

1,333,015.

B. FREILE.
BUTTON,
APPLICATION FILED FEB. 16, 1918.

Patented Mar. 9, 1920.

Fig. 1

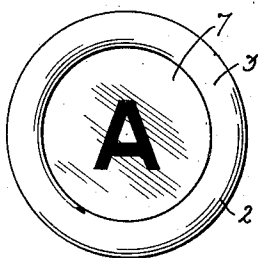


Fig. 2

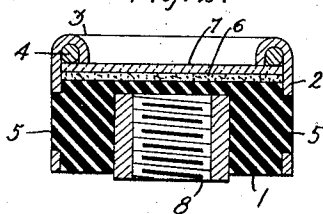


Fig. 3

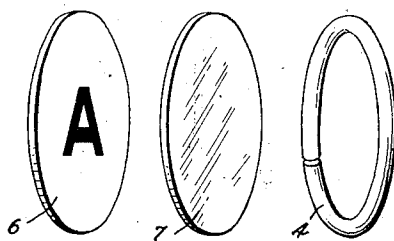
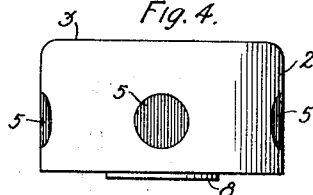


Fig. 4



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UNITED STATES PATENT OFFICE.

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BUTTON.

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Specification of Letters Patent.

Patented Mar. 9, 1920.

Application filed February 16, 1918. Serial No. 217,657.

To all whom it may concern:

Be it known that I, BRUCE FREILE, a subject of the King of Great Britain, residing at Bogota, in the county of Bergen, State of New Jersey, have invented certain new and useful Improvements in Buttons, of which the following is a full, clear, concise, and exact description.

This invention relates to buttons and more particularly to operating buttons for electrical switching apparatus.

Since various portions of the electrical switching apparatus carry electrical currents, it is essential to insulate the exposed portions of the operating buttons thereof in order to properly protect the user. Buttons of this character, especially those associated with telephone switching apparatus, are subjected to such severe service conditions that buttons composed entirely of insulating material do not possess the wearing qualities necessary to satisfactorily meet the service requirements.

It is also very desirable, especially in cases where a plurality of such operating buttons are provided for the use of one operator, to provide indicating means whereby the buttons associated with certain classes of service may be quickly and readily distinguished and selected.

It is the object of this invention to provide a simple and inexpensive unitary protected button having a body portion of insulating material and which may be provided with a permanent distinguishing indication.

In accordance with a feature of the present invention, a unitary button is obtained by molding a body of insulating material within, and integrally associated with, a metallic protecting casing having an opening therein, coincident with the operating surface of the button, surrounded by a projecting hollow rim, such opening being closed by an indicating plate provided with a transparent cover plate and the rim portion being substantially filled by a reinforcing ring. The rim portion serves to prevent slippage of the operator's finger, as well as to protect the button during service.

It is thought that the invention may be clearly understood from the following specification and annexed drawing, in which Figure 1 is a plan of the assembled button; Fig. 2 is a sectional elevation thereof; Fig.

3 shows perspectives of the indicating plate, the protecting cover plate and the reinforcing ring, while Fig. 4 is an elevation of the assembled button.

Referring to the drawings, the body portion 1, which may be made of any suitable insulating material, capable of being molded, such as a shellac compound, is protected by a metallic casing 2, having a projecting hollow rim portion 3, substantially filled by a reinforcing ring 4 and surrounding an aperture in the casing which coincides with the operating surface of the button. The side-wall of the casing 2 is provided with a plurality of apertures 5 which are filled with the insulating material in the process of molding, thereby serving to integrally unite the casing with the body portion. The indicating plate or member 6 may be of any suitable material, of any desired color and bearing any required designating character for indicating the particular service with which the button is to be associated, while the protecting cover plate 7 may be of any suitable transparent material possessing the requisite wearing qualities, such as celluloid. The internally threaded member 8 is molded in the body portion to provide means for removably attaching the button to the operating member of the associated switching apparatus.

In assembling the button, the ring 4 is placed within and substantially fills the rim 3. The cover 7 and the indicating plate 6, which are of approximately the same diameter as the interior of the casing, are then placed in position and the resultant partial assembly is placed in a suitable mold which also contains the member 8. Sufficient plastic material is then introduced into the mold to completely fill the unoccupied portions thereof, including the apertures 5. The ring 4 serves to properly support the peripheries of the plates during the molding process, and cooperating therewith to prevent the insulating material from entering the interior of the rim portion.

While the invention has been described as being applied to buttons for electrical switching apparatus, it is evident that it is also applicable to many other kinds of apparatus subjected to severe service conditions and requiring individual designations for the operating button, such as typewriters, cash registers, etc.

What is claimed is:

1. A button comprising a body portion of molded insulating material, a metallic protecting casing therefor provided with an opening in the top surface thereof and with a plurality of apertures in the side-wall thereof adapted to be filled by the body portion, a transparent cover plate closing such opening, an indicating plate placed underneath the cover plate, and attaching means integrally united with the casing and the plates by said body portion.

2. A molded button comprising a body portion of plastic material, a protecting casing therefor having an aperture therein, indicating means closing such aperture, and attaching means integrally united with the casing and the indicating means by said body portion.

3. A molded button comprising a body

portion of plastic insulating material, a protecting metallic cylindrical casing surrounding said body portion and having apertures adapted to be filled thereby, the edge of the casing intumed to provide an opening of reduced diameter surrounded by a hollow rim, a reinforcing ring adapted substantially to fill the interior of such rim, a transparent cover plate adapted to close such opening, an indicating plate placed against the cover plate and cooperating therewith and with the ring to prevent the plastic material from entering the interior of the rim during the molding process, and attaching means integrally united with the plates and the casing by said body portion.

In witness whereof I hereunto subscribe my name this 2nd day of January, A. D. 1918.

BRUCE FREILE.