(No Model.)

E. R. E. COWELL.

ELECTRIC DISTANCE REGISTER.

No. 267,062. Patented Nov. 7, 1882.

Fig. 1

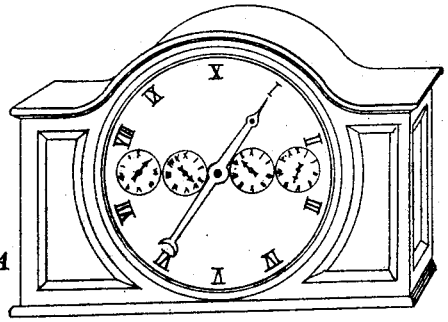


Fig. 2

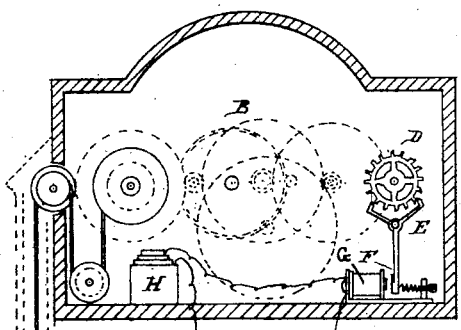
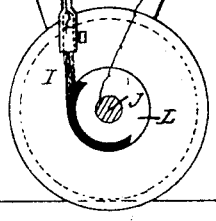


Fig. 3



Attest.
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E. Scully.

Inventor:
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UNITED STATES PATENT OFFICE.

EDWARD R. E. COWELL, OF DETROIT, MICHIGAN.

ELECTRIC DISTANCE-REGISTER.

SPECIFICATION forming part of Letters Patent No. 267,062, dated November 7, 1882.

Application filed April 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDWARD R. E. COWELL, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Electric Distance-Registers; and I do hereby declare that the following is full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

The nature of this invention relates to certain new and useful improvements in electrical distance-registers for railway-cars to automatically register the mileage of a car, and is especially designed as an improvement upon a device for a similar purpose patented to myself December 13, 1881, No. 250,649.

The invention consists in the peculiar construction of parts and their various combinations and operation, as more fully hereinafter set forth.

Figure 1 is a perspective of the case which incloses a train of gears which give motion to indexes of the dials. Fig. 2 is an elevation of the train of gears and its connections. Fig. 3 is a side elevation of a wheel by means of which the electrical circuit is alternately completed and broken.

In the accompanying drawings, A represents the case, upon the front of which are shown a series of dials with proper indexes. The indexes of these dials are connected, in a manner well known to mechanics, to the axes or shafts of a train of gears, B, so that, for instance, the index upon the larger dial will show a distance traveled of ten miles, when immediately another of the dials will register one, and when this latter has made these ten revolutions the next dial will also register one, and so on these dials and indexes may be indefinitely multiplied, as occasion may require. This train is actuated by a weight, C, or by a spring in the usual manner, and is provided with an escapement-wheel, D, and to engage therewith an anchor, E, suitably pivoted to the case and actuated by the pulsations of the armature F of the magnet G, which is electrically connected with the battery H, one pole of which is connected with a suitable wire to a metallic brush, I, such as is usually employed in dynamo-electric machines, while the other pole of the battery is suitably connected to the axle J or wheel of a car.

L is a metal wheel, rigidly secured on the car-axle, and is so constructed that a portion of its periphery is composed of non-conducting substance, and the brush I, being suitably supported, is in contact with the periphery of such wheel at all times.

It will be seen that by this construction at every rotation of the axle the circuit is completed and broken, thereby alternately exciting the magnet, the pulsations of which, acting upon the anchor, control the movements of the escapement and its train of gears, causing the dials to register the distance the car has traveled.

I am aware of the Patents Nos. 76,521 and 251,065, and I do not claim the construction shown in either.

What I claim is—

The electric distance-register herein described, consisting of the car-axle J, having one pole of the magnet electrically connected permanently thereto, the metal wheel L, rigid with such axle J, and having a portion of its periphery composed of non-conducting substance, the brush I, supported at all times against the periphery of said wheel L, to make and break the circuit at each revolution, the train of gearing B, the weight C, escapement-wheel D, anchor E, battery H, magnet G, and armature F, the whole constructed, arranged, combined, and adapted to serve as and for the purposes set forth.

EDWARD R. E. COWELL.

Witnesses:

H. S. SPRAGUE,

E. SCULLY.