

(No Model.)

A. J. OEHRING.
ELECTRIC PUSH BUTTON.

No. 539,079.

Patented May 14, 1895.

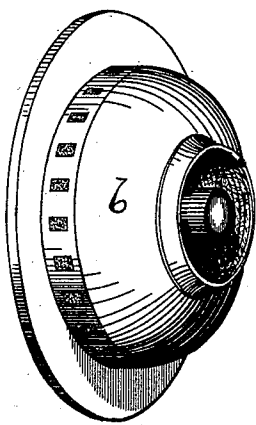


Fig. 1.

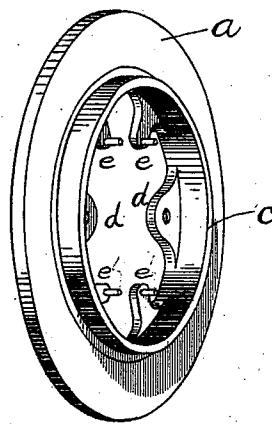


Fig. 2.

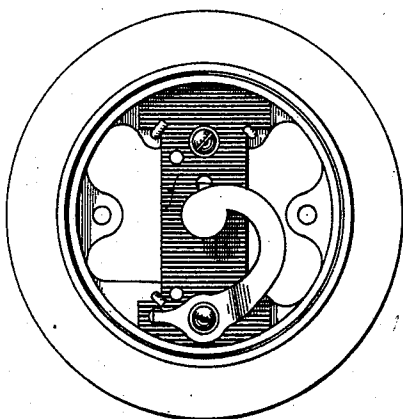


Fig. 3.

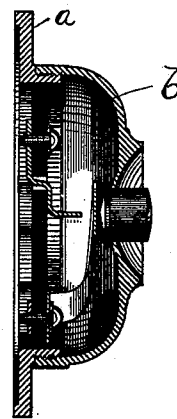


Fig. 4.

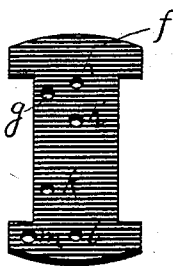


Fig. 5.

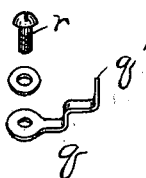


Fig. 6.

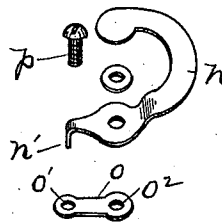


Fig. 7.

WITNESSES

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UNITED STATES PATENT OFFICE.

AUGUST J. OEHRING, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WESTERN ELECTRIC COMPANY, OF SAME PLACE.

ELECTRIC PUSH-BUTTON.

SPECIFICATION forming part of Letters Patent No. 539,079, dated May 14, 1895.

Application filed November 2, 1893. Serial No. 489,843. (No model.)

To all whom it may concern:

Be it known that I, AUGUST J. OEHRING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Electric Push-Buttons, (Case No. 6,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to push button switches for electric circuits, its object being to produce an ornamental push button as an article of manufacture of simple, durable and cheap construction; and to this end it consists in certain novel details of construction as hereinafter described.

My invention is illustrated in the accompanying drawings and will be described with reference thereto.

Figure 1 of the drawings is a perspective view of the front of my improved push-button. Fig. 2 is a view of the base-plate. Fig. 3 is a plan of the push-button with the cover removed, showing the parts in position. Fig. 4 is a central sectional view. Fig. 5 is a perspective view of the plate or piece of insulating material which, mounted within the push-button, serves as an insulating-support for the electrical switch parts of the push-button. Fig. 6 is a perspective view of the contact-spring and the screw for retaining it in place. Fig. 7 is a similar view of the switch-spring.

The switch parts of the push button are mounted upon a circular base plate *a* which is provided with a cup-shaped cover *b* which is screwed upon a threaded annular projection *c* upon the base plate in the usual manner. The base *a* is open in its central portion and is provided with six inwardly projecting lugs *d* and *e*. The lugs *d* are perforated to receive screws for fastening the push button in place. The lugs *e* are provided with upwardly projecting studs or pins *e'* cast integral with them. A plate *f* of some insulating material, as hard rubber or vulcanized fiber, is punched of a form shown in Fig. 5. The recesses in the sides of the plate are made of such depth and length that the plate may enter between the pins *e'* and may fit so closely

as to be prevented from lateral and longitudinal movement. The plate *f* is provided with perforations *g h i k l m*, which may be punched in it in the same operation in which the plate is punched. When the plate *f* is placed in position between the pins *e'* in the base plate, these pins are bent over upon the plate, thus securely holding the latter in position. It will be understood that the base *a* should be cast of some soft and yielding metal, as brass, to permit such bending of the pins. A curved switch lever *n*, punched from resilient metal, is then placed upon the plate *f*, the downwardly projecting tip *n'* of the spring being inserted through the hole *m* in plate *f*. The link-shaped punching *o* is then placed under the plate, the opening *o'* receiving the projection *n'*, which latter is bent over upon the link, thus uniting the two parts and securing them to the plate *f*. A screw *p* is then passed through the opening in spring *n* and through the hole *l* in plate *f* and screwed into the opening *o'* in link *o* which is threaded for the purpose, a washer being placed under the head of the screw in the ordinary manner for the purpose of binding the circuit wire. By this means the switch spring *n* is securely fixed to the plate and any displacement of it is prevented. The curved extremity of the punching *q* is then inserted through the opening *h* in the plate, its extremity *q'* being arranged immediately beneath the extremity of the spring *n* in the center of the push button, and the screw *r* with a washer under it is screwed down into the punching *q* which is threaded to receive it. The screw *r* forms the binding screw of the switch contact *q*. The openings *g* and *h* in plate *f* permit the circuit wires to be passed through the plate and secured in place.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a push button, the combination with a base *a* formed of flexible material and having the pins *e'* formed integral with it, of a plate *f* secured in place by bending the pins over upon it, substantially as described.

2. The combination with the base of a push button of yielding metal having projecting

pins or studs formed integral therewith, of an insulating plate carrying the switch parts secured to the base by bending the said studs down upon it, substantially as described.

- 5 3. The combination with the plate *f* of insulating material of the switch spring *n* having a projection extending through the plate through a perforation in a link and bent down upon the said link, said link, and a screw extending through the switch spring and screw-

ing into the link, whereby the spring is securely held in place upon the plate, and a contact adapted to be engaged by said switch spring *n*, substantially as described.

In witness whereof I hereunto subscribe my name this 13th day of October, A. D. 1893.

AUGUST J. OEHRING.

Witnesses:

DUNCAN E. WILLETT,
LUCILE RUSSELL.