(No Model.)

W. W. SMITH.

CAR TELEGRAPH.

No. 247,127. Patented Sept. 13, 1881.

Fig. 1.

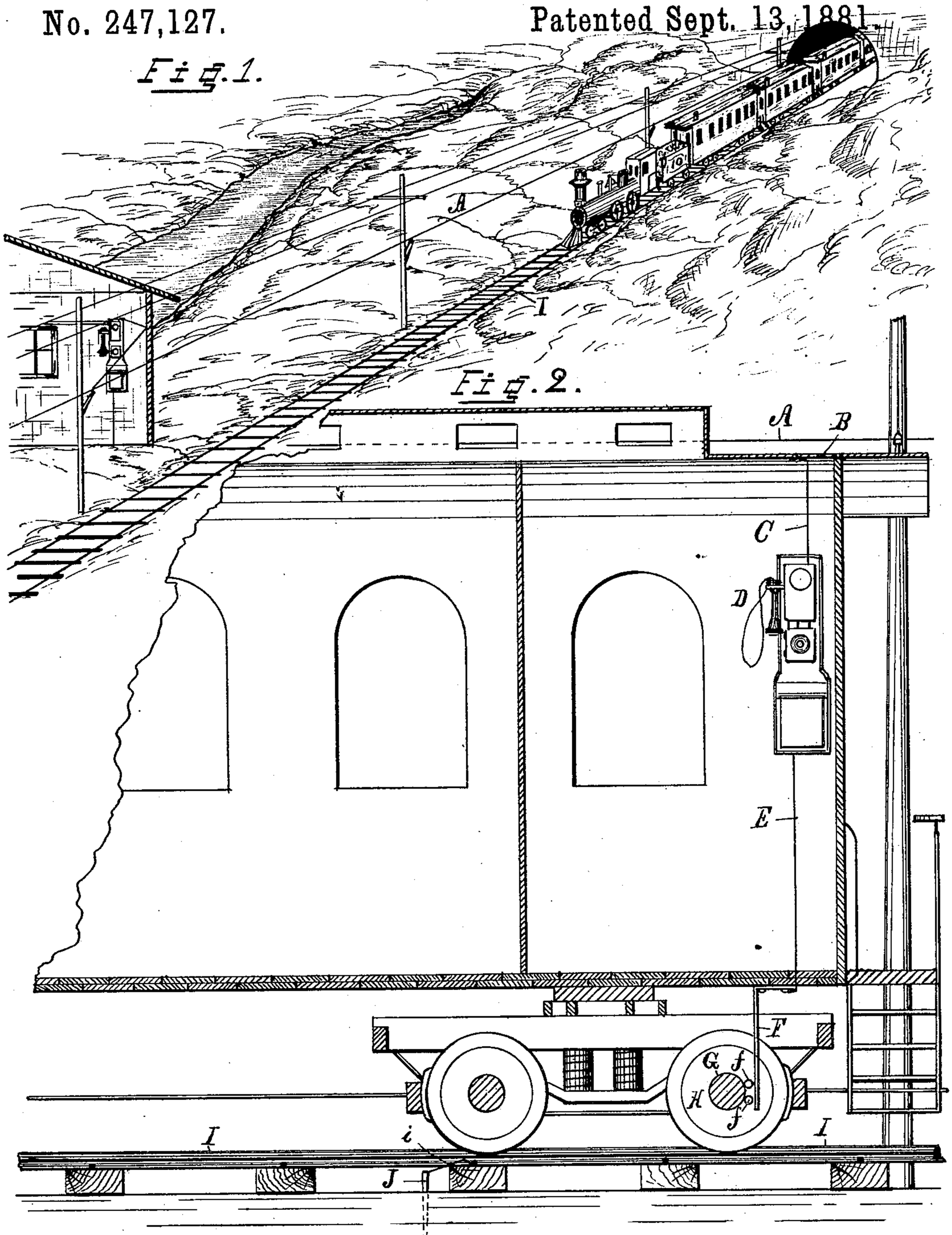

Fig. 2.

WITNESSES

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CAR-TELEGRAPH.

SPECIFICATION forming part of Letters Patent No. 247,127, dated September 13, 1881.

Application filed June 3, 1881. (No model.)

To all whom it may concern:

Be it known that I, WM. WILEY SMITH, of the city of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful Improvements in Car-Telegraphs, of which the following is a specification.

The object of my invention is to provide a means of communication between a railroad-train or like object and a person at any desired point—such as the train-dispatcher's office—or between two such trains, at any time when desired without regard to whether said train or trains are moving or stationary; and it consists of an electrical circuit of which a portion shall be established by induction between the metallic covering of the car and an electrical conductor running along in proximity thereto.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a perspective view of a railway-train and telegraph-line so arranged that my invention may be used in connection therewith, and Fig. 2 is a longitudinal vertical section of one end of a car, in which is arranged means whereby said invention may be put in use.

In said drawings the portions marked A represent a wire or other metallic conductor, strung on poles after the ordinary manner of telegraph-wires; B, the roof of the car, which has a metallic covering; C, a wire leading from said metallic roof to a telephone or other instrument, whereby communication is obtained through electrical agencies; D, said telephone or other instrument; E, a wire forming part of the ground-connection; F, a spring by which said wire and the axle of the wheel are connected; G, said axle; H, the wheel; I, the railroad-rail; and J a metal stake driven into the ground and connected by a wire, *i*, to said rail.

I will now describe the operation of my invention when a telephone is used as a part thereof.

It is intended that a person in the train-dispatcher's office shall be listening constantly for word from trains, and that some one on each train shall be constantly near the telephone in the car ready to enter into communication with him. When it is desired to have communication, the party desiring it puts the generator of the call-signal apparatus in motion, which sounds a "buzzer", (bells or gongs are not desirable in this invention,) which calls up the other party in the ordinary manner, and the talking proceeds.

Instead of having any call-signal apparatus, (especially in the train-dispatcher's office,) it may be found desirable to have a person stand constantly at the telephone, listening for word from the trains.

It is desirable that where a telephone is used on the train means be employed to shut out foreign sounds as much as possible, and I therefore advise that a small compartment be constructed in one end of the car and padded, in order to measurably accomplish this object.

The spring-bar F has anti-friction trucks *f* attached to the face thereof, through which electrical connection can be had with the axle without causing much friction, which is, of course, a desirable thing to do.

To operate my invention in the way which I have contemplated it is desirable that the telegraph-poles be set nearer to the track than ordinarily. A wire preferably of rather larger than the ordinary size is strung along so as to come as near as possible to the top of the cars as they pass along the track. As the tops of nearly all the passenger and express cars are covered with metal an electrical current is induced in said top and connections by the electrical current passing along said wire, or vice-versa, and thus establish, by means of said line and top and the connection running from the telephone to the ground, an electrical circuit, over which telephonic communication may be had.

In order to obtain certain ground-connection it is best not to depend wholly upon the rails, but rather to drive spikes or rods into the ground at intervals along the track and connect them to the rails, as shown.

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

1. As a means of communicating with a train of cars, an electrical circuit consisting of an electrical conductor passing along the track,

having one or more communicating instruments attached thereto, a car having its roof or other outside portion partly or wholly covered with or constructed of electrical conducting material, an electrical connection between said outside portion and a communicating instrument in said car, and a further electrical connection from said instrument to the ground, said electrical conductor being an ordinary telegraph-wire or similar device, and arranged in such position as to be in close proximity to the electrical conducting portion of the car, so that a current may be induced in one by a current in the other, substantially as set forth.

2. The combination of the line-wire A, having suitable ground-connections and communicating instruments connected therewith, the car partly or wholly covered with electrical conducting material, a telephone or other apparatus, for receiving and transmitting messages, located in said car, and a connection between said telephone and said car-covering and one between said telephone and the ground, all substantially as and for the purposes herein set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 30th day of May, A. D. 1881.

WM. WILEY SMITH. [L. S.]

In presence of—

C. BRADFORD,

E. M. GOODWIN.