

(No Model.)

J. F. WOLLENSAK.
ELECTRIC COMPOUND PUSH.

No. 421,340.

Patented Feb. 11, 1890.

Fig. 1.

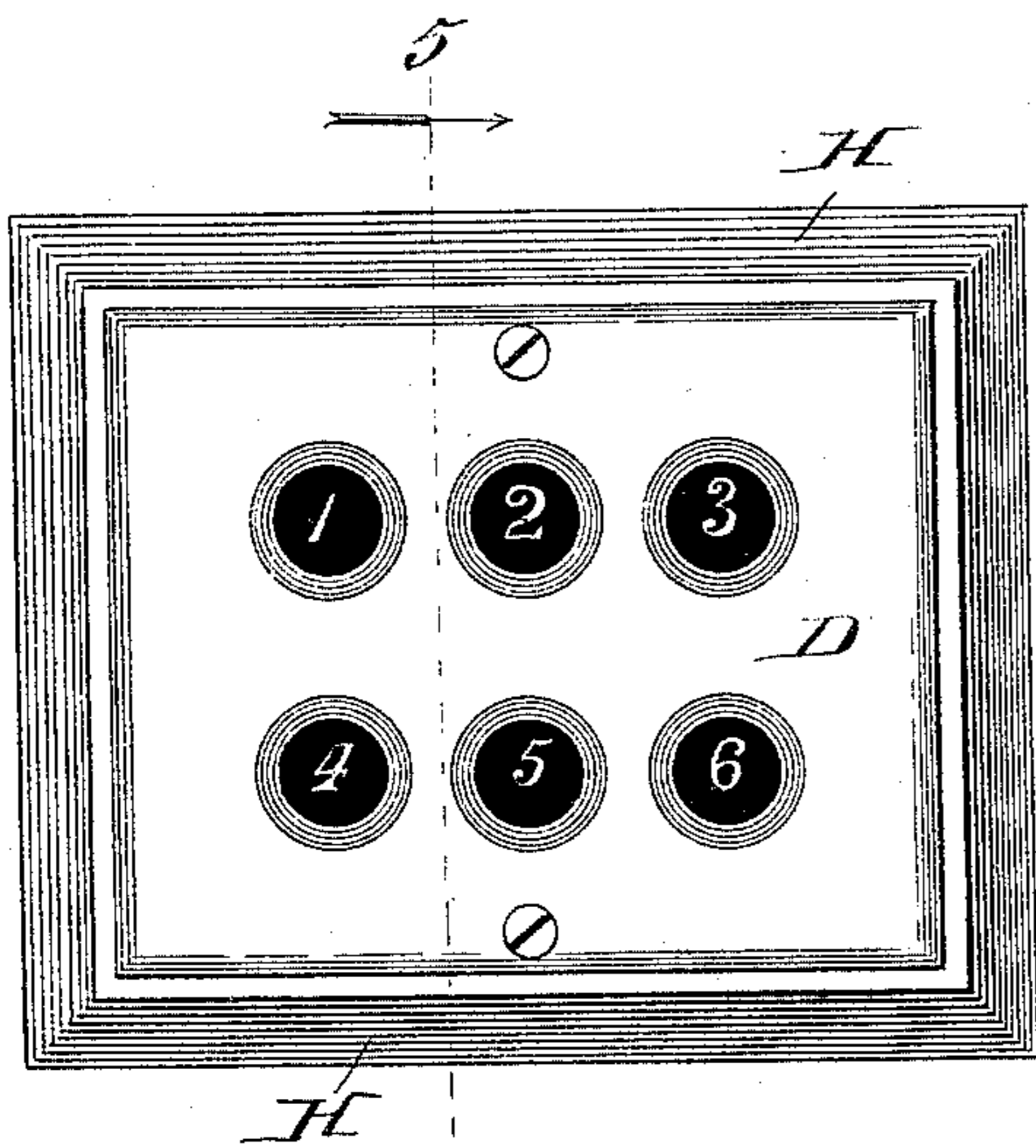


Fig. 2.

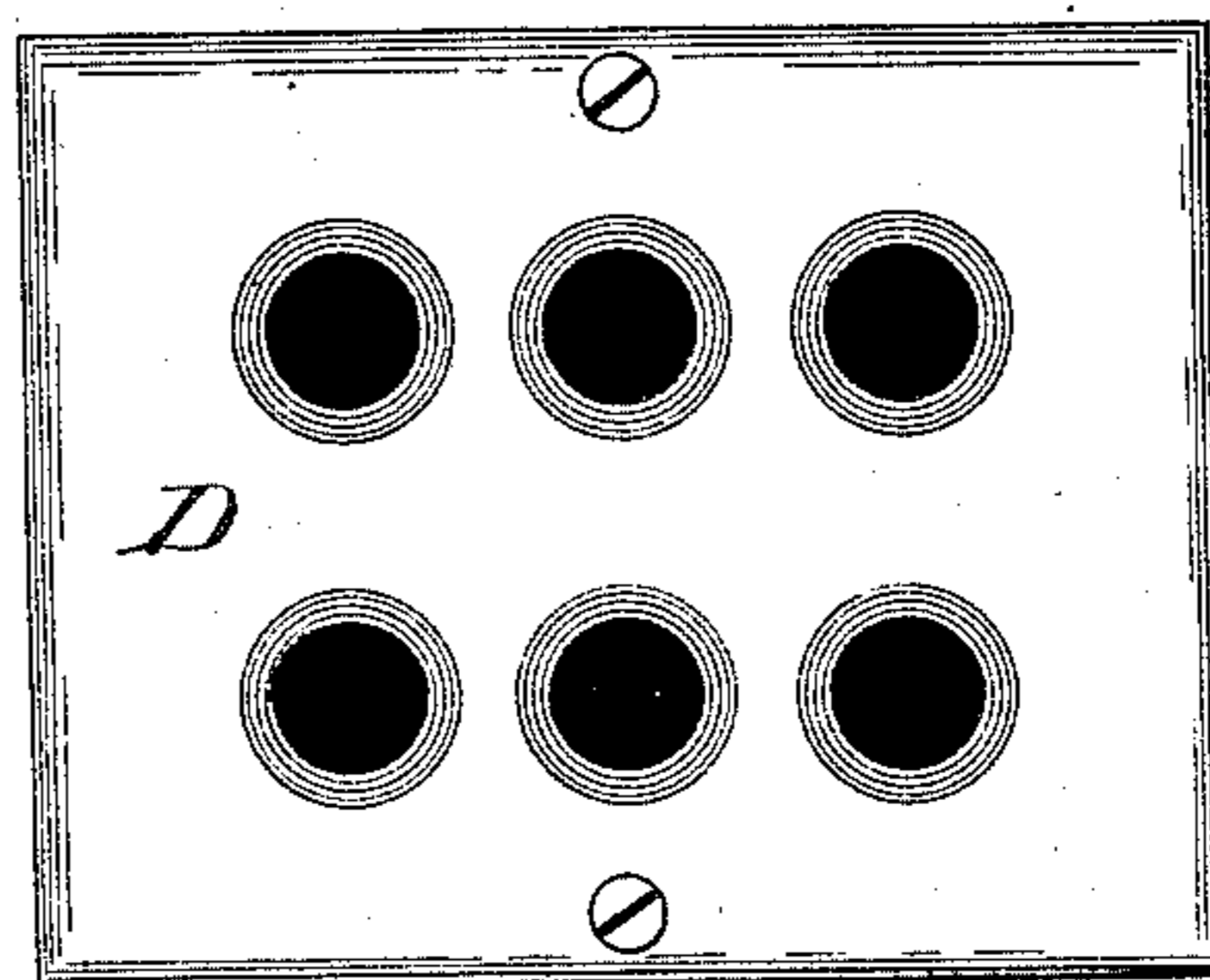


Fig. 3.

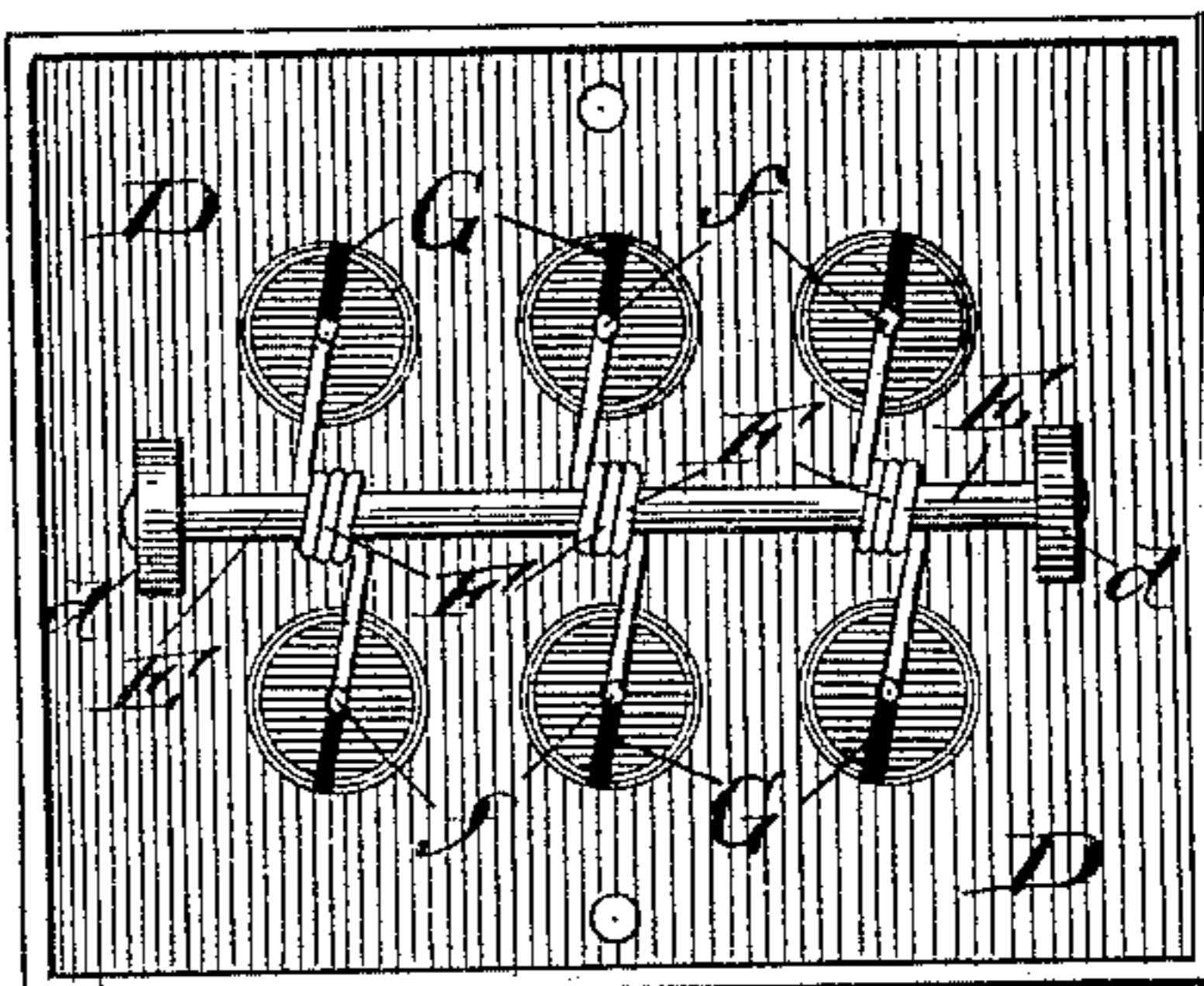


Fig. 5.

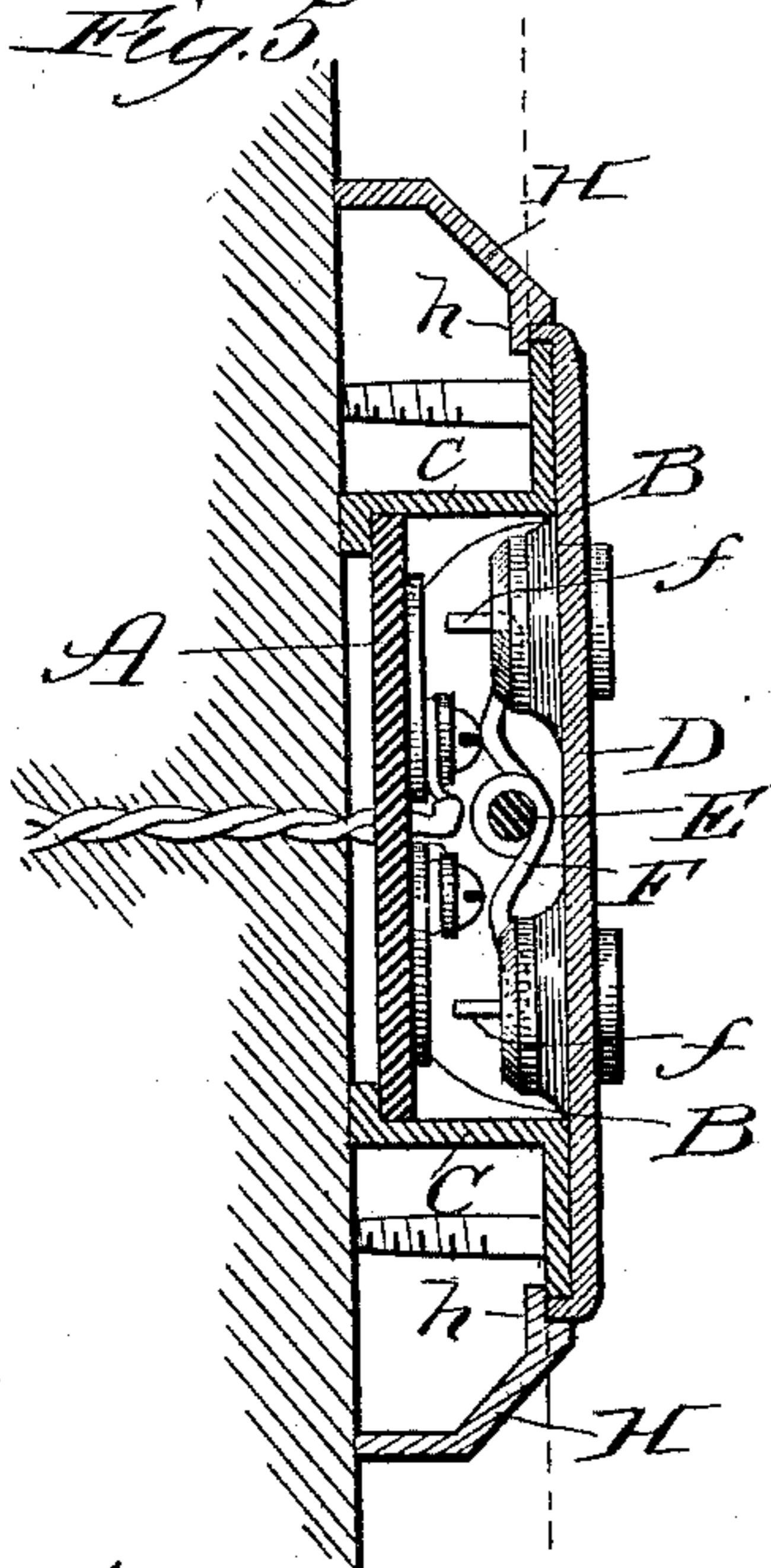


Fig. 6.

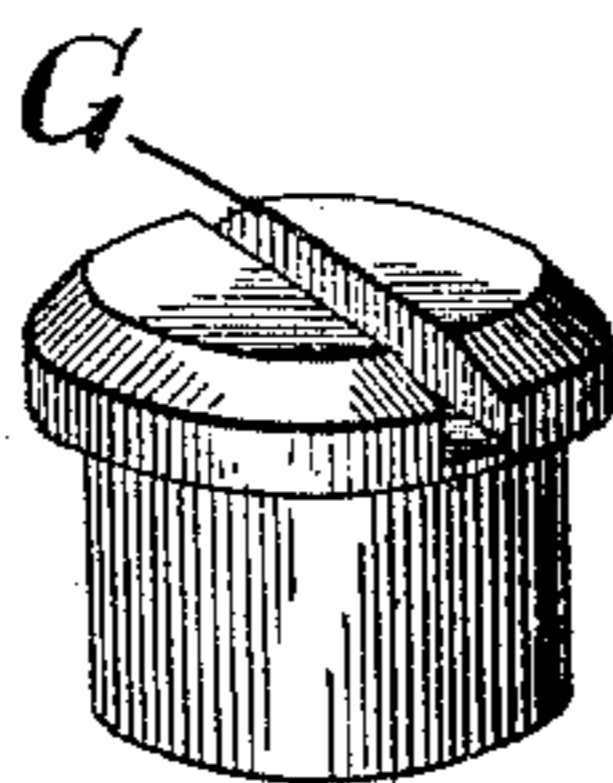
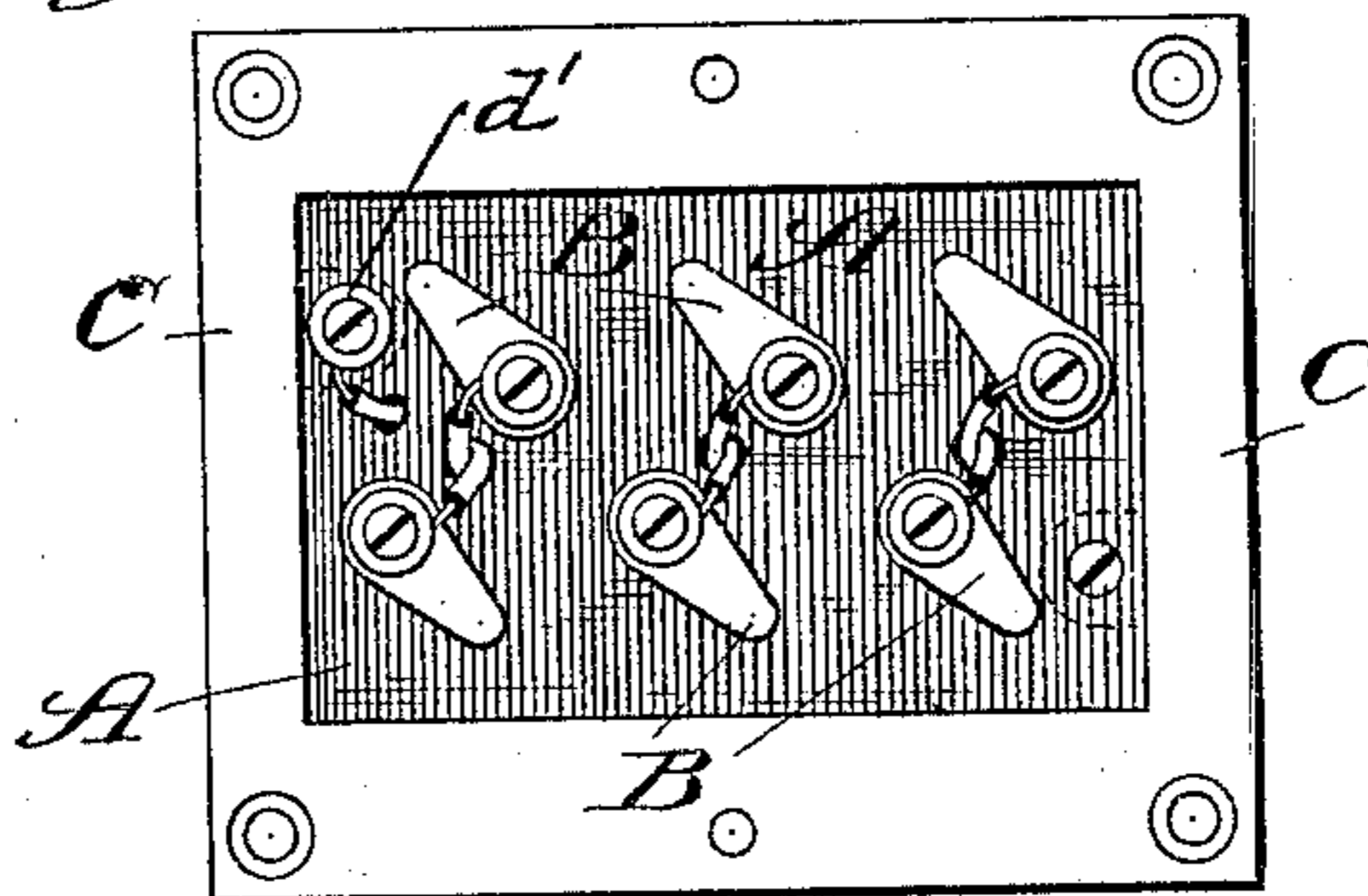


Fig. 4.



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UNITED STATES PATENT OFFICE.

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ELECTRIC COMPOUND PUSH.

SPECIFICATION forming part of Letters Patent No. 421,340, dated February 11, 1890.

Application filed December 16, 1889. Serial No. 333,892. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. WOLLENSAK, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Electric Compound Pushes, of which the following is a specification.

In the drawings, Figure 1 is a plan view of my improved electric compound push with the buttons in place. Fig. 2 is a plan view of the face-plate of the same. Fig. 3 is a plan view of the face-plate, viewed from the bottom or inner side. Fig. 4 is a plan view of my electric compound push with the face-plate removed. Fig. 5 is a vertical section taken through the line 5 of Fig. 1, looking in the direction of the arrow; and Fig. 6 is a perspective view of one of the push-buttons enlarged.

Electric pushes are usually made so as to be sunk into the wood to which they are attached, so as to be flush with the surface of the same, or so as to protrude from the surface to which they are attached. The one or the other of these two styles is employed, according to the situation in which the push is intended to be used. This renders it necessary in practice for manufacturers and dealers to make and keep on hand and in stock both styles of pushes. This requires practically a double amount of capital to be constantly invested in the stock on hand. It also makes it necessary when pushes are to be applied to a house, or in any other situation, to ascertain whether the pushes required will be of the sunk or of the raised style. This necessitates the sending of a workman to examine the particular place in which the pushes are to be used, or to go to the trouble of taking with him both styles of pushes, so as to be prepared to use the particular kind required.

In compound pushes where a number of buttons are employed leading to different terminals it is necessary to have the buttons numbered or provided with names indicating the particular point to which the wires connected with them run, and means should be employed to insure the retention of the numbers or names in their right position and prevent them from becoming turned around, so that they can be read or understood at a glance. It is also important in compound pushes, where a number of wires leading to

the different terminals are brought into proximity, to prevent the wires from becoming crossed or into contact with each other in their exposed portions, which would lead to confusion and error in the operation of the push. The danger of thus becoming crossed or mixed has largely grown out of the fact that the wires are usually drawn through a hole in the wall, and after having the insulation removed from their ends, and after being connected to their respective binding-screws they are pushed back again into the wall in a bunch or mass to enable the push to be attached in place.

My invention has for its principal object to obviate all these difficulties and to make a compound push which can be used either as a raised or as a sunk push, to provide means to prevent the buttons from turning around, to secure an easy and safe connection of the wires to their respective binding-screws, and to simplify and increase the utility of the springs against which the buttons press and by which connection is effected.

In making my improved electric compound push I make a plate A of insulating material, provided with binding-screws and contact-pieces B on its outer surface. This plate is provided with holes, through which the wires to be connected to the binding-screws are drawn. These wires are intended to be drawn tightly through the wall and through the holes of the plate, and the plate screwed or otherwise attached to the wall. To enable the plate to be the more readily attached to the wall, either in a sunk or in a raised condition, I preferably provide it with a case C, as shown in Fig. 5, which, as suggested, enables it to be either sunk into the wood or raised above its surface when attached, and also affords means for attaching the face in proper position, as hereinafter described. After the wires are drawn through the plate, they are bared of their insulating material and connected to the binding-screws and contact-pieces close to the plate, so that there will be no surplus wire to be bunched and pushed back into the hole in the wall. By thus providing for the attachment of the wires on the outside, which enables them to be drawn tightly through, I am able not only more easily and readily to effect the connection of the wires to their binding-screws, but

to dispense with the surplus wire, which must always be present where the attachment is made at the back of the plate, as in the ordinary method. This surplus wire results from the fact that it is necessary to draw several inches of wire through the wall to make such connection to the back of the plate, which must then be pushed back into the wall to enable the plate to be attached.

I next make a face D, provided with holes for the buttons and adapted to be secured in proper position upon the case C. This face is provided with ears or lugs *d*, which stand out somewhat from its surface, and which afford means of attaching a rod E to the inner side of the face. This rod is intended to extend along the inner side of the face a sufficient distance to afford means for supporting as many springs F as the number of buttons intended to be used may require. These springs are made of wire containing sufficient resilience, and are attached to the rod by coiling them around the same or in any other convenient manner, and extending them out on either side to bring the ends of each spring over two of the button-holes. Each spring is therefore made to accommodate two buttons instead of one, as heretofore has been the case. The buttons are provided at their inner ends with a slot or channel G, as shown in the drawings, and the springs are intended to rest in these slots or channels, so as to be held in their proper positions without the use of screws or other means, and so that they will hold the buttons in their proper positions and prevent them from turning round. The ends of the springs are bent in to form contact-points *f*, which are moved down as the buttons are pressed against the contact-pieces B, so as to complete the circuit, the parts *d* and *d'* being connected for that purpose.

When the push is used as a raised push, so as to protrude beyond the surface of the wall to which it is attached, I prefer to surround the parts with a frame H of a size and shape to permit the face to rest within and upon the same. To more easily permit this and to hold the frame and the face more securely together, I prefer to provide the frame with flanges or lugs *h* and to turn the edge of the face down so as to fit upon the same and within the upper rim or edge of the frame, as particularly shown in Fig. 5.

When thus made, the frame will be securely held in place without any separate or additional fastening.

The advantages resulting from my improved compound push are that the wire-connections are made from the front instead of the rear of the plate, the surplus wire resulting from attaching at the rear of the plate is dispensed with, the danger of one wire connecting with another is removed, the same style of push can be used in situations where either a sunk or raised push is needed, the buttons are prevented from turning, the

springs are readily and easily attached to the face, and each spring is made to serve two buttons instead of one.

What I regard as new, and desire to secure by Letters Patent, is—

1. In electric pushes, the combination of a plate of insulating material, binding-screws for holding the ends of the circuit-wires arranged on the front of the plate, and a face having buttons and springs holding the buttons in place and adapted to be pressed into position by the buttons to complete the circuit, and a frame surrounding the plate and holding the face the proper distance from the plate, substantially as described.

2. In electric pushes, the combination of a plate of insulating material, binding-screws for fastening the ends of the circuit-wires arranged on the front of the plate, a face having buttons slotted at their inner ends, and springs resting in the slots of the buttons and preventing them from turning and adapted to be pressed into position by the buttons to complete the circuit, substantially as described.

3. In electric pushes, the combination of a plate of insulating material, binding-screws for fastening the ends of the circuit-wires arranged on the front of the plate, a face having buttons, a rod supported on the inner side of the face, and springs attached to the rod and extending over the button-holes and adapted to be pressed into position by the buttons to complete the circuit, substantially as described.

4. In electric pushes, the combination of a plate of insulating material, binding-screws for holding the ends of the circuit-wires arranged on the front of the plate, a face having buttons slotted at their inner ends, a rod supported on the inner side of the face, and springs attached to the rod and extending over the button-holes and resting in the slots of the buttons and preventing them from turning and adapted to be pressed into position by the buttons to complete the circuit, substantially as described.

5. In electric pushes, the combination of a plate of insulating material, binding-screws for holding the ends of the circuit-wires arranged on the front of the plate, a case for supporting the plate and attaching it to the place of use, a face having buttons slotted at their inner ends, a rod supported on the inner side of the face, springs attached to the rod and extending over the button-holes and resting in the slots of the buttons and preventing them from turning and adapted to be pressed into position by the buttons to complete the circuit, and a frame surrounding the plate and holding the face the proper distance from the plate, substantially as described.

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Witnesses:

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