

R. M. DE VIGNIER.
BUTTON.
APPLICATION FILED FEB. 20, 1918.

1,333,013.

Patented Mar. 9, 1920.

Fig. 1.

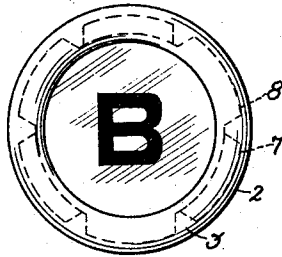


Fig. 2.

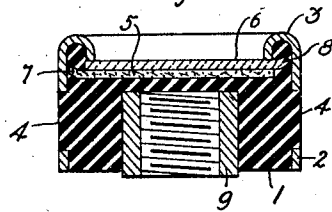


Fig. 3.

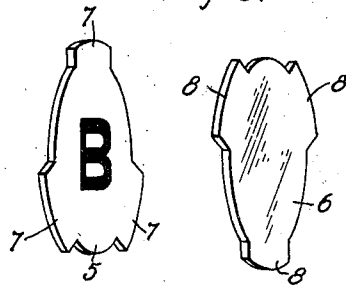
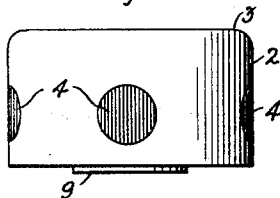


Fig. 4.



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by *J. E. Roberts* Atty.

UNITED STATES PATENT OFFICE.

ROBERT M. DE VIGNIER, OF HOLLIS, NEW YORK, ASSIGNOR TO WESTERN ELECTRIC COMPANY, INCORPORATED, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

BUTTON.

1,333,013.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT M. DE VIGNIER, a citizen of the United States, residing at Hollis, in the county of Queens, State of New York, 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 is 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 portion of insulating material within, and integrally associated with, a metallic protecting casing having an opening therein coincident with the operating surface of the button and surrounded by a projecting hollow rim, such opening being closed by an indicating plate with a transparent cover plate and the interior of the hollow rim being substantially filled by projecting portions of the two plates embedded in the material forming the body portion. The projecting 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 the annexed drawing, in which

Figure 1 is a plan of the assembled button; 55
Fig. 2 is a sectional elevation thereof; Fig. 3 shows perspectives of the indicating plate and its protecting cover plate, while Fig. 4 is an elevation of the assembled button.

Referring to the drawings, the body portion 1, which may be 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 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 4, 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 5 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 6 may be of any suitable transparent material possessing the requisite wearing qualities, such as celluloid. Plates 5 and 6, are each provided with a plurality of similar projecting portions 7 and 8 respectively, which portions are forced into the interior of the rim 3 during the molding process. The internally threaded member 9 85 is molded in the body portion to provide suitable means for removably attaching the button to the operating member of the associated switching apparatus.

In assembling the button, the plates 6 and 5, the greater diameter of each of which, including its respective projecting portions, is approximately the same as that of the interior of the casing, are placed in position with the portions 7 and 8 occupying any positions relative to each other, and the resultant partial assembly is then placed in a suitable mold which also contains the attaching member 9. 95

Sufficient material is then introduced into the casing to completely fill the unoccupied portions thereof including the apertures 4. Due to the pressure employed in molding the button, the portions 7 and 8 of the plates 5 and 6 respectively are forced into the interior of the rim 3 occupying approximately the position shown in Fig. 2. These portions are of such relative proportions that they do 105

not, however, interfere with the entrance of the insulating material into the interior of the rim 3, and as a consequence, the interior of such rim is completely filled thereby and the portions 7 and 8 are securely embedded therein.

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 buttons, such as typewriters, cash registers, etc.

15 What is claimed is:

1. A molded button comprising a body portion of insulating material, a protecting casing having an aperture therein, and indicating means closing, and having projecting portions extending beyond, the aperture, such portions being embedded in the body portion to secure the indicating means in a fixed position.

2. A molded button comprising a body portion of insulating material, a protecting metallic casing having an aperture therein, a transparent cover plate closing, and having projecting portions extending beyond, such aperture, and an indicating plate adapted to lie against the cover plate and having projecting portions positioned in any relation to the projecting portions thereof, said projecting portions of the indicating and cover plates being embedded in said body portions to maintain the said plates in fixed relation.

3. A molded button comprising a body

portion of insulating material, a protecting metallic cylindrical casing surrounding said body portion with apertures engaged thereby, one end of the casing having its edge inturned to form a hollow rim surrounding an opening of reduced diameter, a transparent cover plate closing such opening and having a projecting portion embedded in the insulating material filling the rim, and an indicating plate placed against the cover plate and having projecting portions embedded in the insulating material in the rim, said portions of said plates cooperating with the insulating material in the rim to maintain the plates in fixed relation.

4. A molded button comprising a protecting metallic cylindrical casing having the edge inturned at one end to form a hollow rim surrounding an opening of reduced diameter, a transparent cover plate closing, and having projecting portions extending beyond, such opening, an indicating plate placed against the cover plate and having corresponding projecting portions placed in interlocking relation with the projecting portions thereof, and a body portion of plastic insulating material substantially filling the casing and the rim thereof, said material engaging and integrally uniting the projecting portions with the casing, thereby maintaining said portions in interlocking relation.

In witness whereof, I hereunto subscribe my name this 13th day of February A. D., 1918.

ROBERT M. DE VIGNIER.