Aug. 18, 1936. M. LEVIGARD 2,051,174

CLIP

Filed May 22, 1935

Fig. 1

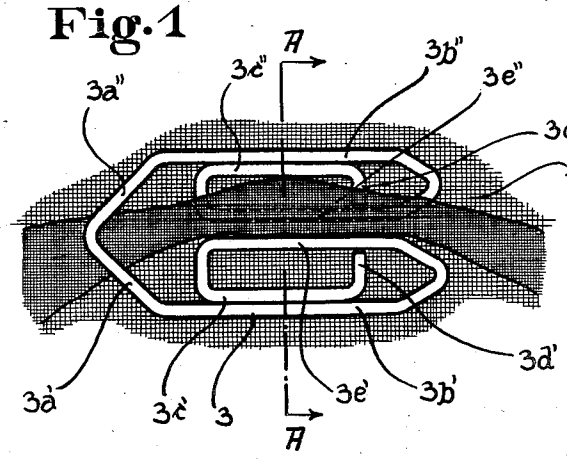


Fig. 2

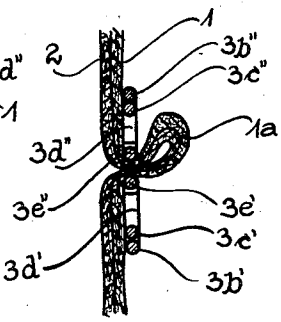


Fig. 3

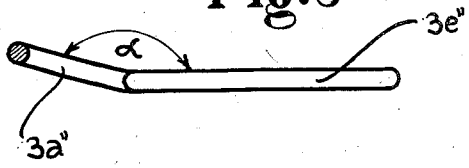
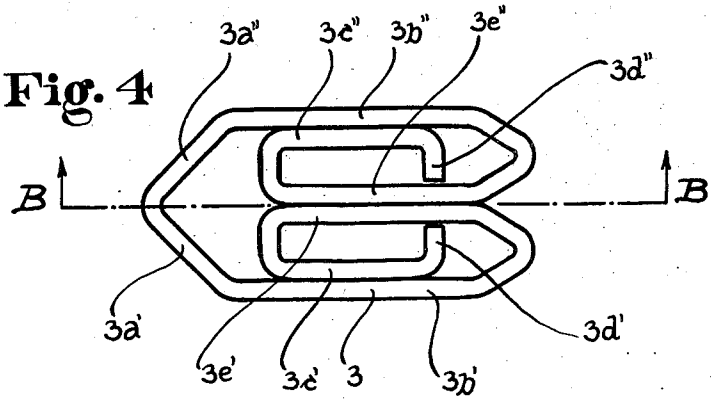


Fig. 5



Fig. 4



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2,051,174

CLIP

Martin Levigard, Frankfort-on-the-Main, Germany

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8 Claims. (Cl. 24—261)

This invention relates to a wire clip destined especially for connecting a sock with the pants. The idea, to employ a simple clip instead of a sock-suspender of rubber, is very old. The oldest clips for this purpose are constructed so that, with their aid, the circumference of the sock is reduced by a fold extending in vertical direction. These clips do, however, not take into consideration the extremely important idea of avoiding a strangling of the blood circulation on the calf, as, by reducing the circumference of the sock, the blood circulation is strangled in the same manner as by a rubber band extending around the calf. The clips have later on been constructed so that they are suitable for connecting the sock with the pants; consequently these clips are no longer open to the drawback that they strangle the calf.

The known clips which are intended for connecting a sock to the pants, are constructed so that they clamp together the sides of a fold extending vertically along the calf and formed by the sock and by the pants. I have, however, found, that this idea is objectionable because the clips tend to slip down along the fold which lies between the clamping parts of the clip. Consequently, the clips will be lost soon or later. The clip according to my invention is shaped in such a manner that it is adapted to clamp together the sides of a fold, which extends transversely across the calf, that is in horizontal direction and is formed by the sock and the pants. By this manner of attachment for which the known sock clips are not suitable, the danger of slipping and becoming lost is eliminated.

Clips are known comprising two wire parts one of E-shape and the other of mirror reflected E-shape. The planes of these parts of the clip form an obtuse angle. These clips possess the advantage that they can be easily gripped, but they possess the drawback that they do not hold tightly owing to the fact that they have no lineally extending clamping parts but press together the socks and pants only at a point and also only with relatively little force.

Sock holding clips are also known which consist of a wire loop having two clip arms formed by two parallel wire parts which are bent inwardly and consequently are situated within the contour of the loop. These clips ensure a more reliable holding between the two parallel arms of the fold formed by the sock and pants than the clip mentioned before, but their clamping pressure is not sufficient. Moreover, the clips can only be easily fixed if they are slipped onto a vertical fold from below by an upwardly directed sliding movement. However, the clips must necessarily work loose from this position sooner or later owing to the jolts occurring when the wearer is walking or running. Another drawback of these clips consists in that they are difficult to grip owing to the absolutely flat shape.

The two last mentioned clips are open to the common objection that their wire ends can catch relatively easily in the fabric of the socks and damage the same, although this objection is not so marked as in other sock clips.

The clip according to my invention is free from the objections of the aforementioned clips and differs substantially from the clips of the type last referred to in that parts of the wire extending from the clip arms situated in the interior of the loop are bent over in such a manner that they lie side by side and in contact with the wire portions forming the outer circumference of the wire loop and that the parts of the wire forming the outer circumference of the wire loop are bent up at an obtuse angle in the portion along which the clamping arms do not extend.

An embodiment of my invention is illustrated in the accompanying drawing, in which:—

Fig. 1 shows in elevation a clip in position on a sock and connecting this sock with the pants.

Fig. 2 is a section on line A—A of Fig. 1.

Fig. 3 is a longitudinal section through the clip taken on line B—B of Fig. 4.

Fig. 4 shows the clip alone in elevation.

Fig. 5 is a cross-section of enlarged scale through a wire which may be used for the manufacture of the clip.

According to Figs. 1 and 2 the sock 1 and the pants 2 form a common horizontally extending fold 1*a* which is pressed together by the wire clip consisting of a wire loop 3 and two clamping arms 3*e'*, 3*e''*. The two substantially parallel clamping arms 3*e'*, 3*e''* extend only along a portion of the length of the clip and the wire parts 3*c'*, 3*c''* forming extensions of these arms and situated in the interior of the loop are bent over in such a manner that they lie side by side with the wire parts 3*b'*, 3*b''* forming the outer circumference of the wire loop. The parts 3*c'* and 3*b'* and the parts 3*c''* and 3*b''* respectively are in contact with one another. The parts of the wire forming the outer circumference of the loop are bent up at an obtuse angle α at the portion 3*a'*, 3*a''* along which the clamping arms 3*e'*, 3*e''* do not extend. This is clearly shown in Fig. 3. The wire parts 3*a'*, 3*a''* bent up at an obtuse angle form a guide which considerably facilitates the

slipping of the clip on to and off the fold *1a*. The wire ends *3d'*, *3d''* are preferably bent inwardly in such a manner that the cross-sectional surface of the wire bears against the wire parts which form the clamping arms *3e'*, *3e''*. If the clip is made of wire of substantially square section as shown in Fig. 5, which is particularly advantageous, the wire parts *3c'*, *3c''* cannot possibly slip off the wire parts *3b'*, *3b''*. However, clips of round wire have also proved quite satisfactory.

It is possible, although by no means necessary, to curve the parts *3b'*, *3b''*, *3c'*, *3c''*, *3e'*, *3e''* to conform with the shape of the leg.

As clearly shown in Figs. 1 and 4 the clip is consisting of a single piece of wire.

While I have herein disclosed the best embodiment of my invention that I have so far devised, it will be appreciated that the invention is susceptible of embodiment in many forms without departing from the spirit or scope thereof.

Having thus described my invention, what I desire to claim as new is:—

1. A clip consisting of a wire loop with two clamping arms formed by two substantially parallel wire parts which are bent inwardly and situated within the contour of the loop, said clamping arms extending along only over a portion of the length of the clip, wire parts forming extensions of said arms and situated in the interior of the loop and bent over in such a manner that they lie side by side and in contact with the wire parts forming the outer circumference of the wire loop, the wire parts forming the outer circumference of the loop being bent up at an obtuse angle at the portion along which the clamping arms do not extend.

2. A clip as claimed in claim 1, characterized in that the wire ends are bent over in such a manner that the sectional surface of the wire substantially bears against the wire parts forming the clamping arms.

3. A clip as claimed in claim 1, characterized in that it is made of substantially square section wire.

4. A clip for connecting a sock to the pants consisting of a wire loop with two clamping arms formed by two substantially parallel parts of wire which are bent inwardly, said arms extending only over a portion of the length of the loop, the arms having substantially parallel portions in contact with each other and extensions bent over in such a manner that they are in contact with parts of the wire forming the outer circumference of the loop and substantially parallel to the said respective wire parts, a part of the wire forming the outer circumference of the loop being bent up to form a guide.

5. A clip for connecting a sock to the pants consisting of a single piece of wire, said wire being bent to form a loop with two substantially parallel clamping arms within said loop, said arms extending only over a portion of the length of said loop, the arms having substantially parallel portions in contact with each other and extensions bent over in such a manner that a part of same is parallel with parts of the wire forming the outer circumference of the wire loop, said parallel parts of wire being in contact, the ends of said extensions being bent inwardly within said loop, a part of the wire forming the outer circumference of said loop being bent up to an obtuse angle to form a guide.

6. A clip consisting of a wire loop with two clamping arms that are bent inwardly so as to be situated within the contour of the loop and that extend along a portion of the length of the clip, the arms having substantially parallel portions in contact with each other and extensions situated in the interior of the loop the extensions being bent over in such a manner that they lie side by side and in contact with the wire parts forming the outer circumference of the wire loop and substantially parallel to the said respective wire parts.

7. A clip consisting of a wire loop with two clamping arms that are bent inwardly so as to be situated within the contour of the loop and that extend along a portion of the length of the clip, the arms having substantially parallel portions in contact with each other and extensions situated in the interior of the loop the extensions being bent over in such a manner that they lie side by side and in contact with the wire parts forming the outer circumference of the wire loop and substantially parallel to the said respective wire parts, the contacting parts being substantially flat.

8. A clip consisting of a wire loop with two clamping arms that are bent inwardly so as to be situated within the contour of the loop and that extend along a portion of the length of the clip, the arms having extensions situated within the contour of the loop, each extension being bent over in such a manner that it lies side by side and in contact with one of the said wire parts forming the outer circumference of the wire loop, the said contact between each of the said extensions and the corresponding wire part extending over a substantial distance greater than the thickness of the wire.

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