(No Model.)

J. H. ROSS.

CONSTRUCTION OF OIL LAMPS.

No. 533,750. Patented Feb. 5, 1895.

Fig. 1.

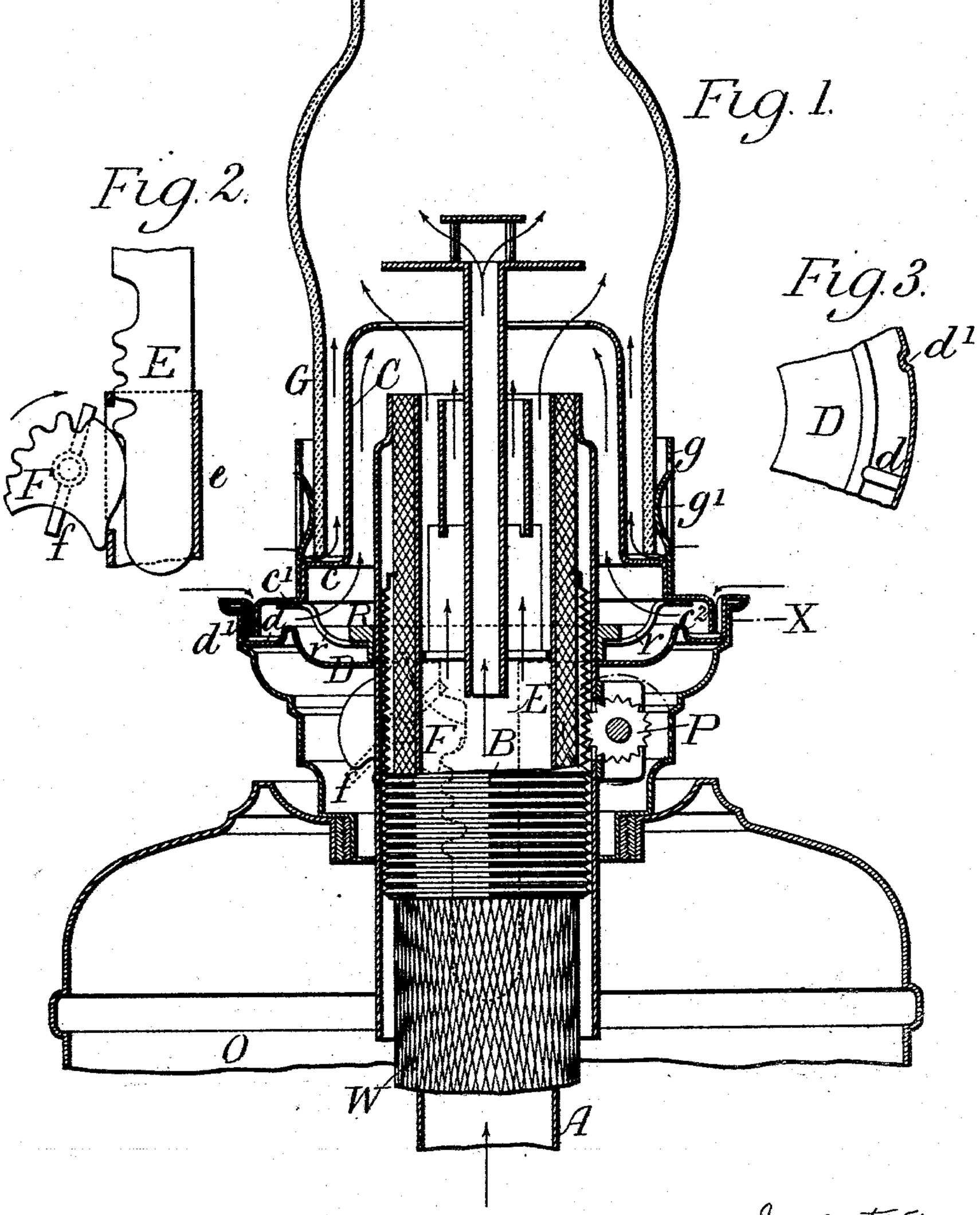

Fig. 2.

Fig. 3.

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UNITED STATES PATENT OFFICE.

JOHN HOWARD ROSS, OF BIRMINGHAM, ENGLAND, ASSIGNOR OF ONE-HALF TO GEORGE HOWARD CARTLAND, OF SAME PLACE.

CONSTRUCTION OF OIL-LAMPS.

SPECIFICATION forming part of Letters Patent No. 533,750, dated February 5, 1895.

Application filed May 12, 1894. Serial No. 511,051. (No model.) Patented in France April 24, 1894, No. 238,030; in Belgium April 25, 1894, No. 109,675; in Hungary May 26, 1894, No. 498, and in Austria May 31, 1894, No. 2,042/44.

To all whom it may concern:

Be it known that I, JOHN HOWARD ROSS, a citizen of England, residing at 171 Hockley, Birmingham, in the county of Warwick, England, have invented an Improved Construction of Oil-Lamps, (for which I have obtained Letters Patent in Austria, dated May 31, 1894, No. 2,042/44; in Hungary, dated May 26, 1894, No. 498; in France, dated April 24, 1894, No. 238,030, and in Belgium, dated April 25, 1894, No. 109,675,) of which the following is a specification.

My invention relates to an improved construction of oil lamps, having reference more particularly to novel means of raising and lowering the air cone and gallery, of admitting air to the interior of the air cone, and of raising and lowering the wick as I shall describe, referring to the accompanying drawings.

Figure 1 is a vertical section of the burner part of a lamp according to my invention. Fig. 2 is a side view of the appliance for raising and lowering the air cone, and Fig. 3 is a part plan at X of Fig. 1.

W is the wick surrounding the air tube A which extends as usual through the oil reservoir O and admits air under its bottom. The wick W is inclosed within a tube B, shown partly in elevation in Fig. 1, this tube having at its top claws projecting inwardly into the wick and being circularly grooved so that whatever side of it is turned toward the pinion P, that pinion, having its teeth engaged in the grooves of what may be termed a cylindrical rack, can always operate to raise or lower the tube B and the wick W. The tube B instead of being circularly grooved may be screw threaded.

The air cone C has an outwardly projecting step *c* on slightly raised ribs of which rests the lower edgs of the glass G the base of which is steadied in the gallery *g* by parts of the gallery inwardly punched, and constituting springs *g'*.

As indicated by the arrows, air enters the interior of the glass G by passing between the ribs under the edge of the glass above *c*. The air cone has another outwardly projecting step *c'* with its outer part c^2 turned vertically down so that its edge rests on ribs *d* slightly raised from the face of a disk D, which has also vertical ribs *d'* within which the lower part c^2 of the cone C is steadied. As indicated by the arrows air enters between the ribs *d'* and *d* under the edge of c^2 to supply the interior of the cone C. The disk D serves as a recipient of any trimmings of the wick or other dirt and can be cleared of these when the cone and glass are raised.

As the admission of air to the interior of the cone is by passing under the edge of c^2, there are no perforations such as are usually provided in lamps for ingress of air to the air cone and which are liable to be obstructed. The air, moreover, entering as it were, in a thin layer between the ribs, is very uniformly diffused without local currents. Obviously the cone C and glass G may be raised by hand and removed when it is desired to get access to the wick W for trimming or lighting.

As such lamps are frequently provided with means of raising and lowering the cone and glass by turning a knob or handle like that employed for raising and lowering the wick, I provide according to my present invention, an arrangement for this purpose so contrived that when the cone and glass are raised they are held up and can only be lowered by turning the handle. For this purpose I attach to a guide ring R, connected by bracket *r* to the step *c'* of the cone C, a rack E guided to slide vertically in a guide *e*, and to this rack I gear a pinion F which can be turned by an external handle *f*.

In Fig. 2 the rack E is shown in its raised position, in which position it is held because its lowest tooth bears upon a circular part of the pinion F. Thus the cone, gallery and glass when raised cannot drop until the pinion is turned; but when the pinion F is turned in the direction of the arrow, the lowest tooth of the rack enters into engagement with the teeth of the pinion and the rack is lowered. When it is in the lowered position as indicated by the dotted lines in Fig. 1 the last tooth of the pinion is engaged in a wide gap of the rack and is so shaped that it holds the rack down so that it can only be raised by turning the pinion.

Having thus described the nature of this invention and the best means I know of carrying the same into practical effect, I claim—

1. In a lamp burner the combination with the base thereof adapted to be secured to a lamp, of an air tube passing centrally through said burner, a wick-tube, means for raising and lowering the same, a disk D secured to the upper edge of the base and provided with raised ribs *d*, *d'* an air cone C resting on the ribs *d*, and provided with outwardly projecting steps *c*, *c'* one of which is provided with raised ribs upon which a globe G, rests, and a gallery *g*, secured to the cone and provided with integral springs *g'*, adapted to retain said globe in position, substantially as described.

2. In a lamp burner, the combination with the base thereof, of an air-tube passing centrally through the same, a wick-tube, with means for raising and lowering the same, a disk D secured to the upper edge of the base and provided with raised ribs *d*, *d'*, an air cone C resting on the ribs *d*, and provided with outwardly projecting steps *c c'*, one of which is provided with raised ribs upon which a globe G rests, a gallery *g*, secured to the cone and provided with integral springs *g'*, adapted to retain said globe, and means for raising and lowering the cone, globe, and gallery, said means consisting of a guide-ring R secured to the step *c'* by a bracket *r*, a guide *e*, a rack E, secured to the guide-ring and adapted to slide in said guide, and a pinion F, provided with a handle *f*, said pinion meshing with the rack, as and for the purpose described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 28th day of April, A. D. 1894.

JOHN HOWARD ROSS.

Witnesses:

REGINALD TREW MORGAN,

SYDNEY E. HARRIS.