

No. 684,189.

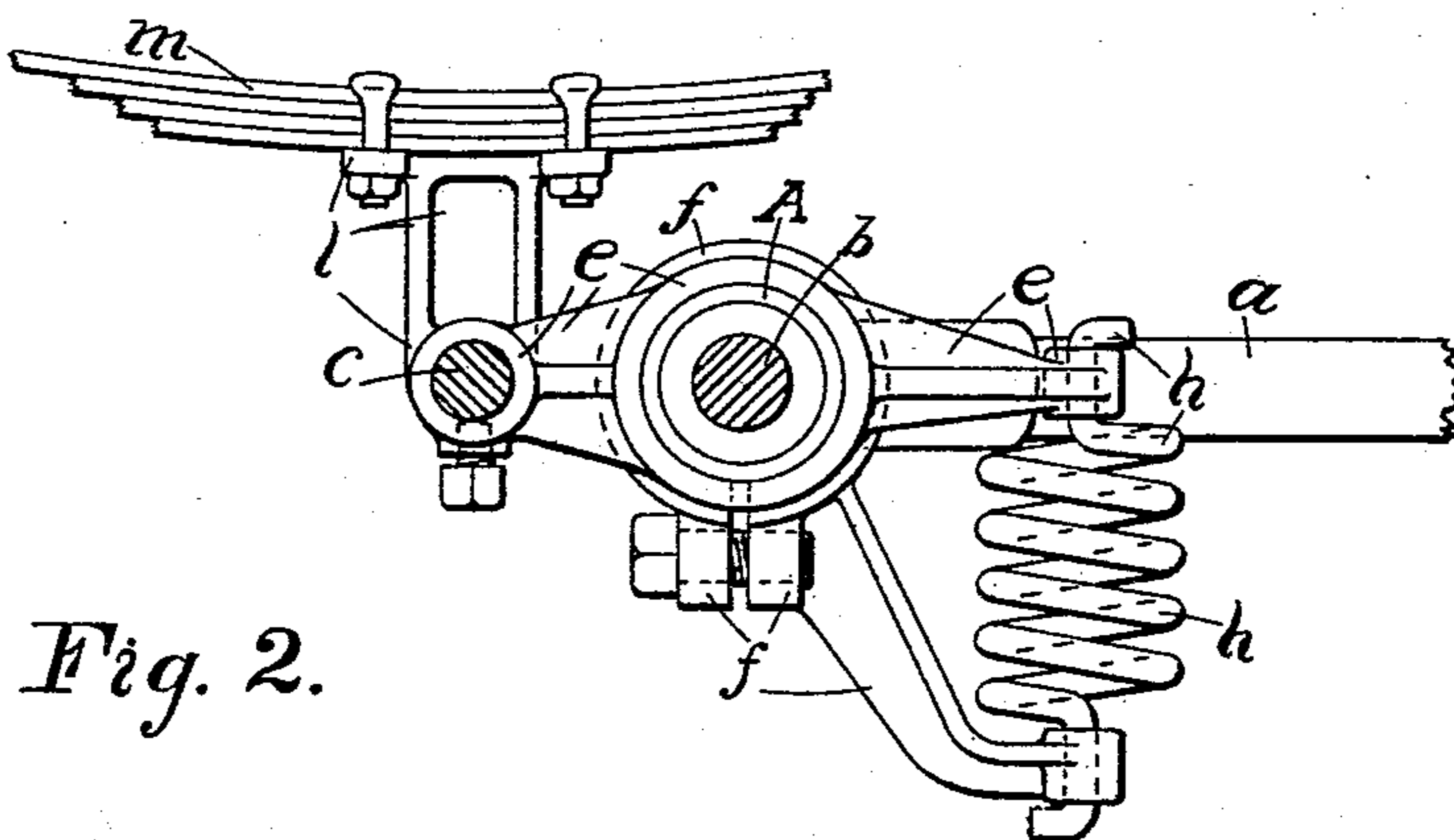
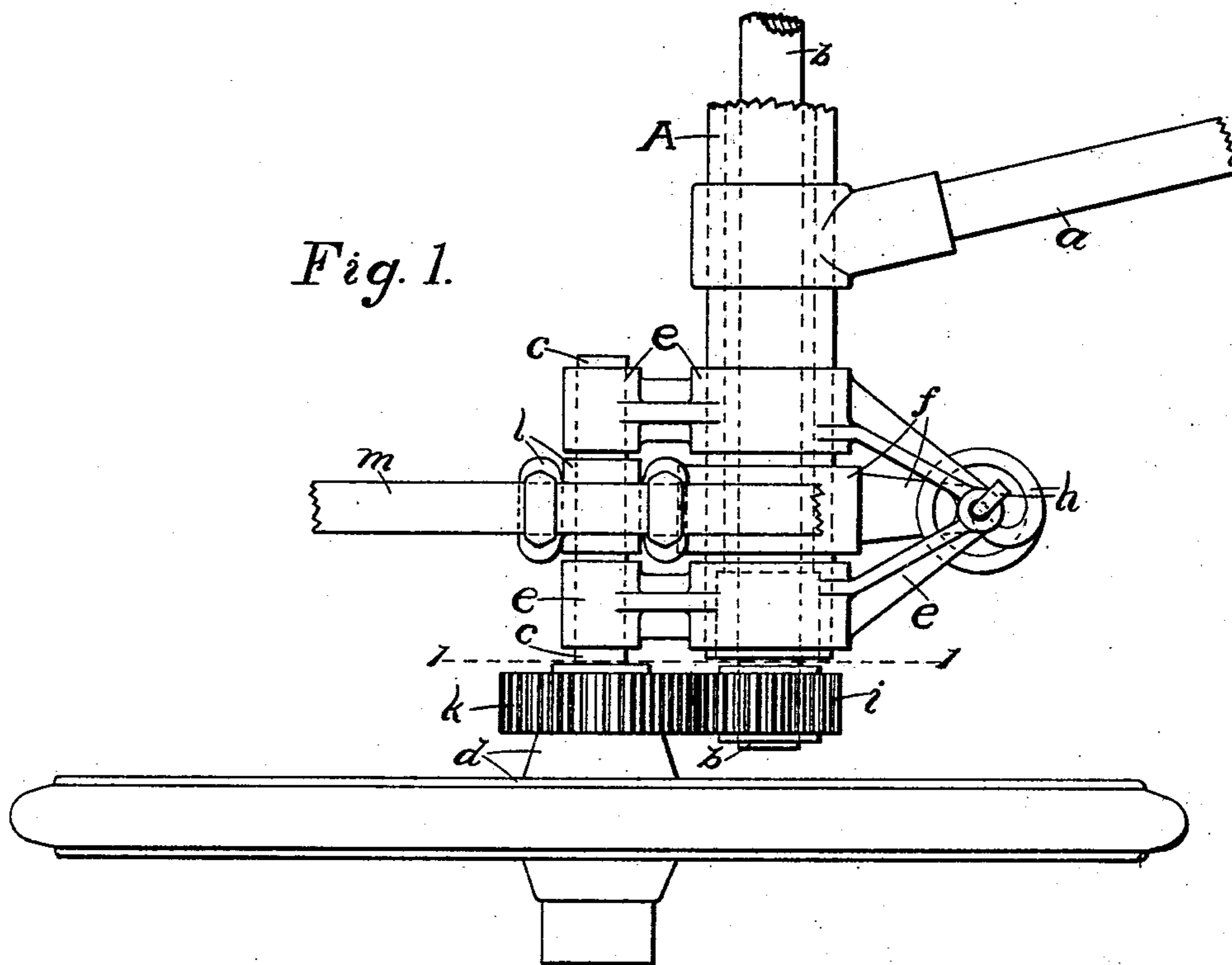
Patented Oct. 8, 1901.

J. F. BYERS.

SPRING MOUNTING FOR MOTOR VEHICLE FRAMES.

(Application filed Mar. 5, 1901.)

(No Model.)



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN F. BYERS, OF RAVENNA, OHIO.

SPRING-MOUNTING FOR MOTOR-VEHICLE FRAMES.

SPECIFICATION forming part of Letters Patent No. 684,189, dated October 8, 1901.

Application filed March 5, 1901. Serial No. 49,985. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. BYERS, a citizen of the United States, residing at Ravenna, in the county of Portage and State of Ohio, have invented a new and useful Spring-Mounting for Motor-Vehicle Running-Gear Frames, of which the following is a specification.

My invention relates to improvements in the running-gears of motor-vehicles, adapting them to have the motor attached directly to their frames; and the object of my invention is to mount the power-shaft or driving end of a motor-vehicle running-gear frame on springs separate from and independent of the body-supporting springs. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a partial plan view of a part of the driving-axle end of a motor-vehicle running-gear provided with my spring-frame mounting, and Fig. 2 a partial sectional elevation on line 1 1 of Fig. 1.

Like letters refer to like parts in both views.

A is a portion of the tubular outer end of the driving-axle-supporting member of a motor-vehicle running-gear frame, *a* being a reach member leading to the steering-wheel end of the frame and rigidly secured to member A.

b is a driving-axle or power-shaft and has a bearing near its outer end within the frame member A.

c is a spindle on which a driving-wheel *d* is mounted to turn freely. An oscillating connector *e* is fitted to turn freely on the frame member A and is secured to the spindle *c*. A resistance member *f* is rigidly secured to the frame member A and is connected to the connector *e* by the spring *h*. The spring *h* is so secured to the resistance member and to the oscillating connector that any oscillating movement of the latter on the frame member A must either extend or compress it.

i is a spur-gear rigid on the outer end of the

power-shaft *b* and meshes with a gear *k*, rigid on the hub of the driving-wheel *d*. Both of the driving-wheels are of course connected to a driving-shaft and to the running-gear frame, as shown and described for one.

l is a spring-block loosely mounted on the spindle *c*, and *m* a portion of one of the springs for supporting the body of the vehicle, secured to the spring-block.

The motor being attached to the running-gear frame near the power-shaft nearly all its weight, together with that of most of that end of the running-gear frame acting downward, causes an oscillating movement of the connectors *e* about the axis of the drive-wheel spindle downward from the position shown in the drawings, and as the frame member A cannot turn on its axis this causes an oscillating movement of the connectors *e* about the frame member A, limited by the compression or reaction of the spring *h*. The pull of the motor in one direction acts to compress the spring farther and in the other to relieve its compression and may even produce an extending stress on it.

What I claim as my invention, and desire to secure by Letters Patent, is—

In the running-gear of a motor-vehicle, a power-shaft and its supporting member of the running-gear frame, in combination with a driving-wheel spindle having a driving-wheel mounted thereon and operatively connected with the power-shaft, an oscillating connector connecting the driving-wheel spindle with the said frame member, a resistance member secured to the frame member, and a spring forming an elastic connection between the resistance member and the oscillating connector, substantially as set forth.

JOHN F. BYERS.

Witnesses:

G. R. PERCIVAL,
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