March 29, 1927. 1,622,954

L. MACHEROUX

EXTENSIBLE BUCKLE AND THE LIKE

Filed June 25, 1926

Fig.1

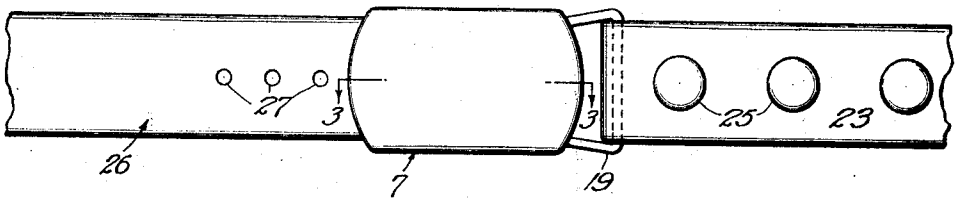


Fig.2

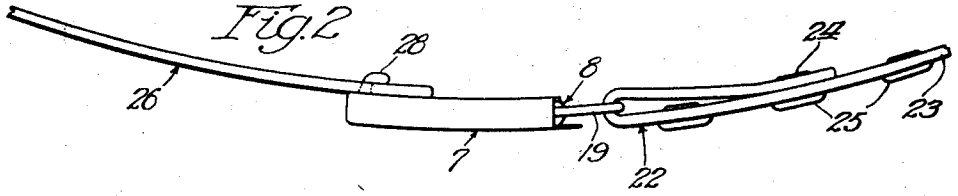


Fig.4

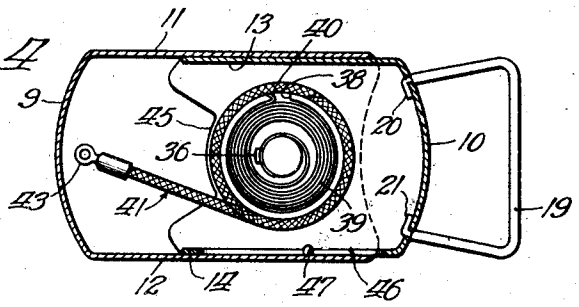


Fig.3

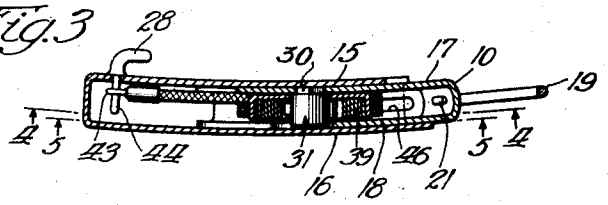


Fig.6

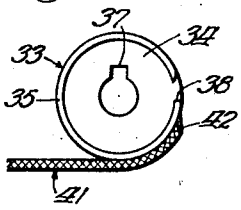
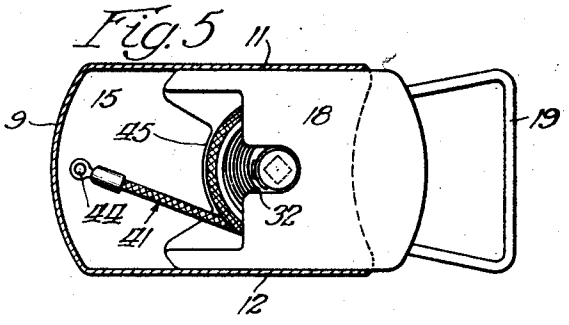


Fig.5



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UNITED STATES PATENT OFFICE.

LOUIS MACHEROUX, OF CHICAGO, ILLINOIS.

EXTENSIBLE BUCKLE AND THE LIKE.

Application filed June 25, 1926. Serial No. 118,509.

This invention has to do with an improved construction of extensible buckle or like article of manufacture. The buckle herein disclosed is particularly intended for use in connection with belts and the like, but it will presently appear that certain of the features of the invention may also be used to advantage in connection with buckles or extensible devices for other purposes than belts. Nevertheless, in view of the fact that the construction herein disclosed has been devised with a view particularly to use with belts and the like, I have illustrated and will describe the same for such use, without, however, intending to limit myself thereto except as I may do so in the claims.

One of the objects of the invention is to provide an extensible buckle, the two sections whereof are spring connected together so that they tend to telescope, the one into the other, under spring tension thus placing a tension on the belt. In this connection it is an object to provide a construction making use preferably of a single winding drum operated by a single spiral spring.

Another object of the invention is to provide means for limiting the extension movement of the two parts with respect to each other so as to avoid any excessive strain being imposed on the spring and drum mechanism.

Another object of the invention is to provide a very simple construction, one which can be manufactured from a very small number of parts, one which is so arranged that the parts can be very easily assembled; and one such that when the parts are assembled they will not become readily disconnected or jammed or otherwise disarranged.

Other objects and uses of the invention will appear from a detailed description of the same which consists in the features of construction and combinations of parts hereinafter explained.

In the drawings Fig. 1 shows a face view of a belt buckle embodying the features of the present invention, the attached belt ends being broken away so as to shorten up the figure;

Fig. 2 shows a plan view corresponding with Fig. 1;

Fig. 3 shows a longitudinal section on the line 3—3 of Fig. 1, looking in the direction of the arrows;

Fig. 4 shows a section on the line 4—4 of Fig. 3 looking in the direction of the arrows;

Fig. 5 shows a section on the line 5—5 of Fig. 3 looking in the direction of the arrows; and

Fig. 6 shows a detailed face view of the drum, looking into the open side thereof, the pivot stud being in place but the spring being removed.

The device herein disclosed includes a pair of telescoping box-like structures 7 and 8 respectively. These are substantially rectangular in face view as shown in Fig. 1, but they are preferably curved on a radius of substantially 8″ inches when viewed from above as in Fig. 2. Inasmuch as both of the telescoping members are formed on the same radius of their central planes they may readily slip with respect to each other so as to telescope in and out.

The outer end of the outer member 7 is closed as shown at 9 and the outer end of the inner member 8 is closed as shown at 10. Both of the inner ends of the members are open; and the top and bottom walls 11 and 12 of the outer member receive the top and bottom walls 13 and 14 of the inner member with a nice fit. Likewise, the back and front walls 15 and 16 of the outer member receive the back and front walls 17 and 18 of the inner member with a nice fit.

A loop 19 has its ends extended through openings in the end wall 10 of the inner member and then hooked over as shown at 20 and 21. This loop receives the end portion 22 of one end of the belt 23; and said portion may be led back and then connected in an adjusted position by means of a snapper 24 which is snapped on to the selected companion snapper member 25. In this way the length of the belt is easily adjusted.

The other end 26 of the belt is preferably provided with a series of holes 27, a selected one of which may be hooked over a hook 28 which projects from the back wall 15 of the other companion telescoping member at a point close to its end wall 9.

There is formed in the wall 17 of the inner member 8 a rectangular hole which receives the squared end 30 of a stud 31. This stud is of proper length to work freely between the back and front walls 15 and 16 of the outer member 7 so that said stud can not become disengaged from the rectangular hole of the inner member 8. Preferably also the front wall 18 of the inner member is slotted as shown at 32 in Fig. 5 so as to facilitate setting the stud into place.

A hollow drum is rotatably mounted upon the stud. This drum includes a floor 34 together with an encircling flange 35 projecting upwardly from said floor. A pin 36 projects from the stud 31 at a point about midway of the height of the flange 35 as shown in Fig. 3 in particular; and a notch 37 formed in the floor 34 of the drum permits said drum to be set down over the stud when the parts are being assembled.

The notch 38 is formed in the flange 35 as shown in Fig. 6. A spiral spring 39 has its inner end perforated and set down over the pin 36. The outer end 40 of said spring is provided with a hook, and said hook is in turn hooked over one side of the slotted opening 38 of the flange 35. By this construction the tension of the spring is exerted between the drum and the stud, and the stud itself is non-rotatably carried by the inner housing member 8.

A small, very flexible metal cable 41 has its inner end 42 soldered or otherwise permanently secured to the drum flange. The other end of said cable is provided with a small eyelet 43 which can be hooked over a pin 44 which reaches inwards from the back wall 15 of the outer member 7.

Preferably this pin 44 comprises an extension of the hook 28 already referred to.

Examination of Figs. 4 and 5 in particular will show the presence of a recess 45 cut backwards into the end of the back wall 17 of the inner member 8. This is to allow free movement of the parts without interference from the pin 44.

In order to prevent the two housing members from being separated an excessive amount I have provided a longitudinal slot 46 in the bottom wall 14 of the inner member 8, said slot receiving a pin 47 which projects thereinto from the bottom wall 12 of the outer member 7.

While I have herein shown and described only a single embodiment of the features of my present invention, still I do not intend to limit myself thereto except as I may do so in the claims.

I claim:

1. As a new article of manufacture an extensible buckle or the like comprising in combination a pair of telescoping members both of which are substantially rectangular in cross section, said members having open telescoping ends, both of said members being formed on a cylindrical curvature of substantially 8 inches in radius, a stud non-rotatably secured to one cylindrical face of the inner member and projecting through the opposite cylindrical face thereof into contact with the inner surface of the adjacent face of the other member, a drum rotatably mounted on said stud, a spiral spring secured to said stud and to the drum and tending to wind up the drum, a flexible tension member having one end secured to the drum on which it winds, a loop on the other end of the tension member, a pin secured to a cylindrical wall of the outside telescoping member and receiving said loop, a pin and slot connection between two of the walls of the telescoping members serving to limit the opening movement of said members with respect to each other, and suitable belt attaching devices on the extreme ends of two telescoping members substantially as described.

2. As a new article of manufacture an extensible buckle or the like comprising in combination a pair of telescoping members of rectangular cross section and broader in one cross sectional direction than the other, a stud secured to the inner telescoping member and extending across same, a drum pivotally mounted on said stud, a spiral spring having its ends connected to the stud and to the drum, a flexible tension member having one end connected to the drum and its other end connected to the other telescoping member, and suitable belt connecting devices in conjuction with the extreme ends of the two telescoping members substantially as described.

3. As a new article of manufacture an extensible buckle or the like comprising in combination a pair of telescoping members of rectangular cross section, said members being broader in one cross sectional direction than the other, and said members being formed on a cylindrically curved surface, a drum pivotally mounted within the inner member on an axis extending transversely across said member, a spiral spring within said drum tending to retract the same and wind it up, and a flexible tension member having one end connected to the drum and the other end connected to the other telescoping member, and suitable connectors for attachment of a garment to the two telescoping members substantially as described.

LOUIS MACHEROUX.