Jan. 23, 1923. 1,443,145.

G. E. PRENTICE.

BELT BUCKLE.

FILED MAY 10, 1922.

Fig. 1

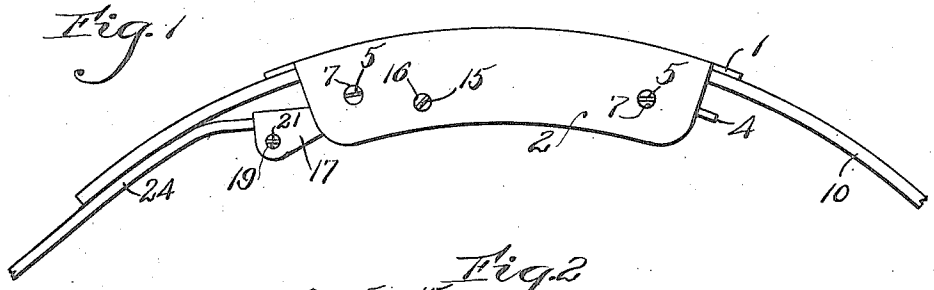


Fig. 2

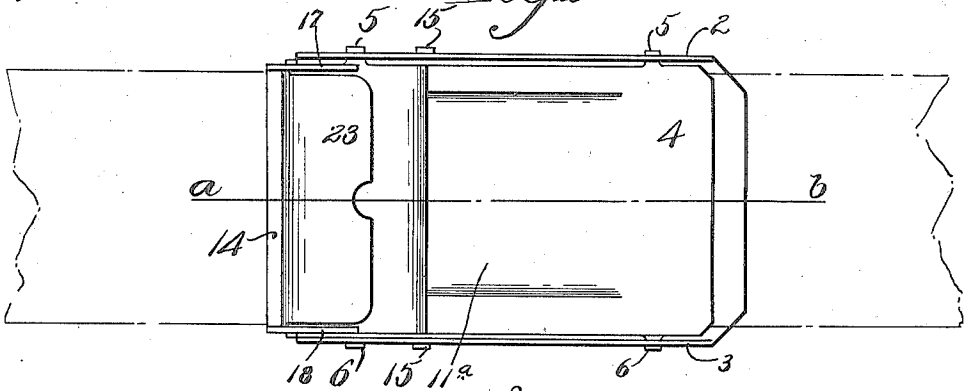


Fig. 3

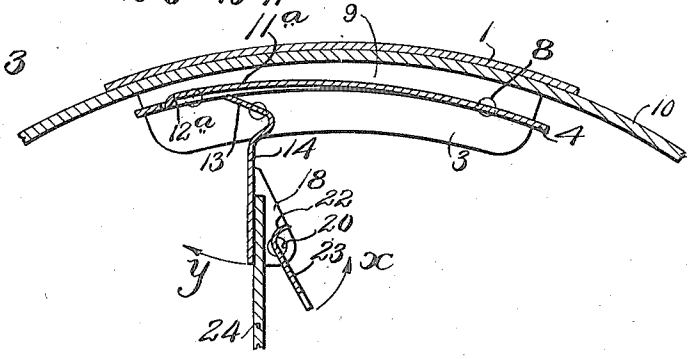


Fig. 4

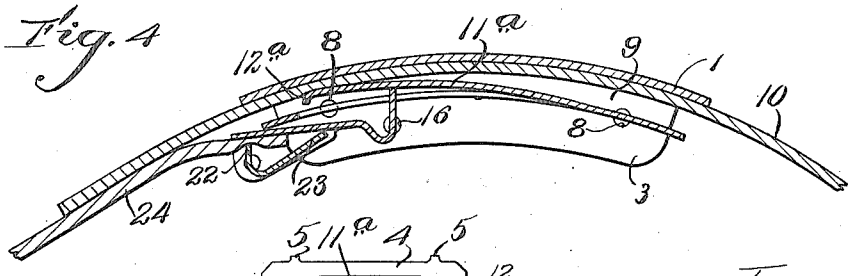
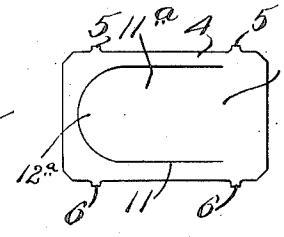


Fig. 5



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UNITED STATES PATENT OFFICE.

GEORGE E. PRENTICE, OF NEW BRITAIN, CONNECTICUT.

BELT BUCKLE.

Application filed May 10, 1922. Serial No. 559,766.

To all whom it may concern:

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

This invention relates to belt buckles and more especially to that type of buckle wherein one end of the belt is clamped between the front wall of the buckle and a cooperating member movable toward and from the rear face of such front wall. When buckles of this general character are associated with rubber belts such as have recently come into use, it is found that there is a tendency for the belt to adhere to the surfaces of the clamping elements, particularly if permitted to remain undisturbed for a considerable length of time. This makes it difficult at times to loosen the belt, resulting in dissatisfaction on the part of the user, although in general this type of buckle possesses features of great merit.

The principal object of the present invention is accordingly to provide a buckle of the class described having its several parts so designed and disposed that upon release of the clamp for loosening the belt the latter will be mechanically separated from the contacting surface of at least one of the cooperating clamping elements.

In the accompanying drawings there is illustrated by way of example one embodiment of means well adapted for accomplishing the above object, in which:—

Fig. 1 is a top plan view of the improved buckle forming the subject matter of the present invention and indicating the opposite ends of a belt as secured thereto;

Fig. 2 is a rear elevation of the device shown in Fig. 1;

Fig. 3 is a horizontal cross section on a line such as *a*—*b* of Fig. 2, showing the parts in position for disengagement of both ends of the belt;

Fig. 4 is a view similar to Fig. 3 but showing the parts positioned for securing both ends of the belt; and

Fig. 5 is a rear elevation to smaller scale showing the rear member of the buckle detached.

The buckle herein disclosed comprises a front plate 1 provided with top and bottom rearwardly projecting flanges 2, 3 respectively. The front plate 1 of the buckle is curved as shown, thus providing a concave rear surface for engagement with the free end of the belt. Spaced to the rear of the plate 1 is a second plate 4 which may be curved to correspond substantially with the curvature of plate 1. This rear plate 4 is preferably provided with integral lugs 5, 6 projecting from its opposite edges, these lugs being adapted to enter openings 7, 8 respectively in the upper and lower flanges 2, 3 of the front plate. The rear plate is thus held securely in position and at a fixed distance from the front plate, thus providing a channel 9 for the reception of the end 10 of the belt. The rear plate 4 is provided with a U-shaped incision 11 (Fig. 5) which defines a flexible, resilient tongue member 11^a integrally united at its end 12 to the plate 4. The free end 12^a of this tongue may be bent forwardly toward the front plate 1, but by reason of its inherent resiliency normally tends to lie substantially in the plane of the plate 4. If desired, the edge of the tongue may be slightly dished or flanged as indicated in Fig. 2 in order to give a finished appearance, while at the same time providing clearance between the edges of the plate and the tongue such as to permit the latter to flex freely out of the plane of the plate.

To the rear of the plate 4 a clamping lever is pivotally supported between the upper and lower flanges 2 and 3. This clamping lever comprises a short arm 13 and a long arm 14 and is preferably furnished with lugs such as 15 engaging openings 16 in the upper and lower flanges, and serving as pivots for the lever. The longer arm 14 of the lever comprises upper and lower flanges 17, 18 and between such flanges is pivoted a second lever having lugs 21 which enter openings 19, 20 in the respective flanges and act as pivots for the last named lever. This second lever comprises a short arm 22 and a long actuating arm 23 and constitutes a retaining clamp for the end 24 of the belt. As indicated in Fig. 3 this end may be placed against the rear face of the lever arm 14 and by swinging the long arm 23 of the retaining lever in the direction indicated by the arrow *x*, in Fig. 3, the arm 22 may be caused to engage the end of the belt, firmly holding the latter against the long arm 14 of the main or clamping lever. When the long arm 14 of the main lever is swung in the direction indicated by the ar-

row y, the other arm 13 thereof is caused to press against the rear surface of the tongue 11^a, thus forcing the latter forwardly toward the front plate 1.

In the operation of the device the end 24 of the belt is first secured to the long arm 14 of the main lever in the manner above described, this being a relatively permanent connection which may remain undisturbed during the life of the belt. The opposite end 10 of the belt is then inserted in the channel 9 passing between the front wall 1 and the rear plate 4 and adjusted to the desired length. The lever arm 14 may now be swung into the position of Fig. 4, thus clamping the belt end 10 between the tongue member 11^a and the front wall 1. With this arrangement it will be evident that any pull exerted upon the belt, acting through the lever arm 14, serves more firmly to hold the tongue 11^a in clamping position. In fact, in securing the belt about the person. it is simply necessary to insert the free end 10 in the channel 9 and to draw the belt to the desired degree of adjustment so that the pull automatically transmitted to the lever 14 acts upon the clamping tongue in a manner such as to retain the adjustment in a very reliable manner. When it is desired to loosen the belt, the lever member 14 is swung rearwardly thereby permitting the spring tongue 11^a to flex rearwardly, its resiliency being sufficient to cause separation of the belt, either from the front wall 1 or from the tongue. After the belt is separated from one or the other of said surfaces, any substantial pull upon the belt very readily separates it from the other of such surfaces, even though, as when a rubber belt is employed, there is a tendency for it to stick or cling with considerable force to one or both of the clamping elements. It is thus evident that efficient means have been provided not only for clamping the belt in adjusted position but for mechanically separating the belt from the clamping surfaces when it is desired to disengage the belt therefrom.

While an integral resilient tongue 11^a has been indicated as constituting one of the clamping elements and as providing means whereby one of such elements, at least, is mechanically separated from the belt when the parts are unclamped, it is contemplated that other and equivalent means may be employed both for clamping the belt and for causing the mechanical separation of the clamping elements when it is desired to loosen the belt. It is also evident that while the buckle herein disclosed is of that type wherein one end of the belt may be permanently clamped to an element of the buckle by means of a disengageable pivoted clamping lever, other and equivalent means may well be employed for securing such end of the belt to the buckle, and while as herein disclosed the parts are so arranged that pull upon the belt serves to exert a continuous force tending to hold the clamping elements in operative position, certain of the advantages to be derived from the employment of the present device are not necessarily dependent upon such an arrangement but might well be incorporated in a buckle having other and usual means for securing one end of the belt permanently thereto.

What I desire to secure by Letters Patent of the United States is:

1. A belt buckle comprising a front plate having rearwardly directed top and bottom flanges, a rear plate spaced from the front plate and having its opposite edges secured to the respective flanges, a tongue member struck from the rear plate and integrally united therewith at one end, and means for deflecting the free end of the tongue member toward the front plate and for retaining it in such deflected position.

2. A belt buckle comprising a front plate, a unitary rear plate spaced therefrom and fixed relatively thereto, said rear plate having a U shaped incision defining a resilient tongue member integrally united at one end with such plate, a lever device for forcing the free extremity of said tongue member toward the front plate, and means for securing the end of a belt to the lever device.

3. A belt buckle comprising a front plate having rearwardly directed top and bottom flanges, a rear plate spaced from the front plate and fixedly secured to said top and bottom flanges, said rear plate having a substantially U shaped, centrally disposed incision defining a tongue member integrally united to the plate, and a lever member pivotally supported between said flanges and having a short arm engageable with the tongue member to force the free end thereof toward the front plate, and a long arm constituting the actuating element of the lever.

Signed by me at New Britain, Conn., this eight day of May, 1922.

GEORGE E. PRENTICE.