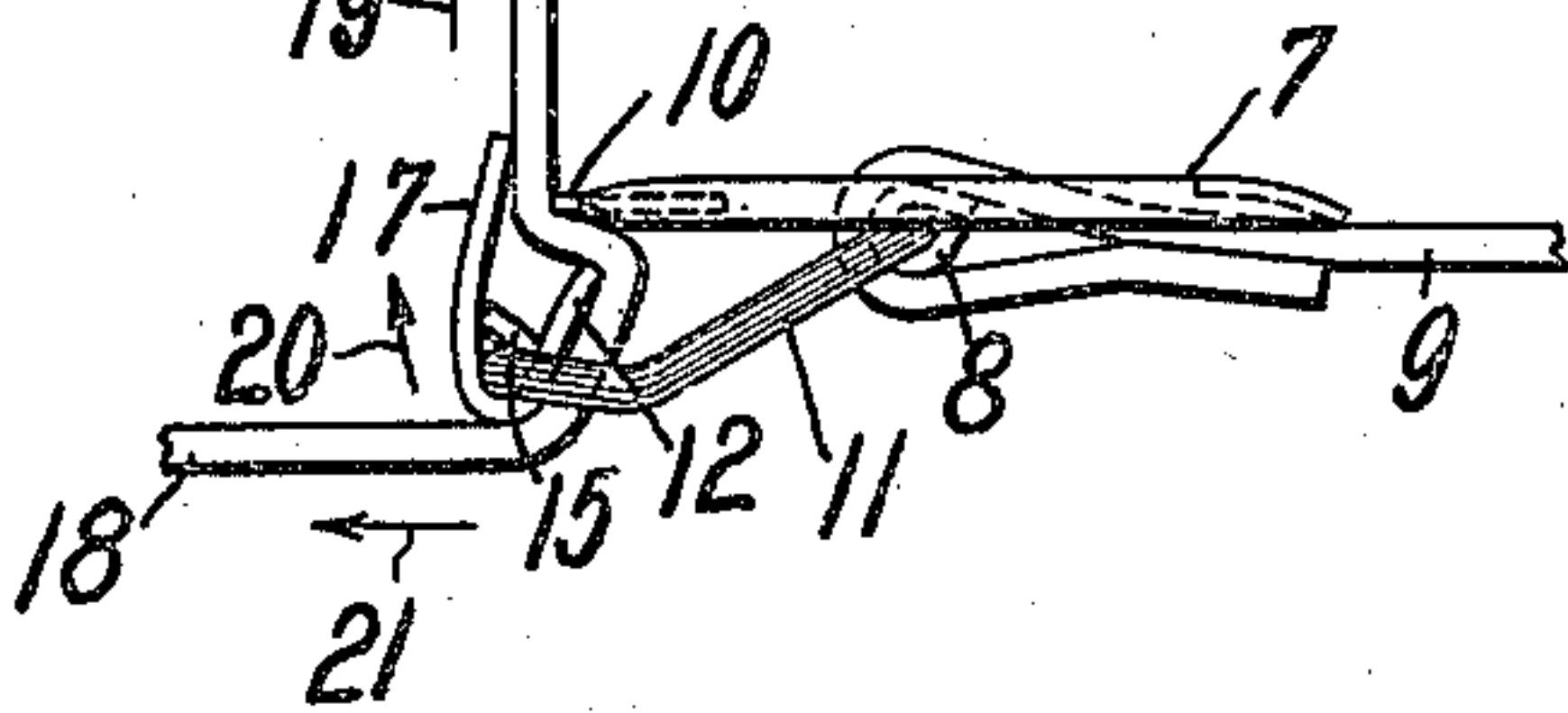
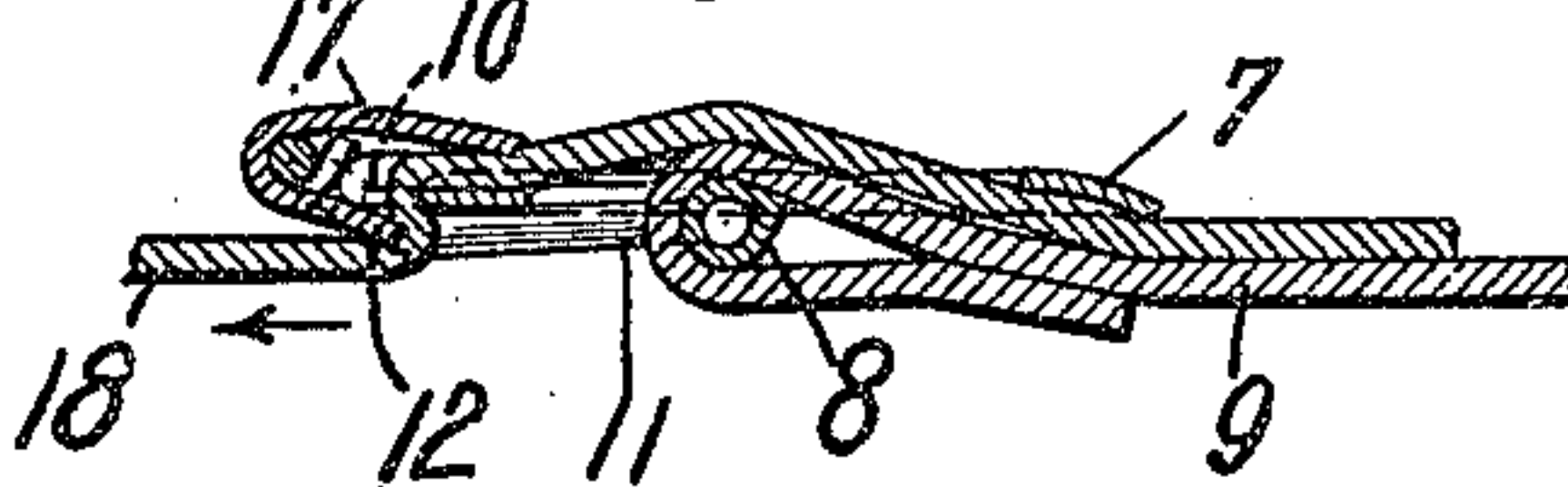


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN A. WHEELER, JR., OF WEST MEDFORD, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO ALMA MANUFACTURING COMPANY OF BALTIMORE CITY, OF BALTIMORE, MARYLAND, A CORPORATION OF MARYLAND.

BUCKLE.

963,193.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN A. WHEELER, JR., a citizen of the United States, residing at West Medford, in the county of Middlesex, State of Massachusetts, have invented an Improvement in Buckles, of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings representing like parts.

This invention relates to buckles; and pertains more particularly to an improved construction and organization providing for effective engagement and disengagement of a strap or the like.

The character of the invention may be best understood by reference to the accompanying drawings showing one of the various embodiments of which the invention is susceptible, which has been selected for purposes of illustration.

In the drawings,—Figure 1 is a top plan, or face view of the illustrative buckle; Fig. 2 is a bottom plan or rear view of the buckle; Fig. 3 is a section on the line 3—3 of Fig. 1; Fig. 4 is a side or edge elevation of the buckle shown in Fig. 1, showing a strap about to be engaged therewith; Fig. 5 is a side elevation similar to Fig. 4, showing a strap approaching its final engagement with the buckle; and, Fig. 6 is a section similar to that of Fig. 3, showing a strap in final engagement with the preferred form of buckle.

Referring to the drawings the illustrative construction of buckle comprises a body portion 7 which may have part of the material thereof stamped down and appropriately shaped to provide a barrel 8. The latter may serve as a convenient means of attachment for a strap 9, as shown in Figs. 4, 5 and 6. The body portion 7 is provided with a strap engaging means 10; and a bail 11 supplies opposed strap engaging means to cooperate therewith. The bail 11 may consist of bent wire; and may have its ends suitably shaped to project into the barrel 8, as shown in dotted lines in Fig. 2, whereby the barrel may serve as a bail fulcrum.

In many cases a mere frictional engagement supplied by the strap engaging means 10 of the body portion in cooperation with the bail 11 might be insufficient to hold the strap securely; it is desirable therefore to

supply means for a more secure engagement; and to this end the strap gripping means of the body portion preferably comprises the two jaws 10, 10, clearly shown in Fig. 2.

Mounted on the bail 11 are one or more cooperating jaws 12, 12. The preferred relation between the jaws 10 and 12 is such that they intermesh more or less, so that one jaw may project rearwardly beyond the extremity of the other. In this manner that part of the strap engaged by the buckle may be gripped along a staggered line; and this either alone or in addition to a mere frictional engagement between parts carried by the bail, and the jaw, provides for a secure gripping engagement.

In the specific construction shown in Fig. 2 the cooperating strap engaging parts of the bail and body portion have somewhat the character of overlapping teeth, the teeth 12, 12 projecting into a space 14 between the teeth 10, 10 of the body portion. The strap engaging teeth 12, 12 may be loosely mounted on the bail 11, so as to be revoluble more or less to accommodate varying conditions; for example, the teeth 12, 12 may be formed in a metal plate having portions 15, 15 struck up to encircle the transverse bar of the bail; and said metal plate may also provide an auxiliary member 17 which is preferred, as shown in Figs. 1, 3 and 6, to overlie cooperating strap engaging parts when a strap is in the final grip of the buckle.

With the preferred arrangement above described, a strap 18 (Fig. 4) may be readily introduced between the bail 11 and the body portion and drawn through the bail as far as desired. Ordinarily the mere friction or drag of the strap on the teeth 12 or parts connected therewith may serve to move the teeth out of the immediate path of the strap 18, so that they will not abrade the latter or interfere with its ready adjustment.

When the strap 18 has been properly adjusted, for example, as shown in Fig. 5, a part thereof will be positioned adjacent the strap engaging means 10, 10 of the body portion. In adjustment the normal pull in the general direction of the arrow 19 of Fig. 5 tends not only to tighten the strap as desired, but also tends to rock the bail in the general direction of the arrow 20 and to force the teeth 12 or their substitutes into secure engagement with the strap. In like

manner the reacting pull on the strap in the general direction of the arrow 21 tends to rock the auxiliary member 17 and teeth 12 from the position of Fig. 5 to that of Fig. 3, thereby finally causing the strap engaging means of the bail and body portion to intermesh as illustrated in Fig. 2. This may be assisted if necessary or desired by manipulation of the auxiliary member 17. In the end the straps 9 and 18 and the buckle preferably occupy the relations shown in Fig. 6. There the cooperating strap engaging means of the bail and body portion hold the strap securely along a staggered line; and the auxiliary member 17 overlies the engaging parts and preferably covers them and serves to give the buckle a flat appearance. An end of the strap 18 may be passed between a part of the member 7 and the strap 9, where it will be held in place. The body portion 7 may provide stop means 22, against which the bail may abut.

When engaged as just described the pull on the strap 18 in the direction of the arrow in Fig. 6 tends to rock the teeth 12 and auxiliary member 17 clockwise in Fig. 6; but the teeth are prevented from being withdrawn from suitable cooperative relation to the body portion by the auxiliary member 17 abutting against the top of the strap 18 overlying the body portion, and in part by the cooperation of the bail 11 with the stop means 22. In this manner engagement between the auxiliary member 17 and the strap may also contribute to hold the latter.

As shown in Figs. 3 and 6 the final gripping position of the preferred form of buckle is such that the cross bar of the bail may stand somewhat above the plane of the body portion 7 and the portions 15 on the bail, may ride over the strap intervening between the same and the jaws 10 of the body portion in such manner as to assist in locking the parts in the position shown in Fig. 6. The bend in the side arms of the bail contributes to this desirable effect. Thus, as the parts move from the positions of Fig. 5 to those of Fig. 6 the parts 15 on the bail may snap over the jaws 10.

To release the strap from the buckle its end may be drawn out from between the

body portion 7 and strap 9 and lifted to rock the auxiliary member 17 contrainclockwise in Fig. 6, or the auxiliary member 17 may be similarly manipulated directly by hand so as to remove the teeth 12 from cooperative relation with the body portion. The pull on the strap 18 in the direction of the arrow in Fig. 6 may have a tendency to rock the entire buckle about the axis of the barrel 8 and thereby to force the rear end of the body portion 7 (at the right in Fig. 6) downwardly against the straps thereunder. This serves to hold the buckle flat and to give a secure holding grip on the end of the strap 18.

A buckle embodying the features of this invention is capable of securely gripping a strap of any practicable thickness; and is thereby adaptable to various different needs without requiring special constructions and adjustments of parts to suit particular needs. It is to be understood, of course, that the invention is not essentially limited to the specific construction and organization shown in the drawings, since as will appear to those skilled in the art, the invention may be variously embodied within the scope of the appended claim. It is not indispensable that all of the features of the invention be used conjointly, since they may be used separately to advantage.

Claim.

A buckle, having a body portion, a bail pivoted to said body portion, and strap-engaging means comprising a fixed tooth-like member on the body portion and a complementary member revolubly mounted on the bail, said tooth-like member intermeshing with said complementary member to engage the strap along a staggered line, the bail underlying the body portion along its sides, whereby the body portion affords stop means contributing to determine strap-engaging relation of said bail and body portion.

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

JOHN A. WHEELER, JR.

Witnesses:

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EVERETT S. EMERY.