(No Model.)

J. W. COLE.

BUTTON.

No. 277,886. Patented May 22, 1883.

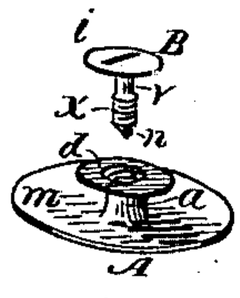

Fig. 1.

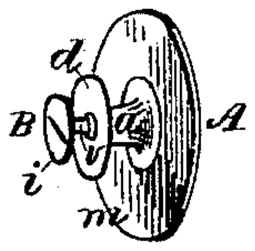

Fig. 2.

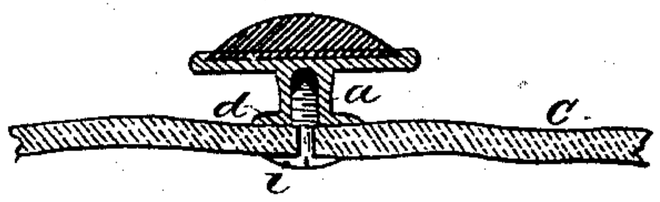

Fig. 3.

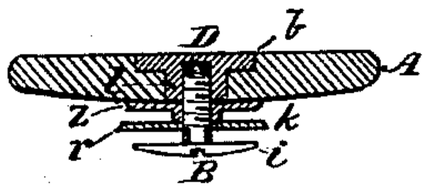

Fig. 4.

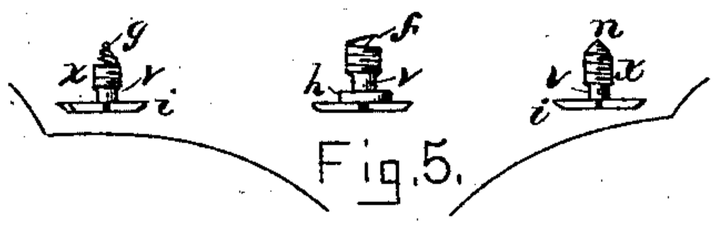

Fig. 5.

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UNITED STATES PATENT OFFICE.

JAMES W. COLE, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND JOHN W. HAMILTON, OF SAME PLACE.

BUTTON.

SPECIFICATION forming part of Letters Patent No. 277,886, dated May 22, 1883.

Application filed October 11, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. COLE, of Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Buttons, of which the following is a description, sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an isometrical perspective view, showing the fastener detached from the body of the button; Fig. 2, a like view, showing the fastener inserted; Fig. 3, a vertical transverse section showing the button attached to the clothing or in use; Fig. 4, a vertical transverse section, showing a modified form of construction; and Fig. 5, views of the fastener.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates more especially to separable or detachable buttons; and it consists in a novel construction and arrangement of parts, as hereinafter more fully set forth and claimed, by which a more desirable and effective device of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation, its extreme simplicity rendering an elaborate description unnecessary.

In the drawings, A represents the body of the button, and B the fastener.

The body consists of a disk, *m*, having the shank, *a*, provided with the annular flange *d* at its inner or lower end, these parts being constructed of metal or any other suitable material.

The fastener is preferably composed of metal, and consists of a screw, *x*, provided with the slotted head *i*, as best seen in Figs. 1 and 5. This screw is not threaded its entire length; but has a plain shank or neck, *v*, adjoining its head, the shank being less in diameter than the body, and is provided with a threaded worm or gimlet point, *n*, designed to penetrate the fabric or material in attaching the button.

The worm or point of the fastener may be varied in its construction, as shown in Fig. 5, if desired, that exhibited on the right in said figure being deemed preferable.

The worm *n* is conical or tapering in form, and is threaded its entire length from base to point. The worm *f* consists of a curved cutting-flange or auger-lip, and the worm *g* of a tapering spirally-arranged flange.

The neck *v* is designed to correspond in length with the thickness of the cloth or other material to which the button is attached, the cloth closing around the neck of the fastener when the button is in position for use, as shown in Fig. 3.

The shank *a* is drilled and tapped or interiorly threaded to receive the screw *x*, as best seen in Figs. 1, 2, 3, and 4.

To prevent the fastener from becoming accidentally unscrewed or detached from the body, I construct the body without the shank *a* in some instances, and make use, principally in large buttons, of a supplemental or auxiliary disk, D, which is fitted into a chamber or corresponding socket, *b*, formed in the center of the disk A, and extending entirely through the same, as shown in Fig. 4, the shank *l* of the auxiliary disk being tapped to receive the fastener. A washer, K, through which the body of the fastener passes, and having two annular flanges, *z r*, is also employed in connection with the disks A D, the flange *z* resting against the inner side of the disk A and the flange *r* on the cloth when the button is in use.

The inner face of the disk A may be countersunk to receive the flange *z*, and the washer K be soldered or permanently attached to the shank of the disk D, if desired.

It will be obvious that in a button constructed as last described, and shown in Fig. 4, the disk A may be revolved on the disk D without unscrewing or detaching the body of the button from its fastener.

For leather and similar materials fasteners having worms or points like those shown in Fig. 5 at *f g* are in some respects preferable

to the point *n*, as they cut a passage for the body of the fastener, and enable the button to be attached with greater facility. When the button is used for leather I also construct the fastener with a rabbet or shoulder, *h*, which is greater in diameter than the body of the fastener, and form a hole or socket in the leather sufficiently large to receive the shoulder when the fastener is in position for use, the broad shoulder being less liable to cut or tear the leather when there is a heavy strain on the button than the narrow neck *v*.

In the use of my improvement the point or worm of the fastener B is placed against the inner side of the fabric or article to which the button is to be attached, and is caused to penetrate and pass through the same by being turned to the right, under pressure, until the disk *i* comes into contact with the inner surface of the cloth. The body of the button is then screwed onto the fastener until the disk *d* is brought into contact with the face or outer surface of the cloth, after which the fastener is turned in as far as possible by means of a screw-driver inserted in the slot of the head *i*, thus firmly securing the button in a manner which will be readily obvious without a more explicit description. In the button shown in Fig. 4, the body not being provided with a permanent shank, it will be obvious that the disk *r* takes the place of the disk *d*, and that the cloth or other material to which the button is attached will be clamped or held between said first-named disk and the head *i* when the button is in use.

Having thus explained my invention, what I claim is—

A separable button composed of a disk provided with an interiorly-threaded tube, and a fastener consisting of a screw adapted to fit said tube, said screw being provided with a plain neck between its head and screw-threaded body, said neck being smaller in diameter than said body, substantially as described.

JAMES W. COLE.

Witnesses:
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