

C. W. STIMSON.
 BUTTON AND BUTTON AND LOOP CLASP.
 APPLICATION FILED OCT. 8, 1909.

986,518.

Patented Mar. 14, 1911.

Fig. 1.

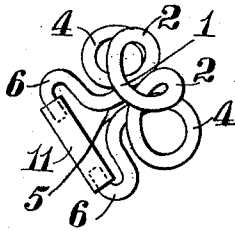


Fig. 2.

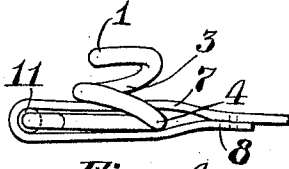


Fig. 3.

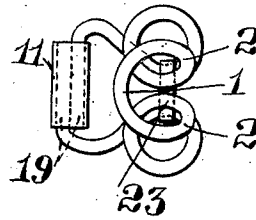


Fig. 4.



Fig. 5.

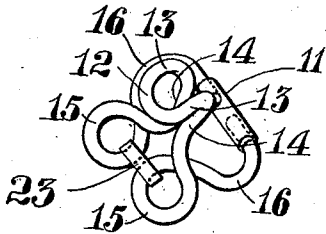


Fig. 6.



Fig. 7.

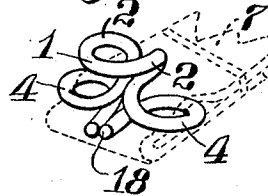


Fig. 8.

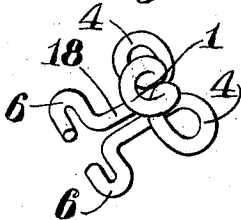


Fig. 9.

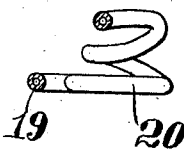


Fig. 10.

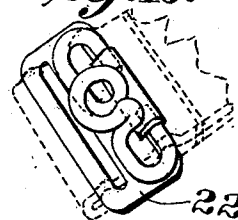


Fig. 11.

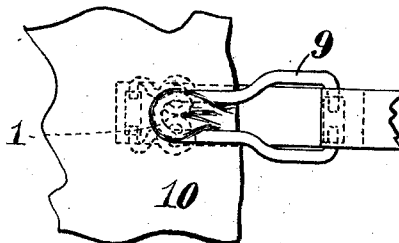
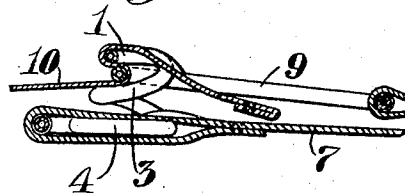


Fig. 12.



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UNITED STATES PATENT OFFICE.

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

BUTTON AND BUTTON AND LOOP CLASP.

986,518.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Application filed October 8, 1909. Serial No. 521,726.

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, in the county of New York and State of New York, have invented certain new and useful Improvements in Buttons and Button and Loop Clasps, of which the following is a specification.

My invention relates to improvements in buttons, and in button and loop clasps, such as employed, for example, in stocking supporters, and my invention comprises a novel button formed of wire, such wire being bent in a peculiar manner, as hereinafter described, to form the button, the form of said button being such that it may be formed of a single piece of wire and by one continuous operation; the button produced being such that it coacts with the loop of a button-and-loop clasp in an improved manner to insure holding of fabric within the clasp.

The objects of my invention are to improve button-and-loop clasps, and particularly the buttons thereof, to provide a button which may be formed from a single wire and may be made easily and cheaply; to so construct such buttons that fabric shall be held in the button-and-loop clasp very firmly but without excessive pressure; and to avoid cutting, creasing or otherwise injuring the fabric held.

I will now proceed to describe my invention with reference to the accompanying drawings.

In said drawings: Figure 1 shows a perspective elevation of one form of my improved button. Fig. 2 shows a side view thereof, the button being shown mounted upon a strip of fabric. Fig. 3 shows a top view of a similar button, and Fig. 4 a front elevation of the button shown in Fig. 1. Fig. 5 shows a perspective elevation of an alternative form of button and Fig. 6 a side elevation thereof with the buttons shown as mounted upon a strip of fabric. Fig. 7 shows a perspective elevation of a further alternative form of button, the intended relation of the tape to said button being indicated in dotted lines. Fig. 8 shows a perspective elevation of a further alternative form of button. Fig. 9 is a central longitudinal vertical section of a button such as shown in Figs. 1-4 inclusive, the button, however, being shown as formed of covered wire. Fig. 10 is a perspective elevation of a

further form of the button, the intended relation of the tape to the button being indicated in dotted lines. Fig. 11 shows a top view of a complete button and loop clasp comprising as part of it one of the buttons hereinbefore referred to, and shows such clasp as in use holding fabric; and Fig. 12 shows a longitudinal vertical section of the complete button and loop clasp on a somewhat larger scale than Fig. 11.

Referring first to Figs. 1-4 inclusive, the button there shown comprises a head 1 constituting the middle portion of the piece of wire from which the said button is formed. This head comprises two loops 2 arranged substantially side by side; and from these loops the wire extends forward and obliquely downwardly, being wound somewhat in the manner of a distorted conical helix, so as to form a contracted neck 3 and loop-supporting portion beneath the head 1 and to form, beneath said neck, other and larger loops 4 forming a base; the two portions of the wire coming nearly together again at the ends of these loops as indicated at 5, and then being spread out and the ends turned together, as at 6, to form a further portion of the base of the loop. Fig. 2 shows how a tape of a stocking supporter is secured to such button, the said tape, there designated by reference numeral 7, passing between the turns of the loops 4 and thence over the ends 6 and back under the button, to a point 8, where the end of the tape is sewn to the main portion thereof. As will be readily apparent to those skilled in wire working, the form of button thus produced is very easily made, and may be made in a single operation, *i. e.*, it is not necessary to pass the wire to form the button through a succession of forming dies operating in a succession of stages.

Since the neck 3 of the button is formed of two thicknesses of wire placed side by side but separated from each other somewhat, the button is in the truest sense a spring button, the neck of which is adapted to yield as necessitated by varying thicknesses of fabric to be held. At the same time, owing to the perfectly rounded surfaces presented by the button throughout, there is practically no possibility of the button cutting, creasing or tearing the fabric held.

Since the portions of the wire which form the neck of the button slope upward toward

the head 1, this button has, with reference to its loop, a peculiar wedging action, tending to wedge the loop up toward the head of the button, so that the greater the pull 5 on the clasp, the more tightly is the loop pressed upward toward the head, and, therefore, the more tightly is the fabric held in the clasp. Figs. 11 and 12 illustrate this button shown in operative relation with respect to a loop, 9 designating the said loop, 10 and 10 the fabric to be held; and Fig. 12 in particular illustrates this wedging action referred to, and shows how the loop, by contact with the inclined surface of the neck 15 and loop-supporting portion 3, is pressed up toward the head 1 of the button, so pinching the fabric firmly, but in such manner as not to tear or otherwise injure the fabric, against the under side of the head 1, and drawing 20 the fabric tightly over said head.

The ends of the piece of wire forming a button may have a ferrule 11 surrounding them, as indicated in dotted lines in Fig. 1, and as shown in Figs. 2 and 3. As clearly 25 appears in Fig. 2, the head of the button has a slight downward inclination to the front which helps to hold the fabric firmly, this head having a capacity for springing upward slightly, at its end, with reference to 30 the neck, so enabling the button to yield in this direction also, to compensate for varying thicknesses of fabric; the fabric being clamped between the head 1 and the loop 9 on one side, and between the loop 9 and the 35 loops 4 of the button, on the other side.

In the alternative form of button shown in Figs. 5 and 6, there is a head 12 corresponding substantially to the head 1 of the button shown in Figs. 1-4 inclusive, but 40 formed by loops 13 which are somewhat less pronounced than the loops 2 of the button previously illustrated and described, the inner turns 14 of these loops having a somewhat more pronounced inclination, where 45 they form the neck of the button, and thence being extended, forward of the head, into base loops 15; after which the ends of the wire project rearwardly to a point somewhat beyond the rear limit of the head and are 50 there bent so as to form a broadened rear portion 16, constituting with the loops 15, the base of the button; the extreme ends of the wire being turned toward each other, these ends being covered over by a ferrule 17.

55 The button shown in Fig. 7 is quite similar to that shown in Fig. 1, comprising a head 1 formed of loops 2, the inner turns of which are brought near together and are then curved outwardly so as to form base 60 loops 4; but this button differs from that shown in Figs. 1 and 2 in that there is no further base portion 6, the ends of the wire being brought close together at a point 18 practically underneath the front end of the 65 head of the button and there terminating.

In this figure I have indicated in dotted lines a tape 7 to which this button is shown as secured, the portion 18 of the button lying between the layers of the tape.

70 The button shown in Fig. 8 is similar to that shown in Fig. 1, except that the base loops 4 of it are somewhat less circular than those of Fig. 1, and except that the portion 18 of the base of the button, intermediate the loops 4 and recurved portions 6, is some- 75 what longer.

As illustrated in Fig. 3, the ends of the wire, there designated by numerals 21, may be lapped, and then the ferrule 11 wrapped 80 around them, so giving somewhat increased strength. But the use of this ferrule 11 is not necessary, and in several of the figures of the drawing, for example in Figs. 4 and 8, I have shown the button without this fer- 85 rule.

This button in its various forms, may be formed either of plain wire or of covered wire. In Fig. 9 I have indicated the button, 90 as formed of covered wire, such wire comprising a core 19, (usually of metallic wire) and a covering 20 which covering may either be of fabric or rubber, or other suitable material.

In Fig. 10 I have shown a button comprising a base plate 22 secured to the ends of the 95 wire and through a slot in which the tape is passed.

In Figs. 3 and 5 I have shown a link 23 connected across the proximate sides of the two loops 4 so as to limit the possible separation of these loops, so preventing the button 100 from being distorted in use.

What I claim is:—

1. A wire button such as described, comprising a head, neck and base portion, all 105 formed of a single piece of wire, the head consisting of a loop formed in an intermediate portion of the wire, both portions of the wire forming the loop extending backward from the front of the head and near 110 the rear of the head being bent toward each other to form other loops, both portions of the wire thence extending forward and obliquely downward underneath the head and close together, so forming a loop-supporting 115 portion and neck, said two portions of the wire being thence bent outward and backward and in the form of loops constituting a broadened base portion below the level of said loop-supporting portion, the said head 120 and the said loop-supporting portion being spaced apart vertically a distance adapting them to receive between them a loop with fabric thereon.

2. A wire button such as described, comprising a head, neck and base portion, all 125 formed of a single piece of wire, the head consisting of a loop formed in an intermediate portion of the wire, both portions of the wire forming the loop extending backward from 130

the front of the head and near the rear of the head being bent toward each other to form other loops, both portions of the wire thence extending forward and downward and close
5 together, so forming a neck and a loop-supporting portion, said two portions of the wire being thence bent backward in the form of loops constituting a broadened base portion below the level of said loop-supporting
10 portion, the said head and the said loop-supporting portion being spaced apart a distance adapting them to receive between them

a loop with fabric thereon, said loop-supporting portion and base-portion loops likewise spaced apart a distance adapting them
15 to receive material between them.

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

CHARLES W. STIMSON.

Witnesses:

EDITH V. WIESSNER,
H. M. MARBLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
