L. A. ANGLE.

BUTTON.

APPLICATION FILED AUG. 22, 1918.

1,383,591. Patented July 5, 1921.

FIG. 3



FIG. 4



FIG. 5

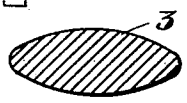


FIG. 1

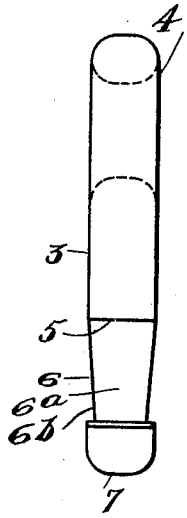


FIG. 2

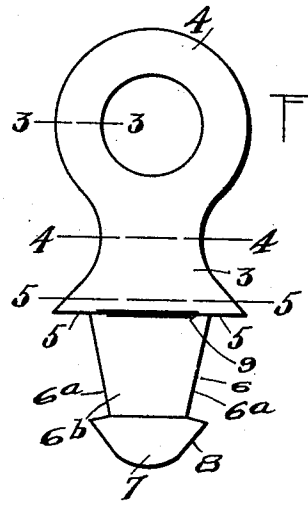


FIG. 8

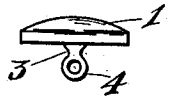


FIG. 6

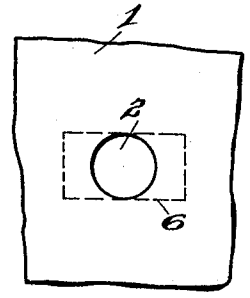


FIG. 9

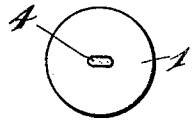


FIG. 7

INVENTOR:
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UNITED STATES PATENT OFFICE.

LLOYD A. ANGLE, OF ROCHESTER, NEW YORK, ASSIGNOR TO ARTS IN BUTTONS, INC., OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

BUTTON.

1,383,591. Specification of Letters Patent. Patented July 5, 1921.

Application filed August 22, 1918. Serial No. 251,035.

To all whom it may concern:

Be it known that I, LLOYD A. ANGLE, a citizen of the United States, and resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Buttons, of which the following is a specification.

The present invention relates to buttons, and to a method of attaching the shanks to the button bodies. An object of this invention is to provide an effective connection between a button shank and a button body which may be manufactured at a minimum cost.

To this and other ends the invention consists of certain parts and combinations of parts all of which will be hereinafter described, the novel features being pointed out in the appended claims.

In the drawings:—

Figure 1 is an enlarged side view of a shank embodying the present invention;

Fig. 2 is a view at right angles to the view shown in Fig. 1;

Fig. 3 is a section on the line 3—3, Fig. 2;

Fig. 4 is a section on the line 4—4, Fig. 2;

Fig. 5 is a section on the line 5—5, Fig. 2;

Fig. 6 is a fragmentary view of the rear face of the button body showing the opening formed in the body before the shank is connected to the body, the anchoring portion 5 of the shank being indicated in dotted lines;

Fig. 7 is an enlarged view showing the button body in section with the shank connected thereto; and

Figs. 8 and 9 are, respectively, a side view and a bottom view on a smaller scale of a button embodying the present invention.

Referring more particularly to the drawings, 1 indicates a button body which is preferably made of compressed, vulcanized fiber or leather board, or other suitable resilient material. This button body 1 may have formed in its rear faces an opening 2, preferably of cylindrical form, for receiving the shank. The shank in this instance comprises an attaching portion 3 on which is formed an eye 4, or other suitable means by which the button may be attached to a garment, and which is also formed with abutting faces or shoulders 5 for coöperating with the rear face of the button body. The shank embodies, in addition to the attaching portion, an anchoring portion 6 which, in this instance, has an enlargement 7 near its free end, said enlargement preferably having tapering sides 8. From the enlargement, the anchoring portion 6 of the shank has two diverging sides 6^a and two diverging sides 6^b so that it tapers from the base of the anchoring portion, providing a base 9 which has a cross-sectional area at least equal to the cross-sectional area of the enlargement 7. This anchoring portion in this instance is of noncircular cross-section throughout its length, being made with the attaching portion of the shank from flat stock, so that substantially all of the cross-sections of the anchoring portion of the shank are elongated, this form being employed in order to prevent the turning of the anchoring portion of the shank in the button body in which the anchoring portion is embedded.

In attaching the shank to the button body, the latter is first preferably provided with the cylindrical or other formed opening 2, which is smaller in cross-section than any cross-section of the anchoring portion of the shank, after which the anchoring portion of the shank is driven or forced into the button body at the opening while the button body is in a dry state. As the button body is made of resilient material, the latter gives, permitting the anchoring portion to penetrate the body until the shoulders or abutments 5 on the shank are reached, when the material of the button body about the anchoring portion will be compressed by such abutments. Owing to the fact that the base of the anchoring portion is at least as great as the cross-sectional area of the enlargement of the anchoring portion, all lateral movement of the shank in the button body will be prevented. Furthermore, the inclined or diverging faces 6^a and 6^b leading from the enlargement 7 to the base of the anchoring portion tend to compress the material of the button body behind the enlargement 7, thus preventing the withdrawal of the shank from the button body.

From the foregoing it will be seen that there has been provided a new method of attaching shanks to button bodies after the formation of such bodies and while the bodies are in a dry state, this attachment not requiring any soldering or separate fastening means for retaining the shank in the button body. The shank has an anchoring portion which, when driven into the button

body, establishes a firm connection therewith. This method does away with all moistening and drying processes, as well as all soldering or molding processes. The shank, in addition to being firmly secured to the button body, is held against rotation in such body.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A button comprising a button body of resilient material, and a shank embedded in said body and having an anchoring portion formed with an enlargement and a base having a cross-section at least equal to the cross-section of the enlargement.

2. A button comprising a button body of resilient material, and a shank embedded in said body and having an anchoring portion of noncircular cross-section to prevent turning in the body, said anchoring portion having an enlargement near its free end.

3. A button comprising a button body of resilient material, and a shank embedded in said body and having an anchoring portion of noncircular cross-section to prevent turning in said body, said anchoring portion having an enlargement near its free end and a base with a cross-section at least equal to the cross-section of the enlargement.

4. A button comprising a button body of resilient material, and a shank embedded in said body and having an anchoring portion of noncircular cross-section formed with an enlargement near its free end and flaring from said enlargement to its base which has a cross-section at least as great as the enlargement, the attaching portion of the shank being provided with an abutment at the base of the anchoring portion abutting the rear face of the button body.

5. A button comprising a button body of resilient material, and a shank embedded in said body and having an anchoring portion provided with an enlargement near its free end and also with a base having a cross-section at least equal to the cross-section of the enlargement, the shank also being provided with an abutment at the base of the anchoring portion coöperating with the rear face of the button body.

LLOYD A. ANGLE.