

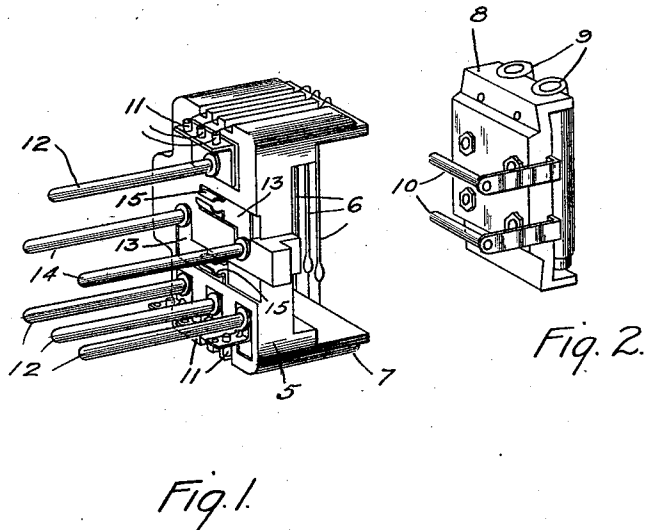
O. FOELL, A. KUSEBAUCH & R. NECKERMAN.

HEATER AND GLOWER RENEWAL FOR LAMPS.

APPLICATION FILED SEPT. 3, 1910.

1,029,114.

Patented June 11, 1912.



WITNESSES:

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UNITED STATES PATENT OFFICE.

OTTO FOELL, OF NEWARK, NEW JERSEY, AND ANTON KUSEBAUCH AND ROY NECKERMAN, OF PITTSBURGH, PENNSYLVANIA, ASSIGNORS, BY MESNE ASSIGNMENTS, TO NERNST LAMP COMPANY, A CORPORATION OF PENNSYLVANIA.

HEATER AND GLOWER RENEWAL FOR LAMPS.

1,029,114.

Specification of Letters Patent.

Patented June 11, 1912.

Original application filed November 11, 1908, Serial No. 462,121. Divided and this application filed September 3, 1910. Serial No. 580,342.

To all whom it may concern:

Be it known that we, OTTO FOELL, a subject of the Emperor of Germany, residing at Newark, in the county of Essex and State of New Jersey, and ANTON KUSEBAUCH and ROY NECKERMAN, citizens of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have made a new and useful Invention in
10 Heater and Glower Renewals for Lamps, of which the following is a specification.

This application is a division of Patent No. 979,455, Dec. 27, 1911, by us for glower renewals for lamps.

15 This invention relates to lamps having conductors of the second class and more particularly to the production of removable heaters for such lamps.

The main parts of a lamp having a conductor of the second class are the glower, the heater, the cut-out device, which is located in the heater circuit, and the current controlling device, which is technically known as ballast and is located in the glower
20 circuit.

The glowers are formed of a refractory material which, at normal temperatures is a non-conductor of electricity, but upon being heated to a certain temperature becomes a
30 current conductor and is then rendered incandescent and caused to emit light by the passage of current through it. The function of the heaters is to raise the temperature of the glowers until they become current conductors. The cut-out device, ordinarily employed, consists of a small magnetic coil, which is actuated by the current and is included in the heater circuit. The function of the device is to open the heater
40 circuit after the glowers have become current conductors and are self-sustaining under the influence of the current flowing through them. The ballast consists of fine iron wire, which is included in the glower circuit and is mounted in a glass container filled with an inert gas.

The glowers require periodical renewing like any other incandescent filaments and the lamp is constructed accordingly. The heaters and glowers have heretofore been permanently secured to the same porcelain and the cut-out device, the ballast and the principal electrical connections or terminals of

the lamp, have been mounted in what is termed the lamp body. The heater and glower porcelain was provided with terminal prongs which were utilized in securing the porcelain to the lamp body and also in plugging the heaters and glowers into the circuit.

In addition to the necessity of removing the glowers, it is occasionally necessary to remove the heaters. The expense of maintenance is excessively high when it is necessary to remove the heaters shortly after removing the glowers, as it is necessary in the constructions, heretofore employed, to remove the glowers from the holder before the heaters can be reached.

An object of our invention has been, therefore, to produce means whereby the heaters may be easily renewed without removing, damaging or in any way affecting the glowers.

In carrying out this invention, a glower porcelain is provided which is independent of the lamp body and which is adapted to receive an independent heater porcelain. The glower and heater porcelains are so constructed that the heater porcelain can be renewed without the use of tools and without in any way affecting the glowers. The glower porcelain is provided with terminal prongs which are employed in securing it to the lamp body and also in plugging the heaters and glowers into the lamp circuit.

In the drawings accompanying this application and forming a part thereof: Figure 1 is a perspective view of a holder base, and, in connection with Fig. 2, illustrates one embodiment of our invention; Fig. 2 is a perspective view of a heater porcelain employed in connection with the apparatus as disclosed in Fig. 1.

Referring to the drawings: A holder base of porcelain or other insulating material is provided for the glowers 6. Abutments 7 are located in each end of the body portion of the base 5 and are adapted to support the glowers 6. The abutments are so arranged that a heater porcelain 8 may be slid into place between them and between the body portion proper of the base 5 and the glowers 6 without disturbing or in any way affecting the glowers. The porcelain 8 is provided with heater tubes 9 which are arranged to

extend in close proximity to the glowers when the porcelain 8 is in place. The porcelain 8 is also provided with prongs 10 which are adapted to removably secure it to the
 5 base portion 5 and which form a part of the heater circuit. Three glowers 6 are mounted on the glower base 5 illustrated. Each glower is secured in place by means of platinum and nickel composition wires secured to
 10 the ends of the glowers and which in turn are secured to terminal pieces by means of aluminum plugs 11. The terminal pieces are secured on the rear face of the holder base 5 and each piece is connected to a terminal
 15 prong 12. One end of each glower 6 is connected to a separate terminal piece connected to one of the prongs 12. The other end of each of the glowers is connected to a common terminal piece and terminal prong 12.
 20 Terminal pieces 13 are mounted on the rear face of the base and are secured in place by means of terminal prongs 14 which are secured to the base 5 and which project from its rear face. A sleeve 15 is formed integrally with each piece 13 and is adapted to receive and engage the end of one of the
 25 prongs 10 provided on the heater porcelain 8. The holder base 5 is so constructed that the heater porcelain 8 may be slid into place adjacent to the glowers 6 and the prongs 10
 30 are so arranged on the porcelain 8 that they are forced into engagement with the sleeves 15 during the operation of sliding the porcelain 8 into place. This electrically connects

them with the terminal prongs 14 and, when 35 the glower base 5 is plugged into the lamp circuit, the heaters are plugged into the heater circuit.

What we claim is:

In combination with a lamp glower, a 40 support base therefor provided with electrical terminals, a heater support, a heater carried thereby, metallic prongs provided on said support for removably securing the same to said base and for connecting said 45 heater to said terminal.

In testimony whereof, I have hereunto subscribed my name this 19th day of August, 1910.

OTTO FOELL.

Witnesses:

CHARLES E. KELLY,
A. YOUNGHOLM.

In testimony whereof, I have hereunto subscribed my name this 26th day of August, 1910.

ANTON KUSEBAUCH.

Witnesses:

K. E. SOMMERFELD,
GEO. J. TAYLOR.

In testimony whereof, I have hereunto subscribed my name this 29 day of Aug. 1910.

ROY NECKERMAN.

Witnesses:

GEO. J. TAYLOR,
MAX HARRIS.