May 3, 1932. T. A. McDERMOTT ET AL 1,856,776

BUCKLE FOR BELTS OR STRAPS

Filed Feb. 10, 1931

Fig. 1.

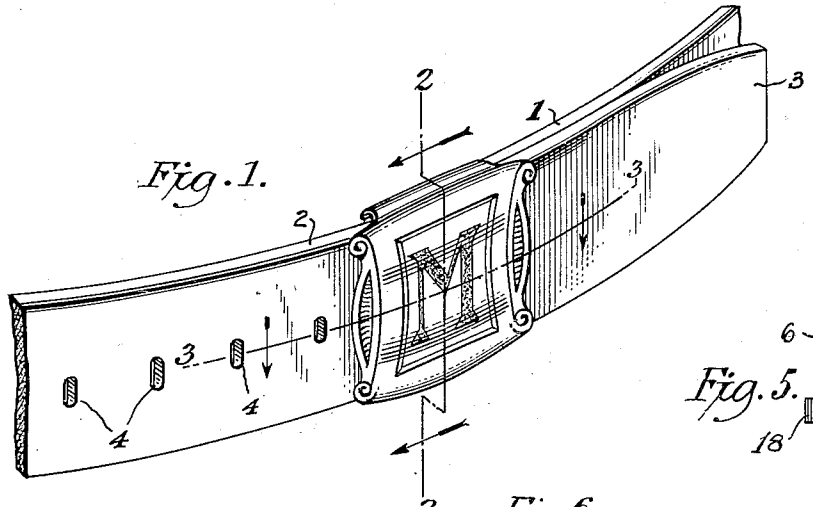


Fig. 5.

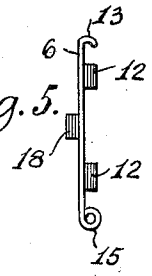


Fig. 6.

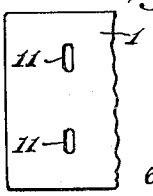


Fig. 2.

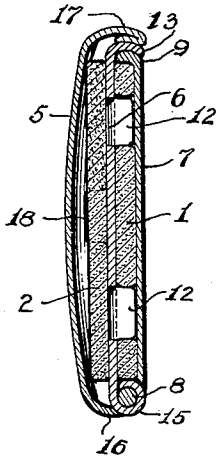


Fig. 4.

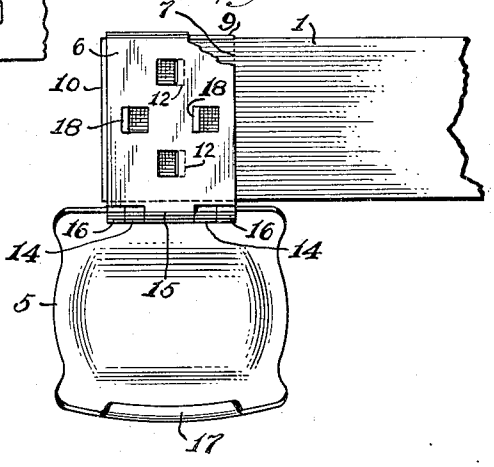
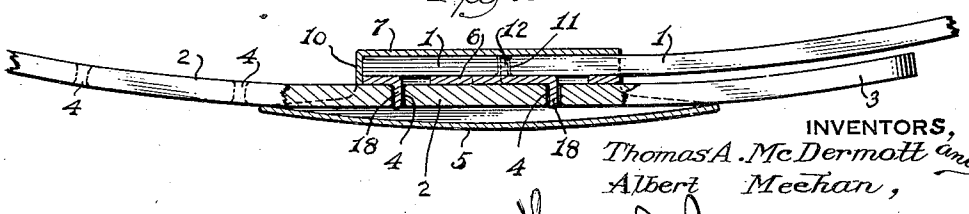


Fig. 3.



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UNITED STATES PATENT OFFICE

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BUCKLE FOR BELTS OR STRAPS

Application filed February 10, 1931. Serial No. 514,733.

Our present invention relates to buckles, and has for its important object an improvement in belt or strap buckles, for any purpose to which these are usually utilized and wherein the strains encountered in such buckles are distributed and dispersed over greater areas of the leather or other material of the belt or strap, and preventing tearing thereof or undue stretching.

The present device is along the same line of construction as that set forth in the copending application of Albert Meehan, Serial No. 495,625, filed Nov. 14th, 1930, for belt buckles, and is an improvement thereover.

One of the important features of construction relates to the means provided for removably and independently attaching the buckle to both ends of a belt, the rear or blind end of the belt being substantially semi-permanently encased in a box like belt-holding structure normally closed, the other or front end of the belt being easily accessible for removal or adjustment thereof.

Another feature lies in the construction of the latch plate, in which all the strains of the belt, in use, are all taken up and supported by the latch plate, alone, thus creating a unitary straining means which is in a single piece with the strain forces in balance, thus relieving the buckle itself of diverse strains on the various parts thereof.

Another feature is in the joining of the back plate, latch plate and front plate and in which they are all joined into a pivoted structure on a common pivot point, thus making the plural parts of the buckle into a single, unitary structure.

Features of arrangement of the latch members on the latch plate, the shape of the coordinating slots in the belt ends for better distribution of strains in the leather, and the details of latching the structure to a belt, are all of novel trend, and increase the utility and ease of operation.

Modifications may be made in the structure herein without departing from the spirit hereof nor the scope of the appended claims.

In the drawings:

Fig. 1 is a perspective front view of our device in locking engagement with and as applied to a belt, the belt being fragmentarily shown.

Fig. 2 is a transverse sectional view taken on the line 2—2, Fig. 1, looking in the direction of the arrows.

Fig. 3 is a longitudinal sectional view taken on the line 3—3, Fig. 1, looking in the direction of the arrows.

Fig. 4 is a plan view of the blind end portion of the belt with the front plate opened, and with the latch and back plates in locked engagement with said blind end.

Fig. 5 is a side view of the latch plate separated and removed from the other components of the buckle; and

Fig. 6 is a fragmentary end view of the rear or blind end portion 1 of the belt showing the latch engaging slots therein.

In Fig. 1 the device is shown as applied to a belt comprising a rear or blind end portion 1 and a front portion 2, the free end of which 3 is provided along its center with a plurality of alined oval straight sided slots 4.

In Fig. 2 the device is shown as comprising three separate pieces, the front or cover plate 5, the belt latch plate 6 and the back plate 7, all of these being curled at the bottom ends so as to hingedly engage around a pintle 8 so that when the buckle is opened the members 5, 6 and 7 are angularly divergent from one another to permit the introduction of both the belt ends 1 and 2.

To this end the back plate 7 is merely a flat plate having an inturned top ledge 9 and an inturned angularly formed end ledge 10, these ledges being formed in such a manner as to fit the rear, blind end 1 of the belt and encase the same on the top side and end as in Fig. 4, while the bottom side of the belt as in Fig. 2 is held in boxed position by the hinge forming portions 14, 15 and 16 of the coordinating commonly joined front, latch and back plate members. This construction is best noted in Fig. 2 wherein the rear squared end 1 of the belt is encompassed on its two sides and one end.

The belt portion 1 is further provided with a pair of elongated straight side slots 11 which are in vertical alinement with one

another as in Fig. 6, and these are so positioned as to come into registry with the blanked up vertically positioned latch lugs 12 which are formed on and extend to the rear of the latch plate 6 so that when the squared belt end 1 is in position in the belt encompassing back plate 7 and the pivot latch plate 6 is closed down thereupon, the flat faced lugs 12 engage in the apertures 11 and the latch plate 6, having a spring latch ledge 13 on its upper end engages over the inturned edge portion 9 of the back plate in a resilient manner and thereby is latched in locked position as shown in Figs. 1 and 2, but best shown in Fig. 2. As thus engaged the buckle construction is lockably engaged to the squared rear end of the belt in such a manner that the only loose member of the assembly is the opened front plate 5 which, as shown in Fig. 4, is swung downwardly from the pivot 8.

The detailed hinging structure of the three buckle members 5, 6 and 7 to the pivot pin 8 is as follows. The back plate 7 has two intermediately located curled or formed ferrules 14, Fig. 4, which engage around the pivot pin 8, the latch plate 6 has a single wide centrally located ferrule 15 curled about the pin 8 while the front cover plate 5 has two outside curled ferrules 16 curled about the outer ends of the pivot 8, so that all three are freely swingable upon the pivot, each one independent of the other so that they may perform their composite functions free of one another but coordinate to act as a single belt or strap engaging buckle member.

The front plate 5 at the side opposite its hinge portion 16 is provided with a curled spring-like latch 17, which, owing to the construction of the front plate, which may be slightly bowed, lends all of its resilience to the permitting of the latching member 17 to snap and unsnap over the curved latch end 13 of the latch plate 6 when operated to close as in Fig. 2, and to open.

The latch plate 6 in the belt engaging position as in Fig. 4 has a pair of outwardly projecting stamped out horizontally alined belt latch lugs 18, these being in substantial transverse alinement and project to the front side of the latch plate, as indicated in Figs. 3, 4 and 5. The rear belt end holding lugs 12, being blanked out of the latch plate oppositely to the lugs 18 and at right angles thereto to form belt or strap engaging lugs on opposite side of the latch plate and these engage the rear squared end of the belt 1.

When the cover plate 5 is opened as in Fig. 4 the front end of the belt 3 with its apertures 4 therein, which are spaced equally apart and in alinement, is then placed over the latch plate with the projecting lugs 18 projecting into and registering with the plural slots 4 and thereafter the front plate 5 is snapped thereover, snap latch 17 thereon engaging over the latch 13 of latch plate 6, as in Fig. 2, closing the entire assembly and keeping the two belt ends in perfect alinement.

It is obvious that any strain subjected to the belt falls upon the opposing lugs 12 and 18, and the opposing strains are confined to the latch plate 6 only, and the other back and front plates 7 and 5 have no other duty to perform than merely to coact to enclose the buckle assembly.

The cover plate may be made wider than the coordinating back belt end structure and may be ornamented to any suitable degree.

In operation of the device it is merely necessary to grasp the loose end 3 of the belt and pull on it which will unsnap the plate 5 and throw it in the position shown in Fig. 4, whereupon the belt may be removed or it may be adjusted to suit by moving the belt and registering its slots 4 with the belt lugs 18—18.

The transverse section Fig. 3 shows the manner in which the belt ends are in engagement in the structure, the box like structure comprising the latch plate 6 and the rear plate 7, being fully shown in this view, and the enclosing function of the front plate 5 also being fully shown.

It is obvious, as set forth, that owing to the fact that there are at least two prongs or lugs 12 and 18 in engagement with both belt ends and that owing to the wide faces presented by the formation of these lugs and the elongation of the slots in both belt ends, that there is a wider distribution of the strain forces set up in the belt ends and thereby the tendency of the belt to tear under strains is obviated, and the strain forces are distributed more evenly due to the wide faced contacts between the lugs and the slotted sides.

It is also obvious that the opposing strains of the two belt ends pulling against each other are localized to the latch plate only and that the longitudinal forces do not affect the back nor front plates.

It is also obvious that when the front plate is removed for adjustment of the free end 3 of the belt that the whole structure remains firmly engaged with the rear end of the belt 1, by reason of the engagement of the latch and back plates thereto and there is no tendency for the buckle to drop off or become loose and yet at the same time, if it is desired to transfer the buckle to another belt this may be readily done by releasing the catch 13 of the latch plate 6 from the latch portion 9 of the back plate and another belt, properly perforated, may be inserted therein and the buckle engageably connected thereto.

Having thus described our invention what we claim is:

1. A belt buckle comprising, in combination with a belt member, a back plate, a latch

plate interlocking with said back plate, and a front plate, all of said plates being hingedly connected together, means on said front plate for latching with said interlocked back and latch plates and means on said latch plate for holding the ends of said belt.

2. A belt buckle of the class described comprising a back plate and a latch plate, said latch plate having opposedly mounted belt and engaging lugs thereon, a cover plate therefor, all of said plates being pivotally connected to a common hinge point and means for latching all said plates to hold same in closed assembly.

3. A belt buckle of the class described comprising a back plate and a latch plate, said latch plate having opposedly mounted belt end engaging lugs thereon, a cover plate therefor, all of said plates being pivotally connected to a common hinge point and means for releasably latching all said plates together to hold same in closed assembly.

4. A belt buckle of the class described comprising a back plate, a front plate and an intermediate latch plate all hinged together at one of their ends and having interengaging latching means at their opposite ends whereby the latch plate may engage said back plate and the cover plate will engage the said latch plate and plural lugs on said latch plate projecting towards said back and cover plates.

5. A belt buckle of the class described, in combination with a belt having apertured ends, comprising a back plate, a front plate and a latch plate all hinged together at one of their ends and having interengaging latching means at their opposite ends whereby the latch plate may engage said back plate and the cover plate will engage the said latch plate and belt aperture engaging lugs on said latch plate projecting both ways from said latch plate and towards said cover and back plates to engage with both the ends of said belt, simultaneously.

6. A buckle comprising in combination with a belt, a back plate, swingable latch and front plates, said plates being pivotally connected with each other at one of their ends, said latch plate having means for holding the ends of the belt, and means whereby the free ends of said plates are separably interlocked with each other.

7. A buckle comprising in combination with a belt, a back plate, a swingable latch plate having means thereon for holding the ends of the belt, a flanged front plate, means pivotally connecting said plates together at one of their ends, and means whereby the free ends of said plates are separably interlocked with each other.

8. A buckle comprising in combination with a belt, a back plate, a hingedly movable latch plate, means carried by said latter plate for holding the ends of the belt, a hingedly movable front plate, hinge means connecting said plates together at one of their ends, and a spring constructed flange carried by each plate, whereby the free ends of said plates are separably interlocked with each other, said plates being of progressively increasing width.

9. A buckle comprising in combination with a belt having perforated ends, a back plate for engaging one of said ends, a swingable front plate for engaging the other end, an interposed swingable plate, oppositely projecting lugs carried by said latter plate for entering the perforations of said ends to hold the latter, hinge means connecting said plates together at one of their ends, and springable flanges integral with the free ends of said plates whereby the said free ends are separably interlocked with each other, said plates being of progressively increasing width.

Signed at New York city, in the county of New York and State of New York, this 7th day of February A. D. 1931.

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ALBERT MEEHAN.