

(No Model.)

T. HIPWELL.

# ARGAND BURNER FOR LAMPS.

No. 250,918.

Patented Dec. 13, 1881.

*Fig. 1.*

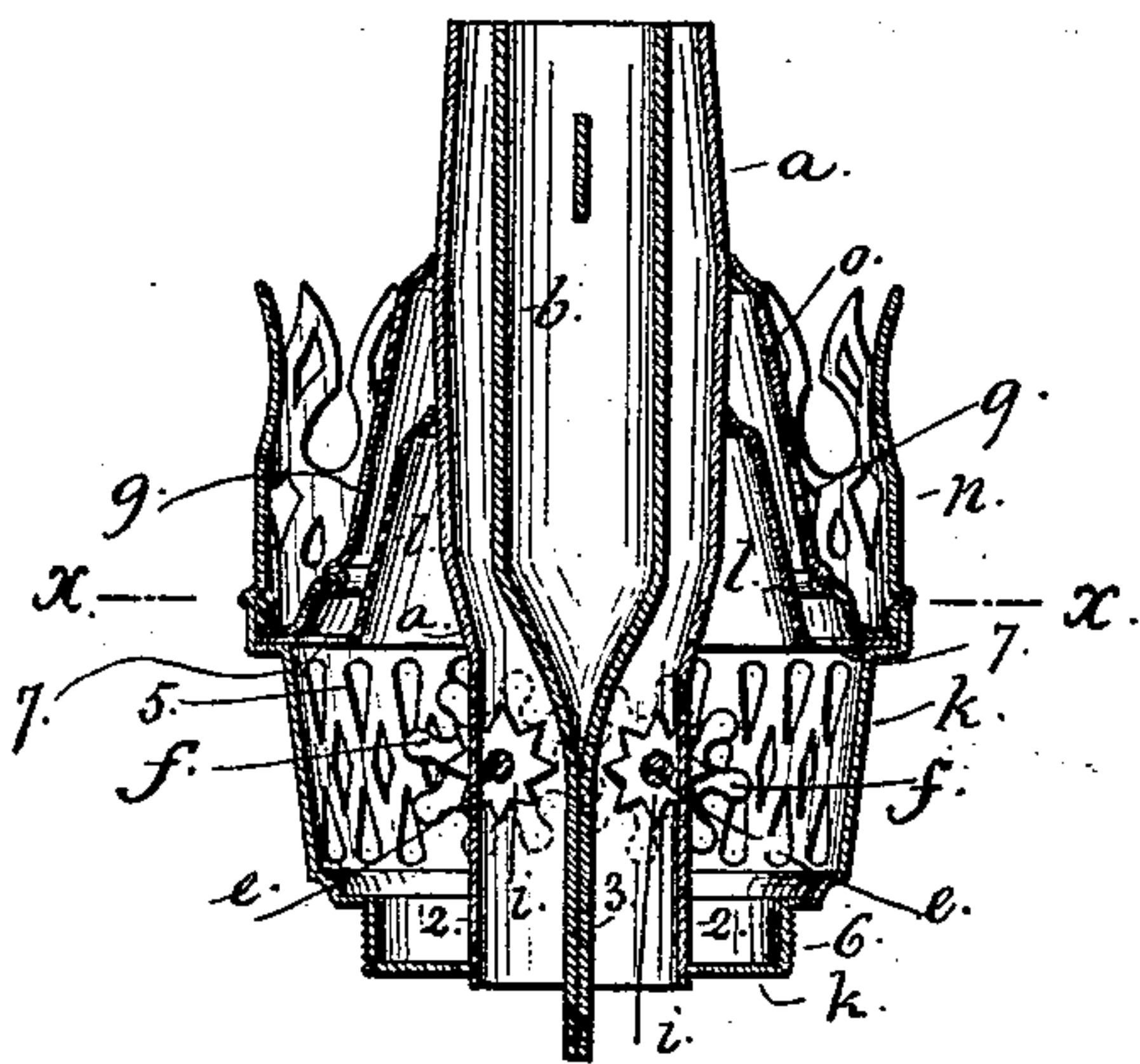


Fig. 4.

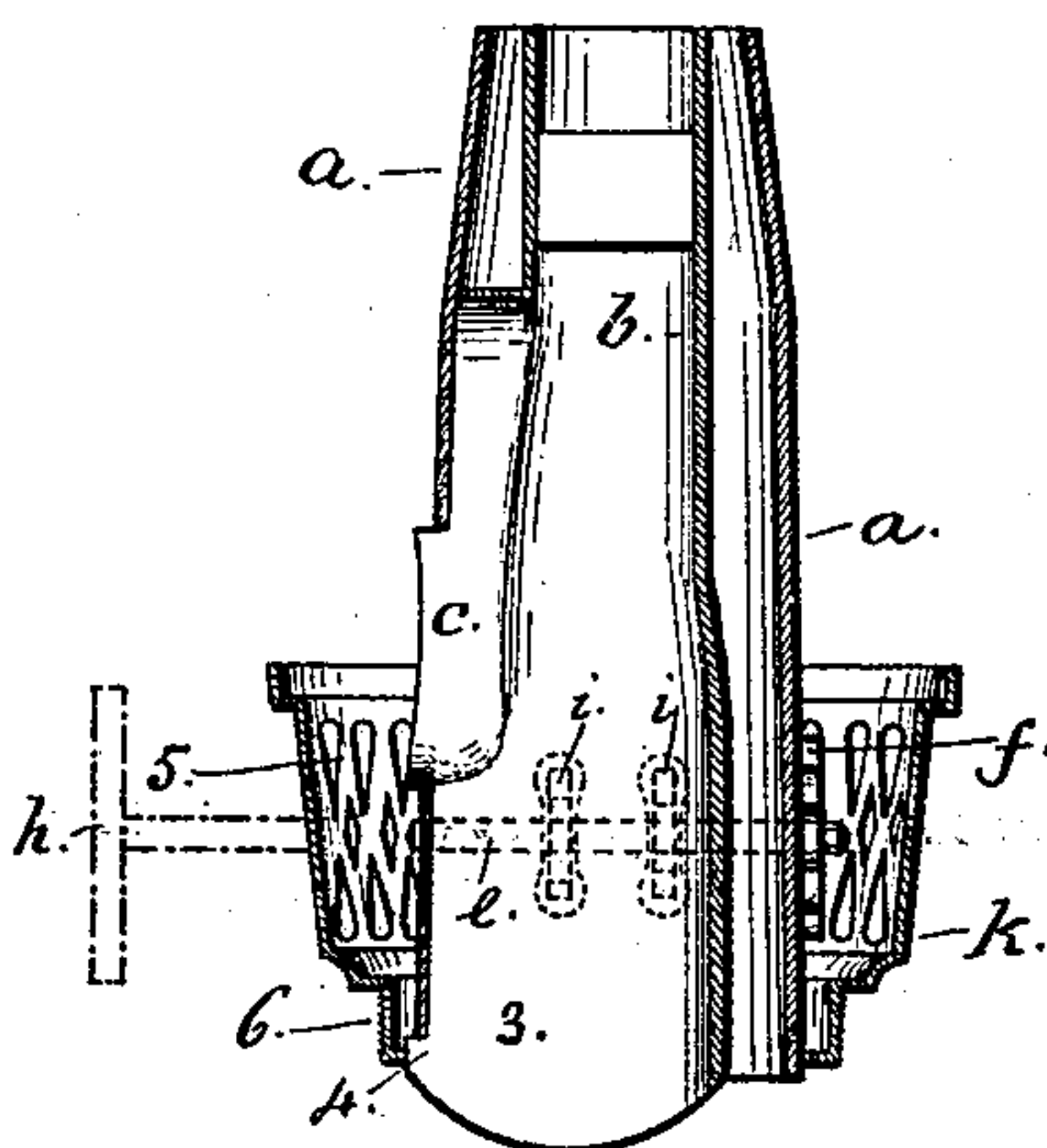
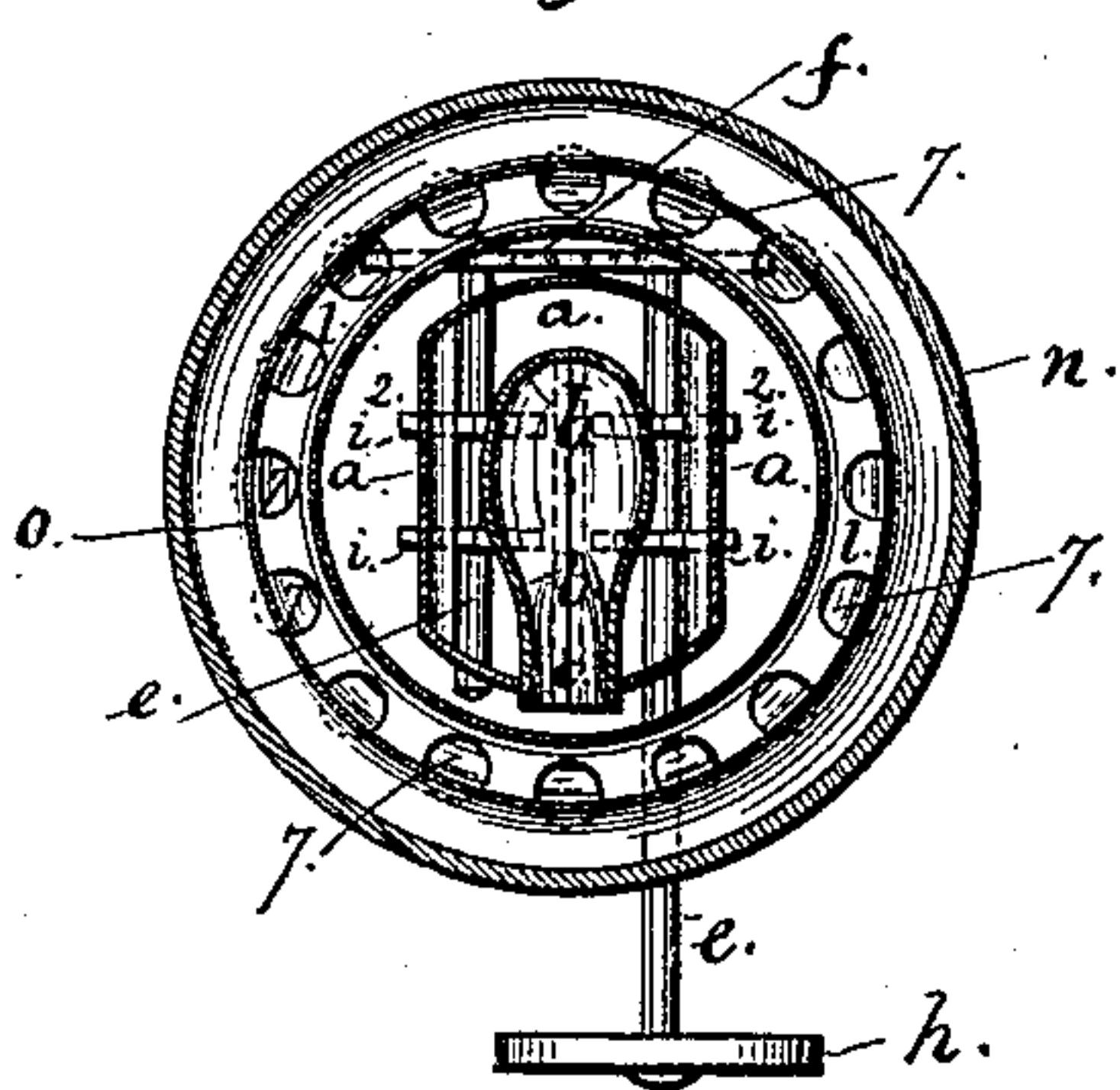


Fig. 2.



*Fig. 3.*

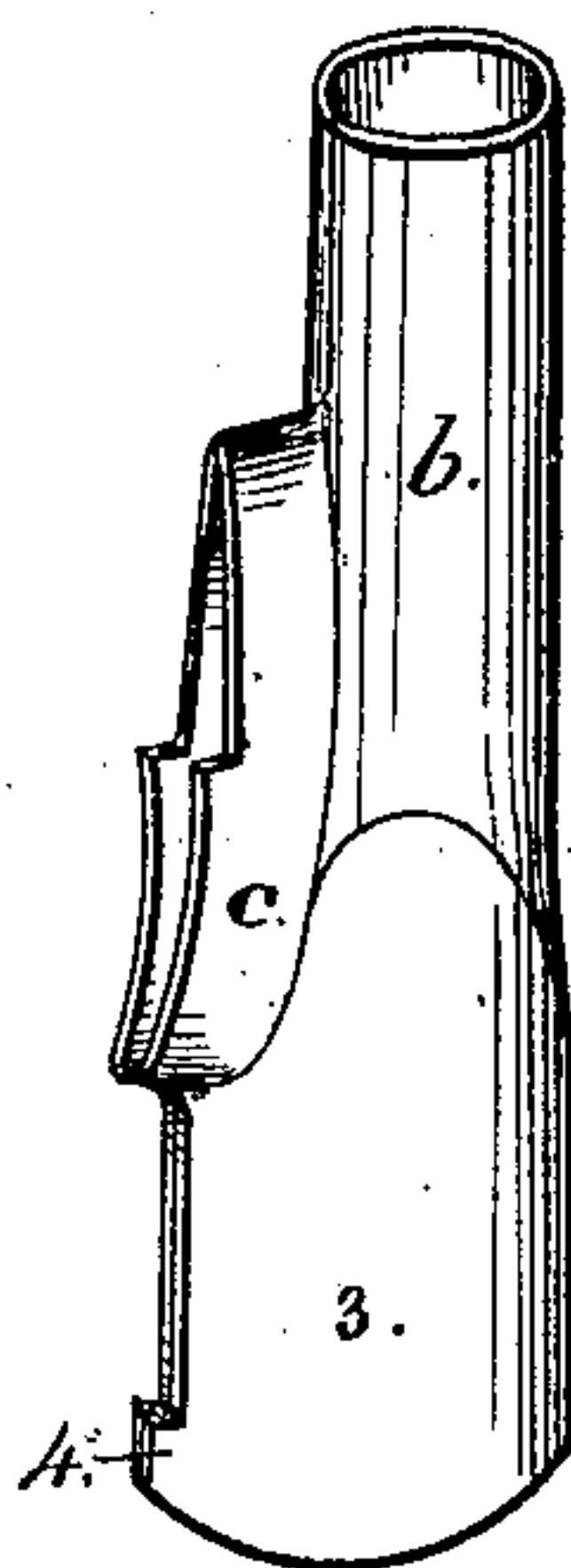
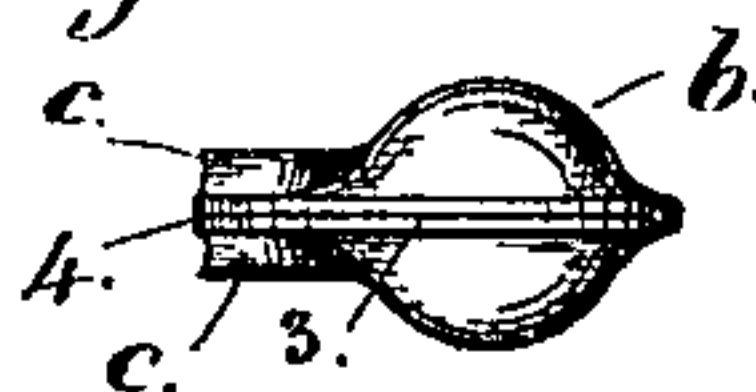


Fig. 5.



Witnesses

Chas. H. Smith  
J. Haily

Inventor

Thomas Hipwell  
per Lemuel W. Perrell



# UNITED STATES PATENT OFFICE.

THOMAS HIPWELL, OF NEW BRUNSWICK, NEW JERSEY, ASSIGNOR TO THE  
MANHATTAN BRASS COMPANY, OF NEW YORK, N. Y.

## ARGAND BURNER FOR LAMPS.

SPECIFICATION forming part of Letters Patent No. 250,918, dated December 13, 1881.

Application filed July 18, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS HIPWELL, of New Brunswick, in the county of Middlesex and State of New Jersey, have invented an Improvement in Argand Burners for Lamps, of which the following is a specification.

Argand lamps have been made with two wick-raising devices geared together. They have also been made with a wick-tube that is adapted to a folded wick that is spread into a cylindrical form after passing a lateral air-inlet, through which the air passes to the central air-tube.

My improvements are made for increasing the size of the wick-tube without enlarging the burner, so that the folded wick can be introduced more easily; also, for preventing injury to the shafts or bearings of the wick-raising wheels, and for allowing smaller wheels to be used, and for insuring a more uniform movement of the wick as it is raised or lowered.

In the drawings, Figure 1 is a vertical section of the burner complete. Fig. 2 is a sectional plan at the line *xx*. Fig. 3 is a perspective view of the air-tube separately; and Fig. 4 is a section of the burner with the cone, chimney-holder, and conical cap removed for giving access to the interior of the burner for cleaning the same.

The wick-tube *a* is round at the upper end, and it is slightly conical, the lower portion being the largest and nearly cylindrical in the middle, and the sides are flattened, as at 2 2, for a purpose hereinafter named.

The air-tube *b* is within the wick-tube *a*. It is formed of sheet metal. The upper end is cylindrical, and of a size to leave the proper space between the upper end of the wick-tube and said air-tube. The sheet metal of this air-tube is spread laterally to form an air-inlet, and there is a rim, *c*, that passes through the opening in the wick-tube *a*, and the parts are soldered together at this place. The lower end of this air-tube is closed by the sheet metal being folded tightly together, as at 3. This forms a central plate within the wick-tube, extending part of the way across and becoming a guide to the folded wick as it is entered into the wick-tube. At the bottom end of the folded sheet there is a projecting fin, 4, at each angle, and these fins

pass into a notch at the lower end of the wick-tube, directly below the lateral air-inlet opening. These fins serve to hold the folded lower ends of the air-tube together, and also steady the air-tube and cause it to retain the proper central position within the wick-tube. These parts being properly cut out by dies and bent up, the manufacture is facilitated, because it is only necessary to place the parts together and then solder them.

I pass the shafts *e* of the wick-raisers *i* through the wick-tube *a*, so that said shafts are inside of the wick-tube and are supported directly by such tube. This prevents the necessity of providing any other supports, prevents the shafts being bent by pressure of the wheels in the wick, and allows for the use of small wick-raising wheels *i*, so that the button or thumb-wheel *h* has more leverage in turning the wheels than heretofore. It is usual to make the shafts slightly polygonal, so that the wheels are properly attached by simply forcing the shaft through them, the friction and the slots in the wick-tube serving to keep the wheels in position endwise of the shafts. The gear-wheels *j* are employed to connect the two shafts together, so that both wick-raisers will be operated at the same time. The bottom end of the wick-tube passes through the burner-shell *k*, and is soldered. This shell is provided with the screw 6, by which it is connected to the collar of the reservoir, and the open-work portion 5 allows air to pass in freely. The top of the shell *k* forms a seat for a movable cap, *l*, that is conical in shape, with scalloped top edge, and perforations in the base at 7, through which air passes to the outside of the flame.

The removable chimney-holder *n* and cone *o* are connected together and rest upon the rim of the burner-shell *k*. The top of this cone *o* is formed with short springs or scallops, that rest against the outside of the wick-tube, and by which the parts are steadied; but the cone, chimney-holder, and chimney may be lifted off the burner or replaced, as desired. There are perforations at 9 through the cone for the passage of air to the exterior of the flame.

The conical cap *l* forms a cover to the ratchet and aids in keeping the burner clean; but, be-

ing removable, the burner-shell *k* can be cleaned out whenever necessary.

I am aware that wick-raising wheels have been employed in an Argand burner adjacent to a concave surface in the base of the air-tube. The lower end of my air-tube is flattened sidewise for the wheels to act at opposite sides.

I claim as my invention—

1. The combination, with the wick-tube in an Argand burner, of an air-tube having a circular upper end, a lateral air-inlet, with a rim, *c*, passing through the opening in the wick-tube, a flattened lower end, and the fins *4*, passing into the notch of the wick-tube, substantially as set forth.

2. The combination, in an Argand burner, of the central air-tube having a lateral inlet and

flattened lower end, a wick tube that is round at its upper end and its sides flattened near the lower end, wick-raising wheels in slots in the wick-tube, and shafts for said wheels passing through the wick-tube and bearing against the inner surfaces of the flattened portions of such wick-tube, substantially as specified.

3. In an Argand burner having a lateral air-inlet, the combination, with the burner-shell, of the movable conical cap *l* and the removable cone *o* and chimney-holder *n*, substantially as set forth.

Signed by me this 12th day of July, 1881.

THOMAS HIPWELL.

Witnesses:

R. TURNER,

THOMAS M. HADLEY.