(No Model.)

E. DUNLAP.

Railroad Signal Apparatus.

No. 243,437. Patented June 28, 1881.

Fig. 1.

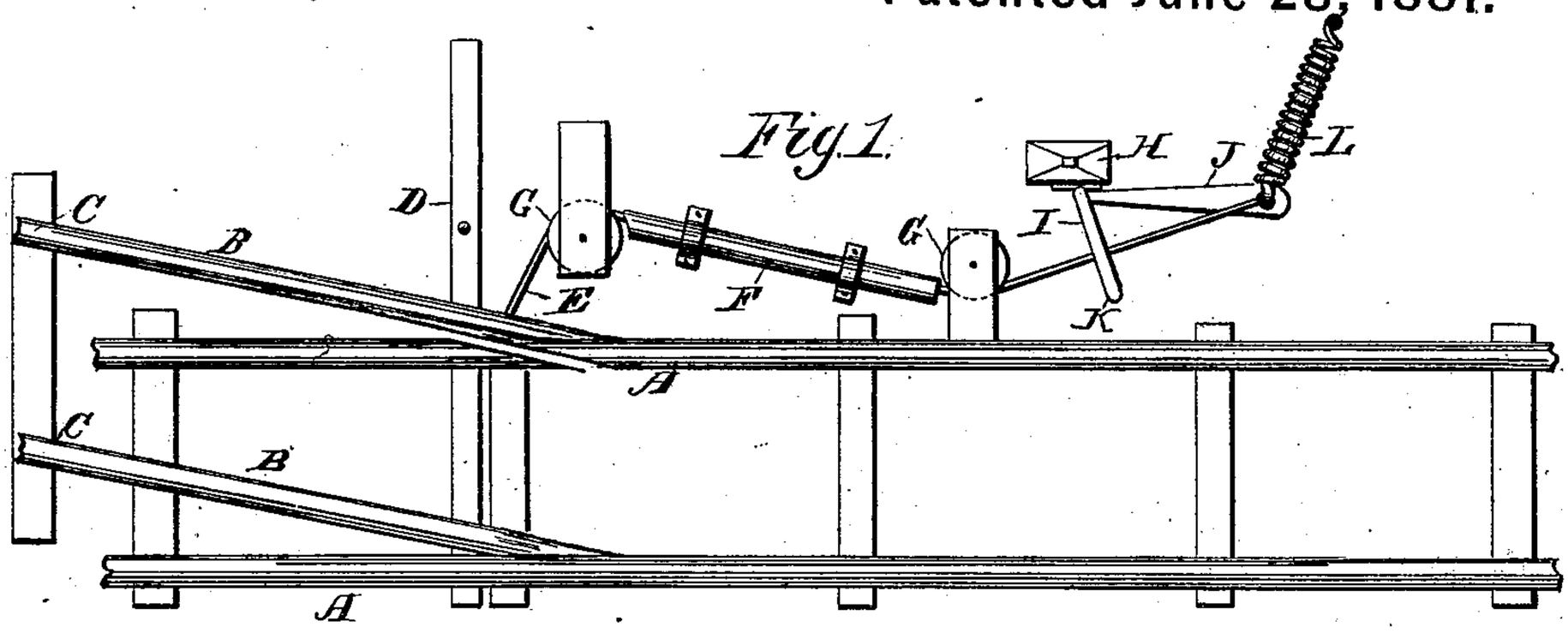


Fig. 2.

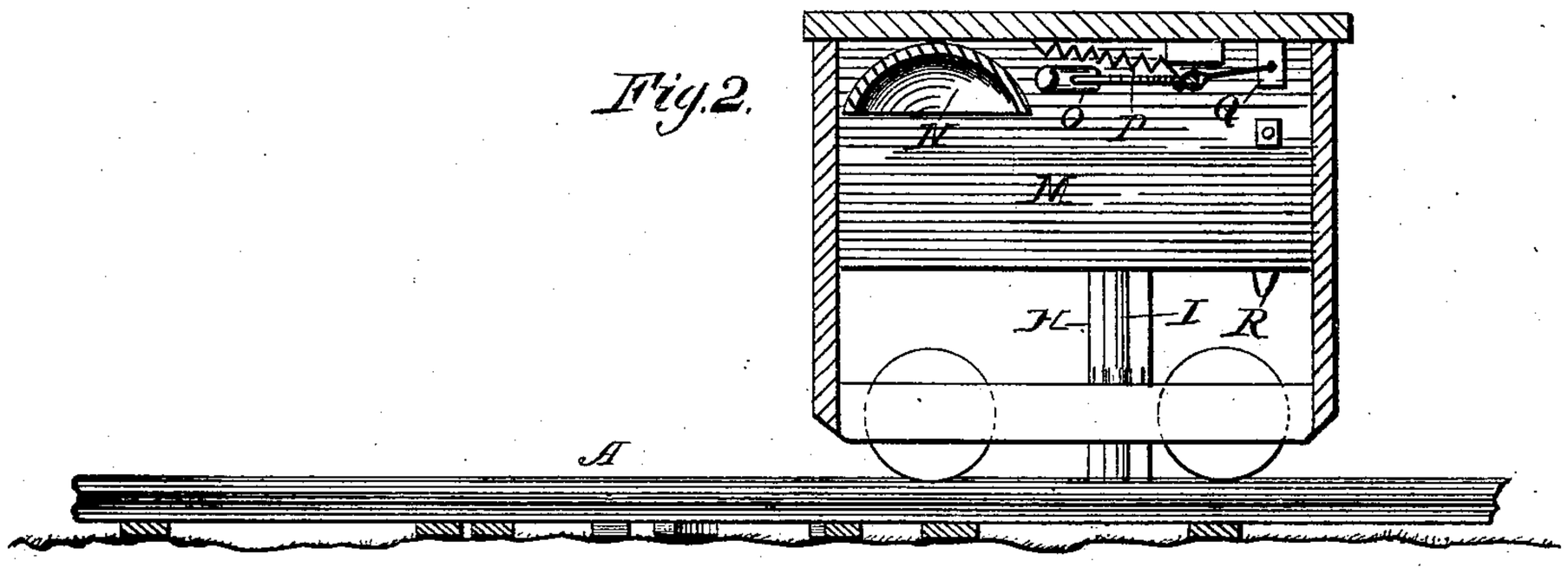


Fig. 3.

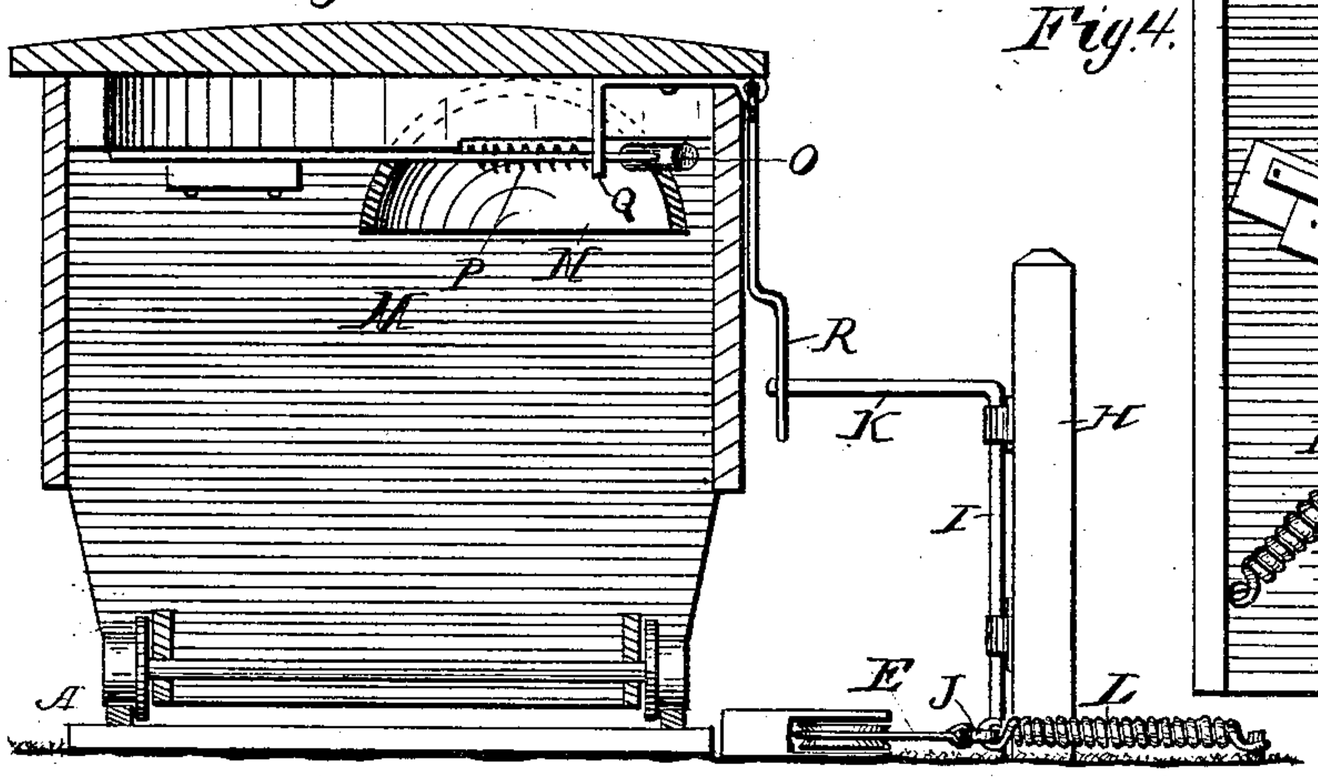
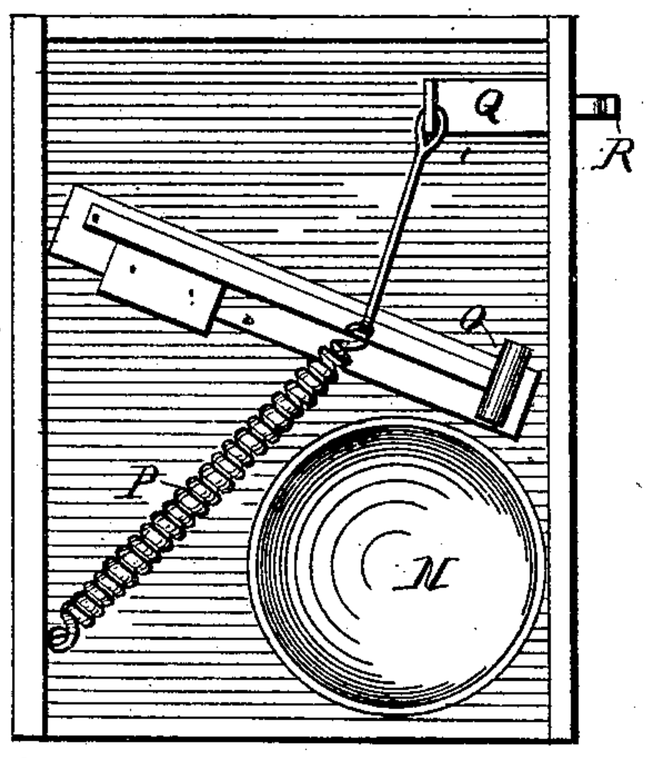


Fig. 4.



WITNESSES

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EVAN DUNLAP, OF CHESTER, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO MICHAEL FRANCIS BODEN, OF SAME PLACE.

RAILROAD SIGNAL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 243,437, dated June 28, 1881.

Application filed April 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, EVAN DUNLAP, of Chester, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Railroad Signal Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a plan view of the track. Fig. 2 is a longitudinal vertical sectional view of the same, showing in position a car having my improvement. Fig. 3 is a vertical cross-section; and Fig. 4 is a detail view of the sounding mechanism, showing its arrangement in the car.

Corresponding parts in the several figures are denoted by like letters of reference.

This invention relates to railroad-signals; and it consists in an automatic sounding device operated by the switch-lever when the same is set for the siding, the object and function of which is to warn approaching trains of the position of the switch, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, A A represent the rails of the main line of the track.

B B are the switch-rails, which are pivoted at C C and connected by the rod or bar D, which is, in practice, operated by a vertical lever, in the usual well-known manner, provision being made for the proper adjustment of the switch by means of the said lever.

To the end of one of the switch-rails, or to the bar D, is secured a cord or chain, E, passing alongside the main track through a tube, F, or through suitable guide-staples forming the equivalent of such tube, and, if necessary, over pulleys G, or their equivalent, to the signal-post H, which is located beside the main track at such a distance from the switch as to enable a train to be completely stopped before reaching the switch in the event of a "danger" signal being given.

I is a vertical rod journaled to the side of the post H, and provided at its lower end with a crank-arm, J, to which the end of the cord or chain E is secured, as shown. The upper end of the rod I is formed or provided with a laterally-projecting arm, K. The said arm K is placed in such a position that when the switch is set for the main line it shall be in a position nearly parallel to the main line of rails, while when the switch is set to the siding the said arm shall project toward the main line at a right angle, or approximately so, to the rails thereof.

To the end of the crank J is secured a spring, L, the object of which is to hold the said crank and arm K away from the main line when the said line is clear.

M is a car, under the roof of which is fixed a bell or gong, N, to strike which a hammer, O, is suitably arranged. The spring P, by which the said hammer is operated, is attached to the end of a bell-crank lever, Q, the outer end of which projects through the side of the car and is provided with an arm, R. The latter, which is disposed vertically, as shown, is adapted to engage the arm K of rod I.

From the foregoing description, and by reference to the drawings hereto annexed, the operation and advantages of my invention will be readily understood.

When the switch is set for the main line the spring L forces the arm J of rod I back, thus bringing the arm K to a position nearly parallel to the main line of rails. When, on the contrary, the switch is set to the siding, the arm K is brought to a position nearly at right angles to the main line of rails, thus causing the arm R of the bell-crank lever of one of the cars of any passing train to strike against the said arm K, thus sounding the gong or danger signal upon the train, which is thereby warned to stop in time to prevent any accident.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a railroad-signal, the combination, with the main rails A and switch B, of the post H, having rod I, provided with arms J K, spring L, and connecting cord or chain E, connecting the switch-rails with the arm J, substantially as and for the purpose set forth.

2. The combination of the main-line rails A, switch B, post H, pivoted rod I, having arms J K, spring L, and cord or chain E, with mechanism for adjusting the switch, and the sounding mechanism N O P Q R, arranged in a railroad-car, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

EVAN DUNLAP.

Witnesses:

MICHAEL F. BODEN,

JOS. WHEATON.