P. ROBINSON.

TELEPHONE APPARATUS FOR TRAINS.

APPLICATION FILED MAY 13, 1912.

1,069,811. Patented Aug. 12, 1913.

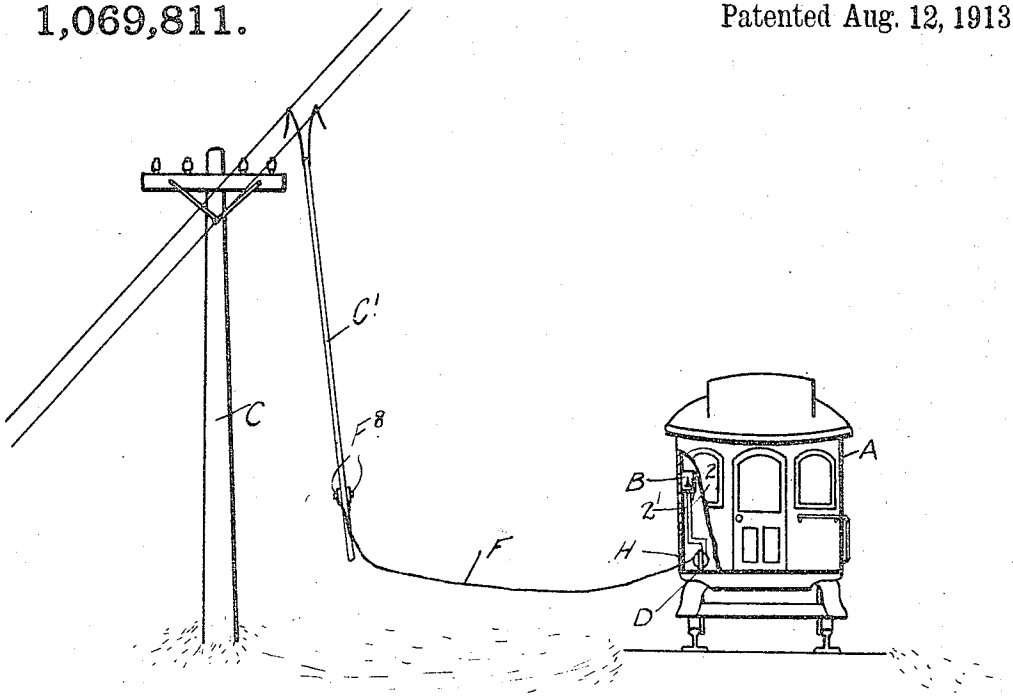


FIG. 1.

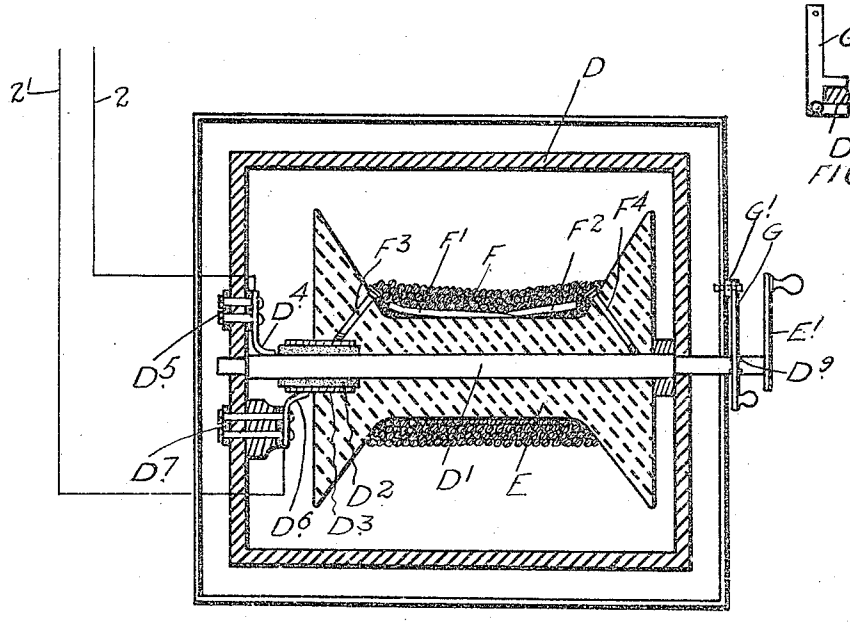


FIG. 2.

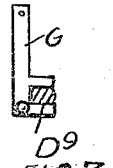


FIG. 3.

WITNESSES

S. Hallett

W. J. McIntosh.

INVENTOR

P. ROBINSON.

by Fred. B. Fetherstonhaugh

Atty.

UNITED STATES PATENT OFFICE.

PERCY ROBINSON, OF SUDBURY, ONTARIO, CANADA.

TELEPHONE APPARATUS FOR TRAINS.

Specification of Letters Patent. Patented Aug. 12, 1913.

1,069,811. Application filed May 13, 1912. Serial No. 697,013.

To all whom it may concern:

Be it known that I, PERCY ROBINSON, of the town of Sudbury, in the District of Sudbury, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Telephone Apparatus for Trains, of which the following is a specification.

My invention relates to improvements in telephone apparatus for trains, and the object of my invention is to provide a supplemental connection between that portion of the telephone circuit located in the train and the main line, which connection will at all times be connected to that portion of the telephone circuit in the train and which at the same time can be readily wound or unwound into a coil when connecting the free end of the supplemental connection to the main line connections and it consists essentially of a shaft journaled in a suitable frame, an insulating sleeve secured to the shaft and a metallic sleeve supported around the insulating sleeve, a spool mounted on the shaft, a suitable contact finger having a wiping contact with the shaft and to which one terminal of the telephone circuit is connected, a contact finger having a wiping contact with the aforesaid metallic sleeve and to which the other end of the telephone circuit is connected, a supplemental wire connecting one line thereof being electrically connected to the shaft and the other line thereof being electrically connected to the metallic sleeve as hereinafter more particularly described by the following specification.

Figure 1, is an end elevation of the train and telephone post having a supplemental wire extending between the train and the aerial telephone wires through the portable special line pole. Fig. 2, is a reduced sectional detail of the supplemental wire winding apparatus. Fig. 3 is a detail of the locking arm.

In the drawings like letters of reference indicate corresponding parts in each figure.

A represents a train having the usual telephone apparatus B from which extend the usual circuit wires 2 and 2′.

C is a telephone post on which is supported in the usual manner the line wires.

C′ is a portable special line pole with two hooks to engage with the aerial line wires, connection being made between the hooks and binding posts on the lower part of the pole to which the free ends of the supplemental wire are connected.

D is a frame in which is journaled a metallic shaft D′.

D² is a sleeve of insulating material connected to the shaft.

D³ is a metallic sleeve.

E is a spool secured to the shaft D′.

E′ is a crank for turning the shaft D′.

D⁴ is a contact finger having a wiping contact against the shaft D′. The contact finger D⁴ is secured to the frame D by a suitable insulating connection D⁵. D⁶ is a similar finger having a wiping connection against the sleeve D³. The finger D⁶ is connected to the frame D by a suitable insulating connection D⁷. The wire 2 leading from the telephone is connected to the finger D⁴ and the wire 2′ is connected to the finger D⁶.

F is a supplemental wire comprising two lines F′ and F² connected respectively to the binding post F³, bearing against the sleeve D³ and the binding post F⁴ bearing against the shaft D′. The opposite ends of the lines are provided with suitable connections, F⁸ designed to be connected to the connections on the portable special line pole. To lock the shaft from rotating a forked arm G is pivotally connected to a standard G′ extending from the main frame. The fork of the arm G extends to each side of the flattened portion D⁹ of the shaft D′, thus preventing the rotation of the shaft.

When it is desired to use the telephone all that is necessary is to stop the train at a point where the distance between the train and the aerial telephone wires is not greater than the length of the supplemental wire F. The arm G is then thrown free of the shaft and the free ends of the supplemental wire F is carried outwardly through a suitable opening in the train and attached to the connections on the lower end of the portable special line pole which is then hooked on to the aerial telephone wires, a sufficient length of the supplemental wire F being unwound for the purpose, when this is done the person can return to the train and rewind the supplemental wire F sufficiently to keep it off the ground replacing the locking arm G which will hold the supplemental wire as taut as desired, constant electrical connection to the train telephone being retained in all positions of the spool. After the telephonic conversation is finished the special pole is unlocked from the

aerial wires, the supplemental wire disconnected from the special pole and rewound on the spool.

From this description it will be seen that I have devised a very simple means whereby a connection is maintained between the supplemental wire and the telephone circuit, which may be readily wound or unwound when making and breaking connection between the supplemental wire and the main line connection.

What I claim as my invention is:

1. In the telephone apparatus for trains, the combination with the circuit wires of the telephone and the main line wire connections, of a suitable shaft located in a train, a spool mounted thereon, an insulating sleeve secured to the shaft, a metallic sleeve on the insulating sleeve, a supplemental wire comprising a line electrically connected to the shaft and a line electrically connected to the sleeve, a finger bearing on the shaft and to which one terminal of the telephone circuit is connected, a finger having a wiping connection with the sleeve and to which the other terminal of the telephone circuit is connected, and an operating crank secured to the shaft, and means for locking the shaft in a stationary position as and for the purpose specified.

2. In the telephone apparatus for trains, the combination with the circuit wires of the telephone, and the main line connections, of a suitable shaft located in the train, a spool mounted thereon, an insulating sleeve secured to the shaft and a metallic sleeve on the insulating sleeve, a supplemental wire comprising a line electrically connected to the shaft and a line electrically connected to the sleeve, a finger bearing on the shaft and to which one terminal of the telephone circuit is connected, a finger having a wiping connection with the sleeve and to which the other terminal of the telephone circuit is connected, an operating crank secured to the shaft and a swinging arm designed to engage with a suitable portion of the shaft, as and for the purpose specified.

3. In a train telephone apparatus the combination with the telephone circuit wires and the main wire line connection, a suitable supporting frame located in a train, a shaft rotatably mounted in said frame, a wire holding spool carried by said shaft an insulating sleeve surrounding a portion of said shaft, a conducting sleeve surrounding said insulating sleeve, a supplemental wire comprising a line electrically connected to the shaft and a line electrically connected to the sleeve, a finger bearing on the shaft to which one terminal of the telephone circuit is connected, a finger having a wiping connection with said conducting sleeve and to which the other terminal of the telephone circuit is connected, both of said fingers being supported from said frame, an operating handle connected to said shaft, and means for locking the shaft against rotation.

PERCY ROBINSON.

Witnesses:
BERTIE CARROLL,
I. B. CRABBE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."