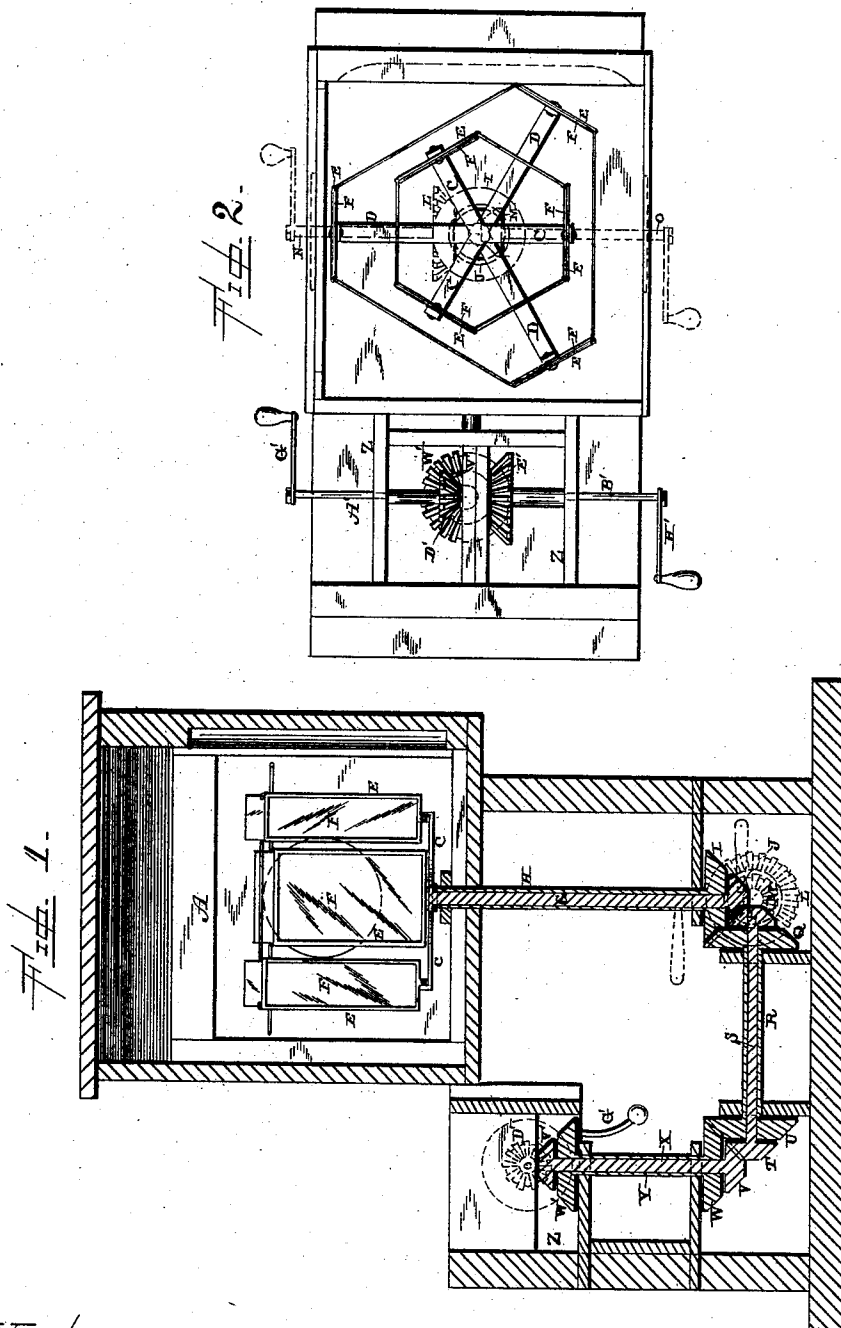


(No Model.)

J. M. HEVERLY.
RAILWAY SIGNAL LANTERN.

No. 392,429.

Patented Nov. 6, 1888.



Witnesses:
Edm. P. Ellis,
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Inventor:
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per F. A. Lehmann,
att'y.

UNITED STATES PATENT OFFICE.

JAMES M. HEVERLY, OF COALPORT, PENNSYLVANIA, ASSIGNOR OF ONE-
FOURTH TO JACOB DANIEL SPANGLE, OF SAME PLACE.

RAILWAY SIGNAL-LANTERN.

SPECIFICATION forming part of Letters Patent No. 392,429, dated November 6, 1888.

Application filed August 15, 1888. Serial No. 282,778. (No model.)

To all whom it may concern:

Be it known that I, JAMES MONROE HEVERLY, of Coalport, in the county of Clearfield and State of Pennsylvania, 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in railroad-signals; and it consists in, first, the combination of the signal-box with two separate and distinct sets of revolving arms placed therein, each of the arms being provided with a different-colored glass and each of the sets being capable of being adjusted independently of the other; second, the combination of the signal-box and the two sets of independently-revolving arms carrying different-colored glasses, the operating-shafts, and the pinions connected thereto, whereby the glasses inside of the signal-box can be changed at the will of the operator, all of which will be more fully described hereinafter.

The object of my invention is to produce a railroad-signal in which there are two sets of independently-revolving arms carrying different-colored glasses, and which glasses can be changed in relation to the bull's-eyes in the signal-box, so as to present the same or different colors from both sides of the box.

Figure 1 is a vertical section of a railroad-signal embodying my invention complete. Fig. 2 is a plan view of the signal or box with the cover removed.

A represents an ordinary signal-box, which is provided with bull's-eyes upon each of its sides in the usual manner. This signal-box may be placed either upon the top of the office or at any distance therefrom, as may be required. When the box is placed upon the top of the office, there will be of course less mechanism to revolve or change the glasses than where the box is placed across the track or at a distance from the office. Inside of the box are placed two sets of revolving arms, C D, and to the end of each one of the arms is connected a suitable frame, E, in which a colored glass, F, is placed. The set of arms C is

shorter than the one D, and the two sets are revolved independently of each other, according as it is desired to bring either different or the same colored glasses in front of the bull's-eyes. Each one of these sets of arms carries a red, white, and green glass, which are the colors usually employed in signaling upon a railroad; but it is evident that these colors can be exchanged for others whenever so desired.

Rigidly secured to the center of the shorter set of arms, C, is an operating-shaft, G, which extends down through the sleeve H, which is connected at its upper end to the arms D. Upon the lower end of the sleeve H is secured a beveled pinion, I, and upon the lower end of the shaft G is secured a smaller pinion, J. If the signal-box A is placed upon the top of the office, then these two pinions are operated by the pinions L M, which engage directly with them, and which are operated by the shafts N O, which extend outward in different directions, and are provided with handles or cranks at their outer ends, by means of which the operator can turn either one of the sets of arms or both of them, as may be desired, for the purpose of presenting any desired color of glass between the light and the bull's-eye.

In case the signal-box is placed at a distance from the office, the two pinions I J are operated by the two pinions Q P, which are placed, respectively, upon and operated by one end of the sleeve R and the shaft S, which passes through it. To the other ends of the sleeve R and shaft S are secured pinions U T, of different sizes, which mesh with corresponding beveled pinions, W V, placed, respectively, upon the lower ends of the sleeve Y and vertical shaft X. These sleeves are placed in suitable bearings upon opposite ends, and the shafts which pass through these sleeves revolve freely therein and are held in place by means of the pinions placed upon their ends, which pinions are smaller than those placed upon the ends of the sleeves.

Mounted in a suitable bearing, Z, which may be located at any desired distance from the signal-box, are the two shafts A' B', which are provided with the pinions D' E', which pinions mesh with the pinions V' W' upon the upper end of the shaft X and sleeve Y. To the outer ends of the shafts A' B' are secured

cranks or handles G' H' and suitable pointers or indicators, by means of which the operator knows just what colored glass has been brought in front of the bull's-eye. By turning these shafts A' B' the operator can change the colored glasses in front of the bull's-eye at will.

Heretofore there have never been used two sets of glasses which could be revolved inside of the signal-box independently of each other, and thus enable the same or different colored lights to be shown through the bull's-eyes at the same time. By having two sets of different-colored glasses inside of the signal-boxes which are adapted to be revolved independently of each other two trains coming in opposite directions can be given different signals at the same time.

Where the signal-box is placed upon the top of the office a handle may be attached directly to the lower end of the sleeve, and the shaft may be made to project far enough below the end of the sleeve to have a handle attached directly to it, as shown in dotted lines in Fig. 1. The sleeve and shaft may be operated either

by pinions or by the handles direct, just as may be preferred.

Having thus described my invention, I claim—

1. The combination of a signal-box provided with bull's-eyes, with two sets of independently-revolving arms carrying different-colored glasses placed inside of the box, and mechanisms for revolving the arms independently of each other, substantially as shown.

2. The combination of a signal-box with two sets of independently-revolving arms placed inside of the box and each set of arms provided with different-colored glasses, a sleeve connected to one of the sets of arms, and a shaft which passes through the sleeve and is connected to the other set, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

J. M. HEVERLY.

Witnesses:

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