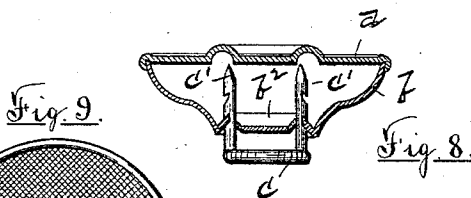
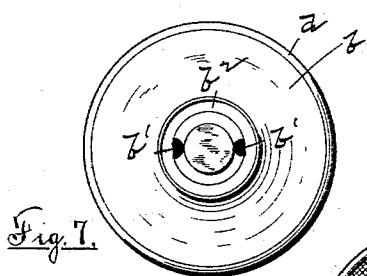
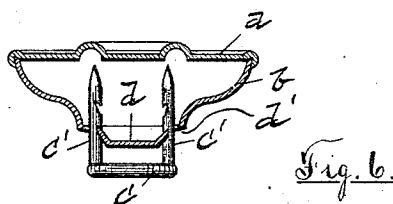
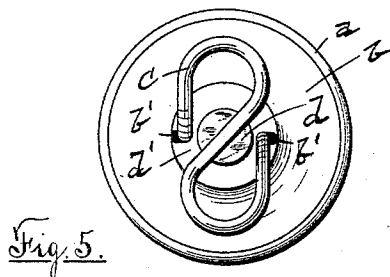
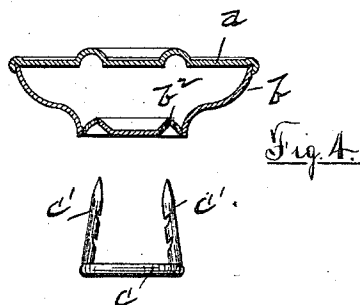
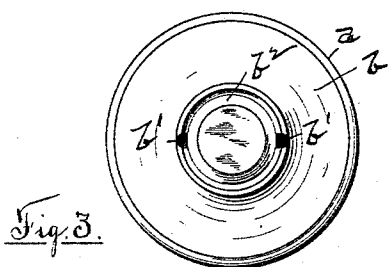
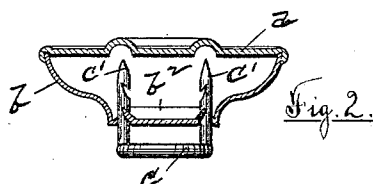
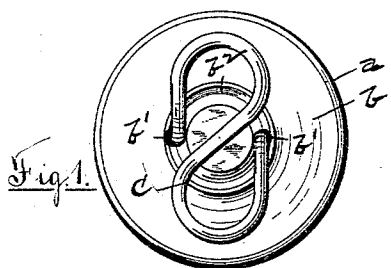


(No Model.)

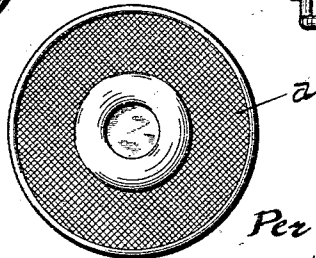
N. D. INGRAM.
BUTTON.

No. 437,992.

Patented Oct. 7, 1890.



Witnesses
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UNITED STATES PATENT OFFICE.

NATHAN D. INGRAM, OF HOLYOKE, MASSACHUSETTS.

BUTTON.

SPECIFICATION forming part of Letters Patent No. 437,992, dated October 7, 1890.

Application filed April 23, 1890. Serial No. 349,185. (No model.)

To all whom it may concern:

Be it known that I, NATHAN D. INGRAM, of Holyoke, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Buttons, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

My invention relates to what are known as "bachelor" buttons, or buttons adapted to be secured to a garment without the use of thread; and it relates particularly to buttons of this nature in which a shank having pointed and barbed prongs adapted to be thrust through the fabric, a collet having holes to receive said prongs, and means for engaging the barbs on the latter are employed. In the use of such buttons much difficulty is encountered in securing them to a garment while the latter is on the person, and particularly in securing them to the rear portion of the garment, because of the time and trouble involved in causing the holes in the collet to register with the points of the prongs on the shank preparatory to forcing said prongs into said holes. Inasmuch as one of the prime objects of this class of button is to enable a button lost from a garment to be replaced by a new one without sewing and without removing the garment from the person this inconvenience in attaching them constitutes a serious objection to their use.

It is the object of my invention to provide a button of this class so constructed that the holes in the collet can be caused to register with the ends of the prongs quickly and readily by manual operation thereof simply, thus rendering it unnecessary to use the eyes in securing the button to a garment.

To this end my invention consists in the button constructed and operating as herein-after fully described, and particularly pointed out in the claims.

Referring to the drawings, in which like letters designate like parts in the several views, Figure 1 is a plan view of the rear side of a button constructed according to my invention. Fig. 2 is a vertical section thereof. Fig. 3 is a plan view of the rear side of the front portion simply of the button, the shank being omitted. Fig. 4 is a vertical section

showing the two parts of the button separated from each other. Figs. 5 and 6 illustrate a slightly-modified form of the invention. Figs. 7 and 8 illustrate still another modification. Fig. 9 is a plan view of the front side of the button.

The letter *a* designates the cap, and *b* the collet, which together form the front portion of the button, and *c* designates the shank, which is provided with the pointed prongs *c'*, adapted to be thrust through the fabric without the use of a needle or other tool and having in the side thereof the barbs, as shown, extending in a direction away from the pointed ends thereof. I prefer to make said shank from a single piece of wire, bent, as shown, to form a base of **S** shape or other form, adapted to bear against a considerable area of the fabric, and having the two ends thereof bent at substantially a right angle to said base to form the prongs *c'*, but do not limit myself to such form.

The prongs *c'* are preferably two in number, as shown, and the collet *b* is provided with a separate hole *b'* to receive each of said prongs. It is essential that the collet be also provided with an inwardly-projecting portion adjacent to each of said holes to enter the barbs on the prongs and prevent withdrawal of the latter, and in order to secure this result, and at the same time provide means for guiding the ends of the prongs into said holes, I form in the collet an annular surface to engage said barbs upon the inner side of the collet and to serve as a guiding-surface for the ends of the prongs upon the outer side of the collet. As shown in Figs. 1 to 4, inclusive, said engaging and guiding means consists of an annular ring *b²*, made in the base of the collet by striking up or inwardly a portion of said base, thus forming an annular projecting portion upon the inner side of the collet and an annular depressed portion or groove in the outer side thereof. The holes *b'* are made in the outer wall of this struck-up portion, as shown, and consequently when the prongs *c'* of the shank are inserted within the collet a portion of the inner wall thereof, at the inner side of said holes, enters the barbs on said prongs and locks the two parts of the button together, as shown in Fig. 2. Said

locking means on the collet being part of a continuous annular surface are very much stronger than simple lips or other similar struck-up devices would be, and are capable of resisting any amount of strain which can be exerted upon the button. Moreover, the annular groove or depression in the outer surface of the collet serves as an infallible guide to direct the ends of the prongs into the holes b' , inasmuch as whatever the relative position of said holes and the ends of the prongs may be when the front portion of the button is placed against said prongs a partial revolution of the former in either direction will cause the ends of the latter to follow said groove until they enter said holes. The button can therefore be attached to a garment at the back of the wearer as readily and as quickly as if it were in sight, and when a large number of the buttons are being applied to garments, as in the manufacture of ready-made clothing, such guiding means to direct the ends of the prongs into the holes in the collet effects a material saving in the time required for such operation.

The normal position of the prongs is preferably that shown in Fig. 4—that is to say, slightly inclined toward each other—so that as they are spread apart when being thrust within the collet their resiliency will cause their barbs to closely hug the inner wall of the annular ring b^2 , as previously described.

In the form shown in Figs. 5 and 6 the central portion of the base of the collet is depressed below the normal plane thereof, as shown at d , thus leaving an annular plane surface d' surrounding said depressed portion upon the outer side of said base. The holes b' are made in said annular surface d' , and the latter serves the same guiding function as the groove in the previously-described form, while the wall of the depressed portion d upon the inner side of the collet serves as the engaging means to enter the barbs on the prongs c' , as shown in Fig. 6.

The form shown in Figs. 7 and 8 differs from that shown in Figs. 1 and 2 only in that the holes b' are made in the inner wall of the annular struck-up portion b^2 instead of in the outer wall thereof, and the barbs are made on the outer side of the prong c' of the shank instead of on the inner side thereof. Said barbs, therefore, engage the outer wall of the annular portion b^2 of the collet, as shown in

Fig. 8, when the two parts of the button are locked together.

In all of the forms shown to attach the button to a garment it is necessary simply to thrust the prongs c' through the fabric from the inner or rear side of the latter, place the front portion against the ends of said prongs, slightly revolve said portion, if necessary, until the ends of the prongs enter the holes b' , and then press the two parts of the button together with the thumb and finger. Such pressure causes the prongs to enter the collet until two of the barbs thereon overlap the adjacent wall of the struck-up or depressed portion of the latter, and the two parts of the button are then locked securely together.

It will be observed that by my invention I produce a button which is not only much stronger in its construction, but capable of being attached to a garment much more quickly and easily than buttons of this nature as heretofore constructed.

The cap a is, as shown in Fig. 9, of the common form, and it will be understood that the form of said cap may be varied as desired; or the button may have any of the other forms of covering usually employed in lieu of a cap without affecting my invention, which relates solely to the construction of the collet and the shank.

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

The button herein described, comprising a shank having pointed and barbed prongs adapted to be thrust through the fabric and a front portion having a collet provided with holes to receive said prongs, whereby said front portion of the button will be held against rotation when the prongs and collet are in engagement with each other, said collet having in its base and intersecting said holes an annular deflected portion, which upon the inner side of the collet engages the barbs on said prongs and locks the two portions of the button together, and which upon the outer surface of the collet serves as a guide to direct the ends of the prongs into the holes in the collet, substantially as set forth.

NATHAN D. INGRAM.

Witnesses:

W. H. CHAPMAN,
J. E. CHAPMAN.