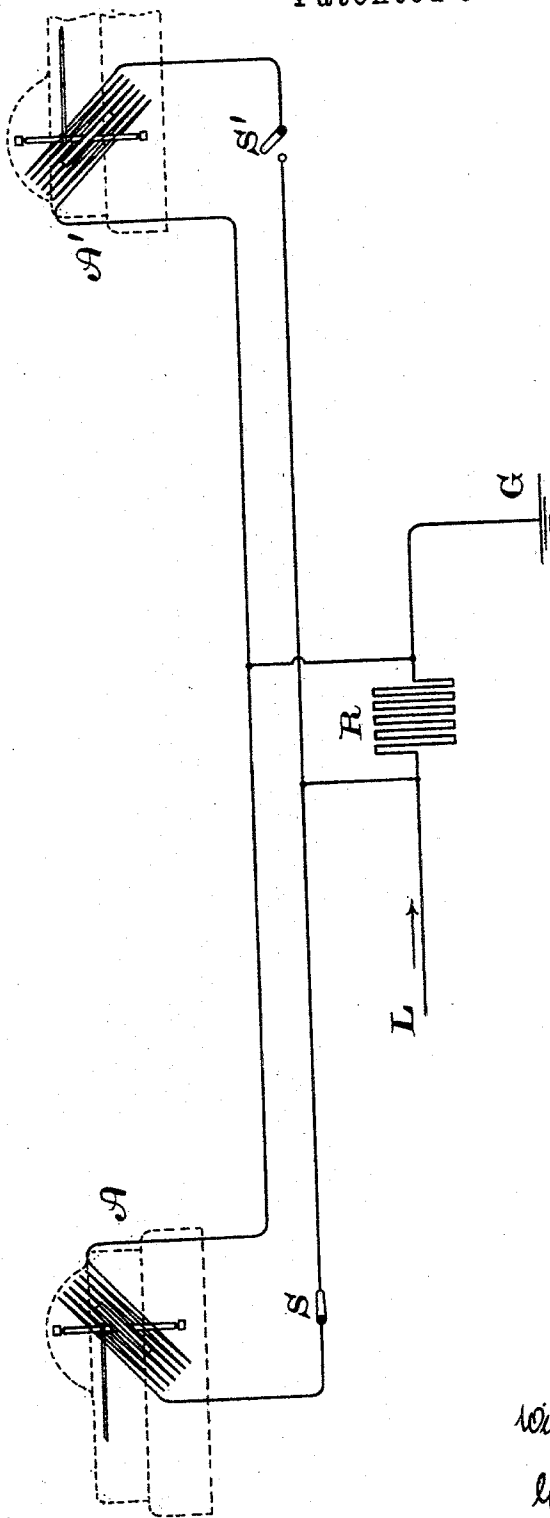


(No Model.)

W. B. POTTER.  
SHUNT AMMETER.

No. 583,934.

Patented June 8, 1897.



WITNESSES.

*A. H. Abell*

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Atty.

# UNITED STATES PATENT OFFICE.

WILLIAM B. POTTER, OF SCHENECTADY, NEW YORK, ASSIGNOR TO THE  
GENERAL ELECTRIC COMPANY, OF NEW YORK.

## SHUNT-AMMETER.

SPECIFICATION forming part of Letters Patent No. 583,934, dated June 8, 1897.

Application filed January 25, 1897. Serial No. 620,565. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM B. POTTER, a citizen of the United States, residing at Schenectady, in the county of Schenectady, State of New York, have invented certain new and useful Improvements in Shunt-Ammeters, (Case No. 517,) of which the following is a specification.

My invention relates to shunt-ammeters, and more especially to the connections of such devices in the working circuit, so that they may be economically wired.

In the operation of certain electrical devices—such, for instance, as electric cars—it is desirable to have current-indicating instruments in different places in the equipment. As such instruments are commonly constructed a shunt is provided for each one, so that whenever the current passes through the instrument it is calibrated for its own shunt. Where two or more instruments, however, are to be used, I prefer to so connect these that the same resistance-shunt may be used for all of them. I also prefer to insert switches in the lead of each instrument, so that any one of them may be thrown out of action. In the case of an electric car, for instance, it is unnecessary to keep the ammeter on the rear platform or connected with the controller which is not operating in circuit, and it is also undesirable, because it leaves a live circuit in the otherwise dead controller, so that I prefer to arrange the switches in the manner pointed out. This latter might be omitted, as by special construction of the ammeters or

special calibration of them they could still be made to register accurately, even although more than one of them was in circuit with the same shunting-resistance, but this is not the preferred construction.

The accompanying drawing is a diagram showing my invention.

In said drawing, A A' are the ammeters, each of which is connected in shunt to the resistance R, placed in the line L between the source of supply and ground G. Switches SS' are provided for opening the circuit of either ammeter as occasion may demand. When the switch S is open, the ammeter A' is in circuit in shunt to the resistance R. When the switch S' is open, the ammeter A is in circuit. Of course it is manifest that more than the two ammeters illustrated may be similarly connected without departing from my invention.

The use and operation of the devices will be sufficiently understood from the foregoing description.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A plurality of ammeters connected in shunt to a common resistance.

2. Two shunt-ammeters in shunt to a common resistance in the line, with switches for opening the circuit of either ammeter.

In witness whereof I have hereunto set my hand this 11th day of January, 1897.

WILLIAM B. POTTER.

Witnesses:

B. B. HULL,

M. H. EMERSON.