(No Model.)

E. P. CLARK & N. D. INGRAHAM

BUTTON FASTENER.

No. 393,740. Patented Dec. 4, 1888.

FIG. 1.

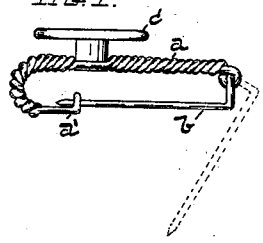


FIG. 2.

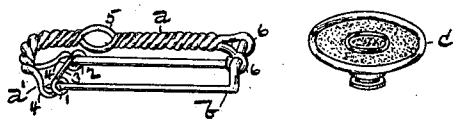
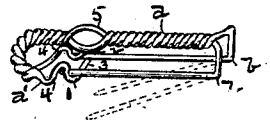


FIG. 3.



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EMBURY P. CLARK AND NATHAN D. INGRAHAM, OF HOLYOKE, MASSACHUSETTS; SAID CLARK ASSIGNOR TO SAID INGRAHAM.

BUTTON-FASTENER.

SPECIFICATION forming part of Letters Patent No. 393,740, dated December 4, 1888.

Application filed August 13, 1888. Serial No. 282,673. (No model.)

To all whom it may concern:

Be it known that we, EMBURY P. CLARK and NATHAN D. INGRAHAM, of Holyoke, in the county of Hampden and Commonwealth of Massachusetts, have invented a new and useful Improvement in Button-Fasteners, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

Our invention relates to devices for securing buttons to garments without the use of thread, and has for its object to provide a combined button and fastener, which will possess great strength and durability, which will be sufficiently flexible to prevent inconvenience to the wearer of the garment to which it is secured, and which can be quickly and conveniently applied to the garment without defacing the latter.

To this end our invention consists in a fastener comprising a bar or rod composed of twisted strands of wire, which bar or rod receives the stem of the button, and which has connected to one of its ends a pin, the pointed end of which is adapted to be received within a clasp at the opposite end of said bar or rod, as hereinafter fully described, and particularly pointed out in the claims.

Referring to the drawings, in which like parts are designated by like letters in the several figures, Figure 1 is a side elevation of the combined button and fastener. Fig. 2 is a view in perspective of the fastener and button separated from each other. Fig. 3 is a similar view of a slightly-modified form of the fastener.

The letter *a* designates the bar or rod composing the body portion of the fastener, which is preferably bent back upon itself at one end, as shown, to form a loop to receive the edge of the garment, and terminates at said end in a clasp, *a'*. At its opposite end said bar is provided with a bearing in which is pivoted a double-pronged pin, *b*.

The bar *a* is composed of strands of wire twisted closely together, and we prefer to form the bar, clasp *a'*, and the bearing for pin *b* from a single piece of wire, as follows: A piece of wire of suitable length is bent at each side of its middle point to form the small loops 1 2, thus leaving the straight portion 3 between said loops, when the two strands of the wire are again bent into substantially an **S** shape and at substantially a right angle to loops 1 2, as shown at 4 4, after which said strands are closely twisted together until the point where it is desired to attach the button is reached, as at 5, at which point said strands are bent around the stem of the button *c* in such manner as to receive said stem between them, and from this point the strands are again closely twisted about each other until the end of the bar is reached, where they are bent to form loops 6 6, slightly separated from each other, as shown, to form the bearing for pin *b*. The end of the bar containing the clasp is then bent back upon itself, as shown, pin *b* is inserted within loops 6 6, and the operation is completed. The button *c* is preferably formed with an annular groove near the outer end of its stem to receive the two strands of wire, and said strands being closely twisted together upon each side of the button the latter is securely held upon the bar and cannot become loosened by wear. Pin *b* at its rear end is preferably bent twice at a right angle, whereby space is afforded between its prongs and the bar for the fabric, when applied to a garment. Said pin will have the pointed ends of its prongs normally spread apart at such a distance that when said ends are compressed to cause them to enter the clasp their elasticity will retain them therein.

In the preferred form of the invention, as shown in Figs. 1 and 2, the opening between loops 1 2 to admit the ends of the pin to said loops is upon the rear side of the clasp, or the side farthest away from the button, and when thus constructed the ends of the pin can be readily caused to enter the clasp by slightly compressing the prongs toward each other and moving them toward the button until their free ends are brought into contact with the straight portion 3 of the clasp, when by permitting them to expand said ends will enter loops 1 2 and be retained therein. The points of the prongs are effectually guarded by the **S**-shaped portions 4 4 of the clasp, so that they cannot injure the person when applied to a garment.

In the form of the invention shown in Fig. 3 the opening in the clasp between loops 1 2

is upon the inner side thereof, and the prongs of the pin are a continuation of the twisted strands of the wire; but as the ends of the prongs are not so readily inserted within the clasp, and as the prongs must be compressed toward the bar as well as toward each other after being inserted through the fabric, we prefer to use the form first described.

The fastener is applied to a garment by inserting the pin through the latter at such a point that the edge of the fabric will be received within the bend in the bar between the button and the clasp, after which the ends of the prongs are compressed, as previously described, and seated within loops 1 2 of the clasp. It will be observed that when thus applied to a garment a clear space between the greater portion of the head of the button and the fabric is afforded, which enables the button to be passed through a button-hole much more easily than is the case in button-fasteners in which the button is secured to a metallic plate equal in width to the diameter of the head of the button. This result is still further facilitated by the fact that, the bar *a* being substantially round in cross-section, the button is permitted to have a slight rocking movement with said bar. The twisted-wire bar, moreover, is more or less flexible and does not incommode the wearer, as do those in which a metallic plate is employed, especially when worn upon pantaloons.

We do not wish to limit ourselves to the use of the fastener with the particular kind of button herein shown, as the same result could be secured by passing one of the strands of the wire composing the bar through the loop of the ordinary shank-button, where it would be securely held by the twisted strands upon each side thereof.

The button-fastener herein described is simple and inexpensive in construction, and yet very strong and durable, besides possessing the special advantages hereinbefore described.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The button-fastener herein described, consisting of a bar or rod composed of a plurality of strands of wire twisted together, said bar or rod having at its opposite ends, respectively, a pin and a clasp to receive the end of said pin, and having a button secured thereto between its ends, substantially as set forth.

2. The button-fastener herein described, consisting of a button and a fastening device, to which said button is secured, said fastening device consisting of a bar or rod composed of two strands of wire twisted closely together, terminating at one end in a two-pronged pin and at its opposite end in a clasp to receive the ends of the prongs of said pin, substantially as described.

3. The button-fastener herein described, consisting of bar *a* and clasp *a'*, composed of a continuous piece of wire, button *c*, secured to said bar, and pin *b*, pivotally connected to said bar, substantially as described.

4. The button-fastener herein described, consisting of a continuous piece of wire bent upon each side of the middle portion, 3, thereof to form loops 1 2, S-shaped loops 4 4, loop 5, and loops 6 6 at the ends of said wire, the two strands of said wire being closely twisted together between loops 4 4 and loop 5, and also between the latter and loops 6 6, button *c*, having its stem located within loop 5, and pin *b*, mounted in loops 6 6, substantially as set forth.

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