J. KEATS.

BUTTONS.

No. 193,964. Patented Aug. 7, 1877.

Fig. 1.

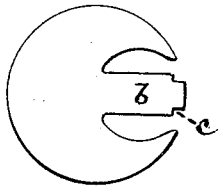


Fig. 2.

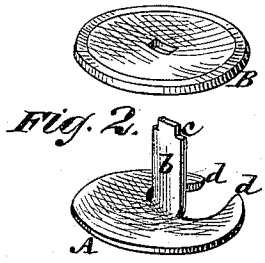


Fig. 3.

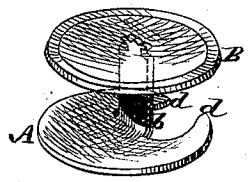


Fig. 4.

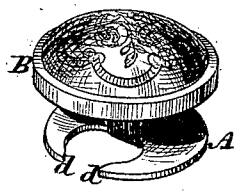


Fig. 6.

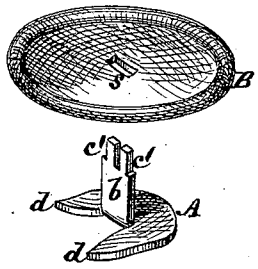


Fig. 7.

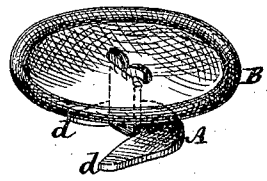


Fig. 5.

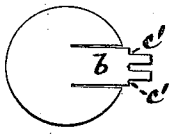


Fig. 9.

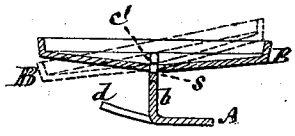
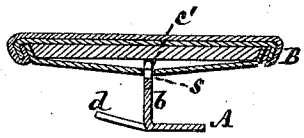


Fig. 8.



Witnesses

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JOHN KEATS, OF WOOD GREEN, ENGLAND.

IMPROVEMENT IN BUTTONS.

Specification forming part of Letters Patent No. **193,964**, dated August 7, 1877; application filed June 28, 1877.

To all whom it may concern:

Be it known that I, JOHN KEATS, of Wood Green, in the county of Middlesex, England, have invented certain Improvements in Buttons, of which the following is a description, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to buttons which are not held to their place by being sewed, but are secured by a back plate or disk, which is attached to the head of the button by a shank, and is projected through the fabric to which it is desired to attach the button, said back or holding plate either providing for a permanent attachment of the button or for its detachable connection as a stud.

The invention consists in a stud or button the shank of which and a shouldered rivet which attaches the said shank to the head are both formed out of the same sheet-metal blank with the disk of which the back or holding plate of the stud or button is composed by so cutting the said blank as to produce a tongue-like portion extending from the center, or near the center, of the disk to or beyond its circumference, and turning up the so-cut portion perpendicular to the face of the disk.

The invention also consists in a button having its shank struck up from, and composed entirely of, the same piece of metal which forms the back or holding plate, and united in a flexible manner with the head of the button, to admit of said head having a like freedom of motion relatively with the surface of the fabric to which the button is attached as buttons which are secured by sewing, and whereby the operation of buttoning and unbuttoning is facilitated.

Figure 1 represents one form of blank which may be used in the construction of a button or stud made in accordance with my invention. Fig. 2 is a view, in perspective, of said blank after it has been struck up to form the back or holding plate and shank of the button or stud, also showing a head-plate to which said shank is designed to be secured. Fig. 3 is a perspective view of said parts as attached; and Fig. 4, a view, in perspective, of a finished stud, embodying the parts as shown in the previous figures. Fig. 5 is a view of a modified form or construction of the blank from which the back or holding plate and shank are made; Fig. 6, a view, in perspective, of the same after it has been struck up into shape ready for attachment to the head, also showing the head of an uncovered button to which the shank is designed to be connected in a flexible manner. Fig. 7 is a perpective view of said parts as attached. Figs. 8 and 9 are sectional view, in direction of the length of the shank of a cloth-covered button and of its skeleton constructed with a shank formed entirely of the same piece of metal as the back or holding plate, and flexibly riveted to the head of the button, Fig. 9 also showing, by dotted lines, the freedom given to the head by the flexible attachment of the shank thereto.

Prior to more minutely describing these several figures of the drawing, it will be observed that the head of the stud or button may either be simple or compound, and either plain or ornamented, and of any suitable material or materials.

Referring, in the first instance, to Figs. 1, 2, 3, and 4 of the drawing, I first take a blank which has been stamped out of sheet-brass or other metal, by means of a fly-press or other suitable contrivance, into the form shown in Fig. 1, whereby said blank is left with an opening at one side of it terminating in duplicate points externally, and containing a tongue or neck, *b*, which commences at the center of said blank, and terminates externally in a shouldered outer extremity, *c*. The disk or main portion of this blank forms the back or holding plate A of the button or stud, and its tongue or neck *b*, which is afterwards struck or bent up into shape, as shown in Figs. 2 and 3, constitutes the shank. The pointed outer ends *d d* of the cut-away portion in one side of said plate form horns to facilitate the entry and removal of the plate A through and from the fabric to which it is designed to apply the button or stud, or through or from a hole specially made in the fabric for the purpose. To attach the back A to the head B of the stud or plate forming part of said head, the shouldered outer extremity *c* of the shank *b*, which constitutes a shouldered rivet, is entered within a slot in said head-plate and riveted down over the latter, or otherwise secured thereto.

Referring, in the next instance, to Figs. 5, 6, and 7 of the drawing, Fig. 5 shows a metal blank, having a tongue or neck, *b*, cut or formed in it from its center outward, and projecting beyond the margin of said blank. This tongue or neck, which is afterward struck or bent up to form the shank of the button, as shown in Figs. 6 and 7, terminates externally in a double-pronged shouldered extremity, *c' c'*, which constitutes a shouldered double rivet. The disk or main portion of this blank forms the back or holding plate A of the button, and the pointed outer ends *d d* of the cut-away portion in it made by the striking up of the shank *b* form horns for passing the plate A through the fabric to which it is designed to apply the button. Either of these horns may, if desired, be slightly bent, to give to it a screw form or action. The back or holding plate is attached to the head B of the button by passing the prongs *c' c'* or double rivet at the outer extremity of the shank through a longitudinal aperture, *s*, in the head, and afterward pressing or bending the protruding portions of said prongs laterally in reverse directions over onto the outer surface of the head, thereby forming ears, which, while securing the button-head to the shank, admit of the head slightly rocking on the latter about the prongs as a center of motion, a sufficient looseness being left or formed in securing the button to its place between said ears and the shouldered portion of the shank for the purpose. This constitutes a flexibly-riveted connection of the head with the back or plate of the button, to give to it the same freedom as a sewed button, as clearly shown by dotted lines in Fig. 9 of the drawing, in which figure, as also in Fig. 8, the same construction of parts is shown as in Figs. 5, 6, and 7, but as applied to a cloth-covered button or dished head-plate of such or other button having a facing or covering applied to its head.

If a button with a round shank be desired, the edges of the shank *b* produced from the sheet may be turned in or over to produce the round form; and, in such case, instead of cutting away metal from the sides of the shank, as is shown in Fig. 1, a simple slit may be made on each side, and the whole of the metal contained within the circle of the blank thus utilized.

I claim—

1. A stud or button having its shank *b* and a shouldered rivet, *c*, which attaches the said shank to the head, formed from the same sheet-metal blank with the back plate A by cutting from the disk of said blank a tongue-like portion, extending from the center to or beyond the circumference of said disk, and turning up the so-cut portion perpendicular to the said disk, substantially as herein described.

2. In combination with the shank and head of a button, the shouldered double rivet *c' c'*, formed on the shank, and having its prongs turned in reverse directions to form a flexible connection between the shank and head, substantially as herein described.

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FRED. HAYNES.