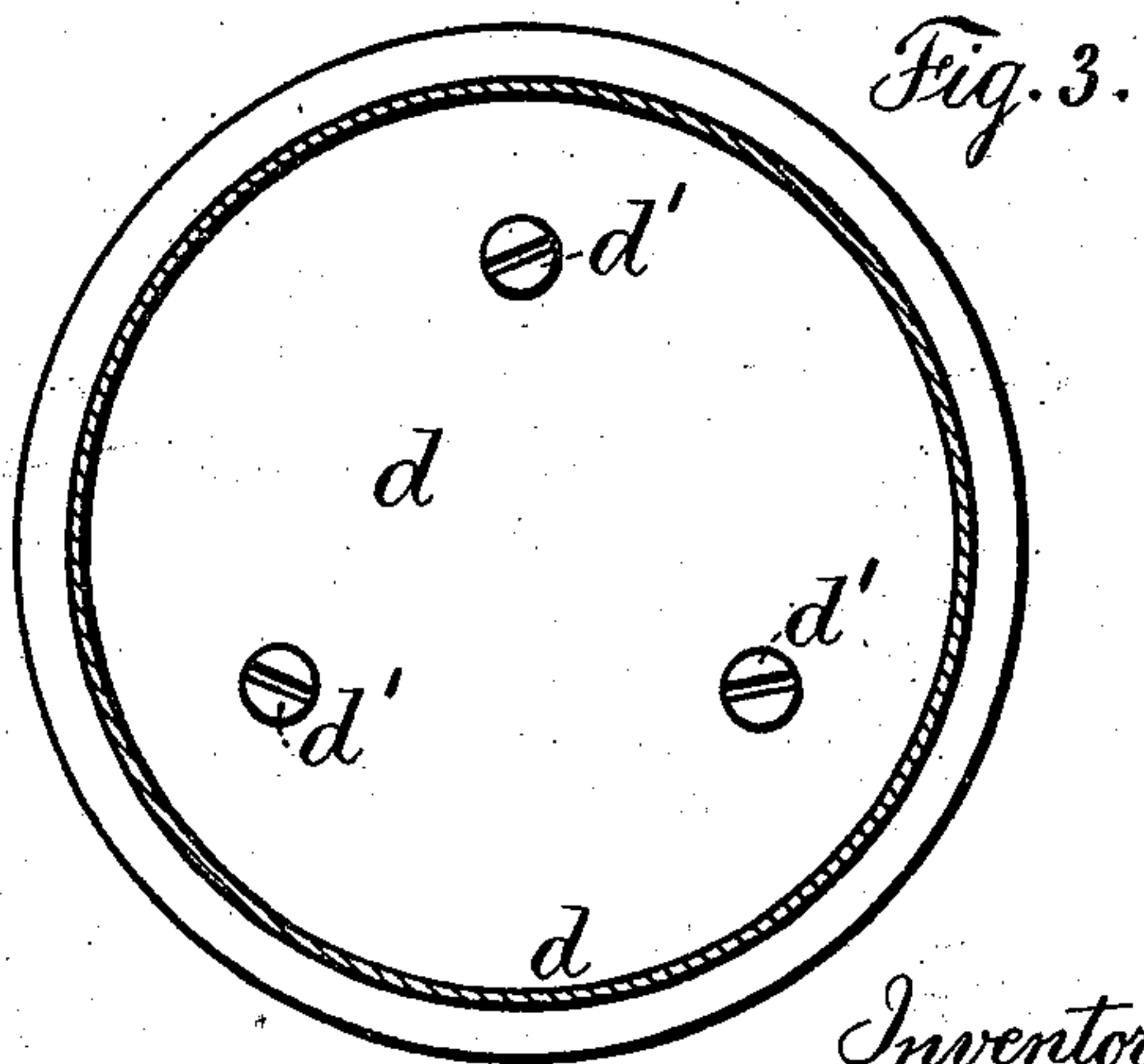
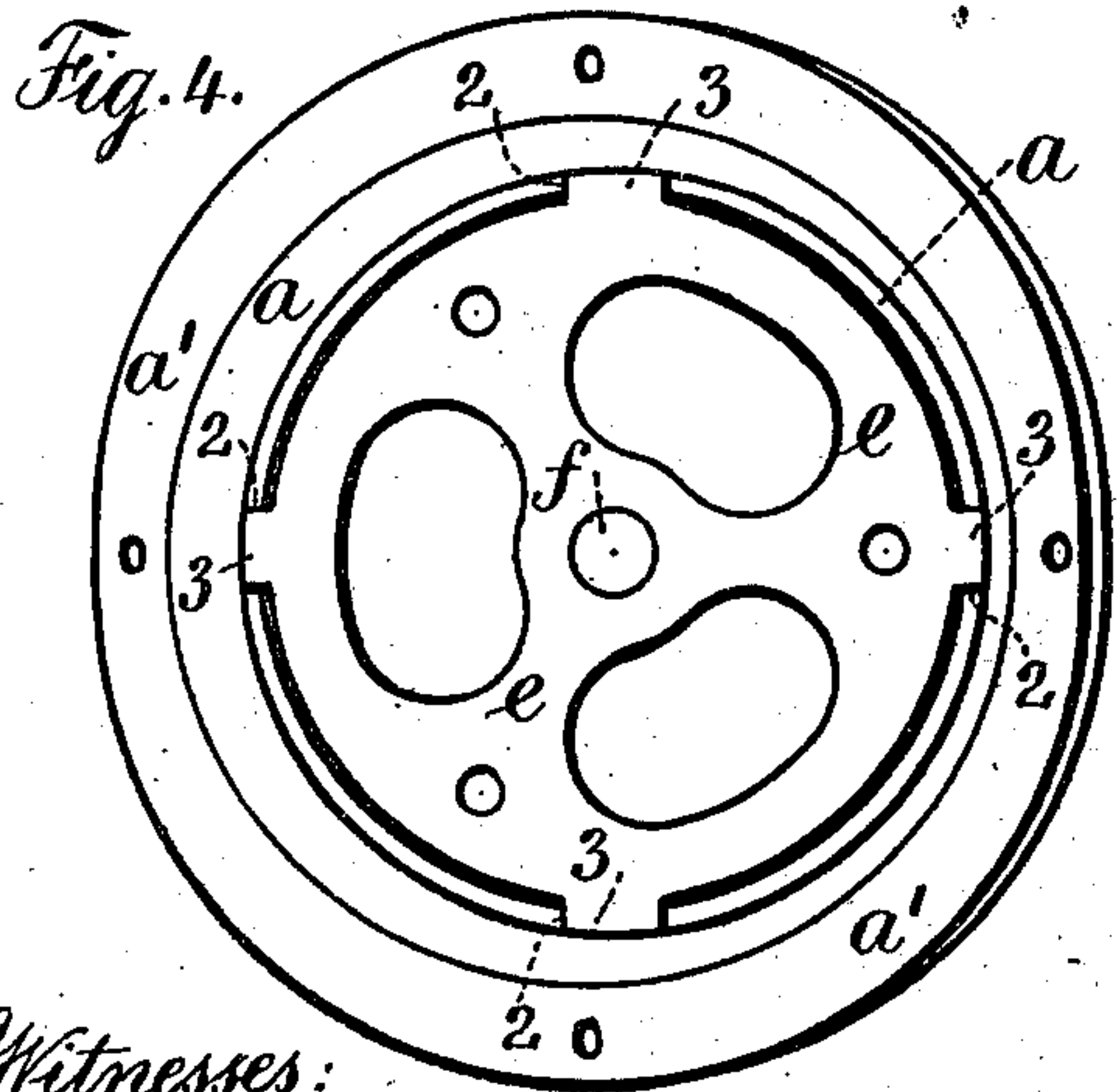
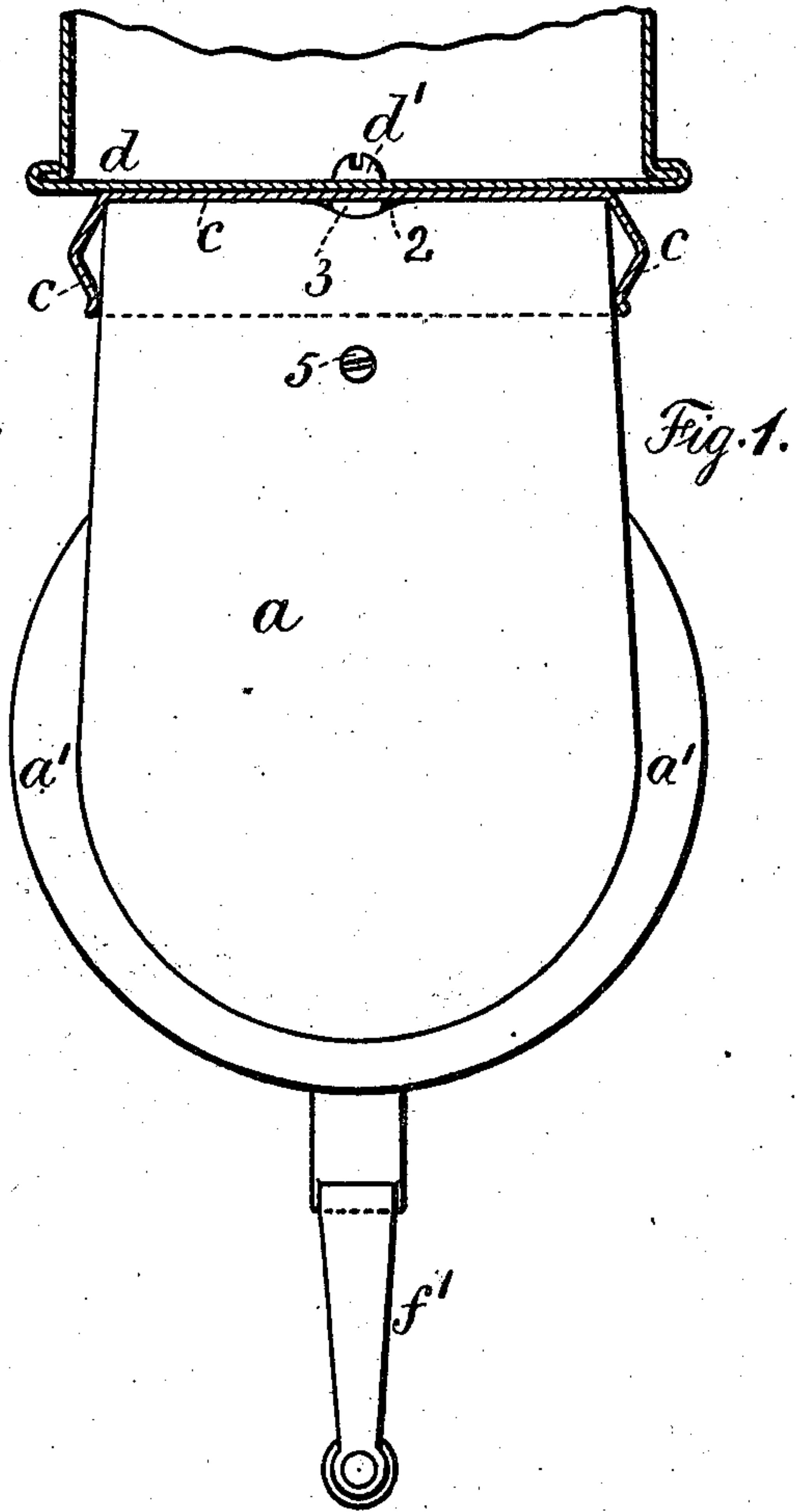
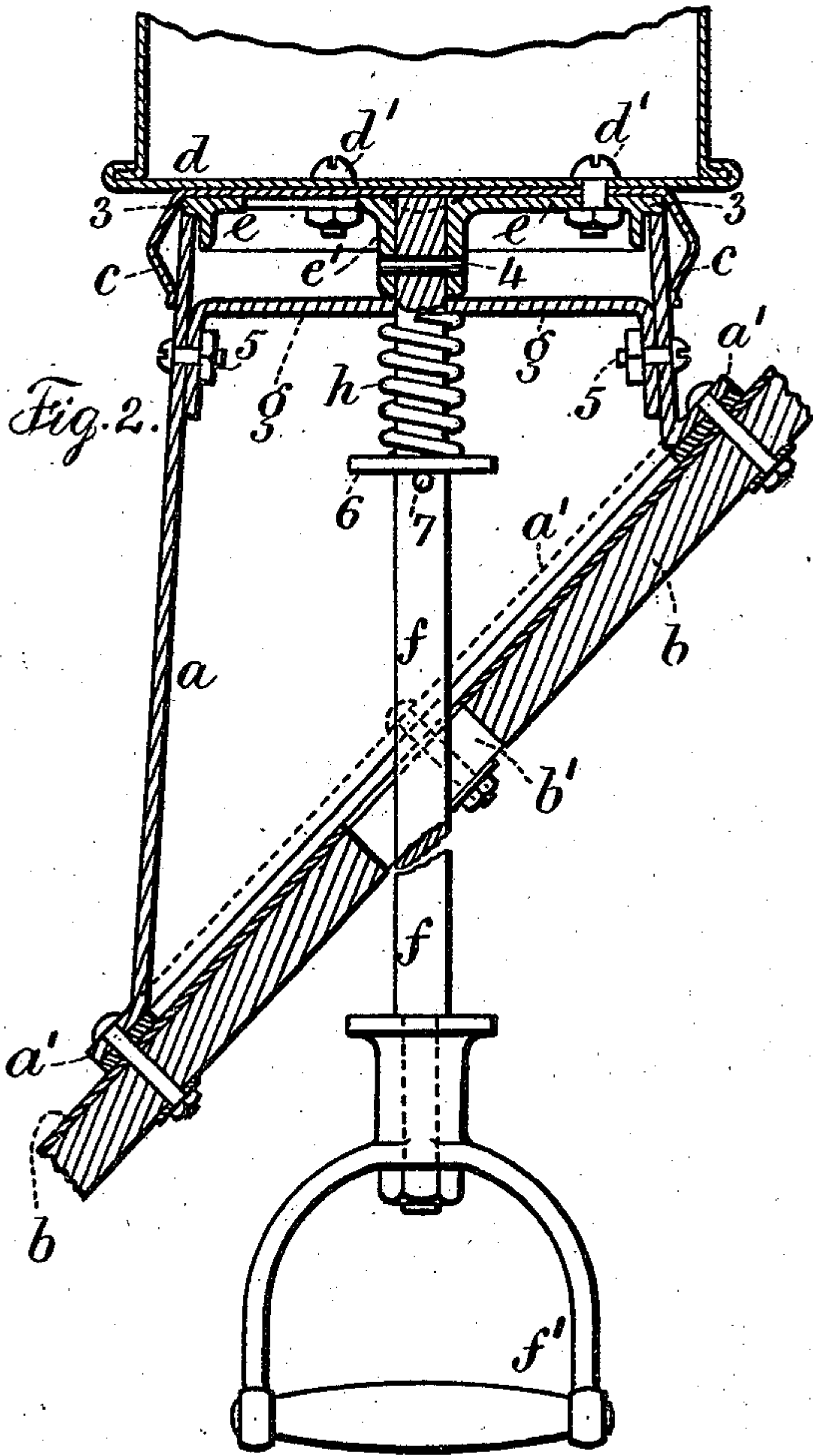


No. 724,156.

PATENTED MAR. 31, 1903.

R. BLACK.  
SIGNAL LAMP FOR RAILWAY CARS.  
APPLICATION FILED DEC. 11, 1902.

NO MODEL.



Witnesses:  
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Inventor:  
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per L. W. Sirell attys



# UNITED STATES PATENT OFFICE.

ROBERT BLACK, OF NEW YORK, N. Y., ASSIGNOR TO THE DRESSEL RAILWAY LAMP WORKS, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## SIGNAL-LAMP FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 724,156, dated March 31, 1903.

Application filed December 11, 1902. Serial No. 134,737. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT BLACK, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented an Improvement in Signal-Lamps for Railway-Cars, of which the following is a specification.

My invention relates to rotatable signal-lamps placed on the tops of cars and adapted to be turned horizontally in either direction from within the cars, and the same is an improvement upon the device shown and described in the application filed September 9, 1902, Serial No. 122,646, by Frederick W. Dressel.

The object of my invention is to simplify the construction, to afford more effective protection against storm, and to positively locate the several positions of the lamp, so that as turned the parts automatically come to the desired position.

In carrying out my invention I provide a tubular cylindrical support of cast metal having one end formed with a flange at an inclination and which flange is adapted for connection to the roof of the car or caboose, and the other and upper end occupies a horizontal plane. In this upper end there are a series of notches preferably placed at equal distances apart. I provide a locking-plate having lugs at equal spaced-apart intervals agreeing in number and location with the notches in the upper end of the tubular cylindrical support and which lugs are adapted to be received in said notches, and I provide a weather-cap adapted to fit over this locking-plate, over the upper end of the tubular cylindrical support, and to extend down outside of the same as a skirt for an appreciable distance, and the base of the lamp, said weather-cap, and locking-plate are to be securely connected by suitable devices, so that they are adapted to move as one. The central portion of the locking-plate is made as a hub, to which is secured a handle passing downward through the tubular cylindrical support through an aperture in the roof of the car and terminating within the car in a handle. Extending across the tubular cylindrical support is a bar secured thereto and having an aperture for said rod, and between

this bar and a washer held by a pin to said rod is a helical spring, the office of which is to hold the locking-plate down, so that the lugs thereof seat in the notches in the upper edge of the tubular cylindrical support. As the handle and rod are turned by hand said lugs move out of their seats in said notches up onto the upper edge of the tubular cylindrical support, the spring yielding with said action, and with the rotation of the parts the said lugs seat in the adjoining notches in the upper end of said support with the progressive movement, all of which parts are hereinafter more particularly set forth.

In the drawings, Figure 1 is an elevation and partial section. Fig. 2 is a vertical section at right angles to Fig. 1. Fig. 3 is a sectional plan through the base of the lamp, and Fig. 4 is a plan with the base of the lamp and the weather-cap removed.

*a* represents the tubular cylindrical support formed at one end at an inclination with a flange *a'*, which flange agrees with the inclination of the roof of the car, so that said support *a* occupies a vertical position and its upper end a horizontal plane. Between the flange *a'* of said support and the roof *b* of the car I prefer to employ a packing of suitable material, said parts being securely held in position by bolts or suitable devices, as shown in Fig. 2.

In the roof of the car there is an opening *b'* in the center of the support *a*, through which passes the rod *f*, which rod may be of any desired length, extending down into the car and terminating in a handle *f'*. The upper end of the tubular cylindrical support *a* is provided with notches 2, there being by preference four in number, spaced at equal distances apart.

*e* represents a locking-plate fitting within the upper end of the tubular cylindrical support *a* and having projecting lugs 3, which are shown as four in number at equal distances apart. These lugs are adapted to fit and to be received in the notches 2 at the upper end of the support *a*, and the center of the locking-plate is provided with a hub *e'*. The lugs have curved under surfaces and the notches correspond in contour.

*d* represents the base of the lamp, and *c* a



weather-cap comprising an inverted dishing or cup-shaped structure coming between the locking-plate *e* and the base of the lamp *d* and having a flange or skirt portion extending down for an appreciable distance outside of the tubular cylindrical support *a*. The base of the lamp *d*, the weather-cap *c*, and the locking-plate *e* are securely connected by bolts *d'*. This locking-plate *e* is shown as of open construction in Fig. 4 for lightness.

Within the tubular cylindrical support is a guide-bar *g*, extending centrally across the same, provided with an aperture for the rod *f* and with downwardly-extending ends, and bolts 5 pass through said ends and through the tubular cylindrical support *a* to secure the bar *g* in position. The rod *f* is shown as extending into the hub *e'* of the locking-plate and as secured thereto by a pin 4, and the end face of the hub comes closely adjacent to the upper surface of the bar *g*. Between the under surface of the bar *g* and a washer 6, surrounding and secured in position to the rod *f* by a pin 7, is a helical spring *h* around the rod *f*, the office of which is to apply tension expansively to hold the locking-plate down upon the upper end of the tubular cylindrical support *a*, and thereby to retain in position the lamp-base, the weather-cap, the said rod, and the handle on the lower end thereof by virtue of the lugs 3, held in the notches 2 of said support. This structure determines the position of the base of the lamp and with the same the entire lamp structure carried thereby and further determines the direction of the light from the lamp and the color thereof by means of devices well known in the art.

When it is desired to turn the lamp to change the color, the handle *f'* is grasped and it and the rod *f* are turned with force, which raises the lugs 3 out of the notches 2 against the action of the spring *h*, said lugs rising upon the upper surface of the tubular cylindrical support, and with the further movement of the parts said lugs, by virtue of the action of the spring *h*, drop into the next adjoining notches.

According to the construction illustrated it will be observed that it is possible to turn the lamp-body a quarter of a revolution at a time with each movement imparted to the handle and rod. This structure is substantially automatic in its action, as it is not necessary for the attendant to be provided with any device to indicate the location of the lamp upon the tubular cylindrical support, as the location is determined by the lugs and notches hereinbefore described. This structure is exceedingly simple and effective, and the weather-cap *c* as a skirt surrounding the upper end of the tubular cylindrical support makes it substantially impossible for any rain or snow to find its way within the tubular cylindrical support and so down into the car.

I claim as my invention—

1. In a railway signal-lamp adapted for use

on the roofs of cars, the combination with the lamp-body and a tubular cylindrical support having one end formed at an inclination and adapted for connection to the roof of the car, of a locking-plate received in the upper end of the tubular cylindrical support and having portions adapted to engage the upper edge of said tubular cylindrical support, a hand-operated rod passing axially through the tubular cylindrical support, through the roof of the car and down within the car, a connection from said rod to said locking-plate, and a guide therefor, and a spring around said rod adapted to hold said locking-plate in position, and means for connecting the lamp-body and locking-plate so that they turn together.

2. In a railway signal-lamp adapted for use on the roofs of cars, the combination with the lamp-body and a tubular cylindrical support having one end formed at an inclination and adapted for connection to the roof of the car, of a locking-plate received in the upper end of the tubular cylindrical support and having portions adapted to engage the upper edge of said tubular support, a hand-operated rod passing axially through the tubular cylindrical support, through the roof of the car and down within the car, a connection from said rod to said locking-plate and a guide therefor, and a spring around said rod adapted to hold said locking-plate in position, means for connecting the lamp-body and locking-plate so that they turn together, and a weather-cap comprising a plate secured to and between the locking-plate and lamp-body and having a downwardly-extending rim or skirt surrounding the upper end of the tubular cylindrical support.

3. In a railway signal-lamp adapted for use on the roofs of cars, the combination with the lamp-body, of a tubular cylindrical support having one end formed at an inclination and adapted for connection to the roof of the car, said support having equidistant spaced-apart notches in its upper end, a locking-plate adapted to be received in the upper end of said support and having projecting lugs at equidistant spaced-apart intervals agreeing with and adapted to be received in said notches, a manually-operated rod passing vertically and axially through said tubular cylindrical support and at its upper end connected to a hub of the locking-plate whereby the said plate may be turned by said rod, devices for guiding said rod and yielding devices for holding said locking-plate to its seat and which permit the same to be turned at the pleasure of an attendant, and means for connecting the lamp-body and locking-plate.

4. In a railway signal-lamp adapted for use on the roofs of cars, the combination with the lamp-body, of a tubular cylindrical support having one end formed at an inclination and adapted for connection to the roof of the car, said support having equidistant spaced-apart notches in its upper end, a locking-plate



adapted to be received in the upper end of  
said support and having projecting lugs at  
equidistant spaced-apart intervals agreeing  
with and adapted to be received in said  
5 notches, a manually-operated rod passing ver-  
tically and axially through said tubular cy-  
lindrical support and at its upper end con-  
nected to a hub of the locking-plate whereby  
the said plate may be turned by said rod, a  
10 bar extending across the tubular cylindrical  
support and forming a guide for said rod, a  
pin connected to said rod and a washer around  
said rod above said pin, and a helical spring  
between said washer and the said guide-bar  
15 acting expansively to hold the projections of  
the locking-plate into engagement with the  
notches in the upper end of the tubular cy-  
lindrical support, and means for connecting  
the lamp-body and locking-plate.  
20 5. In a railway signal-lamp adapted for use  
on the roofs of cars, the combination with the  
lamp-body, of a tubular cylindrical support  
having one end formed at an inclination and  
adapted for connection to the roof of the car,  
25 said support having equidistant spaced-apart  
notches in its upper end, a locking-plate  
adapted to be received in the upper end of  
said support and having projecting lugs at  
equidistant spaced-apart intervals agreeing

with and adapted to be received in said 30  
notches, a manually-operated rod passing ver-  
tically and axially through said tubular cy-  
lindrical support and at its upper end con-  
nected to a hub of the locking-plate whereby  
said plate may be turned by said rod, a bar 35  
extending across the tubular cylindrical sup-  
port and forming a guide for said rod, a pin  
connected to said rod and a washer around  
said rod above said pin, and a helical spring  
between said washer and the said guide-bar 40  
acting expansively to hold the projections of  
the locking-plate into engagement with the  
notches in the upper end of the tubular cy-  
lindrical support, means for connecting the  
lamp-body and locking-plate, and a weather- 45  
cap comprising a plate and a flange or skirt  
forming the periphery thereto, said plate be-  
ing held between the lamp-body and locking-  
plate and secured thereto, and the skirt ex-  
tending down over the upper end of the tu- 50  
bular cylindrical support, substantially as and  
for the purposes set forth.

Signed by me this 5th day of December,  
1902.

ROBERT BLACK.

Witnesses:

DAVID L. WOODALL,  
FLOYD K. PINCKNEY.