(No Model.)

W. T. WATERS.

RAILROAD TRAIN TELEGRAPH.

No. 271,958. Patented Feb. 6, 1883.

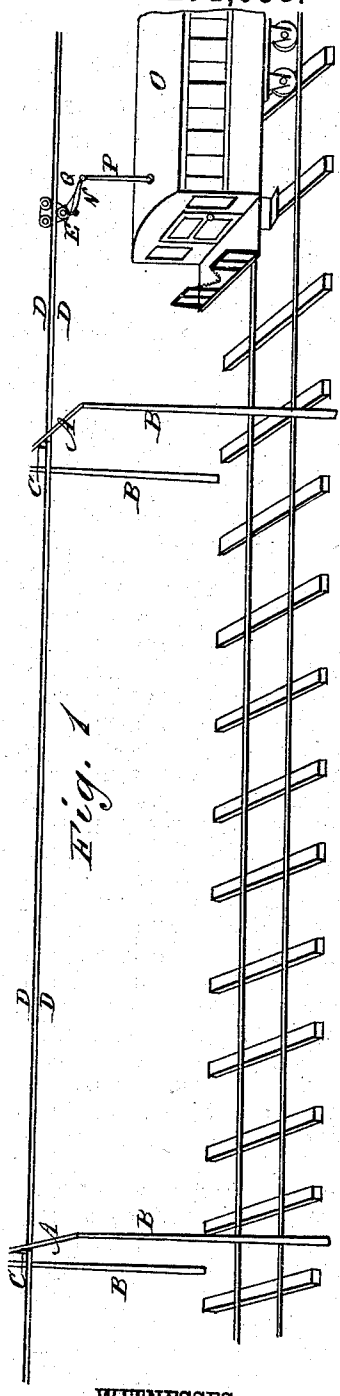


Fig. 1.

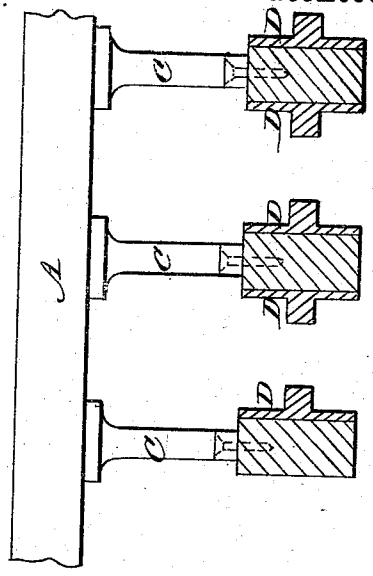


Fig. 4.

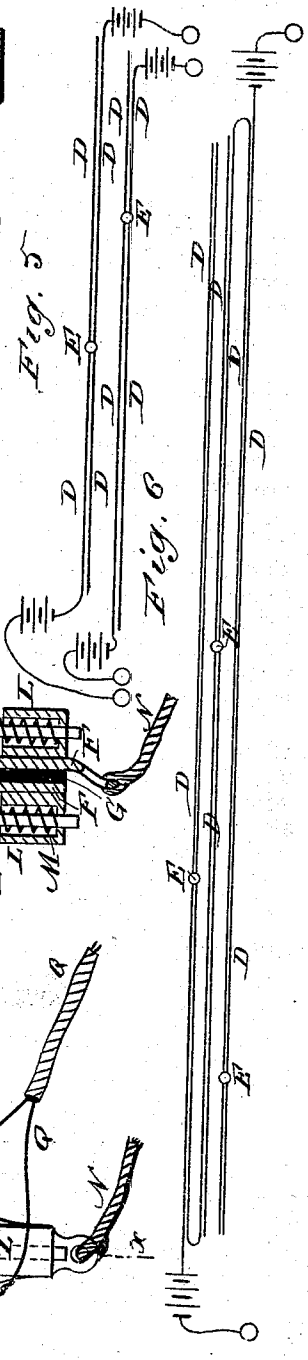


Fig. 5.

Fig. 6.

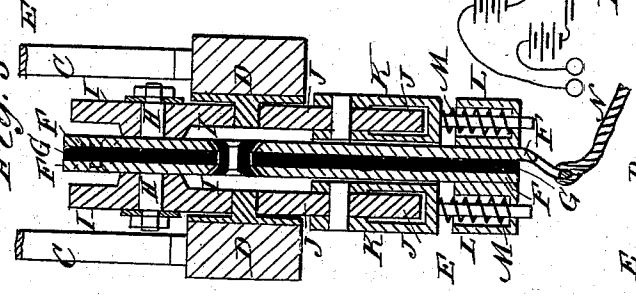


Fig. 3.

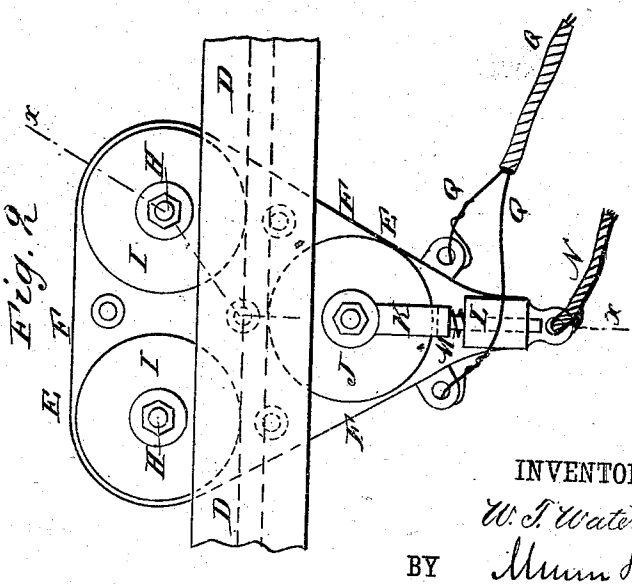


Fig. 2.

WITNESSES:

C. Neveux

C. Sedgwick

INVENTOR:

W. T. Waters

BY Munn & Co

ATTORNEYS.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM T. WATERS, OF ATLANTA, GEORGIA.

RAILROAD-TRAIN TELEGRAPH.

SPECIFICATION forming part of Letters Patent No. 271,958, dated February 6, 1883.

Application filed July 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. WATERS, of Atlanta, in the county of Fulton and State of Georgia, have invented a new and useful Improvement in Railroad-Train Telegraphs, of which the following is a full, clear, and exact description.

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 perspective view of my improvement. Fig. 2 is a side elevation of the traveling conductor and a portion of the track. Fig. 3 is a sectional elevation of the same, taken through the line *x x*, Fig. 2. Fig. 4 is a sectional end elevation of a portion of the suspended conductors enlarged. Fig. 5 is a plan view, illustrating the electric circuit. Fig. 6 is a plan view, illustrating a modification of the electric circuit.

My invention is an improvement in the class of train-telegraph lines in which a rolling conductor or truck travels on suitable rails or wires supported on posts set upright alongside the track, and is so connected with a car that it travels with it, and enables electrical communication to be maintained between the car and either terminus of the line.

My improvement relates particularly to the construction of the rolling conductor or truck, as hereinafter described and claimed.

From cross-beams A, attached to poles B, erected at the opposite sides of the roadway, are suspended, by hangers C or other suitable means, insulated conductors D, which, in the construction shown in the drawings, are formed of metal plates, each having a central flange and attached to the adjacent sides of the wooden beams. The construction of the conductors D is immaterial, so long as they are perfectly insulated and form a continuous track for the traveling conductor E. The conductors D are arranged in pairs, and any desired number of pairs can be used. The alternate ends of the conductors D of each pair are connected with batteries and ground-lines, so that when a connection is made between the said conductors at any point in their lengths a complete electric circuit will be formed; or the opposite ends of the first and last conductors of a series of several pairs can be connected with batteries and ground-lines, each pair being connected at its opposite ends with the adjacent pairs, as illustrated in Fig. 6. The traveling conductor E is formed with two metallic plates, F, insulated from each other by a plate, G, of hard rubber or other non-conducting material, and connected with each other by insulated rivets.

To the upper part of each plate F are attached, or upon it are formed, gudgeons H, upon which revolve the wheels I. The wheels I roll upon the upper sides of the flanges of the conductors D, upon the lower sides of which roll the wheels J. One wheel J is connected with each plate F, and is pivoted to the forked upper end of a standard, K, the lower end of which works in a socket, L, attached to or formed upon the lower part of the said plate F. The standard K is pressed upward by a spiral spring, M, placed in the socket L, so that the wheels I J will be held against the conductors D with sufficient force to insure a perfect electric contact at all times.

With the lower end of one of the plates F is connected the end of a cable, N, the other end of which is connected with a car, O, of the train, or with a post, P, attached to the said car, so that the traveling conductor E will be drawn by the car with which it is connected.

With each of the plates F is connected the end of a conducting-wire, Q, the other ends of which are connected with a key or telegraph-instrument within the car O, so that a telegraph-message can be sent between the car and either end of the line, wherever the train may be, and whether the train may be in motion or at rest.

When practicable, each train upon the road can have its own pair of conductors D, and the train and conductors can form an independent circuit, as illustrated in Fig. 5; or the several pairs of conductors can be connected at their ends, as illustrated in Fig. 6, so that all the conductors and all the trains will be included in one circuit.

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

1. In a railroad-train-telegraph conductor, the truck for traveling on elevated supports,

having the metal plates F, the intervening insulating-plate, G, and the transporting metal wheels H, having journals fixed in said plates F, as shown and described.

2. In a railroad-train-telegraph conductor, the combination, with the metal conductors or rails, of the conducting-plates F, having wheels H, the wheels J, standard K, socket L, springs M, wires Q Q, and cable N, for connecting the conductor or truck with a car, as shown and described.

WILLIAM T. WATERS.

Witnesses:
JAMES T. GRAHAM,
C. SEDGWICK.