

G. C. Merrill,

Lantern.

No. 46,010.

Patented Jan. 24, 1865.

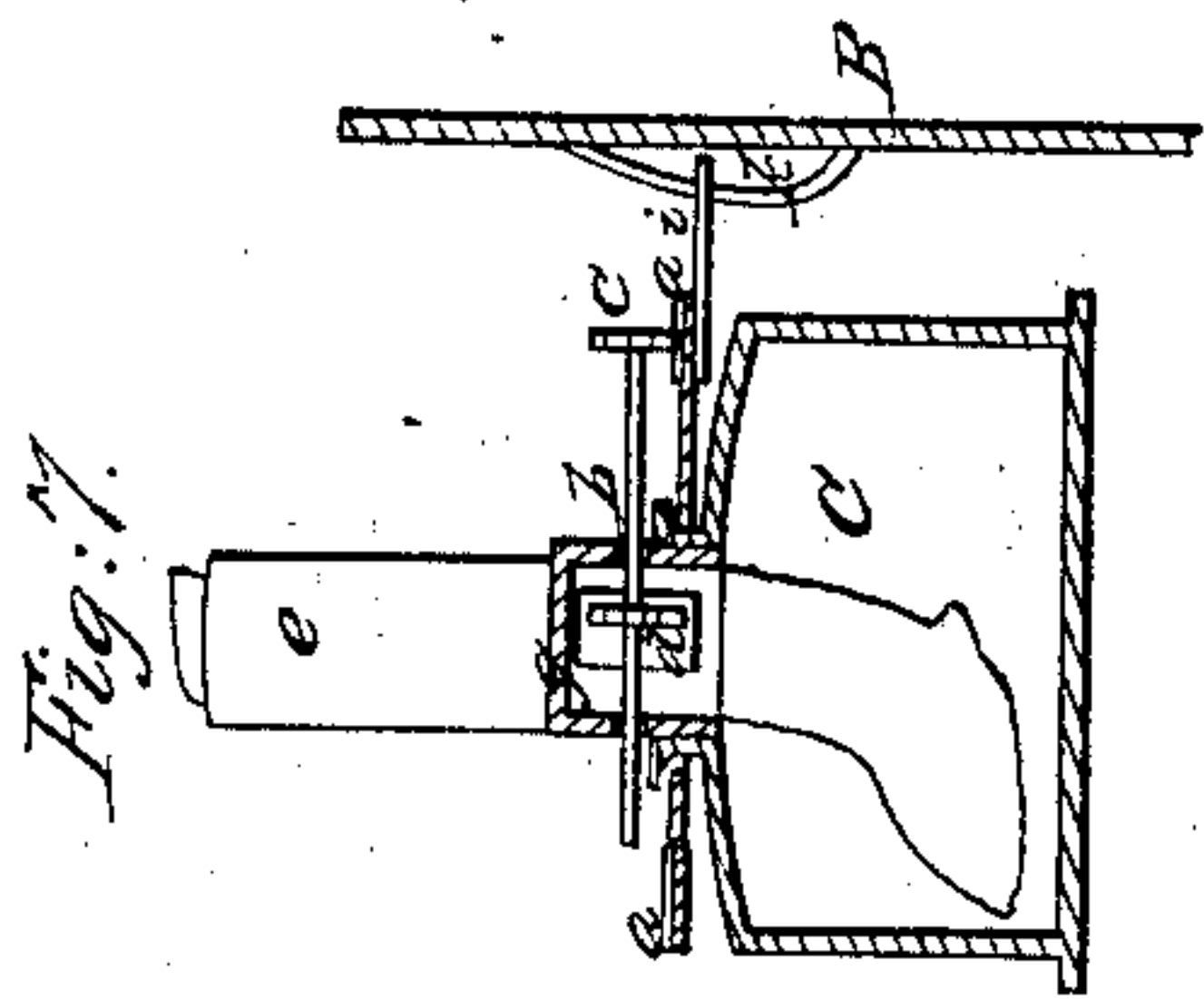


Fig. 6.

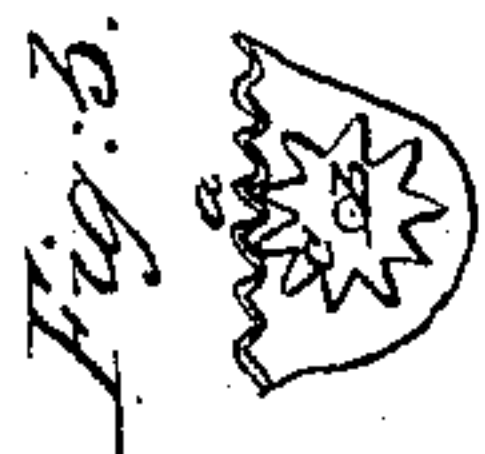
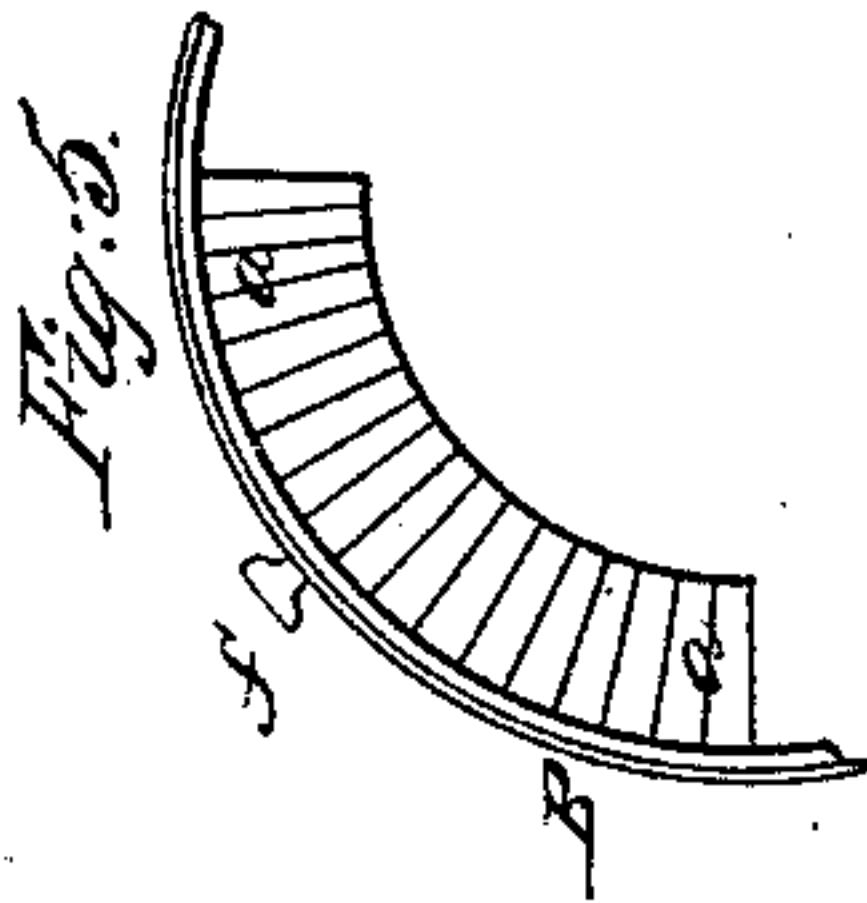
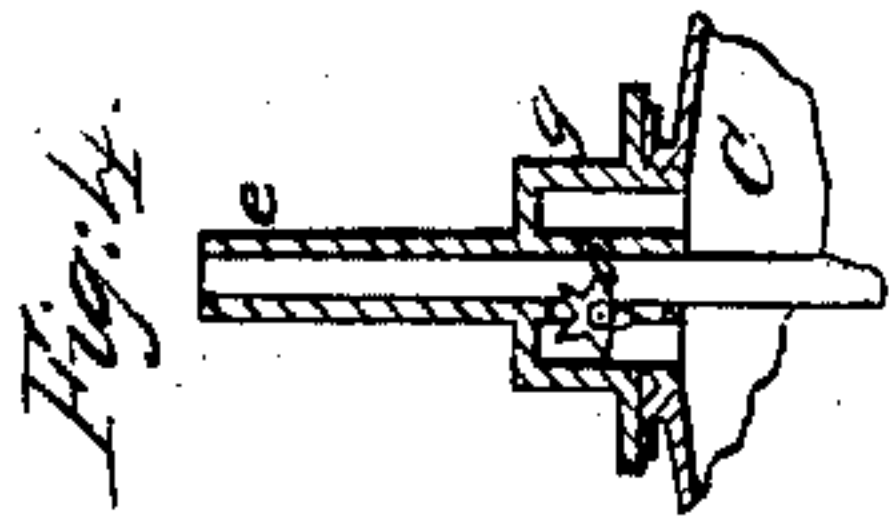
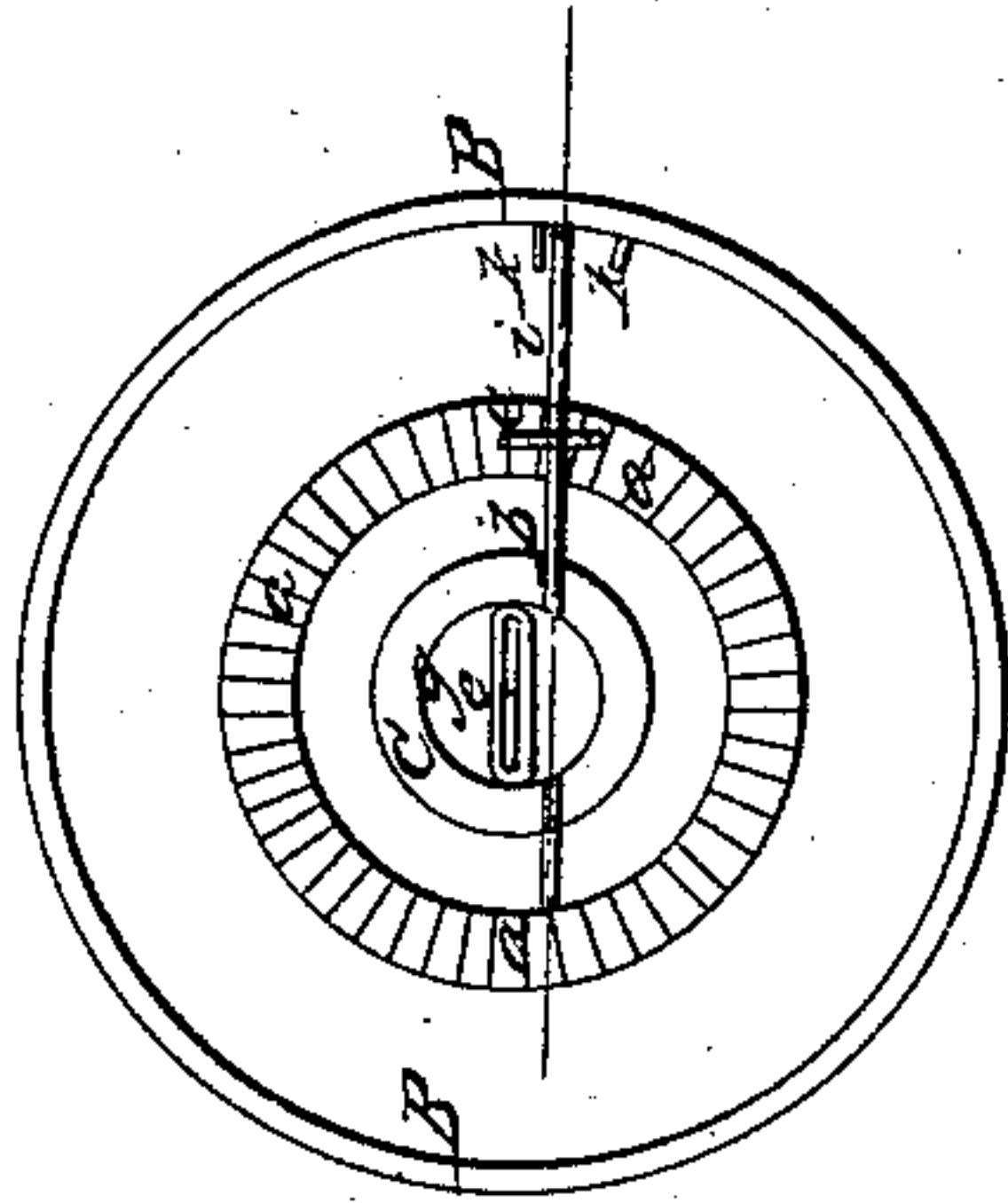


Fig. 2.

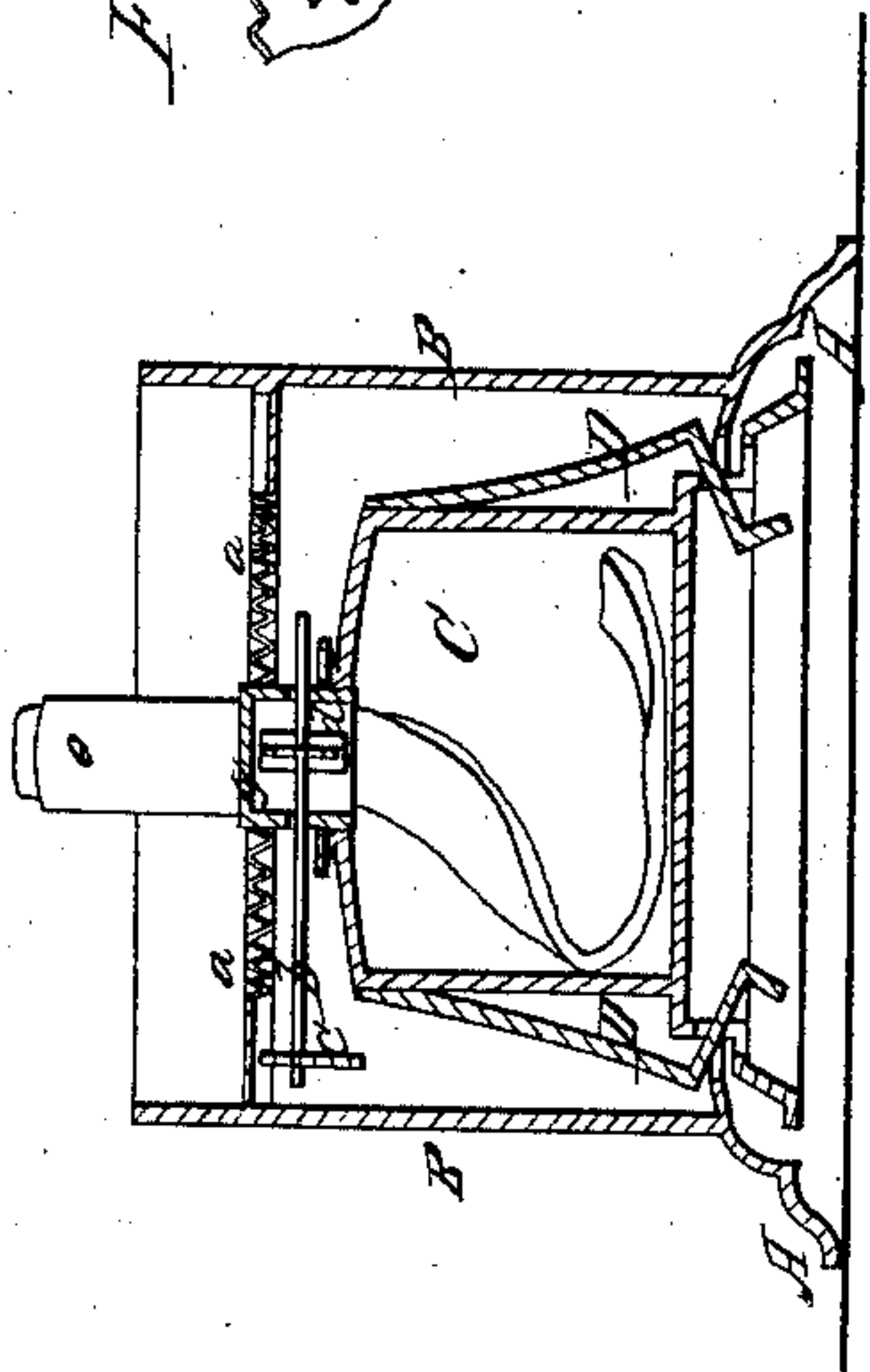
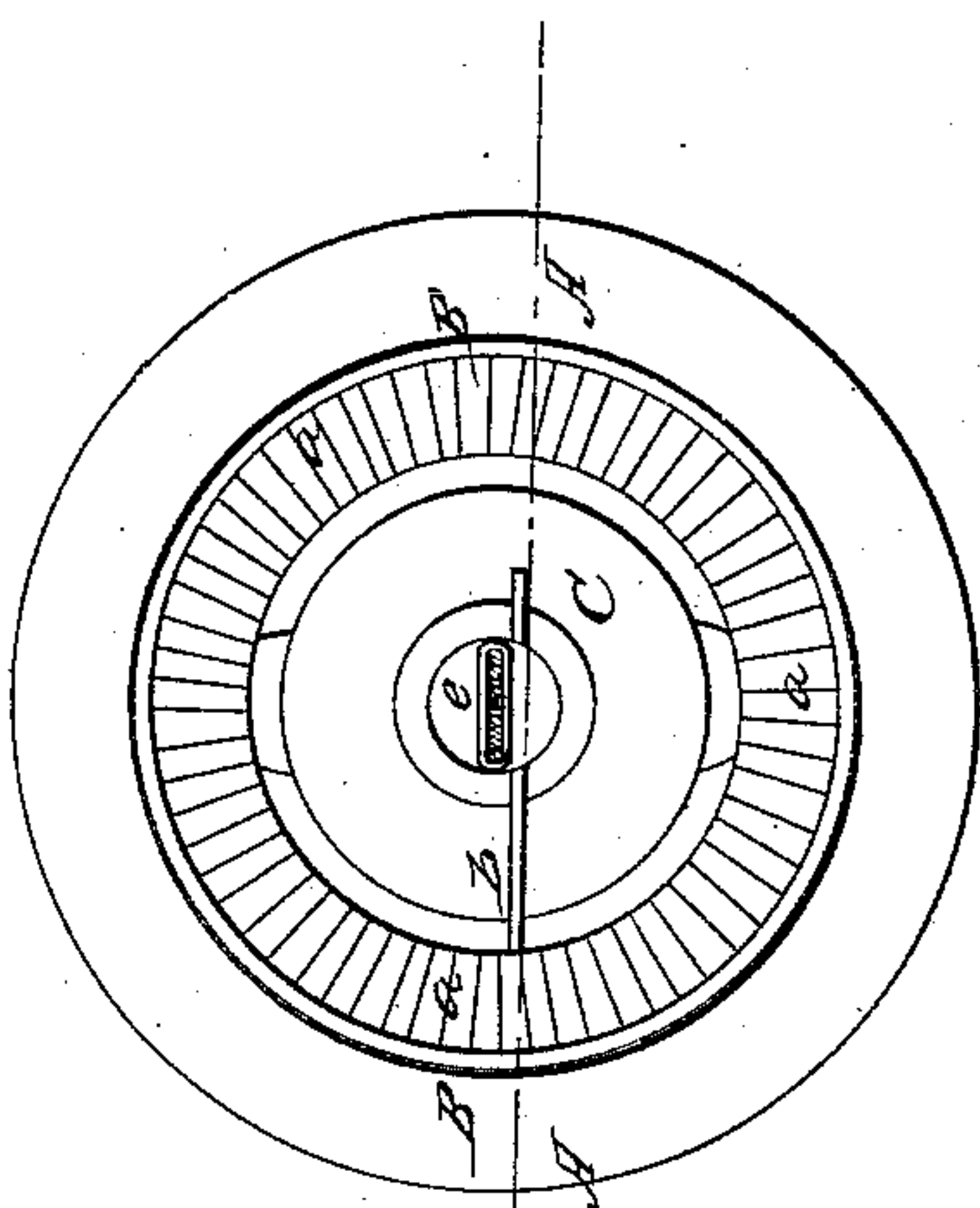


Fig. 1.



Inventor:

George C. Merrill

Witnesses:  
L. L. Bond  
George W. Gray

# UNITED STATES PATENT OFFICE.

GEORGE C. MERRILL, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN LANTERNS.

Specification forming part of Letters Patent No. 46,010, dated January 24, 1865; antedated January 14, 1865.

*To all whom it may concern:*

Be it known that I, GEORGE C. MERRILL, of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Lanterns; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a top view of the lantern-base without a globe; Fig. 2, a vertical section of the same; Fig. 3, a detached portion of the circular rack or corrugated disk, showing the operation of the pinion; Fig. 4, a vertical section of the wick-tube and collar; Fig. 5, a segment rack or disk; Fig. 6, a top view of the lantern-base with the rack or disk attached to the oil-cup; Fig. 7, a vertical section of the base shown at Fig. 6.

Like letters refer to similar parts in all of the drawings.

The nature and object of my invention consists in providing a lantern-base with a circular rack or corrugated disk, attached either to the base of the lantern or to the oil-cup, so as to operate the wick-ratchet, which is provided with a pinion or friction-roller, and raise or lower the wick by revolving the oil-cup or lantern without removing the oil-cup from the lantern.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct my lantern in any of the known forms, except that the oil-cup or lower base, where the lower metallic portion of the lantern is made in two parts, must be made or so attached or connected as to admit of at least a partial rotary movement. The oil-cup C may be made in any of the known forms, also the wick-tube *e* and that portion of the wick-ratchet *d* which comes in immediate contact with the wick.

In the form shown at Figs. 1 and 2, the shaft of the wick-ratchet, *b*, is elongated and brought out nearly to the perpendicular portion of the base B. On the outer end of this shaft I attach a pinion, *c*, instead of the ordinary button. Immediately over this pinion, and so as to come in contact with it, I attach to the base B a circular rack or corrugated

disk, *a*, so made that the teeth or corrugations will fit the teeth in the pinion *c*, so that by turning the oil-cup or upper portion of the base, where the lower is stationary, the wick can be raised or lowered without the cup being removed.

The shaft *b* should not be so far extended as to come in contact with the inner portion of the flange A, upon which the springs D rest when the oil-cup C is inserted into the lantern.

If, from the peculiar construction of the oil-cup and lantern-base, or for any other cause, it should not be desirable or practicable to use a full rack or disk, a segment may be used, as shown at Fig. 5, and where the double base or base and oil-cup are so connected that a rotary movement cannot be given to either, I then attach the rack, disk, or segment by a groove or other support, so that it can be operated by a button, *f*, on the outside, (see Fig. 5,) which is attached to the rack or disk and passes through a horizontal slot in the base B, so that by moving this button the rack, disk, or segment is moved and a rotary motion communicated to the pinion *c* and the wick-ratchet *d*, whereby the wick is raised or lowered, according to the direction in which the button *f* is moved. In adjusting the wick by the rotary motion it will of course make no difference in the operation or effect whether the oil-cup or the lantern-base is moved, provided one or the other remains stationary, or nearly so.

A modification of my invention is shown at Figs. 6 and 7. There the rack or disk *a* is made by placing a circular piece of metal or other suitable material on the top of the oil-cup and between it and the collar *g* of the wick-tube, with the collar for its axis. On the outer edge of this disk corrugations or teeth are made to fit the pinion *c*, which in this case is placed above the rack or disk, and the pinion-shaft *b* is not elongated, but the whole is brought within the dimension of the oil-cup. In order to prevent the disk from rotating within the cup or lantern-base, I attach to it a pin, *i*, which extends outward to the base of the lantern B. When the cup is inserted into the lantern, the pin *i* is placed in a loop, *k*, of which there may be one or more, or they may be simple protuberances of any form which



will prevent turning. This form will operate nearly, if not quite, as well as the other. I do not confine myself in either case to teeth or corrugations, as my device can be operated with a plain disk and friction-roller. The whole, when complete and attached to a coal or carbon oil burning or other lantern or lamp, forms a cheap, desirable, and effective device for regulating the wick without removing the oil-cup.

Having thus fully described my improvements, what I claim as my invention, and desire to secure by Letters Patent, is—

1. Operating the wick-ratchet in a lantern or lamp by a rotary motion of the oil cup or lantern.

2. Operating the wick ratchet by the rotary motion of a rack or disk.

3. The circular rack or disk *a*, when used for the purpose of operating a lantern-wick ratchet.

4. The rack or disk *a*, in combination with the pinion *c* and wick-ratchet *d*.

5. The combination of the rack or disk *a*, the pinion *c*, and ratchet *d* with the oil-cup *C* and base *B*, all being constructed and operating substantially as set forth and specified.

GEORGE C. MERRILL.

Witnesses:

L. L. BOND,

C. D. WOLF.