

(No Model.)

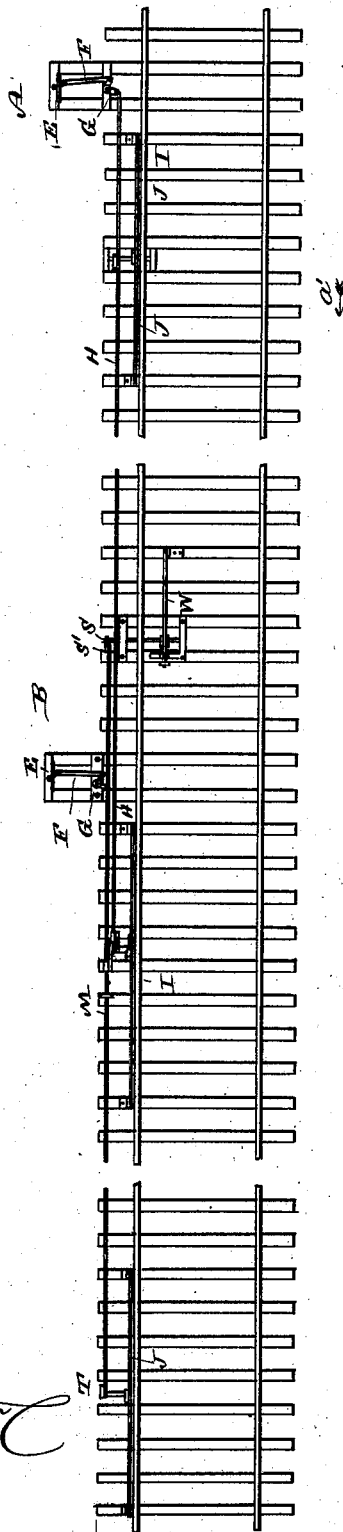
2 Sheets—Sheet 1.

T. R. A. WEBER.
RAILROAD SIGNAL.

No. 347,541.

Patented Aug. 17, 1886.

Fig. 1.



WITNESSES:

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INVENTOR:

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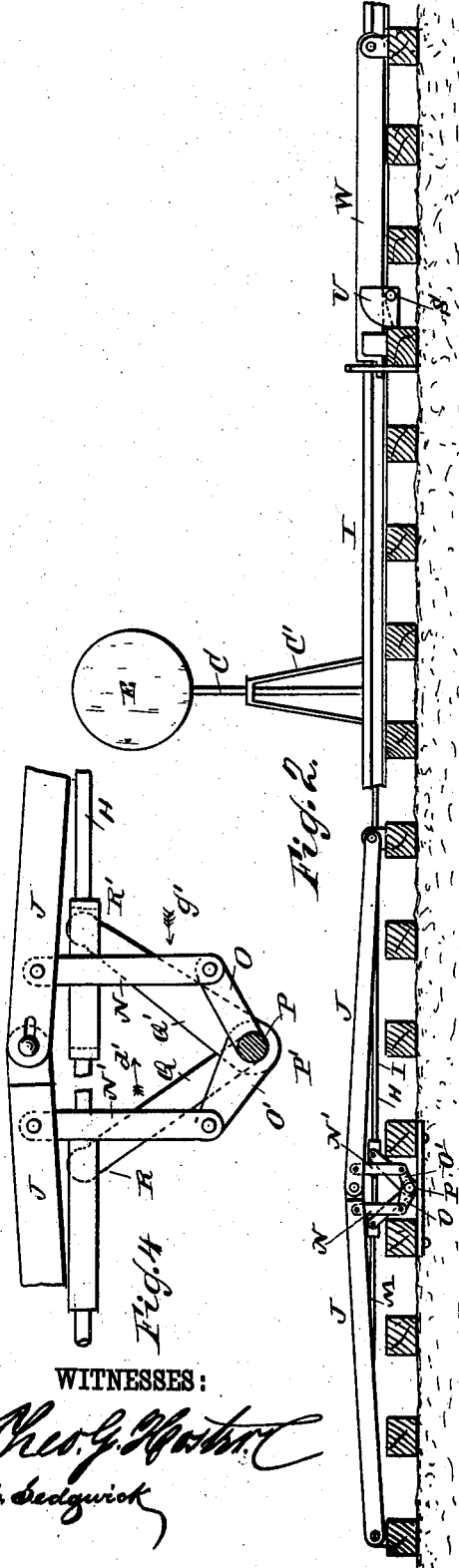
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T. R. A. WEBER.
RAILROAD SIGNAL.

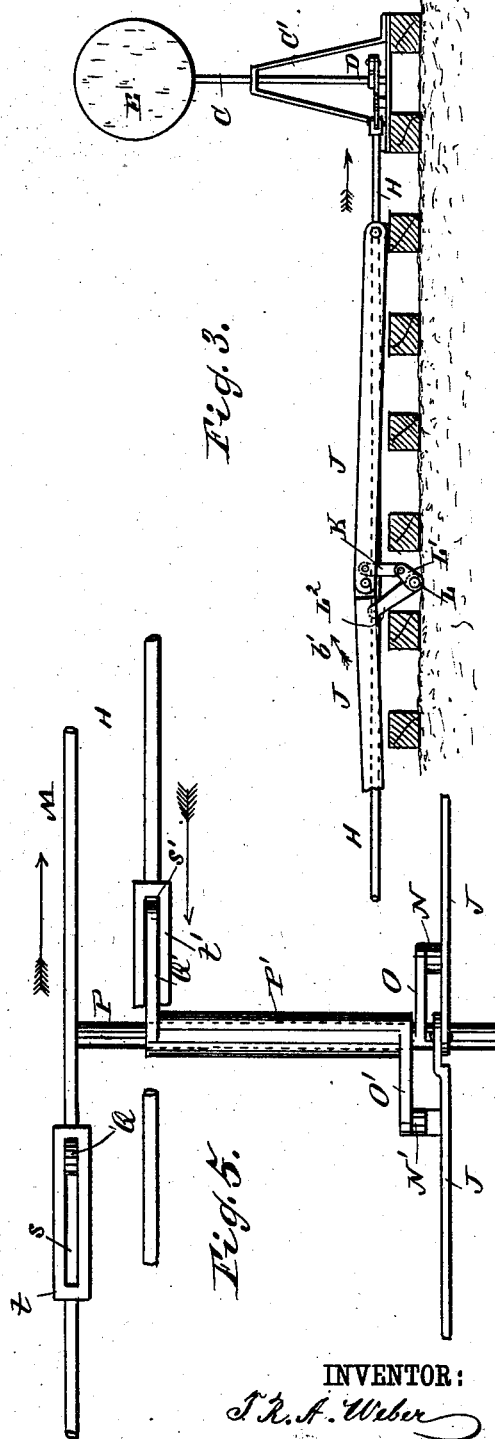
No. 347,541.

Patented Aug. 17, 1886.



WITNESSES:

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UNITED STATES PATENT OFFICE.

THEODOR R. A. WEBER, OF NEW YORK, N. Y.

RAILROAD-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 347,541, dated August 17, 1886.

Application filed May 20, 1885. Serial No. 166,199. (No model.)

To all whom it may concern:

Be it known that I, THEODOR R. A. WEBER, of the city, county, and State of New York, have invented a new and Improved Railroad-Signal, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved railway-signal which is so constructed that the signals are automatically set to "danger" by a train, and are not changed until the train leaves the section.

The invention consists of two signals combined by rods with each other and with mechanism at the sides of the rails for operating said rods, all as will be fully set forth and described hereinafter, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a railroad-track provided with my improved signal, parts being broken out. Fig. 2 is a side view of the signal-operating mechanism; Fig. 3, a side view of the mechanism differently applied. Fig. 4 is a detail enlarged sectional view of the said mechanism. Fig. 5 is a plan view of the same.

The signals A and B are located a greater or less distance from each other at a curve, deep cut, or at any place on the road where the engineer cannot see any great distance ahead.

Each signal consists of a vertical rod, C, suitably journaled in a frame, C', and provided at its lower end with a crank, D, and at the upper end with a signal-disk, E, or lantern.

Each crank D is connected by a bar or rod, F, with one end of an angle-lever, G, pivoted on a sleeper to swing in the horizontal plane, and the other ends of the levers G of the signal A are connected with a rod, H. Between the said rod H and the rail I two bars, J, are pivoted to clips on the sleepers, and their inner ends are pivoted together and connected by a link, K, with a short crank-arm, L', on one end of a shaft, L, having a longer crank-arm, L², on its other end, the longer crank-arm, L², being connected with the rod H.

The lever G of the signal B is connected with

a rod, M, also running parallel with the rails. At the signal B two bars, J, are provided in the manner set forth, and are connected at the pivoted ends by links N and N', respectively, with the crank-arms O and O' on the end of the shaft P and the sleeve P' surrounding it. At the opposite end the shaft P has an arm, Q, and the sleeve P' an arm, Q', which arms Q and Q' are passed into slots s and s', respectively, in flattened parts t and t' of the bar M and the bar H, respectively. The rod M has one end connected with another set of bars, J, pivoted, in the manner described, at the point T, except that the levers on the shaft at T are placed in opposite direction from those at the signal A, and as shown in Fig. 3. The point T' is located some distance from the signal B in the direction from the signal A to the signal B. The other end of the rod M, which is between the signals A and B, is connected with a crank, S', on the end of a shaft, S, mounted transversely under the rails and carrying a flanged cam-piece, U, between the rails, on which cam-piece a bar, W, rests, which is pivoted between the rails.

The operation is as follows: The trains run in the direction of the arrow a', Fig. 1, and the signal A is set for a clear line, and the jointed ends of the bars J are raised, as shown in Fig. 3. The train passes the signal A and the wheels depress the jointed ends of the bar J and swing the crank-arm L² in the direction of the arrow b', whereby the rod H is moved in the inverse direction of the arrow a' and turns the signal A ninety degrees, so that the same shows "danger." The trains now arriving at the signal A are signaled to stop. The first train runs past the signal B and on the bars J at the said signal and presses down their jointed ends, whereby the arm Q is swung in the direction of the arrow d' and the arm Q' in the direction of the arrow g', whereby the rod H is moved in the direction of the arrow a' and the signal A set to show a clear track and the bars J at the signal A are raised. The bar M is moved in the reverse direction of the arrow a' and the signal B is turned ninety degrees to show "danger," and at the same time the rod M raises the bars J at T. When the train runs on the bars J at T, it depresses the same and moves the rod M in the direc-

tion of the arrow a' and turns the signal B to show a clear line. The slots s and s' prevent the bars M and H from being operated in both directions, the slot s allowing the signal A to turn to "danger" when signal B is turned to "danger," and slot s' allowing the rod H to move in the direction of signal A and turn same to "danger" when the rails J at A are depressed without interfering with signal B when said signal is turned to "track clear" by the arms Q and Q'. If these slots were not provided, both signals A and B would be operated at the same time when the train passed over the bars J of the signal B. In short, when a train passes the signal A it sets it to show "danger"; at the signal B it sets the said signal B for "danger" and the signal A for a "clear line," and at T it sets the signal B for a "clear line." The signal the train has last passed remains set for "danger" until the train has passed to a certain point from the said signal—that is, to T. At the same time that the signal B is turned to "danger" the bar W is raised and strikes a projection on the under side of the locomotive or car of a passing train, which projection sounds a bell or gives another sound-signal on the car or locomotive. Thus if the engineer fails to see signal B he is reminded of the danger by the sound-signal.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the signals A and B, of the bars J, pivoted at the rails at the signals A and B and at the point T, the rod H, connected with the bars J at the signals A and B and with the signal A, and of the rod M, connected with the signal B and with the pivoted bars J at the signal B, and at the point T, substantially as herein shown and described.

2. The combination, with the signals A and B, of the bars J, pivoted at the signals A and B and at the point T, the rod H connected with the bars J at the signals A and B and with the signal A, the rod M, connected with the signal B and the bars J at the signal B and at T, and of the shaft S, connected with the rod M and having a part, U, substantially as herein shown and described.

3. The combination, with the bars J, pivoted at the rail I, of the shaft P, having the arms O Q on its ends, the sleeve P', surrounding the shaft P and having arms O' Q' on its ends, the links N N', connecting the bar J with the arms O O', the rods M and H, connected with the arms Q and Q', respectively, and the signals B and A, connected with the rod M and H, respectively, substantially as herein shown and described.

THEODOR R. A. WEBER.

Witnesses:

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