

(No Model.)

2 Sheets—Sheet 1.

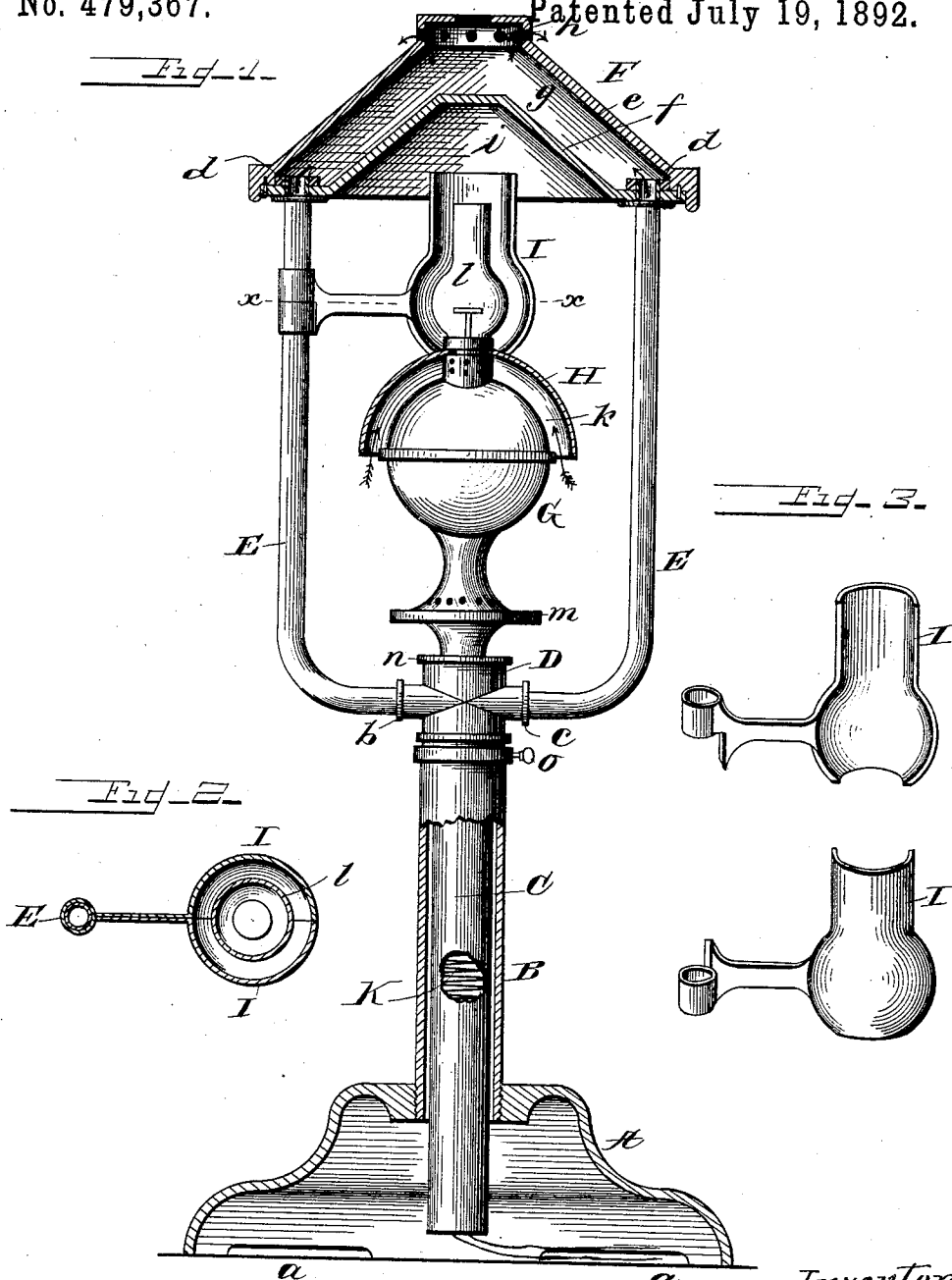
J. J. JOHNSTON, Dec'd.

A. S. H. JOHNSTON & J. G. THOMPSON, Administrators, & A. JOHNSTON, Administratrix.

MEANS FOR UTILIZING HEAT OF LAMPS.

No. 479,367.

Patented July 19, 1892.



Witnesses

G. A. Tauberschmitt
H. B. Reinohl

A. S. H. Johnston, J. G. Thompson Administrators
Anna Johnston, Administratrix of the estate
of James J. Johnston deceased

By Attorney

D. C. Reinohl

(No Model.)

2 Sheets—Sheet 2.

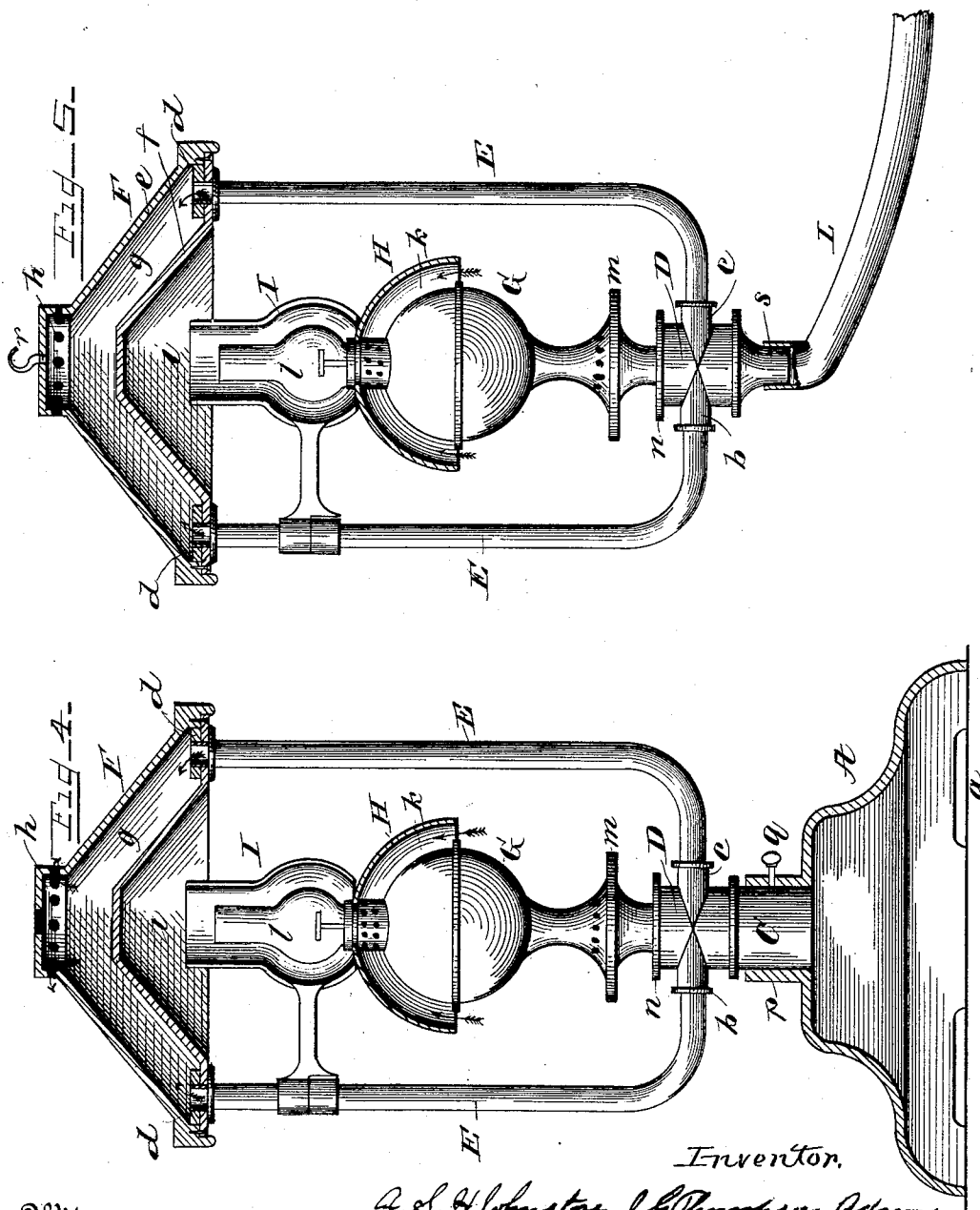
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Inventor.

2. S. H. Johnson, J. L. Thompson Admors
 & Anna Johnson Admors of the estate of
 James J. Johnson deceased

4 Anna Johnston Adm^r of the estate of
James J. Johnston deceased

James J. Johnston, deceased

By Attorney

D. C. Reinohl

UNITED STATES PATENT OFFICE.

ALEXANDER S. H. JOHNSTON AND ANNA JOHNSTON, OF COLUMBIANA, OHIO, AND JAMES G. THOMPSON, OF NEW BRIGHTON, PENNSYLVANIA, ADMINISTRATORS OF JAMES J. JOHNSTON, DECEASED, ASSIGNORS OF ONE-HALF TO DAVID C. REINOHL, OF WASHINGTON, DISTRICT OF COLUMBIA; JOHN E. ALLEN, PRESENT ADMINISTRATOR, SUCCEEDING PRIOR ADMINISTRATORS.

MEANS FOR UTILIZING HEAT OF LAMPS.

SPECIFICATION forming part of Letters Patent No. 479,367, dated July 19, 1892.

Application filed October 1, 1891. Serial No. 407,449. (No model.)

To all whom it may concern:

Be it known that JAMES J. JOHNSTON, deceased, formerly a citizen of the United States, residing at Columbiana, in the county of Columbiana and State of Ohio, did in his lifetime invent certain new and useful Improvements in Means for Utilizing Heat of Lamps; and we ALEXANDER S. H. JOHNSTON and JAMES G. THOMPSON, administrators; and ANNA JOHNSTON, administratrix, of the said J. J. JOHNSTON, deceased, 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 appertains to make and use the same.

This invention relates to devices for heating and circulating air in a room, compartment, building, or hospital by the heat from a lamp or other lighting apparatus, which has usually been wasted, and has for its object certain improvements in construction on the device shown in Patent No. 433,474, granted James J. Johnston on the 5th day of August, 1890.

The invention will be hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, which form part of the specification, Figure 1 represents a side elevation partly in section; Fig. 2, a plan view on line *xx* on Fig. 1; Fig. 3, perspectives of the two halves of the shade; Fig. 4, a modification of the construction shown in Fig. 1, and Fig. 5 another modification showing the invention applied to a hanging lamp generally used for lighting halls or sitting-rooms in dwellings.

Reference being had to the drawings and the letters thereon, A indicates a base provided with slots or openings *a*, through which air from the floor enters the hollow base; B, a hollow column attached to the base; C, a hollow support or extension, which enters the column B and slides freely therein to raise or lower the lamp, as circumstances may require.

To the upper end of the support C is attached a cross D, such as is commonly used in steam and gas fitting, and to the side branches *b c* are

secured pipes or tubes E E, which support an air-heater F. The heater may be secured to the tubes E by lock-nuts *d* or in any approved manner. The air-heater E is made of an upper plate *e* and a lower plate *f*, both of which are circular in form and may be of cast or sheet metal stamped into the form shown, and between said plates is an air-chamber *g*. The upper plate *e* is provided with one or more apertures *h* for the escape of heated air. The lower plate *f* is, however, preferably made of cast metal, and the outer surface *i* thereof may be nickel-plated to form a reflector.

Around the neck of the lamp G is secured a shield H to protect the oil in the bowl of the lamp from rays of reflected heat from the surface *i* of the plate *f* and also to form a passage *k* between the lamp and the shield to effect an induced current of air to the burning wick of the lamp, and thereby increase the supply of oxygen to the flame in the form of heated air.

Around the chimney *l* of the lamp is placed a two-part sheet-metal shade I, which is separable vertically, as shown, and secured to one of the pipes E, leading to the air-heater F. The shade may be made to inclose the chimney and obscure the light of the lamp from all sides thereof, or either side only may be obscured by turning one of the half-shades back out of the way of the light. The shade I when surrounding the chimney of the lamp collects the heat radiated from the burner through the chimney and conducts it upward against the air-heater E. The inner surfaces of the semi-shades may be polished or nickel-plated to form reflecting-surfaces to be used when one-half of the shade is removed from around the lamp. By this construction light from the lamp may be reflected into an adjoining compartment through an open door, or it may be directed out through a window to light an approach to a building or dwelling.

When a lamp is used, preference is given to the Argand type; but it is obvious that a drop-light from a gas-fixture may be placed in position upon the support *m*, which is affixed to the upper branch *n* of the cross D,

and thus utilize the heat from the drop-light to warm the room.

The heater may be adjusted to any height within the range of the tubular support C and secured in position by a thumb-screw *o*.

Within the tubular support C is shown an induction-coil K, which may be attached to any suitable generator of electricity (not shown) and heated to incandescence for inducing a current of cold air from the floor of a room and heating it in its passage through the support on its way to the heating-chamber *g*.

In Fig. 4 is shown a modified construction designed for heating purposes only for rooms not otherwise provided with means for heating them. In this construction the column B is omitted and a short support C inserted into an extension *p* on the base A and secured by a thumb-screw *q*, whereby the heater may be brought down to the usual height of a stove.

In Fig. 5 is shown a construction adapted for use with hall or hanging lamps and in which the air-heater F is provided with a hook *r* for suspending it from a ceiling. The base A is dispensed with, and to the lower branch or nipple *s* of the cross D is attached a conduit L, which may be of rubber or metal, for conducting air from the floor to the air-heater.

The tubular portions of the device may be made of drawn-brass tubing and a high degree of ornamentation imparted to the construction.

Having thus fully described this invention, what we claim is—

1. An air-heater having a chamber within its walls, ingress and egress apertures, and a heat-reflecting surface, in combination with

a branched tubular conduit upon which said heater is supported, communicating with the heating-chamber and extending to or near the floor of a compartment, and a support for a lamp between the branches of the conduit, substantially as described.

2. An air-heater having a chamber within its walls, ingress and egress apertures, and a heating-reflecting surface, in combination with a tubular conduit and a heating-coil within the conduit, substantially as described.

3. An air-heater supported upon a tubular conduit and having a heat-reflecting surface on its lower side, in combination with a lamp supported under said heater and a shield supported by and engaging the neck of the lamp.

4. An air-heater supported upon a tubular conduit, in combination with a lamp and a shade surrounding the chimney of the lamp and constructed to collect heat radiated from the burner through the chimney and direct the same against the air-heating chamber.

5. An air-heater supported upon a tubular conduit, in combination with a lamp and a vertically-separable shade pivotally secured to the tubular conduit and surrounding the chimney of the lamp, as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

ALEXANDER S. H. JOHNSTON,
ANNA JOHNSTON,
JAS. G. THOMPSON,

Administrators and Administratrix of the estate of James J. Johnston, deceased.

Witnesses:

CHARLES STRICKLER,
JOHN G. AUGUSTINE.

It is hereby certified that in Letters Patent No. 479,367, granted July 19, 1892, upon the application of Alexander S. H. Johnston and Anna Johnston, of Columbiana, Ohio, and James G. Thompson, of New Brighton, Pennsylvania, administrators of James J. Johnston, deceased, for an improvement in "Means for Utilizing Heat of Lamps," an error appears in the printed specification requiring the following correction, viz.; In line 48, page 2, the compound word "heating-reflecting" should read *heat-reflecting*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 26th day of July, A. D. 1892.

[SEAL.]

CYRUS BUSSEY,

Assistant Secretary of the Interior.

Countersigned:

W. E. SIMONDS,

Commissioner of Patents.