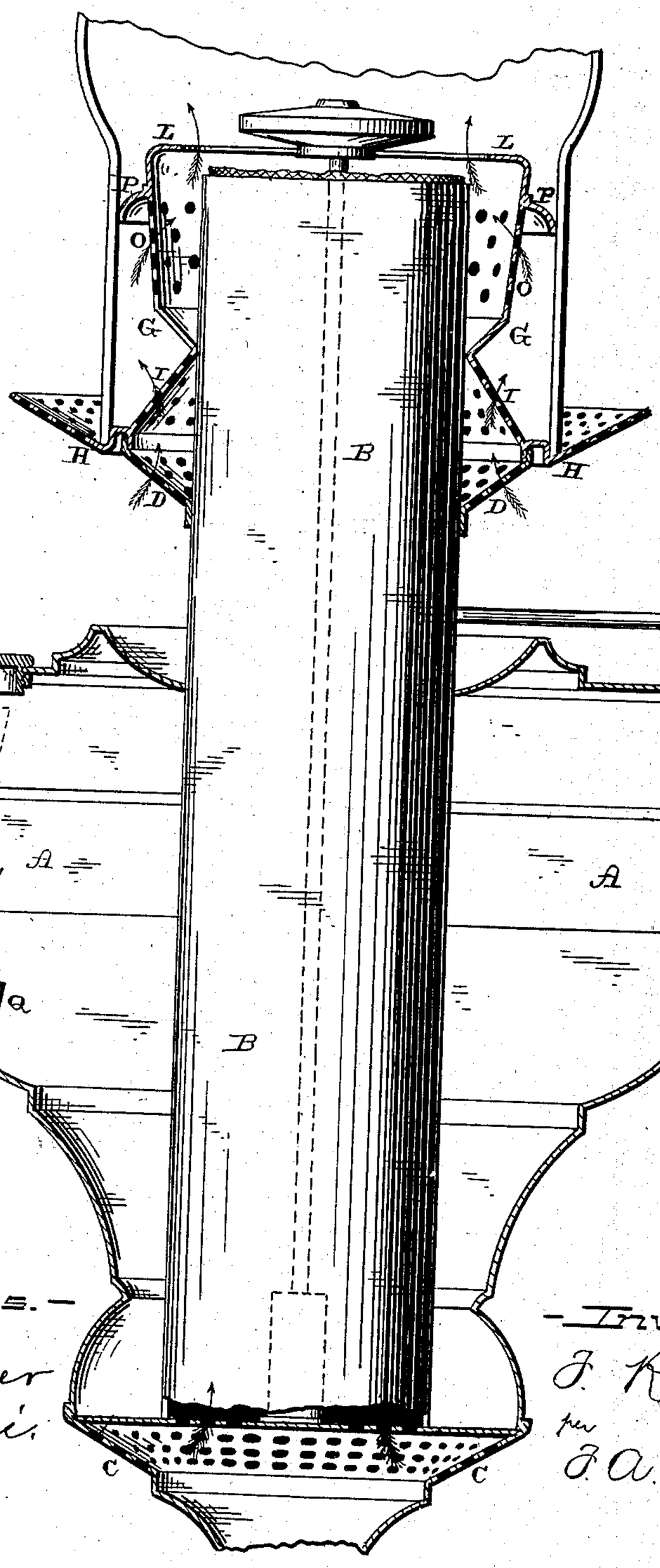
(No Model.)

F. RHIND.

ARGAND BURNER.

No. 322,321. Patented July 14, 1885.



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UNITED STATES PATENT OFFICE.

FRANK RHIND, OF BROOKLYN, NEW YORK.

ARGAND BURNER.

SPECIFICATION forming part of Letters Patent No. 322,321, dated July 14, 1885.

Application filed February 12, 1885. (No model.)

To all whom it may concern:

Be it known that I, FRANK RHIND, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Argand Burners and Lamps; 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 it, reference being had to the accompanying drawing, which forms part of this specification.

My invention relates to an improvement in Argand burners and lamps; and it consists, first, in an Argand burner, in the combination of the wick-tube, the spreader, a deflecting-ring which conducts the air to the flame, a support for the ring, and a support for the chimney, the ring being provided on its outer side with slotted wings which are adjustable to the chimney; second, in an Argand burner, the combination of the wick-tube, the spreader, and a cone which is applied to the outer side of the wick-tube, the cone being provided with a deflecting-ring upon its top and a support for the chimney at its lower end, and contracted at or near its center, so as to fit tightly upon the wick-tube, all of which will be more fully described hereinafter.

The object of my invention is to so construct the different parts of the burner that the heat from the deflecting-ring is transferred through wings connected thereto to the chimney, and the cone kept cool by having all of the air which is fed to the burner from the outside made to pass through it, and the lamp thus prevented from becoming intensely heated, as is always the case where a large Argand burner is used.

The accompanying drawing represents a vertical section of a lamp embodying my invention.

A represents the lamp-bowl, up through which the hollow or tubular wick-tube B passes in the usual manner. All of the air which is fed to the burner from the inside passes through the perforations at C, and then up through the tube to the flame.

Upon the outside of the wick-tube, at any suitable distance below its top, is the concave perforated support D, upon which the perforated cone or cap G rests. The lower portion, H, of this cone is spread out to any suitable extent, so as to form a support for the chimney, and is given any ornamental shape that may be preferred. Above the supporting part H the cone is inclined inward and upward, and is perforated, as shown at I, so that the air which passes through the perforations in the support D can pass up into the lower portion of the chimney. At the top of the perforated part I the cone is contracted, so as to fit tightly against the outer side of the wick-tube, not only for the purpose of holding the cone in position, but to prevent the air which passes up through the support D from passing directly up the wick-tube. This contracted portion serves to turn the rising currents of air out into the chimney for the purpose of keeping both the lower portion of the chimney and the burner cool. From this contraction the burner expands outward and upward to the deflecting-ring L, which forms the top of the burner. The portion O below the ring is perforated, so that the air from the bottom portion of the chimney can pass through it to be fed to the flame from the under side of the deflecting-ring. On the outer side of this deflecting-ring are formed the wings or springs P, which serve both to hold the chimney in position and, by coming in contact with the inner side of the lower end of the chimney, to conduct away the heat from the deflecting-ring, and thus keep this portion of the burner cool. These wings also serve to prevent the air in the lower portion of the chimney from rising upward, and thus forcing it to pass through the perforated part O. If the wings were not used in connection with the ring, the chimney could not be made to fit, and too much air would pass up the chimney without coming in contact with the flame, thus causing a red instead of a white flame. The wings and the ring coact for the purpose of producing a more perfect illumination than can be produced without them both.

The body of the cone acts only as a support for the ring and wings, and to support the chimney in position. The chimney need not be forced downward as far as shown in the drawing, as it can be supported higher up, if so desired.

As the Argand burners have heretofore been constructed the deflecting-ring becomes intensely heated, and this heat being commu-

nicated to the other parts of the burner, the lamp becomes so intensely hot that it not only becomes dangerous but unpleasant to handle. The ring being brought in contact with the chimney by means of the wings, and the air being made to pass back and forth through the burner, the burner is always kept cool, and hence this difficulty is entirely overcome.

Having thus described my invention, I claim—

1. In an Argand burner, the combination of the wick-tube, the spreader, a deflecting-ring which conducts the air to the flame, and which is provided on its outer side with a slitted flange forming wings which adjust themselves to the chimney, a support for the deflecting-ring, and a support for the chimney below the slitted flange, substantially as shown.

2. In an Argand burner, the combination of the wick-tube, the spreader, and a cone which is supplied to the outer side of the wick-tube, the cone being provided with a deflecting-ring, and having a slitted flange on its outer side forming wings which are adjustable to the size of the chimney on its top, and a support for the chimney on its lower end, the cone being perforated and contracted at or near its center, substantially as described.

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

FRANK RHIND.

Witnesses:
PH. AD. NEBLING,
ROBERT J. COWAN.