

No. 781,301.

PATENTED JAN. 31, 1905.

J. D. PRICE.  
SIGNAL.

APPLICATION FILED DEC. 28, 1903.

Fig. 2.

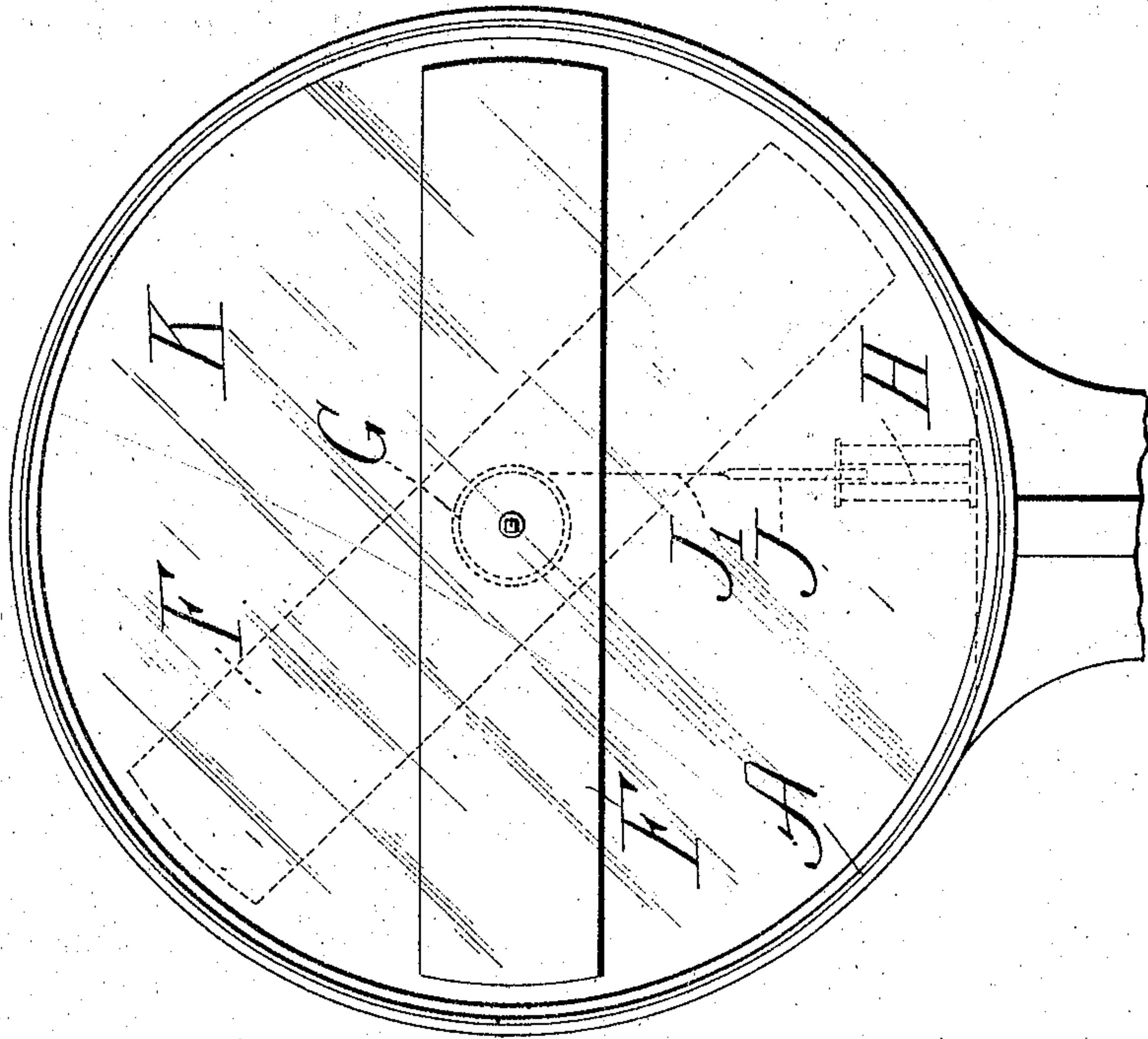
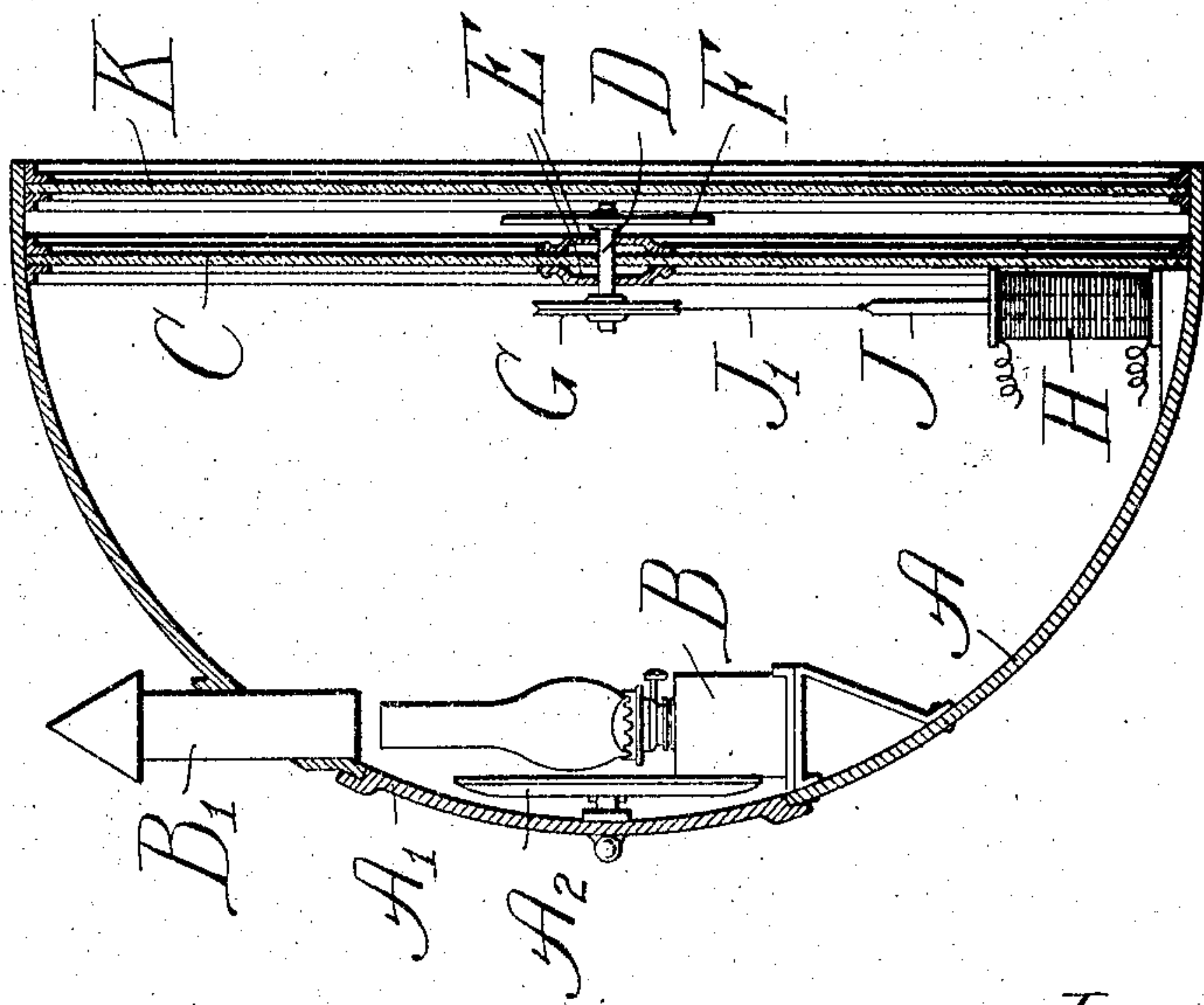


Fig. 1.



Witnesses:  
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## UNITED STATES PATENT OFFICE.

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## SIGNAL.

SPECIFICATION forming part of Letters Patent No. 781,301, dated January 31, 1905.

Application filed December 28, 1903. Serial No. 186776.

*To all whom it may concern:*

Be it known that I, JONATHAN DAVID PRICE, a citizen of the United States, residing at Aurora, in the county of Kane and State of Illinois, have invented a new and useful Improvement in Signals, of which the following is a specification.

This invention relates to railway-signals and the like, its primary object being the construction of a signal which shall be clearly visible by day or night and in which all the working parts are shielded from the weather.

A signal according to this invention comprises a movable semaphore or arm, preferably operated electrically and mounted in front of a screen which forms a light-background for it, whether it be lighted from the front, as in ordinary daylight, or from the back, as by a lamp placed behind it. The semaphore-arm is preferably counterweighted, so that it tends always to fall to the "danger" position, and a solenoid and core are provided to bring it into position to indicate "line clear." All the mechanism is inclosed in a casing furnished with a transparent front through which the semaphore may be seen, and a lamp or other source of light is placed in the casing at the back for use at night.

In the accompanying drawings, which show the upper portion of one form of signal according to this invention, Figure 1 is a central vertical section, and Fig. 2 is a front elevation.

Like letters indicate like parts throughout the drawings.

A is a casing, formed, say, of light metal and having an opening at the back, through which a lamp B may be inserted, this opening being closed by a door A', to which a reflector A<sup>2</sup> is fastened. Near the front of the casing is a screen C, formed of opaline glass or similar semitransparent material, and a shaft D passes through the center of the screen and is rotatably supported in brackets E. Fixed to the front end of the shaft D is a semaphore-arm F, and a pulley G is attached to its rear end.

Behind the screen at the lower part of the casing A is a solenoid H, having a core J, which is attached to one end of a cord J', the

other end of this cord being attached to the pulley G. The semaphore-arm F is counterweighted, so that normally—i. e., when no current is passing through the solenoid H—it falls into the horizontal position illustrated in the drawings, this position indicating "danger." A stop (not shown in the drawings) may be provided in any convenient place to make this position a definite one. When current passes through the solenoid H, the core J is pulled down and brings the semaphore-arm into the position illustrated by chain-lines in Fig. 2, this position indicating "line clear."

The front of the casing is inclosed by a sheet K of transparent material, and a chimney B' for the lamp is provided at the back.

One advantage of a signal according to this invention is that it presents substantially the same appearance to the driver by night or day, so that he has not, as in the ordinary system, to observe the position of a semaphore in daylight and a colored light at night.

It is to be understood that although it is preferred to use a semitransparent or opaline screen, such as C, the invention includes any other arrangement which gives substantially the same results. For instance, the screen C directly behind the semaphore-arm might be dispensed with and the interior of the casing A be provided with a light-reflecting surface, such as white enamel. The lamp could in this case preferably be furnished with an opaline globe, and the casing would then itself act as a screen or background which would be effective by day or night.

Obviously the improved signal may be operated electrically from the signal cabin or may be used in conjunction with any suitable automatic system.

What I regard as new, and desire to secure by Letters Patent, is—

1. In a signal, the combination of a casing equipped at its front portion with a semitransparent screen and provided a short distance in front of said screen with a transparent plate, a semaphore located in the space between said screen and plate and having a shaft journaled centrally in said screen, a lamp within said casing in the rear of said screen, and means

for actuating the semaphore, for the purpose set forth.

2. In a signal, the combination of a casing equipped at its front portion with a semitransparent screen and provided a short distance in front of said screen with a transparent plate, a semaphore located in the space between said screen and plate and having a shaft journaled centrally in said screen which is provided in  
10 the rear of said screen with an actuating-

wheel, a solenoid within said casing having flexible connection with said wheel, and a lamp within the casing in the rear of the screen provided with a chimney extending through the casing, for the purpose set forth.

JONATHAN DAVID PRICE.

In presence of—

WALTER N. WINBERG,  
W. B. DAVIES.