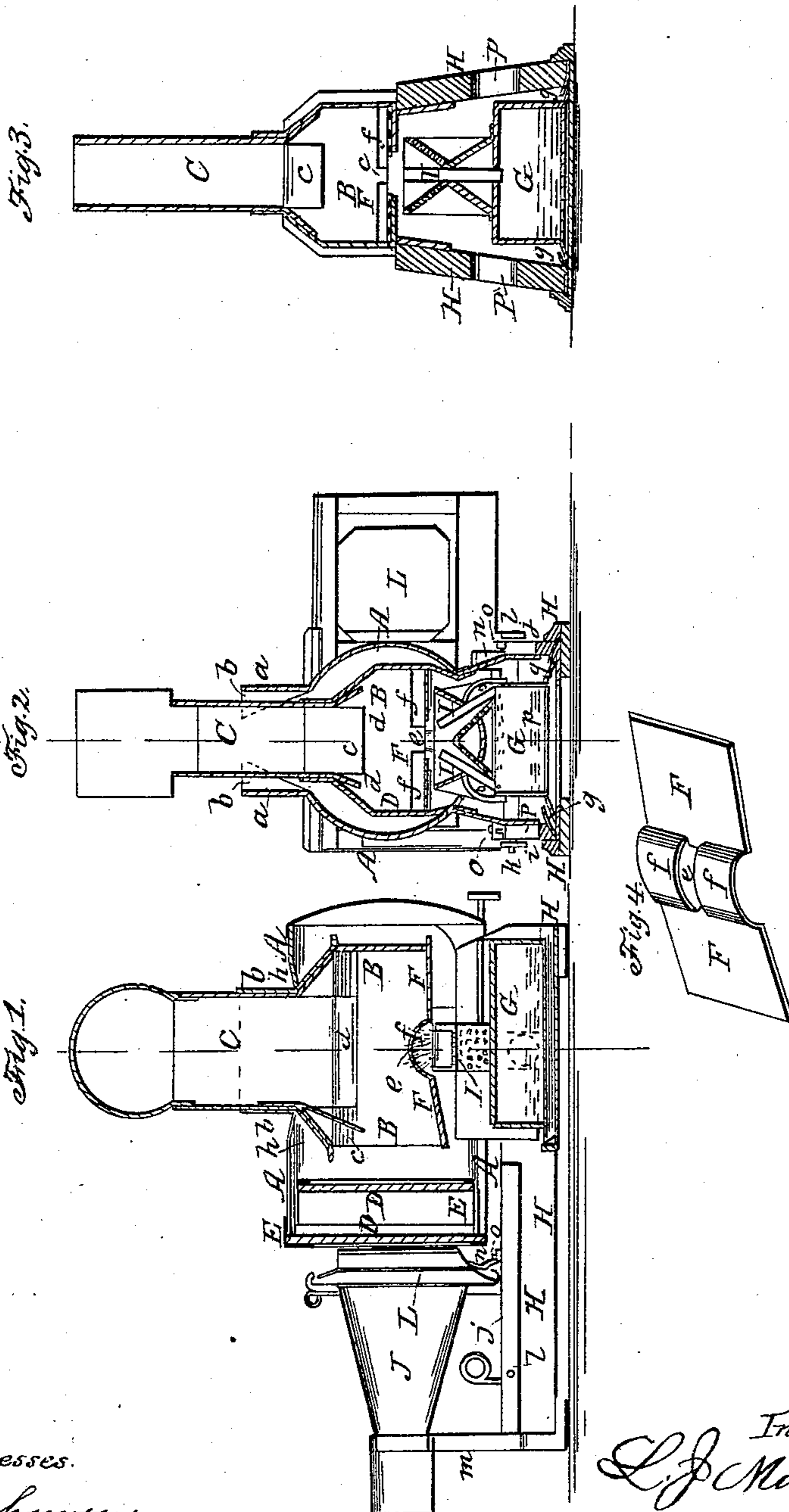


L. J. MARCY.  
Magic Lantern.

No. 92,330.

Patented July 6, 1869.



Witnesses.  
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# United States Patent Office.

L. J. MARCY, OF NEWPORT, RHODE ISLAND.

Letters Patent No. 92,330, dated July 6, 1869.

## IMPROVEMENT IN MAGIC 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, L. J. MARCY, of Newport, in the county of Newport, and State of Rhode Island, have invented a new and improved Magic Lantern; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical longitudinal section of my improved magic lantern.

Figure 2 is a vertical transverse section of the same.

Figure 3 is a vertical transverse section of a modification of the same.

Figure 4 is a detail perspective view of the bottom plate of the inner shell of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to certain improvements on the magic lantern for which Letters Patent, No. 77,300, were granted to me on the 28th day of April, 1868.

The object of the present invention is to still better prevent the overheating of the case or shell, and of the lenses, and to produce a convenient manner of removing and inserting the lamp.

The invention consists, first, in so constructing the inner and outer cases, that their points of contact above the lamp are reduced, to prevent overheating; and, in providing deflecting pendent flanges in the inner case, for the same purpose.

The invention also consists in a new manner of attaching the tube that contains the small lens.

The invention consists, further, in so arranging the bottom plate of the inner and outer shells, that the same will act as a cone to the burner, allowing thereby the removal and insertion of the lamp from the side, while, heretofore, it could only be put in and taken out below. Thereby the device is made much more convenient, as the whole lantern need not be moved when the lamp is to be filled, emptied, or handled.

A, in the drawing, represents the outer case or shell of the lantern-box, made of nearly cylindrical form, and provided with an opening in the upper surface, from which side flanges, *a a*, project.

B is the inner shell. This is shorter than the shell A, and of prismatic or cylindrical form, as shown.

This is open at the lower end, its sides being fastened to those of the shell A, as in fig. 2, and has a projecting chimney, C, which is of rectangular or circular construction.

The cylinder C fits through the upper aperture of the shell A.

Ears, *b b*, projecting from the flanges *a*, are fastened to the chimney, they forming the only fastening-devices, or metallic connection between the inner and outer cases, above the lamp.

At the ends, the case B is not connected with A.

In the cylinder is formed a downward and forward-projecting flange, *c*, reaching into the shell B, to protect the lens D in the front cap E.

Side flanges, *d d*, may also be formed on the chimney, to guide the heat into the chimney, and to keep it off the sides of the shell B.

The bottom F, of the lantern-case, is formed by a metal plate, which is slotted in the middle, as in fig. 4, and which is struck up in line with the slot *e*, transversely, as at *f f* in fig. 4.

The lamp G, resting on the frame H, that supports the apparatus, can be moved into the case of the lantern from a side or end, and fits, with its double or single burner I, under the struck-up parts of the plate F, which thus serves as a cone, allowing the burner to be made without a cone.

The flame of the lamp strikes through the slot *e* in the lantern-case.

I prefer to form flanges or ribs, *g g*, on the lamp, so that it will be guided in grooves of the frame.

The outer case A has also apertures, *h h*, at the ends of the chimney, as in fig. 1, to allow more rapid escape of heat.

The front tube J, containing the small lens, is secured to the frame H by two catches or fastenings, *i* and *j*.

The fastening *i* is in the form of a loop or staple, projecting from J, and fitted over a pin, K, on the side of the frame, while the fastening *j*, on the other side, is in the form of a hook, fitted over a pin, L, of the frame.

In front, the tube J is supported on a fixed rest, *m*.

The slider plate N has a projecting ear, *n*, pendent from the middle, which strikes against one of two pins, *o o*, that project from the horizontal surface of the frame H, as said slider plate is moved to one side or to the other.

One of the two divisions of the slider plate is thus held properly in line with the lenses. When to be shifted, the plate N is pushed until the stop *n* arrests it, when the other division is in line.

The frame H has apertures, *p*, at the sides, to allow fresh air to enter the lantern.

In fig. 3, is represented a modification of the apparatus, showing it adapted to a signal-lantern.

In this case, the device is the same, except that the case A, lens D, tube J, and plate N, are dispensed with; although the device may also be used with the outer shell A, for signal and other purposes.

Having thus described my invention,

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

1. The outer case A, when provided with an opening through the top to allow the insertion of the chimney B, and with projecting flanges *a*, that are fastened to the chimney, substantially as herein set forth and described.

2. The deflector-plates *c d*, formed on the chimney, substantially as and for the purpose herein set forth and described.

3. The inner case of a magic lantern, when so attached that it is in no metallic connection with the outer case, above the flame, except at the connections *b*, as specified.

4. The plate *F*, having the slot *e* and struck-up parts *f*, substantially as and for the purposes herein set forth and described.

5. A magic lantern, when provided with a lamp

which has no cone formed on it, so that the lamp can be moved in or out from the side or end, as specified.

6. The tube *J*, when provided with the projecting loop *i* and hook *j*, to be fastened to the pins *k l*, substantially as herein set forth and described.

The above specification of my invention signed by me, this 24th day of March, 1869.

L. J. MARCY.

Witnesses:

FRANK BLOCKLEY,  
ALEX. F. ROBERTS.