

(No Model.)

2 Sheets—Sheet 1.

W. P. ELLIOTT.
SIGNAL LANTERN FOR RAILWAY GATES.

No. 438,228.

Patented Oct. 14, 1890.

Fig. 1.

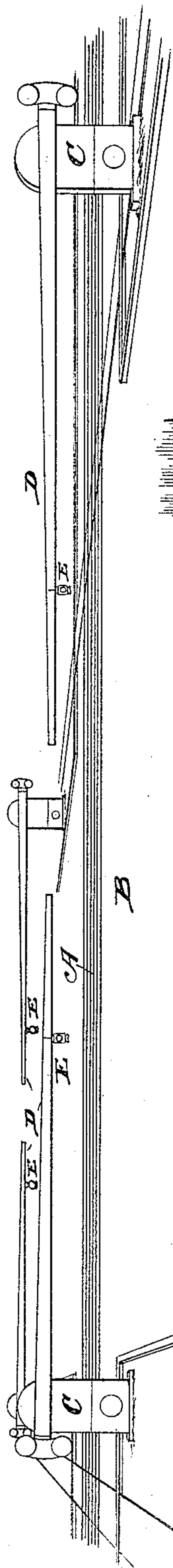


Fig. 5.

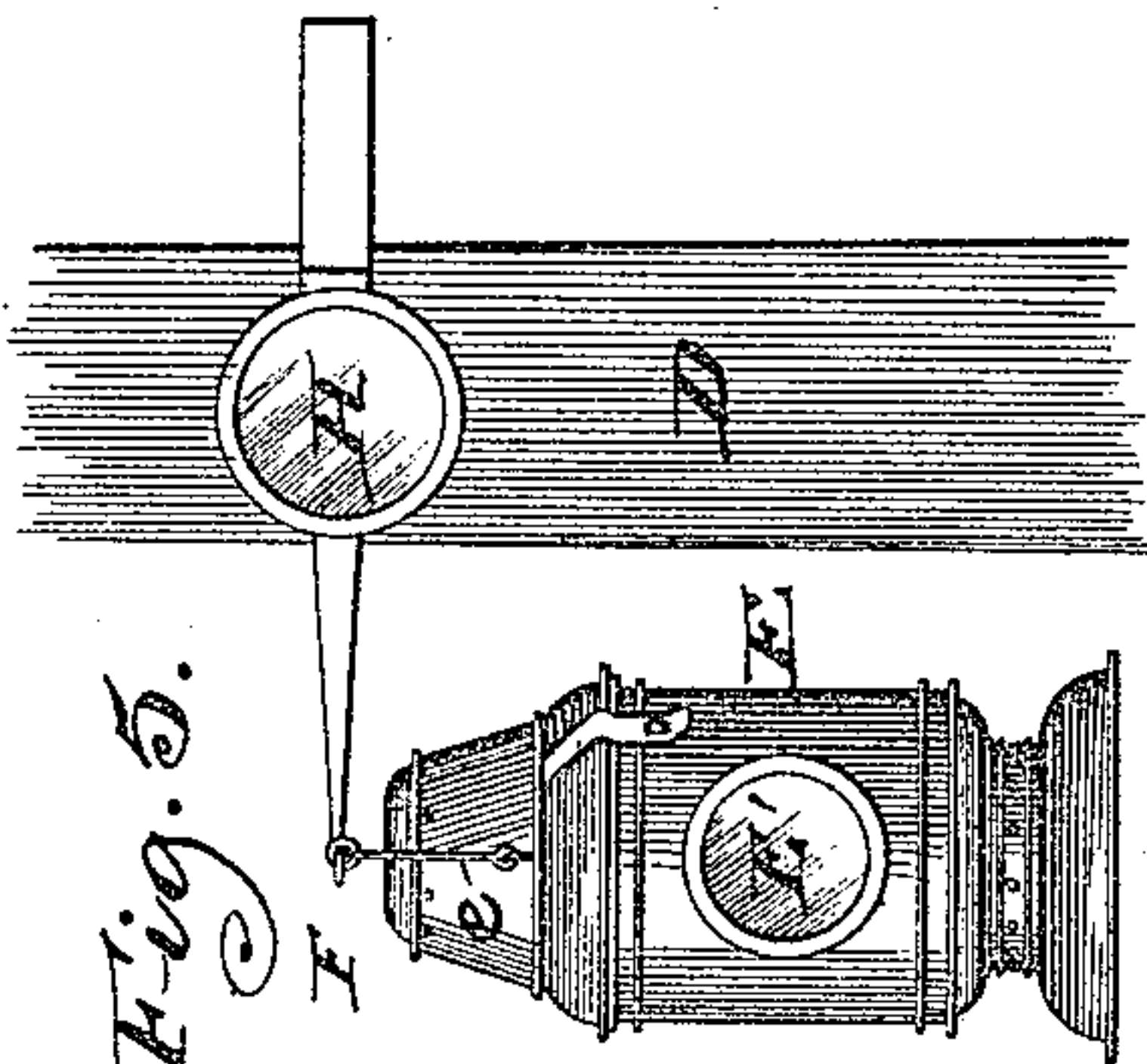
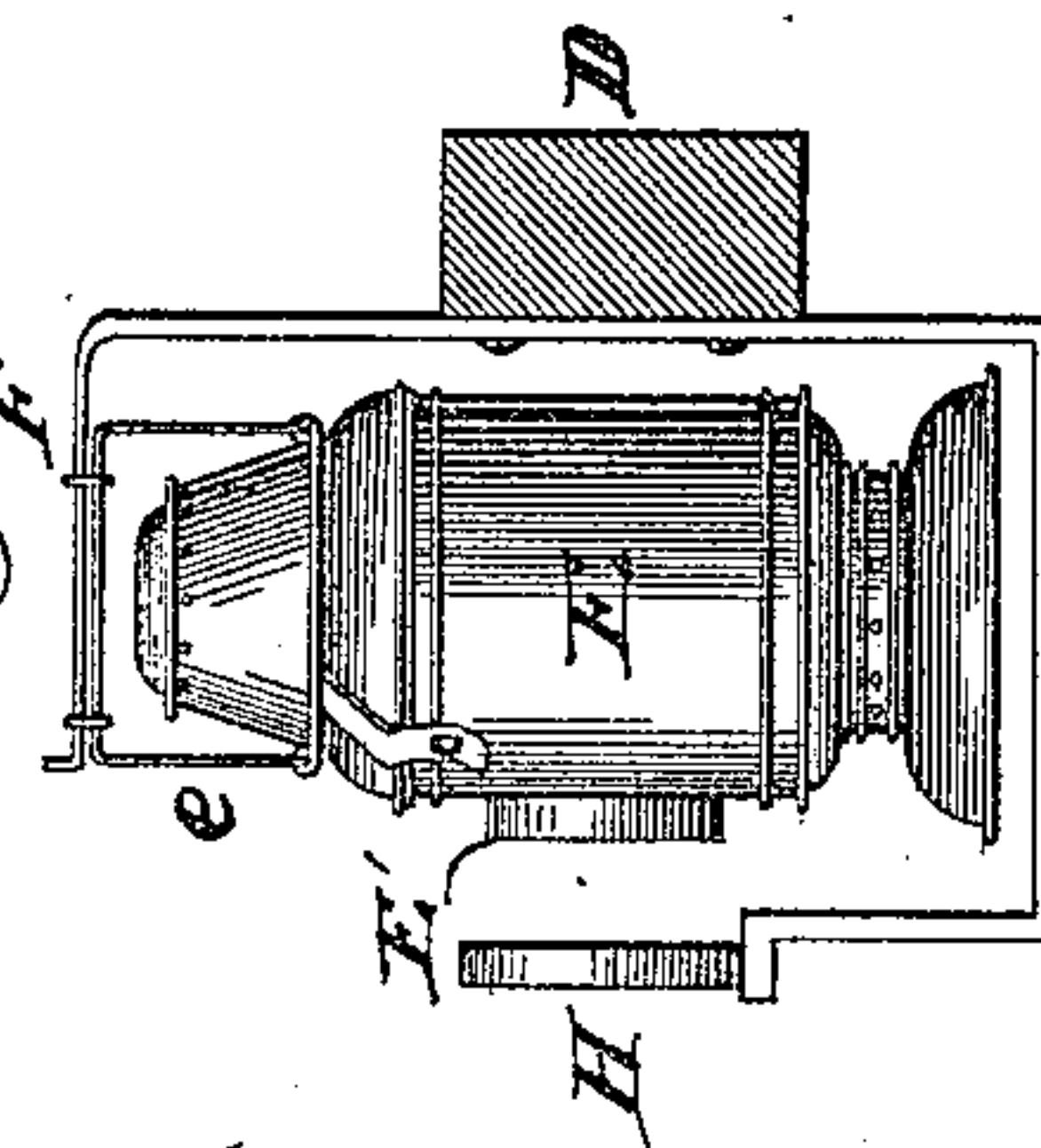


Fig. 4.



Witnesses,
J. J. Mann,
Frederick B. Goodwin

Inventor,
William P. Elliott
By *Offield & Sons,*
Attys,

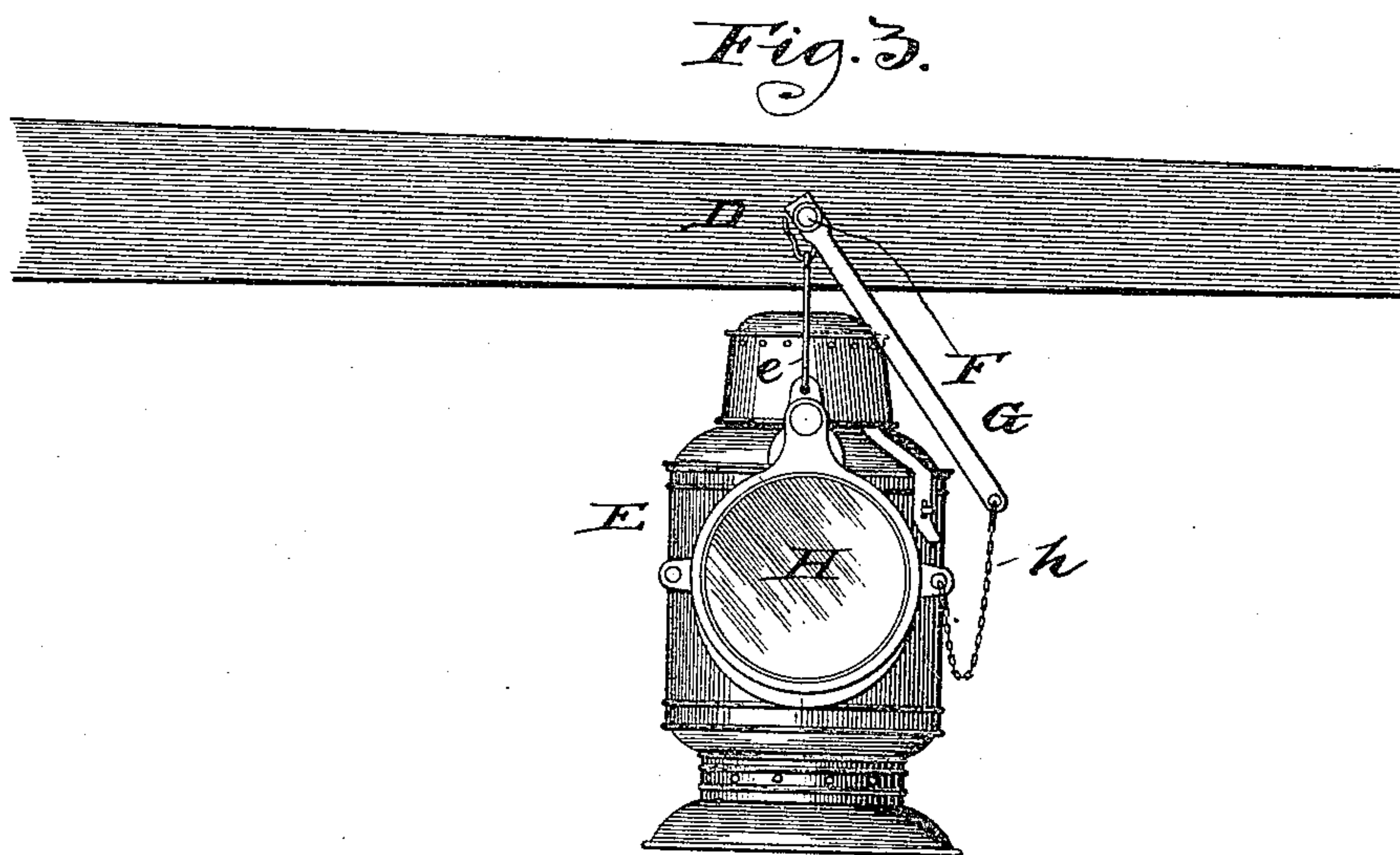
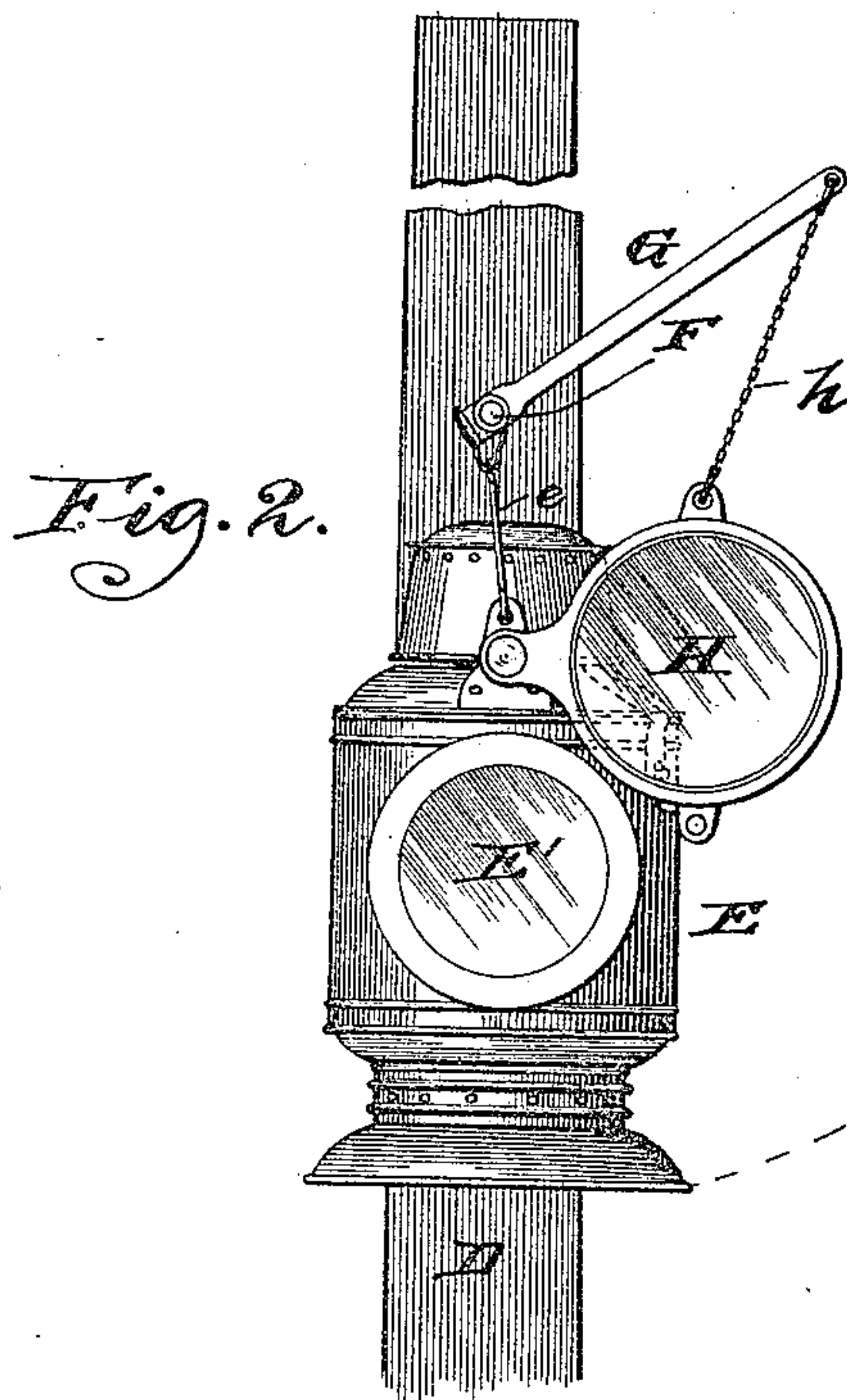
(No Model.)

2 Sheets—Sheet 2.

W. P. ELLIOTT.
SIGNAL LANTERN FOR RAILWAY GATES.

No. 438,228.

Patented Oct. 14, 1890.



Witnesses,
J. J. Mann,
Frederick Goodwin

Inventor,
William P. Elliott
By, *Offield & Son,*
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM P. ELLIOTT, OF CHICAGO, ILLINOIS.

SIGNAL-LANTERN FOR RAILWAY-GATES.

SPECIFICATION forming part of Letters Patent No. 438,228, dated October 14, 1890.

Application filed May 9, 1890. Serial No. 351,113. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. ELLIOTT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Signal-Lanterns for Railway-Gates, of which the following is a specification.

My invention has for its object to provide signal-lanterns adapted to give warning to passers upon a street or highway of the position of the swinging arms of railway-gates such as are used to bar the street or highway at railroad-crossings; and my invention consists in the devices and combinations of devices, as hereinafter particularly described, and set forth in the claims.

In carrying out my invention I employ any suitable form of lantern, but preferably one showing light in one direction only and having a bail or pivot whereby it is adapted to be suspended so as to swing freely from its support, and in order to indicate to persons passing along the street or highway the position of the gate-bars I employ suitable spectacles which are adapted in one position of the gate-bar to intercept the light from the lantern in the direction of the approaching traveler, while in another position or positions of the gate-bar these spectacles will be so positioned with reference to the lantern that the light therefrom will show in the direction of the approaching traveler.

In the accompanying drawings, Figure 1 is a perspective view showing a crossing guarded by gates and showing lanterns suspended from the gate-arms. Fig. 2 is a front elevation of the lantern, showing the gate-arm erect, in which position the light is not intercepted by the spectacle. Fig. 3 is a front elevation of the lantern, showing the gate-arm down or in its horizontal position with the spectacle covering the face of the lantern and intercepting the light therefrom. Figs. 4 and 5 are views showing a modified form of the device.

In the drawings, A represent railway-tracks, and B a highway crossing the same.

C represents the stationary post of the railway-gates, and D the swinging arms thereof.

Referring now particularly to Figs. 2 and 3, E represents a lantern, which in this instance

is provided with a pivoted bail *e*, suspended from a support F, secured with the gate-arm and preferably near the middle of the crossing to be barred. In the illustration shown the lantern-case is imperforate, except that it has secured in its wall the plain lens E'. Connected rigidly to the support F is a short arm G, and pivotally connected with the lantern is the spectacle H, which will be controlled by a connecting medium, preferably flexible in its character—as, for example, the chain *h*. Instead of connecting the arm G to the support F, said arm may be secured to the gate-arm and project therefrom above and parallel to support F.

In Fig. 2, where the gate-arm is shown erect, it will be observed that the light from the lantern passes freely, the spectacle in this instance not being in a position to intercept it; but as the gate descends on its pivot the lantern will swing freely on its pivot in the direction of the dotted line of said figure, acting under the influence of gravity, and the spectacle which is restrained by the connecting means when the gate is in the erect position will also swing toward the lantern and in a plane parallel to the movement of the latter until the two meet, when the rays of light from the lantern will be intercepted partially at first and gradually increasing until the spectacle has covered the face of the lantern, and this with the parts arranged and proportioned as in the drawings will occur before the gate-arm has assumed a horizontal position, such as shown in Fig. 3; but the lantern and spectacle, being both pivoted so as to swing freely, will maintain the position last described during the completion of the movement of the gate-arm and after it has come to rest in the position shown in Fig. 3.

It is evident that if the arm G be made longer and the length of the connecting means *h* be accommodated thereto the spectacle will act to cover the lantern at a less inclination of the arm from the vertical. It is also apparent that the lantern may be pivoted to the arm in other ways than by the employment of the specific means herein shown, and that it may show its light from more than one side or from all sides. I regard it as important, however, to so adjust the spectacle with ref-

erence to the railway and highway that the edge of the spectacle only shall be presented in the direction of the railway, and that the light shall not show through said spectacle to moving trains upon the railway, and thereby all confusion otherwise likely to arise by the use of colored signals visible to the operatives of railway-trains is obviated. I also prefer that the light of the lantern shall be so confined as to show only from the highway; but it will be readily understood that the spectacles may be provided on both sides of the lantern, so as to signal in either direction upon the highway. The shedding of a white light upon the railway-tracks, however, would not be ordinarily objectionable, and therefore the lantern may be of the ordinary glass tubular variety, showing its light in all directions.

In the modified constructions shown in Figs. 4 and 5 the former figure illustrates, in side elevation, the lantern pivoted and suspended from the support, the latter taking the form of a bracket secured rigidly with the gate-arm and having an extension passing beneath the lantern upturned and bearing on the end thereof a stationary spectacle, and in this figure the gate-arm is shown in section in the horizontal position, the face of the lantern covered by the spectacle, while in Fig. 5 the gate-arm is shown erect, the lantern having passed from behind the spectacle. As in the preferred construction, the means of supporting the lantern and spectacle may be further modified; but the advantage of the construction shown in Figs. 2 and 3 over that shown in Figs. 4 and 5 is that in the former the spectacle intercepts the light during the initial movement of the gate-arm from its vertical position, and when the gate-arm is lifted the spectacle is not removed until to-

ward the completion of the upward movement of the gate-arm, while in the latter construction the interception of the light by the spectacle will occur toward the close of the movement of the gate-arm toward its horizontal position, and when the arm is being raised the lantern will be uncovered during the first part of the upward movement. It is also obvious that instead of employing a lantern in which the case shall be pivotally connected with the gate-arm the casing of the lantern may be stationary, while the lamp used in the lantern may be pivotally supported therein, so as to maintain the flame in a vertical position.

I claim—

1. In a signal device for railway-gates, the combination, with a lamp or lantern pivotally connected to the swinging arm thereof, of a spectacle also pivotally supported and flexibly connected to the gate-arm, whereby the lamp or lantern and the spectacle are adapted to swing freely upon their respective pivots during the downward movement of the gate-arm and the spectacle is brought to intercept the light of the lantern, substantially as described.

2. In a signal device for railway-gates, the combination, with a swinging arm of the gate, of a support projected from the side thereof, a lantern pivotally supported therefrom, a rigid arm projecting from the support, a spectacle pivotally supported from the lantern, and a flexible connecting medium between the outer end of the rigid arm and the spectacle, substantially as described.

WILLIAM P. ELLIOTT.

Witnesses:

FREDERICK C. GOODWIN,
N. M. BOND.