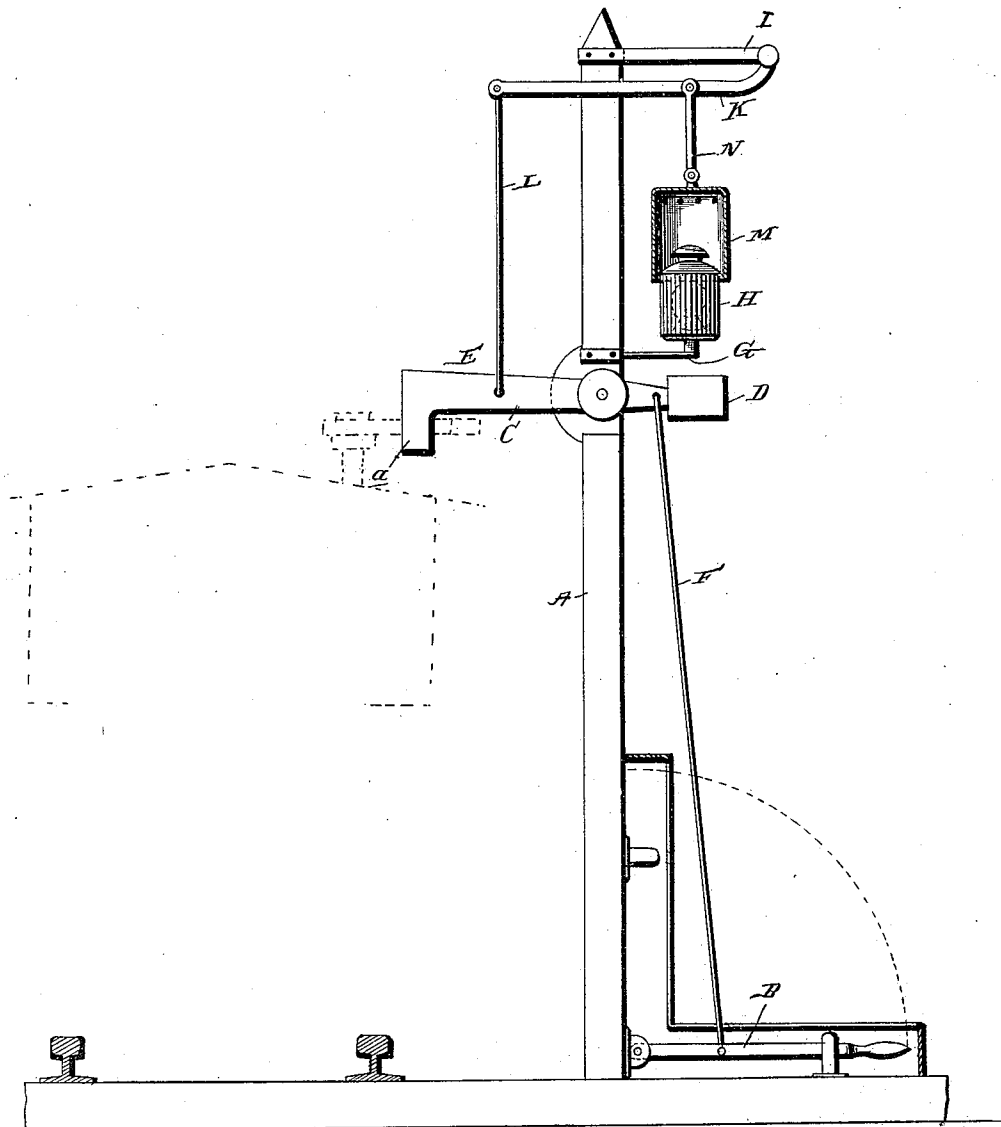


(No Model.)

T. E. HILL.
RAILWAY SIGNAL.

No. 470,876.

Patented Mar. 15, 1892.



Witnesses:

A. Gaeder
T. C. Turpin

Inventor

Thomas E. Hill

by James J. Sheehy

Attorney

UNITED STATES PATENT OFFICE.

THOMAS E. HILL, OF RAHWAY, ASSIGNOR OF ONE-HALF TO WILLIAM T. BOTHWELL, OF JERSEY CITY, NEW JERSEY.

RAILWAY-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 470,876, dated March 15, 1892.

Application filed July 17, 1891. Serial No. 399,870. (No model.)

To all whom it may concern:

Be it known that I, THOMAS ENGLISH HILL, a citizen of the United States, residing at Rahway, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Railway-Signals; and I do 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 ap-

10 pertains to make and use the same.
This invention has relation to an improvement in railway-signals, and while it is more particularly adapted for use by hand, yet it is obvious that it may be made to serve in
15 connection with such devices as I have shown in my application for Letters Patent filed July 8, 1891, Serial No. 398,795, and also with elevations along the track, such as shown in the application which I have filed even date here-
20 with, Serial No. 399,869.

The main object of the invention is to provide such signals along the track about two thousand feet apart, so that when a train ahead stops the flagman may go back to the
25 device and set the signal to "danger," so that the bar of the signal may strike the arm on top of the engine-cab to crush the glass cap and apply the brakes.

The invention will be fully understood from
30 the following description and claim, in which the figure is a cross-sectional view of a railway, showing my improved signal and devices for operating a brake system.

Referring by letter to said drawing, A indicates an upright post or frame, which is arranged on the outer side of the rails at suitable intervals apart.

B indicates a hand-lever, which is pivoted at one end to said post near one end thereof
40 and is designed to be locked in both a vertical and horizontal position.

C indicates a signal-bar, which is pivoted at a suitable point to the post A. This bar is provided at one end with a weight D, which
45 has a tendency to keep the opposite or inner end E in a raised position. The inner end of this bar C is designed to assume a position over the railway, and it is provided with a depending arm α , which is designed to strike

the pivoted arm extending from the cab of 50 the locomotive to apply the brakes, or this arm may contact with other parts of the locomotive for a similar purpose.

F indicates a rod, which is connected at one end to the weighted end of the bar C, and its
55 opposite end is connected at a suitable point to the hand-lever B, so that by the manipulation of said lever the inner end of the bar may be raised or lowered. The lever is arranged in a suitable casing to protect the same, and
60 a lock should be provided for securing the lever in the position desired.

G indicates a bracket, upon which is arranged a lamp or signal H, carrying a corrugated red glass. 65

Extending laterally from the top of the post A is an arm I, and pivoted to the outer end of this arm is the curved end of a lever K, the opposite or inner end of which is connected
70 by means of a rod L with the bar C on the inner side of its pivotal point.

M indicates a shade. This shade is connected by means of a link N with the curved lever K, so that said shade may be moved to cover and uncover the signal H and be gov-
75 erned in such movements by the movements of the bar C, and consequently the hand-lever or such devices as may be employed to manipulate the rod F.

From the foregoing description the operation of my invention will be obvious. It will be seen that when the hand-lever has been thrown down in a horizontal position, and may thus be locked, the weighted end of the bar C will also be down and the depending branch
85 α consequently placed in the path of the devices carried by the engine for applying the brakes. This movement of the bar C will cause the shade M to uncover the signal H, while the raising of the hand-lever to a vertical position will reverse the movements of the parts before described, conceal the "dan-
90 ger" signal, and let down the depending arm of the bar C out of the path of the devices carried by the engine. 95

Having described my invention, what I claim is—

In a railway-signal, the combination, with

a vertical post or frame, of a bar carrying a weight at one end and a depending arm at its opposite end and pivoted to said post, a signal also secured to the post, a lateral arm secured at one end to the top of the post, a curved lever pivoted at one end to the outer end of the lateral arm, a rod connecting the inner end of said lever with the inner portion of the weighted bar, a vertically-movable shade for
10 covering and uncovering the signal, a link

connecting said shade with the curved lever, and a vertically-movable rod depending from the weighted end of the pivoted bar, substantially as specified.

In testimony whereof I affix my signature in 15
presence of two witnesses.

THOMAS E. HILL.

Witnesses:

W. H. LITTLE,

WILLIAM H. FREEMAN.