

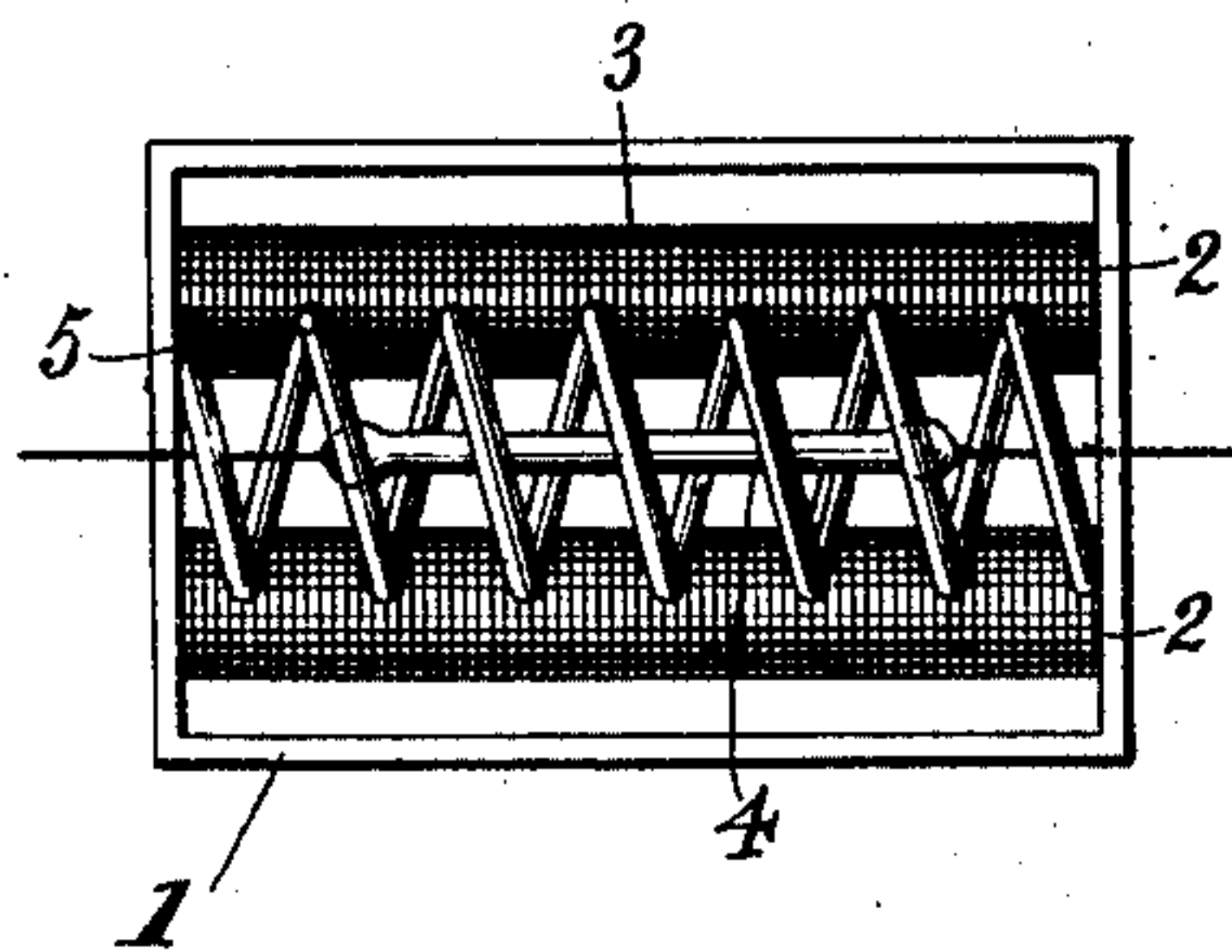
No. 719,506.

PATENTED FEB. 3, 1903.

H. N. POTTER.
ELECTRIC LAMP.

APPLICATION FILED NOV. 21, 1901.

NO MODEL.



Witnesses:

Raphael Potter
W. H. Capel.

Inventor

Henry Noel Potter
by *Charles A. Perry - Atty*

UNITED STATES PATENT OFFICE.

HENRY NOEL POTTER, OF NEW ROCHELLE, NEW YORK, ASSIGNOR TO
GEO. WESTINGHOUSE, OF PITTSBURG, PENNSYLVANIA.

ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 719,506, dated February 3, 1903.

Application filed November 21, 1901. Serial No. 83,077. (No model.)

To all whom it may concern:

Be it known that I, HENRY NOEL POTTER, a citizen of the United States, and a resident of New Rochelle, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Electric Lamps, of which the following is a specification.

Some of the standard forms of electric lamps in which originally non-conducting bodies, known as "glowers," are brought to a conductive state by external heat and maintained in a state of incandescence by the electric current which then traverses them are provided with electric heaters arranged alongside and substantially parallel to the incandescing elements, such heaters being often in the form of tubular bodies of heat-resisting material wound with platinum wires, by means of which the preliminary heat is developed.

When a lamp so constructed is arranged with its axis horizontal, it sometimes happens that the lamp fails to start, owing to the fact that the air-currents rising against the glower cool it and prevent its being sufficiently heated.

The present invention is designed to provide means whereby the glower shall be protected against such rising currents of air, and to this end I propose the use of a screen having its meshes or ribs sufficiently close together to serve the purpose indicated without interfering seriously with the radiation of light. I find that a thin spiral of pure zirconia surrounding the glower, quite close to it, constitutes a sufficient screen for the purpose. The use of a close spiral or similar cage-like screen has the further advantage of increasing the efficiency of the glower by confining the heat, which lengthens the life of the glower and assists in making up for the losses by absorption in the cage. The cage may be made of quartz and in that case would be transparent. Moreover, other refractory materials besides zirconia might be selected to form the body of the cage, and other arrangements of the ribs or meshes might be made besides the arrangement in spiral form.

My invention is illustrated in the accompanying drawing, which is a side elevation of

a glower and heaters for an electric lamp of the type described, in combination with a screen of zirconia or other refractory material arranged in the form of a spiral.

In the drawing, 1 represents a supporting box for the heaters, which are represented at 2 2 as bodies of refractory material covered with platinum wire 3. The glower is shown at 4 and the spiral screen at 5.

What I claim as my invention is—

1. In an electric lamp of the character described, the combination with a glower and one or more heaters, of a refractory cage embracing the glower and independent of the heater or heaters.

2. In an electric lamp of the character described, the combination with a glower and one or more heaters of a transparent refractory cage embracing the glower and independent of the heater or heaters.

3. In an electric lamp of the character described, the combination with a glower and one or more heaters, of a refractory cage embracing and located close to the glower, and independent of the heater or heaters.

4. In an electric lamp of the character described, the combination with a glower and one or more heaters arranged substantially parallel thereto, of a screen independent of the heater or heaters the said screen being in proximity to the glower and adapted to prevent injurious air-drafts from rising against the glower.

5. In an electric lamp of the character described, the combination with a glower and one or more heaters arranged substantially parallel thereto, of a refractory cage independent of the heater or heaters, said cage being adapted to shield the glower from drafts, and arranged in such proximity to the glower as to serve to confine a portion of its heat and so lengthen its life and compensate for absorption losses.

Signed at New York, in the county of New York and State of New York, this 19th day of November, A. D. 1901.

HENRY NOEL POTTER.

Witnesses:

GEORGE H. STOCKBRIDGE,
WM. H. CAPEL.