

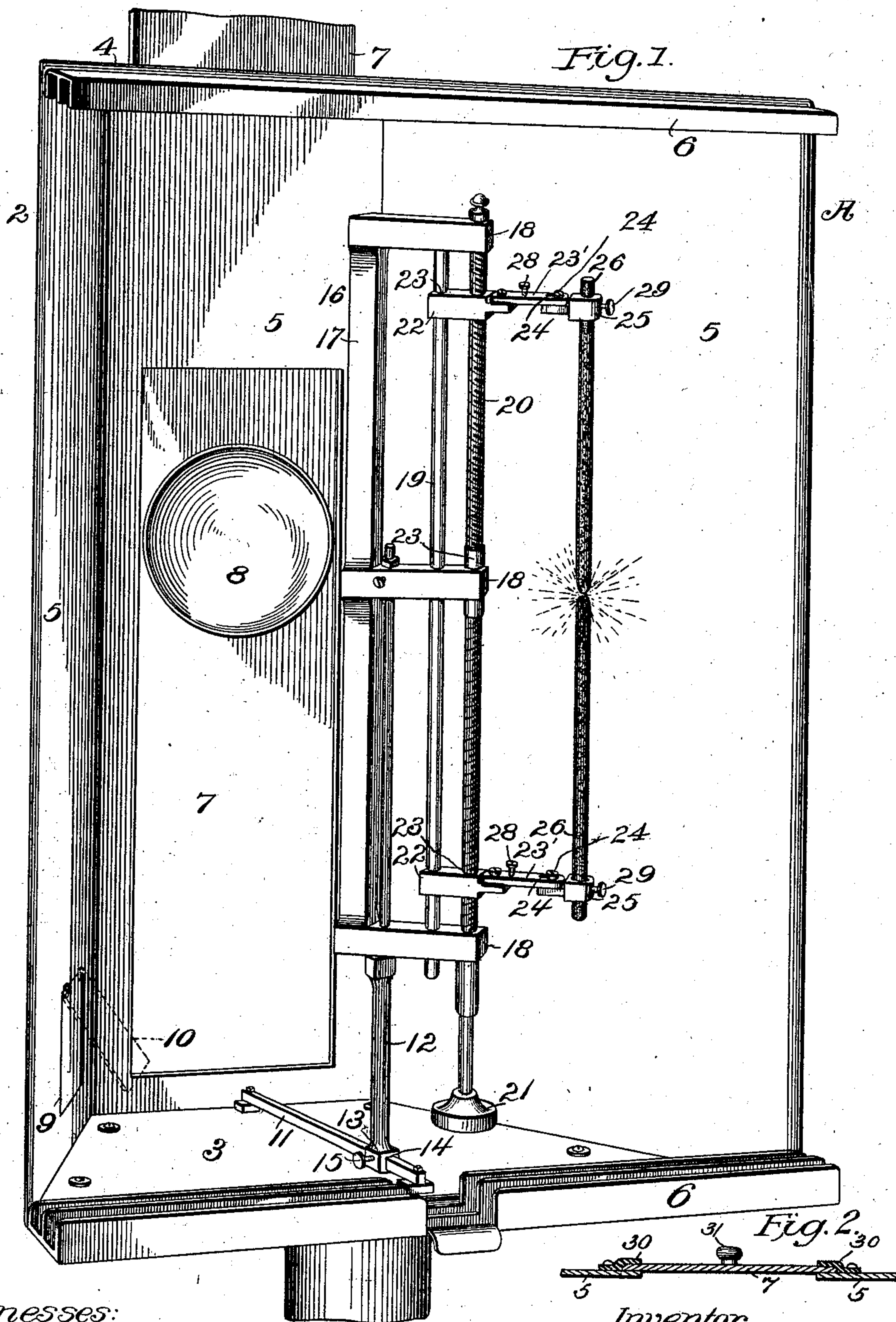
No. 702,649.

Patented June 17, 1902.

W. HARVEY.
ILLUMINATOR.

(Application filed Apr. 22, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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ILLUMINATOR.

SPECIFICATION forming part of Letters Patent No. 702,649, dated June 17, 1902.

Application filed April 22, 1901. Serial No. 56,848. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HARVEY, a citizen of the United States, residing in New York city, in the county of Kings and State of New York, have invented certain new and useful Improvements in Illuminators, of which the following is a specification.

This invention relates to illuminators, and particularly to an improved reflecting device for throwing light upon objects, and is particularly adapted for the purpose of throwing different-colored lights upon a stage, whereby the whole stage or certain parts thereof or performers thereon are made to stand out in a bright light or in any colored light desired, and is especially useful to add to the attractions of various spectacles.

This invention has for its object to provide a light with a reflector which may be readily adjusted in focus in position, so that it may be in a horizontal plane with the carbons of an arc-light when the latter are shortened by consumption, and also to provide convenient means for manipulating the selective transmitting media, such as different-colored glass slides, by which the color of the light thrown upon the object desired to be illumined may be varied as required; and a further object of this invention is to reflect the light to different positions by the upward or downward adjustment of the reflector.

The invention comprises in general suitable supporting means, such as a cabinet, provided in front at the top and bottom with ways in which the selective transmitting media may be moved and at its back with an adjustable slide to which a reflector is attached and on one side with a suitable opening for the insertion of the hand and arm of the operator. Within the cabinet is a bracket which supports a pivoted member carrying a light, which by means of said member is adjustable to any point within a given radius of the reflector and said member, so that by a vertical adjustment of the reflector and the radial and transverse adjustment of the member and light a wide and universal range of light reflection is obtained.

In the drawings accompanying and forming part of this specification, Figure 1 is a perspective view of the improved device. Fig. 2 is a detail section showing the reflector-

slide mounted in guideways at the back of the cabinet.

The device generally is represented by A, and comprises supporting means, shown as a cabinet 2, having a bottom 3 and top 4 and three closed sides 5. The front is open, and the cabinet 2 is provided at top and bottom in front with ways 6, extending across said front, in which different-colored glass slides (not shown) may be slid. At the rear of the cabinet, opposite the open front, is a vertically-adjustable slide 7, movable in guideways 30 by a thumb-piece 31, and to such slide 7 a reflector 8 is secured. On one side of the cabinet an opening 9 may be provided, through which opening 9 the operator may insert his hand and arm, such opening 9 being normally closed in any suitable manner, here shown as a swinging door 10. Secured to the floor of the cabinet 2 and extending from the rear to the front opposite the reflector 8 is a bracket 11. A standard 12 is adjustably mounted on said bracket and is here shown as having a head 13, with an aperture 14 there-through, adapted to slide on the bracket 11 and provided with a thumb-screw 15, by which it may be retained in different positions. A frame 16, shown as comprising a vertical section 17, from which three arms 18 extend at right angles, is revolvably mounted on the standard 12. At a suitable distance from the vertical portion of the frame 16 a guide-rod 19 extends through and is secured to the arms 18. In the outer ends of the arms 18 a rod 20 may be rotatably mounted and provided at its lower end with suitable means for turning such rod 20, shown as a thumb-piece 21. The portions of the rod 20 on either side of the middle arm 18 are provided with means of vertically adjusting the carrier 22, hereinafter described, such means being shown here as right and left screw-threads. Slidably mounted on the guide-rod 19, one on each side of the middle arm 18, are carriers 22, each shown as having a screw-threaded aperture 23 complementary to the screw-threads on the corresponding portion of the rod 20. Links 23' may be secured to the reduced outer ends of the blocks 22 in such a manner that they may be secured at different angles horizontally to said blocks 22, the outer ends of the links 23' being shown as having a slot 24.

Carbon-holders 25 of any desired form may be secured to said links 23 by any suitable means, such as a screw 24' passing through the slots 24, said carbon-holders 25 being provided with suitable means of securing carbons 26 therein, such as the thumb-screws 29. The links 23 may be provided with posts 28 to receive the electric wires. (Not shown.)

The device may be modified in details of construction without departing from the principles or sacrificing the spirit of the invention, and I do not limit myself to the particular form shown and described.

The operation of the invention is as follows:
 15 The operator having by means of the slide 7 adjusted the reflector 8 to suit the height of the light and by means of the rod 20 adjusted the carbons 26 with reference to each other turns on the electricity and by means
 20 of sliding the standard 12 along the bracket 11 arranges the focus, while by turning the frame 16 and adjusting the reflector 8 he can direct the light in any direction he wishes either in the focus of the reflector or toward
 25 the part of the cabinet having no reflector and by means of the thumb-piece 21 keep the carbons 26 in proper relation with each other and take up any wear that occurs. At the same time by moving the colored-glass slides
 30 in the ways 6 so as to be in front of the reflected light he can change the color upon the object as desired, and by moving the light away from the reflector a diffused light may be thrown upon any portion of or the whole
 35 of the stage.

While the reflector may be brought to a level with the light, it can also be moved to throw the reflection upward or downward, as desired—that is to say, by adjusting the reflector above the level of the light it will throw an upward reflection and by adjusting it below said light the reflection will be cast downward.

It will be seen that the source of light of
 45 this illuminator is adjustable toward and from a reflector and also to any point within a given radius of said reflector. It will be further noted that the reflector is also vertically adjustable with respect to the source of
 50 light and that by the vertical adjustment of the reflector and the radial adjustment of the light and the longitudinal adjustment of the light-carrying member it becomes possible to generate a varied and universal reflection.

55 Having described my invention, I claim—

1. In an illuminator, the combination with a cabinet adapted to carry colored slides, of a vertically-adjustable reflector located in said cabinet; and a revoluble member also mounted in said cabinet for adjustment with reference to said reflector and carrying a source of light, said source of light being adjustable upon said frame and with respect to the reflector.

65 2. An illuminator comprising a cabinet having three closed sides, one of said sides provided with a door, and an open front provided

at top and bottom with ways adapted to receive interchangeable colored-glass slides; an adjustable reflector mounted at the rear of said cabinet; and a revoluble light-carrying frame slidably mounted in said cabinet in front of said reflector and in rear of said slides.

3. An illuminator comprising a cabinet having three sides closed, one of said sides provided with an operating-aperture; an open front provided with ways at the top and bottom adapted to receive interchangeable colored-glass slides; a vertically-adjustable reflector mounted in the rear of said cabinet; an adjustable carrying means therein in front of the reflector; and means whereby a light may be emitted, carried thereby.

4. In an illuminator, the combination with supporting means, of a reflector carried thereby; a light-carrying frame also carried thereby and adjustable toward and from said reflector, one part of said frame having a rotary adjustment relative to another part thereof, and one part of said frame carrying means whereby a light may be emitted, and having an adjustment in a plane transverse to the plane of the axis of said rotary adjustment.

5. In an illuminator, the combination with supporting means, of an adjustable reflector carried thereby, a light-carrying frame also carried thereby and adjustable toward and from said reflector, one part of said frame having a rotary adjustment relative to another part thereof, and one part of said frame carrying means whereby a light may be emitted and having an adjustment in a plane transverse to the plane of the axis of said rotary adjustment.

6. In an illuminator, the combination with supporting means, of an adjustable reflector carried thereby; means whereby a light may be emitted; a frame effective to support said light-emitting means, said frame having a rotary adjustment relatively to the reflector; one part of said frame having a rotary adjustment relative to another part thereof, and one part of said frame having an adjustment in a plane transverse to the plane of the axis of the rotary adjustment of said part of said frame.

7. In an illuminator, the combination with a cabinet adapted to support colored slides, of a reflector located within said cabinet, a revoluble frame also mounted in said cabinet and movable toward and from said reflector; and means whereby a light may be emitted adjustable upon said frame.

8. In an illuminator, the combination with a cabinet adapted to carry colored-glass slides and an adjustable sliding reflector carried therein, of a revoluble frame also carried in said cabinet and movable toward and from said reflector; and means whereby a light may be emitted adjustable upon said frame.

9. An illuminating device, comprising, in combination, a cabinet arranged to carry screens or slides; a reflector; a burner; and

supporting means between said reflector and burner to provide a relative adjustment vertically, laterally, and to and fro between the reflector and the burner.

5 10. An illuminating device comprising, in combination, a cabinet arranged to carry glass screens or slides; a reflector; a burner; and means for supporting said burner; said supporting means being so constructed as to
10 enable an adjustment of said burner toward and from said reflector and also from side to side.

11. An illuminating device comprising, in

combination, a cabinet arranged to carry glass screens or slides; a reflector; a burner; 15 means for supporting said burner; said supporting means so constructed as to enable an adjustment of said burner toward and from said reflector and also from side to side; and means for supporting said reflector so constructed as to enable a vertical adjustment 20 of the latter.

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