No. 728,568. PATENTED MAY 19, 1903.

J. M. GULENTZ.

METHOD OF APPLYING TERMINAL WIRES TO ELECTRIC LAMP GLOWERS.

APPLICATION FILED JULY 16, 1902.

NO MODEL.

Fig. 1.

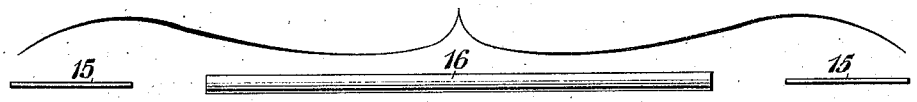


Fig. 2.

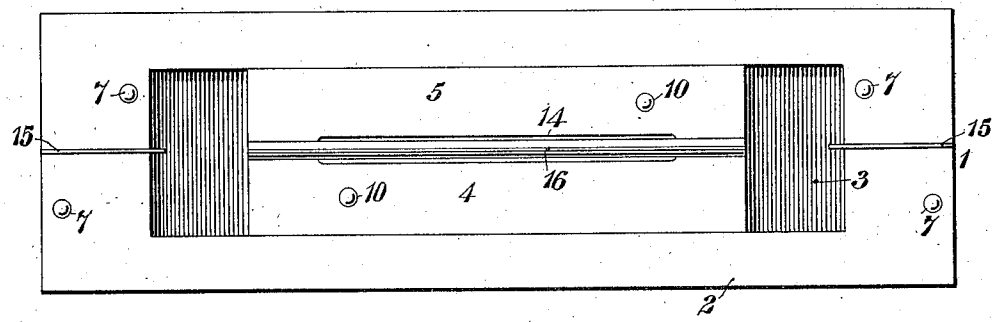


Fig. 3.

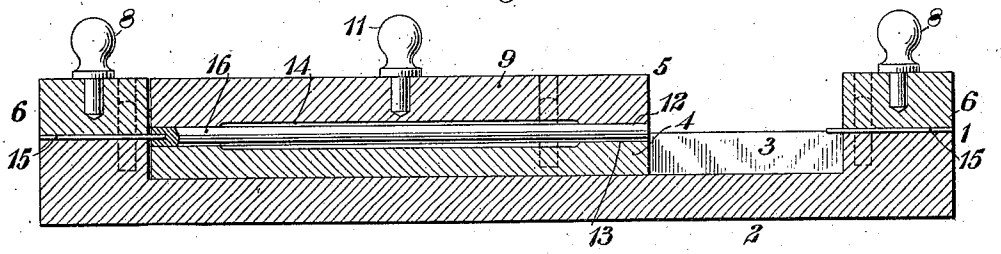


Fig. 4.

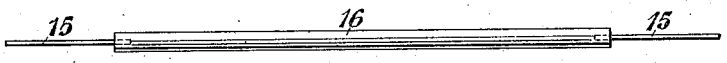
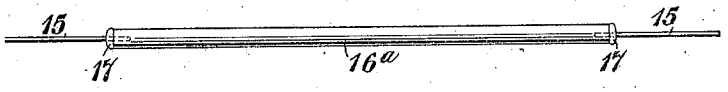


Fig. 5.



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No. 728,568.

Patented May 19, 1903.

UNITED STATES PATENT OFFICE.

JOSEPH M. GULENTZ, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO GEORGE WESTINGHOUSE, OF PITTSBURG, PENNSYLVANIA.

METHOD OF APPLYING TERMINAL WIRES TO ELECTRIC-LAMP GLOWERS.

SPECIFICATION forming part of Letters Patent No. 728,568, dated May 19, 1903.

Original application filed April 10, 1902, Serial No. 102,309. Divided and this application filed July 16, 1902. Serial No. 115,785. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH M. GULENTZ, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Methods of Applying Terminal Wires to Electric-Lamp Glowers, of which the following is a specification, this being a division of my application, Serial No. 102,309, filed April 10, 1902.

My invention relates to electric-lamp glowers which are conductors only when heated to comparatively high temperatures and to the manufacture of the same.

The object of my invention is to attach terminal wires to glowers in a simple, inexpensive, and expeditious manner and so as to insure satisfactory electrical and mechanical union between said parts.

In the accompanying drawings, illustrating my invention, Figure 1 is a side elevation of a glower-blank and the two terminal wires before attachment to the blank. Fig. 2 is a plan view of a portion of the apparatus employed by me and showing a glower-blank and two terminal wires in position thereon. Fig. 3 is a longitudinal vertical section through the apparatus, a portion of which is shown in Fig. 2, the glower-blank and terminal wires being shown in position on the apparatus. Fig. 4 is a side elevation of a glower-blank with the terminal wires affixed thereto; and Fig. 5 is a view similar to Fig. 4, but showing a completed glower.

In practicing my invention I employ the apparatus which will be now described, it being understood, however, that the process of manufacture and the product resulting therefrom are not restricted to the use of any specific apparatus.

The means here shown comprises a rectangular frame 1, the base portion 2 of which is provided with an oblong rectangular recess or guideway 3, and in this recess is mounted the bottom portion 4 of a two-part block 5, this block being of less length than the recess or guideway 3, but of substantially the same width, it being fitted, however, so as to slide easily therein. The frame 1 comprises a a clamping block or piece 6 at each end, which is suitably fastened to the base portion 2, the means here shown being dowel-pins 7, which project upward from the base and fit into corresponding holes in the pieces 6. These pieces 6 are also provided with handles 8, by means of which they may be placed in and removed from their operative positions in the apparatus. The top part 9 of the block 5 is fastened to the bottom part 4 by dowel-pins 10, projecting upward from the lower part and fitted into corresponding holes in the upper part. This part 9 is also provided with a handle 11, by means of which it may be placed in and removed from its operative position. The two ends of the parts 4 and 9 are provided with registering semicylindrical recesses 12 and 13 of the right dimensions to receive a glower-blank. The parts are also hollowed out to form an enlarged semicylindrical recess 14. The parts 2 and 6 are also preferably provided with small registering grooves to receive the terminal wires 15, the grooves being of such dimensions that the wires may be clamped firmly in position, so that the amount of terminal-wire end which it is desired to insert into the glower-blank shall project within the recess 3 at the upper side thereof.

In applying the terminal wires 15 I place an unbaked and comparatively soft glower-blank 16 in the clamping-block 5 and place the terminal wires 15 in the ends of the frame 1, so that they shall be clamped in position by means of the pieces 6. I then move the block 5 longitudinally in the one direction or the other—for example, to the position indicated in Fig. 3—which will serve to force the end of the terminal wire into the end of the blank. The piece 6 at that end may then be raised slightly or entirely removed to release the wire 15 and the block be then moved in the guideway to the other end thereof, thus forcing the end of the right-hand terminal wire into the corresponding end of the glower-blank. The glower-blank and its terminal wires, which present the appearance indicated in Fig. 4, may then be removed from the apparatus and a suitable paste 17 applied to the ends of the blank. The device may be then baked or otherwise

subjected to any treatment which may be necessary or desirable to put it in condition for service, the resulting glower 16^a being then ready for use, except for attachment of additional lengths of lead-wires to the terminal wires 15, it being the usual practice to employ platinum for the terminal wires 15 and to fuse additional lengths of wire of less expensive material to the ends of these terminal wires.

Since the application of a high degree of heat to a glower-blank serves to effect a shrinkage of the material, the terminal wires which are applied in accordance with my invention are securely anchored in position by such shrinkage.

I claim as my invention—

1. The method of applying terminal wires to electric-lamp glowers, which consists in forcing the ends of the terminal wires into the ends of the glower-blank when the latter is in a comparatively soft condition and subsequently baking the glower to fasten the terminal wires in position.

2. The method of attaching terminal wires to a glower, which consists in forcing the wires into the ends of an unbaked glower-blank, applying a coating of paste to the ends of the blank and then baking the blank to fasten the wires in position.

In testimony whereof I have hereunto subscribed my name this 10th day of July, 1902.

JOS. M. GULENTZ.

Witnesses:

HUGH ANDREW CROOKS,

MURRAY C. BEEBE.