

(No Model.)

T. LANGSTON.  
LANTERN.

No. 283,258.

Patented Aug. 14, 1883.

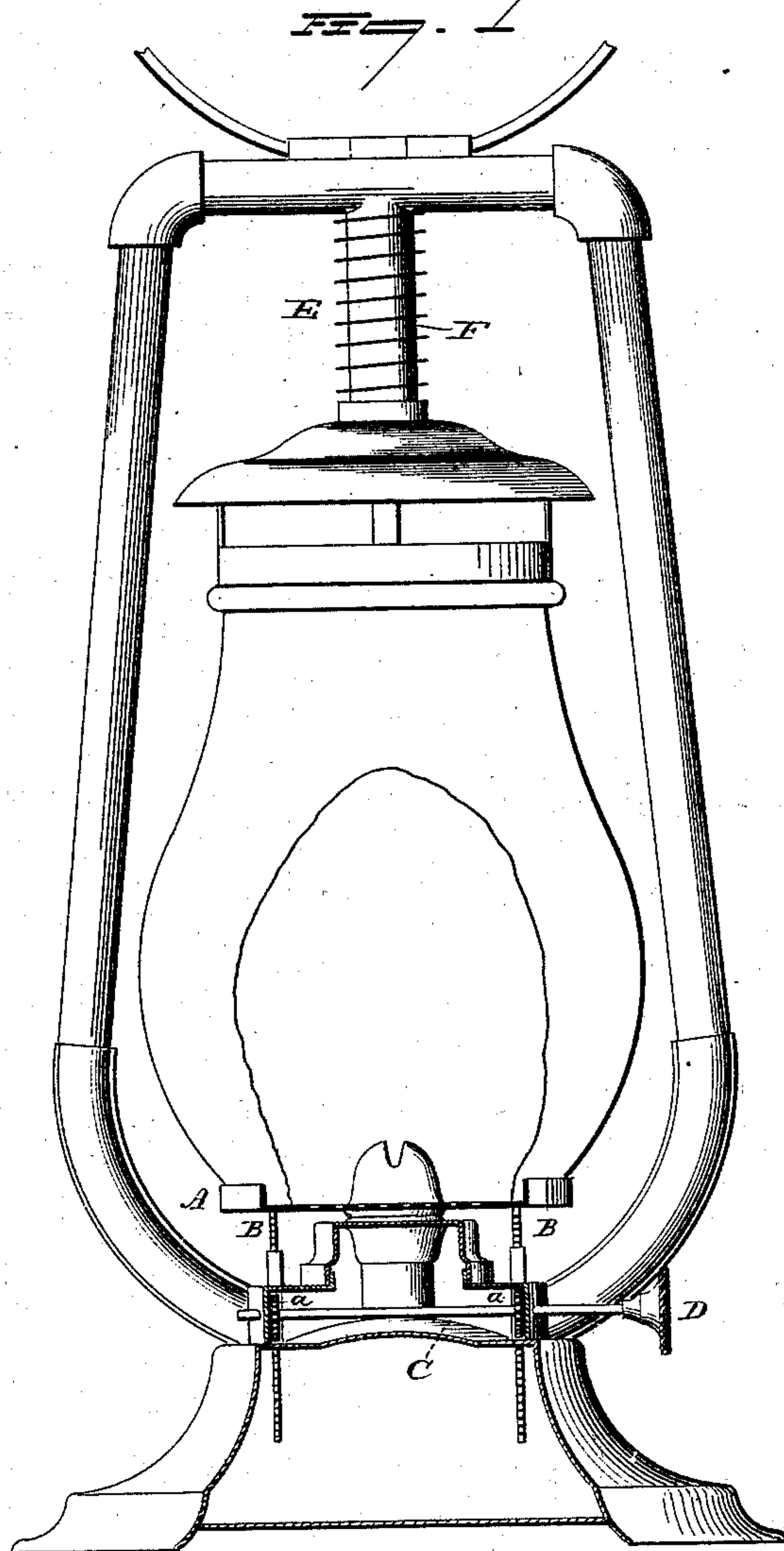


FIG. 2

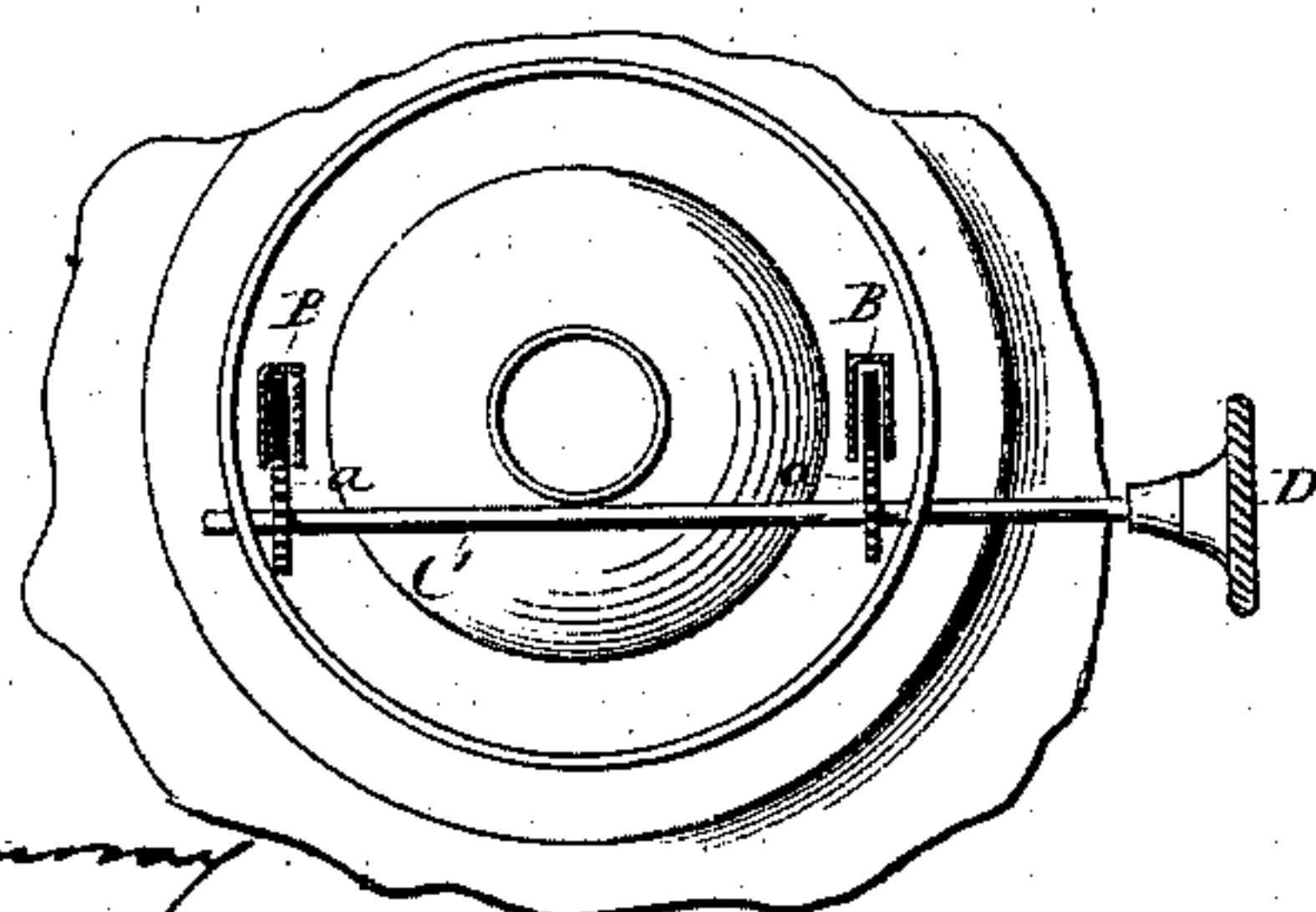
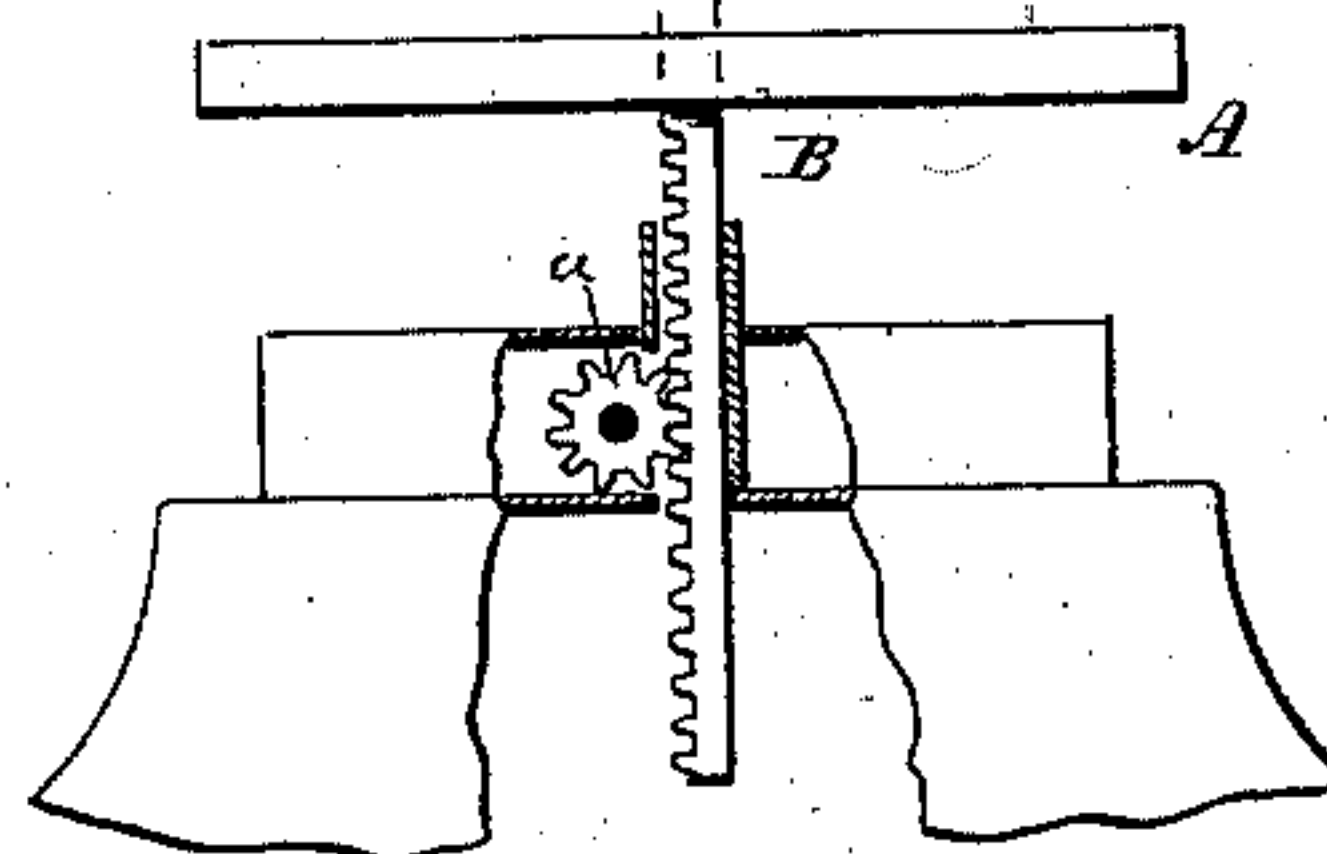


FIG. 3



Witnesses,  
*J. N. Shumway*  
*J. C. Earle*

*Thomas Langston*  
Inventor  
*J. C. Earle*



# UNITED STATES PATENT OFFICE.

THOMAS LANGSTON, OF MERIDEN, CONNECTICUT, ASSIGNOR TO EDW. MILLER & CO., OF SAME PLACE.

## LANTERN.

SPECIFICATION forming part of Letters Patent No. 283,258, dated August 14, 1883.

Application filed July 5, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS LANGSTON, of Meriden, in the county of New Haven and State of Connecticut, have invented a new Improvement in Lanterns; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which  
10 said drawings constitute part of this specification, and represent, in—

Figure 1, a vertical section taken in front of the pinions; Fig. 2, a horizontal section above the pinions; Fig. 3, a sectional side view, showing the rack and pinions.  
15

This invention relates to an improvement in that class of lanterns in which the globe is arranged to be moved upward to expose the wick for lighting or trimming and then returned  
20 without necessarily taking the globe from its support. Various devices have been constructed for this purpose—such, for illustration, as in Patent No. 86,549, in which the upper holder for the globe is arranged to slide  
25 on a vertical tube and be held by suitable catches in its elevated position, and when released from such catches a spring is applied to force the globe downward and hold it when in its down position. In such case—the sudden  
30 or accidental releasing of the catch—the spring instantly acts with force to throw the globe down, sufficient frequently to break the globe, so that great care is required in the use of such an arrangement. Other devices have  
35 been constructed for this purpose; but all are subject to the same accidents.

The object of my invention is to construct the lantern with a mechanical lift for the globe, whereby such accidents will be avoided; and  
40 it consists in arranging the lower globe-holder upon vertical racks extending downward into connection with corresponding pinions upon a shaft, the said shaft provided with means for turning it, and whereby such turning of the  
45 shaft in one direction will impart a forced vertical movement to the globe-holder, or turned in the opposite direction will impart reverse movement to the holder, as more fully hereinafter described.

In illustrating my invention I show it as applied to a lantern like that in Patent No. 86,549, it being understood, however, that I do this only as a matter of convenience of illustration, inasmuch as any suitable support for the upper end of the globe, whereby that  
50 end may be permitted to rise or fall, will employ my invention equally as well.

A is the lower globe-holder, from which two vertical toothed racks, B, extend downward, made fast to the holder. Within the base, or  
60 at any convenient position, I arrange a horizontal shaft, C, in suitable bearings, and provide it at its outer end with a knob, D, or other convenient means for turning the shaft. On this shaft are two pinions, *a a*, corresponding,  
65 respectively, to the two racks B B, and working therein, and so that by turning the shaft in one direction the holder A is raised, as seen in broken lines, or in the opposite direction the holder will be lowered. This mechanical  
70 engagement of the racks and pinions makes the vertical movement of the globe positive and even. The racks serve also as guides to insure the constant proper relative position of the bottom of the globe to the lamp and avoid  
75 the necessity of fastening the globe in either its up or down position, the racks and pinions easily supporting the globe at any point between the two extremes wherever the turning of the shaft may happen to cease.  
80

I have represented the globe-holder as a common perforated plate; but this holder may be independent of the plate, or the plate may be dispensed with entirely, it only being essential to my invention that there shall be a  
85 holder for the base of the globe, to which the racks may be attached.

A spring, E, is arranged around a central support or guide, F, at the top, to bear upon the upper globe-holder; but this spring is not  
90 essential, as the upper holder may be secured to the neck of the globe, and the lower end of the globe secured to the lower holder. In that case, the parts being held together, the racks will perform the holding up or down, or wherever the globe may stand; but a spring at the  
95 top is desirable, as is also a guide for the vertical movement of the globe; but the vertical



guide may be any of the usual constructions, or the spring applied in any convenient manner.

I claim—

5 1. In a lantern in which the globe is supported upon a holder at the bottom, the said holder constructed with vertical toothed racks B, combined with a horizontal shaft, C, and corresponding pinions, *a a*, arranged in bearings, substantially as and for the purpose described.

10 2. In a lantern, the combination of a guide for the vertical movement of the upper end of the globe, a globe-holder for the lower end of the globe, the said lower globe-holder pro-

vided with vertical toothed racks B B, combined with a horizontal shaft and corresponding toothed pinions, *a a*, substantially as described.

3. In a lantern, the combination of a vertical guide for the upper end of the globe, a spring the action of which is to force the globe downward, the lower globe-holder provided with vertical racks B B, combined with a horizontal shaft, C, carrying corresponding pinions, *a a*, substantially as described.

THOMAS LANGSTON.

Witnesses:

BENJ. C. KENNARD,  
LEWIS E. FROST.