

(No Model.)

E. A. SPERRY.
POWER GEARING FOR ELECTRIC CARS.

No. 563,425.

Patented July 7, 1896.

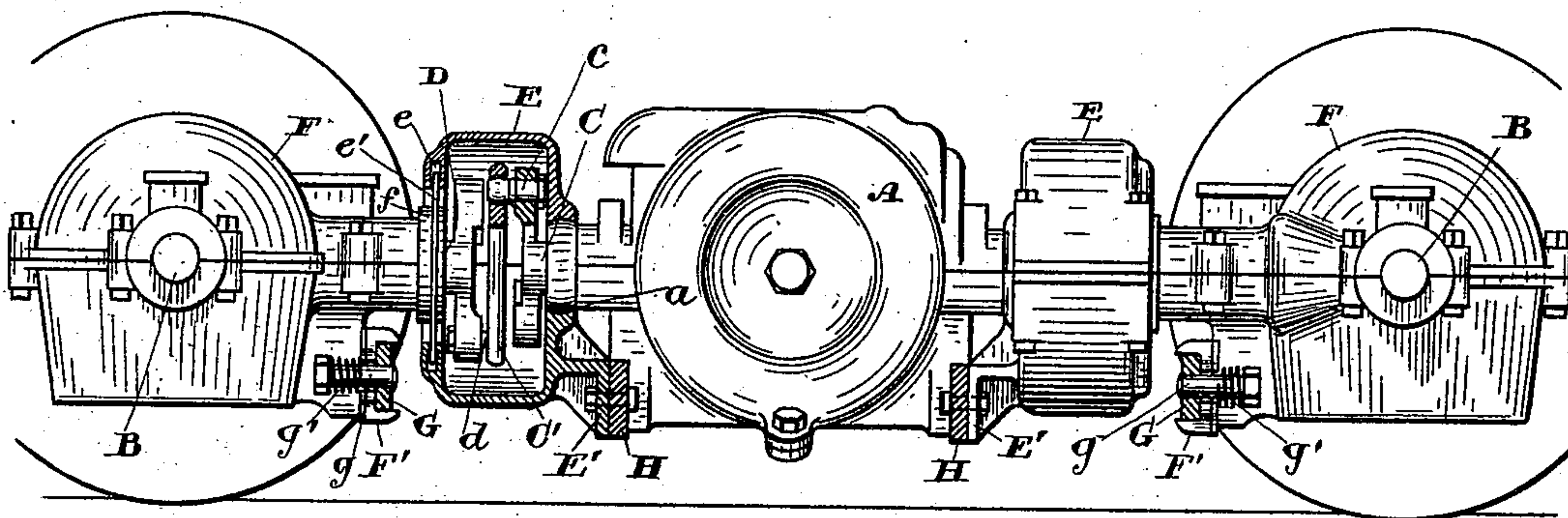


Fig. 1.

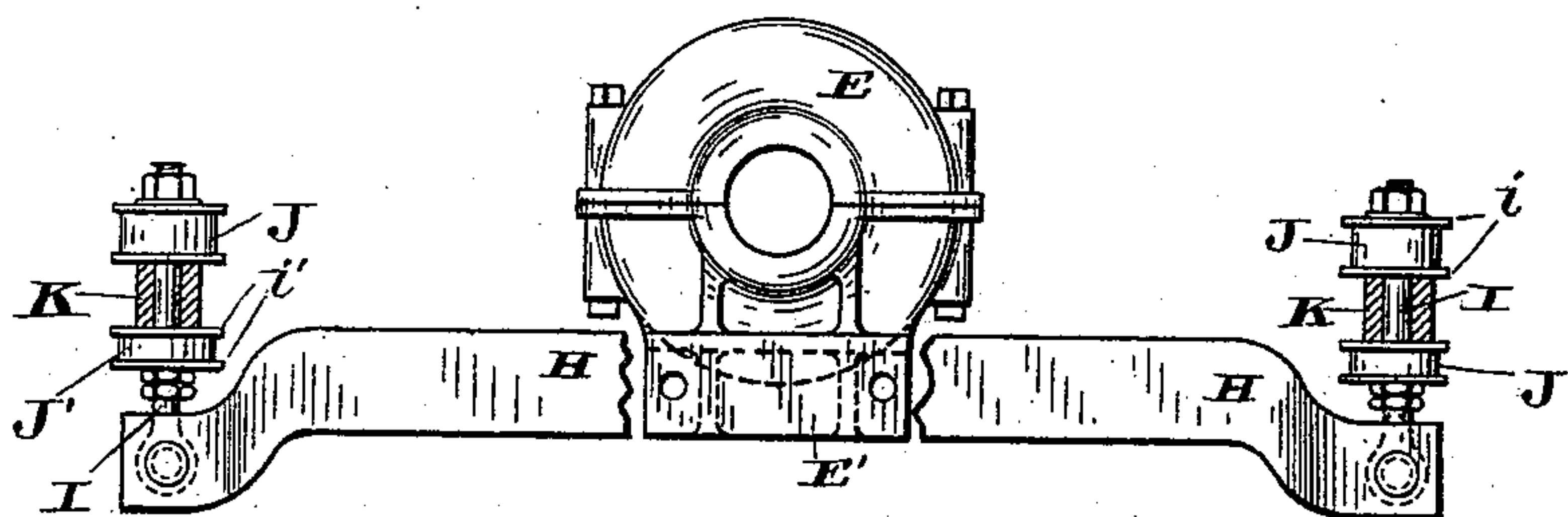


Fig. 2.

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ELMER A. SPERRY, OF CLEVELAND, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE GENERAL ELECTRIC COMPANY, OF NEW YORK.

POWER-GEARING FOR ELECTRIC CARS.

SPECIFICATION forming part of Letters Patent No. 563,425, dated July 7, 1896.

Application filed June 9, 1894. Serial No. 514,035. (No model.)

To all whom it may concern:

Be it known that I, ELMER A. SPERRY, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Power-Gearing for Electric Cars, of which the following is a specification.

My invention relates to improvements in power-gearing for motor-trucks, and relates to the method of support and of inclosing such gearing, especially where the motor is allowed freedom and independence of movement.

My invention is fully described and illustrated in the following specification and accompanying drawings, the novel features thereof being specified in the claims annexed to the said specification.

In the drawings, Figure 1 is a side elevation partially in section. Fig. 2 represents the rear of the housing with the motor-support bar and elastic mounting.

Like letters of reference indicate similar parts throughout the views.

A motor A is mounted upon the axle B, preferably by a yielding joint forming a part of the support, which may be constructed as shown in Fig. 2. I may add the resilient medium shown in this figure by the rubber cushions J J', or these may be omitted as occasion demands. A power transmission is shown in part as connecting the axle B with the motor A, consisting in the driver C, "driven" D, and pins mounted thereon, (shown at c and d,) a link C' connecting the pins. The driven portion D is mounted upon a shaft leading to the gearing inclosed in case F, mounted upon the axle B, and also supported by the cross-bar of the truck G, which may be independent of the cross-bar H, supporting the motor, or may flex longitudinally and connect thereto. The connection between it and the housing F may be of any suitable form, the one shown herein being substantially the same as the one shown in my application, Serial No. 513,634, filed June 6, 1894, consisting of the sliding clamp F', pin g, and spring g'. A separate housing E is here shown incasing the driving connection, which is rigidly attached to the motor, being secured directly to the motor-bar H by a foot or bracket E'.

An oil-tight joint is shown at a to prevent the contents of the housing E from escaping and dust or dirt from entering the housing. A yielding or sliding inclosing joint is indicated by the annular disk e', operating within the circular slot e in the surrounding portion of the casing E, and secured at its center to the housing F by the ring f. This disk may be attached by its outer edge and slip within the slot near its center, as will readily be understood. It may vary in form, involving any of the well-known constructions for this purpose. In mounting the motor I prefer to set same upon the bar or bars H, which may be independent of the motor attached thereto, or form projections from the motor-frame. These are secured by eyebolts I, pivotally attached to the bar H and passing through the truck-frame K or portion attached thereto and through washers i i', between which and the said support K are resilient mediums. (Shown by the rubber cushions J J'.) These may be cylindrical and perforated at their center to receive the bolt I, or may be made in any manner well known in constructions of this class. The adjusting-nuts above and below (shown in the figure referred to) adjust the bar H with reference to the truck-frame or projection K, and at the same time allow of the clamping of the buffers J J', or any adjustment that may be necessary in connection therewith.

The use and operation will be readily understood from the foregoing, and although it is designed to use all these features in connection with each other, yet it is obvious that some may be used without the others, and the invention extends to such use.

I claim—

1. In a motor-car, an axle, a motor supported therefrom, means between the motor and the axle allowing for more or less relative movement between the two, a power-gearing connecting the motor and the said axle, a yielding coupling forming a part of such gearing, a casing inclosing the coupling and mounted on the motor, an independent housing for the gearing, a support for said housing independent of the motor-support and a yielding connection between the two housings.

2. In a motor-car, an axle, a motor supported therefrom, means between the motor and the axle allowing for more or less relative movement between the two, a power-gearing 5 connecting the motor and the said axle, a yielding coupling forming a part of such gearing, a casing inclosing the coupling and mounted upon the motor, a separate housing for the gearing, and a support for said housing 10 independent of the motor-support in combination with a yielding wall forming a portion of the inclosure of the coupling-housing mounted upon such gear-housing.

3. In a motor-car, a motor, a running-gear 15 for the car, a driving connection from the motor to the gear, two inclosing housings for the driving connection, one mounted upon the motor and the other upon the axle, and a support for the latter independent of the motor-support in combination with a sliding inclosing joint forming a part of one of such 20 housings.

4. In a motor-car, a motor, a running-gear for the car, a driving connection from the motor to the gear, two inclosing housings for the 25 driving connection, one mounted upon the motor and the other upon the axle, and a support for the latter independent of the motor-support in combination with a flexible wall forming a part of one of such housings. 30

5. In a motor-car, a motor, a running-gear for the car, a driving connection from the motor to the gear, two inclosing housings for the

driving connection, one mounted upon the motor and the other upon the axle, and a support 35 for the latter independent of the motor-support in combination with a sliding inclosing joint and a flexible wall forming a part of one of such housings.

6. In a motor-car, a motor, the running-gear of the car, power-driving connection from 40 the motor to the running-gear, an inclosing housing for the connection consisting of two independent casings, one mounted upon the axle and resting upon a separate support, and 45 the other independently mounted.

7. In a motor-car, a motor, the running-gear of the car, power-driving connection from the motor to the running-gear, an inclosing 50 housing for the connection consisting of two independent casings, one mounted upon the axle and resting upon a separate support, a yielding joint between the casing and said support, and the other casing independently 55 mounted.

8. In a motor-car, a motor, the running-gear of the car, power-driving connection from the motor to the running-gear, an inclosing housing for the connection consisting of two 60 independent casings, one only mounted upon the axle, and the other mounted upon the motor-supporting bar.

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