G. E. PRENTICE.

BELT BUCKLE.

APPLICATION FILED AUG. 28, 1914.

1,131,550. Patented Mar. 9, 1915.

Fig. 1

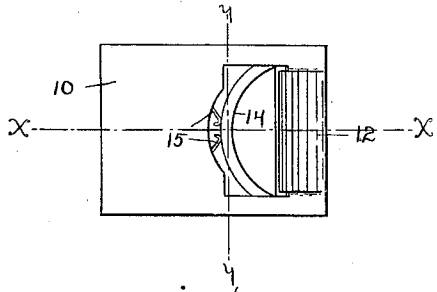


Fig. 2

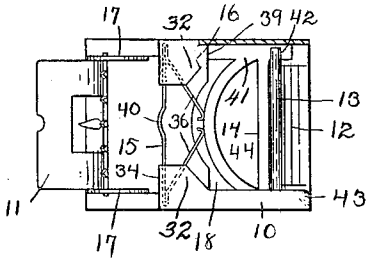


Fig. 4

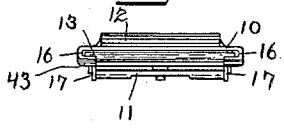


Fig 5

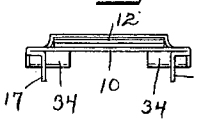


Fig. 3

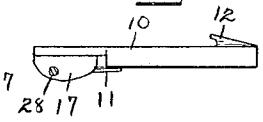


Fig. 6

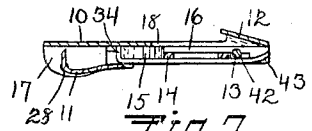


Fig. 7

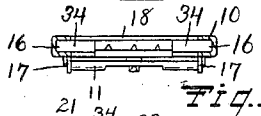


Fig. 11

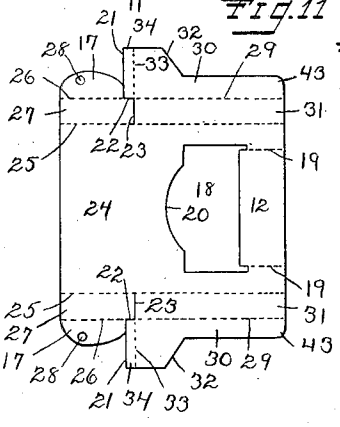


Fig. 8

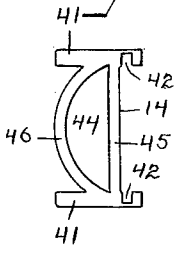


Fig. 9

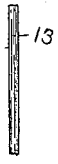
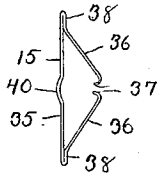


Fig. 10



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UNITED STATES PATENT OFFICE.

GEORGE E. PRENTICE, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE G. E. PRENTICE MANUFACTURING COMPANY, OF NEW BRITAIN, CONNECTICUT, A CORPORATION.

BELT-BUCKLE.

1,131,550. Specification of Letters Patent. Patented Mar. 9, 1915.

Application filed August 28, 1914. Serial No. 859,085.

To all whom it may concern:

Be it known that I, GEORGE E. PRENTICE, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Belt-Buckles, of which the following is a specification.

My invention relates to improvements in belt buckles, and the object of my improvement is simplicity and economy in construction and convenience and efficiency in use.

In the accompanying drawing:—Figure 1 is a front elevation of my improved belt buckle. Fig. 2 is a rear elevation of the same. Fig. 3 is a side elevation of the same. Fig. 4 is an end elevation of the same. Fig. 5 is an end elevation of the same as viewed from the other end, and with the clamping lever omitted. Fig. 6 is a sectional view on the line *x x* of Fig. 1. Fig. 7 is a sectional view on the line *y y* of Fig. 1 of the frame. Fig. 8 is a plan view of the slide. Fig. 9 is a plan view of the roller. Fig. 10 is a plan view of the spring. Fig. 11 is a plan view of the blank for the frame.

My improved belt buckle comprises a frame 10, a clamping lever 11 pivotally mounted at one end that is ordinarily for securing the fixed end of the belt and an inclined clamping lip 12 at the other end of the belt for the loose end of the belt, a roll 13 for coöperating with the said lip in effecting such clamping, a slide 14 for guiding the said roll, and a spring 15 for maintaining the said slide and roll in the clamping position. The tension of the belt serves to tighten the hold of the clamping roll 13 and the lip 12. The slide 14 travels in ways 16 formed by turning over a portion of each side of the frame. The clamping lever 11 is pivotally mounted in ears 17 formed by turning over another portion of each side. A finger hole 18 is provided in the frame giving access to the slide 14.

The construction of the frame 10 may be considered in connection with a description of the blank as shown in Fig. 11. The said blank comprises a rectangular body portion 24 having the opening 18 at the right of the middle, leaving material at the extreme right end to form the lip 12, and which lip is forced forwardly along the lines 19 to the position shown in Fig. 6, at a slight inclination to the body portion. The rear or inner wall of the opening 18 has a curved concave portion 20 at about the middle. The edge portion on each side of the blank is divided into a right end portion and a left end portion by a slit which is composed of a transverse portion 21 extending inwardly from the extreme edge for the greater part of the extent of the edge portions, a short longitudinal portion 22 extending to the right from the inner end of the said outer transverse portion 21, and a second, inner transverse portion 23 extending inwardly from the off-set portion 22 to the edge of the body portion 24. The said edge portions are bent as follows: Both are bent along the line 25, corresponding to the side of the body portion 24. The left hand portion is divided by a longitudinal line 26, into the ears 17, already mentioned, and an intermediate connecting wing 27. By the bend along the line 25 the connecting wing 27 is brought into abutment with the face of the body portion 24; the ear 17 is bent along line 26 into a position at right angles to the body portion 24, and is provided with a pivot hole 28 to receive one of the pintles of the clamping lever 11.

The right hand portion of each edge portion is similarly divided in each case by a longitudinal line 29 into the outer part 30 and the inner part 31, part 31 being bent at right angles to the body 24 and part 30 at right angles to part 31 to form the guide way 16. Thus the outer part 30 of the blank serves when folded over as the roof or one of the inclosing walls of the way 16, being separated from the body portion 24 suitable for operatively housing the spring 15, slide 14 and roller 13. The main portion of the said roof 30 is relatively narrow, and I provide at the inner portion thereof adjacent the slit 21 an extension 32 or continuation of the free edge, which extends inwardly from the two sides, as shown in Fig. 2, suitably to cover the end portion of the spring 15. Connected to the extension 32 and the adjacent portion of the roof 30 is a lug 34, which is bent at right angles along the line 33.

It will be noted that the lug 34 is formed by the outer transverse slit 21 and the longitudinal slit 22. The said lug 34 serves on the one side as the bottom of a pocket for

the end of the spring 15 and on the other side, toward the clamping lever 11, serves as a stop for the fixed end of the belt to prevent the same from entering the housing space for the spring 15. The extreme outer end portion 43 of the roof 30 is turned inwardly into the way 16 sufficiently to serve as a stop for limiting the outward movement of the slide 14 and roll 13 and to prevent the same from falling out when disconnected from the belt. The spring 15 comprises a middle or bridging portion 35 that bridges the space between the ways 16 and abuts by its ends against the lugs 34, and a pair of free arms 36 that extend inwardly from the ends of the middle portion 35, and generally at an inclination relatively thereto, so that the tip ends 37 are opposed, and normally appreciably separated from the bridging portion 35. It will be further noted that the bridging portion 35 and the free arms 36 are connected by a return bend portion 38 at the ends, forming a flat portion for a short distance. This return bend portion 38 is positioned between the lug 34 and slide 14 and is suitable for engaging the opposed portion 39 of the slide 14 in case the latter should be moved to the extreme inward position. Also, the extreme or tip ends 37 of the free arms 36 are turned inwardly, and the middle part 40 of the bridging portion 35 is offset inwardly, suitably to receive the same when the free arms 36 are sprung inwardly to the extreme position, coresponding to the extreme inward movement of the slide 14.

The roll 13 is a single piece of cylindrical material. The slide 14 is of skeleton construction and comprises side members 21 which loosely fit the ways 16, and a pair of connecting bars 45, 46. The side members 41 are provided adjacent their outer ends with inwardly opening oppositely disposed slots 42 for receiving the ends of the roll 13. The bar 45 is straight and bar 46, which is at the rear of the slide, is curved to correspond with the curved portion 20 of the opening 18 in the body. This construction of the slide provides an operating opening 44 which corresponds generally with the opening 18 in the frame and is suitable for admitting the finger, the same being accessible either from the front or back of the buckle. In case the finger is inserted from the front through the opening 18 into the opening 44 for releasing the buckle by pulling the slide 14 inwardly, the movement of the finger will be limited by the edge 20, the finger being engaged with the inner edge of the curved connecting bar 46. The other edge of the said curved connecting bar 46 is engaged with the ends of the spring arms 36.

The spring arms 36 tend to hold the roll 13 in position adjacent the lip 12 and separated therefrom by a space that is less than the thickness of the belt so that when the said belt is interposed between the roll and the lip there will be a slight pressure on the belt, the tension of the spring being sufficient to take up back-lash or loose play, the actual clamping being effected by a longitudinal pull on the belt. The slide 14 serves to hold the roll 13 in position across the body of the buckle so that the ends thereof will be positively held in engagement with the ways 16.

It will be noted that as described the ways 16 are of skeleton construction, the opposed edges of the roof portion 30 at the rear being separated by an open space, and which space corresponds approximately to the width of the belt receiving opening 18 and the width of the inclined clamping lip 12, being in fact slightly greater than the width of the said lip. That is to say, there is at the rear of the buckle an open space between the ways 16 opposite the inclined clamping lip 12, and which is of sufficient width to permit a belt to move back and forth therein such as would be accommodated by the clamping lip 12. This open space is utilized in effecting the release of the belt from the buckle, by a simple tilting of the one relatively to the other. With the belt in position for use such release is readily effected by simply grasping the buckle only and tilting the same, the belt not being operated on directly.

The fact that the clamping lip 12 is positioned at a slight inclination only to the body portion and to the direction of the longitudinal pull of the belt permits of effecting such release with a minimum of such tilting movement of the buckle and belt relatively one to the other.

What I claim as my invention is:—

1. In a belt buckle comprising a frame, means at one end thereof for securing the fixed end of a belt comprising a clamping lever, means at the other end thereof for clamping the loose end of the said belt comprising a sliding device, the said frame comprising a body portion and lateral edge portions along the lateral edges of the said body portion, and the part of the said lateral edge portion adjacent the said one end being turned over to provide ears for the said clamping lever, and the part thereof adjacent the said other end being turned over to form a housing for operatively housing the said sliding device.

2. In a belt buckle, a frame having clamping means for the fixed end of a belt at one end and a sliding device at the other end for engaging with the loose end of a belt, a pair of lugs 34 on the said frame, and the said lugs serving on one side to limit the movement of the said slide devices and on the other to limit the position of the said fixed end of a belt.

3. A belt buckle comprising a frame having a clamping lip at one end, a clamping roll having a to and fro movement rela-

tively to the said lip, means for guiding the said roll, and spring means tending to move the said roll toward the said lip.

4. A belt buckle comprising a frame having a clamping lip at one end and guide ways along the lateral edges, a clamping roll, and a slide operatively engaged with the said ways and having slots for the ends of the said roll.

5. A belt buckle comprising a frame having a clamping lip at one end and guide ways along the lateral edges, a clamping roll, a slide engaged with the said ways and having slots for the ends of the said roll, and a spring engaged with the said slide.

6. A belt buckle comprising a frame having a body portion, guide ways along the lateral edges thereof, and a lip at one end thereof serving as a fixed clamping member, a sliding device engaged with the said ways serving as a moving clamping member and having a releasing bar, and the said body portion having an opening serving to give access to the said releasing bar for releasing the said clamping members.

7. A belt buckle comprising a frame having a body portion, ways along the lateral edges thereof, a clamping lip at one end thereof, and lugs closing one end of the said ways, a sliding device engaged with the said ways, and a spring positioned in the said ways, supported by the said lugs, and having free arms engaged with the said sliding device.

8. A buckle comprising a frame having a pair of ways, lugs closing the ends of the said ways, and a clamping lip at one end, a sliding device engaged with the said ways, a spring engaged with the said ways, comprising a straight portion adjacent the said lugs and a pair of arms extending inwardly from the ends of the said straight portion, and the free ends of the said arms being engaged with the said sliding device.

9. A buckle comprising a frame having a pair of ways, lugs closing the ends of the said ways, and a clamping lip at one end, a sliding device comprising lateral members engaged with the said ways and a cross connecting device connecting the said lateral members, a spring made of strip material comprising at the lateral ends doubled portions engaged with the said ways and arms having free ends engaged with the said cross connecting device, the said doubled portions being interposed between the said lugs and lateral members, and the said doubled portions being connected by a return bend of suitable lengths to serve as positive stops for the said lateral members.

10. A buckle comprising a body portion having a clamping lip at one end, ways extending along the lateral edges of the said body portion at the rear side thereof, a sliding clamping device engaged with the said ways, and the said ways at the portion adjacent the said clamping lip being separated by an open space suitable for permitting a belt to have free movement therein.

GEORGE E. PRENTICE.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."