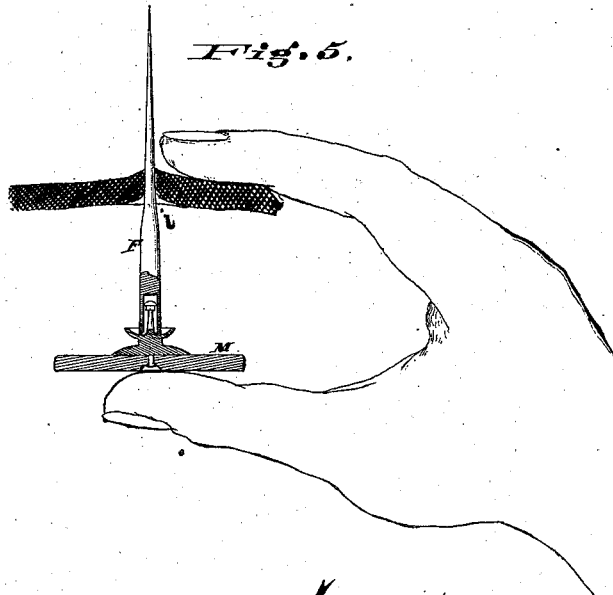
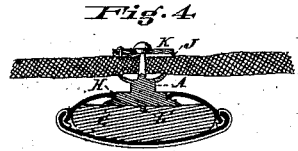
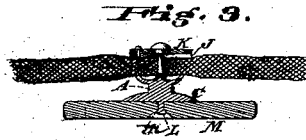
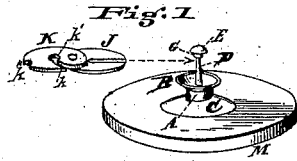


F. W. LUDWIG.
BUTTON-FASTENINGS.

No. 193,976.

Patented Aug. 7, 1877.



Attest
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UNITED STATES PATENT OFFICE.

FREDERICK W. LUDWIG, OF CINCINNATI, OHIO.

IMPROVEMENT IN BUTTON-FASTENINGS.

Specification forming part of Letters Patent No. 193,976, dated August 7, 1877; application filed July 2, 1877.

To all whom it may concern:

Be it known that I, FREDERICK W. LUDWIG, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Improvement in Button-Fasteners, and in needles therefor, of which the following is a specification:

My invention consists in certain improvements in the class of button-fasteners represented in Letters Patent No. 191,649, granted to myself, as assignee of Anton Brookman, on the 5th day of June, 1877; and my improvements comprise the provision of a fillet or collar immediately beneath the shank-head, in combination with an appropriately-slotted hook or catch, whereby the elasticity of the goods to which the button is attached is made available to hold and securely retain the button in place.

My improvements further comprise the provision of a collar or fillet immediately in rear of the swell of the button-core, to receive and hold the rear disk of the button.

Figure 1 is a perspective view of button-shank and retaining-washer, illustrating a position preparatory to being engaged. Fig. 2 comprises perspective views of two forms of the shank, adapted for different styles of button-head. Figs. 3 and 4 are sectional views of my improved shanks as applied to differently-constructed button-heads. Fig. 5 is a view illustrating the manner of entering the button-shank into a piece of goods.

My button-fastener has, like that described in said Patent No. 191,649, a stem, A, having two flanges, B and C, one flange, B, being designed to rest upon the face of the goods or garment, and the other flange, C, being for the support and attachment of the button proper of any material.

My fastener also has, in common with that of said patent, a neck, D, which terminates in a head or enlargement, E, which, as in that of said patent, is enabled to penetrate the goods by the use of a needle or stiletto, F.

But my button-fastener differs from that of said patent, and from all others known to me, in the possession, at the juncture of the neck and head, of a fillet or collar, G. This collar coacts with a peculiarly-formed hook or catch of my button-fastener, to be presently described, to securely retain said catch in lock,

and thus render impossible any accidental displacement.

My present fastener also differs from that of Brookman and others in the cup-like form of its cloth-flange B, whereby it is enabled to gripe the goods more effectually and to cooperate more effectively with my locking device.

When intended for cloth or other covered buttons my fastener also has a collar or fillet, H, at the junction of the stem A and flange C, for a purpose explained in the sequel.

My locking device consists, as that in said patent, in a notched washer, J, having pivoted to it a hook, K; but the hook differs from the hook in the patent in respect that its slot *k*, instead of being throughout of width just sufficient to grasp the neck D, is enlarged, *k'*, at its innermost end, to fit and inclose the collar G. A nick, *k''*, in the edge of the hook, enables its withdrawal by thumb-nail of the operator.

A spur, L or L', at the crown of my fastener, is provided, either for attachment of a bone, vulcanite, or other hard cap, M, through a central aperture, *m*, in which the spur is passed and riveted, as in Figs. 3 and 5, or in the class of cloth buttons, for simply centering and holding the wad or filling, as in Fig. 4. For use with buttons of the former class the stem-collar H may be omitted.

My button-fastener is applied as follows: The button proper or cap having been attached, by riveting or otherwise, the point of the needle is inserted in the goods as far as the shoulder. The acute form and very slight flare of the needle up to said shoulder enables this to be easily effected by simple pressure upon the butt. At this stage of the operation the shank D of the button is inserted in the butt of the needle, which is then easily pressed the remaining distance by application of the operator's thumb upon the face of the button, as in Fig. 5. The peculiar form of the needle employed renders it easy of penetration to a certain desired extent by simple pressure against the butt, and permits of the ready application of the button, whose relatively broader surface then affords an easy means of completing the penetration. The needle with the button-shank within it, having been thus forced through the goods and the needle re-

moved, the shank is seen exposed on the rear side of the goods. The operator now takes the locking device, and, having pushed the shank within the washer, then swings the hook K forward until the enlarged extremity of the slot *k* is brought opposite the collar. Immediately on reaching this position the hook is, by the elasticity of the goods, thrown up in contact with the under side of the flange E, so as for the enlarged extremity of the slot to surround the collar G, from which it cannot afterward be dislodged by any accidental force, because of the excess of diameter of said collar over the width of the slot.

Although exempt from accidental displacement, the button can at any time be removed by the hand of the operator first pressing laterally on the hook, so as to clear it from the collar, and, while thus depressed, withdrawing it.

I reserve to myself the right to make the improved needle, which is specially adapted for use in attaching the button, the subject of a new application.

I claim as new and of my invention—

1. The combination, with button-shank having the collar or enlargement G, of a locking device, J K *k k'*, formed and operating substantially as set forth.

2. The button-shank A B C D E G, constructed substantially as and for the purpose set forth.

In testimony of which invention I hereunto set my hand.

F. W. LUDWIG.

Attest:

GEO. H. KNIGHT,
WALTER KNIGHT.