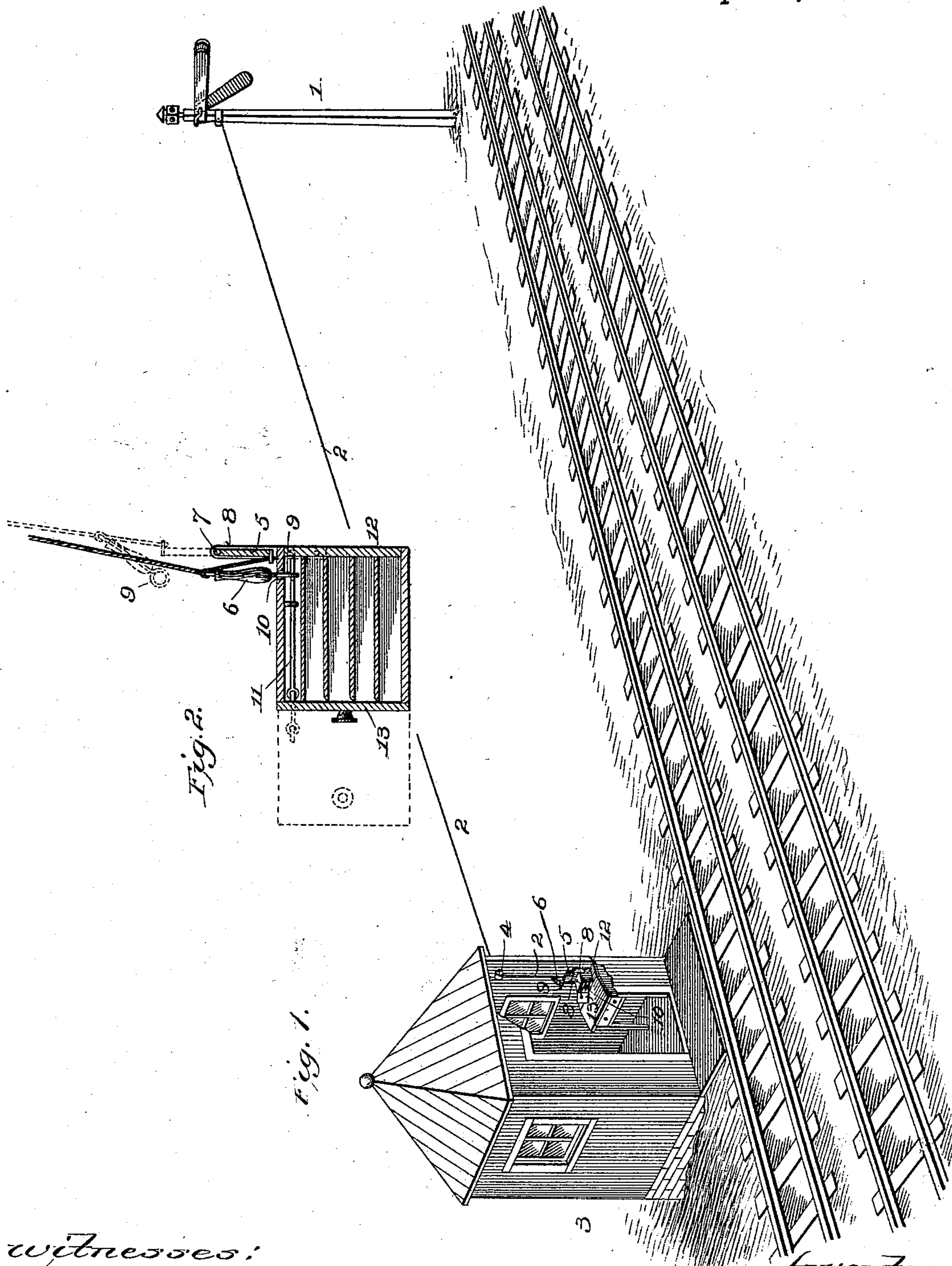


(No Model.)

C. C. & G. F. KAHNE & A. A. ADKINS.
RAILWAY SIGNAL.

No. 517,751.

Patented Apr. 3, 1894.



witnesses:
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UNITED STATES PATENT OFFICE.

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ASHLAND, KENTUCKY.

RAILWAY-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 517,751, dated April 3, 1894.

Application filed November 6, 1893. Serial No. 490,149. (No model.)

To all whom it may concern:

Be it known that we, CHARLES C. KAHNE, GEORGE F. KAHNE, and ANDREW A. ADKINS, citizens of the United States, residing at Ashland, in the county of Boyd and State of Kentucky, have invented new and useful Improvements in Railway-Signals, of which the following is a specification.

Our invention relates to railway signals to be controlled from the operator's house and connected with an indicator that will always show unmistakably the exact condition of the signal, without requiring the operator to go outside, and in combining with the order box so that an operator cannot withdraw an order blank without setting the signal to stop the train which is to receive the order.

Our invention consists in certain novel features of construction which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings:—Figure 1 is a perspective view illustrating the manner of mounting the indicator in the operator's house and connecting it with the signal. Fig. 2 is a longitudinal section through the indicator.

1 represents a semaphore or other signal in which a danger signal or red arm is arranged to drop down by gravity from between two white arms by which it is normally hidden from view. This signal may be provided with the ordinary signal lamp for night use which is rotated by the dropping of the arm. These parts may be of the ordinary construction and need not be further described herein.

2 represents the cord or wire connection by which the arm is held in elevated position and which may be released to permit said arm to fall into danger position. The cord 2 passes into the house 3 over a pulley 4, has connection with the indicator panel 5 and terminates in a handle 6. When the handle 6 is released so that the danger arm is in the position shown in Fig. 1, the panel 5 is reversed to expose its red face, but when the handle 6 is drawn down, and draws up simultaneously the danger arm on the signal, the panel 5 hangs with its white face in view to indicate that the signal along the track is in such position as to inform a passing engineer

that the track is clear. The manner in which the cord 2, which passes through the indicator operates the indicator panel 5, will be understood upon reference to Fig. 2. The panel 5 is hung upon a horizontal axis 7, mounted in arms 8, and has attached to its free end the cord 2 which passes over pulley 4 just above the panel. When the cord is released, the weight of the danger arm draws the panel 6 upward, swinging it upon its axis, and reversing it to disclose its red face. When, however, the cord is drawn in by the handle 6 and the danger arm returned behind the white arms the panel is allowed to hang downward from its axis and expose its white face. In order to hold the handle down, it is provided with a loop 9 which enters an opening 10 in a stationary part and is secured therein by a pin 11. When it is desired to drop the signal and its indicator to danger position, the pin is withdrawn, and the parts assume the position shown in Fig. 1.

In the practical management of many railroads there is a rule which compels all operators, before writing an order to set the signal at "danger."

Our arrangement has a special advantage in that it can be readily applied to the "order box" in an operator's house in such a manner that he cannot withdraw a blank to write an order which he has received, or is receiving by telegraph, without simultaneously complying with the rule above referred to. This application of our invention is readily accomplished by locating the stationery or order box 12 in a convenient place, mounting upon it the swinging indicator panel, forming in the top of the box the opening 10, and mounting the pin 11, beneath the top of the box and connecting it to the box door 13, as shown, so that it will be withdrawn and permit the signal to fall to danger position, when the box door 13 is opened to get an order blank, and so that when the handle is drawn down to show a white signal, and the loop 9 is inserted in opening 10, the pin may be projected through the loop by the act of closing the door.

From the foregoing, it will be observed that we have not only produced a simple and efficient indicator which will, at all times disclose to the operator the condition of the sig-

nal on the road, but we have produced such a device in combination with an order box in such a manner that the ordinary system followed, that of receiving and writing down telegraphic orders, compels the operation of the signal in the intended manner, and at the same time leaves the device free for operation at other times than upon receiving an order.

Having thus described our invention, the following is what we claim as new and desire to secure by Letters Patent:

1. In combination with a railway signal and the cord or connection for operating the same; the herein-described indicator consisting of a movable panel having red and white surface and suitably connected with the operating cord or connection whereby the panel is moved in opposite directions simultaneously with the change in the direction of movement of said operating cord or connection, and the detent for holding the operating cord, substantially in the manner and for the purposes set forth.

2. In combination with a gravity operating railway signal and the cord or connection for retaining or releasing said signal; the herein-described indicator consisting of a movable swinging panel having positive connection with said operating cord which causes said panel to move in opposite directions simultaneously with the change in the direction of movement of the operating cord, a loop in connection with the cord, an opening through which the loop is introduced, and a removable pin for retaining the loop in the opening, as and for the purposes explained.

3. In combination with a railway signal and the cord by which it is controlled; a pivoted red and white faced panel having connection with the cord which causes the panel to swing upon its pivot and disclose its opposite faces simultaneously with the change in the direc-

tion of the operating cord, the handle for controlling said cord and a detent for the handle substantially as described.

4. In combination with a gravitating railroad signal and its operating cord; an indicating panel having different colored opposite faces and mounted to swing upon a horizontal axis, connection between the panel and said operating cord whereby the panel is reversed by the reversal of the movement of the cord, and a detent for the cord for holding the signal in raised position, all substantially as and for the purpose set forth.

5. In combination with a gravitating signal and its operating cord having a loop; of the order box, and a sliding pin for engaging the loop of the operating cord, under control of the door of the order box, substantially as and for the purpose set forth.

6. In combination with a gravitating signal, and its operating cord; of an order box, an opening in the order box through which a loop on the cord passes, and a reciprocating pin engaging said loop and controlled by the door, all substantially as and for the purpose set forth.

7. In combination with a gravitating signal and its operating cord; an order box having a door, an indicating panel mounted upon a horizontal axis above the order box, and having connection with said operating cord, a loop on the cord passing through an opening in the top of the box, and a reciprocating retaining pin engaging the loop and connected with the door of the box, all substantially as and for the purpose set forth.

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Witnesses:

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