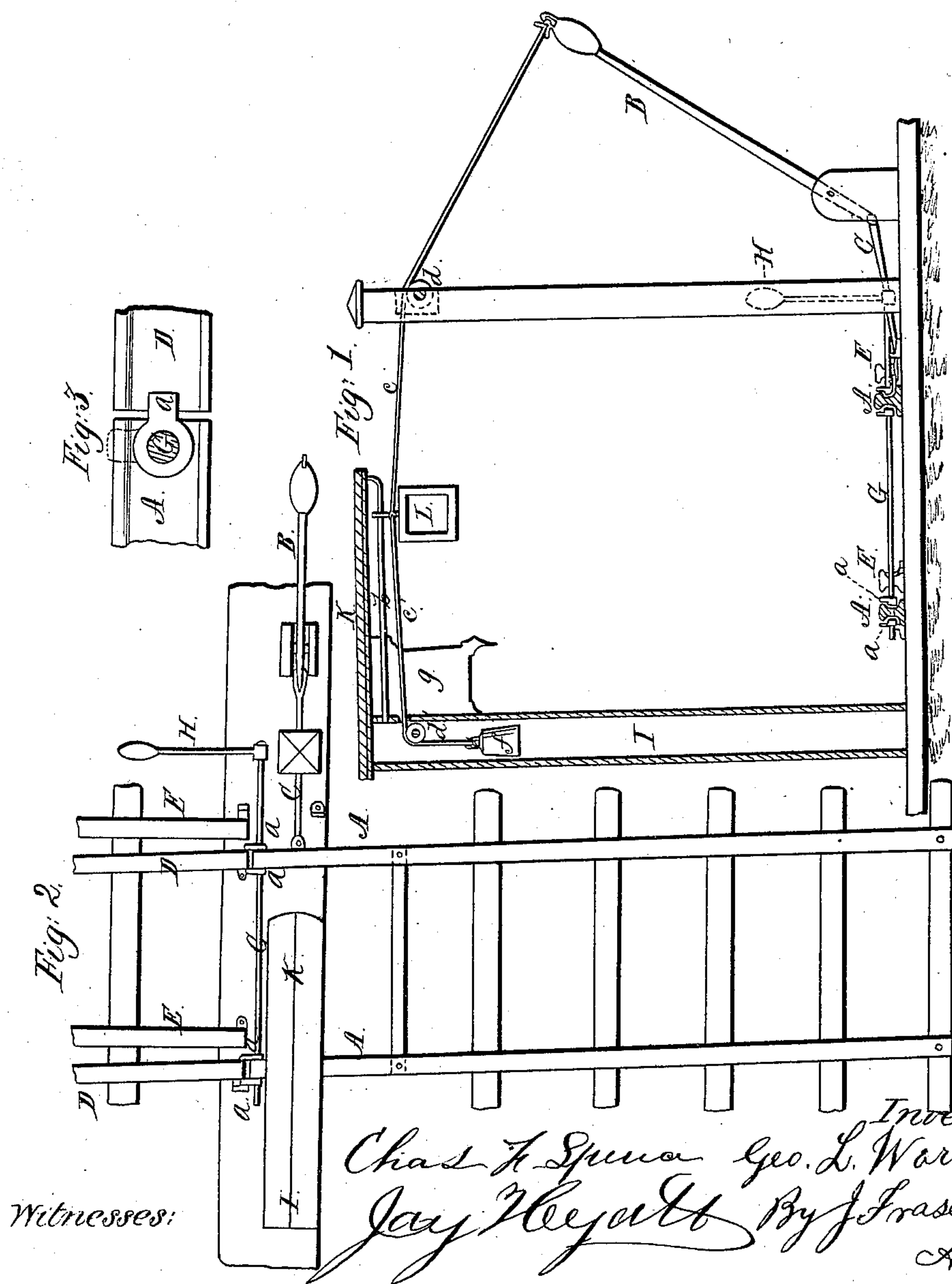


G. L. Warner,

Railroad Switch,

N^o 65,518.

Patented June 4, 1867.



United States Patent Office.

GEORGE L. WARNER, OF ROCHESTER, NEW-YORK, ASSIGNOR TO HIMSELF
AND CORNELIA HAWKS, OF SAME PLACE.

Letters Patent No. 65,518, dated June 4, 1867.

IMPROVED RAILWAY SWITCH AND SIGNAL.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE L. WARNER, of Rochester, in the county of Monroe, and State of New York, have invented a certain new and useful improvement in Railroad Switches and Signals; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a sectional elevation of my improved arrangement.

Figure 2, a plan of the same.

Figure 3, a detached view, showing the contiguous ends of two rails, and the coupling for connecting the same.

Like letters of reference indicate corresponding parts in all the figures.

My invention consists in combining with the ordinary switch, by means of a cord, a weighted signal, situated in an elevated frame, and sliding on a suitable guide; also employing in connection therewith a lever-shaft fixed to turn in the ends of the switch-rails, and having cams or fingers that couple direct with the ends of the fixed rails, the whole operating as hereinafter set forth.

As represented in the drawings, A A are the ordinary sliding-switch rails, operated by lever B and connecting-rod C as usual. D D and E E are the fixed, diverging rails, with which the switch-rails are made to couple as they are thrown from one to the other. The ends of the switch-rails are provided with bearings to receive a shaft, G, which thus moves with the rails. This shaft is provided with a hand-lever, H, at one end, and also with pairs of cams or fingers, *a a*, so situated as to correspond in position with the fixed rails. When the lever is depressed each pair of fingers turns down so as to clamp its rail and hold it in place; but when the lever is elevated the cams are correspondingly elevated to free the rails. On the opposite side of the track from the switch is situated an elevated standard, I, with a projection, K, preferably extending over the track. This projection is provided with a guide, *b*, on which freely slides a signal, L. This signal may be in the form of a lantern or any other device that will serve the desired purpose. With one side of the signal connects a cord, *c*, which passes over a pulley, *d*, and attaches to the top of the lever B, and with the other side connects a cord, *c'*, which passes over a pulley, *d'*, and has attached at the opposite end a weight, *f*, that runs down in the hollow standard I.

In order to shift the switch the cam-lever H is elevated so as to free the cams from the ends of the fixed rails. The switch lever is then operated to throw the rails, when the cams are again turned down to hold them in place. When the switch-lever is thrown out, as in fig. 1, it will be seen that the signal will be drawn out with it; and when it is thrown back in the opposite position the weight *f* will draw the signal back behind the screen *g* (or signal-box) out of sight. In this manner the action of the signal is made automatic with the switch. The projection K is made in roof form to protect the signal from the weather.

Signals have before been connected with switches in such a manner as to change their position as the switch is operated. Such, broadly, I do not claim. But in ordinary switches of this kind the signal is connected directly with the switch, and forms a fixture thereof, low down, and cannot be easily seen by the engineer, especially in turning a curve, or if any obstruction intervenes. By my arrangement I am enabled to elevate the signal to any desired height, and to locate it at a distance from the switch, and also to bring it directly over the track. This effect is especially produced by the employment of the cords *c c'* and the weight *f*, in connection with the switch-lever.

A shaft with cams has also been before used to hold the switch-rails in place as their position is changed, but in such case the shaft has been stationary or fixed under the sliding-rails, and the cams have simply turned up on one or the other side of said sliding-rails to hold them in place. My cam-shaft differs from this in having its bearings in the ends of the sliding-rails and moving with them, and in having the cams couple over on the ends of the contiguous fixed rails, instead of turning up against the edges of the switch-rails. By this arrangement I elevate the shaft above a position where water will collect around it and freeze, and I couple and hold the two contiguous ends of the sliding and fixed rails together, directly at the contact-joint, so as to retain them more firmly in line than could otherwise be the case.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination and arrangement with the switch B C of the elevated and isolated signal L, connected by the cord *c*, and provided with counterbalance weight *f*, operating in the manner and for the purpose specified.

I also claim specially locating the cam-shaft G in the ends of the shifting-rails, and providing it with cams that couple the ends of the rails directly together, as herein set forth.

I also claim the arrangement as a whole, consisting of the weighted signal L, cord *c*, switch B C, cam-shaft and cams G *a a*, and the standard-frame I K, with guide *b* and screen *g*, as set forth.

In witness whereof I have signed my name in the presence of two subscribing witnesses.

GEORGE L. WARNER.

Witnesses:

R. F. OSGOOD,

JAY HYATT.