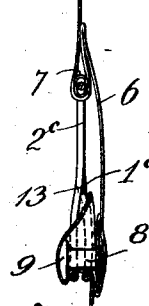
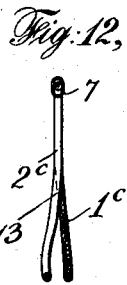
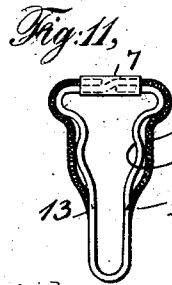
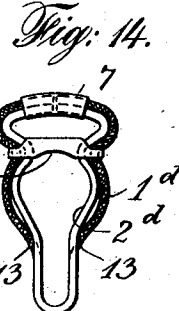
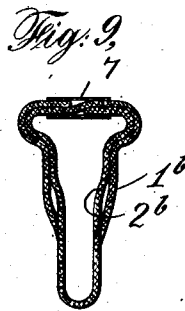
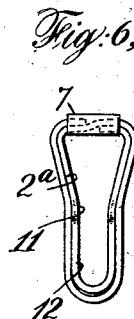
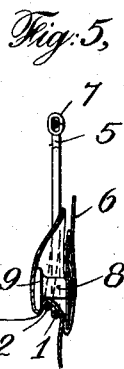
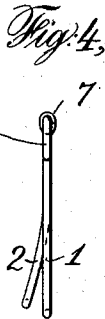
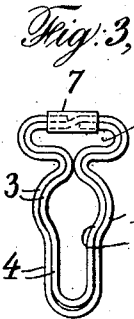
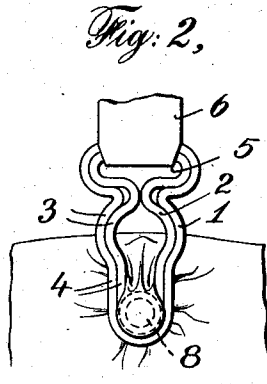
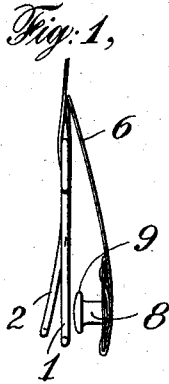


C. W. STIMSON.
 BUTTON AND LOOP CLASP.
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997,473.

Patented July 11, 1911.



Witnesses:
 Max B. A. Daring.
 Paul H. Frank

Inventor
 Charles W. Stimson
 By *His* Attorneys
 Mark & Dwyer

UNITED STATES PATENT OFFICE.

CHARLES W. STIMSON, OF NEW YORK, N. Y.

BUTTON-AND-LOOP CLASP.

997,473.

Specification of Letters Patent.

Patented July 11, 1911.

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To all whom it may concern:

Be it known that I, CHARLES W. STIMSON, a citizen of the United States of America, and a resident of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Button-and-Loop Clasps, of which the following is a specification.

My invention relates to improvements in button and loop clasps, such as are used in garment supporters, and in the loops of such clasps, and comprises a novel two part loop comprising upper and lower members having a spring-relation to one another such that in use they tend to press the fabric held against the underside of the head of the button, and against the base of the button, thereby holding the fabric very firmly and in such manner that even delicate fabrics will not be cut or torn.

My invention consists in the novel construction of the loop, and in the combination of such loop with a headed button.

Ordinary button and loop clasps hold fabric by gripping the same frictionally between the sides of the loop and the neck of the button. Little or no pressure is exerted by the loop tending to press the fabric against the under-side of the head of the button, or against the base of the button, and so the gripping action of the loop and button is confined to a rather small proportion of the area of fabric included in the clasp. The improved loop herein described, may or may not grip the fabric between its edge and the neck of the button, according to the size of the interior space of the loop as compared with the diameter of the neck of the button, but in pressing the fabric up against the under-side of the head of the button, and in pressing it against the base of the button, a superior gripping effect is realized so that in most cases the fabric would be held securely even if there were no gripping of the fabric between the loop and the neck of the button. In practice, however, I prefer to so construct the parts that both of these gripping actions exist.

The objects of my invention are to improve the construction of button and loop clasps, to provide increased gripping action over a relatively large surface of the fabric to be held, and thereby to reduce liability to cutting or tearing of the fabric, and to

adapt the button to hold thin and slippery fabrics, such as silk.

I will now proceed to describe my invention with reference to the accompanying drawings, illustrating certain embodiments of my invention, and will then point out the novel features in claims.

In the said drawings: Figure 1 shows a side elevation of a complete button and loop clasp comprising a loop constructed in accordance with my invention; Fig. 2 shows a front view of such clasp with a portion of a piece of fabric held therein; Fig. 3 is a front view of one form of loop embodying my invention and Fig. 4 is a side elevation thereof, and Fig. 5 a longitudinal section of the loop showing also a button and fabric held between the loop and the button; Fig. 6 is a front view of an alternative form of loop; Fig. 7 is a longitudinal section thereof; and Fig. 8 another longitudinal section of the loop, showing also a button and a piece of fabric held between the button and the loop; Fig. 9 is a front view of a further alternative form of loop and Fig. 10 a side view thereof. Fig. 11 is a front view of an alternative form of loop; Fig. 12 is a longitudinal section thereof; and Fig. 13 another longitudinal section of the loop, showing also a button and the webbing connecting the button and the loop; and Fig. 14 is a front view of a further alternative form of loop.

The improved loop herein described, comprises, in its various forms, two parts, namely, a base part and an upper part, both of substantially the characteristic form of a garment supporter loop, and having a spring-relation to one another. I prefer to form them of wire, as the rounded surface which a wire exposes to the fabric is substantially incapable of cutting the fabric; and preferably, and as shown in the drawings, both the base portion and the upper portion of the loop are formed of one and the same piece of wire, the loop comprising therefore a single piece of wire bent to form two substantially concentric connected and spring-related loops. The opening in the lower or base-loop is usually of such size, with reference to the head of the button, that this lower base portion does not act at all to hold the button (the reason for this will be explained hereafter), the button being held in the lower portion of the

upper loop, solely by the action of such upper loop.

Referring now to the drawings, and at first to Figs. 1-5 inclusive, 1 designates the base portion or lower portion of the loop above referred to, and 2 the upper portion referred to. As will be seen from the drawings, these two portions of the loop are formed from a single piece of wire, and each have the characteristic form of a garment supporter loop, that is to say, they each have an enlarged portion 3 and a contracted portion 4 near their lower ends, there being also an opening 5 provided in each, near the top, for the passage of the webbing 6. A ferrule 7 commonly surrounds the upper portion of the loop, to conceal the ends of the wire and to hold said ends in place. As will be seen by reference to Figs. 4 and 5, the lower end of the upper portion 2 of the loop, is bent upwardly, so that when the button 8 is pressed downward into the lower end of the loop its head 9 presses downward this upwardly bent lower end of the upper loop 2, the fabric to be held, indicated by numeral 10 in Fig. 5, being thereby pressed against the under-side of the head 9 of the button, and being held, therefore, not only by being pressed by the sides of the loop against the neck of the button, but also by being pressed by the lower portion of the member 2 of the loop against the under-side of the head of the button, and by being pressed by member 1 against the base of the button. The combined gripping action thus obtained insures a very firm holding of the fabric, without undue pressure on the fabric, and therefore it has been found that a loop such as shown in these figures, in connection with a button such as shown, will hold very securely thin silk and other fabrics, which it has been difficult to hold in former button and loop clasps, and to hold same without any injury to the fabric, even though the latter be quite delicate. The clasp thus constructed is also capable of holding securely fabrics of different thicknesses, from thin silk to heavy woolen fabrics.

In the loop illustrated in Figs. 3, 4 and 5, the spring action of member 2 with reference to member 1, is due to the fact that both members are formed of the same piece of spring wire, and to the fact that the ends of the wire are gripped and held together by the ferrule 7. In the alternative form of loop shown in Figs. 6, 7 and 8 the upper member of the loop, here designated by numeral 2^a, has in it a double bend at 11, so that its lower portion 12 is substantially parallel to the base member 1^a of the loop, but is spaced away somewhat from such base member 1^a. The action of this alternative form of loop is substantially the same as that of the loop shown in Figs. 3,

4 and 5, except that, since the lower portion of the upper member 2^a is substantially parallel to the corresponding portion of the member 1^a, this portion 12 presses the fabric against the lower side of the head of the button, not only at the front of the button but also around the sides of the button through a greater range than obtains with the form of loop shown in Figs. 3, 4 and 5, so that a still stronger gripping action is obtained.

In the alternative form of loop shown in Figs. 9 and 10 the base member, here designated by numeral 1^b, is bent to produce the offset between the lower ends of the base and upper members, instead of bending the upper member, as in Figs. 6, 7 and 8.

In the further alternative form of loop shown in Figs. 11, 12 and 13, the upper member of the loop, here designated by numeral 2^c, rests upon the lower member, here designated by numeral 1^c, at points 13, the lower ends of the base and upper members of the loop being offset relatively. The effect of this construction is, that when the button is pushed down into the lower end of the loop, the upper member 2^c is bent as a cantaliver spring, bending from points 13, and in this way, said upper member 2^c exerts a relatively powerful spring action tending to press the fabric against the head of the button. Member 1^c also bends as a cantaliver spring, pressing the fabric against the base of the button.

Either or both members of the loop may be provided with a covering of rubber, textile fabric, or other suitable material. In the loop shown in Figs. 9 and 10, both members of the loop are covered, while in the loop shown in Figs. 11, 12 and 13, only the base member is covered, the upper member being of uncovered wire. This latter construction I prefer, since when pushing a button, with fabric thereover, into the contracted portion of a covered loop, there is apt to be considerable friction between the fabric and the covering of the loop, which may tend to wear the fabric, particularly if the covering of the loop be of rubber or textile fabric. Therefore plain wire is preferable, for the portion of the loop against which the fabric slides. On the other hand, there is an advantage in covering the base portion of the loop, since it is this portion that may at times come in contact with the skin of the wearer.

The two members of the loop are not necessarily formed of the same piece of wire, and in Fig. 14 I show a loop wherein the two members, here designated respectively as 1^d and 2^d, are formed of different pieces of wire. In this loop, as in the loop shown in Figs. 11, 12 and 13, the upper member rests upon the base member at points 13, and is offset from said base member beyond

such point, so as to obtain the cantaliver spring action above referred to. Where the two members of the loop are formed of different pieces of wire, as in Fig. 14, I preferably provide a cross link 15, which not only serves to prevent undue distention of the loop, but also stiffens the loop so far as the spring action referred to is concerned. In this form of loop shown in Fig. 14, the base member 1^a is formed of covered wire, while the upper member 2^a is not covered.

By preference the opening in the lower or base member of the loop is of such width, even at its lower end, that the head of the button can pass freely through such opening at all points. This prevents the button being drawn down with its head between the base member and upper member and so prevents undue spreading apart of the two members of the loop.

What I claim is:—

1. A loop for garment supporter clasps comprising base and upper members formed from a single piece of spring-wire, and thereby spring-related to each other, said members each having an opening adapted to permit the passage of the head of a button, such opening of the upper member narrower, near its lower end, than said head of the button, such opening of the base member narrower, near its lower end, than the base of the button, the upper member resting upon the base member at an intermediate point, the upper portions of said upper and base members being in substantially the same plane and the lower ends of said upper and base members being in different planes normally, whereby in use the upper member

becomes, with respect to the base member, a cantaliver spring tending by spring action to press the fabric held against the lower side of the head of the button.

2. A loop for garment supporter clasps comprising base and upper members adapted to coact with a headed button and each having an opening adapted to permit the passage of the head of the button, the opening of the upper member contracted near its lower end, said members located in substantially the same plane in the upper portion of the loop, and relatively offset in the lower portion of the loop, the upper member resting upon the base member at an intermediate point, whereby in use the upper member becomes, with respect to the base member, a cantaliver spring, tending by spring action to press the fabric held against the lower side of the head of the button.

3. A loop for garment supporter clasps comprising base and upper members formed from a single piece of spring wire, both said members of loop form and arranged approximately concentrically relative to each other, the ends of the wire located at the upper end of the loop close together, and a ferrule confining said ends, the said members being relatively offset in the lower portion of the loop.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES W. STIMSON.

Witnesses:

H. M. MARBLE,
D. A. DAVIES.