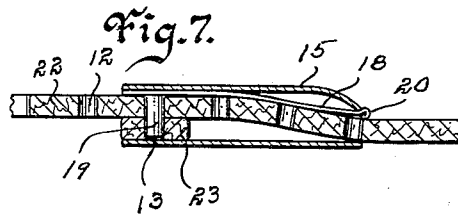
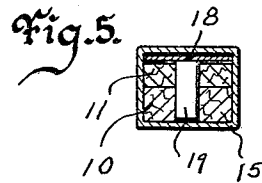
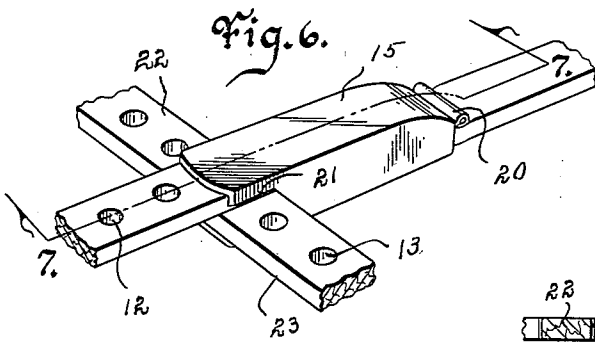
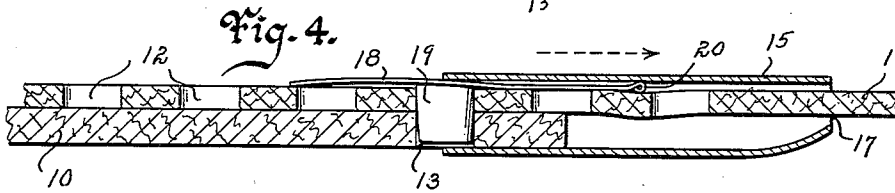
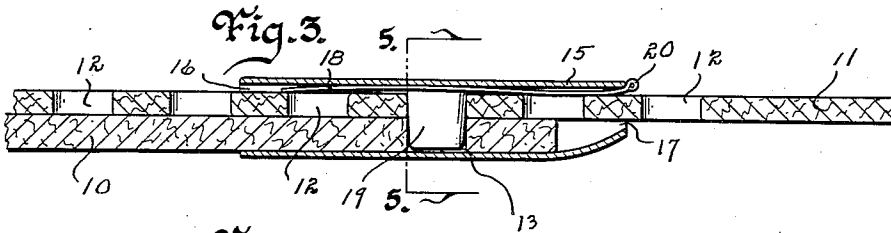
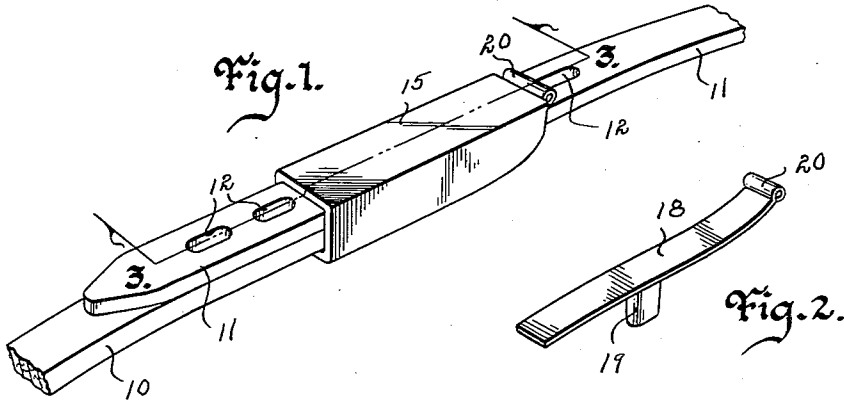


2,792,609

STRAP BUCKLE

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2,792,609

STRAP BUCKLE

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4 Claims. (Cl. 24—164)

This invention relates to a fastening means for securing the two ends of a belt, strap, or like, together.

There have been many types and styles of buckles for detachably holding two lengths of leather, plastic, or like, together. The most common, of course, is the ordinary buckle having a keeper frame, secured to one of the lengths and a hinged tongue that selectively extends through holes in the other length, with the other length threaded through the keeper frame. Perhaps the greatest objection to such buckles is that at least one of the leather length ends is required to bend in its length to pass through the buckle portion. This not only produces a non-straight pull, but is bulky and is of distorted appearance. Furthermore, the length of strap that is to be secured readily becomes scuffed and shopworn. This is particularly true of trouser belts. Still another disadvantage of the common buckle is that it has decided protrusions that are subject to catching and hooking onto other foreign matter to the strap lengths, such as hair, clothing, and like. This is particularly true when such buckles are used on dog collars, men's trouser belts, harness for beasts of burden, ladies' strap pocketbooks, and like.

Therefore, the principal object of my invention is to provide a strap buckle for the two free ends of a strap or straps that maintains the two lengths secured together in straight relationship, thereby eliminating distortion of either of the strap portions and making for an even, uniform pull in two directions.

A still further object of this invention is to provide a strap buckle that has no objectionable protrusions.

A still further object of this invention is to provide a strap buckle that is not bulky and of exceptionally light weight.

A still further object of this invention is to provide a strap buckle that is easily and quickly fastened or unfastened.

A still further object of my invention is to provide a strap buckle that is economical in manufacture, durable in use and refined in appearance.

These and other objects will be apparent to those skilled in the art.

My invention consists in the construction, arrangement, and combination of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view of my strap buckle securing two strap ends together and in use,

Fig. 2 is a perspective view of the latch portion of my strap buckle,

Fig. 3 is a longitudinal sectional view of my strap buckle in use taken on the line 3—3 of Fig. 1 and more fully illustrates its construction,

Fig. 4 is a longitudinal sectional view of my strap buckle in the process of being moved to a detached condition,

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Fig. 5 is a cross-sectional view of the device taken on line 5—5 of Fig. 3,

Fig. 6 is a perspective view of a slightly modified strap buckle adapted for use when the strap members transversely lap each other, and

Fig. 7 is a longitudinal sectional view of the structure shown in Fig. 6 and is taken on line 7—7 of that figure.

In the above described drawings, I have used the numerals 10 and 11 to designate the two end portions of a strap. These two portions 10 and 11 may be separate strap members or they may merely be the two free ends of one strap such as found in belts, dog collars, and like. At least one of these strap portions is provided with a plurality of spaced apart longitudinal slots or holes 13 and the other strap portion must have at least one registering slot or hole 14. These holes are shown in the drawings and it is to such common strap portions that I use my buckle and which I will now describe in detail.

I have used the numeral 15 to designate the elongated housing of my buckle which is rectangular in general appearance. This elongated housing is completely open at its front end as shown in Fig. 1 and is designated by the numeral 16. The bottom portion of the rear end of the housing 15, however, extends in a curved line toward the face of the housing 15 to terminate in a restricted slit opening 17. This slit opening 17 is such as to loosely embrace and conform to the cross-sectional area of one of the strap portions as shown in Fig. 3. The open forward end of the housing, however, is rectangular and of a dimension that loosely embraces and conforms to the cross-sectional area of at least two of the strap portions as shown in Fig. 1. Fig. 2 shows my latch means and which consists of an elongated leaf spring portion 18 slightly bowed upwardly at its center portion and its rear end portion. On the lower center side of the spring 18 is a lug 19. The numeral 20 designates a small cylinder portion on the rear end of the leaf spring which may be formed merely by bending the extreme rear end portion of the spring back upon itself.

The practical operation of my device is as follows. The housing and the leaf spring are first attached, after which the housing 15 is slid onto the strap portion 11, with its restricted opening 17 to the rear. The two strap portions are placed together with the hole 14 of the strap 10 registering with the desired hole 13 in the strap 11. The catch means is then placed on top of these two straps with its lug 19 extending through the two selected holes of the two strap portions. To fasten the buckle, it is merely necessary to slide the housing 15 forwardly over the two strap ends and the leaf spring portion 18 until the rear end of the housing 15 snaps past the portion 20 of the leaf spring. At this period of operation, the buckle will be locked as shown in Fig. 1 and Fig. 3, with the portion 20 extending back of the top of the rear end of the housing 15. Obviously, with the leaf spring 18 yieldingly holding its portion 20 in such position, the housing will be locked against rearward movement and the two strap ends will be rigidly held together and the straps will extend outwardly therefrom in undistorted straight lines parallel with each other. When the buckle is in use as described, it will be noted that there are no objectionable protrusions to catch on other materials, and inasmuch as the cross-sectional area of the housing 15 is not much greater than the cross-sectional area of the two lapped straps, the buckle is relatively small and of light weight. With this housing embracing the leaf spring 18, the lug 19 will be held through the two strap portions and cannot become disengaged.

To detach my buckle or to adjust the lug 19 into different holes, it is merely necessary to manually depress the member 20 against the resiliency of the leaf spring 18, downwardly to a position where the housing 15 may be

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slid to the rear, and over and from the leaf spring 18 as shown in Fig. 4. In the placement of the buckle or its removal, it will be noted that neither of the strap end portions are unduly distorted. The strap ends will not become scuffed or damaged and a most neat appearing fastening means is provided. Another advantage of the construction of my buckle just described is that all parts are yieldable with each other when the buckle is fastened, thereby eliminating noise or rattle. By the housing 15 being restricted at its rear end, a smooth appearance is provided to accommodate the single strap that extends therethrough. The other free end of the strap is maintained inside the housing 15 and thus cannot become distorted or bent. The forward movement of the housing 15, once the buckle has been fastened, is restricted by the restricted open rear end of the housing.

The buckle shown in Fig. 6 and Fig. 7 is substantially the same as that shown in the other figures of the drawings, except that the sides of the forward end of the housing 15 are cut away at 21 so that the buckle will accommodate two cross straps 22 and 23. Also, instead of curving the rear bottom end portion of the housing 15 upwardly, I have curved the rear top end portion of the housing 15 inwardly. However, the restriction at the rear end of the housing 15 may be accomplished either by curving its rear outer side top or its rear under side. The lug 19 may be oblong as shown in Fig. 2 or round as shown in Fig. 7. While the lug 19 may be of any shape, it is found that when it is oblong longitudinally of the straps, it will automatically align the leaf spring with the straps for the sliding of the housing to an embracing position.

Some changes may be made in the construction and arrangement of my strap buckle without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims, any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim:

1. In combination, two lapping strap portions each having at least one hole, a buckle comprising an elongated housing open at both ends and slidably embracing said strap portions where they lap each other, a leaf spring curved in its longitudinal length and resting on one side only of one of said strap portions, a lug extending from said leaf spring and detachably penetrating a hole in each of said strap portions; said leaf spring designed to be embraced by said elongated housing at times, and a latch portion on one end of said leaf spring yieldably rising to a position back of one end of said elongated housing for preventing the sliding of said elongated housing in one direction.

2. In combination, two lapping strap portions each having at least one hole, a buckle comprising an elongated

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housing open at both ends and slidably embracing said strap portions where they lap each other, a leaf spring curved in its longitudinal length and resting on one side only of one of said strap portions, a lug extending from said leaf spring and detachably penetrating a hole in each of said strap portions; said leaf spring designed to be embraced by said elongated housing at times, and a depressible outwardly extending projection on the extreme end of said leaf spring yieldably rising to a position back of one end of said elongated housing for preventing the sliding of said elongated housing in one direction.

3. In combination, two lapping strap portions each having at least one hole, a buckle comprising an elongated housing open at both ends and slidably embracing said strap portions where they lap each other, a leaf spring curved in its longitudinal length and resting on one side only of one of said strap portions, a lug extending from said leaf spring and detachably penetrating a hole in each of said strap portions; said leaf spring designed to be embraced by said elongated housing at times, a depressible outwardly extending projection on the extreme end of said leaf spring yieldably rising to a position back of one end of said elongated housing for preventing the sliding of said elongated housing in one direction; said elongated housing having its end engageable by said outwardly extending projection of an area less than its other end.

4. In combination, two lapping strap portions each having at least one hole, a buckle comprising an elongated housing open at both ends and slidably embracing said strap portions where they lap each other, a leaf spring curved in its longitudinal length and resting on one side only of one of said strap portions, a lug extending from said leaf spring and detachably penetrating a hole in each of said strap portions; said leaf spring designed to be embraced by said elongated housing at times, a depressible outwardly extending projection on the extreme end of said leaf spring yieldably rising to a position back of one end of said elongated housing for preventing the sliding of said elongated housing in one direction; said elongated housing capable of completely embracing and hiding said leaf spring except said outwardly extending projection.

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