

(No Model.)

M. HOOPES.
ELECTRIC SWITCH.

No. 462,353.

Patented Nov. 3, 1891.

Fig. 1.

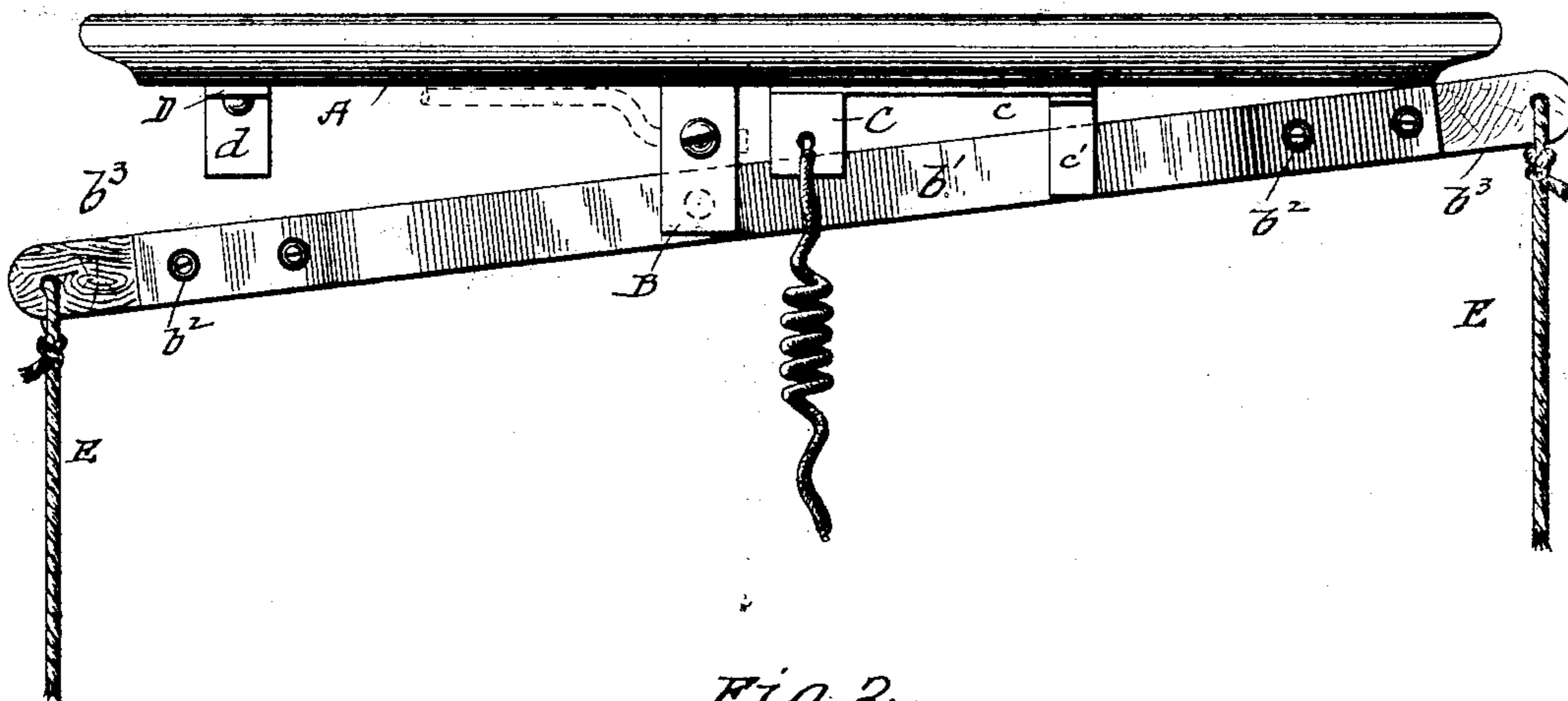


Fig. 2.

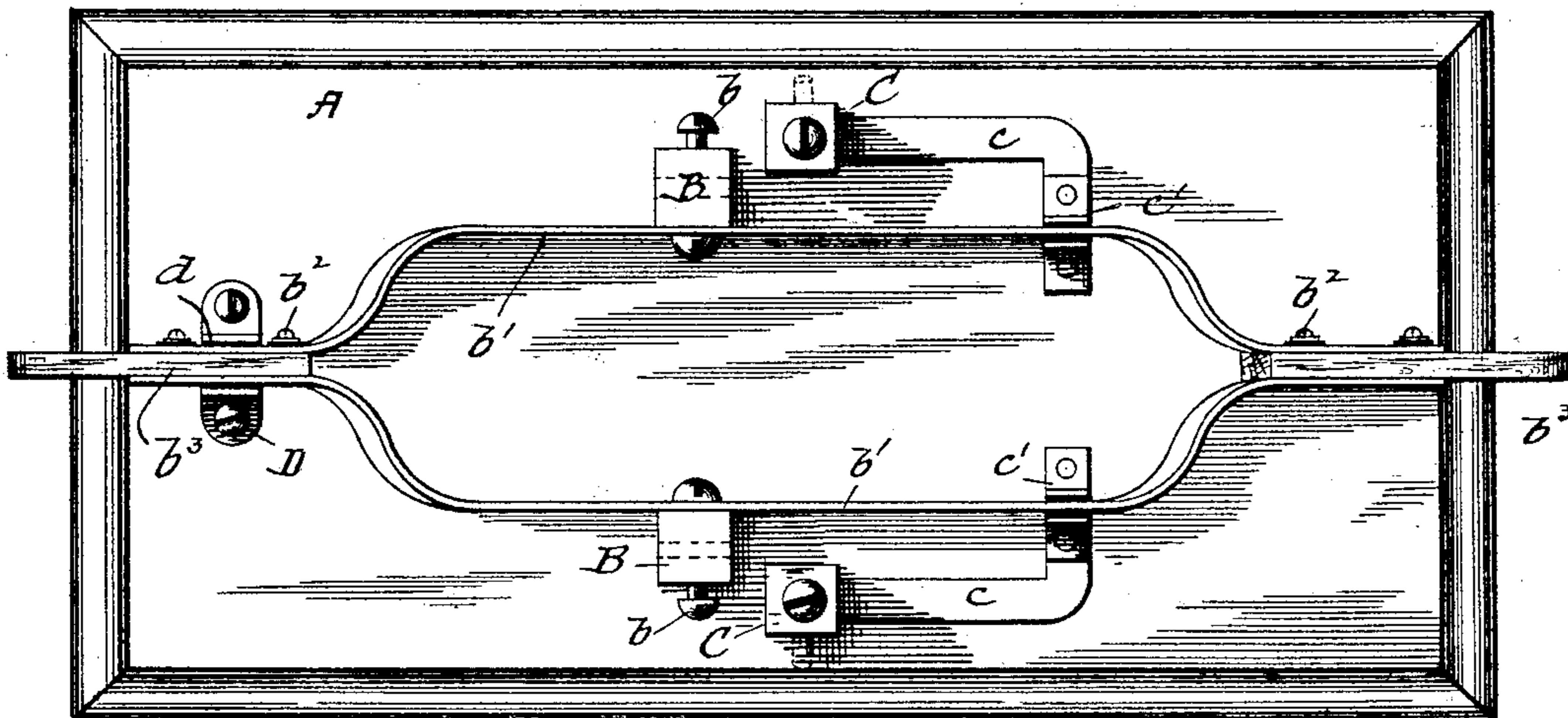


Fig. 4.

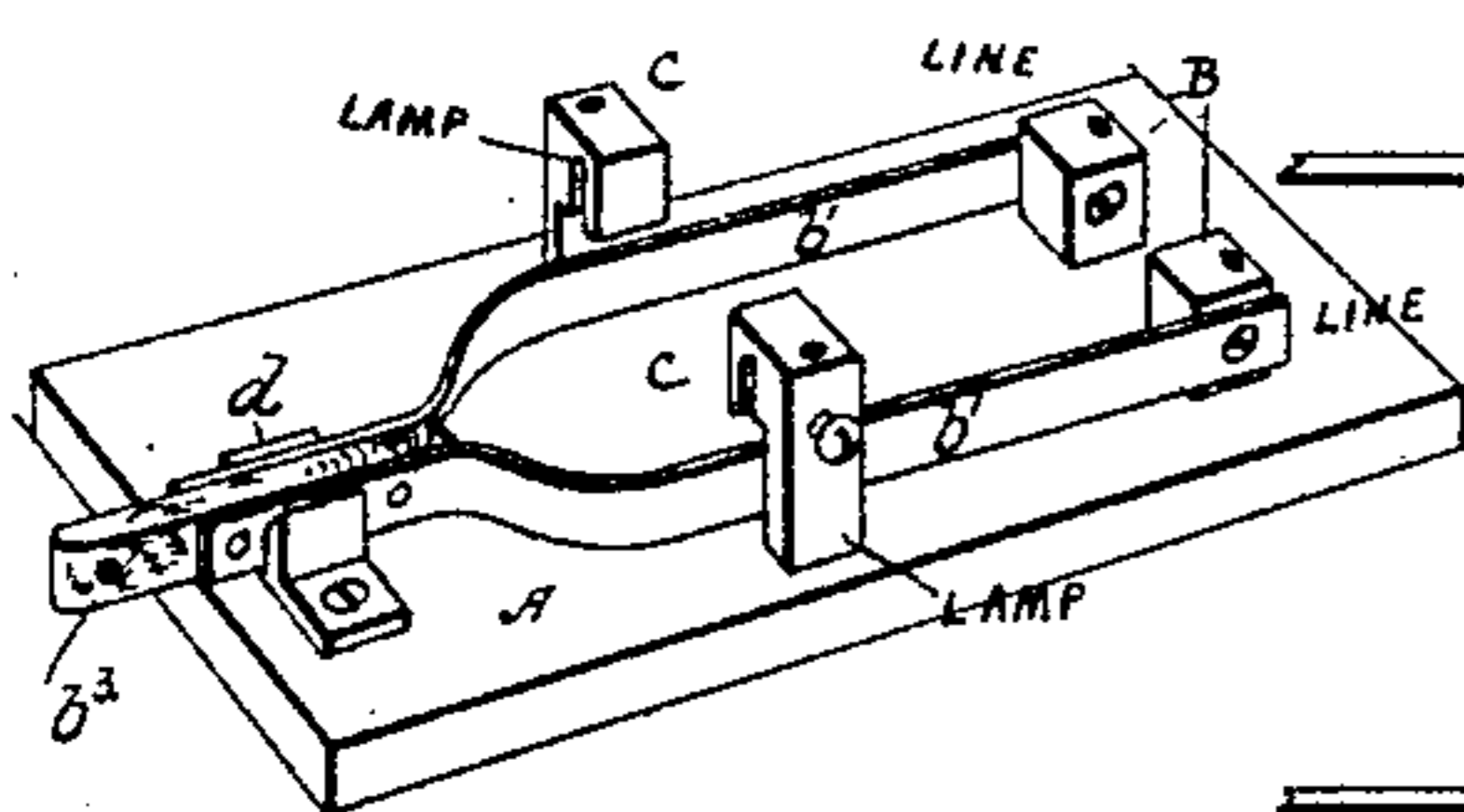
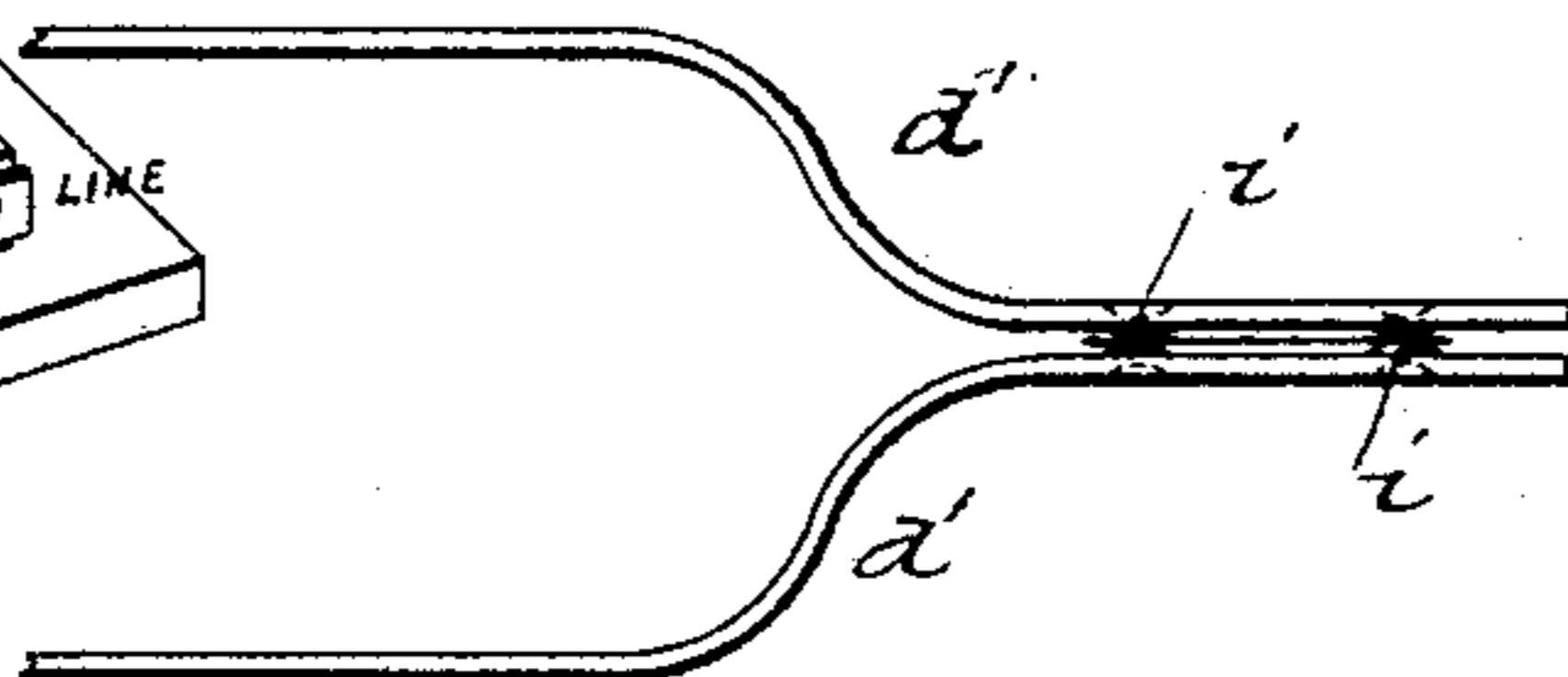


Fig. 3.



WITNESSES:

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ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 462,353, dated November 3, 1891.

Application filed August 4, 1891. Serial No. 401,637. (No model.)

To all whom it may concern:

Be it known that I, MAURICE HOOPES, a citizen of the United States, residing in West Chester, in the county of Chester and State of Pennsylvania, have invented certain new and useful Improvements in Electric Switches, of which the following is a specification.

The invention has reference to electric switches.

The object of the invention is the production of a cheap and efficient switch, and one whose base or support may be used as the hanger-board of an arc lamp or other translating device.

The invention consists of the details of construction, which will hereinafter be described and claimed with reference to the accompanying drawings, in which—

Figure 1 represents a side elevation of the switch; Fig. 2, a plan of the same; Fig. 3, a detail; and Fig. 4 is a view of a modification.

A represents the base upon which the parts of the switch are supported. If the switch is to be used as an ordinary wall-switch, this board will be secured to the wall; but if the switch is to be used for an arc lamp it is preferred to utilize the base A as the hanger-board of the lamp and secure the same to the ceiling.

B B are two metallic posts provided with binding-screws b for the line-wires and having pivoted to them, respectively, two flat strips or levers b' b' . These levers are extended some distance on each side of the posts parallel to each other, and their ends are bent inward toward each other and secured together by screws b^2 , but with a block of insulating material b^3 inserted between the ends. The screws are surrounded by insulating-bushings, which prevent electrical connection between the two levers. The blocks b^3 of insulating material, while serving as connecting and insulating devices, also form handles for operating the switch.

C C are two binding-posts located in about the middle of the board and upon either side. To these are connected the wires leading to the lamp or other translating device which the switch controls. In the case of an arc lamp suspended from the ceiling these wires would convey current to and support the lamp. To each of the posts C metallic plates

c are connected and extended to points below the respective levers b' b' . At the outer ends of the plates they are provided with blades c' , which stand in the same plane, respectively, as the levers b' , so that when said levers are tilted on their pivots they will pass between and into contact with the said blades. At the opposite end of the board and centrally located is a metallic bracket D, having two blades d attached to it, the space between being in the plane of the joined ends of the levers, and they are constructed to receive and make contact with the said ends, respectively, when the levers are tilted toward that end of the board. When the levers are in engagement with these blades d , they are in electrical connection with each other through a bracket D.

When the switch is used upon the ceiling pendent ropes E E are attached to each of the insulating-blocks b^3 , by means of which the switch may be tilted in either direction. If the switch is used against the wall, these blocks may be used as handles.

In operation the circuits are as follows: from binding-post B to one of the levers b' , to the corresponding plate c , post C, through the lamp, to the other post C, blade c , the other lever b' , and post B. When the lamp is cut out, the levers are in the position shown in dotted lines in Fig. 1, and the circuit is absolutely broken through the lamp and short-circuited from one lever b' to the other through the bracket D.

In some instances I combine with a switch of this form an automatic cut-out for the translating devices, which is illustrated in Fig. 3. The adjacent ends of the levers d' are provided with small lugs or teats i and a piece of paper inserted between them, which is held in place by the pressure of the ends toward each other. When the potential increases abnormally, the paper is ruptured and the levers are allowed to come into contact with each other. This is the ordinary "paper cut-out," but so far as known to me the same has never been combined with a switch of this kind. A good feature of this switch is the manner of joining and insulating the two levers and of using them when so joined as a single lever.

It is obvious that the contacts which lead to

the lamp may be on the same side of the pivots as the short-circuiting blades *d*, in which case the levers would be only single-ended and the lamp-contacts would be offset from the board, 5 as shown in Fig. 4. When the lever is out, the lamp is in circuit, and when it is in the short circuit is established.

Having thus described my invention, I claim—

10 1. In an electric switch, a pair of parallel levers separated from each other along their middle portions, with their ends bent inward toward each other and secured to the opposite sides of blocks of insulating material, in com- 15 bination with two contacts arranged to make connection, respectively, with the levers on one side of the axis, and a single contact arranged to make connection with the levers on the opposite side of the axis, substantially as 20 described.

2. In an electric switch, a pair of pivoted levers joined together, but insulated from each other at one end and separated at the other end by a sheet of insulating material, 25 such as paper, against which the ends of the levers press, the levers being provided with lugs or teats, which bear opposite each other upon the paper, two contacts arranged to make connection with the levers on one side of the axis, and a single contact arranged to 30 make connection with the levers on the opposite side of the axis, for the purpose set forth.

In witness whereof I have hereunto affixed my seal and signed my name in the presence of two subscribing witnesses.

MAURICE HOOPES. [L. S.]

Witnesses:

E. S. HAINES,
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