Oct. 16, 1928. 1,688,272

L. FOULETIER

SPRING PRESSURE BUTTON

Filed May 14, 1926

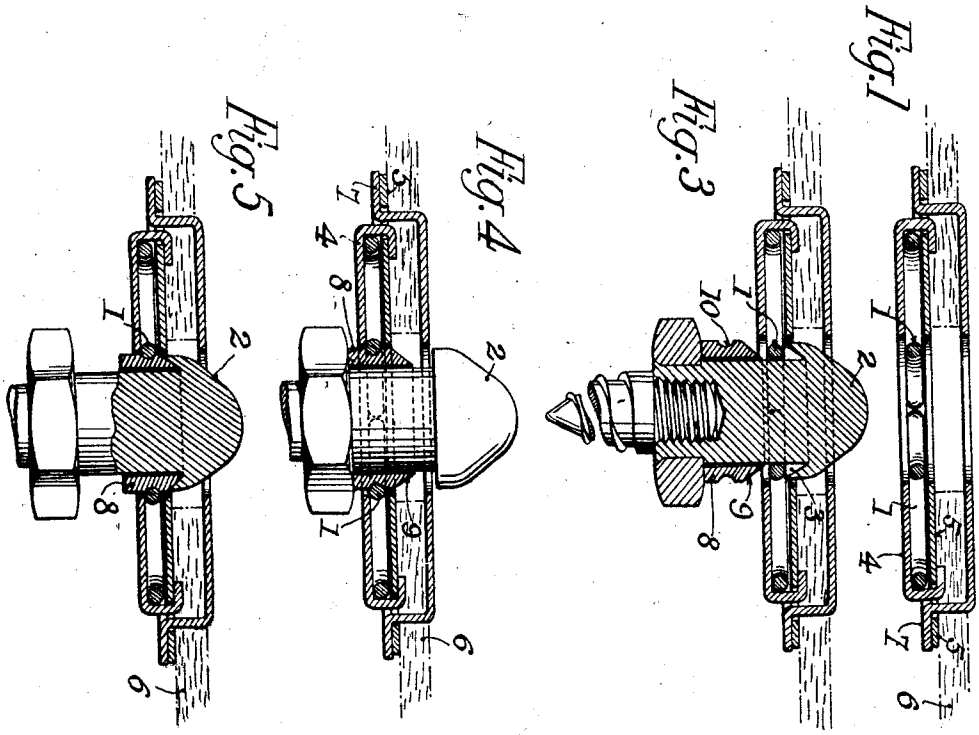


Fig. 1

Fig. 5

Fig. 4

Fig. 3

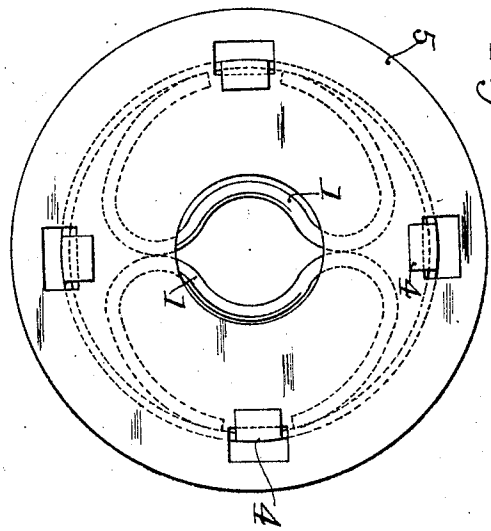


Fig. 2

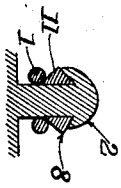


Fig. 7

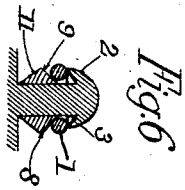


Fig. 6

INVENTOR
LOUIS FOULETIER
BY Munn & Co
ATTORNEYS

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UNITED STATES PATENT OFFICE.

LOUIS FOULETIER, OF GRENOBLE, FRANCE.

SPRING-PRESSURE BUTTON.

Application filed May 14, 1926, Serial No. 109,184, and in France July 7, 1925.

My invention relates to a spring pressure button which assures a reliable fastening, while its two component parts may be readily separated and without strain upon the attaching means.

The appended drawings show by way of example various forms of pressure buttons in accordance with the invention.

Fig. 1 is a cross section of the cup-shaped part alone, and,

Fig. 2 is the corresponding plan view.

Fig. 3 is a section of the button in the closing position.

Figs. 4 and 5 show the method of opening the button.

Figs. 6 and 7 show a modification respectively in the closed position and in the position preliminary to the opening.

The said pressure button comprises two principal parts which are attached to the respective pieces to be fastened together, as follows:

1. A cup-shaped part which is apertured at the centre and contains a spring 1.

2. A button 2 which comprises a circular recess 3 in the lower part.

The said cup-shaped part may consist for example of two plates which are attached together and are fastened to the textile fabric 6. A third plate 7 is also attached below the plate 5, and the spring 1 whose form is variable is disposed between the plates 4 and 5. The shape of said spring is indicated solely by way of example, and it may have any other suitable shape and may be made in one or two pieces.

Upon the shank of the button 2 is loosely slidable a ring 8 which is beveled at 9 adjacent the head of the button, and is slightly grooved on the periphery at 10. The groove is not essential, since the pressure of the spring may suffice to draw the ring.

The said ring has a diameter equal to that of the head of the button, or a somewhat larger diameter.

The operation is as follows:

To button the device, the cup-shaped part is placed upon the button, and a slight pressure is given in order to bring the spring 1 under the head of the button whose lower edge forms an abutment (Fig. 3).

To unbutton the device, I commence by pressing more strongly upon the cup-shaped part. The spring 1 meets with the beveled edge 9 of the ring 8 and moves aside, thus entering the groove 10 (Fig. 4); the device is then drawn up, so that the ring 8 will slide along the body of the button 2 and will be engaged in the recess 3 (Fig. 5). The spring can thus be readily disengaged from the groove 10 and will slide around the head of the button as the two fastened buttoned parts are further separated.

Obviously, the button and its cup-shaped part may have widely differing shapes, for instance round, square, polygonal and the like, without departing from the principle of the invention.

The two parts of the button may be fastened in any suitable manner to the pieces to be buttoned together, by means of claws, eyelets, screws, tacks and the like.

In the modification shown in Figs. 6 and 7, the ring 8 comprises in addition to the bevel 9 an oppositely situated bevel 11 formed on its lower edge, so as to have a double taper and without peripheral groove.

In these conditions, in the closed position (Fig. 6) the parts have the same relative positions as before, but to open the device, when the cup is pressed upon, the spring will slide upon the upper ramp of the ring and thence upon the lower ramp. The device is then drawn up and the ring 8 engages the recess 3, and the spring proceeds at once upon the bevel 11 (Fig. 7); the spring then slides upon the bevel 11 and upon the head of the button.

In all cases, it will be noted that in the closing position the device will be securely fastened, since the spring abuts against the under part of the button head, and cannot go beyond it whatever may be the traction exercised.

The ring 8 may have a triangular, rounded or other cross section, and it may be open and flexible, or closed.

One has already proposed spring pressure buttons of a kind similar to those which have been described above, also comprising, on the one hand, a button having a shank provided with a bulged head and a sleeve sliding along this shank, and on the other hand a movable cup provided with a recess adapted to slide over the said button and stopping means adapted to be resiliently or yieldingly clamped about the said shank, the said sleeve being adapted to cooperate with the said stopping means so as to keep the same apart for the purpose of unbuttoning. I do not claim this combination in a general manner. However in the known devices of this kind, the under part of the head was not recessed for

receiving the beveled top part of the sliding sleeve, so that the peripheric surface of this sleeve could not join the periphery of the head without leaving a space in which the spring stopping means were liable to engage themselves when unbuttoning takes place, thereby preventing the latter from being easily effected.

Having thus described my apparatus, what I claim as new therein, and my own invention, is:—

In a spring pressure button, the combination of a cup-shaped member comprising an aperture formed at its centre and adapted to be fastened to one of the two pieces to be buttoned together, a spring disposed in said cup-shaped member, a stud provided with a head and a shank, adapted to be fastened to the second of the pieces to be buttoned together, and to be inserted into the aperture in the said cup-shaped member, the bottom of the head having formed therein a recess serving as an abutment for contact with the said spring, a ring whose diameter at least equals that of the said head and is slidable on the said shank, said ring comprising adjacent the head a beveled edge adapted to engage the said recess in the head and thus to cause the said spring to expand whereby the latter may slide upon the said head when the said cup-shaped member is drawn upon the same and an annular groove formed in the periphery of said ring.

In testimony whereof I have hereunto affixed my signature.

LOUIS FOULETIER.