No. 762,283. PATENTED JUNE 14, 1904.

E. CORWIN.

SIGNAL LANTERN.

APPLICATION FILED FEB. 17, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

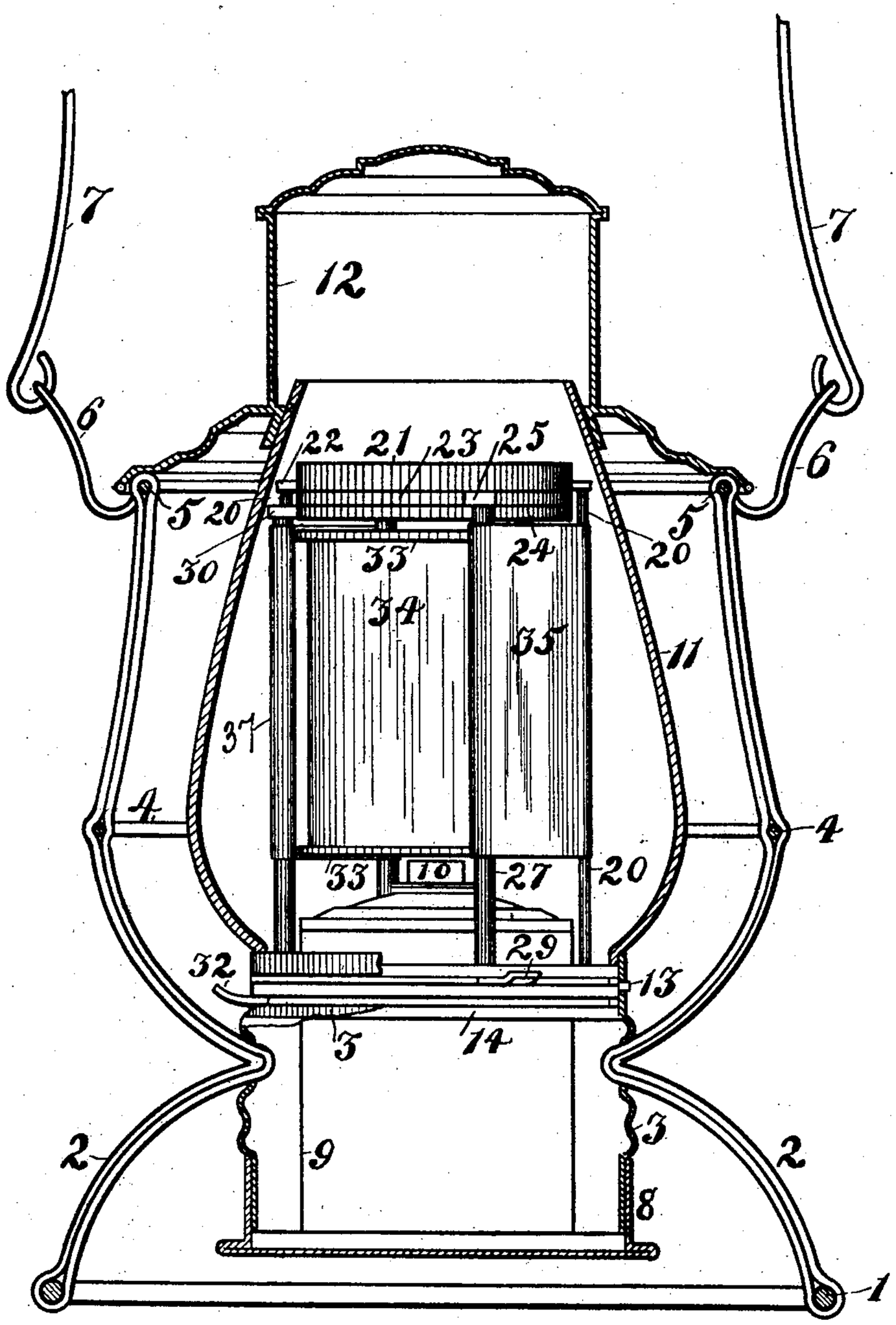

Fig. 1.

Witnesses:
Maude Zwisler.
May Brown.

Inventor:
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NO MODEL. 2 SHEETS—SHEET 2.

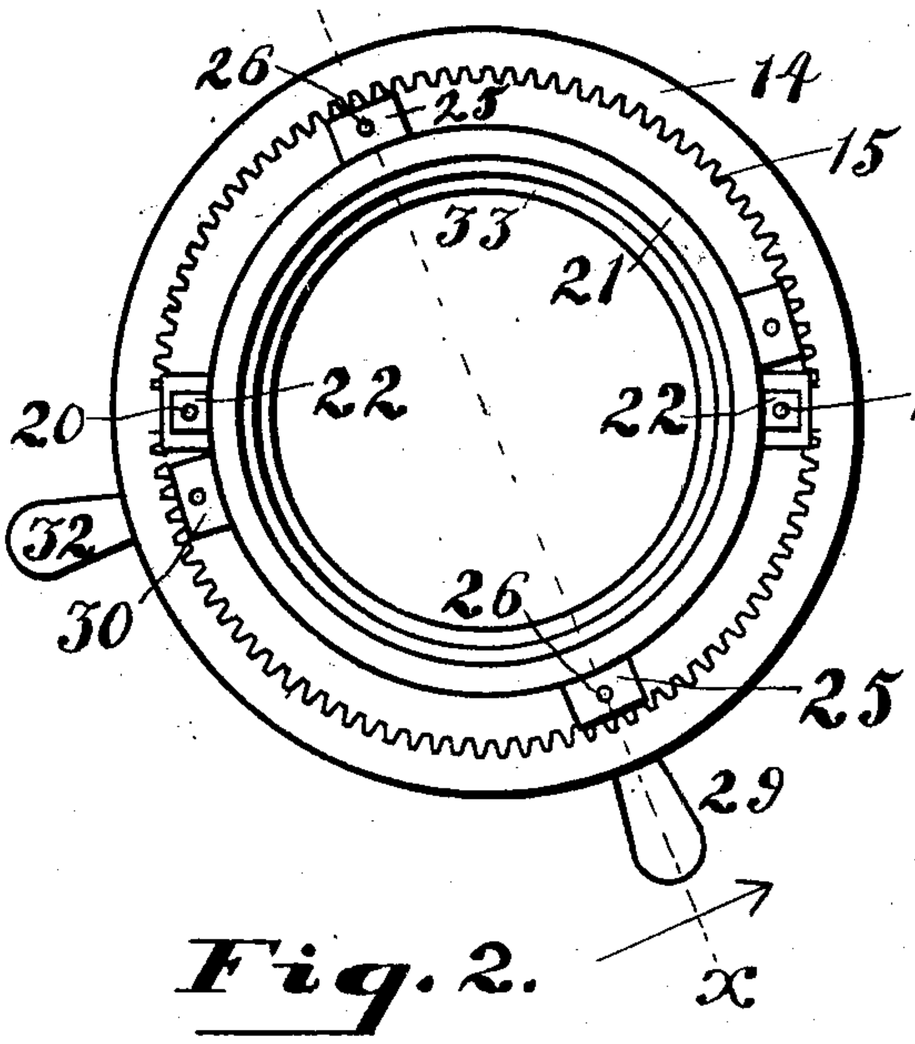

Fig. 2.

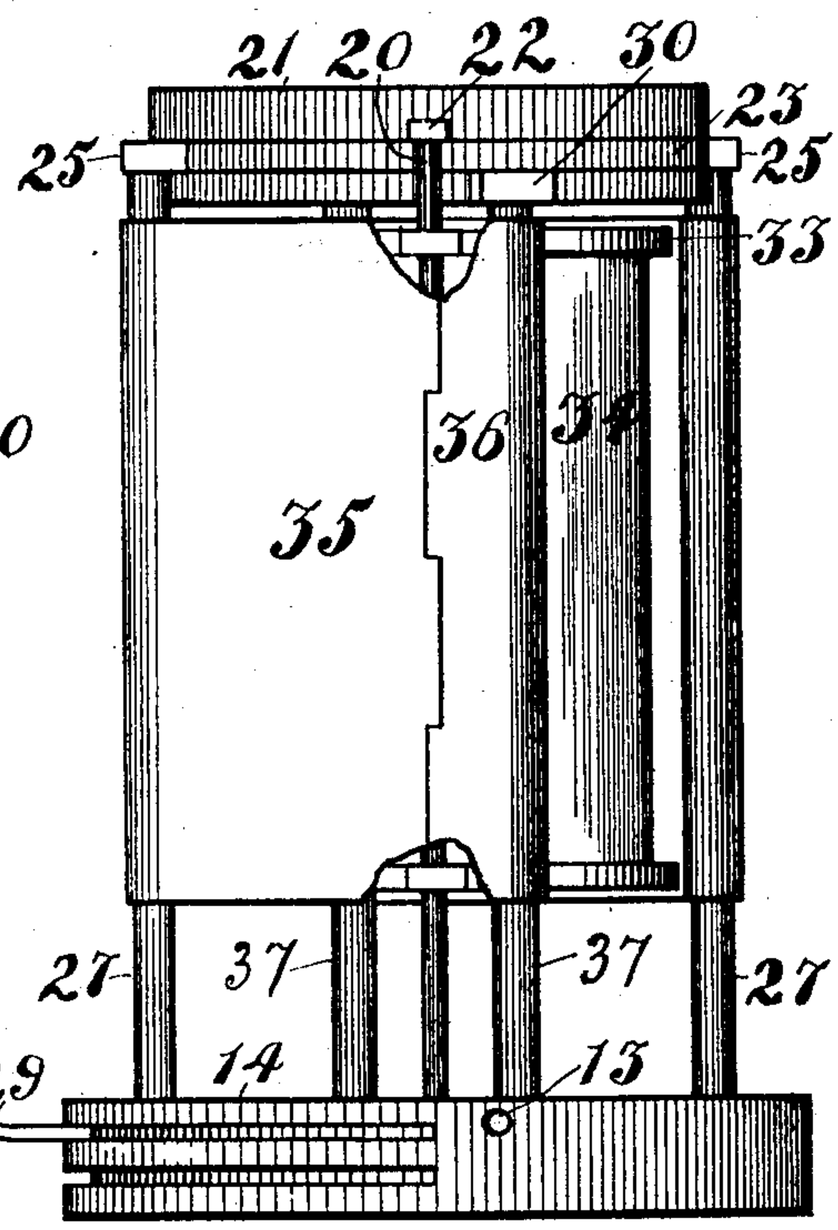

Fig. 3.

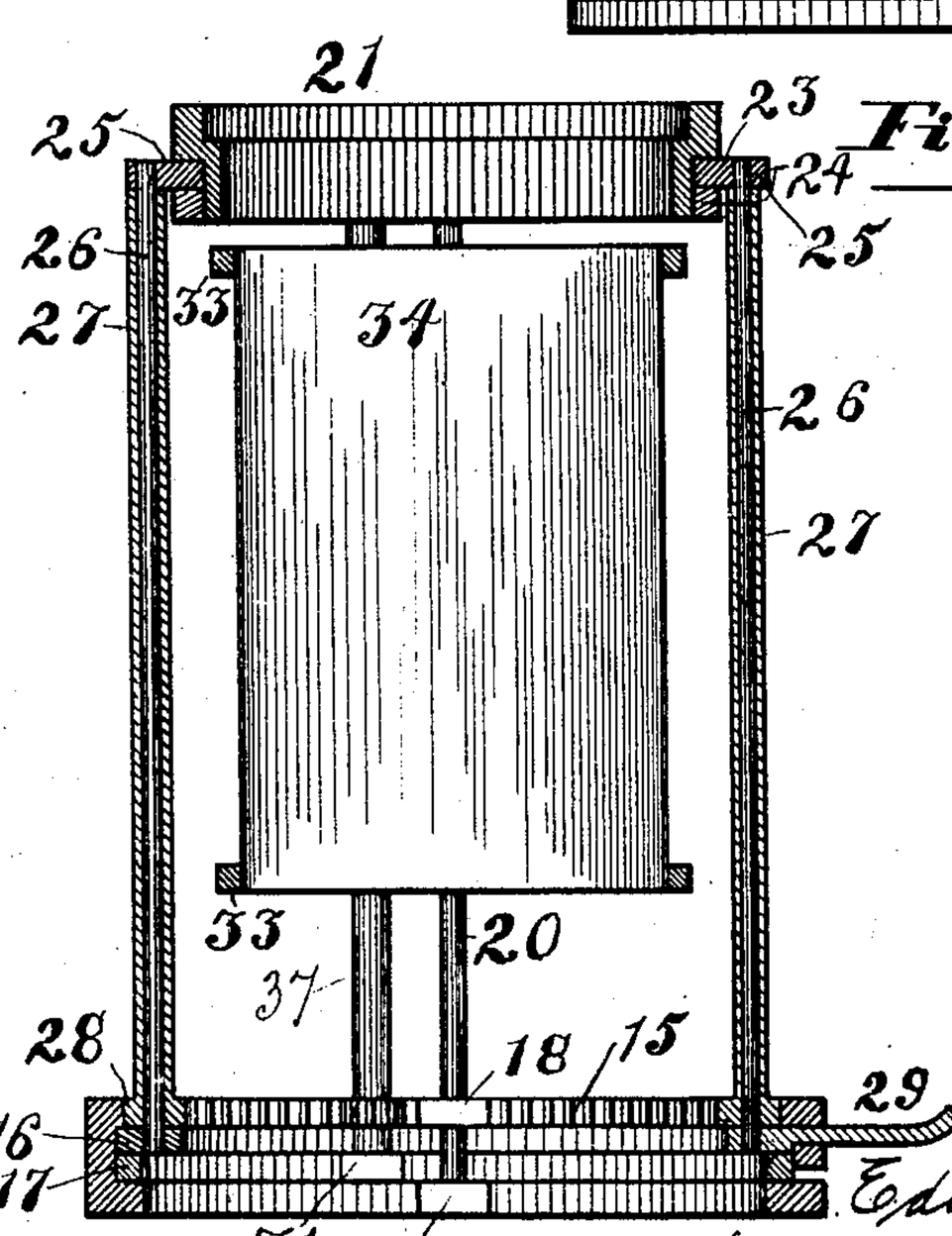

Fig. 4.

Witnesses;
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No. 762,283. Patented June 14, 1904.

UNITED STATES PATENT OFFICE.

EDWARD CORWIN, OF AKRON, OHIO, ASSIGNOR OF ONE-THIRD TO EDWARD J. MORGAN, OF FINDLAY, OHIO.

SIGNAL-LANTERN.

SPECIFICATION forming part of Letters Patent No. 762,283, dated June 14, 1904.

Application filed February 17, 1904. Serial No. 194,053. (No model.)

To all whom it may concern:

Be it known that I, EDWARD CORWIN, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented a certain new and useful Improvement in Signal-Lanterns, of which the following is a complete specification.

My invention relates generally to signal-lanterns commonly used by railroad employees to aid them in the proper performance of their duties.

The objects of my invention are to place within the ordinary signal-lantern carried by railroad men suitable mechanism by which different colors may be shown by the lantern as desired by the employee for the purpose of signaling to approaching trains or to other employees and yet which will at no time impair the perfect efficacy of the lantern as a light-giver when used solely for furnishing light to the employee.

A further object is to so locate and place this mechanism within the lantern that its use will at no time interfere with the ordinary use of the lantern and its placing within the lantern is easily and readily attained, as well as its removal therefrom, and which will enable the employee with a slight movement of the finger to show either a green light or a red light as well as the white light commonly given by the lantern.

To the accomplishment of the aforesaid objects my invention consists in the peculiar and novel construction, arrangement, and combination of the various parts hereinafter described, reference being had to the accompanying drawings, forming a part hereof.

In the accompanying drawings, in which similar reference-numerals indicate like parts in the different figures, Figure 1 represents a vertical central section of a signal-lantern with my improved device in position therein. Fig. 2 is a plan view of my improved mechanism removed from the lantern; Fig. 3, a side elevation of Fig. 2 looking from the right of Fig. 2, and Fig. 4 a section at the line *x* of Fig. 2.

The ordinary lantern consists of an annular base-ring 1, from which arise inwardly-turned double wires 2, which turn inward a proper distance above the base-ring 1 and enter the sides of the casing 3 and are there soldered. From thence these wires extend upwardly in a curved style to a medial ring 4, which they inclose, and from thence pass upward to the top ring 5, at which point they terminate. From this top ring 5 extend first downwardly and then upwardly two loop-wires 6, into which is fastened a handle 7, by which the lantern is carried.

Into the lower end of the casing 3 is inserted and held by a bayonet-fastening or other preferred means the oil-reservoir 8, on which is the reservoir 9, surmounted on top by the burner 10, which contains the ordinary wick. Into the upper end of this casing 3 is inserted a glass chimney 11, the top of which is sustained in place by an upwardly-swung top 12, hinged onto the top ring 5. This is the ordinary lantern as now constructed, and a further description seems now unnecessary. In order to place my improved mechanism in this lantern, the top 12 is raised and turned backward and the glass chimney removed and my device placed into the upper end of the casing 3, where it is sustained on one side by a stud 13, being of a diameter very close to the internal diameter of the upper part of the casing 3, and it rests in position and is further sustained by the fact that it has two projecting levers passing through a cut in the upper portion of the casing to permit their revolution therethrough. This mechanism which I insert in the lantern is best shown in Figs. 2, 3, and 4 and consists at the bottom of an annular ring 14, of metal, preferably of brass. Around the upper edge of the inner portion of this ring 14 are cut internal gear-teeth 15 for a purpose to be stated. The bottom portion of this ring is turned inward toward the center sufficiently far to form between it and that portion in which are cut the gear-teeth 15 openings for the reception of two annular rings 16 17, the object of which will be stated. On diametrically opposite sides of the ring 14 and on the part where the gear-teeth are cut are lugs 18, and immediately below them on the lower portion of this ring are lugs 19. Through these two lugs are

passed and firmly mounted upright posts 20, the upper ends of which serve to sustain a ring 21 by passing through lugs 22 on the outside thereof. On the outside periphery of the upper ring 21 is cut an opening of suitable size to receive two annular rings 23 and 24, capable of revolution about the ring 21. On opposite sides of the ring 23 are two lugs 25, through which pass pins 26, the lower ends of which pass into inturned lugs integral with the ring 16. Surrounding the rods 26 are sleeves 27, on the lower ends of which, and preferably integral therewith, are pinion-gears 28, arranged to mesh into the gear-teeth 15. One of the lugs on the ring 16 is provided with an outwardly-projecting arm 29, which passes through a slot in the ring 14, thereby permitting its radial movement around the periphery of the ring 14. On diametrically opposite sides of the ring 24 are lugs 30, from which extend downwardly rods similar to the rods 26, but which are wholly concealed in the drawings by sleeves 37, similar to sleeves 27, which enter lugs 31 in the ring 17. This ring has also projecting from it an arm 32, similar to the arm 29 and for a like purpose. From this it will be seen that the rings 16 and 23 furnish the sustaining means for pins 26 and sleeves 27 and rings 17 and 24 for similar pins and their corresponding sleeves 37 and support them at all times in their movement about the light. Situated between the rings 21 and 14 and sustained by lugs which grip the posts 20 are two rings 33, between which extends and is held a mica chimney 31, which serves to prevent the heat of the lamp in the lantern from doing any damage to the mechanism just described. It is obvious that the rotation of the ring 16, for example, by means of the arm 29 will cause a simultaneous movement of both the rods 26 about the imaginary center of the ring 14 and simultaneously therewith cause the revolution of the sleeves 27 about the rods 26, due to the meshing of the pinions 28 into the gear-teeth 15, and this is equally true of the sleeves 37 and rods mounted on the ring 17. Now in order to furnish a means of showing different colors by means of this lantern I roll about each of the sleeves 27 a ribbon or band 35, of a color such as red, and attach its free end to a ribbon 36, say of a green color, which in turn is rolled about one of the rollers 37 on the rod rising from the lug 31 on the ring 17. This point of union of the two curtains or ribbons may be wired to one of the posts 20, if necessary, to keep it permanently in position; but this is not ordinarily necessary. Of course this description relates to one side of the lantern, and it is repeated on the opposite side, so that each sleeve 27 has wrapped about it a red curtain, and each of the sleeves 37 on the rods rising from the lugs 31 has wrapped about it a green curtain, and each green curtain meets its respective red curtain directly opposite or outside of and, if necessary, against the post 20. From this it will be seen that if both arms 29 and 32 are thrown apart to opposite ends of the slots cut in the sides of the ring 14 all of the curtains will be rolled up and the white light be given. If it is desired to show, for instance, a red light, the upper arm 29 is swung around until it encounters the other end of the slot in which it travels, which will unroll simultaneously both of the red curtains from diametrically opposite points and keep unrolling them until the entire circumference about the mica chimney 34 is covered by a red curtain. If it is desired to change this to a green lantern, the arm 29 is thrown back to its original position and the arm 32 thrown, which will unroll the sleeves carrying the green curtain. In the drawings in Fig. 1 the red curtain is shown as being partially thrown into position.

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

1. The combination with a signal-lantern of a frame arranged to surround the light thereof, a series of rings mounted in said frame, rods connecting said rings bearing revoluble sleeves, curtains arranged to roll on said sleeves and mechanism to revolve said rings and sleeves in said frame about said light.

2. The combination with a signal-lantern of a frame to inclose the light therein, revoluble rings mounted in said frame connected by pairs of rods, revoluble sleeves on said rods, curtains arranged to roll on said sleeves and means to revolve said rings about said flame and means interposed between said flame and said curtains to protect said curtains.

3. The combination with a signal-lantern of a framework to inclose the light therein, revoluble rings in said frame, each pair connected with an opposite pair by rods, revoluble sleeves on said rods, curtains arranged to be rolled on said sleeves, spur-pinions attached to said sleeves, an internal rack in said frame and means to cause said rings to revolve and said pinions to mesh into said internal rack.

4. The combination with a signal-lantern of a framework arranged to be sustained in the body of said lantern surrounding the central portion thereof, pairs of revoluble rings in said framework, revoluble sleeves on said rods, curtains arranged to roll on said sleeves, a spur-pinion on the lower end of said sleeves, an internal rack around the lower portion of said frame to mesh into said spur-pinions, and means to cause the meshing of said spur-pinions and internal gear and means to surround the flame of said lamp and protect said curtains from said flame.

5. The combination in a signal-lantern of a framework to be sustained by the body of said lantern and inclose the central portion thereof, said framework involving upper and lower stationary rings connected by posts, a

pair of revoluble rings on both upper and lower stationary rings, rods to connect one of the upper rings with one of the lower rings, revoluble sleeves on said rods, means mounted on said sleeves to revolve the same, curtains arranged to be rolled on said sleeves and means to revolve each pair of rings in unison and simultaneously revolve said sleeves and wind and unwind said curtain.

6. The combination with a signal-lantern, of a frame arranged to surround the light thereof, sustaining means revoluble about said light mounted in said frame, means mounted on said sustaining means to support a curtain-winding sleeve, a curtain arranged to wind on said sleeve and mechanism to revolve said curtain-holding means about said light.

7. The combination with a signal-lantern, of a frame arranged to surround the light thereof, sustaining means revoluble about said light mounted in said frame, means mounted on said sustaining means to support a curtain-winding sleeve, a curtain arranged to wind on said sleeve and mechanism to revolve said curtain-holding means about said light and simultaneously revolve said curtain-holding means on its support.

In testimony that I claim the above I hereunto set my hand in the presence of two subscribing witnesses.

EDWARD CORWIN.

In presence of—
H. N. HEMING,
JOHN GARLOW.