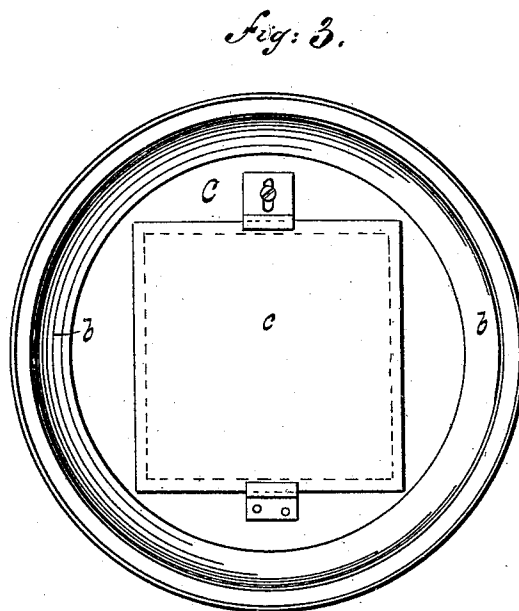
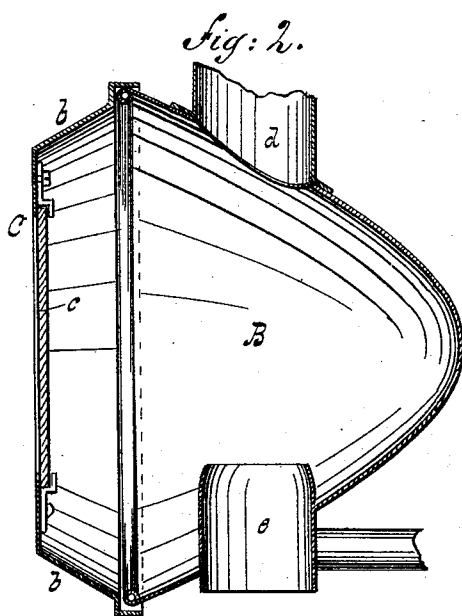
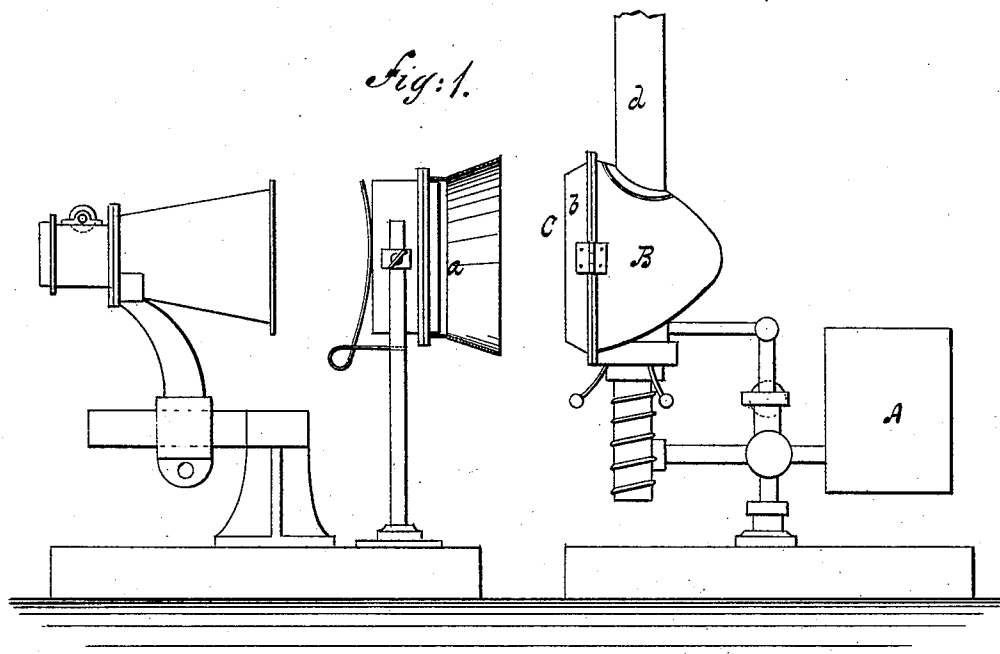


(No Model.)

J. B. COLT.  
MAGIC LANTERN.

No. 411,092.

Patented Sept. 17, 1889.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JAMES B. COLT, OF NEW YORK, N. Y.

## MAGIC LANTERN.

SPECIFICATION forming part of Letters Patent No. 411,092, dated September 17, 1889.

Application filed December 20, 1888. Serial No. 294,200. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES B. COLT, of New York city, in the county and State of New York, have invented a certain new and useful Improvement in Magic Lanterns, of which I declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

10 This invention is in the nature of an improvement in magic or stereopticon lanterns; and the invention consists of a lantern constructed in the manner and for the purpose hereinafter shown, described, and claimed.

15 In the accompanying sheet of drawings, Figure 1 is a side elevation of my lantern; Fig. 2, a vertical section of the reflector; Fig. 3, a rear view of the hood of the reflector detached from its support.

20 Similar letters of reference indicate like parts in the several views.

This invention primarily relates to the construction, combination, and arrangement of the reflector of a lantern designed for stereopticon purposes and projecting pictures.

25 To increase the brilliancy of the light in a magic lantern is to render the definition of the lantern much more satisfactory, and to increase the brilliancy without necessarily resorting to the oxyhydrogen-burners, and without also increasing the heat of the light to a degree that would be injurious to a lantern, is a problem that manufacturers of stereopticon-lanterns have been endeavoring  
30 to solve for many years. For the purpose of arriving at a result that will nearly or quite accomplish all that is required in this connection, I affix or apply to the lamp A of my stereopticon a reflector B, which is as nearly  
35 as may be parabolic in form, which form, as is well known, yields the best results when used in a reflector. This reflector B, of the form described, is mounted upon the lamp A, of any suitable construction; but to give a  
40 satisfactory result the flame from this lamp must be relatively of large proportions, and therefore send out a high degree of heat, and this heat, if allowed to pass freely and unob-

structed from the face of the reflector, would in time warp the metal of the lamp and in some instances fracture the condensing-lenses *a*. 50

To maintain the bright light without injury from its heat, I provide my reflector B with a hood C. This hood is hinged or otherwise fixed to the reflector, so that it fits over its face. The hood is made from metal, and it is in form a truncated cone with angular sides *b*, resulting from its form, and with its face or front side fitted with a window *c*. 60

It is found in practice that the reflector B, when fitted with the hood above described, permits a large and brilliant lamp-flame without injury to any part of the apparatus, since as the heat is generated it is retained within the chamber formed by the reflector and hood until it passes off through the chimney *d*. 65

By this construction and combination of my reflector and hood it is possible to burn oil-lamps of great flame and brilliancy in a stereopticon-lantern, as well as, if desired, the ordinary lime-light. The chimney *d* is made of metal and attached to the reflector, and the burner-case *e* of the lamp passes into and is also attached to the reflector. 75

Another improvement in connection with the reflector and lamp consists in inserting the burner of the lamp A in the reflector B, so that the flame shall be in the same vertical line or coincident with the opening in the reflector for the chimney *d*, causing the current through the chimney to be sufficient to supply the burner with the necessary air, which passes up through and around the burner, for sustaining combustion, and as well to carry off through the chimney the smoke, &c. By this arrangement of lamp, reflector, and chimney I am able to do away with a glass chimney surrounding the flame, which robs the light of brilliancy, especially when the chimney is smoked, to say nothing of the inconvenience arising from the fracture of the glass, and, besides, such a chimney always casts a more or less distinct shadow upon the screen. 80  
85  
90  
95

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

The combination of the lamp, the parabolic reflector having the chimney *d* secured to one side and a burner-case to the opposite side, and the hood C, having the window *c*, the burner of the lamp being received within

the burner-case, by which the reflector is supported, and the reflector and hood constituting the combustion-chamber, substantially as and for the purpose described.

JAMES B. COLT.

In presence of—

G. M. PLYMPTON,

D. A. CARPENTER.