

No. 751,407.

PATENTED FEB. 2, 1904.

H. L. PERRYMAN.
BUCKLE.

APPLICATION FILED FEB. 25, 1903. RENEWED JAN. 9, 1904.

NO MODEL.

Fig. 1.

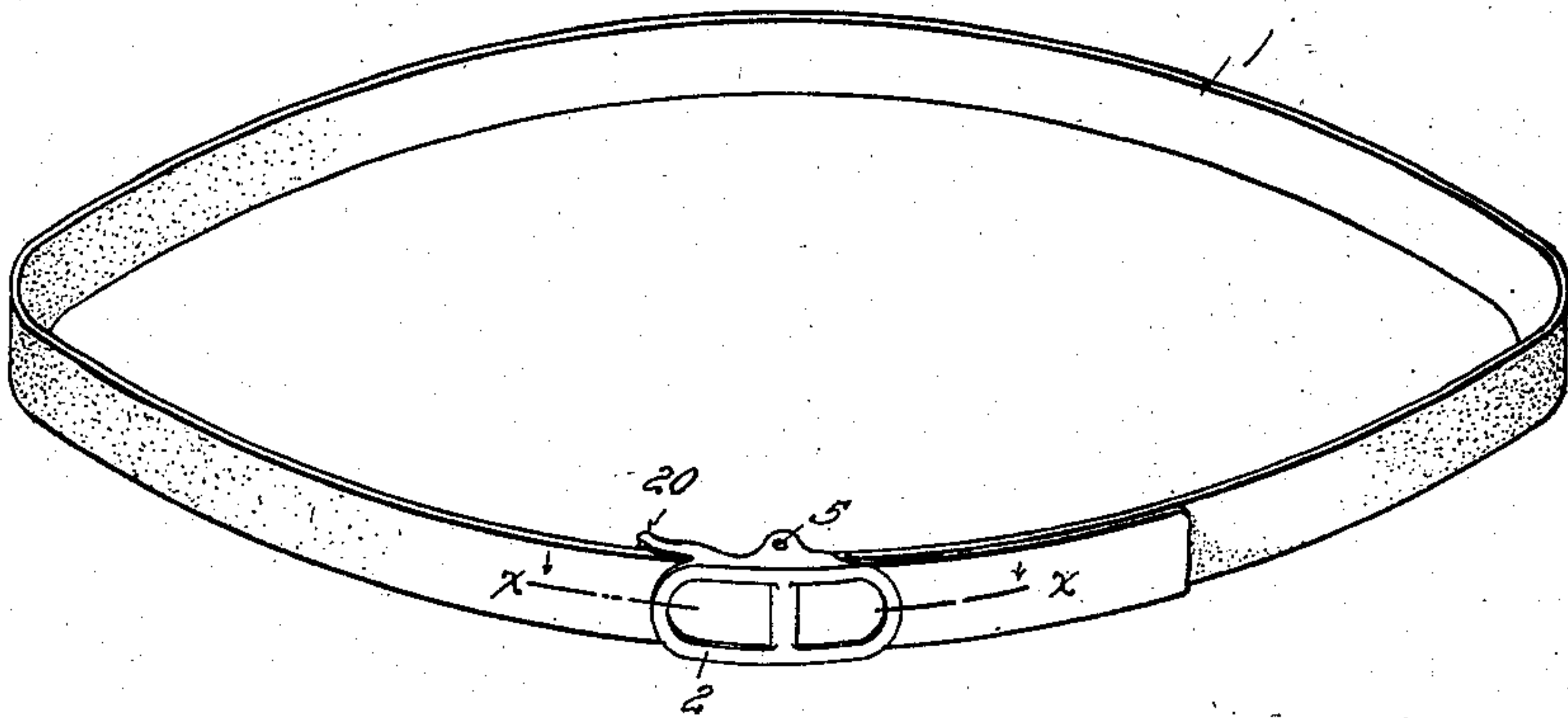


Fig. 5.

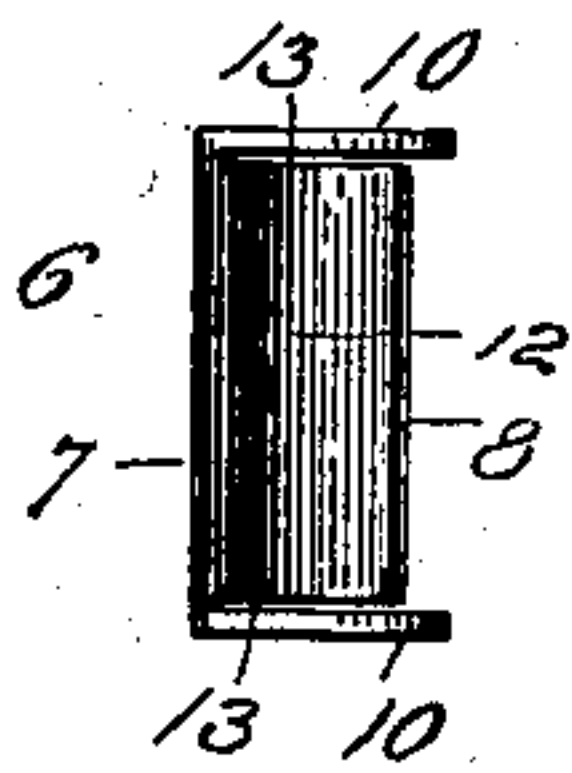


Fig. 4.

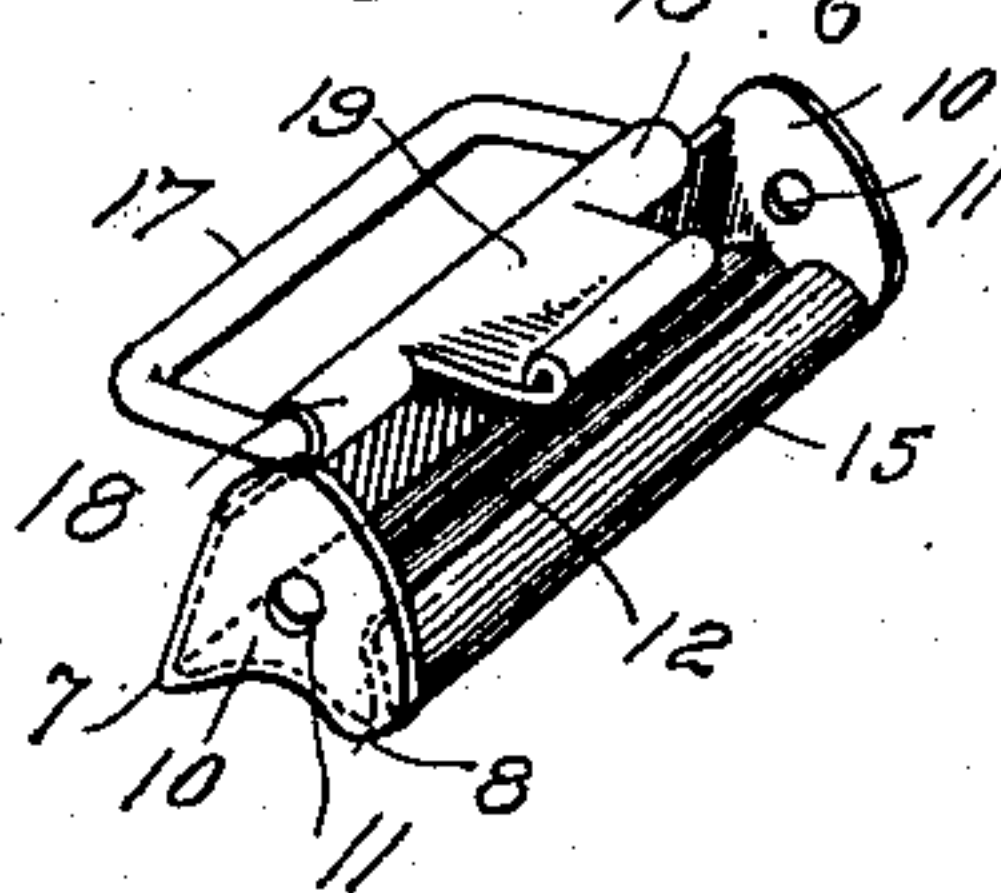


Fig. 2.

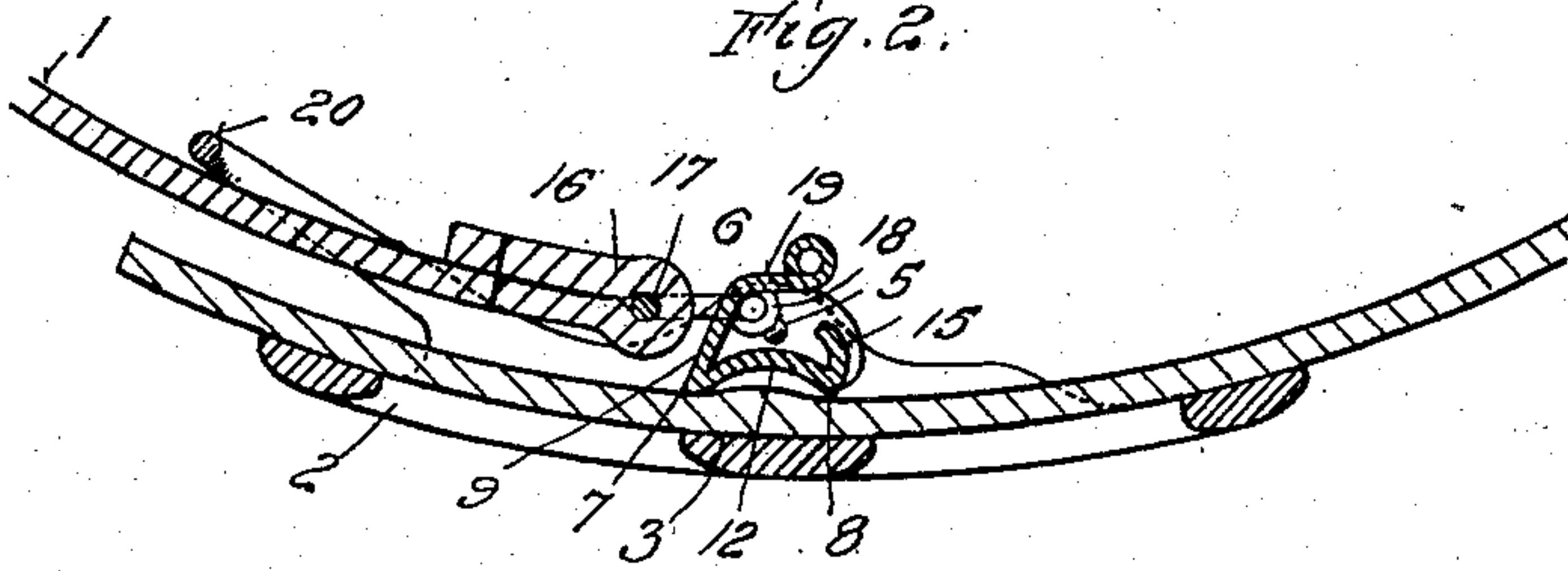
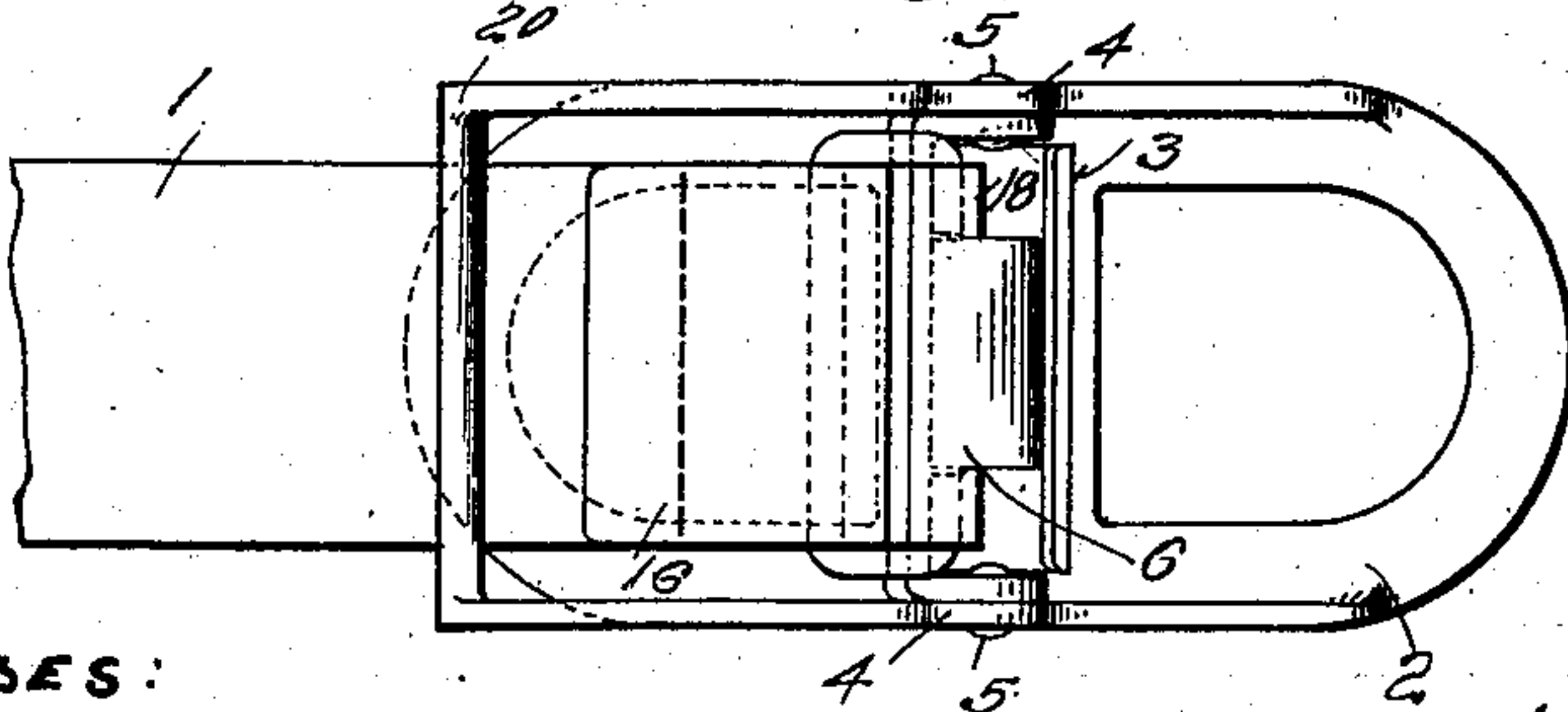


Fig. 3.



WITNESSES:
J. C. Dawley,
Irvine Miller

INVENTOR
Henry L. Perryman,
by H. A. Foulmer,
ATTORNEY

UNITED STATES PATENT OFFICE.

HENRY L. PERRYMAN, OF SPRINGFIELD, OHIO.

BUCKLE.

SPECIFICATION forming part of Letters Patent No. 751,407, dated February 2, 1904.

Application filed February 25, 1903. Renewed January 9, 1904. Serial No. 188,408. (No model.)

To all whom it may concern:

Be it known that I, HENRY L. PERRYMAN, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Buckles, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to buckles, and has for its object to provide a device of this description adapted for general use whereby the free end of a belt or strap may be readily engaged or disengaged and firmly held during such engagement, the device being self-locking and of a character such as to not injure the belt or strap and the structure as a whole being simple, light, and inexpensive.

To these ends my invention consists in certain novel features, which I will now proceed to describe and will then particularly point out in the claims.

In the accompanying drawings, Figure 1 is a perspective view illustrating one form of my invention as applied to a belt for personal wear. Fig. 2 is an enlarged plan section taken on the line *x x* of Fig. 1 and looking in the direction of the arrows. Fig. 3 is an enlarged view of the device from the rear, the free end of the belt being removed from the buckle. Fig. 4 is a detail perspective view of the tongue of the buckle detached, and Fig. 5 is a view of the engaging face of the tongue.

In the accompanying drawings I have shown my invention as applied to a belt for personal wear, although it will be understood that my improved buckle is capable of other applications. In said drawings, 1 indicates the belt, and 2 the body or frame of the buckle, which may be of any suitable form. On its rear face this body or frame is provided with a flat bearing-surface 3, lying in the general plane of the back of the body or frame. I use the term "flat" in the sense of a smooth uninterrupted surface as contradistinguished from a surface having projections which co-operate with the tongue to hold the belt or strap. On each side of this bearing-surface 3 there extends outward from the back of the body a lug or projection 4, and to these lugs

is pivoted at 5 the tongue or cross-bar 6 of the buckle. This tongue extends across the back of the buckle, so as to swing across the bearing-surface 3 of the body thereof, and that portion of said tongue which lies between its pivotal axis and the bearing-surface of the body of the buckle is so constructed that it terminates adjacent to said bearing-surface in two engaging edges or angles 7 and 8, the former of which is preferably located at a greater distance from the pivotal axis of the tongue than the latter. I prefer to construct the tongue of sheet metal, for the reason that it can thus be made lighter and stronger and at less expense. The body portion 9 of the buckle terminates in end pieces 10, connected therewith and provided with apertures 11, through which the pivots 5 pass. The face of the tongue opposite the bearing-surface 3 consists of a piece of metal 12, joined to the body 9 at its front edge only, its lateral margins being separated from the end pieces 10 by slits 13. The part 12 is deflected upward or recessed between the engaging edges 7 and 8, so as to form a clearance-space 14. The part 12 being united to the body of the tongue at one edge only and being of resilient material, the engaging edge 8 is free to yield away from the bearing-surface 3 under pressure, the other engaging edge, 7, being rigid. In other words, the face portion of the tongue is connected at one end to the rigid edge of the body portion thereof and is provided at its opposite end with an engaging edge free to yield relatively to the body of the tongue. The part 12 is preferably provided adjacent to the engaging edge 8 with a flange or extension 15, inclined or curved so as to present an outwardly-enlarging opening between it and the bearing-face 3 when the tongue is so turned as to bring said flange or extension opposite the bearing-surface. When one end of the belt is attached to the tongue, which is the construction which I prefer, it is connected to said tongue on the opposite side of the pivotal axis thereof to that on which the engaging edges of the tongue are located. As a preferred means for effecting this connection I have shown the attached end of the belt 1 as pro-

vided with a loop 16, to which is connected a link 17, the ends of which enter sleeves 18, formed on the upper edge of the body 9 of the tongue. The tongue is also preferably provided at the upper edge of the body 9 with an extension or pressure piece 19, extending in a general way parallel with a plane connecting the engaging edges 7 and 8.

The body 2 of the buckle is preferably provided at one end with the usual guiding-loop 20. The tongue is preferably, but not necessarily, constructed of a single piece of resilient material.

In the operation of fastening the free end of the belt or strap by means of the buckle the lower part of the tongue is so turned to the left, Fig. 2, that the free end may be introduced (from right to left in Fig. 2 of the drawings) between said tongue and the bearing-surface 3, the flange 15 acting as a guide during this operation. To secure the belt or strap, the lower part of the tongue is then turned so as to bring the engaging edge 8 into contact with the belt or strap, and as the turning of the tongue to the right, Fig. 2, continues said engaging edge compresses the belt and is itself free to yield under the resistance which the belt offers to compression. This action continues until the engaging edge 8 has passed what may be termed the "center," or, in other words, the shortest line connecting the pivotal axis of the tongue with the bearing-surface 3. As the turning motion of the tongue continues the resilience of the part 12 of the tongue and of the compressed material of the belt moves the engaging edge 8 away from the bearing-surface 3, at the same time bringing the engaging edge 7 sharply down upon the belt and holding it there against accidental displacement. The spring-supported engaging edge 8 thus serves as a locking device and automatic engaging device for the tongue. Any strain on the free end of the belt tending to move it out of the buckle will be resisted by the engaging edge 7 of the tongue, which is located at such a distance from the pivotal axis of the tongue as to prevent its passing by itself the center when the belt is interposed between the tongue and bearing-surface 3. This gripping action of the engaging edge 7 of the tongue is of course intensified when the other end of the belt is attached to the tongue, since the natural strain exerted on the belt by the body surrounded thereby will tend to engage the edge 7 more firmly with the belt as the tensional strain increases, thus gripping the belt between the edge 7 of the tongue and the abutment formed by the bearing-surface 3. Since this bearing-surface is without any projection, the belt lies flat thereon and is not sharply bent and thereby marred or injured. The belt may be released by pressing on the pressure-piece 19 toward the body of the buckle, whereupon the

spring-supported engaging edge 8 and the material of which the belt is composed will yield sufficiently to permit said engaging edge, moving to the left, Fig. 2, to pass the center in the reverse direction, after which the free end of the belt may be readily withdrawn from the buckle. The clearance-space formed in the engaging face of the tongue between the engaging edges facilitates the separate successive action of said engaging edges, which is a feature of the operation thereof hereinbefore described.

I do not wish to be understood as limiting myself to the precise details of construction hereinbefore described, and shown in the accompanying drawings, as it is obvious that these details may be modified without departing from the principle of my invention.

I make no claim in this application to a buckle having a body provided with a flat bearing-surface and a tongue pivoted to said body and having separated engaging edges located at different distances from the pivotal axis of the tongue and having a clearance space between them, as such a structure forms the subject-matter of an application filed by me August 7, 1902, Serial No. 118,712.

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

1. A buckle comprising a frame or body having a flat bearing-surface on its rear face, in combination with a tongue pivoted to said frame or body so as to swing across said bearing-surface, the engaging portion of the tongue terminating in separated engaging edges located at different distances from the pivotal axis of the tongue, the engaging edge nearest said axis being yielding or spring-supported and the other engaging edge being rigid, substantially as described.

2. A buckle comprising a frame or body having a flat bearing-surface on its rear face, in combination with a tongue pivoted to said frame or body so as to swing across said bearing-surface, the engaging portion of the tongue terminating in separated engaging edges located at different distances from the pivotal axis of the tongue and having a clearance-space between them, the engaging edge nearest said axis being yielding or spring-supported to form a locking device to hold the tongue in engaging position, and the engaging edge farthest from the pivotal axis being rigid serving to grip the belt or strap against the bearing-surface, substantially as described.

3. A buckle comprising a frame or body having a flat bearing-surface on its rear face, in combination with a tongue pivoted to said frame or body so as to swing across said bearing-surface, the engaging portion of the tongue terminating in separated engaging edges located at different distances from the pivotal axis of the tongue, the engaging edge nearest

said axis being yielding or spring-supported and the other engaging edge being rigid, and a belt or strap connected to the tongue on the opposite side of the pivotal axis from the engaging portion, substantially as described.

4. A buckle comprising a frame or body having a flat bearing-surface on its rear face, in combination with a tongue pivoted to said frame or body so as to swing across said bearing-surface, the engaging portion of the tongue terminating in separated engaging edges located at different distances from the pivotal axis of the tongue and having a clearance-space between them, the engaging edge nearest said axis being yielding or spring-supported to form a locking device to hold the tongue in engaging position, and the engaging edge farthest from the pivotal axis being rigid and serving to grip the belt or strap against the bearing-surface, and a belt or strap connected to the tongue on the opposite side of the pivotal axis thereof from the engaging portion, substantially as described.

5. In a buckle of the character described, the combination, with a frame or body having a flat bearing-surface on its rear face, of a tongue pivoted to said frame or body so as to swing across said bearing-surface, said tongue comprising a body portion provided with a rigid engaging edge and having end portions connected therewith to receive the pivots, and a face portion of resilient material connected to the rigid edge, and provided with an engaging edge at its opposite end free to yield relatively to the body of the tongue, substantially as described.

6. In a buckle of the character described, the combination, with a frame or body having a flat bearing-surface on its rear face, of a tongue pivoted to said frame or body so as to swing across said bearing-surface, said tongue com-

prising a body portion provided with a rigid engaging edge and having end portions connected therewith to receive the pivots, and a face portion of resilient material connected to the rigid edge, and provided with an engaging edge at its opposite end free to yield relatively to the body of the tongue, said face portion being curved or recessed to form a clearance-space, substantially as described.

7. In a buckle of the character described, the combination, with a frame or body having a flat bearing-surface on its rear face, of a tongue pivoted to said frame or body so as to swing across said bearing-surface, said tongue comprising a body portion provided with a rigid engaging edge and having end portions connected therewith to receive the pivots, and a face portion of resilient material connected to the rigid edge and provided with an engaging edge at its opposite end free to yield relatively to the body of the tongue, said face portion being provided with a guiding flange or extension adjacent to its engaging edge, substantially as described.

8. A buckle comprising a frame or body having a flat bearing-surface on its rear face, in combination with a tongue pivoted to said frame or body so as to swing across said bearing-surface, the engaging portion of the tongue terminating in separated engaging edges, one of which is spring-supported so as to yield relatively to the body of the tongue, the other engaging edge being rigid, substantially as described.

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

HENRY L. PERRYMAN.

Witnesses:

E. O. HAGAN,
IRVINE MILLER.