

A. RINCKLAKE.
Lamp.

No. 222,737.

Patented Dec. 16, 1879.

Fig: 1.

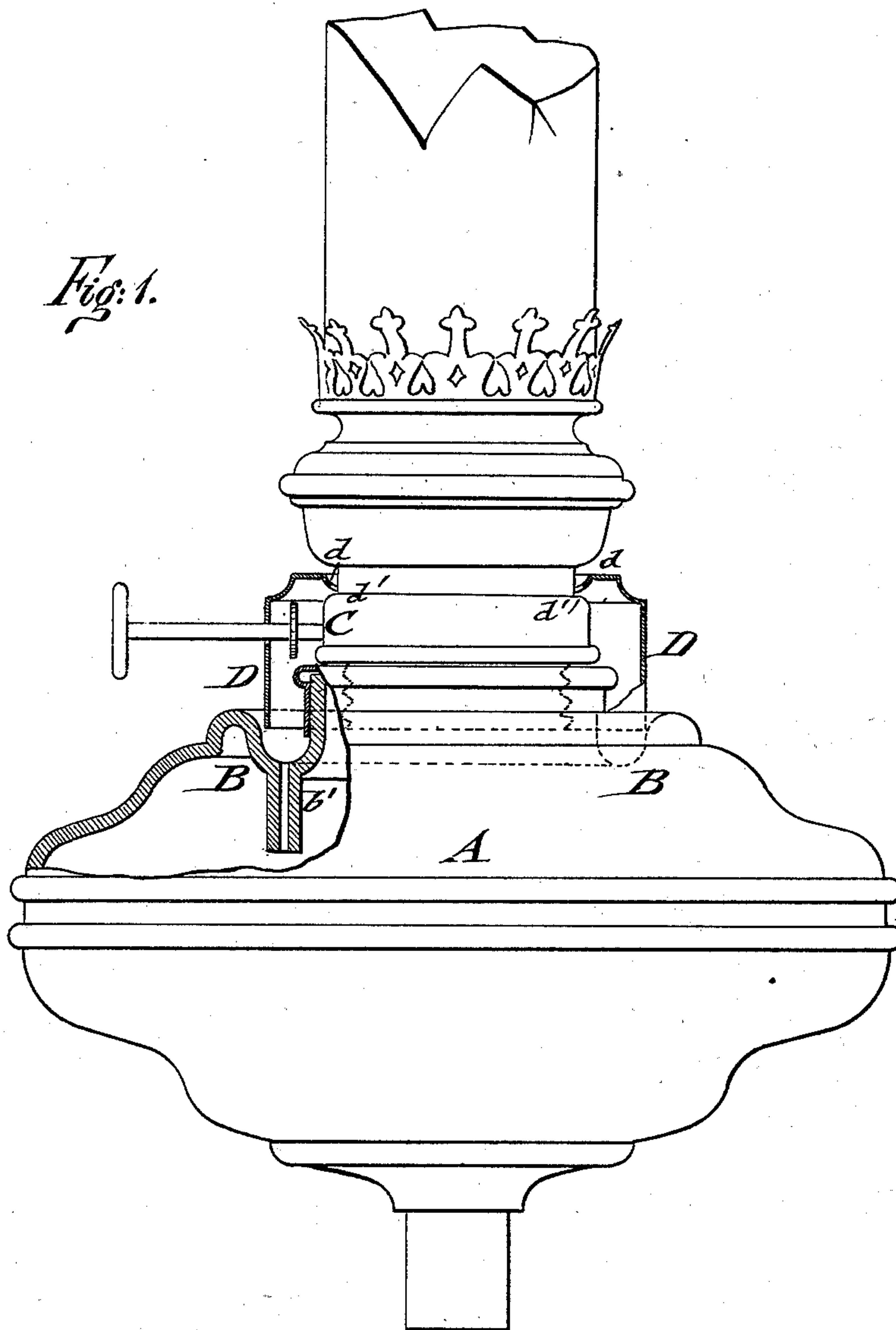
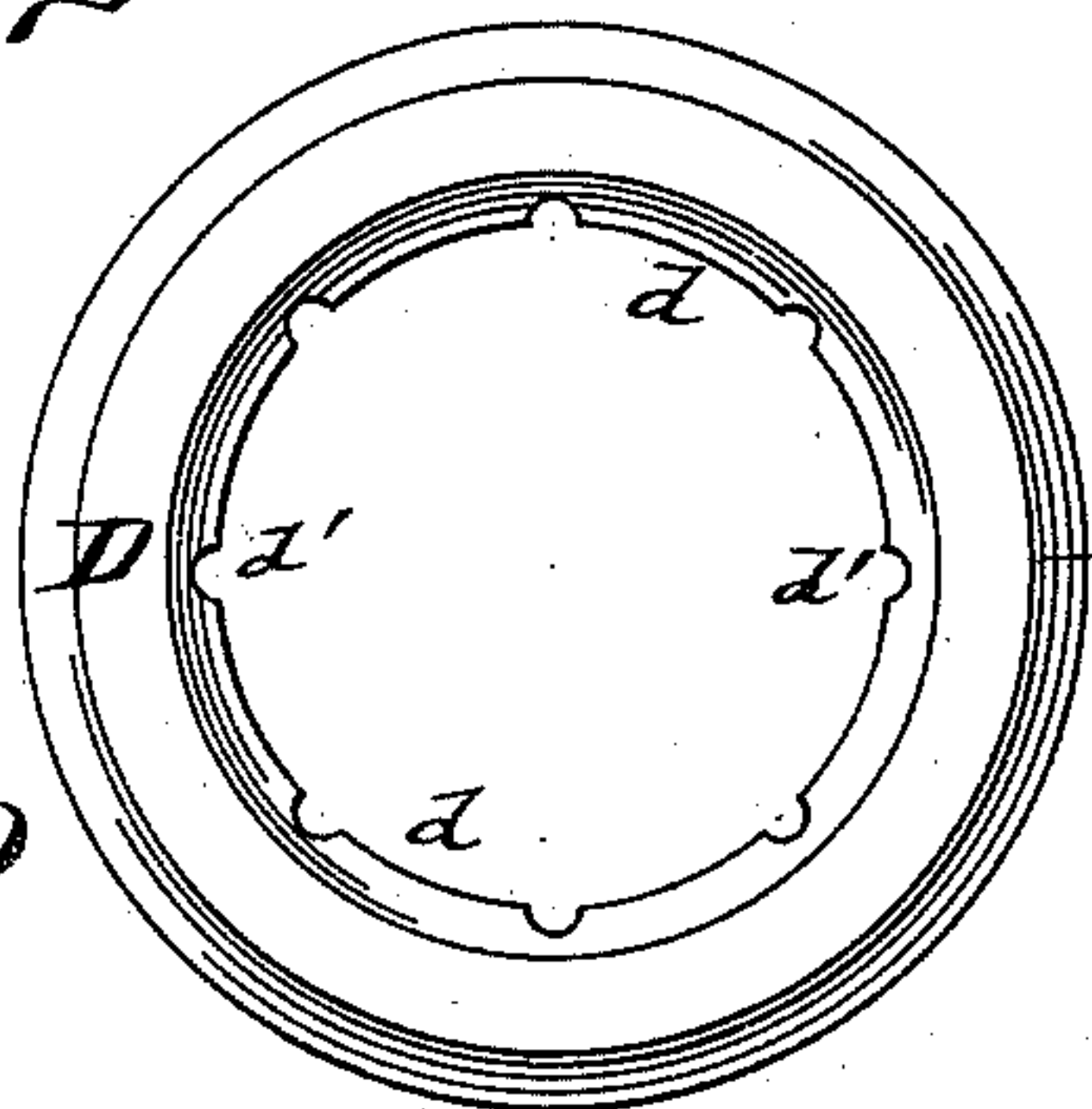


Fig: 2.



Witnesses:

Carl Karp.
Otto Pisch.

Inventor:

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by Paul Goepel.
Attorney

UNITED STATES PATENT OFFICE.

AUGUST RINCKLAKE, OF BRUNSWICK, GERMANY.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **222,737**, dated December 16, 1879; application filed July 28, 1879.

To all whom it may concern:

Be it known that I, AUGUST RINCKLAKE, of Brunswick, in the Empire of Germany, have invented certain new and useful Improvements in Lamps, of which the following is a full and complete specification, reference being had to the accompanying drawings, in which—

Figure 1 represents an elevation, partly in section, of my improved lamp; and Fig. 2, a top view of the vapor-cap of the same.

Similar letters of reference indicate corresponding parts.

The object of this invention is to so improve the petroleum-lamps in general use that the so-called "sweating" of the same is entirely prevented. This sweating of the lamps is caused, first, by the leakage of oil through the cement joint between the neck of the lamp-bowl and the collar into which the burner is screwed; second, by the capillary action which takes place around the threaded portion of the burner which is screwed into the collar; and, third, by the passage of oil from the wick to the spur-wheels, and then along the shaft of the same to the hand-wheel by which the wick is adjusted, and from which it drips down onto the bowl. Besides these causes, there is also a constant overflowing of petroleum at the top of the burner, arising from the capillary action of the wick.

To obviate these various causes of the sweating of lamps, the lamp-bowl is provided, first, with an annular gutter or drain, by which the oil is prevented from spreading over the surface of the bowl, and conducted by openings in the bottom of the gutter, said openings having downwardly-extending tubes back into the bowl. The shaft of the wick-adjusting spur-wheels is next provided with a drip-disk, that is arranged outside of the burner proper and placed vertically above the gutter; and, lastly, an annular vapor-cap that encircles the burner, drip-disk, and gutter, and by which the oil-vapors are condensed and the drippings conducted back into the bowl.

In the drawings, A represents a lamp-bowl, which is provided with an annular gutter or drain, B, that extends at the upper part thereof around the neck of the bowl. This gutter may be blown into the bowl when the same is of glass or similar material, or spun in situa-

ble manner into the bowl when the same is of sheet metal.

At the bottom of the gutter B are arranged one or more openings, *b'*, by which the drippings that are collected in the gutter may be returned to the interior of the bowl. The opening or openings are provided with downwardly-extending narrow tubes *b'*, in which, owing to their capillary action, always a small quantity of oil is retained. This oil prevents the passage of the vapors that collect in the upper part of the bowl to the outside. In other words, the oil forms a reliable vapor-seal. This gutter catches, in the first place, all the oil which makes its way through the cement joint of the neck of the bowl and the collar, also that which passes by capillary action between the screw end of the burner and collar, and, finally, that which runs over the top of the burner.

The shaft of the spur-wheels by which the wick is raised or lowered is provided with a drip-disk, C, vertically above the gutter B. This drip-disk returns the oil that passes from the wick to the spur-wheels, and then along the shaft to the outside, back to the gutter, and thence into the bowl.

A vapor-cap, D, extends concentrically to the neck of the bowl, and is fitted to the exterior part of the gutter and to the lower part of the burner above the drip-disk, it being preferably slotted at the side for the spur-wheel shaft, so as to be readily removed for cleaning when the burner is unscrewed from the bowl. The vapor-cap D is fitted by an annular rim, *d*, around the burner, the rim having notches *d'*, for admitting the passage of drip-oil from the exterior of the burner and along the collar to the gutter and bowl.

As the gutter forms a kind of fence or barrier that encircles the burner and neck of the bowl, it prevents the oil from spreading over the outer surface of the bowl. This gutter forms, therefore, the essential feature of my invention, to which the drip-disk and vapor-cap are the necessary accessories. By these simple additions an effective remedy for one of the most disagreeable and annoying features of petroleum-lamps is provided, and thereby their cleanliness and their more general application are considerably promoted.

I am aware that lamp-bowls with collecting-gutters around the neck of the bowl are old. I am also aware that lamp-bowls with gutters having discharge-openings have been used; but neither construction prevents the sweating of the lamp-bowls, the latter even increasing it, as the vapors pass freely to the outside and are condensed on the outer surface of the bowls.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A lamp-bowl provided with an annular gutter or drain around the neck of the bowl, the gutter having one or more discharge-openings, and a downwardly-extending tube or tubes, which conduct the oil collected in the gutter to the inside of the bowl, and form a vapor-seat for the bowl, substantially as described.

2. The combination of a lamp-bowl having an annular gutter or drain and a downwardly-extending discharge tube or tubes with a drip-

disk arranged outside of the burner on the spur-wheel shaft and vertically above the gutter, substantially as set forth.

3. The combination of a lamp-bowl having an annular gutter or drain and a downwardly-extending discharge tube or tubes with a burner-encircling vapor-cap that is fitted to the outer circumference of the gutter, substantially as specified.

4. The combination of a lamp-bowl having an annular gutter or drain and a downwardly-extending discharge tube or tubes with a drip-disk that is arranged outside of the burner on the spur-wheel shaft, and with a vapor-cap which is fitted around the burner and adapted to inclose drip-disk and gutter, as set forth.

In testimony that I claim the foregoing I hereunto set my hand.

Brunswick, April 5, 1879.

AUG. RINCKLAKE.

Witnesses:

WILLIAMS C. FOX,

JOHS. KRACKE.