

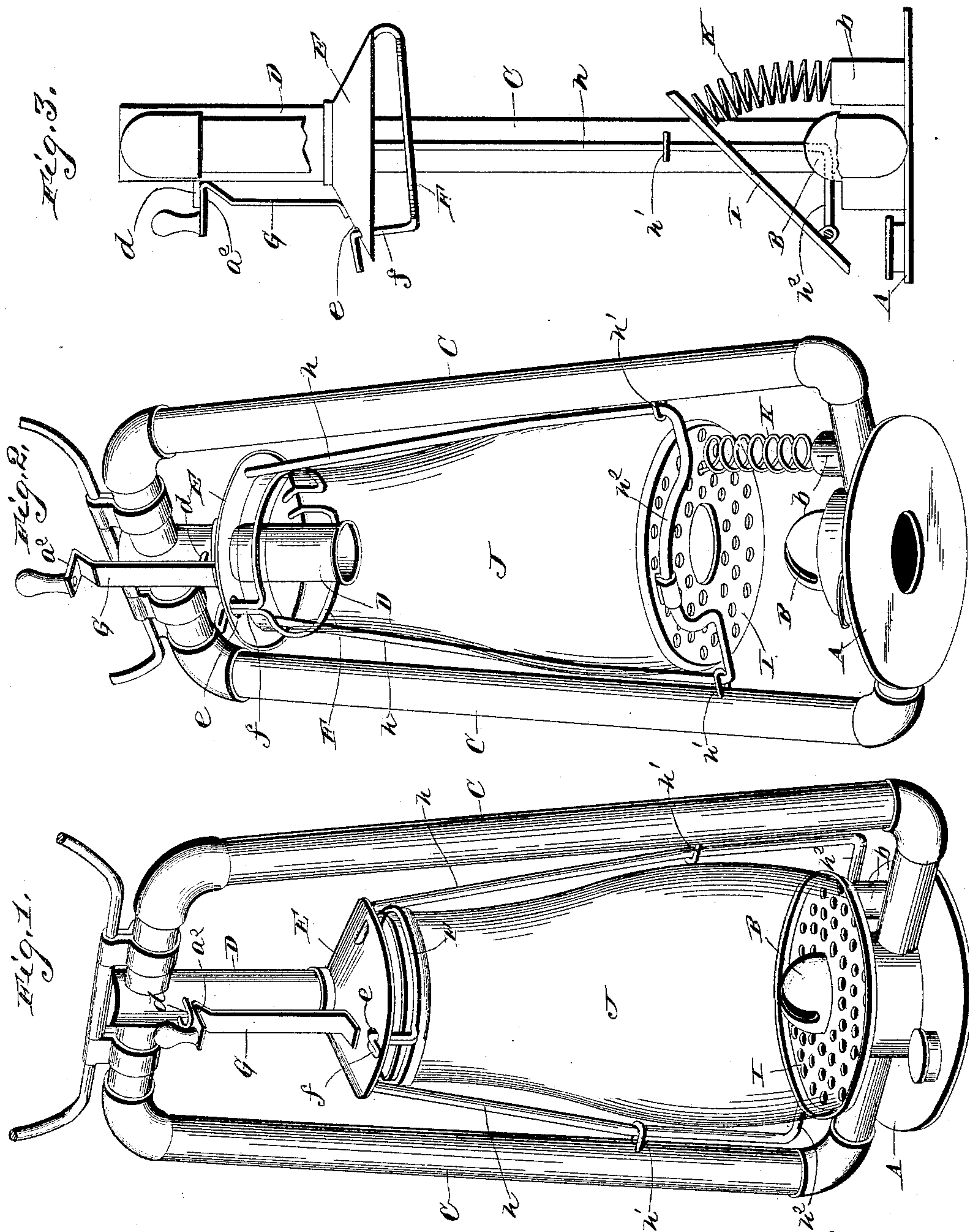
(No Model.)

F. R. & A. P. SMITH.

LANTERN.

No. 394,025.

Patented Dec. 4, 1888.



Witnesses

C. B. Taylor,
H. F. Riley.

Inventor.

Frank R. Smith,
Addison P. Smith,

By their Attorneys

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

FRANK REGINALD SMITH AND ADDISON PINEO SMITH, OF HOULTON, MAINE.

LANTERN.

SPECIFICATION forming part of Letters Patent No. 394,025, dated December 4, 1888.

Application filed November 19, 1887. Serial No. 255,643. (No model.)

To all whom it may concern:

Be it known that we, FRANK REGINALD SMITH and ADDISON PINEO SMITH, citizens of the United States, residing at Houlton, in the
5 county of Aroostook and State of Maine, have invented a new and useful Improvement in Lanterns, of which the following is a specification.

This invention relates to tubular lanterns
10 in which the globe is mounted in a globe-frame which is attached to the sides of the main frame in such manner that the globe and its supporting-frame may be raised when it is desired to expose the burner-cone for
15 trimming, lighting, extinguishing, or otherwise.

The object of this invention is the production of a tubular lantern in which the frame that carries the globe when in an elevated position, for the purpose of giving free access to
20 the burner for trimming, lighting, extinguishing, or the like, will remain so, and will not drop back until forced down over the burner.

The invention consists in the novel combination and arrangement of the parts, herein-
25 after fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the accompanying drawings, forming
30 part of this specification, and in which like letters of reference designate corresponding parts, Figure 1 is a perspective view of a tubular lantern embodying my improvements in what I deem their best form, the parts be-
35 ing in position for use. Fig. 2 is a similar view of the same with the globe in an elevated position in order to afford access to the burner for trimming, lighting, extinguishing, or otherwise. Fig. 3 is a side elevation of the tubu-
40 lar lantern, the globe being removed and the perforated plate tilted, as for the insertion of a new globe.

In the drawings, A designates the reservoir-cap, B the burner and C C the inclined tubes
45 which conduct air to the burner, and D is the vertical tube, which is a rigid dependent portion of the top of the main frame, all of a construction too well known to require description in detail.

50 The globe-cap E, as heretofore, is adapted to slide upon the vertical tube D, and is pro-

vided upon its under side with a ring-shaped catch, which embraces the upper end of the globe. This ring-shaped catch F is preferably composed of a single piece of wire bent
55 into circular form and having the two ends meeting closely together and secured by soldering or otherwise to the rear of the globe-cap E. Intermediately of the ends of this piece of wire composing the ring-shaped catch
60 is formed a thumb-piece, *f*, formed by bending up the central portion of the wire into two parallel parts, which thumb-piece passes through an opening, *e*, in the globe-cap E, and
65 enables the ring-shaped catch to be raised, when it is desired to release the top of the globe to remove it or for the insertion of a globe. Upon the upper side of the globe is
provided a piece of flat spring metal, G, which
70 is secured thereto by soldering or similar means. The top of this piece of spring metal G is bent at right angles to its length and forms a locking projection, *a*², which, when
the globe-cap is down at the bottom of the
75 vertical tube D, engages a shoulder, *d*, consisting of a piece of metal, preferably wire, secured in a suitable manner to the vertical tube D. At the free end of this piece of spring
metal G is fixed a small knob or handle, by
80 which the spring may be made to disengage the shoulder *d* on the vertical tube to permit
the sliding frame to be elevated, the normal position of the spring being against the ver-
tical tube D. This spring G on the upper
85 side of the globe-cap E, together with the small shoulder *d* on the vertical tube, constitutes a locking device, whereby the sliding globe-frame may be securely retained in a depressed position.

The globe-frame consists of the bottom por-
90 tion, *h*², and the side wires, *h h*, which are mounted in guides *h' h'* and extend along the inclined sides C C of the main frame to the globe-cap, to which they are secured. When
constructed with reference to economy, dura-
95 bility, and strength, this entire frame is made of a single piece of wire, the ends, as before stated, being fixed to the globe-cap. The bottom portion, *h*², of the globe-frame is bent
into semicircular form and passes around one
100 side of the burner-cone.

The globe-seat I, which surrounds the burner-

cone, is preferably perforated, and is hinged to the bottom portion, h^2 , of the globe-frame, so that the perforated plate I, upon which the globe rests, may be turned on its hinge and placed in an inclined position independently of the globe-frame for inserting or removing the globe J.

On the reservoir-cap A is a thimble, b , arranged in a vertical position and preferably extending upward to the globe-seat. Within this thimble b is incased a spiral spring, K, one end of which is attached to the globe-seat, so that when the sliding globe-frame is in its lowest position the spring K is compressed, the tendency of which is to force one side of the globe-seat upward, when the top of the globe is released from the globe-frame, thereby causing the globe-seat to turn on its hinge; but when the top of the globe is not released from the globe-frame the tendency of the spring K is to force the globe-frame upward and make the said frame slide in the guides h' .

The operation is as follows: When it is desired to insert the globe, the bottom of it is placed upon the perforated globe-seat I, which is (when there is no globe in the lantern and the seat in its lowest position) always in an inclined position. As the globe is brought to a vertical position, the ring-shaped catch F is raised by the thumb-piece f and the top of the globe slipped under it. The ring-shaped catch, being then released, descends and fits snugly around the top of the globe and holds it securely in position. The spiral spring K aids in retaining the globe in the globe-frame by exerting a constant pressure upon the globe-seat and keeping it in contact with the bottom of the globe. In order to remove the globe from the lantern, it is only necessary to

raise the ring-shaped catch by the thumb-piece and tilt the globe. When it is desired to elevate the globe-frame in order to afford free access to the burner B for trimming, lighting, extinguishing, or other purpose, the spring G, by the knob or handle at its free end, is released from engagement with the shoulder d of the vertical tube D. The spiral spring K, being then in a depressed condition, instantly acts upon the globe-seat I and forces the sliding globe-frame upward, making it slide in the guides h' and assume a position above the burner, as is shown in Fig. 2, and there supports it until forced down again. The spring G, when the globe is forced down upon the burner B, engages the shoulder d of the vertical tube D and firmly locks the globe down and prevents it rising from its depressed position.

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

In a tubular lantern, the combination of a globe-seat, the sliding globe-frame, said seat and frame being hinged together, as shown, and an incased coiled spring bearing against the under side of the globe-seat opposite the point where the said seat is hinged to the sliding globe-frame, whereby the globe-seat is automatically tilted, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

FRANK REGINALD SMITH.

ADDISON PINEO SMITH.

Witnesses:

M. J. WEBBER,
ANNIE P. MILLER.