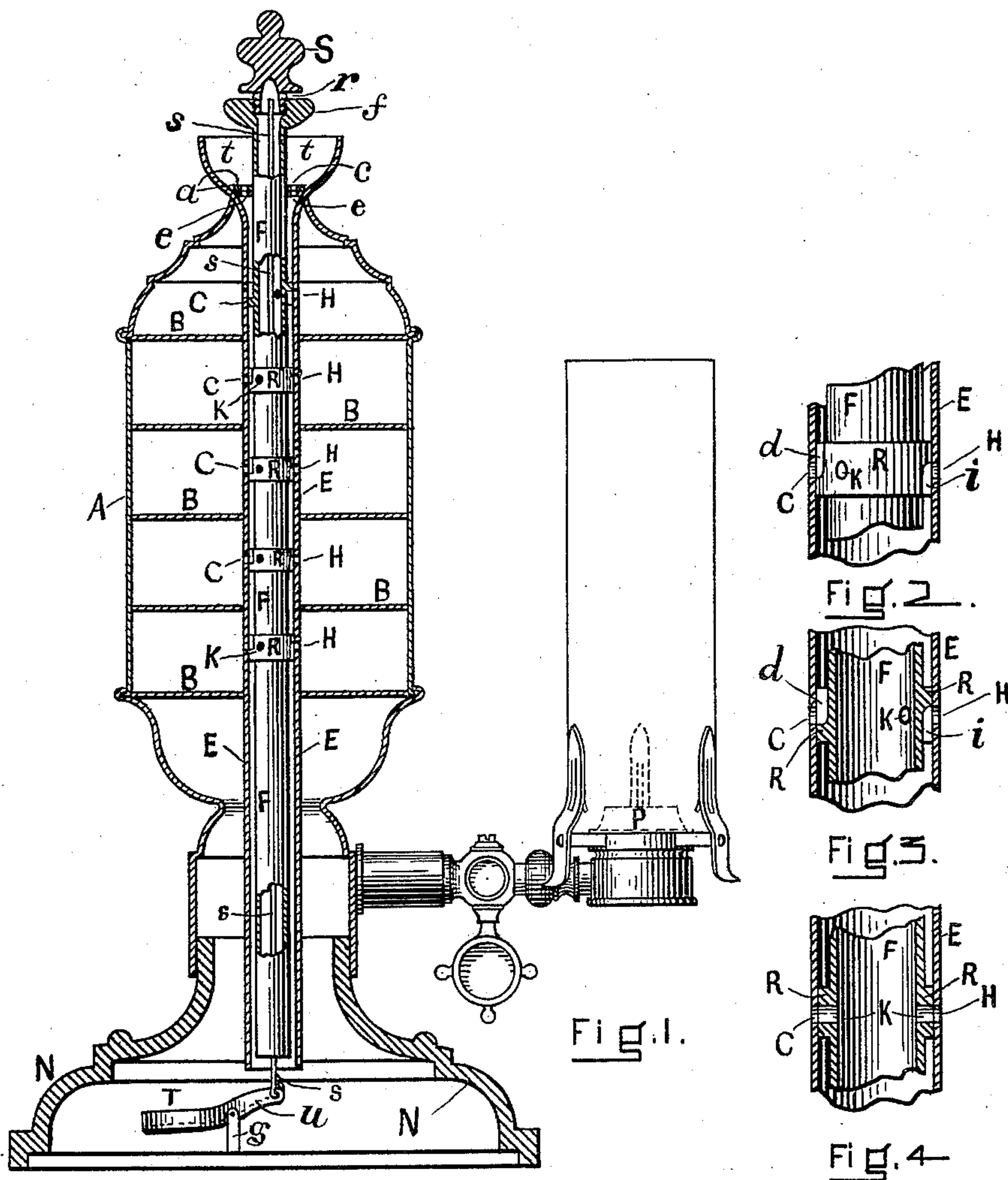


(No Model.)

W. W. AUSTIN.
CARBURETING LAMP.

No. 397,485.

Patented Feb. 12, 1889.



WITNESSES.

William H. Parry
E. G. Emanuel

INVENTOR.

William W. Austin.
By Sylvester Walker,
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM W. AUSTIN, OF LOWELL, MASSACHUSETTS.

CARBURETING-LAMP.

SPECIFICATION forming part of Letters Patent No. 397,485, dated February 12, 1889.

Application filed February 29, 1888. Serial No. 265,683. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. AUSTIN, of Lowell, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Carbureting-Lamps, of which the following is a specification:

The object of my invention is to remedy certain defects and objections found to exist in this class of lamps as heretofore constructed.

My invention relates to lamps for burning hydrocarbon vapors in which the liquid is contained in a series of shallow reservoirs placed one above the other, having the series connected together by a central air-tube and an inclosing filling-tube, each being provided with a series of holes or perforations, and the inner one adapted to be turned within the outer one, so as to partially or wholly close the holes or openings through which the air passes in taking up the vapor from the hydrocarbon oil, whereby the amount of air may be regulated in order to produce a steady light of uniform brilliancy at the burner; and my invention consists in the construction, combination, and arrangement of a series of rings or bands having openings extending from the top and bottom edges upon opposite sides thereof and holes or openings through the same and through the inner air-tube to which they are secured, so as to fit snugly within the outer tube and form a tight joint with the interior of said outer filling-tube, and are so located in relation to the holes in the outer tube that when turned or rotated the said holes may be brought to coincide therewith, or to partially or fully close the same, and that by a further rotation of the said inner tube the said openings extending from the top and bottom edges of the said rings may be brought opposite the said holes in the outer tube, so as to form a passage connecting the spaces thus formed between the outer and inner tubes when desired to introduce the hydrocarbon oil to the series of shallow reservoirs, as hereinafter described, and particularly set forth in the claim.

Figure 1 represents a vertical central sectional elevation of a vapor-lamp constructed according to my invention. Figs. 2, 3, and 4 represent sectional elevations of a portion of the tubes removed and drawn on an enlarged

scale, showing the different positions of the interior tube, with the outer one in section.

In the drawings, A represents the shell of the lamp, made of metal, and divided by a series of horizontal partitions, B, soldered or otherwise secured to the outer tube and shell, so as to form water-tight reservoirs for the hydrocarbon liquid. The outer tube, E, is provided with holes C and H on opposite sides thereof, which serve the purpose of filling, and also admit a current of air to be drawn from the inner tube, F, through the holes K, and which current passes outward at each reservoir from the top one to the bottom one, so that the surface of the hydrocarbon in each reservoir is uniformly or equally exposed to the action of the current of atmospheric air, which thus becomes charged with the vapor of the hydrocarbon, as hereinafter described, the inner tube being turned so as to admit the air through holes K.

The inner tube, F, is provided with a series of rings, bands, or projections, R, secured thereto at intervals corresponding in number to the reservoirs, and which fit closely within the outer tube, E, so that a narrow space is left between the said bands R, surrounding the inner tube, F, and the interior of the outer tube, E, as shown. The top of the inner tube, F, is closed by a screw-plug, S, provided with air-inlet holes *r*, and also the said vertical tube F is provided near its upper end with an annular horizontal flange, *a*, provided with filling-holes *c*, and having a bearing or seat on the top portion of the lamp, which is provided with corresponding filling-holes, *e*, and the said tube F is also provided with a projecting milled head, *f*, by which it may be turned to open and close the filling-holes *c*, which are surrounded by an upwardly-projecting cup or funnel, *t*, within which the hydrocarbon oil is turned to fill the series of shallow reservoirs beneath.

The hydrocarbon when poured into the funnel passes through the holes into the space between the two tubes E and F until it strikes the upper edge of the projection or upper ring, R, nearest the top of the lamp, and then into the opening *d* in the upper edge of the ring, and then passes outward through the hole C in the outer tube, E, into the top reservoir

until it is filled up to the opposite hole, H, which connects with the opening *i*, formed in the lower edge of the said ring R, thence into the second reservoir until it is partially filled
5 in like manner, and thus each reservoir becomes in succession filled up to the holes H until the bottom reservoir is reached, where any excess runs out and falls into the balance-cup T, which will tip with a few drops, it being pivoted between the vertical supports *g*,
10 and provided with a lever-arm, *u*, to the end of which is pivoted the vertical signal-wire *s*, which extends upward through the inner tube and terminates near the top of the same, as
15 shown, so as to indicate when all the reservoirs are filled by its upward movement when pouring in the oil or hydrocarbon liquid at the top, the screw-plug S being removed at the time, so as to permit the wire *s* to be seen.
20 The bottom portion, N, is made of transparent glass.

Having thus described my invention, what I claim is—

A vapor-lamp consisting of a shell, A, having a burner, P, and provided with a series of
25 partitions, B, and having a perforated filling-tube, E, provided with a perforated annular flange, *a*, an inner perforated air-tube, F, having a series of projections or rings, R, which
30 fit within the outer tube and are each provided with holes C and H and openings *d* and *i*, and the top having a screw-plug, S, the said air-tube being provided with an indicating-wire, *s*, connected to the arm of the pivoted balance-cup T, as shown and described.

WILLIAM W. AUSTIN.

Witnesses:

SYLVENUS WALKER,
WILLIAM H. PARRY.