E. N. HUMPHREY.

BUCKLE.

APPLICATION FILED OCT. 28, 1910.

991,995.

Patented May 9, 1911.

Fig. 1.

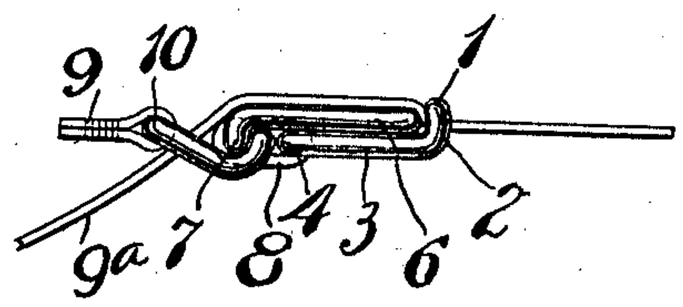


Fig. 2.

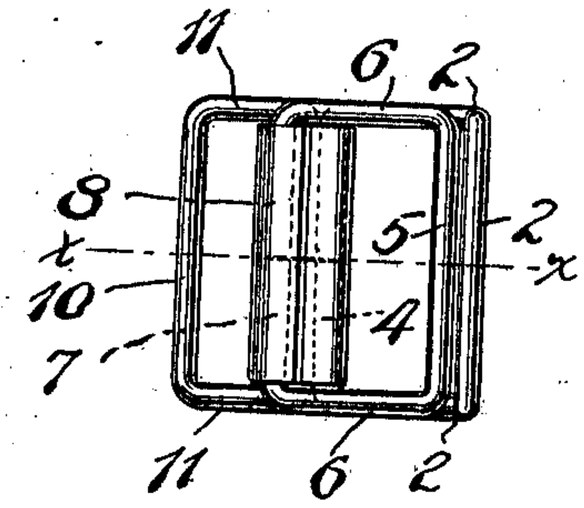


Fig. 3.

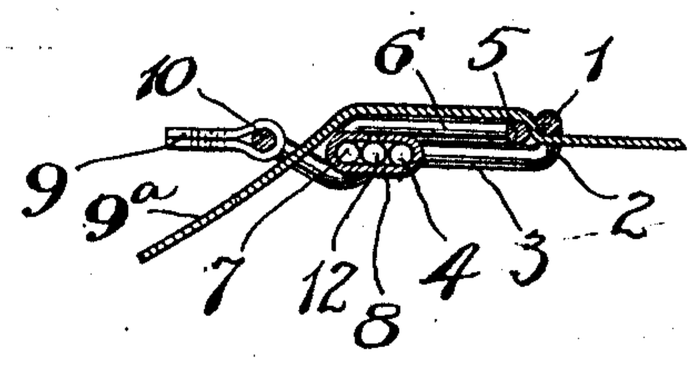
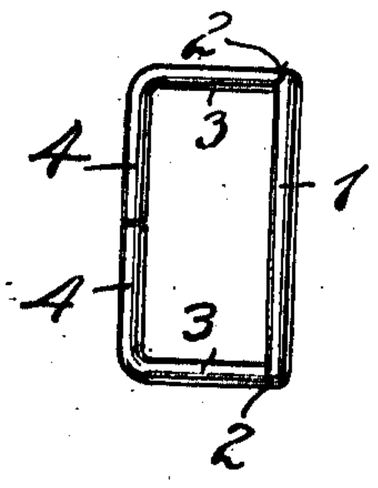


Fig. 4.



Witnesses:
Fred'k. W. Dannenfelser
Chas. A. Peard

Inventor
E. N. HUMPHREY
By his Attorneys
Parker Burnham & Parker

UNITED STATES PATENT OFFICE.

ERNEST N. HUMPHREY, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO TRAUT & HINE MANUFACTURING COMPANY, OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

BUCKLE.

991,995. Specification of Letters Patent. Patented May 9, 1911.

Application filed October 28, 1910. Serial No. 589,529.

To all whom it may concern:

Be it known that I, ERNEST N. HUMPHREY, a citizen of the United States, residing at New Britain, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Buckles, of which the following is a full, clear, and exact description.

My invention relates to improvements in buckles, the object being to provide a simple and efficient construction.

In the accompanying drawings, Figure 1 is a side elevation of my improved buckle as it would appear in use. Fig. 2 is a plan view of the buckle with the belt removed. Fig. 3 is a longitudinal section thereof, on the plane of the line *x*—*x* of Fig. 3. Fig. 4 is a plan view of the main frame detached.

In the accompanying drawing I have shown my buckle in a preferred form.

The buckle comprises two main frames which have a swinging movement relatively to each other. Said frames are made of wire and are connected by a loop, preferably of sheet metal, the parts being so proportioned and arranged as to hold the belt by a gripping contact, there being a snap action employed in locking the belt in place. In referring to these two frames and for the purpose of facilitating description, I shall speak of one frame as the main frame and the other as the tongue frame.

The main frame is so shaped as to provide a front-bar or draw-bar 1 at a point intermediate the length of the wire employed in making said frame. The two wire ends of the draw-bar are bent downwardly, as at 2—2, and then rearwardly to constitute the side-bars 3—3. The extreme ends of each side-bar are then bent inwardly forming the pivot bearing 4.

The tongue frame is so bent as to provide a front-bar, or, what I will term the clamping-bar 5, which is approximately the same length as the draw-bar 1 of the main frame. The tongue frame also includes the side-bars 6—6 which extend rearwardly from the clamping-bar 5. The extreme ends of the stock employed in making the tongue frame are turned downwardly and inwardly to form the pivot portion 7. The pivot ends 4 and 7 of the main frame and tongue frame respectively are held, or embraced, within a clip 8. This clip is preferably C-shaped and made of spring metal. The pivot end 4 of the main frame is located forwardly of the pivot end 7 of the tongue frame.

In the preferred form of the construction, I also include another frame, which I will term a loop-frame. This frame may be used for attaching the fixed end of the belt 9, or may also be used for a tuck-loop, or both. In the particular form shown, I have secured the fixed end 9 of the belt to this loop-frame. This loop-frame includes the bar 10 and the two side-bars 11—11 extending downwardly from the bar 10, and then upwardly as shown in Figs. 1 and 3, and terminating in a pivot portion 12, to be embraced by the clip 8. In the preferred arrangement the pivot portion 12 of the loop-frame is located between the pivot portions 4—7 of the main frame and the tongue frame respectively. (See Figs. 1 and 3).

When the parts are assembled, it will be seen that when the tongue frame is pressed down, its clenching bar 5 will assume a position slightly below the center of the draw-bar 1, whereby, when the thickness of a belt is between said bars, the aforesaid snap action occurs. The tongue frame is held in this locking position and is not permitted to pass through the main frame by reason of the fact that the side-bars 6—6 will rest upon the side-bars 3—3 of the main frame. When the free end 9^a of the belt is to be engaged by the buckle, the same is passed around the bar 1 (the tongue 5 being raised). When the proper adjustment of the belt has been attained, the tongue frame is swung down and pressed into the position shown in Fig. 3, snapping into said position as above described, so as to frictionally clamp the adjustable end of the belt 9^a between the bars 1—5. The extreme free end of the belt may then be tucked through the loop-frame 10 if desired, or, indeed, may be permitted to stand free, there being sufficient friction between the bars 1 and 5 to guarantee the secure tension of the belt in its adjusted position. The snap action is permitted in the present instance by reason of the two features of construction, most conspicuous of which is the yielding character of the clip 8. When the snap action is occurring, it will be observed that the strain on the pivot portions 4—7 will be in a direction to spring the clip 8, which latter will yield sufficiently to permit of said snap action. Again, the upturned ends 2—2 of the side-bars 3—3 of

the main frame will allow of a slight yielding of the bar 1 in a direction away from the bar 5, when sufficient pressure is applied. The main spring action, however, occurs at the clip 8, hence said clip should be so proportioned, and should be constructed of such material, as to properly withstand the strain to which it is subjected. To disengage the buckle it is merely necessary to pull the free end of the belt forwardly and away from the buckle, and, at the same time, press up on the underside of the bar 5 thereby snapping it past the bar 1 and simultaneously freeing the belt.

What I claim is:

1. In a buckle, a main frame and a tongue frame each frame including two side-bars and a pivot portion, a clamping-bar at the forward end of said side-bars of the tongue frame, a draw-bar at the forward end of the side-bars of the main frame in clamping relation with the clamping bar, one of said bars being offset from the plane of the side-bars to which it is connected whereby said bar may be swung past the center of the bar on the other frame, and a yielding clip tightly embracing the pivot portions of said frames the pivot portion of the tongue frame being located at the rear of the pivot portion of the main frame.

2. In a buckle, a main frame and a tongue frame, each frame including two side bars and a pivot portion, the pivot portion of the main frame being forward of the pivot portion of the tongue frame, a clamping bar at the forward end of the side bars of the tongue frame, a draw bar at the forward end of the side bars of the main frame and in clamping relation with said clamping bar, one of said bars being offset from the plane of the side bars to which it is connected whereby said bar may be swung past the center of the bar on the other frame, a loop frame for the rear of the buckle, said loop frame having a pivot portion, said pivot portion being located between the pivot portions of the main and the tongue frames and a yielding clip snugly embracing all of the aforesaid pivot portions.

ERNEST N. HUMPHREY.

Witnesses:
W. J. WARAM,
F. L. TRAUT.