(No Model.)

A. J. OEHRING.

HANGER BOARD FOR ARC LAMPS.

No. 555,112. Patented Feb. 25, 1896.

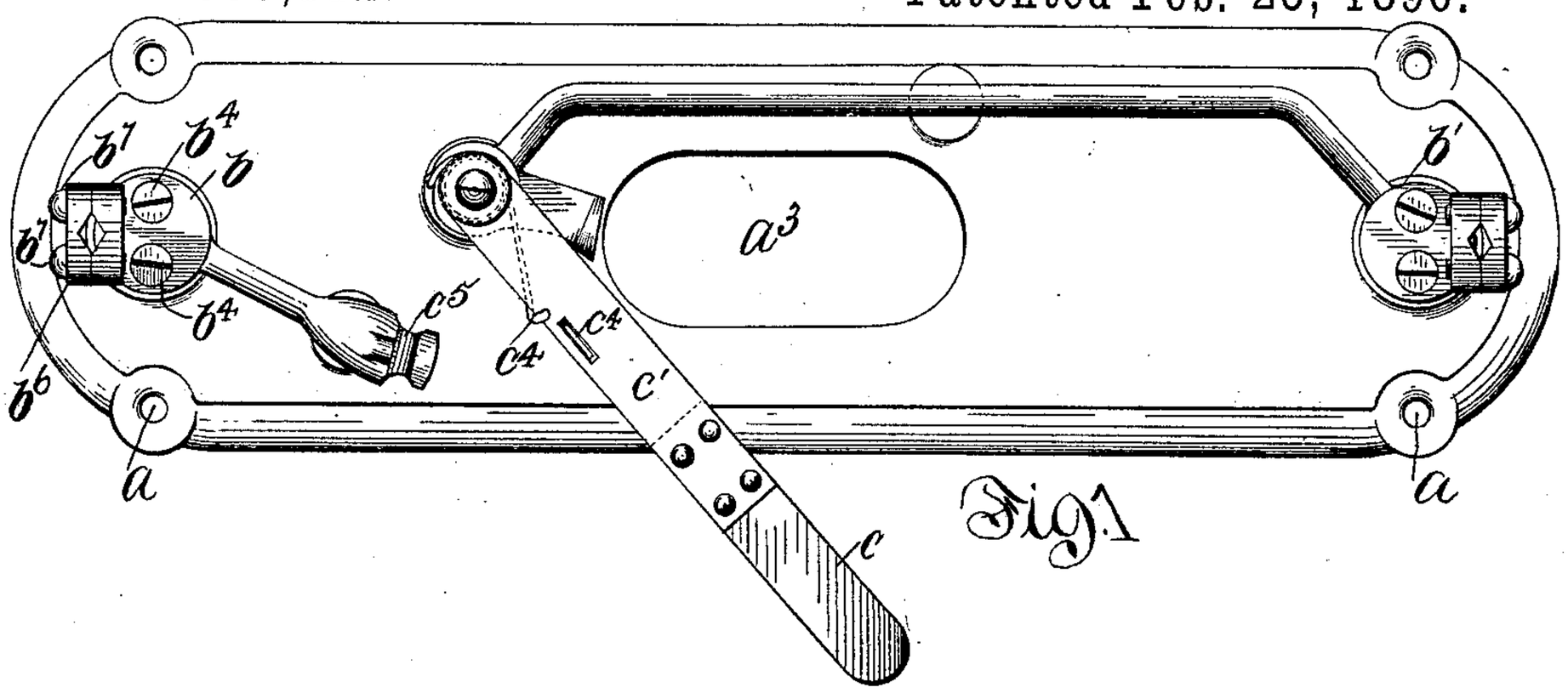


Fig. 1

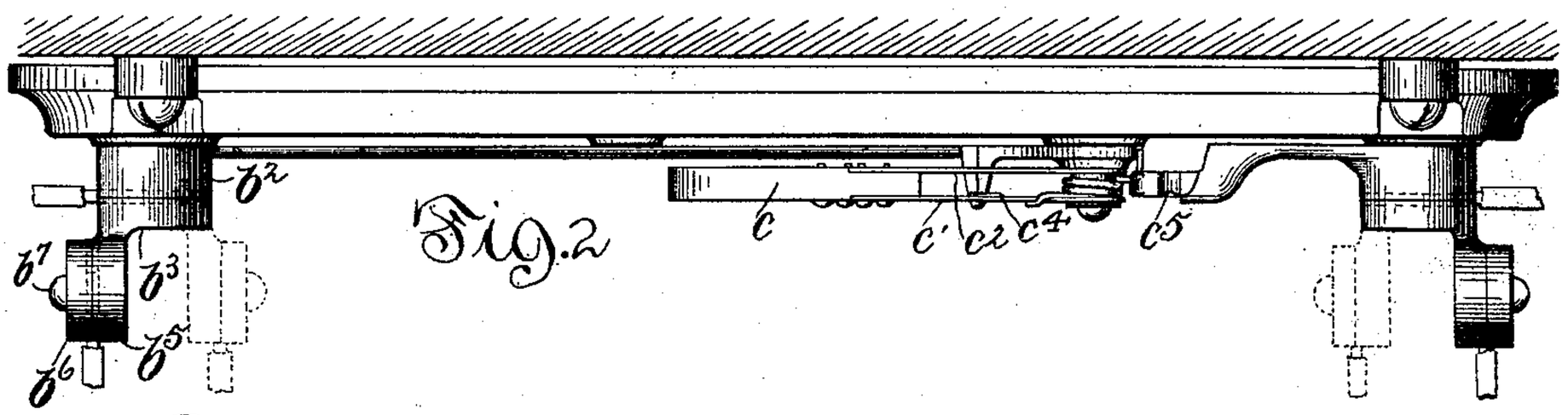


Fig. 2

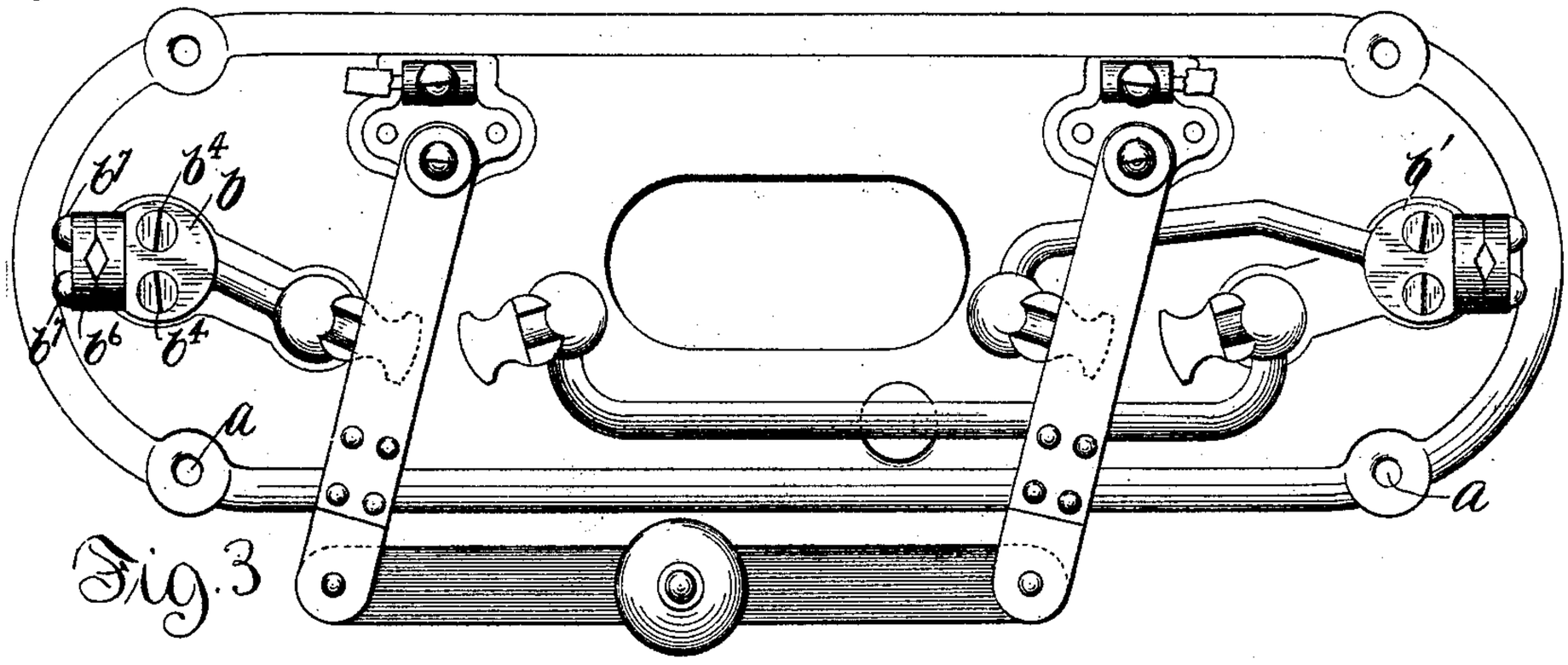


Fig. 3

Fig. 4

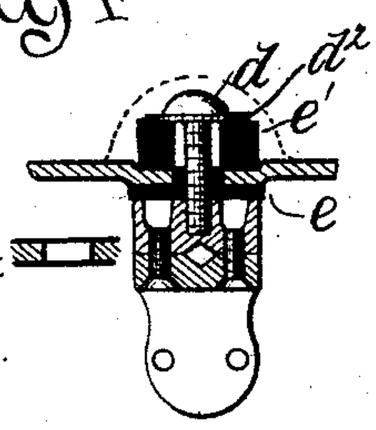
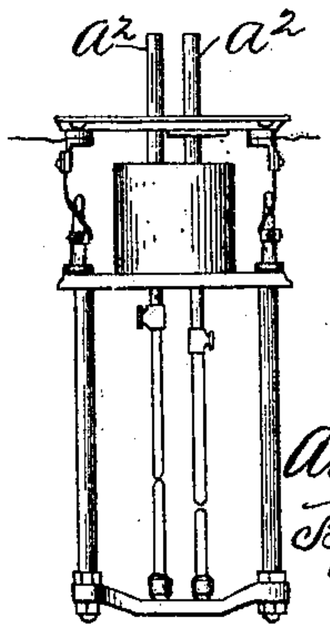


Fig. 5



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UNITED STATES PATENT OFFICE.

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

HANGER-BOARD FOR ARC LAMPS.

SPECIFICATION forming part of Letters Patent No. 555,112, dated February 25, 1896.

Application filed September 18, 1894. Serial No. 523,325. (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 Hanger-Boards for Arc Lamps, (Case No. 7,) 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 hanger-boards for arc lamps, and its object is the provision of an insulating non-inflammable hanger-board that shall not be readily broken when subjected to rough usage.

My object is, further, to provide an improved switch and improved binding-posts for the hanger-board.

Formerly the hanger-board was constructed of wood which, while it could be made insulating, was inflammable, and for this reason objectionable. In some municipalities ordinances have been passed prohibiting the use of hanger-boards of inflammable material, and it has been customary heretofore to construct such boards from marble or slate by cutting the same into the desired shape, or from porcelain, the porcelain being molded into proper form. Hanger-boards made of marble or slate are expensive and subject to be broken in handling or when subjected to strains resulting from the screwing of the same against an uneven surface. The latter, while cheaper of construction, is open to the same objection of being easily broken.

My invention, in its preferred form, comprises a hanger-board made of cast-iron or similar material, an insulating enamel being provided upon the surface of the iron which renders it, as a body, insulating. Being thus made of cast-iron the board is not easily broken in handling, nor is there a tendency to break when the same is screwed upon an uneven surface. The binding-posts and contact-terminals are mounted upon the insulated hanger-board thus produced in a manner which will be hereinafter described.

My invention consists, secondly, in a switch adapted to prevent arcing when for any reason the switch is but partially closed; thirdly, in binding-posts which may be readily adapted to single-carbon lamps or to double-carbon lamps having wider frames.

I will describe my invention in connection with the accompanying drawings, in which—

Figure 1 is a view of a hanger-board embodying my invention, a single switch being provided in the circuit. Fig. 2 is a side view of the board, showing the same secured to the ceiling, the alternative position of the binding-posts being indicated in dotted lines. Fig. 3 is a view of a hanger-board embodying my invention, a pair of switches being provided thereon. Fig. 4 is a partial sectional view of the hanger-board, showing the enamel provided upon the surface of the cast-iron plate and the manner of mounting the binding-posts thereon. Fig. 5 illustrates a lamp suspended from the hanger-board.

Like letters refer to like parts in the several figures.

The hanger-board is cast of the desired form and provided with holes a a by means of which it may be secured to the ceiling. In certain locations it is necessary that the chimneys a^2 a^2 of the lamp shall extend through the hanger-board, and for this purpose an opening a^3 may be provided in the board. Upon the board are provided the binding-posts b b', which preferably comprise a lower portion, b^2, provided with a channel into which the conductor may be laid, a removable cap b^3 being provided with a coacting channel adapted to be placed over the conductor, screws b^4 b^4 being provided for securing the cap to the lower portion, b^2. The cap carries upon one end a perpendicular arm b^5 provided with a groove or channel into which the conductor may be laid, a cap b^6 provided with a similar channel being adapted to fit over the conductor and to be secured in position by means of the screws b^7 b^7.

When the binding-posts are to be used in connection with a lamp with a wide frame the caps b^3 may be placed in position, as shown in Fig. 2 in full lines, while if it be desired to use the board with lamps having narrow frames the caps may be placed in the position indicated by dotted lines.

The switch, as shown in Fig. 1, comprises

a pivoted arm c comprising a pair of parallel plates c' c^2 adapted when the switch is closed to embrace the contact-terminal c^3, an inward projection c^4 being provided upon one of the plates, as c^2, adapted to engage a channel c^5 provided upon the contact-terminal to maintain the arm in a closed position. A spring c^7 is provided, having one end coiled about the pivot of the arm and maintained stationary, while the other end engages the edge of plate c' to maintain the contact-arm normally in an opened position. Should the arm be left in a position such that an arc might be formed between the terminal and the said arm, the spring reacting will serve to move the contact-arm out of contact with the terminal point and thus prevent the formation of an arc.

Referring to Fig. 4, it will be observed that the enamel is provided not only upon the surface of the plate but also upon the walls of the holes provided therein for the securing thereto of the binding-posts and the other circuit-pieces, so that the possibility of closing circuit between portions of the circuit and the cast-iron of the hanger-board is prevented. All portions of the surface of the hanger-board being thus practically insulated the several circuit-pieces may be secured directly to the surface of the board, but I preferably provide additional insulation.

As shown in Fig. 4 the lower portion of the binding-post is secured to the plate by means of a screw d passing through the hole provided in the plate, the end of the screw being adapted to engage a tapped hole provided in the lower portion of the binding-post. A bushing e of vulcabeston or other similar insulating material is interposed between the binding-post and the surface of the plate, a portion of the bushing extending through the hole in the plate and surrounding the shank of the screw d. Upon the opposite side of the board is provided a washer of vulcabeston e', upon which rests a metallic washer d^2, against which the head of the screw may rest. As shown in Fig. 2 the hanger-board when in position upon the ceiling rests with its upper surface at a slight distance from the ceiling, and in order to prevent the access to the circuit-pieces of water that may from any cause accumulate upon the top of the board the washer e' and the head of the screw d may be covered with paraffine, as indicated by the dotted lines.

The hanger-board as above constructed possesses all of the advantages as to insulating properties of boards made of marble, slate, or porcelain, and possesses none of their disadvantages as to cost of construction and fragility. After the cast-iron has been covered with the insulating enamel the board is to all intents and purposes completely insulating, and the current-carrying conductors mounted thereon may be brought into direct contact with the surface of the board without danger of ground or short circuit, and while I prefer to employ additional insulation between the enamel and the conductors to prevent the abrasion of the enamel such precaution is not essential, and I do not desire to limit myself to the employment of the additional insulation.

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

1. In a hanger-board, the combination with the contact-arm c comprising the parallel plates c' c^2, one of said plates being provided with an inward projection c^4, of a contact-terminal c^3 adapted when said arm is closed to rest between said plates to make contact therewith, said contact-terminal being provided with a channel c^5 adapted to be engaged by said projection c^4, and the spring c^7 for returning the contact-arm to its opened position, substantially as described.

2. In a hanger-board, the combination with a base-board of a pair of binding-posts mounted thereon, said binding-posts comprising each a lower portion and a cap adapted to be secured thereto, said cap being provided upon one end with a perpendicular arm to which the conductor extending to the lamp may be attached, said caps being capable of attachment to the lower portions, with the arms upon the inside or upon the outside; whereby narrow and wide frame lamps may be accommodated, substantially as described.

In witness whereof I hereunto subscribe my name this 13th day of June, A. D. 1894.

AUGUST J. OEHRING.

Witnesses:
W. CLYDE JONES,
GEORGE S. BUELL.