

(No Model.)

C. A. BRAUN.
ELECTRICAL BELL PULL.

No. 405,525.

Patented June 18, 1889.

Fig. 1.

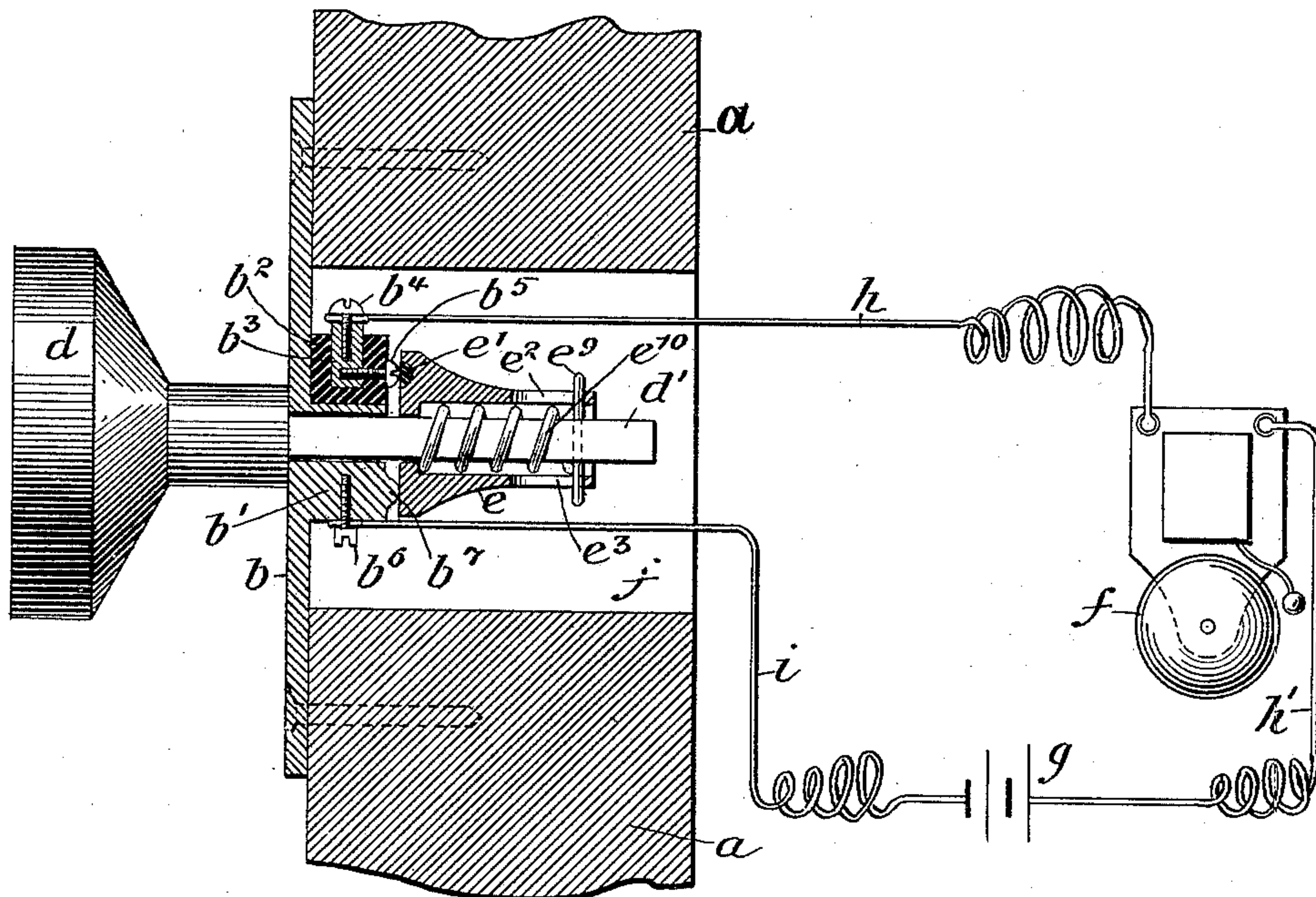


Fig. 3.

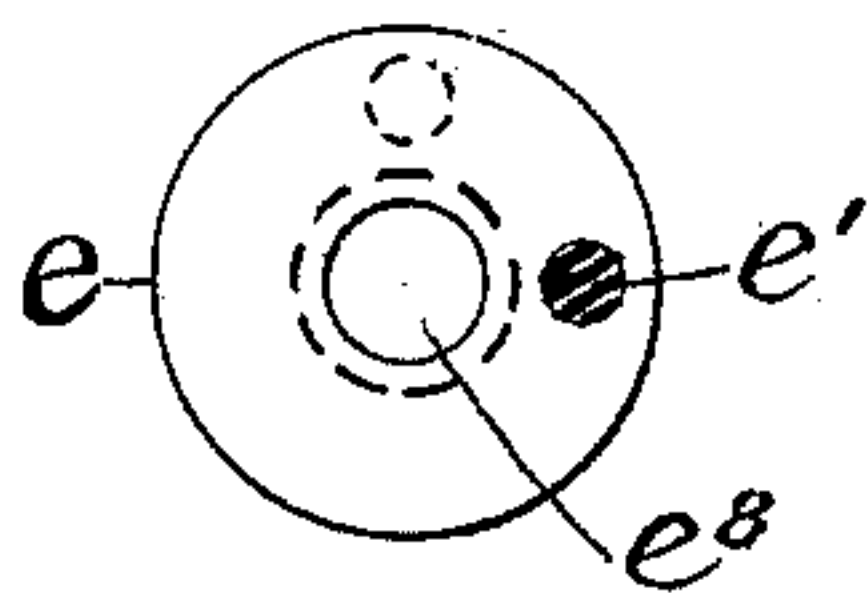


Fig. 2.

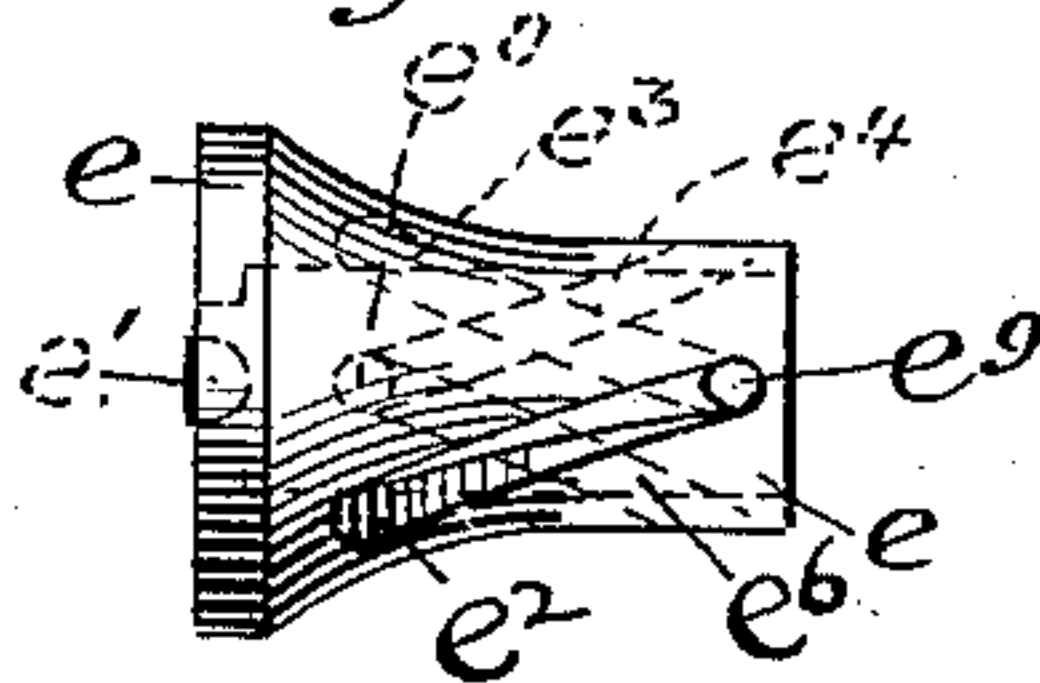


Fig. 4.

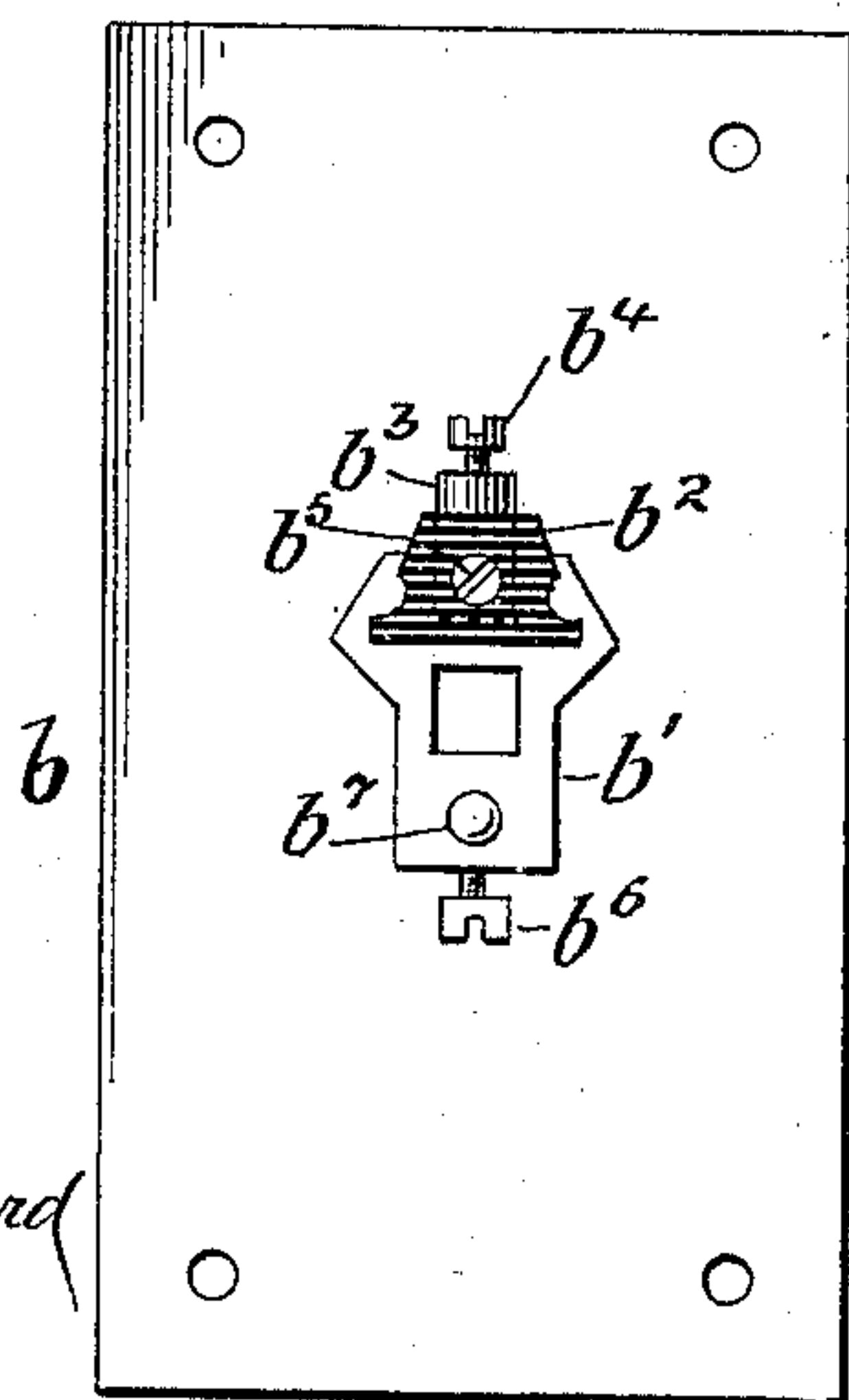


Fig. 5.

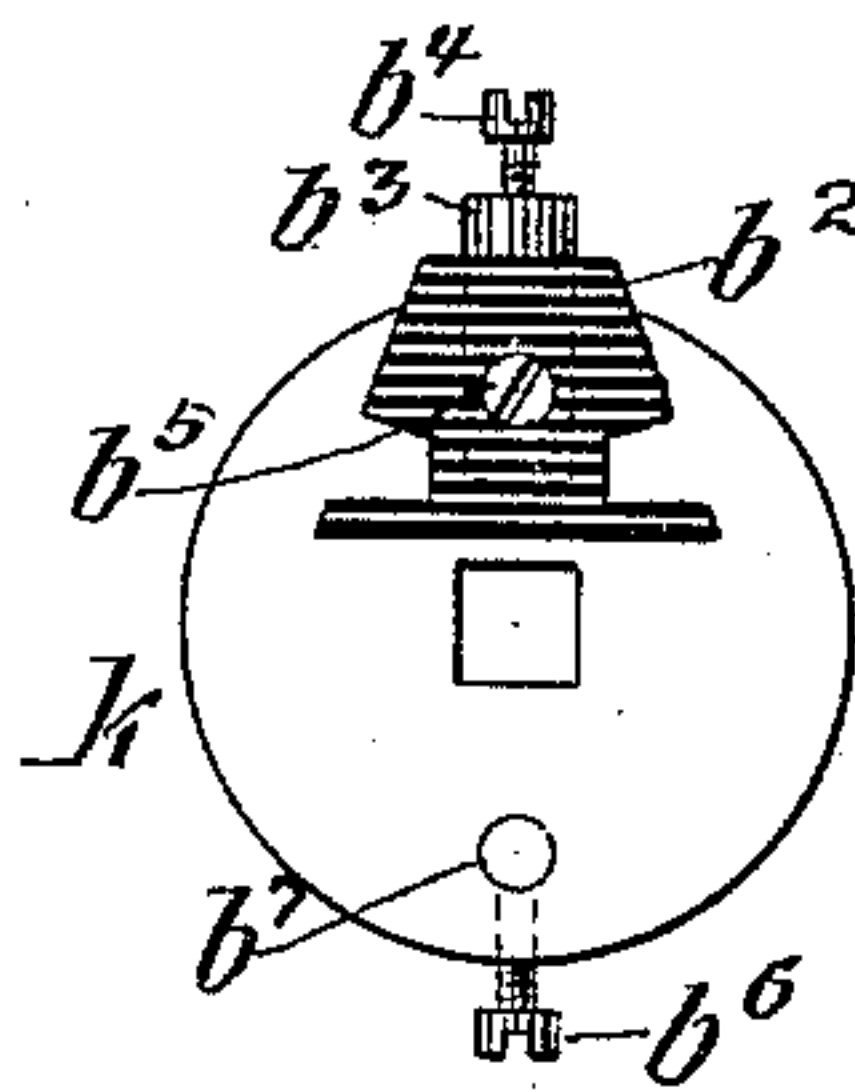
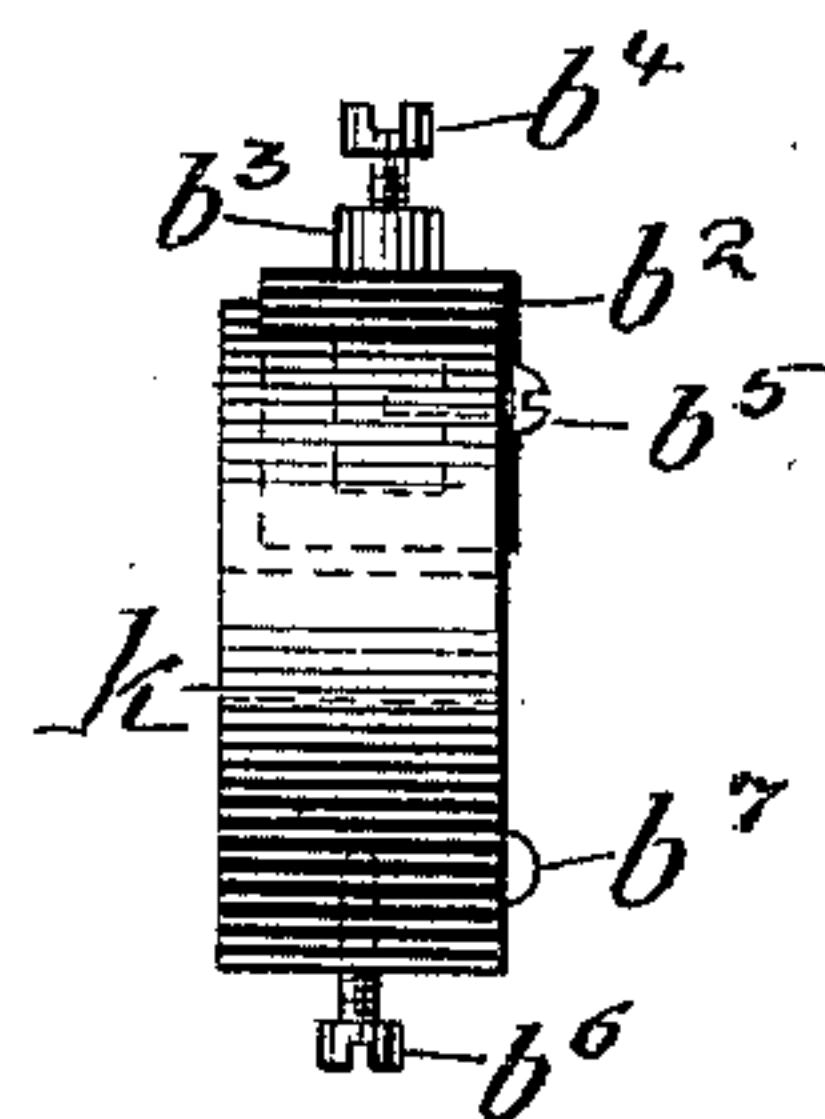


Fig. 6.



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ELECTRICAL BELL-PULL.

SPECIFICATION forming part of Letters Patent No. 405,525, dated June 18, 1889.

Application filed March 11, 1889. Serial No. 302,880. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. BRAUN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Electrical Bell - Pulls, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming part hereof, and in which—

Figure 1 shows a fragment of a door-post or casing in section with my improved bell-pull and its connections, in which the door-plate b and the projection which holds the insulating and attaching apparatus, and the wires, bell, and battery are shown attached, ready to operate. Fig. 2 shows the spring-chamber e in side elevation and turned quarter way around from the position shown in Fig. 1, so as to bring the slot e^2 in front and the slot e^3 opposite to it, the latter being shown in broken lines e^4 , and the position of said slots, after the spring-chamber e has been turned by operating the bell, is shown by the broken lines indicating the new position of said slots in e^3 and e^6 . The insulating-plug e' is also indicated. Fig. 3 shows the bottom view of Fig. 2 and the insulating-plug e' in it. Fig. 4 shows the plate which holds the bell-pull, as seen from its inner side, provided with the insulating and attaching mechanism for the electrical apparatus attached to said plate. Fig. 5 shows a removable or attachable device, as seen from the inner side, which may be attached to the shank of the bell-pull and provided with insulating and attaching apparatus, as shown in Fig. 4; and Fig. 6 shows the same as seen on its edge.

Like letters refer to like parts throughout.

The object of my invention is to provide an electrically-operated door-bell which shall be operated by an ordinarily-operating bell-pull; and to attain said ends I construct my improved apparatus in substantially the following manner, namely:

To the outer side of the door post or casing a , I attach the plate b , provided with internal projection b' , through which the square shank d' of the pull d operates in a square hole. Into one side of the said projection b' —in this

case the upper edge—is inserted an insulating-plug b^2 , as shown in Fig. 4, in which the insulating-plug is cut away, so as to expose the cylinder b^3 , with its binding-screw b^4 and screw b^5 , to full view. Upon said shank d' , in the chamber j , is placed the spring-chamber e , provided with a round hole e^8 through its base, and spiral slots e^2 e^3 , which start near the top of the spring-chamber on diametrically-opposite sides thereof and extend to near its base in opposite spiral directions, as plainly indicated in Fig. 2. Through the upper end of said slots and a hole through the shank d' is passed a pin e^9 , which projects beyond the outer sides of said slots and plays in them, and thus, through the spiral position of said slots, turns said spring-chamber back and forth on its axis when the pull d is operated. Within the cavity of said spring-chamber is placed a spiral spring e^{10} , of which the upper end presses against the said pin e^9 , and of which the lower end rests on the narrow annular base of said chamber, formed by said hole e^8 cut through the bottom of said spring-chamber. Into the outer side of the base of said spring-chamber is inserted an insulating-plug e' , so placed as to rest upon the head of the screw b^5 when the spring e^{10} is extended to its full length, as shown in Fig. 1, and about diametrically opposite to said screw b^5 is a small projection b^7 , upon which and the said screw rests the spring-chamber e , and which, with the screw b^5 , tends to hold the axis of the spring-chamber e parallel to the axis of the shaft or shank of the bar d' .

The screw b^5 passes through the insulating material b^2 into the metal cylinder or binding-post b^3 , to the upper end of which the wire h is attached by means of the screw b^4 . The other end of said wire h connects with one of the binding-posts of an electrical bell f , and from the other binding-post of said bell and wire h' connection is made with one side of a battery g , and from the other side of said battery, by means of a wire i , the electric circuit is completed through the lower side of the projection b' , to which said wire i is fastened by means of a screw b^6 .

When the spring-chamber e stands in position, as indicated in Fig. 1, with its insulating-plug e' resting on the screw b^5 , the circuit

is broken; but when the pull d is drawn outward, so as to bring the position of the pin e^9 to the position e^0 , or toward it far enough to throw the insulating-plug e' off the screw b^5 and into or toward the said position e^0 , so as to bring b^5 into metallic contact with the base of the spring-chamber e , the circuit is completed and the bell f caused to ring, and it will continue to ring as long as the said parts are held so as to prevent the spring e^{10} from acting; but when the spring e^{10} is extended, its motion, through the said connecting parts, again causes the insulating-plug e' to assume the position shown in said figure, and the circuit is broken.

My improved electrical bell attachment may be used in connection with any shank d' by slipping on such shank a separate block k , as shown in Figs. 5 and 6, provided with the same several insulating and connecting parts, as shown and described in Fig. 4, and operated with the other parts already described.

What I claim is—

1. In combination with an electric circuit, electric bell, bell-pull, and insulated contact-point to one end of said circuit, a transversely-

reciprocating spring-chamber provided with an insulating-plug operating with said insulated contact-point, whereby, by operating said bell-pull, the electric circuit may be opened and closed, substantially as specified.

2. In combination with a reciprocating spring-chamber provided with an insulating-plug, spiral slots, and a spring, a bell-pull provided with a pin operating in said slots, an insulated contact-point at one end of an electric circuit operating with said insulating-plug, and an electric bell adapted to operate substantially as specified.

3. In combination with a spring-chamber provided with an insulating-plug, spiral slots, and a spring, all upon the shaft of a bell-pull, a bell-pull shaft provided with a pin adapted to play in said spiral slots, an insulated contact-point at one end of an electric circuit, said circuit provided with an electric bell, and said insulating-plug adapted to operate with said insulated contact-point, substantially as specified.

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