G. E. DUNTON.

METHOD OF TREATING MOLDS USED IN THE ART OF ELECTROTYPING.

APPLICATION FILED OCT. 31, 1910.

994,826.

Patented June 13, 1911.

2 SHEETS—SHEET 1.

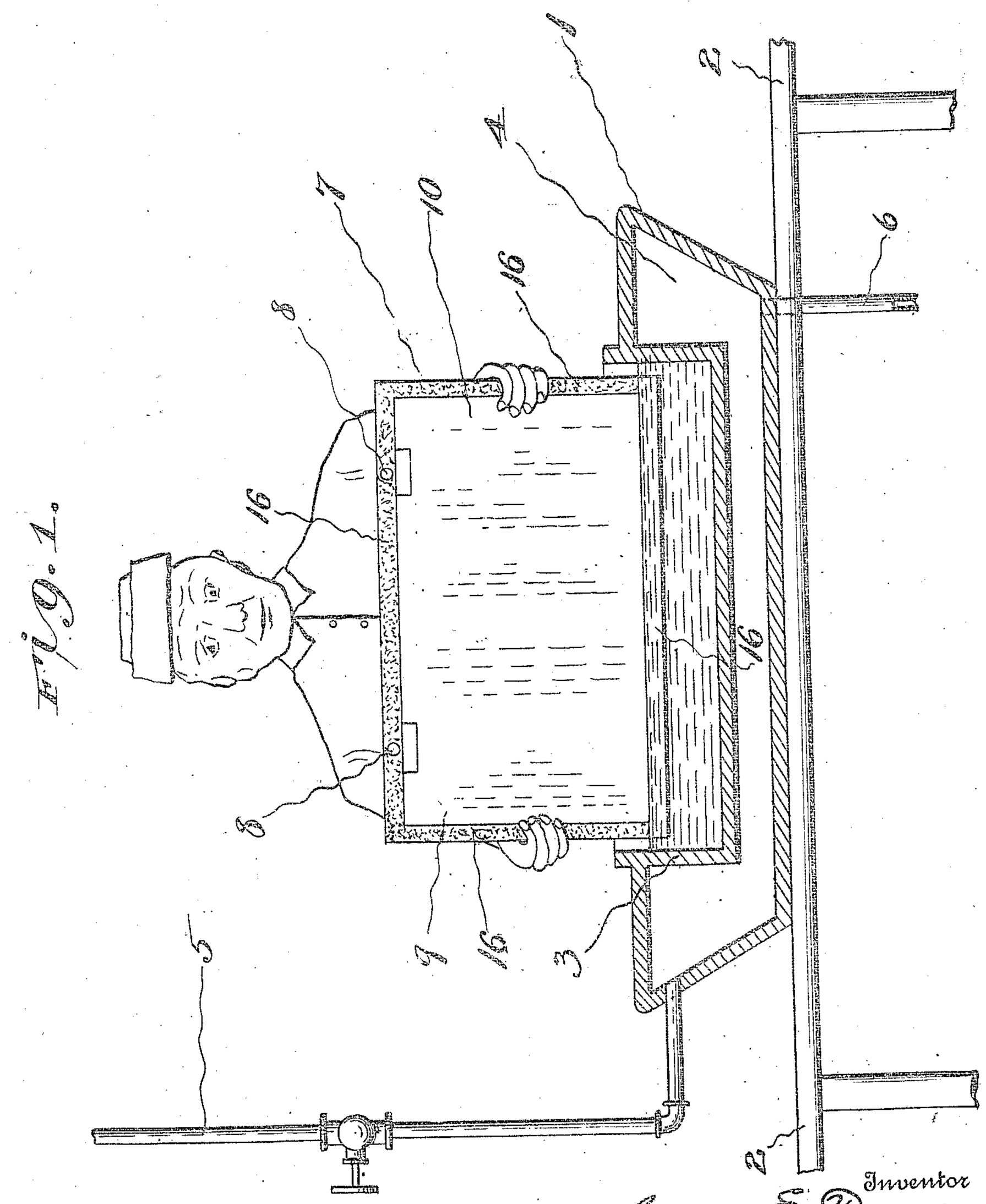

FIG. 1.

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Fig. 2.

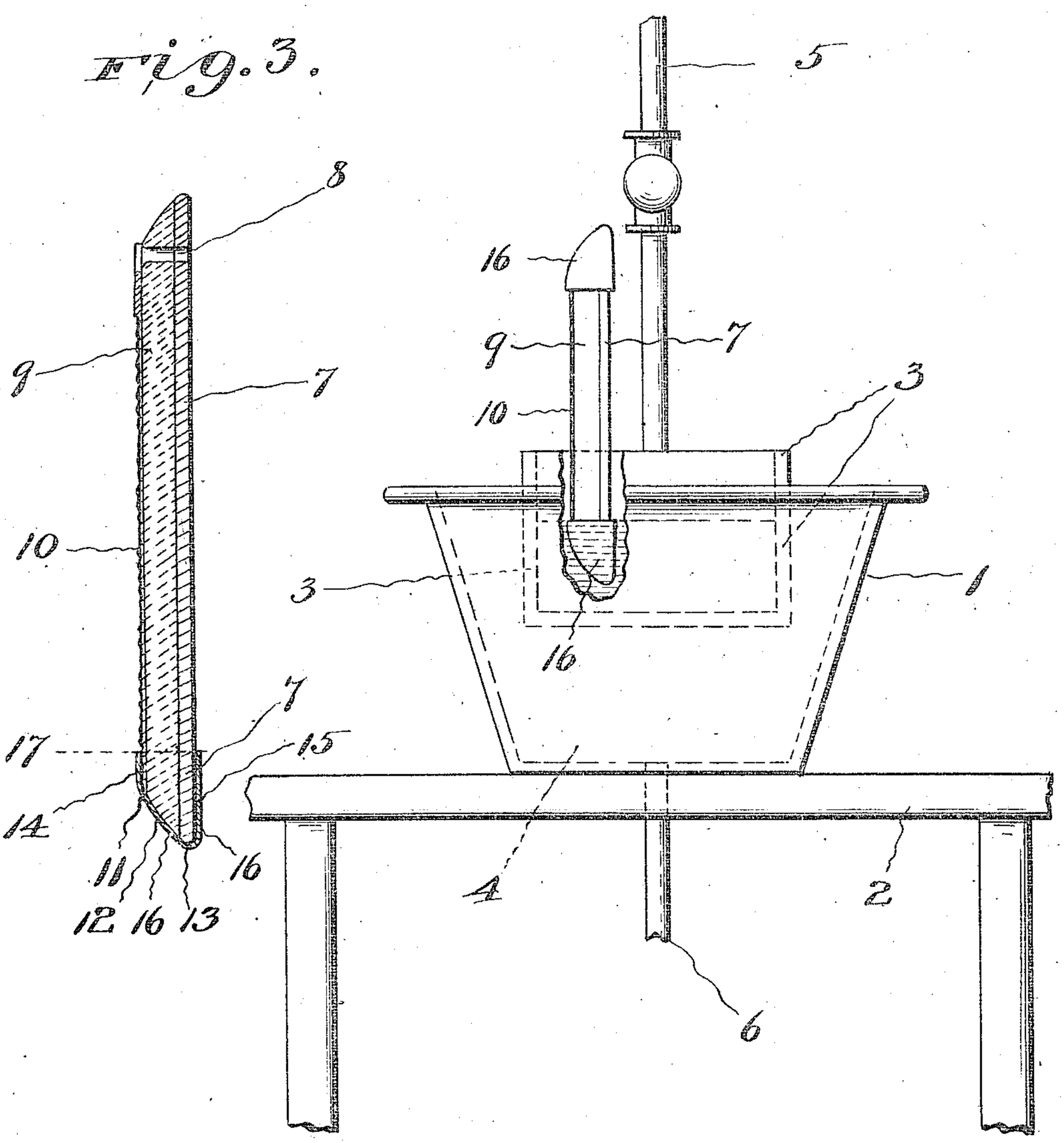

Fig. 3.

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METHOD OF TREATING MOLDS USED IN THE ART OF ELECTROTYPING.

994,826.

Specification of Letters Patent. **Patented June 13, 1911.**

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To all whom it may concern:

Be it known that I, GEORGE E. DUNTON, residing at New York city, county of New York, State of New York, a citizen of the United States, have invented certain new and useful Improvements in Methods of Treating Molds Used in the Art of Electrotyping; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to an improved method of treating molds used in the art of electrotyping.

In the art of electrotyping it is necessary to use a thin sheet of some metal as a back or base for the wax molds. These thin sheets of metal are commonly called molding pans or cases and are generally made from an alloy of lead, tin and antimony known as electrotype metal, although copper and even brass sheets are used, and are usually about one-eighth to three-sixteenths of an inch in thickness. These metal cases or pans are laid flat upon iron slabs or tables, hot wax is poured over them and allowed to cool, strips of iron having been placed around the edge to confine the wax. After the wax has been poured into these cases and pans, on one side, they are known as filled cases and are what the electrotyper uses to take the impression on or make his mold in. The wax surface is brushed over with black lead and the original form composed of types, illustrative cuts or whatever is desired to be electrotyped are pressed into the mold. To receive the desired deposit or to cause the deposit on this wax it is necessary to make the surface of the wax conductive, meaning that the surface of the wax must be made metallic, so that when the mold is placed in the electrotypic bath it shall perform its function as the cathode in the electrical circuit of which it becomes a part. It is desirable however that only the surface of the wax shall be connected to or form a part of the electric circuit. To this end especially devised insulating hooks are provided for hanging the pan carrying the wax mold in the electrotypic bath. These hooks make no electrical connection between the metallic pan or case and the electrical circuit but they connect the surfae of the wax mold with the said circuit.

Considerable care is exercised and elaborate pains are taken to prevent any electrical connection, between the surface of the wax mold and the metal of the pan or case as this connection would defeat the purpose of the insulating hook and carry the deposit of metal over onto the exposed back of the pan or case thus wasting the metal, electrical energy and deflecting the electrotype.

In blackleading the surface of the wax it is impossible to confine the coating of black lead to the surface of the wax alone, as it will no matter how careful you are, work over the edges of the wax onto the back of the pan, thus electrically connecting the surface of the wax with the metal of the pan or case.

The particular value of my method is its simplicity, great saving of time and the absolutely perfect result which it produces, it being impossible for any electrical connection to be made over the edge of the case from the wax mold to the metal pan or case.

The filled case is prepared in the same manner as heretofore described and set forth, the molding and blackleading is done precisely in the same manner, but after the blackleading I depart from any and all the methods heretofore known or used.

The mold having been previously blackleaded is immersed or dipped edgewise to the required depth in a bath of melted wax, contained in a suitable receptacle, which forms a coating thereon and quickly withdrawn one side following the other until the four sides of the mold have been treated. It will be found that the wax will cover the back to an equal distance with the face doubly insuring the prevention of the deposit extending around onto the back of the pan or case.

Referring to the drawings which illustrate one form of apparatus for carrying out my method:—Figure 1 is a sectional view of a wax melting receptacle or container showing the edge of a mold being dipped in the melted wax therein; Fig. 2 is an end view of the wax melting receptacle, partly broken away, showing one edge of a mold being dipped in the wax therein and the opposite edge after having been dipped. Fig. 3 is a central sectional view of the pan or case and mold.

In the drawings, 1 represents the wax melting receptacle, mounted on a suitable slab or table 2, having a melting pan 3, and a steam chamber 4 with steam inlet and out-

let pipes 5 and 6, respectively. 7 is the pan or case provided with holes 8 at the top for the reception of suitable hooks designed for use in suspending the wax mold in the electrotypic bath. The pan or case is provided with a wax mold 9 having its surface covered with blacklead 10 and the edges 11 of the blacklead, the edges 12 of the mold, the edges 13 of the pan or case, the outer marginal portions 14 of the blacklead, on the face of the mold, and the outer marginal portions 15 of the back of the pan or case are covered with a continuous coating of melted wax 16 as far as the dotted line 17.

What I claim is:—

1. The method of treating a wax mold to insulate it from its molding pan, consisting in forming a continuous coating on the edges of the wax mold and molding pan and the outer marginal portions of the mold and molding pan, substantially as described.

2. The method of treating a wax mold composed of a wax body with a graphite covering on its face and a metal plate on its back, consisting in forming a coating of wax on the edges of the blacklead, wax body and metal plate and on the outer marginal portions of the blacklead and metal plate, substantially as described.

In testimony whereof, I affix my signature in the presence of two witnesses.

GEORGE E. DUNTON.

Witnesses:
H. BECKER,
F. S. DUFF.