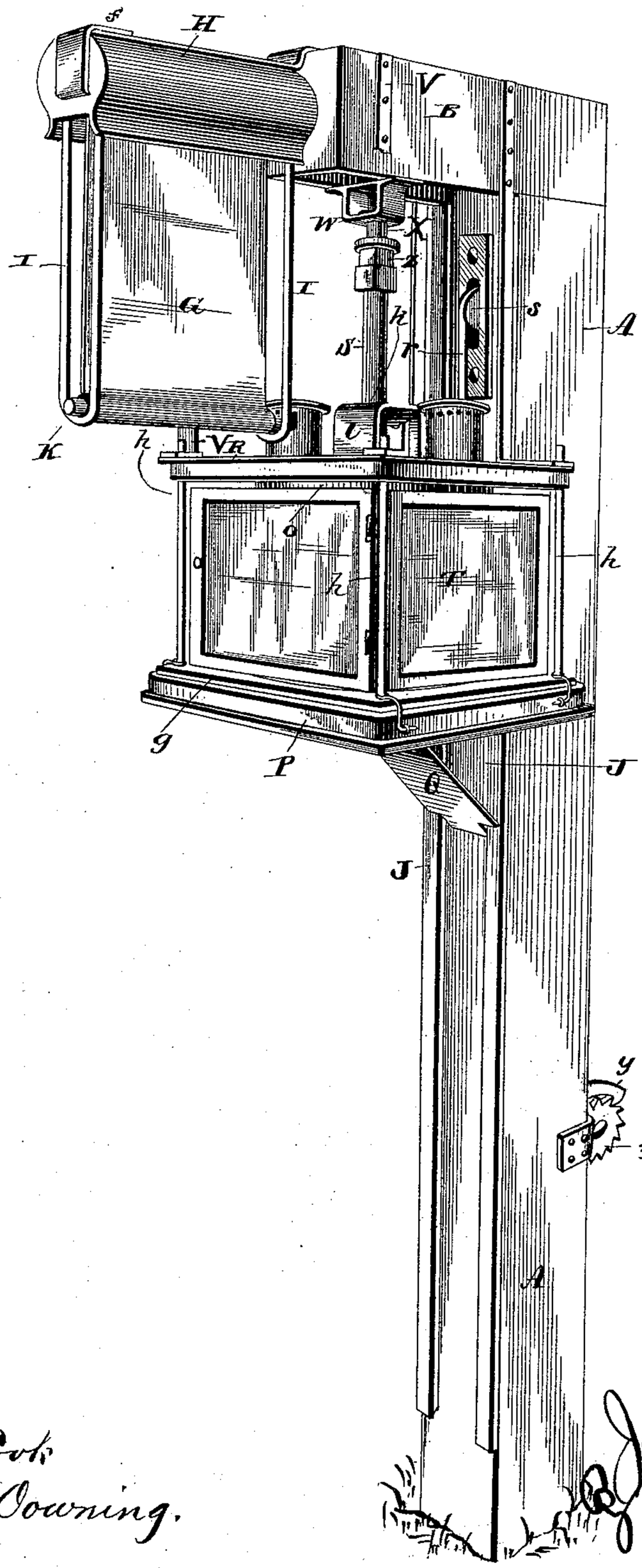
(No Model.) 2 Sheets—Sheet 1.

J. R. PARK.

RAILROAD SIGNAL.

No. 324,411. Patented Aug. 18, 1885.

Fig. 1.



WITNESSES

George Cook.

Geo. F. Downing.

INVENTOR

James R. Park,

by Munn & Co

ATTORNEY

(No Model.)

2 Sheets—Sheet 2.

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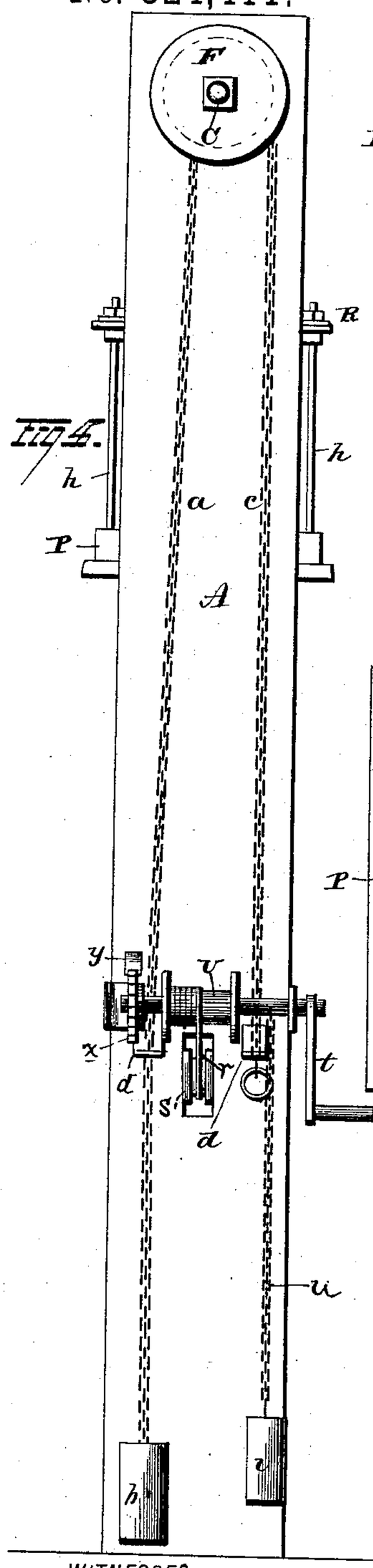

Fig. 4.

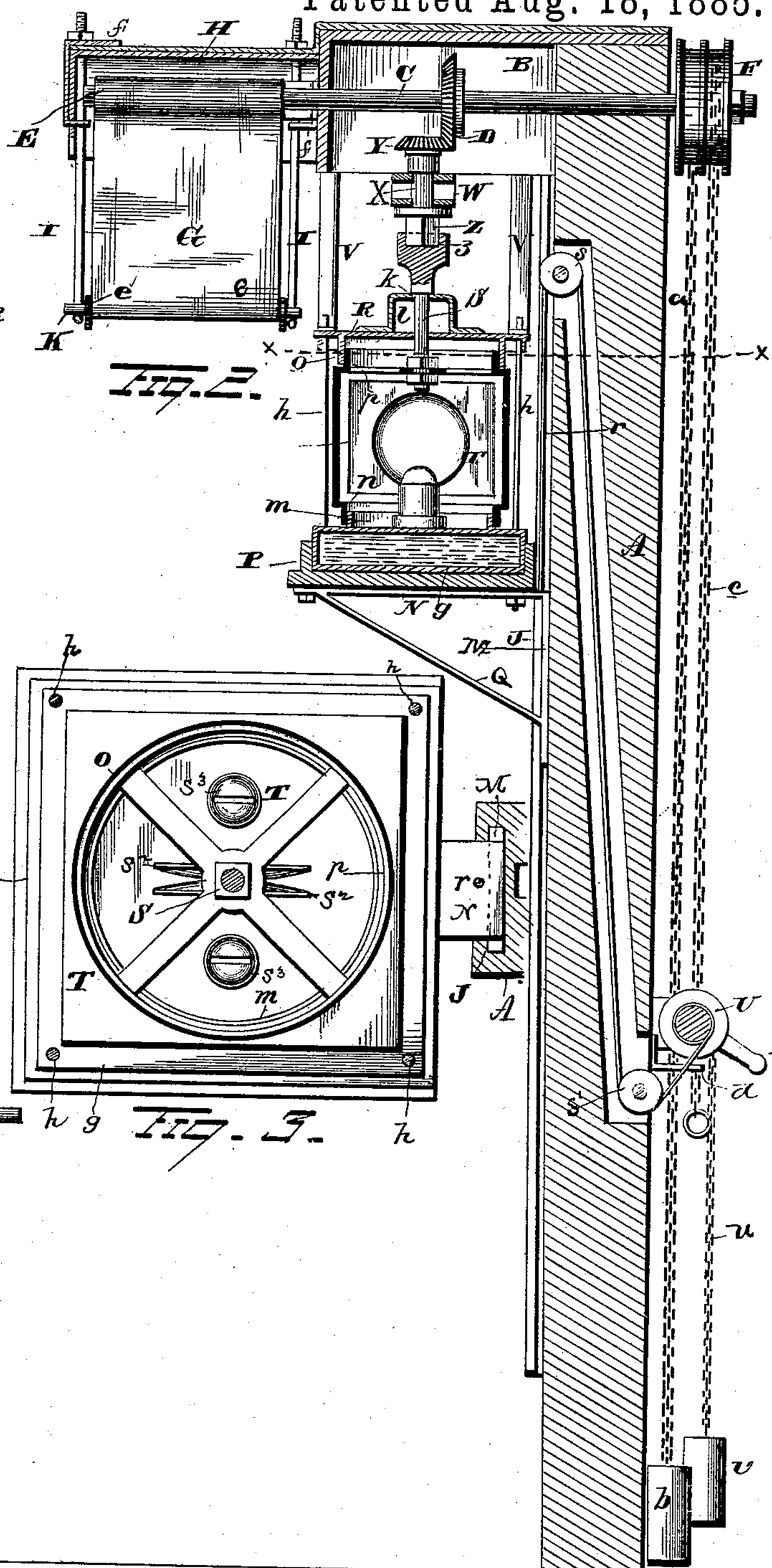

Fig. 2.

Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES R. PARK, OF LAVERGNE, TENNESSEE.

RAILROAD-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 324,411, dated August 18, 1885.

Application filed April 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. PARK, of Lavergne, in the county of Rutherford and State of Tennessee, have invented certain new and useful Improvements in Railroad-Signals; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in railroad-signals, the object being to provide a device of this character which shall be simple in construction, which shall be capable of being easily and readily handled, and which shall be durable and efficient in use; and with these ends in view my invention consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a view in perspective of my improved signal. Fig. 2 is a view in longitudinal vertical section of Fig. 1. Fig. 3 is a view partly in section and partly in plan, taken on the line *x x* of Fig. 2; and Fig. 4 is a rear view.

A represents the upright standard, constructed, if desired, of one piece of material, and of any suitable height, to the top of which is secured the horizontal box or casing B.

Through the support A and casing B extends the horizontal shaft C, provided midway between the upright A and the end of the casing B with a gear, D, and also provided on the end which extends beyond the casing B with a drum, E. On the opposite end of this shaft is secured a double pulley, F, to which is secured the rope or chain *a*, carrying a weight, *b*, and also the rope or chain *c*, which extends down near to the ground or within easy reach of the operator, said ropes or chains being secured on opposite sides of the pulley and passing through guides *d*, secured to the rear of the support A, in order to keep them in position and guide them in their operation. When the weight *b* is lowered, the chain *c* will be wound up, and when the chain *c* is pulled down the weight will be raised.

To the drum E is secured a flag, G, which, when the chain *c* is pulled down, is wound upon the drum, and when the weight *b* is lowered is caused by the revolving of the shaft C to unwind and lower. When the flag is wound up, it is hidden from view by means of a shield, H, adapted to fit over the drum and held in position by means of the depending guides I, the upper ends of which pass through the guides *f*, one of which is secured to the outer end of the casing B and the other to the shield H, the latter being curved, as shown in the drawings. In these guides I are adapted to move the ends of the metal rod K, secured in the lower ends of the flag, and adapted to keep the latter in proper position, the said rod K being provided near its ends with flange *e*, adapted to prevent the rod from coming out of the guides I.

M is a frame-piece, moving between the grooved strips or guides J, secured to the upright A, to which piece M are secured the horizontal piece N and the inclined piece or brace Q, which latter is also secured to the outer end of the piece N, and assists in supporting the same.

To the horizontal piece N is rigidly secured the table or platform P, to which is removably secured the base or reservoir *g* of the lamp. To the base or reservoir *g* of the lamp are secured the four uprights *h*, connected near the tops and held in position by the cover R.

Through the cover R passes the vertical shaft S, to the lower end of which is secured the lamp-casing T, and provided with a shoulder, *k*, adapted to strike the bearing *l*, secured to the cover R, and adapted to hold the said casing T in suspension between the base *g* and said cover R, and allow the casing to be rotated. This casing consists, essentially, of a rectangular metallic frame provided on diametrically-opposite sides with red or other colored glass faces, and on the two remaining sides with white glass faces. The base or reservoir *g* of the lamp is provided with an upwardly-extending circular flange, *m*, around which fits a downwardly-extending flange, *n*, formed on the lower end of the lamp-casing, said flanges being adapted to keep the wind

from entering the lamp. The cover R is also provided with a downwardly-extending circular flange, *o*, fitting around an upwardly-extending flange, *p*, formed on the upper end of the lamp-casing and performing the same function as the flanges *m n*.

It will now be seen that by this construction and arrangement of parts the casing may be revolved independent of the top and base, and by securing the lights and reflectors to the base or oil-reservoir *g* the lamp-casing may be turned without disturbing any other portion of the device.

To the horizontal piece N, or any other suitable point, is secured a rope or chain, *r*, adapted to pass over a pulley, *s*, secured to the upright support A, and down the rear side of said support to a drum or windlass, U, secured to the support and operated by a crank, *t*. To this windlass is also secured a chain or rope, *u*, carrying a weight, *v*, adapted to counterbalance the weight of the lamp and facilitate the raising and lowering of the same.

When the crank *t* is turned in one direction, the weight *v* will be lowered and the rope or chain *r* wound around the windlass U, and the lamp thereby raised. If the crank is turned in the opposite direction, the lamp will be lowered and the weight *v* raised. In the present instance I have shown two pulleys, *s* and *s'*, over which the chain or rope *r* passes; but if the support A is made solid the latter pulley may be dispensed with.

To the extension or casing B are secured the four depending arms V, the lower ends of which are bent at right angles and each provided with a hole adapted, when the lamp is raised, to receive the ends of the posts *h* and assist in keeping the lamp in position, a ratchet, *x*, secured to the end of the windlass, and pawl *y*, secured to the support A, being adapted to hold the lamp in any desired adjustment.

To the casing B is secured the bearing W, through which passes the shaft X, the upper end of which is provided with a gear-wheel, Y, adapted to mesh with the gear D on the shaft C, the lower end being provided with the square shoulder Z, adapted, when the lamp is raised, to fit in the socket *z*, formed in the upper end of the shaft S.

When the lamp is in its raised position and the chain *c* or *a* is pulled down, the shaft C will be turned, and, through the intervention of the gears D Y and the shafts S and X, rotate the lamp, at the same time raising or lowering the flag, as before described. If, however, the lamp should be in its lowered position, the rotation of the shaft C would only operate the flag.

By slightly lowering the weight *b* the lamp may be turned quarter-way round, thus exposing to the side either the white or red glass of which the lamp is composed without bringing the flag to view the shield H extending downwardly a suitable distance to hide it. One of said glasses is hinged, forming a door.

From the foregoing it will be seen that I am enabled to operate both the flag and the lamp-casing by a single shaft and shaft-operating mechanism. As the flag is for use during the day-time and the lamp at night, there is no necessity for gearing the parts so as to present the colored glass and the flag at the same time; but if it is so desired, by simply employing gear-wheels between the shafts C and X of such relative size that the flag will be unfurled while the lamp-casing is making a quarter-turn, and so constructing the connection Z *z* that the latter will only join or come together when the parts are in a predetermined position, this end can be accomplished.

When reflectors S^2 are employed, they are preferably secured to the central portion of the base or reservoir *g*, and the burners S^3 placed outside of same.

By this improved construction the flag and lamp may be operated from the ground and the use of ladders obviated. Again, when it is desired to light or clean the lamp, it is simply lowered within easy reach of a person on the ground, being much more convenient than transporting a ladder to and from the lamp.

I would therefore have it understood that I do not limit myself to the exact construction shown and described, but consider myself at liberty to make such changes as fall within the spirit and scope of my invention.

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

1. In a railroad-signal, the combination, with a standard having a guideway in one face thereof, a support adapted to move vertically in said guideway, a lamp seated on said support, a rotating casing surrounding the lamp, a vertical shaft rigidly secured to the casing, and devices for vertically elevating the support, of a horizontal shaft journaled in the upper end of the standard, devices for rotating the horizontal shaft, and a vertical shaft geared with the horizontal shaft and adapted to engage the vertical shaft of the lamp-casing, substantially as set forth.

2. In a railroad-signal, the combination, with a lamp-support, lamp, and lamp-casing, a drum having a flag thereon, and a horizontal shaft for winding and unwinding the flag and rotating the lamp-casing, of a rope or chain secured to the lamp-support and passing upwardly over a pulley, and secured at its lower end to a winding-drum, and a counter-balance suspended from said drum, substantially as set forth.

3. The combination, with a base and top respectively provided with upwardly and downwardly projecting flanges, of a lamp-casing suspended between the base and top, and provided with flanges fitting within or around said former flanges, and means for rotating said casing, substantially as set forth.

4. The combination, with a support, of a box or casing secured to the top thereof, a

shaft passing through the latter, and provided on one end with a flag and on the other with a pulley, means for turning the shaft and winding or unwinding the flag, guides for the flag to move in, and a shield secured to the guides, and adapted, when the flag is wound up, to conceal the same, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES R. PARK.

Witnesses:
W. A. GOODMAN,
S. H. WALKER.