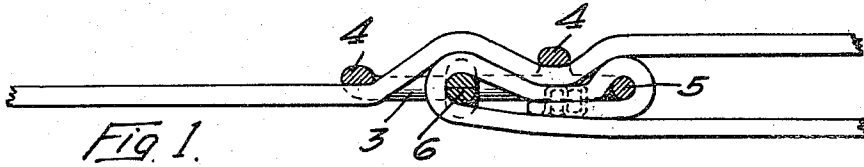
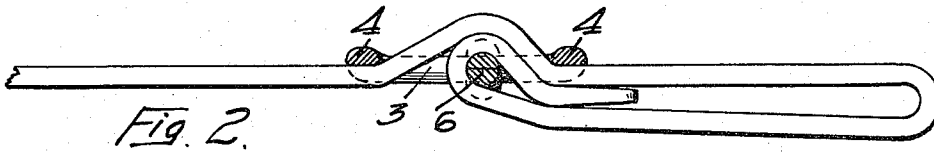
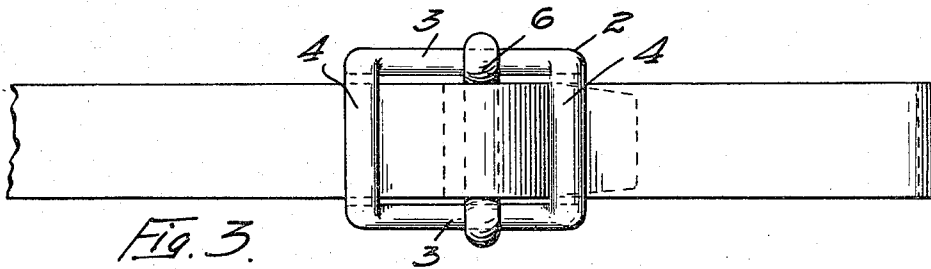
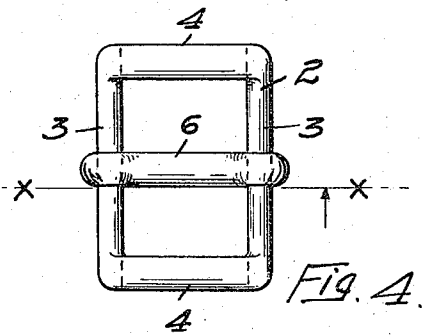
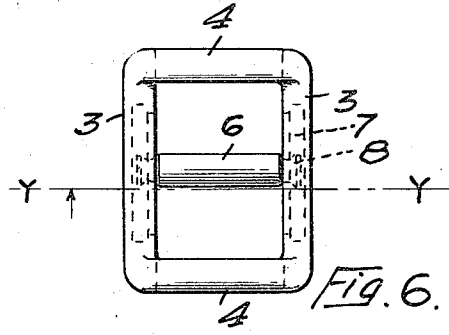
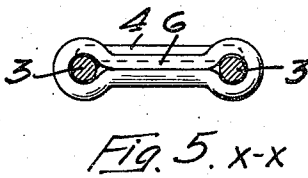
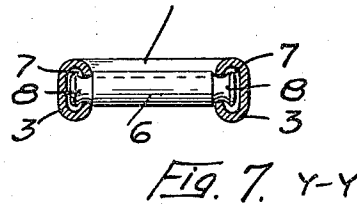


M. R. COWELL.
BUCKLE.
APPLICATION FILED MAY 15, 1914.

1,178,136.

Patented Apr. 4, 1916.
2 SHEETS—SHEET 1.



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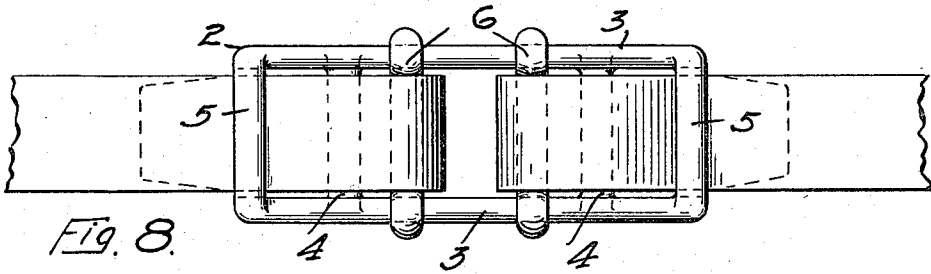
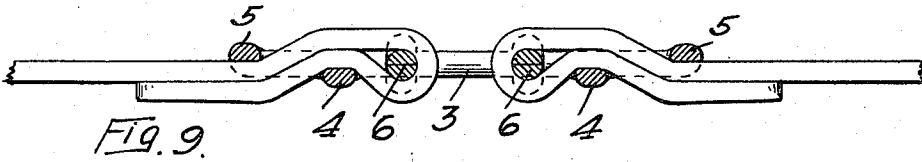
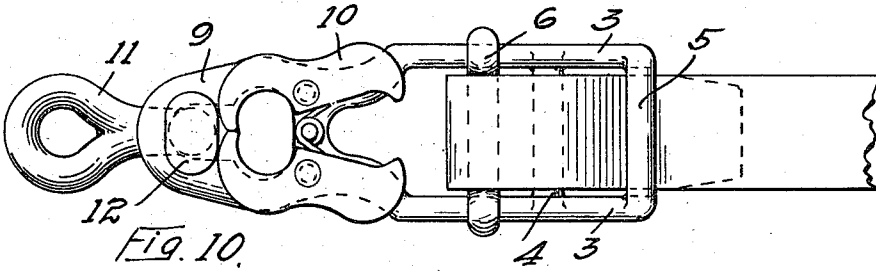
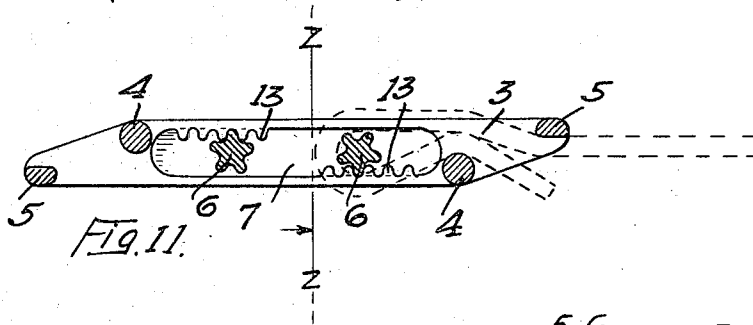
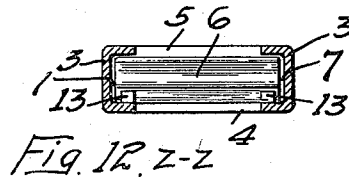
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UNITED STATES PATENT OFFICE.

MARCUS RAY COWELL, OF ST. PAUL, MINNESOTA.

BUCKLE.

1,178,136.

Specification of Letters Patent.

Patented Apr. 4, 1916.

Application filed May 15, 1914. Serial No. 838,637.

To all whom it may concern:

Be it known that I, MARCUS RAY COWELL, a subject of the King of Great Britain, and resident at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Buckles, of which the following is a specification.

This invention relates to improvements in buckles designed for holding straps together, or for locking the end of a single strap to a buckle frame, which frame may be secured to any supporting part in any desired manner.

The object of the invention is to provide a buckle that will fasten two straps together or will lock a single strap at any desired point without the use of the ordinary buckle tongue.

The invention consists generally in the constructions and combinations hereinafter described and particularly pointed out in the claims.

In the accompanying drawings forming part of this specification, Figure 1 is a longitudinal sectional view of a buckle embodying my invention and illustrating one method of using the same. Fig. 2 is a similar view showing a slightly modified construction. Fig. 3 is a plan view of the buckle shown in Fig. 2, with a strap arranged in connection therewith to form a loop. Fig. 4 is a plan view of the buckle shown in Fig. 3 with the strap omitted. Fig. 5 is a transverse vertical section on line $x-x$ of Fig. 4 looking in the direction of the arrow. Fig. 6 is a plan view of the buckle shown in Fig. 4 with a modified arrangement of locking bar. Fig. 7 is a transverse section of the buckle shown in Fig. 6, taken on the line $y-y$ of Fig. 6, looking in the direction of the arrow. Fig. 8 is a plan view of a modified form of the buckle provided with two locking bars. Fig. 9 is a longitudinal sectional view of the buckle shown in Fig. 8. Fig. 10 is a plan view showing the buckle having its frame formed integrally with a spring-controlled connecting device. Fig. 11 is a sectional view of a buckle substantially the same as that shown in Fig. 8, with modified arrangement of the locking bars. Fig. 12 is a section on line $g-g$ of Fig. 11 looking in the direction of the arrow.

In all of the drawings 2 represents the buckle frame, which is provided with parallel side bars 3—3, and, as here shown, is

provided with two end bars 4—4, arranged at right angles to the side bars 3—3. In some instances I provide at each end of the buckle frame a keeper 5, which is preferably formed by integral extensions of the side bars 3 and a cross-bar or rod parallel to the end bar or bars 4 adjoining the ends of the extensions of the side bars 3. (See Figs. 1, 8, 9, 10 and 11). The term "keeper" is employed because the member so designated serves to keep the strap in its looped or flattened condition. In Figs. 1 and 10 of the drawings I have shown a keeper 5 at one end only of the buckle frame, while in Figs. 8, 9 and 11, I have shown a keeper at each end of the buckle frame. I may employ the keeper at one or both ends as may be preferred for the particular use to which the buckle is to be put. I provide one, or in some instances two, movable locking bars that extend across the buckle frame substantially at right angles to the side bars 3 and parallel with the end bars 4. The locking bars 6 are suitably secured or connected with the side bars 3, so as to move freely on said bars toward either end of the buckle frame. I prefer to form these locking bars by making a loop of sufficient size to pass over the buckle frame, so that after it is brought inside of the end bars 4, the portions thereof between the side bars 3 may be pressed inward and brought in contact, or substantially in contact, with each other, as shown most clearly in Figs. 1 and 5 of the drawings. This locking bar is preferably made of a half round strip of metal, so that the body of the bar between the loops surrounding the side bars will have flat surfaces facing each other, and thereby making this part of the locking bar substantially cylindrical in cross section as shown in Figs. 1, 2 and 9 of the drawings. The loops thus formed at the ends of the bar slide freely on the side bars 3 and the locking bar cannot come off from the buckle frame as the main part of the locking bar, extending cross-wise between the loops, will come in contact with the inner sides of the end bars 4, thus limiting the movement of the cross bar in either direction. If preferred, the side bars 3 may be provided with longitudinal ways or recesses 7, and in this instance the locking bar 6 is provided with a journal 8 at each end, these journals engaging the said recesses or ways 7, as shown in Figs. 6 and 7 of the drawings.

With this construction the locking bars 6 can be moved lengthwise of the buckle frame, being held at all times parallel to the end bars 4, the action being substantially the same as with the looped locking bar 6 already described, except that with the locking bar shown in Figs. 6 and 7 of the drawings, there may be a rolling as well as a sliding action of the bar along the buckle frame.

In Fig. 10 of the drawings, one end of the buckle frame is shown formed integrally with the frame of a connecting device 9, having spring arms 10 to which a member 11 having a stud 12, may be connected.

In Figs. 11 and 12 I have shown another modification of the buckle. In this structure the side bars are shown with longitudinal grooves 7, corresponding to the groove 7 shown in Figs. 6 and 7 of the drawings, and the locking bars 6 are corrugated and have their ends engaging teeth 13 formed on the upper and lower walls of the recesses 7. With this construction a pull on the strap tends to roll the locking bar toward the end of the buckle frame, the corrugations engaging the teeth on the wall of the recess or way 7, which prevents any slipping of said bar as it is rolled forward by the pull on the strap.

As shown in Figs. 1, 2 and 9 the end bars 4 are preferably off-set, or arranged above or below the central plane of the buckle frame, and their inner faces are flattened, said bars being substantially D-shaped in cross-section. This arrangement brings a sharp angle of the bar against the surface of the strap where it passes between said bar and the movable locking bar 6, whereby as a pull is exerted upon the strap, tending to move the locking bar toward the end bar, as shown in the drawings, the strap is clamped between the locking bar and this sharp edge or corner of the end bar, and said edge or corner embeds itself slightly in the leather. The end bar being off-set and placed above or below the central plane of the buckle frame, this sharp edge of the end bar will be in position to hold the strap which is pressed against it by the movable locking bar.

In the structures shown in Figs. 8 and 9 the inner corners of the bars 4 are preferably rounded off so that said corners will not embed themselves in the leather, while the outer corners are left sharp so that they

will embed themselves in the leather and prevent the short end of the strap from working out. If preferred the keeper bars 5 may also be provided with flat inner faces thus providing sharp corners to bear against the strap when the device is in use as shown in Figs. 9 and 11 of the drawing. Where the corrugated locking bar is employed the end bars 4 may be of cylindrical form as indicated in Fig. 11 of the drawings.

I do not limit myself to the details of the construction, as it is obvious that many changes in details of construction may be made without departing from my invention.

I claim as my invention:

1. A buckle, comprising a frame having parallel, longitudinally extending side-bars and transverse bars offset from the plane of the side bars and having flattened inner surfaces to present angular edges toward a centrally disposed locking bar, and a locking bar arranged between and parallel to the transverse bars with its ends supported by said side-bars and movable longitudinally thereof.

2. A buckle, comprising a frame having parallel, longitudinally extending side-bars and transverse bars disposed at opposite sides of a centrally disposed locking bar and offset from the plane of the side-bars and having flattened inner surfaces to present angular edges toward the locking bar, a keeper bar parallel to one of said transverse bars and carried by extensions of the side bars, and a locking bar arranged between said transverse bars with its ends supported by said side-bars and movable longitudinally thereof.

3. A buckle having a frame provided with parallel, longitudinally extending side bars, a transverse bar formed integrally with said side bars and offset from the plane thereof and having a flattened inner surface to present an angular edge toward a central locking bar, and a locking bar arranged parallel to said end bar with its ends supported upon said side bars and movable longitudinally thereof.

In witness whereof, I have hereunto set my hand this 6th day of May 1914.

MARCUS RAY COWELL.

Witnesses:

EDWARD A. PAUL,
G. E. SORENSEN.

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