

P. J. KANE.  
 FASTENER FOR GLOVES, SHIRT WAISTS, AND THE LIKE.  
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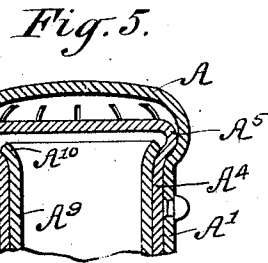
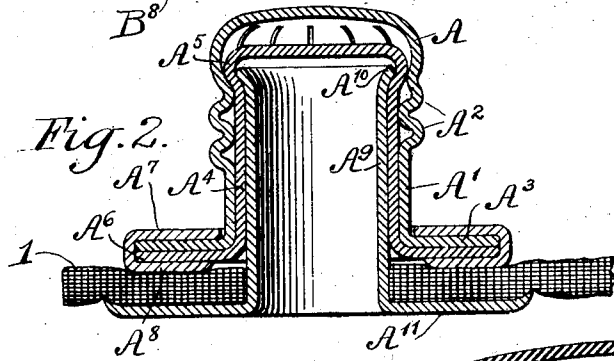
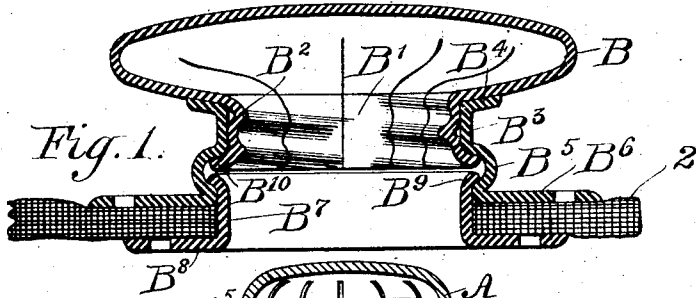
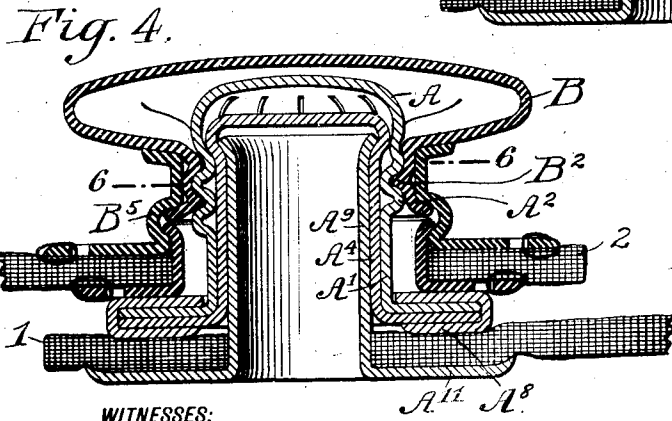
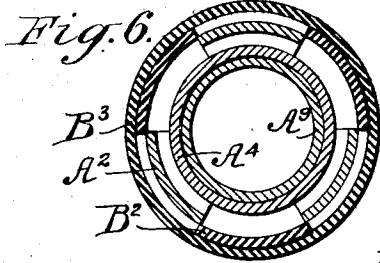
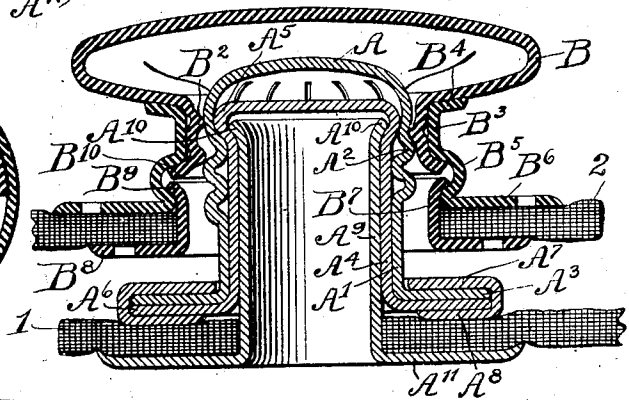


Fig. 3.



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# UNITED STATES PATENT OFFICE.

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FASTENER FOR GLOVES, SHIRT-WAISTS, AND THE LIKE.

1,069,433.

Specification of Letters Patent.

Patented Aug. 5, 1913.

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*To all whom it may concern:*

Be it known that I, PETER J. KANE, a citizen of the United States, residing in the borough of Brooklyn, in the city and State of New York, have invented a certain new and useful Improvement in Fasteners for Gloves, Shirt-Waists, and the Like, (I will use the general term "button;") and I do hereby declare that the following is a full and exact description thereof.

My invention is an improvement on a fastener which has long been used, and is much approved, in which a head carried on one part of the garment is compelled by the force of the finger and thumb to enter a slightly smaller hole in a receptacle on the other part of the garment, the elasticity of one or both of the parts being availed of to permit such operation, and to hold them engaged. The elasticity also serves at an other period by allowing the parts to be separated by a sufficient pull.

A fastener of the general style on which my improvement is based is set forth in the patent to Pierre A. Raymond, June 11th, 1889, No. 405,179.

I will now proceed to describe my improvements, assuming the entire fastener to be held with its axis upright and with the outer, the receiving part, uppermost.

There are screw threads in the mouth of the cavity which receives, and corresponding screw threads on the exterior of the part which enters and engages therewith, so that there are in addition to the retention otherwise induced, screw threads which contribute to the holding, and the parts are strengthened so that they are not likely to be injured by rough usage of the garment when unsecured.

I carry on the exterior of the outer part, a disk appearing as a button, of sufficient size to enable it to be gripped with force to effect the turning. A rigidly connected tubular extension therefrom toward the other part carries the screw threads. Instead of having it reach down the whole depth of the device, it is only of sufficient length to reach down to about the mid-height. The lower end is smoothly flanged outward and engaged in an annular recess in an inclosing tube.

It is common to have the head hollow and to carry it on a hollow part or tube extending rigidly through both flaps of the skirt or other garment. I employ the same and

slit the head longitudinally. I divide the tube into two lengths and hold one length firmly in the corresponding part of the garment, and hold the other length or end firmly in the button-like head, and make this part integral therewith. This allows me to turn this outer end of the receiving tube by revolving the button. External screw-threads on the inner tube and internal screw-threads on the outer tube are engaged and disengaged at will.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification. All are sections.

Figures 1, 2, 3, 4 and 5 are central longitudinal sections. Fig. 1 shows the outer or receiving part attached to its portion of the garment, and standing in the position to receive the other part. Fig. 2 shows the inner or entering part with its internal fortifying parts attached likewise to its portion of the garment, the two parts, this and that shown in Fig. 1, being not engaged together, but in the position to be engaged. Fig. 3 shows the parts after they have been thus engaged by a suitable endwise force applied to each, independent of any revolution. Each is in the position to engage the other part in the ordinary long approved manner by a direct thrust. There has been no revolution of the head and no engagement of the screw-threads, except such as results from the sliding of the parts endwise, one within the other, the material yielding elastically to permit such motion. Fig. 4 is a corresponding view of the parts after the button on the outer part has been revolved one or more times, and the screw threads engaged by a proper screw action. Fig. 5 is a view corresponding to Fig. 2, showing a modification. Fig. 6 is a cross section on the line 6-6 in Fig. 4, with a modification.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

Referring to Figs. 1 to 4, A is an approximate sphere of elastic metal constituting a hollow slitted head, having enough elasticity to serve in the ordinary manner in this class of fastenings, and having a tubular neck A' also slitted and having screw-threads A<sup>2</sup> produced thereon. Its lower edge has a broad flange A<sup>3</sup> or right-angled

extension by which it and its attachment can be secured to a garment 1. A tube A<sup>4</sup> fits tightly within the neck or tube A'. Its closed and enlarged upper end A<sup>5</sup> is engaged in the base of the head A and serves as a strengthener or reinforcement therefor. Its lower end is flanged outward as indicated by A<sup>6</sup>. This flange lies in contact with the flange A<sup>3</sup> before described, and is strongly bound thereto by an annular clasp A<sup>7</sup> A<sup>8</sup>.

The inner part is completed by the presence in its interior of a third tubular part A<sup>9</sup>, flanged or riveted outward at its upper end A<sup>10</sup> to reinforce the part A<sup>5</sup> and flanged much more broadly outward at the bottom A<sup>11</sup>. Each flange may be perforated to receive thread to increase the security of its attachment to the garment.

I will now describe the outer part which is carried on the front face of the other portion 2 of the garment, and is just enough larger to receive and hold the elastic head A by its firm grip like other long known examples of this class of fastenings, and also by my invention, has screw threads to make the grip reliable under greater strain.

B is a button arranged to be conveniently turned; B' is a tubular extension therefrom having its inside diameter a very little smaller than the exterior of the head A, so that the forms of the engaging parts and the elasticity of the metal is availed of as in other fastenings of this class to engage them together by a forcible endwise pressure in one direction, and also to allow them to be separated by about the same amount of force applied in the opposite direction while under all ordinary conditions of use the fastening retains its hold.

B<sup>3</sup> is a separate tube larger than B', having a fair bearing by a smooth flange B<sup>4</sup> at the top, under the button B, on which the button and its screw-threads B<sup>2</sup> may be revolved, and its load transferred to this tube, and having an annular chamber B<sup>5</sup> at the midheight, and a broad flange B<sup>6</sup> at the bottom.

A short tube or eyelet of sufficiently smaller diameter to go inside said tube B<sup>3</sup> and having a broad flange B<sup>8</sup> at the bottom, a short body B<sup>7</sup>, and an enlargement or flange B<sup>9</sup> at the top, engages by such top in the bottom of the annular chamber B<sup>5</sup>. There is a corresponding enlargement B<sup>10</sup> at the base of the revoluble screw-threaded length B', B<sup>2</sup>, extending down from the button B, which length and enlargement engages in the upper part of the annular chamber B<sup>5</sup>. This construction shields and locks the fixed part B<sup>3</sup> to the revoluble part B B', B<sup>2</sup> and yet allows a sufficiently easy turning of the latter.

The inclosing tube is flanged at the bottom to form a base B<sup>6</sup>. For sewing, the base is perforated and so formed as to allow

of the placing of the receiving part of the device on the edge of the upper flap of the garment, in such a manner as to obviate the necessity, if so desired, of cutting a hole in the garment.

It will be seen that in addition to its other duties, the part A<sup>9</sup> serves to strengthen the stud member, when in practice the fastening is subjected to a severe lateral strain, and also that it fixes a limit to how far the screw threads A<sup>2</sup> may yield inward. Similarly the part B<sup>3</sup> in addition to receiving lateral force serves to guard against too great yielding outward of the screw-threads B<sup>2</sup>. I attach special importance to the fact that these parts support the yielding screw-threaded parts which they accompany, reinforcing the inner part on its interior and the outer part on its exterior.

I shape the screw threads by the usual skill of the ordinary sheet-metal worker. The screw threads A<sup>2</sup> in the entering part are mainly important on their outer faces, and the screw threads B<sup>2</sup> in the receiving part B are mainly important on their inner faces.

In the first movement of applying the fastenings, the parts are forced together; the spring head A on the entering part is compressed and forced past the screw threads in the revolving tube B'. As soon as the spring head has passed the screw threads, the elastic element asserts itself, the spring head expands into the space in the top or cap B, and the parts are held firmly together, in the ordinary way of this class of fastener, and in position for engaging the screw threads. In the second movement, the top or cap is revolved, and with it the integral tube; the screw threads are thus engaged and pull the parts tightly together.

To use the invention I make two movements, the giving and receiving parts A and B are first forced together endwise so that the screw threads meet each other. Afterward the user revolves the button B and with it the integral tube B', and the screw threads A<sup>2</sup> and B<sup>2</sup> which have already met now pull the parts more tightly together. That takes up the slack and presses the bases of the two sets of parts more tightly together, and makes a snug and complete fit.

In separating the parts there are also two movements. The button B is revolved in the direction the reverse of the first, relaxing the hold of the screw threads; afterward the giving or entering part is pulled down, the receiving part up, and the spring head on the entering part slips out of the space in the top or cap, moves down past the screw threads, and the disengagement is complete.

Modifications may be made without departing from the principle or sacrificing the advantages of the invention.

The screw-threaded parts can be coarser

or finer and the length of such parts may be varied somewhat. Only one part may be screw-threaded and the opposite part may have isolated raised parts or prominences produced by inserting short studs to engage in such threads. The modification shown in Fig. 5 shows such studs in places occupied by the male screw threads in Figs. 2, 3, and 4. I can use interrupted screw threads as shown in Fig. 6.

I claim as my invention:

1. In a fastener for garments, a button that may be conveniently grasped and turned, an internally screw-threaded tube rigidly attached to such button and flanged outward at its free end and an inclosing tube having an annular recess in which the said flange engages and may be revolved, in combination with a resilient headed externally screw-threaded stud adapted to be inserted in said tube and button by direct thrust, and to be further engaged by screw action when the button is turned.

2. In a fastener for garments, a button that may be conveniently grasped and turned, an internally screw-threaded tube rigidly attached to such button and flanged outward at its free end and a smooth inclosing tube having an annular recess in which the said flange engages and may be revolved, said inclosing plain tube having a flange B<sup>a</sup> perforated as shown, in combination with a resilient headed externally

screw-threaded stud adapted to be inserted in said tube and button by direct thrust.

3. In a fastener for garments a revoluble tube having internal screw threads adapted to be secured to one part of the garment, in combination with a stud to be secured to the other part of the garment having a resilient head and external screw threads adjacent thereto; the internal screw threads on the revoluble tube being adapted to serve first as a socket through which the resilient head of the stud is forced and loosely locked by its resiliency, and afterward as a screw to be revolved to draw the parts more tightly together.

4. In a fastener for garments, the combination of a hollow revoluble button adapted to be secured on one part of the garment of which an internally screw threaded tube is an integral part and also a separate tube within which this screw-threaded tube is adapted to be rotated, and an externally screw threaded and resilient headed stud adapted to be carried on the other part of the garment, such stud being made resilient by means of longitudinal slits in the material of the stud.

Signed at New York N. Y. this tenth day of October 1910.

PETER J. KANE.

Witnesses:

THOMAS DREW STETSON,  
O. C. WINGE.