

E. PARKER.
Railroad Switch.

No. 230,147.

Patented July 20, 1880.

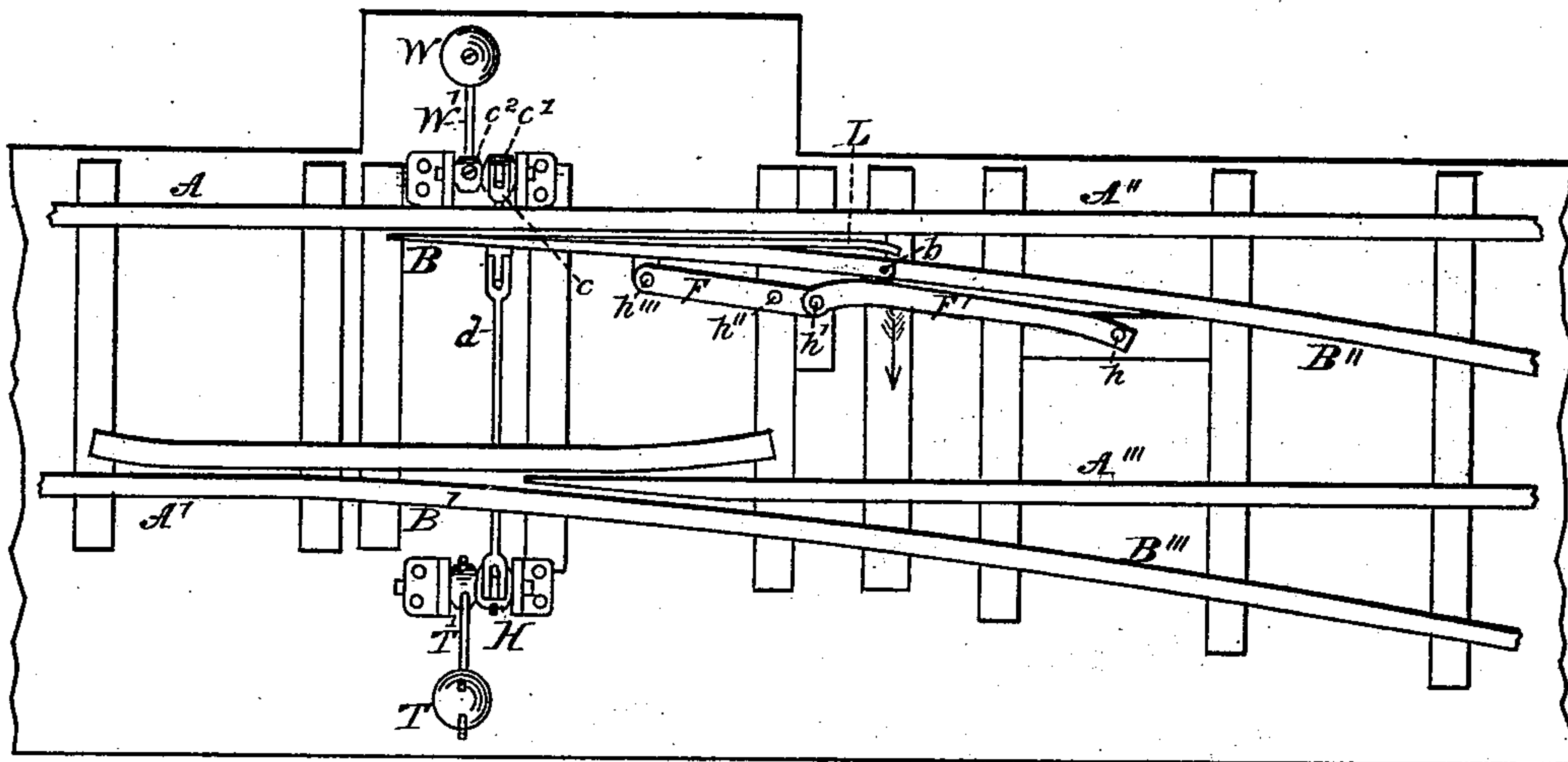


Fig. 1.

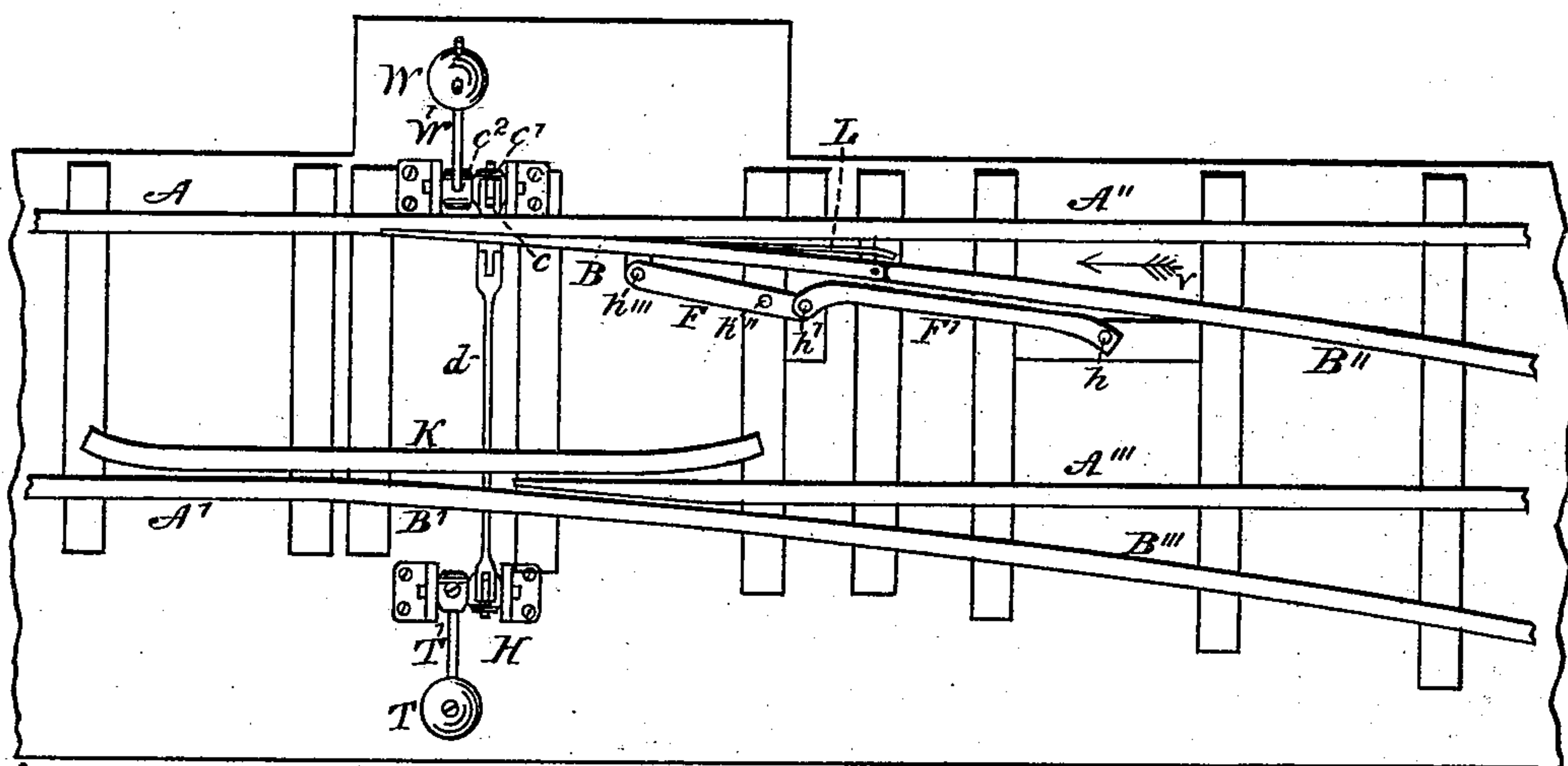


Fig. 2.

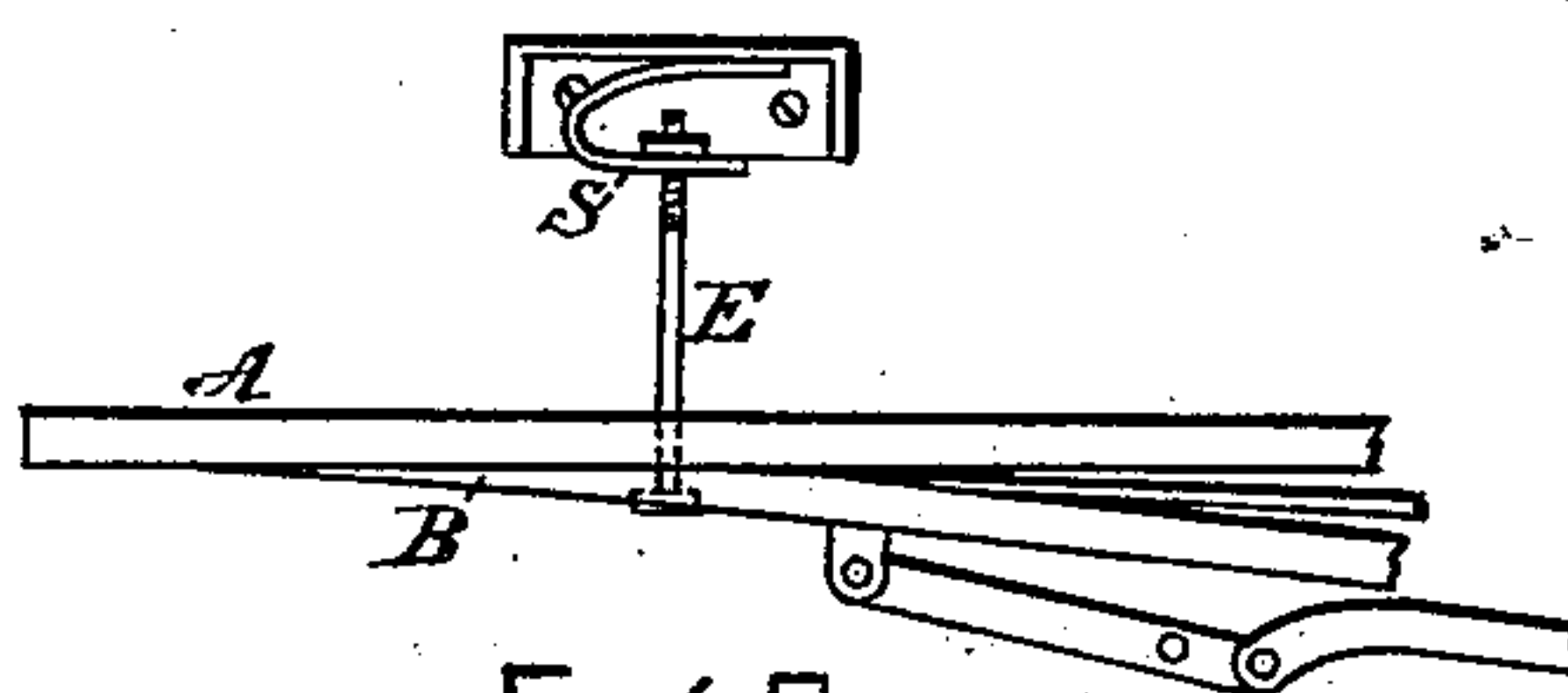


Fig. 3.

WITNESSES.

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Fig. 4.

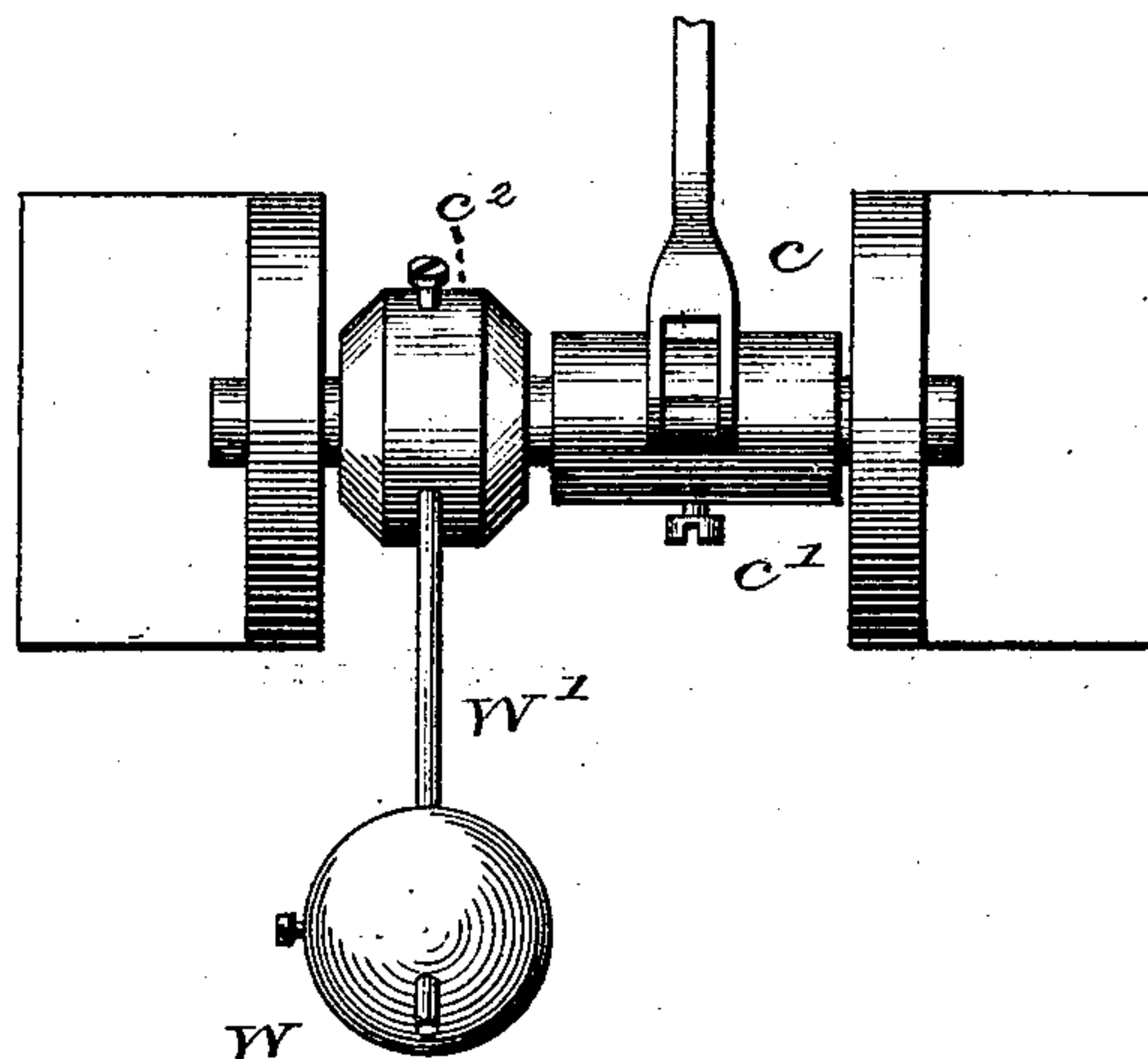
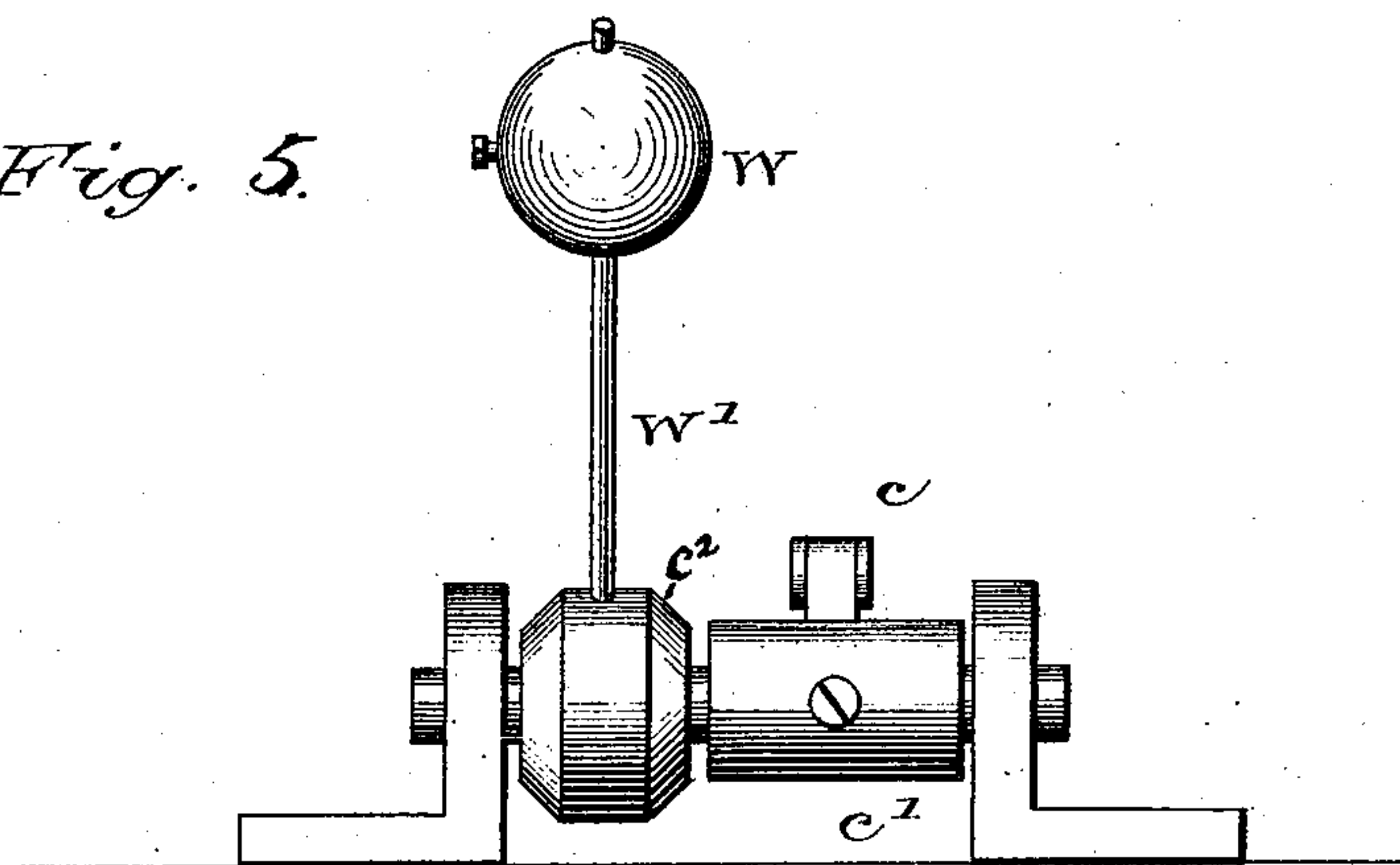


Fig. 5.



Witnesses:
G. M. Browlitch.
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Inventor:
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UNITED STATES PATENT OFFICE.

EPHRAIM PARKER, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
OF HIS RIGHT TO SAMUEL A. OTIS, OF SAME PLACE.

RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 230,147, dated July 20, 1880.

Application filed October 13, 1879.

To all whom it may concern:

Be it known that I, EPHRAIM PARKER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Switches for Railway-Tracks, of which the following is a specification.

My invention relates to that class of switches in which the point or points are closed automatically by the action of a weight or spring, so that they direct a train approaching from front of the point invariably to the main line or to the branch, as the weight or spring may be set to act; but if a train be approaching from the back of the point, either from the main line or the branch, then the train will pass onto the main track without disturbing the point—that is, in case the train is on the line for which the point is being held open by the action of the weight or spring; but in case the train is on the track for which the point is wrongly held, then the flanges of the wheels of the approaching train will act upon a horizontal lever in such a manner as to set the point right for the train to pass safely to the main track.

In the drawings, Figure 1 shows a track in which the point is held open by means of a weight for the passage of the car back and forth on the main line. Fig. 2 shows a track upon which the point is held by weight or spring so that the car may safely pass forth and back on the main and side tracks. Fig. 3 shows, in detail, one of the rails and a point with a spring instead of a weight to operate the point. Fig. 4 is a plan, showing the crank-shaft and its connecting parts enlarged. Fig. 5 is an elevation, showing the same parts shown in Fig. 3.

Let $A A''$ and $A' A'''$ represent the two lines of rails of the main track, while $B B''$ and $B' B'''$ represent the two lines of rail of the siding or branch track.

B is a point or movable switch, pivoted at b . This moving point B is connected, by a short link, c , to a crank-shaft, c' . (See Figs. 1 and 2.) This crank-shaft c' has upon it a collar, c^2 . Said collar has a set-screw, so that it may be fastened firmly to the crank-shaft c' ,

or left loose upon it. W is a weight connected by lever W' to the collar c^2 .

d is a link which connects the point B to a crank-shaft device on the other side of the track at H . As this crank-shaft device at H is in all respects like the one above referred to, it is not necessary to describe it in detail. In practice only one of these devices is to be used at a time. For instance, if the point B is to be held open, as indicated in Fig. 1, so that the train will pass to and fro on the main track, then the device $c c' c^2 W' W$ is disconnected, so that the weighted lever $W W'$ has no effect on the point, and the device at H is connected, so that the weighted lever $T T'$ will hold the point open, as shown.

In Fig. 2 the crank-shaft device $c c' c^2 W' W$ is connected to the point, so as to automatically close it, as shown, and the crank-shaft device H is disconnected, so as to have no action on the point.

In Fig. 3 I have shown a spring, S , and a link, E , which serve to connect the spring to the point B . This device $S E$ is simply a substitute for the crank-shaft devices already described.

I will now describe the device by which the point B is operated by the wheels of the train.

F is a lever having a fixed fulcrum at h'' , and connected by a joint at h''' to the point B . The opposite end of this lever F is connected by a joint at h' to a second lever, F' , this second lever having a fulcrum fixed at h . Now, when the point B is open, as shown in Fig. 1, the lever F' lies close to the rail B'' , its upper surface being on a level with the upper surface of the rail. Therefore the flanges of the wheels of an approaching train, being on the track $B''' B''$, would force this lever F' outward, as indicated by the arrow. This movement of the lever F' would be communicated to the lever F and throw the joint h''' inwardly, so as to close the point B , and thus allow the train to run from the siding safely onto the main track.

The point B is provided with a yielding spring side bar, L , so that the wheels of a train approaching on the main line from the direction of the arrow v , Fig. 2, will not strike and

act upon the point B so violently as they would if this spring-bar L were not attached. Thus the point B will be opened to allow the train to pass by a comparatively easy, steady pressure.

K represents a guard-rail, made and secured in the ordinary manner.

What I claim is—

1. In a railway-switch, the combination of the point B with the spring-bar L, substantially as described, and for the purpose set forth.

2. In a railway-switch, the combination of

the point B and the levers F F', all operating together substantially as described, and for the purpose set forth.

3. In a railway-switch, the combination of the point B and the levers F F' with the crank-shaft device $c\ c'\ c^2\ W'\ W$, all operating together substantially as described, and for the purpose set forth.

EPHRAIM PARKER.

Witnesses:

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