

(No Model.)

H. von KÖHLER.
PUSH BUTTON.

No. 440,813.

Patented Nov. 18, 1890.

Fig. 1.

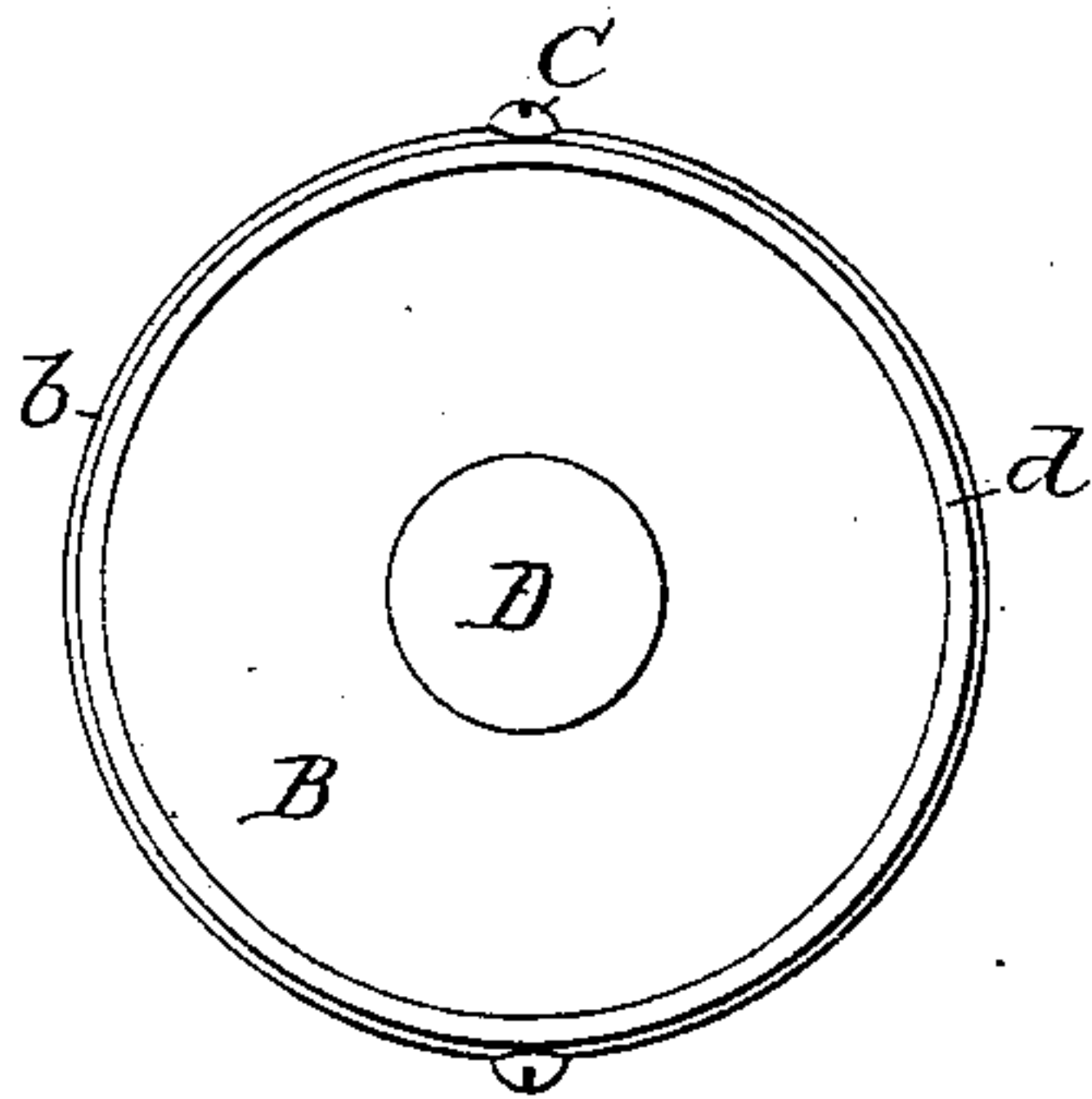


Fig. 3.

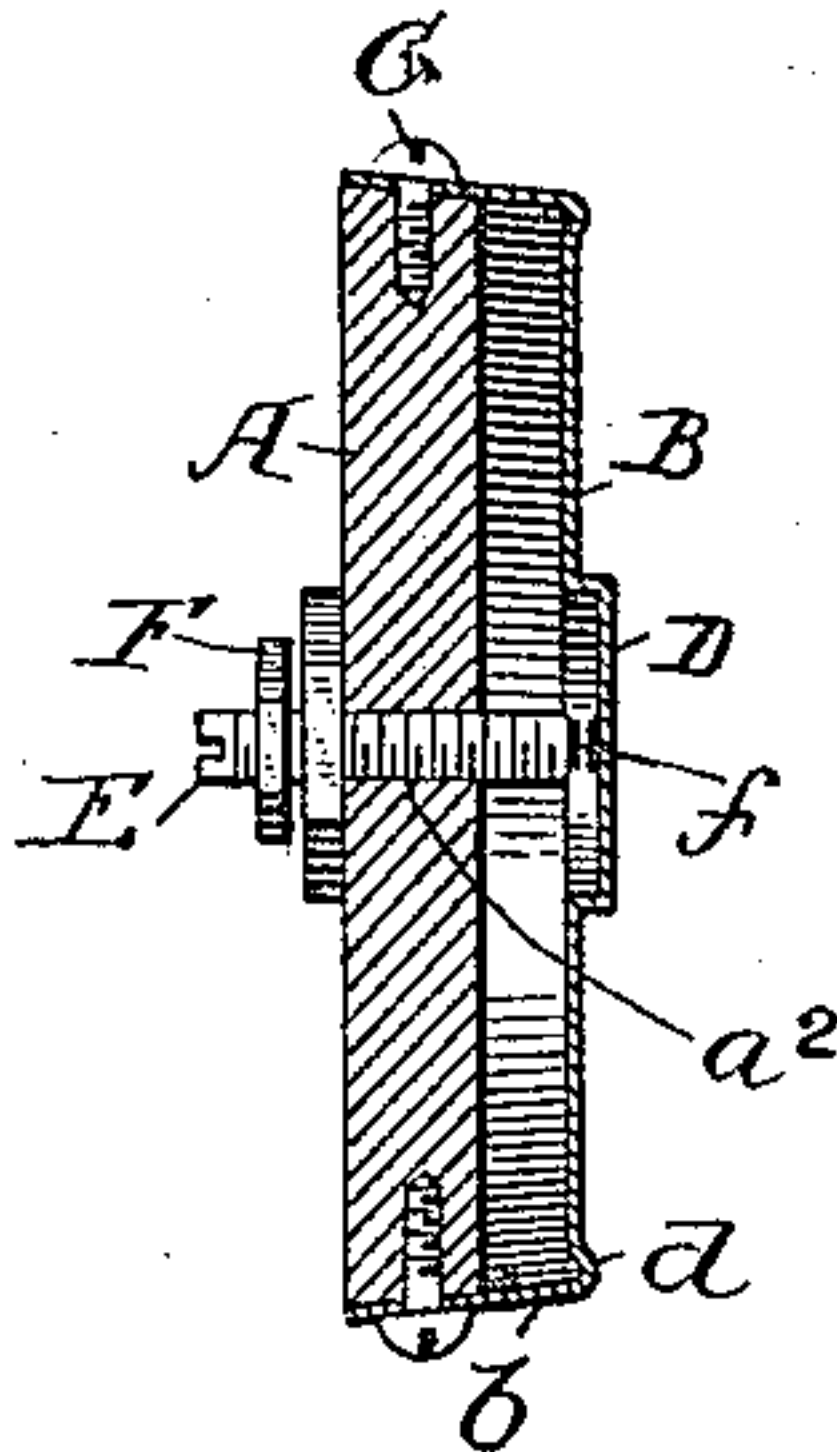


Fig. 2.

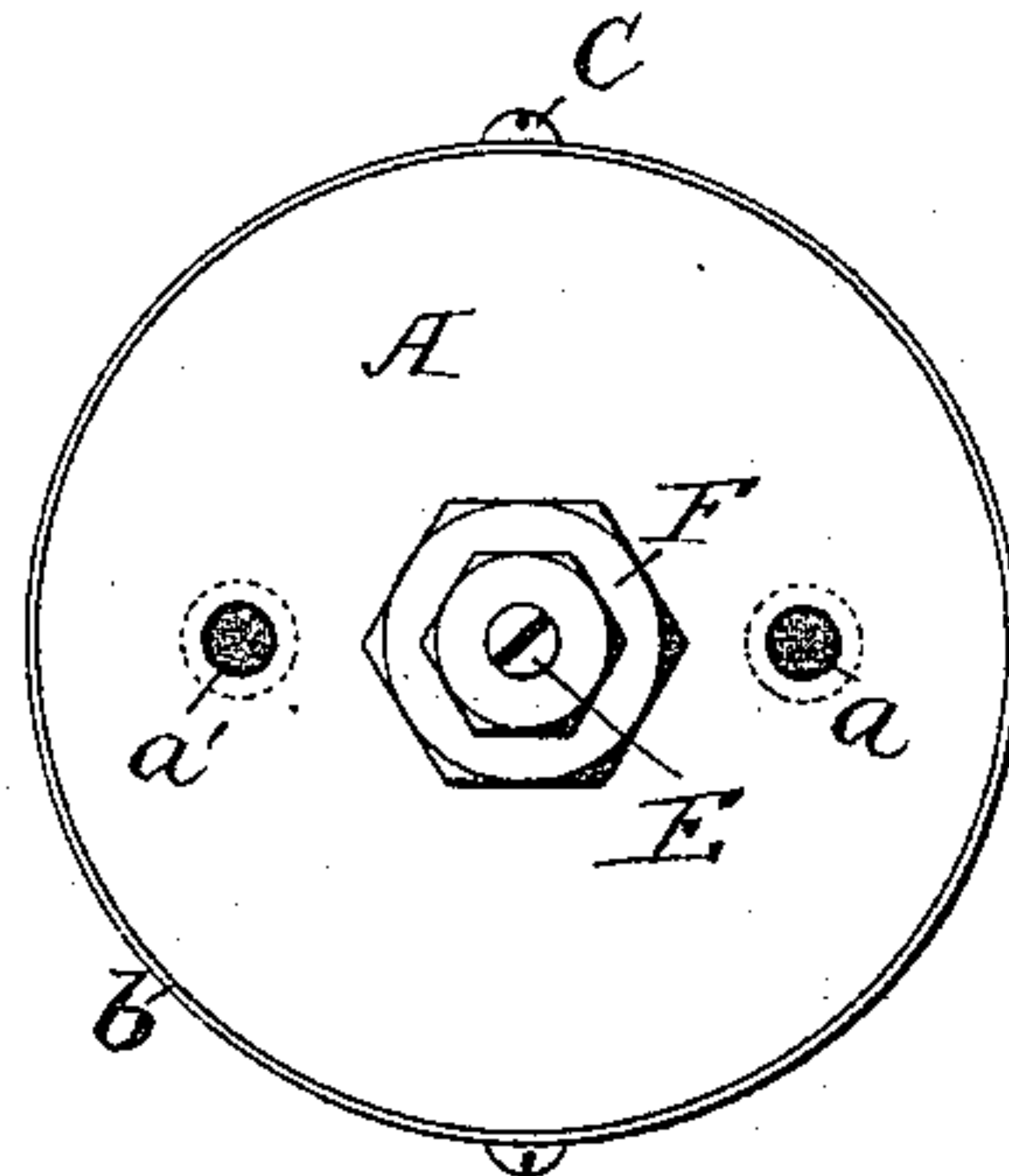


Fig. 4.

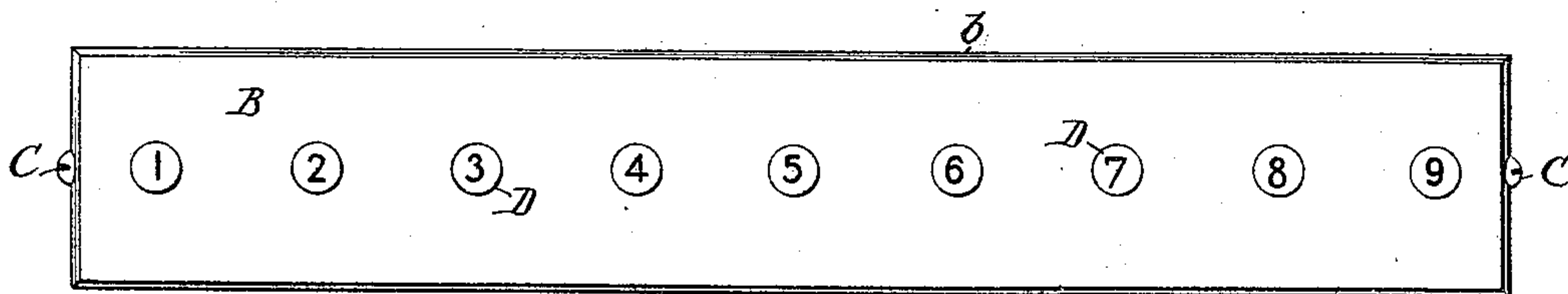


Fig. 5.

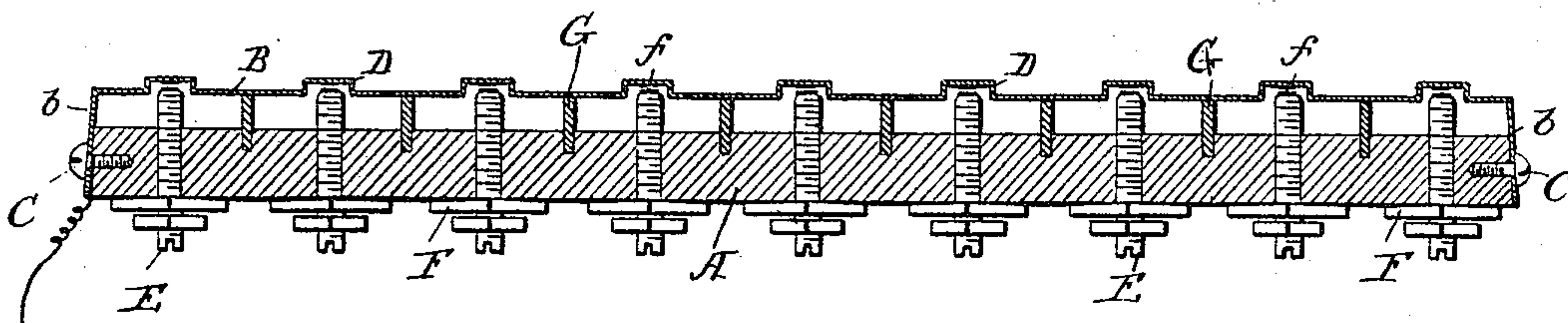
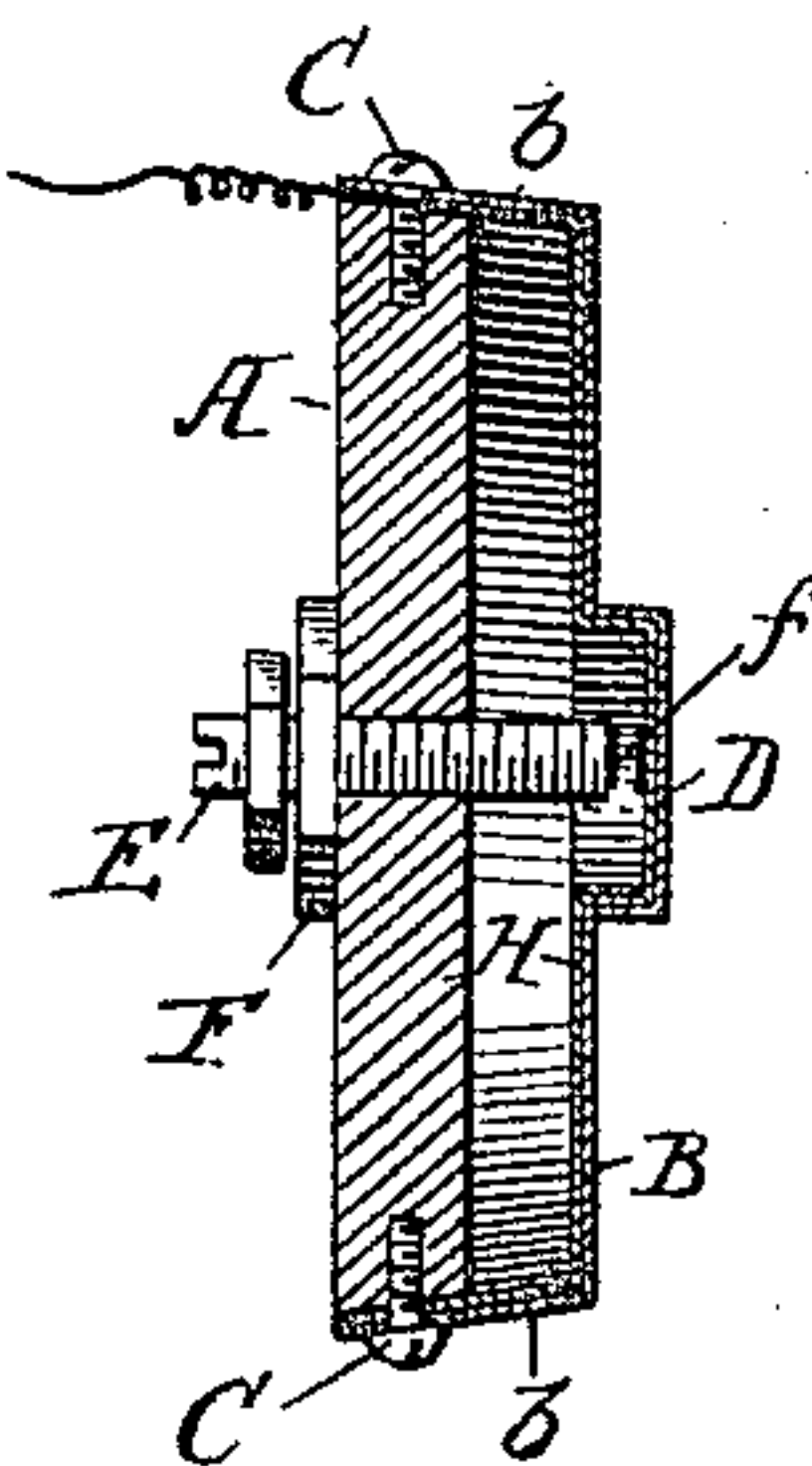


Fig. 6.



WITNESSES

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HJALMAR VON KÖHLER, OF NEW YORK, N. Y.

PUSH-BUTTON.

SPECIFICATION forming part of Letters Patent No. 440,813, dated November 18, 1890.

Application filed May 31, 1890. Serial No. 353,725. (No model.)

To all whom it may concern:

Be it known that I, HJALMAR VON KÖHLER, a subject of the King of Sweden, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Push-Buttons, of which the following is a specification.

My invention relates to push-buttons for electric circuits, and has for its object to provide a simple, cheap, and effective push-button, which is not liable to get out of order, and in which the contacts are properly protected from extraneous and foreign matters; and to these ends my invention consists in a push-button constructed and arranged substantially as hereinafter described.

In the accompanying drawings, Figure 1 is an enlarged plan view of one embodiment of my improved button. Fig. 2 is a bottom plan view of the same. Fig. 3 is a vertical cross-section. Fig. 4 is a plan view of another form, and Fig. 5 is a vertical transverse cross-section thereof. Fig. 6 is a vertical cross-section showing a slightly-modified arrangement.

Heretofore it has been common to make push-buttons by providing a base which has to be turned and finished or otherwise tooled or prepared, and on this base there are mounted two springs and a turned wooden or a cast or pressed metallic cover containing a hole for a turned or otherwise-made thumb-button, which may be depressed to contact the springs and thereby complete the electric circuit. Such constructions and arrangements, however, do not present such a finished appearance, nor can they be practically made of a small size to be successfully used in certain positions and relations where it is desirable to have the push-button as small, compact, and present as finished an appearance as possible.

It is one of the objects of my present invention to improve the construction of push-buttons and to make them simple and cheap and at the same time effective, and to do this I carry out my invention in the manner substantially as hereinafter set forth.

In the drawings, A represents a base, preferably of a non-conducting fibrous material, which may be simply stamped out in the rough, and the screw-holes a a' a'' can be

formed at the same operation. To this base I attach a top piece B, preferably made of one single piece of spring metal and having flanges b , arranged to embrace the edges of the conical-shaped base-piece A, to which it may be secured in any suitable way, as by the screws C, so that the button is perfectly water and dust tight. This top piece is formed with a central extension D, which serves as a thumb or finger piece to receive the pressure of the operator, and when a single button is used the edges of the cap-piece are formed with a rounded or curved rib or bead d , which aids in strengthening the top piece and in improving its elasticity. This top piece can be struck up from a single piece of metal, or it can be made of any non-conducting material faced for a portion of its inside surface with metal.

Extending through the base-piece is a screw E, having the clamp pieces or plates F, to which the conductor can be attached in the usual manner. The screw can be adjusted readily, so that its end will be in proximity to the thumb-piece D. The end of the screw and the under side of the top piece adjacent thereto may be covered with a thin piece of platinum f , which will not be affected by the passage of the current through the contact.

In some instances the top piece may be made of non-conducting material, as celluloid, for instance, and be provided with a strip of metal H, also stamped to conform to the inner contour of the top piece and to complete the electric connection between the contact-screw and conductor-terminal.

When it is desired to have a number of push-buttons for different calls arranged together, the base A is formed as before, being struck out of a single piece of material, and the top B is also made of a like single piece and the two are attached together, as before indicated. The various screws E can be inserted from the bottom and adjusted with relation to the thumb portions, and in order to prevent any accidental closure of the circuit between the two adjacent sets of contacts I insert midway between the screws in the base bearing-pieces G of some non-conducting material.

It will be seen from the above that the push-button can be constructed very cheaply, as

the base and top may be struck up at a single operation, and when they are combined they furnish a push-button in which the contacts are preferably protected from dust, moisture, or other extraneous matter, and the device may be exceedingly small and still have a finished appearance and operate with perfect accuracy. When thus made, it may be secured to a desk, table, or other article of furniture and occupy but little room and not interfere with the ordinary functions of the article to which it is applied.

What I claim is—

1. A push-button consisting of a flat base of non-conducting material having a contact passing through the base and a top piece provided with flanges embracing the outer edges of the base and having a thumb portion opposite the contact, the top piece, flanges, and

thumb portion being formed of a single integral piece and connected to the base-piece by fastening devices extending through the flanges, substantially as described. 20

2. A push-button consisting of a base-piece having a number of contacts extending there- through, and a metallic top piece embracing the base-piece and having a number of elevated thumb-pieces and supporting-pieces intermediate of the contacts, substantially as described. 25

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 30

HJALMAR VON KÖHLER.

Witnesses:

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A. W. KIDDLE.