No. 793,936. PATENTED JULY 4, 1905.

H. F. KEIL.

ELECTRIC PUSH BUTTON.

APPLICATION FILED FEB. 27, 1905.

Fig. 1

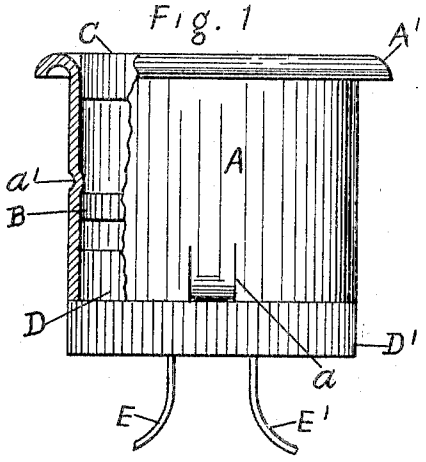
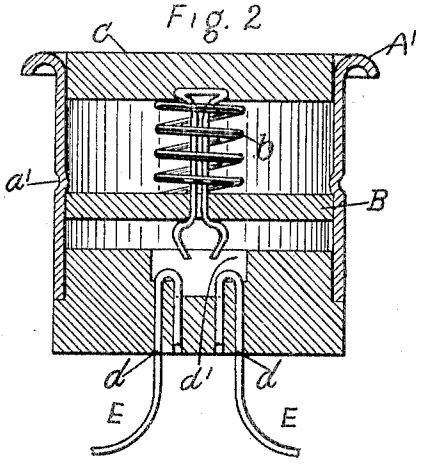


Fig. 2



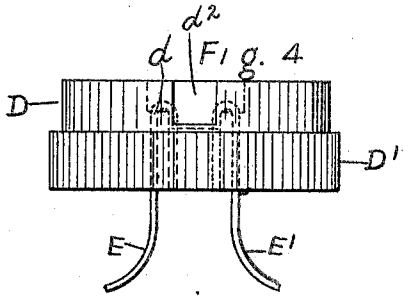


Fig. 4

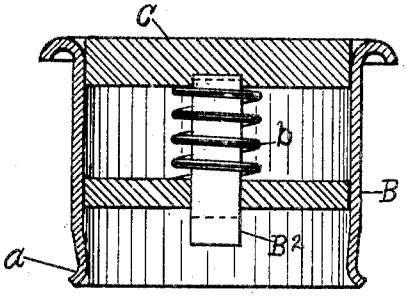


Fig. 3

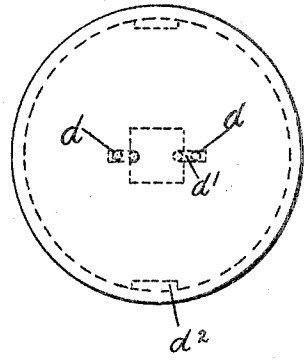


Fig. 5

WITNESSES:

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PHOTO-LITHOGRAPHED BY SACKETT & WILHELMS LITHO. & PTG. CO. NEW YORK

No. 793,936. Patented July 4, 1905.

UNITED STATES PATENT OFFICE.

HENRY FRANCIS KEIL, OF BRONXVILLE, NEW YORK.

ELECTRIC PUSH-BUTTON.

SPECIFICATION forming part of Letters Patent No. 793,936, dated July 4, 1905.

Application filed February 27, 1905. Serial No. 247,565.

To all whom it may concern:

Be it known that I, HENRY FRANCIS KEIL, a citizen of the United States of America, and a resident of Bronxville, in the county of Westchester and State of New York, have invented a certain new and useful Electric Push-Button, of which the following is a specification, the same being a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to devices—such as manually-actuated disks, knobs, or balls—by pushing or pressing which the circuit of an electric bell is completed, and particularly to a push-button in which the circuit-wires are directly inserted and firmly held in an insulated condition and in position to be engaged with the circuit-changing means at will without the use of binding-posts, screws, &c.; and it has for its object the production of an improved structure of this class made of simplified construction, ornamental in appearance, and efficient in practical use.

With this object in view the invention consists in certain novel features of construction and combination and arrangement of parts, all of which will be hereinafter described, and specifically pointed out in the drawings which accompany and form a part of this specification, and in which—

Figure 1 represents a view in section of a push-button made according to my invention. Fig. 2 is a detail sectional view of the same; Fig. 3, a view in section of the circuit-closer and cup; Fig. 4, a view in section of the plug or body member, and Fig. 5 a view of the upper face of the latter.

Like letters of reference indicate like parts in all the views.

Referring particularly to the drawings, in which is shown one embodiment of my invention, A denotes the cup or cylinder, preferably having a rim A′. The cup is formed with plug-retaining means, as an interiorly-extending shouldered portion or indentation *a*, and is also preferably made with an additional interiorly-extending shouldered portion or indentation, as at *a′*, or equivalent interiorly-extending parts constructed and arranged to constitute a retaining-rim or otherwise slightly contracted in size a short distance above the first-named interiorly-extending part in order to hold the cup and plug together when the cup is snapped upon the plug.

The circuit-closing means ordinarily consist of a washer B, constructed of insulating material, through an opening or slot in which are passed two circuit-closing fingers B′ B², which are rigidly engaged with the knob or push-button or center C. A spring *b* is placed around the shanks of the fingers B′ and B² and is located intermediate the washer B and the button C and serves to normally hold the button C and the spring-fingers B′ and B² in their highest and normal position, the upward movement of the same being limited by the said washer B.

The plug or body member D is preferably made of insulating material, as of hard rubber, and is ordinarily formed with a plurality of longitudinal orifices *d*, extending through the same and terminating ordinarily at the upper face of the plug in a practically horizontal part or parts, as the widened portions or interior laterally-disposed recesses *d′*, the bottom edge of the plug being ordinarily widened and formed with a milled edge D′. The said plug D also has formed in the side of the same a recess or inwardly-extending portion *d²*, constructed and arranged to coact with the indentation *a* in holding the plug within the cup A. In order to allow of more freedom of movement of the cup A and to give the same more resilience, I sometimes cut or split one or both of the sides of the indentation *a* in order to form a slit *a²* on one or both sides of the said indentation, as shown in Fig. 1. In operation the circuit-wires E E′ are thrust through the orifices *d* of the plug D and bent over the practically horizontal face formed by the interiorly-disposed recesses or grooves *d′* and secured in an immovable relation to the said plug by bending the ends of the wires over so as to lie in a horizontal position or in any other approved manner. The circuit-closing device, consisting of the button C and washer B, is now snapped into the said cup by the operation of forcing the washer over the contracted portion *a′* of the

metal cup or cylinder A, so that it will lie between the two shouldered portions a and a', whereupon by depressing the button C the contact-fingers B′ and B² will engage the circuit-wires E E′ and close or complete an electric circuit therethrough.

As it is evident that many changes in the construction, form, proportion, and relative arrangement of parts might be resorted to without departing from the spirit and scope of my invention, I would have it understood that I do not restrict myself to the particular construction and arrangement of parts shown and described, but that such changes and equivalents may be substituted therefor.

What I claim as my invention is—

1. In an electric push-button, a plug having longitudinal perforations for wires located away from the edge thereof and terminating in a practically horizontal face formed by an interior lateral-recessed part across which the ends of the wires may be placed.

2. In an electric push-button, a plug having longitudinal perforations for wires and also having cup-retaining means consisting of a recessed or inwardly-extending portion, in combination with a cup having circuit-closing means and formed with retaining means consisting of an interior shouldered part to engage the plug-retaining means and whereby the cup may be snapped on or off the said plug.

3. In an electric push-button, a cup having retaining means consisting of an interior part constructed and arranged to form a shoulder, in combination with a plug constructed and arranged to be snapped into the said cup and having longitudinal perforations for wires.

4. In an electric push-button, a plug having longitudinal perforations for wires located away from the edge thereof, and terminating in a practically horizontal face formed by an interior lateral-recessed part across which the ends of the wires may be placed, the said plug also having retaining means consisting of recesses or inwardly-extending portions.

In testimony of the foregoing specification I do hereby sign the same, in the city of New York, county and State of New York, this 14th day of February, 1905.

HENRY FRANCIS KEIL.

Witnesses:

F. A. WURZBACH,

H. BAMMANN.