

K. A. SIMMON.
CONNECTOR.
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1,384,491.

Patented July 12, 1921.

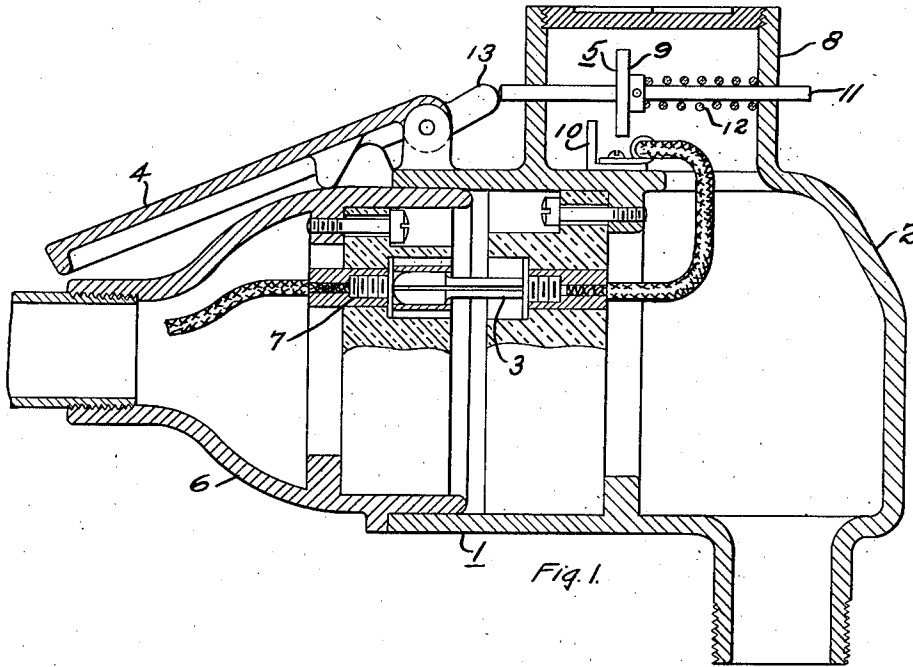


Fig. 1.

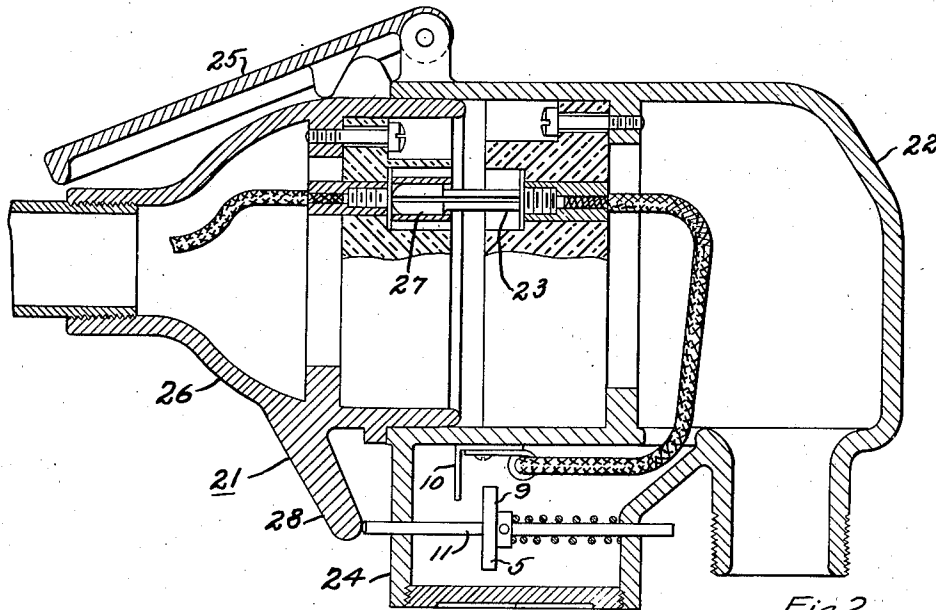
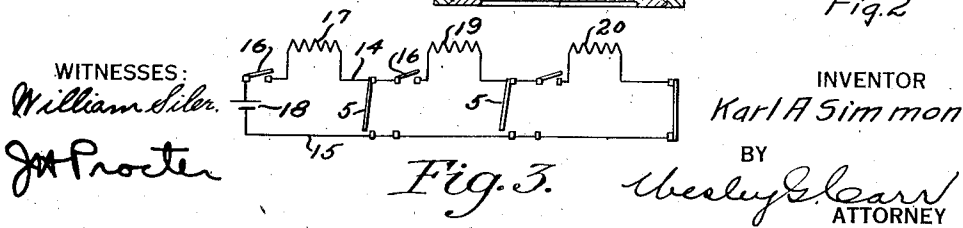


Fig. 2.



UNITED STATES PATENT OFFICE.

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CONNECTOR.

1,384,491.

Specification of Letters Patent.

Patented July 12, 1921.

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To all whom it may concern:

Be it known that I, KARL A. SIMMON, a citizen of the United States, and a resident of Edgewood Park, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Connectors, of which the following is a specification.

My invention relates to connectors and particularly to train-line connectors.

One object of my invention is to provide a connector having a switch within the receptacle member thereof that shall be adapted to short circuit certain of the conductors in the connector under predetermined conditions.

Another object of my invention is to provide a train-line connector of the above-indicated character that shall be simple to construct and effective in its operation.

In practising my invention, I provide a receptacle having a plurality of contact members therein, a door for closing one end of the same, under predetermined conditions, a plug member having corresponding contact members therein and adapted to be inserted in the receptacle and a normally closed switch within the receptacle that is adapted to be opened when the plug is inserted in the receptacle for the purpose of open-circuiting a short-circuit connection around certain of the conductors. The switch is adapted to normally maintain the short-circuit connection across certain of the conductors in order that a complete circuit may, at all times, be obtained from one central controlling point, irrespective of the number of cars in a train.

Figure 1 of the accompanying drawings is a side view, partially in elevation and partially in section, of a train-line connector embodying my invention; Fig. 2 is a side view, partially in elevation and partially in section, of a modified form of the train-line connector embodying my invention, and Fig. 3 is a diagrammatic view of a train line illustrating the application of my invention.

In Fig. 1 of the drawings, a connector 1 comprises a receptacle 2 having a plurality of contact members 3 therein, a door 4 and a switch 5. A plug member 6 is provided

with a plurality of contact members 7 that are adapted to engage the corresponding contact members 3 of the receptacle 2 when the same is inserted in the receptacle.

The switch 5 is mounted in a casing 8 on the receptacle 2 and comprises a movable contact member 9, a stationary contact member 10, a guiding member 11 and a spring 12 for yieldingly holding the contact members in engagement, under normal conditions. The door 4 is provided with a projection 13 that is adapted to engage the guiding member 11 for the purpose of moving the contact member 9 out of engagement with the contact member 10 when the door is moved to such open position as to permit the insertion of the plug member 6.

The switch 5 is provided for the purpose of normally short circuiting train-line conductors 14 and 15, as shown in Fig. 3 of the drawings, when the two members of the connector are separated in order that a control switch 16 may complete a circuit through a translating device 17 and a source of electromotive force 18. That is, if the cars upon which translating devices 19 and 20 are mounted are disconnected from the car upon which the device 17 is mounted, the switch 5 will permit the circuit, comprising the device 17 and the source of electromotive force 18 to be completed whenever the proper switch 16 is closed. Thus, if the translating devices 17, 19 and 20 are located on different cars of a train, the function of the control circuit will not be impaired because of the open circuiting of any of the connectors by reason of the uncoupling of any of the cars.

In Fig. 2 of the drawings, a connector 21 comprises a receptacle 22 having contact members 23 therein, a housing 24 for inclosing the switch 5, a door 25, a plug member 26 having contact members 27 therein and a projection 28 thereon that is adapted to engage the guiding member 11 of the switch 5 for the purpose of disengaging the contact members 9 and 10 of the same when the plug 26 is inserted in the receptacle 22.

I do not limit my invention to the particular structures illustrated, as the switch may be disposed in the main portion of the receptacle and various other modifications may

be made without departing from the spirit and scope of the invention as set forth in the appended claims.

I claim as my invention:

5 1. The combination with a receptacle having contact members therein, a plug member therefor having corresponding contact members, and a door for the receptacle, of a short-circuiting switch for the contact
10 members disposed within the receptacle, and means whereby the switch is actuated when the door is opened to receive the plug member.

15 2. The combination with a receptacle having a door thereon and contact members therein, and a plug member therefor having corresponding contact members therein, of a switch disposed in the receptacle for normally short-circuiting certain of the con-

ductors, and means whereby the opening of the door opens the switch.

3. The combination with a receptacle having conductors therein, a door for the receptacle having a projection thereon, and a plug member having contact members
25 therein that are adapted to engage the contact members in the receptacle, of a normally closed short-circuiting switch in the receptacle, and means adapted to be engaged
30 by the projection on the door to open the switch when the door is opened to permit the insertion of the plug member in the receptacle.

In testimony whereof, I have hereunto subscribed my name this 29th day of
35 May, 1917.

KARL A. SIMMON.