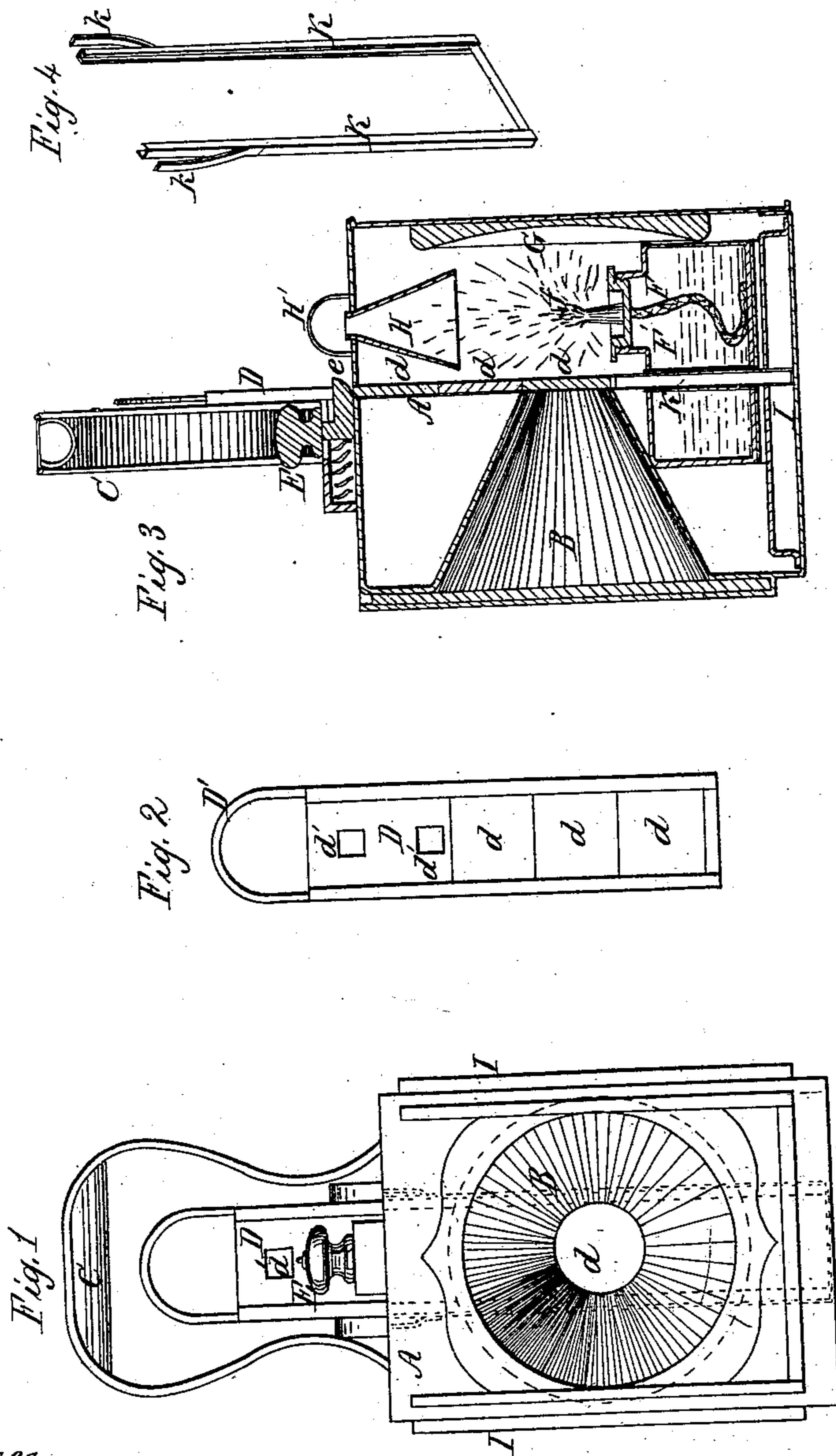


D. TODD.  
SIGNAL LANTERN.

No. 96,637.

Patented Nov. 9, 1869.



Witnesses  
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# United States Patent Office.

DAVID TODD, OF DETROIT, MICHIGAN.

Letters Patent No. 96,637, dated November 9, 1869.

## IMPROVEMENT IN SIGNAL-LANTERNS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, DAVID TODD, of the city of Detroit, in the county of Wayne, and State of Michigan, have invented certain new and useful Improvements in Signal-Lamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, making part of this specification, in which—

Figure 1 is a front elevation of the lamp;

Figure 2 is a detached view of the slide, containing the different-colored glasses;

Figure 3 is a vertical sectional view; and

Figure 4 is a view of a frame in which the slide moves.

The invention consists of a novel construction and arrangement of parts, whereby the convenience and efficiency of the lantern are increased, while, at the same time, the cost of manufacture is diminished as will be fully understood from the following description of its construction and operation.

A is the body of the lamp, of a square form, three sides of which are of glass, secured to a suitable metallic frame-work. The fourth or back side constitutes a door, hinged and secured in the usual manner.

The glass at the sides is covered by thin sheets of metal, so arranged as to slide up and down at pleasure, these sheets serving to protect the glass from breakage when in ordinary use as a signal-lamp, while, at the same time, by simply withdrawing them, the lamp may be used for illuminating-purposes, as required.

B is a cone, the mouth or front end of which occupies nearly the whole front of the lamp.

At the rear end of this cone is placed a slide, D, carrying small pieces of different-colored glass, *d d d*.

It is provided with a handle, D', and also with slots *d d*.

This slide moves vertically in a frame, K, composed of two grooved uprights, connected at their lower ends by a rib or tie, and provided at their upper ends with elastic tongues *k k*, serving to keep said frame from being lifted out of place, as shown in dotted lines, fig. 1, the frame itself keeping the slide in a proper relation to the cone B, for a purpose hereinafter explained.

This slide is held at any desired vertical elevation, by means of the spring thumb-latch E, the spur *e* of which enters the slots *d d*.

F is the oil-reservoir, provided with the usual crank-socket and tube, of such height that the flame *f* shall stand immediately in rear of the inner opening of the cone B.

This reservoir is further provided with an opening or socket, F', through which passes the frame K and slide D, as seen in fig. 3, and is secured to the platform I on the bottom of the lamp, by flanges or lips

projecting from its lower surface, engaging with similar lips on the upper surface of said platform, in such a manner that it, the reservoir, can be readily withdrawn from the back side of the lamp for the purpose of filling or cleaning, accidental displacement being prevented by the frame K, passing through the socket F', and a corresponding opening in the platform I.

G is a concave reflector, attached to the inside of the door, of the usual material and form.

H is a chimney, and H' a chimney-cap, neither of which needs any specific description.

The operation of my lamp is as follows:

When the wick is lighted and the door closed, the reflector G concentrates the light upon the glass covering, the inner end of the cone B thereby illuminating the entire inner surface of said cone, with the same color as the glass itself, and making the lamp, at a short distance, as effective as though the outer face of the lamp were colored, while, by simply shifting the slide D, I am able to produce three or more different colors upon the same front, and a much stronger light, from the fact that I get the benefit of the reflector G, which must be dispensed with in the ordinary construction.

In constructing this lamp for use as a switch-lamp, it may have four cones; that is, one upon each of its sides, two red and two green, arranged in pairs, that is, the red at opposite sides, and the green at alternate sides; or the different bits of glass may be arranged in cylindrical form, in rows two or three high, adapted to be revolved; then, by interposing an opaque screen either in front of or in rear of the cone, so as to darken it while such of the colors as it is not desired to show were passing, any desired succession may be attained.

Another, and perhaps the easiest manner of producing a great number of changes and combinations in colors, is this: A number of slides may be readily carried in the lamp, by simply setting them down into the body of the lamp through slots or perforations in the top. In this respect, it has a very great advantage over any other lamp ever invented.

By simply removing the sliding doors, and, if desired, the cone and slide, an illuminating-lamp may be easily produced, as the cone is made removable for that purpose.

It will be observed that the aperture F', through the reservoir F, not only provides for the passage of the slide D, but also serves to admit a current of air constantly between the flame of the lamp and the glass in the slide D. This tends to prevent said glass from becoming unduly heated.

In order to take out the reservoir, it is necessary to remove the slide D and frame K.

This latter can be readily taken out by compressing

the springs K K sufficiently to pass them through the opening in the top of lamp, through which the slide moves.

Having thus described the construction and operation of my lamp,

What I claim as new, and wish to secure by Letters Patent, is —

1. The slide D, constructed as set forth.
2. The cone B, in combination with the slide D, arranged and operating as set forth.

3. The latch E, in combination with the slide D.
4. The frame K, operating as set forth.
5. The platform I, provided with a slot, as set forth.
6. The reservoir F, provided with the aperture F', as set forth.

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Witnesses:

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