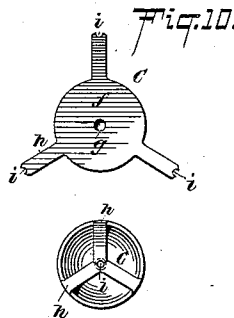
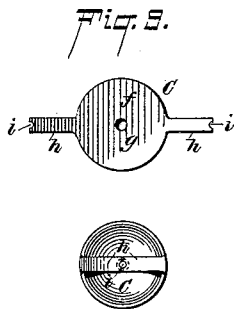
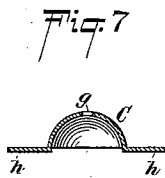
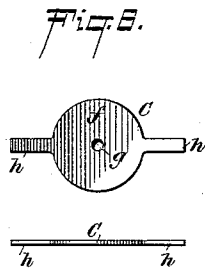
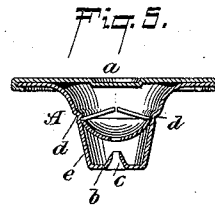
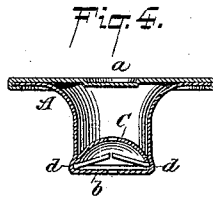
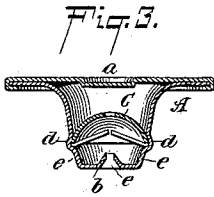
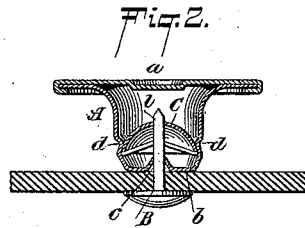
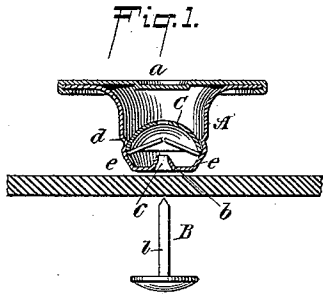


(No Model.)

G. COOK.
BUTTON.

No. 464,149.

Patented Dec. 1, 1891.



WITNESSES:

William Goebel.
Erving S. Platt

INVENTOR

George Cook.

UNITED STATES PATENT OFFICE.

GEORGE COOK, OF ALLENDALE, NEW JERSEY, ASSIGNOR TO THE PATENT
BUTTON COMPANY, OF WATERBURY, CONNECTICUT.

BUTTON.

SPECIFICATION forming part of Letters Patent No. 464,149, dated December 1, 1891.

Application filed May 14, 1891. Serial No. 392,696. (No model.)

To all whom it may concern:

Be it known that I, GEORGE COOK, a citizen of the United States, and a resident of Allendale, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Buttons, of which the following is a specification.

My invention relates to an improvement in buttons.

10 Many attempts have heretofore been made to form buttons in such manner that by means of a pair of springs or spring-arms bearing or impinging against the fastener the latter will be held against disengagement from the button proper. In some cases the fastener has been roughened or corrugated and in other cases has had grooves formed therein for the reception of the ends of the arms; but as far as I am aware these several different forms of buttons have been impractical, either by reason of the intricate and expensive parts or because the fastener was not held sufficiently tight within the button to withstand the great strain sometimes put upon it without becoming disengaged therefrom.

15 I have found that in most, if not all, instances where it has been the object to construct a self-fastening button upon the principle as hereinafter described the fastener has been so combined with the button that it has been impossible to prevent lateral movement thereof, and hence the jaws or springs have worked imperfectly. The object of my invention is to overcome these defects and imperfections and to produce a button which shall be self-fastening, which may be easily, readily, and permanently secured to the cloth or fabric by a gentle pressure of the fingers, and which shall compare favorably in its cost of manufacture with the cheap buttons now on the market. These objects I have accomplished by securing within the body of the button a plate or disk having a central opening, the edges of which, with those of an opening in the lower end of the button, fit closely around the fastener and bear upon the same at two points in its length, and thus render certain a vertical movement only thereof. In one piece with this disk I form two or more arms, which are inclined and bear or impinge against the fastener, their free ends when

bent around against each other being in a vertical line with the opening above them in the disk and the opening below them in the bottom of the button, thereby insuring their certain operation in binding and holding the fastener, there being no possible chance of lateral movement of the fastener.

To more fully explain my improved article, reference is had to the accompanying drawings, in which—

Figure 1 is a view in section of the several parts prior to the attachment of the button to the cloth. Fig. 2 is a similar view after the button has been secured to the fabric. Figs. 3 and 4 are sectional views showing different methods of securing the locking-disk in place. Fig. 5 is a sectional view showing the disk reversed. Fig. 6 shows a plan and edge view of the blank from which the disk is formed. Fig. 7 shows the first step in shaping the disk from the blank. Fig. 8 shows a sectional and reversed plan view of the finished disk. Figs. 9 and 10 are modifications of said disk.

A represents the body of the button, having its edges bent over and secured to the cap or cover *a*. The lower edge *b* of the button is also turned inwardly and upwardly, forming a hole or opening *c* of such size as to nicely contain the rivet or fastener B, the upwardly-turned edges enabling said fastener to readily find and enter the opening *c*.

Within the body of the button is located the fastening-disk C and held in proper position by means of the shoulder *d*, which prevents it from being raised, and by the converging sides *e* of the lower part of the button, which prevent it from being drawn or forced downwardly. This disk is formed from a blank, as shown in Fig. 6, struck from sheet metal, and consists of the disk proper *f*, having a central opening *g* of approximately the same diameter as and in a vertical line with that of the hole or opening *c*—that is, of sufficient size as to allow of the entrance of the fastener B. The blank also consists of the two arms *h*, formed integral with the disk *f* and on opposite edges thereof, the length of each of which arms is the radius or slightly greater than the radius of the disk *f*, in order that in the completed disk they may be bent inwardly and slightly upwardly, as shown in

Fig. 8, and have their free ends nearly, if not quite, meet, the object of which will herein-after appear. The blank being formed as described, the disk *f* thereof is then struck inwardly, forming the cup-shaped disk, as shown in Fig. 7, which allows the arms *h* to be bent inwardly and upwardly, as shown in Fig. 8, representing the finished or completed disk. The disk being completed, it is inserted in the button-body and the shoulder *d* struck inwardly, as shown in Figs. 1 and 2, which assist, as before explained, in holding it in position. It will be noticed that the opening between the ends of the arms *h* or the line of joining if brought together is in the same vertical plane with that of the openings *c* and *g*. If desirable, the extreme ends of the arms *h* may be slightly cut or hollowed out, as shown at *i*, Fig. 9, forming when brought together the opening *k*, sufficiently large to permit of the entrance of the piercing end of the fastener, but not large enough to receive the body of the fastener without slightly parting or separating the arms.

B represents the rivet or fastener, consisting of the shank *l*, having one end flanged or headed, and its opposite end, if preferred, pointed to enable it to pierce its own way through the cloth or fabric.

In order to fasten the button to the cloth, it is simply necessary to properly place the button thereof and by gentle pressure force the pointed rivet through the same into the button through the hole *c*. The pressure being continued, the fastener enters between the arms *h*, slightly forcing them apart, which, being made of spring metal, continue to impinge against it. The fastener then passes up through the opening *g* in the disk, all as shown in Fig. 2. By reason of the incline of the two arms toward the pointed end of the rivet the fastener can be easily forced inwardly as far as the thickness of the cloth will permit; but if drawn downwardly or outwardly the spring-arms impinging against it prevent any possible movement in that direction, the tendency being to bring the ends of the arms together and more tightly bind against the fastener, all lateral play or movement of the fastener being prevented by reason of its fitting snugly in the openings *c* and *g*.

It will be obvious that my invention, as above described, is susceptible of various

modifications—as, for instance, instead of forming the shoulder *d*, as described, it may be struck outwardly and the disk set in the recess, as shown in Fig. 3, and, as shown in Fig. 4, the recess may be formed in the lower part of the button. Again, instead of providing the disk with two arms *h* it may be formed with three, as shown in Fig. 10; and, further, the disk may be reversed in the button, as illustrated in Fig. 5, in which case the arms *h* will be inclined away from the disk instead of toward it, and, if desired, the disk in this instance may be made flat instead of cup-shaped.

My invention is exceedingly simple in construction, the button consisting, practically, of two pieces, the button proper and the disk, which, with arms formed integral thereon, may be readily stamped out of metal.

The fastener is practically the same as that used in many other forms of buttons, and need not, as in case of many instances, be corrugated or grooved. The parts are readily put together, the fastener piercing its own way through the material, thus overcoming the necessity of using setting and punching tools.

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

1. A button constructed with a hole or opening in its lower end and having a cup-shaped disk secured therein, said disk being provided with an opening above and in alignment with that of said former opening, and with inwardly and upwardly bent arms meeting or approximately meeting in the same vertical plane with that of said openings.

2. A button provided with the opening *c* and containing a disk *C*, located above the lower end of the button, said disk being constructed with the opening *g* and spring-arms *h*, the ends of the latter and the edges of said openings *c* and *g* being all in the same vertical line and adapted to receive a tack against which the arms bear, substantially as described.

Signed at New York, in the county of New York and State of New York, this 9th day of May, A. D. 1891.

GEORGE COOK.

Witnesses:

WILLIAM GOEBEL,
EDWARD G. MARKS.