July 11, 1933. I. LEITER, NÉE KOCH 1,917,377

CLAMPING CLIP

Filed May 19, 1931

Fig. 1.

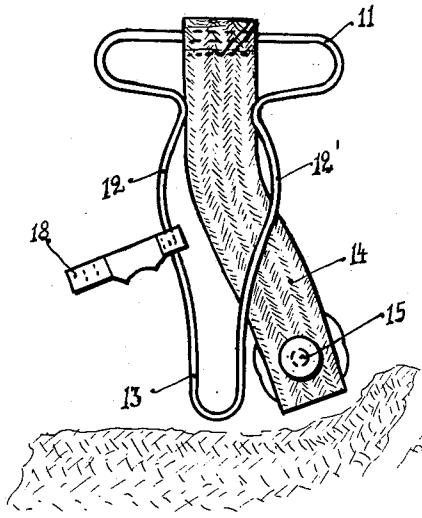


Fig. 2.

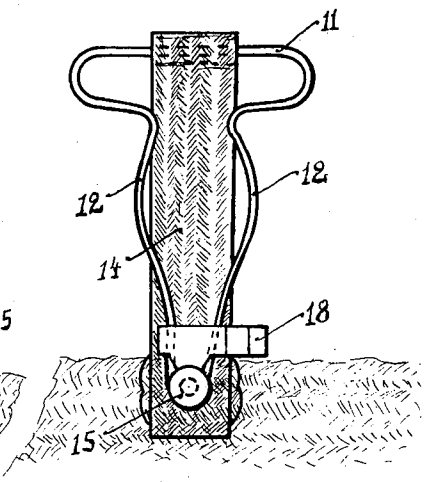


Fig. 3.

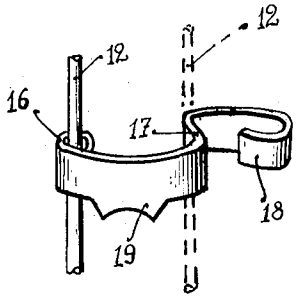
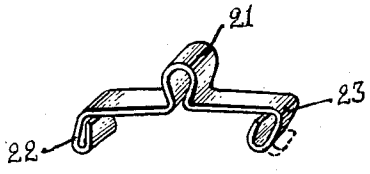


Fig. 4.



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UNITED STATES PATENT OFFICE

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CLAMPING CLIP

Application filed May 19, 1931, Serial No. 538,515, and in Germany May 24, 1930.

The invention refers to improvements in and relating to clamping clips of the button and loop type, such as used in garters and similar articles for detachably holding hosiery, garments or other fabrics.

The clamping clips, as ordinarily used in garters or the like, in which a button, fastened at the end of a so-called tab with the stocking or fabric laid on top of it, is slipped into the narrowed end of a wire-loop, suspended from a ribbon or from the garter-shield, have been found to be not quite reliable: In consequence of the counterpressure of the stockings or other fabric, or of the elasticity of the button-holding tab or of the formation of the wire-loop it happens often, that the button with the fabric slips back and out of the wire-loop, so that the piece of fabric disengages again from the clip of the garter.

One object of the invention is to provide a new and improved clamping clip, which is absolutely reliable and sure to hold the fabric, once the latter is put into the grip of the clip, until the user himself releases the fabric again from the clip. Another object of the invention is to provide a safety-means, which may be manufactured separately and used in connection with already existing clamping clips of various descriptions, as they are already on the market, in order to give to those clamping clips of older types higher value and a higher degree of security.

In order to carry out those objects of the invention I devise a movable locking clasp, which after the insertion of the button into the end of the wire-loop (or its equivalent) is put into such position on the clamping clip, as to block the button from passing back out of the loop, until the user himself removes this clasp again out of this locking position. In putting this principle into practical use in the manufacturing of new clamping clips I prefer to arrange the locking clasp hinged slidably on the one leg of the wire-loop, and adapted to be swung around this leg and resiliently to be clamped on the other leg of the wire-loop. In connection with already existing clamping clips of any older type the locking clasp of my invention is preferably given the shape of a double-winged elastic bracket, with the middle part forming a handle and the two resilient ends adapted to be slipped over the two legs of the wire-loop.

In the drawing I have shown two preferred embodiments of my invention, whereby

Figures 1 and 2 are elevations of a clamping clip as improved by the new locking clasp of my invention, shown in the open and closed position respectively of the clamping clip;

Figure 3 is a perspective view of the locking clasp of this first embodiment of the invention;

Figure 4 is a view of another embodiment, in which the locking clasp is shaped as a double-winged bracket.

In the illustration of the first embodiment the most simple type of a clamping clip is shown, in which the one part is a wire-made frame, having an elongated base 11, to be sewed or fastened otherwise on a ribbon, a hanger-strap or the like, a bulged middle part 12, 12', and a slightly converging narrowing end-loop 13. At the base 11 is fastened the socalled tab 14, as a rule made from an elastic or non-elastic ribbon, at the end of which tab is fixed the button 15 of customary form, having a narrow neck and an enlarged head. The locking clasp, which preferably is made of resilient steel, consists in an irregularly bent leaf-spring, the one end of which forms an eye 16, by means of which this leaf-spring is slidably hinged to the one leg 12 of the wire-part. The middle of this leaf-spring is bent twice in opposite turns, so as to form a somewhat receding S-shaped step 17. The somewhat prolongated free end of the leaf-spring is provided with a turned-over brim 18, in order to prevent it from hurting the wearer by a sharp edge, and to facilitate the handling of the locking clasp as explained below. The part of the leaf-spring between the hinge 16 and the step 17 is broadened and preferably arched, so that this curved part 19 may get a better grip on the head or on the neck of the button 15, and also increase the resiliency of the clasp.

In the practical use of this new and im-

proved clamping clip in the usual manner the button 15, with the piece of hosiery, cloth or the like, 20, is introduced into the bulged middle part 12 of the wire frame, and both pieces together are slipped into the wire-loop 13. Thereupon the locking clasp, which first may be in the position shown in Figure 1, is slipped along on the wire-leg 12 to a position close to the button 15, and is then swung round its eye or hinge 16, so that the step 17 snaps over the other wire-leg 12′, and the curved broad part 19 of the leaf-spring bears against the head or against the neck of the button 15. The button is thus locked in its position, and the piece of hosiery or cloth 20 is prevented from slipping out of the grip of the clamping clip. The locking clasp is preferably made of a length exceeding the breadth of the tab 14, and by a slight pressure of a finger from below against the laterally projecting brim 18 the locking clasp may be disengaged from the wire leg 12′ and be swung to the other side, thus freeing the button 15, if it is desired to open the locking clasp.

In the second embodiment of my invention the general construction of the clamping clip may be the same, as in the first example, which means, it comprises likewise a wire-frame with the base 11, the bulging legs 12, 12′, and the narrowing loop 13; and further the tab 14 with the button 15. The locking clasp however has the form shown in Figure 4, in which a strip or lamella of springy steel is shaped into a double-winged elastic bracket, the middle part of which is formed into a loop 21 to serve as a convenient handle on the clasp, whereas the ends are bent inwardly, so as to form oppositely slanting eyelets 22, 23, adapted to catch over the wire-legs 12, 12′ of the frame, if pressed down on the latter. The clasp will then stick by itself, riding on the wire-loop 13, and will lock the button in the garment-holding position, until the user of the article, by exerting a sufficient pull on the loop or handle 21, removes the locking clasp again from the wire-frame of the clamping clip.

It is understood that the locking clasp shown in Figure 4 may be brought likewise into permanent hinging connection with the wire-frame of a clamping clip, to substitute the locking clasp of the first shown embodiment of my invention; and it may be of advantage, to manufacture the locking clasp of the type of Figure 4 with the one eyelet, 22 or 23, slightly opened, so that the buyer of such clasp may himself fasten it to an old clamping clip of any design, by simply slipping the open eyelet over the one wire-leg of the clip in question, and then pressing this eyelet together, so as to transform it into a hinge. To the men of the art it is further evident, that there are possible still many other variations in the details of the construction of my new and improved clamping clip, which will be within the scope of protection as defined in the following claim, as my invention is to be seen generally in the principle of providing a locking means in connection with clamping clips of the button and loop type, which clamping means, if brought into operative position on the clamp, will prevent an accidental slipping of the button part out of the loop of the counterpart on the clamp.

I claim:

A button and loop fastener, comprising: a wire loop, a tab connected thereto, a button at the free end of said tab, and a resilient clasp for locking the button in the loop, said clasp being hinged at one of its ends to one leg of the loop and having means for separably snapping over the other leg of the loop, the part of the clasp extending between the two legs of the loop being arched, so as to increase the resiliency of the clasp and also increase its grip on the neck of the button.

In testimony whereof I herewith affix my signature.

INGA LEITER, NÉE KOCH.