

No. 758,730.

PATENTED MAY 3, 1904.

A. J. WURTS & E. BENNETT.
ELECTRIC LAMP.

APPLICATION FILED JAN. 10, 1901.

NO MODEL.

Fig. 1.

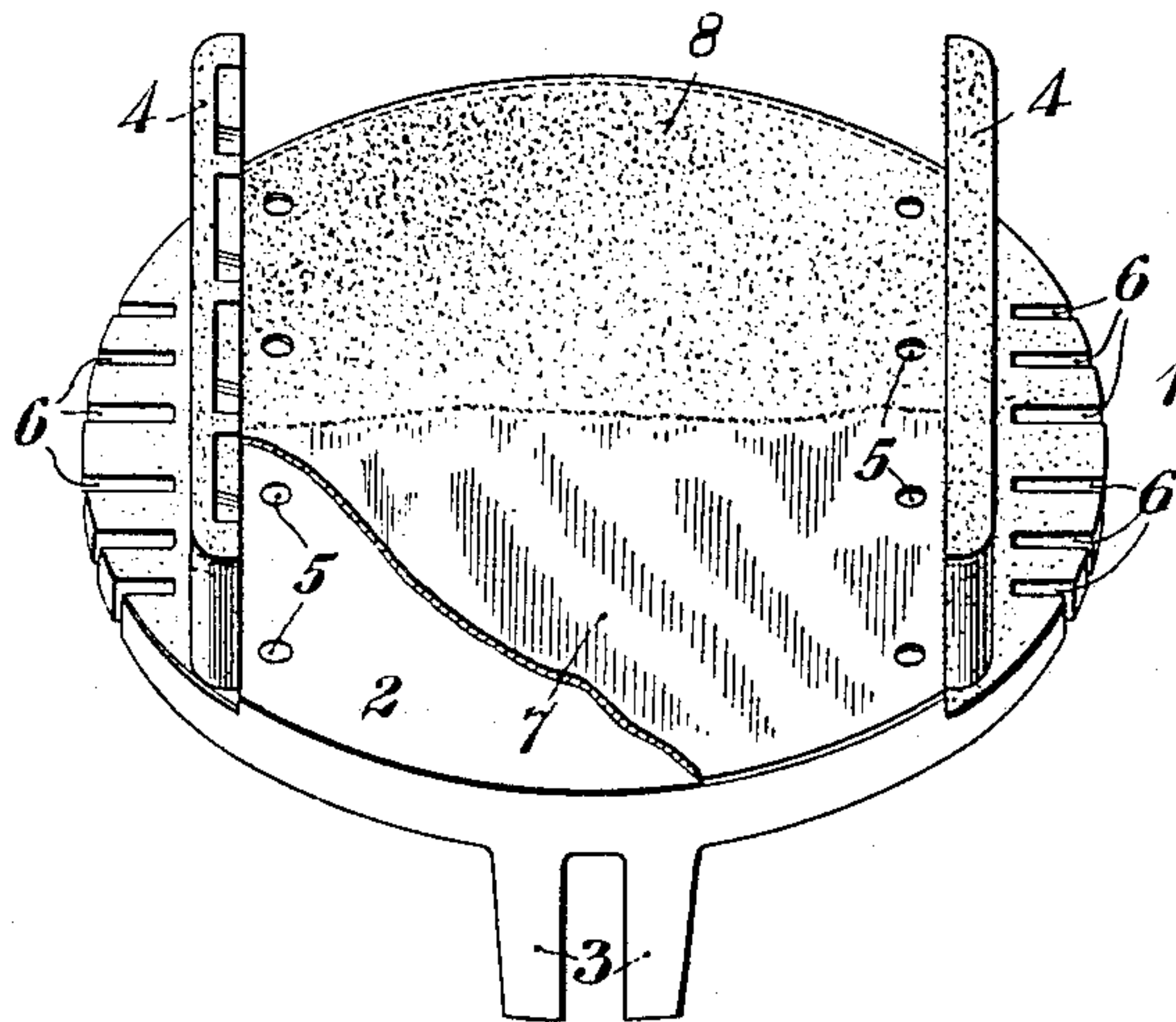
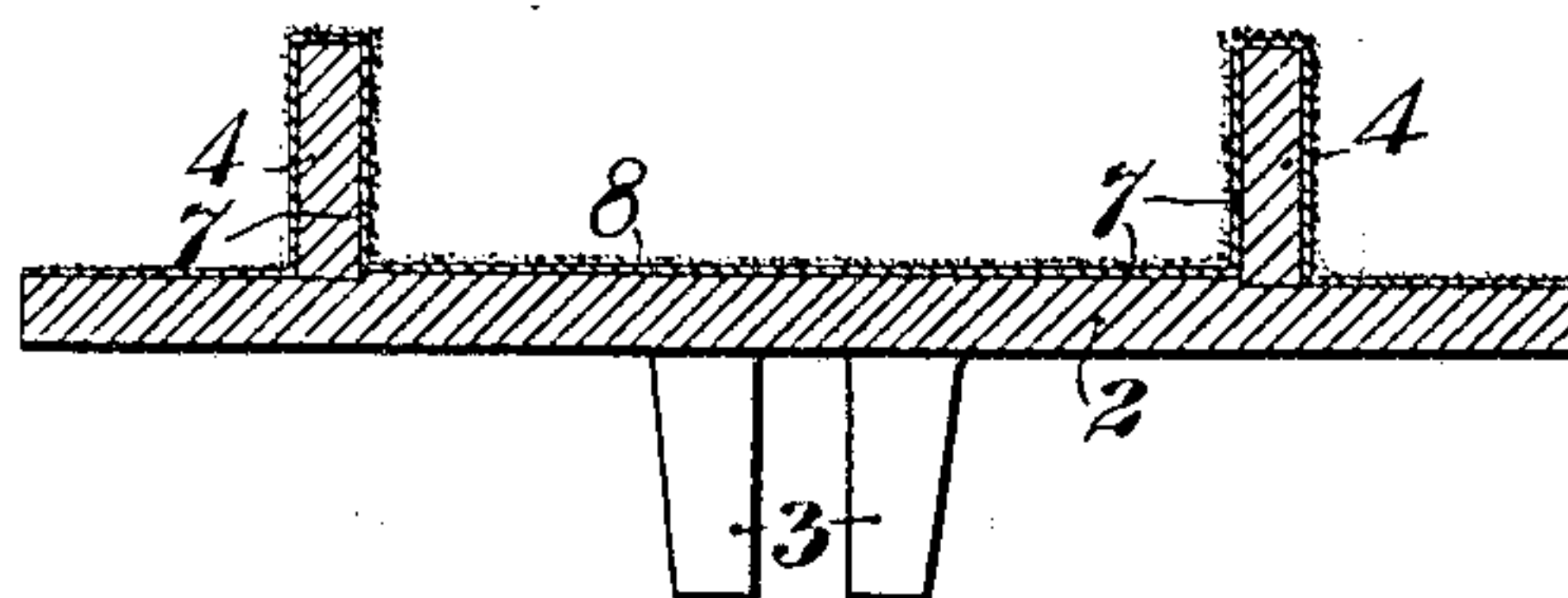


Fig. 2.



WITNESSES:

C. L. Belcher
Birney Hines

INVENTORS

Alexander Jay Wurts
Edward Bennett

BY

Walter G. Carr
ATTORNEY.

UNITED STATES PATENT OFFICE.

ALEXANDER JAY WURTS AND EDWARD BENNETT, OF PITTSBURG, PENNSYLVANIA, ASSIGNORS TO GEORGE WESTINGHOUSE, OF PITTSBURG, PENNSYLVANIA.

ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 758,730, dated May 3, 1904.

Application filed January 10, 1901. Serial No. 42,783. (No model.)

To all whom it may concern:

Be it known that we, ALEXANDER JAY WURTS and EDWARD BENNETT, citizens of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Electric Lamps, of which the following is a specification.

Our invention relates to electric lamps of the type in which the light-emitting bodies or glowers are conductors only when hot and in which the leading-in wires or the conductors employed for heating the glowers, or both, become more or less disintegrated in use, so as to produce a conducting deposit upon adjacent non-conducting parts.

The object of our invention is to provide a means whereby the non-conducting portions of the lamp which constitute supports for the glowers and heaters may be continued in service for an indefinite period without experiencing any material losses and without impairing the operation of the lamp.

In the operation of lamps of the character above indicated difficulties have been experienced where platinum leading-in or heating conductors, or both, have been employed by reason of the formation of platinum-black and the deposition of the same upon the non-conducting parts of the holder. The platinum-black thus deposited is a conductor and frequently establishes short circuits, which result in damage to the parts of the lamp between which such short circuits are established. In order to obviate this difficulty, we have devised the means constituting the present invention, an illustration of which may be found in the accompanying drawings, in which—

Figure 1 is a perspective view of that portion of a holder upon and adjacent to which the heaters and glowers are supported. Fig. 2 is a transverse sectional view of the holder shown in Fig. 1.

The holder 1 comprises a disk 2, of porcelain or other suitable non-conducting and heat-resisting material, having on one side lugs 3 for supporting the holder in proper position and on the opposite side lugs 4, between which

the heater-tubes are supported. The terminal leads from the heater-coils project through the holes 5 in the plate and are attached by suitable binding devices to terminal rods or blocks (not shown) at the other side of the disk. The glower-leads extend through slots 6 in the edges of the disk and are also attached by means of suitable binding devices to the proper terminal rods or blocks (not shown) at the other side of the disk. All of these parts are well known to the art, and therefore they, as well as the coöperative relation between the same and the heaters and glowers, need not be more fully described.

The platinum-black that is formed during the operation of the lamp becomes deposited upon the non-conducting parts and, as has been already stated, if allowed to remain on the holder is likely to cause damage by reason of the short circuits which may be thus established between different conductors. It has been found practically impossible to remove the platinum-black from the porcelain holder, when deposited, as indicated, and we therefore provide the holder on the heater and glower supporting side with a coating of suitable non-conducting paste, which may or may not be baked after it is applied, as may be found desirable. A paste formed of a mixture of kaolin, alumina, and water has been used and found satisfactory in practice; but a paste formed of other non-conducting materials might be used which would be equally satisfactory. The chief requirement in this connection is that the non-conducting paste shall adhere to the porcelain sufficiently well to permit of handling without being accidentally broken away, but shall still be easily removable. The coating, if of suitable material and properly applied, may be readily scraped or brushed off when the lamp becomes substantially inoperative by reason of the deposit of platinum-black, the platinum-black which has been deposited thereon being at the same time removed. A new coating may then be applied and the holder be again put into service. The platinum-black which forms upon the surface of the coating 7 is indicated at 8.

Although platinum is specified as the metal

usually employed by us for leading-in wires and heating-conductors, we do not intend to thereby restrict our invention to use in lamps having parts made of platinum.

5 It will be understood that the invention is not restricted to lamps having a plurality of either heaters or glowers or to the use of any specific metal or alloy for leading-in wires or heating-conductors. It will also be understood
10 that the deposit which is received by the removable coating may come from either the leading-in wires or heating-conductors, or from both.

We claim as our invention—

15 1. In an electric lamp of the type described having exposed metal conductors, a non-conducting holder for the heaters and glowers provided with a readily-removable coating of non-conducting material to receive the conduct-
20 ing particles given off by said metal conductors, substantially as and for the purpose described.

2. In an electric lamp of the type described

having exposed platinum conductors, a glower and heater holder provided with a readily-re- 25 movable thin coating of non-conducting material to receive the platinum-black given off by said conductors, substantially as and for the purpose described.

3. In an electric lamp of the type described 30 having exposed platinum conductors, a non-conducting support or holder having its face adjacent to the lamp-glowers provided with a readily-removable coating of non-conducting material to receive the platinum-black given 35 off by said conductors, substantially as and for the purpose described.

In testimony whereof we have hereunto subscribed our names this 7th day of January, 1901.

ALEXANDER JAY WURTS.
EDWARD BENNETT.

Witnesses:

H. A. CROOKS,
C. H. ZOLLER.