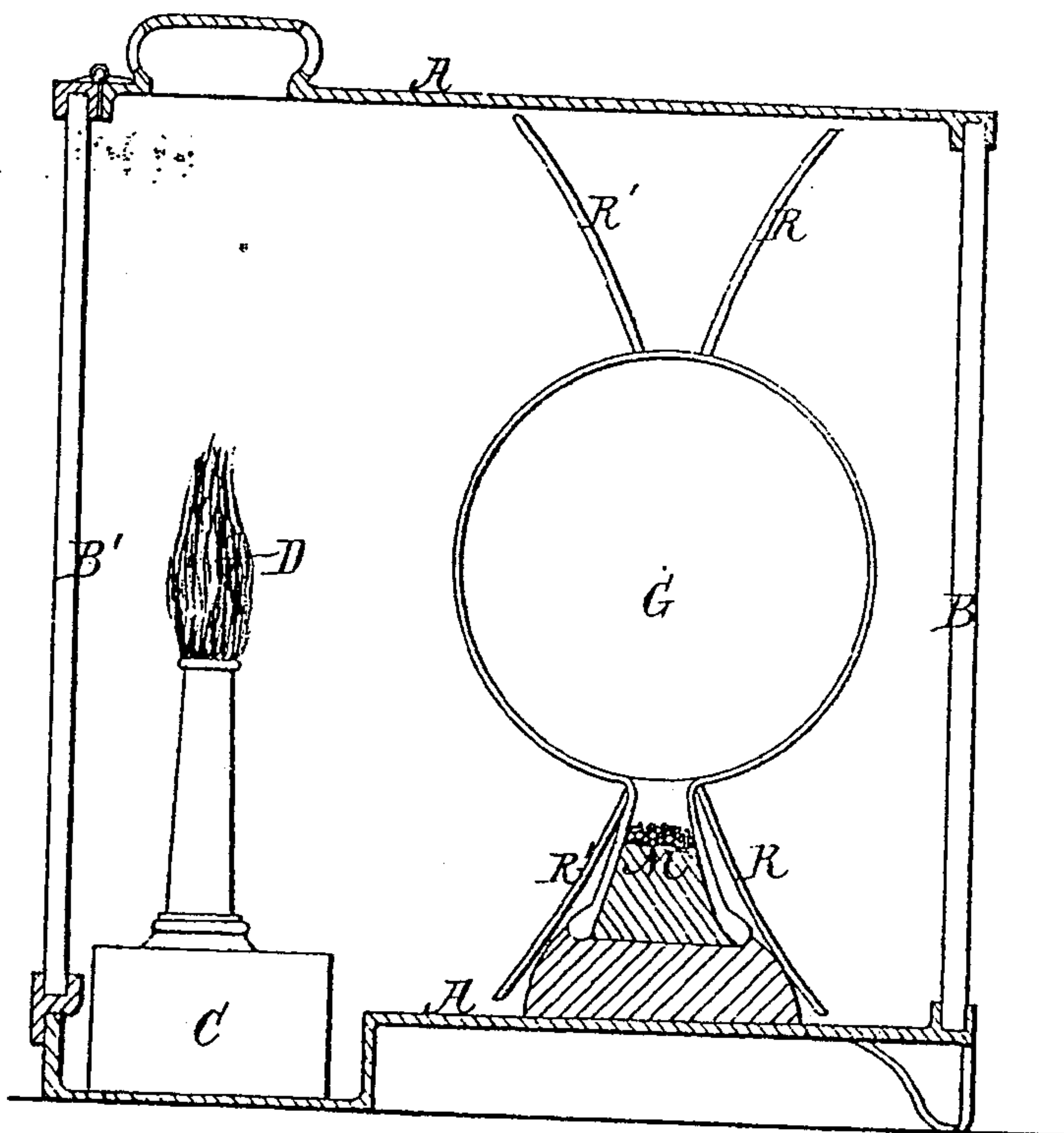


S. KAKELES.  
Signal Lantern.

No. 27,988.

Patented April 24, 1860.



Witnesses.  
E. R. de la  
Davidson

Inventor;  
Soligman & Co

# UNITED STATES PATENT OFFICE.

SELIGMAN KAKELES, OF NEW YORK, N. Y.

## IMPROVEMENT IN FLUID LENSES.

Specification forming part of Letters Patent No. **27,988**, dated April 24, 1860.

*To all whom it may concern:*

Be it known that I, SELIGMAN KAKELES, of New York, in the county and State of New York, have invented a new and Improved Signal-Lantern; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The nature of my invention consists in the use and application of a magnet, or its equivalent, in the bottom of the glass globe, when said globe is filled with a colored liquid, whereby the mineral particles with which the liquid has been colored, and which may not be quite discolored, will be attracted, and thereby prevent the fluid from becoming cloudy or turbid by the vibratory motion of the car or carriage to which said lantern may be fixed.

In the accompanying drawing, which represents a longitudinal section of my improved signal-lantern, A represents the lantern or casing provided at its front and back sides with colorless glass sides B B'.

C is a lamp of any desired description, fastened into the lantern and arranged only for one flame, D.

G is a glass globe filled with a liquid and firmly fastened in the lantern at a height corresponding with the flame D, and situated some distance in front of the flame.

Near the middle of the glass globe G two reflectors, R R', are fastened all around said glass globe G, facing opposite directions, one toward the front and the other toward the back of the lantern.

When the flame D is lit the light will be reflected from the reflector R' through the back of the lantern, while the rays passing in front through the liquid in the glass globe G will

concentrate in the reflector R and be reflected by the same through the front of the lantern. If the glass globe G is filled with a colored liquid, the light reflected in front of the lantern will naturally correspond with the color in the glass globe G, while the light reflected through the back of the lantern will be white or colorless. If, therefore, the lantern should be attached into the forward or after end of a railway-car, a powerful colored light will be reflected and shown on the outside, while a colorless light will be thrown into the car for the purpose of illuminating the inside. The colored liquid in the glass globe is generally produced by the solution in acids of the suitable metallic oxide giving the required color. The continual vibratory motion of the car or carriage would very soon make this liquid cloudy or turbid, and prevent thereby a clear light being emitted. To prevent this and to keep the liquid always clear I insert into the bottom of the glass globe a magnet, by which all undissolved metallic particles are attracted, and consequently the liquid kept clear.

Instead of a magnet, magnet-fillings mixed with shellac and beeswax may be made into a composition, with which that part of the globe through which the same has been filled is stopped up, and then turned toward the bottom or lower side, as represented at M.

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

The application and use of a magnet or its equivalent in the bottom of a glass globe filled with a colored fluid, for the purpose as herein set forth.

SELIGMAN KAKELES.

Witnesses:

HENRY E. ROEDER,  
JAMES H. DAVIDSON.