

(No Model.)

S. H. SHORT.
ELECTRIC LOCOMOTIVE.

No. 567,662.

Patented Sept. 15, 1896.

Fig. 1.

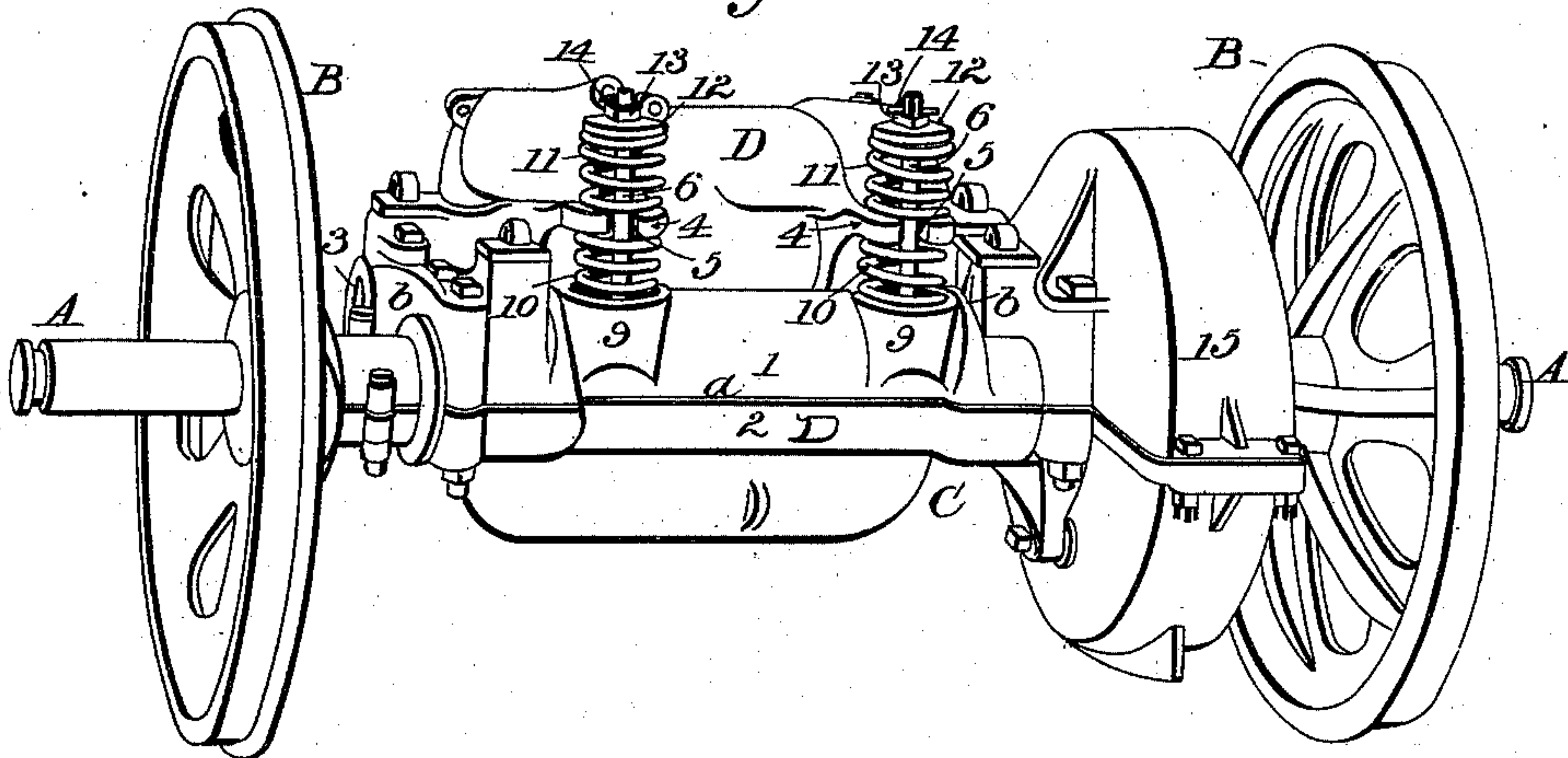
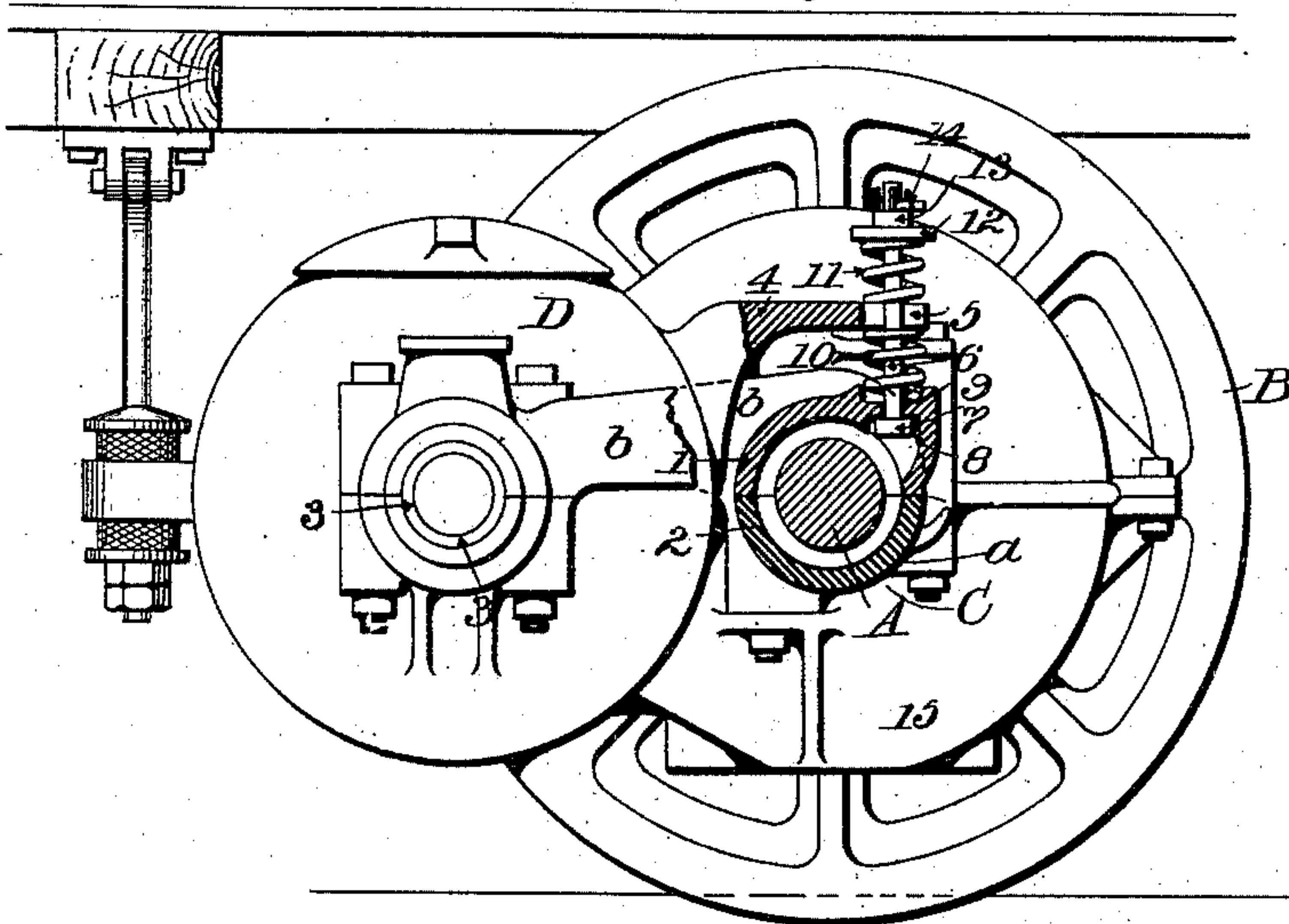


Fig. 2.



WITNESSES

Arthur Ashby
G. F. Downing

INVENTOR

Sidney H. Short
By H. A. Seymour
Attorney

UNITED STATES PATENT OFFICE.

SIDNEY H. SHORT, OF CLEVELAND, OHIO.

ELECTRIC LOCOMOTIVE.

SPECIFICATION forming part of Letters Patent No. 567,662, dated September 15, 1896.

Application filed September 3, 1895. Serial No. 561,314. (No model.)

To all whom it may concern:

Be it known that I, SIDNEY H. SHORT, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Electric Locomotives; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in electric locomotives; and it consists in certain novel features of construction whereby to afford simple and efficient yielding connections between the motor-casing and axle.

In the accompanying drawings, Figure 1 is a view illustrating an embodiment of my improvements. Fig. 2 is a sectional view.

A represents an axle having wheels B secured thereto. A frame C is mounted on the axle, so that its free end can swing vertically, and comprises a sleeve *a*, made in two parts 1 2, bolted together, and parallel arms *b b*. The arms *b b* are made at or near their free ends with bearings for the accommodation of hollow trunnions 3, projecting from the motor-casing D, said motor-casing also having a suitable flexible connection with the truck-frame of the car. At the side next to the sleeve *a*, on the axle, the motor-casing is provided at or near its ends with lugs or ears 4, each having an open slot 5 for the accommodation of a vertical rod or bolt 6. The lower ends of the rods or bolts 6 are made with angular heads 7, having their seats in similarly-shaped recesses 8 in the bottoms of pockets 9, made on the upper half 1 of the sleeve *a*. The pockets 9 are not directly over the longitudinal axis of the sleeve, but are disposed to one side or rearwardly thereof, so that the bearings of the rods or bolts 6 will not be immediately over the longitudinal axis of the axle, but rearwardly thereof. Springs 10 encircle the rods or bolts 6 and have their bearings in the pockets 9 and against the under faces of the lugs or ears 4, respectively. Similar springs 11 are located on the rods or bolts 6 between the upper faces of the lugs or ears 4 and disks or washers 12 at the upper ends of said rods or bolts. The disks or washers 12 are retained in place on the rods or bolts by means

of nuts 13, and the latter are preferably provided with suitable nut-locks 14. The armature of the motor is connected with the axle through the medium of suitable gearing, and the latter is inclosed by a gear-casing 15.

From the combination and arrangement of parts above described it will be seen that the motor is mounted in a frame connected with the axle and capable of a vertical swinging motion, and that the side of the motor next to the axle is flexibly supported by the sleeve of the swinging frame at points outwardly removed from the longitudinal axis of the axle. While the motor is located to one side of the axle, it is not supported solely at one side thereof, but a portion of its weight is brought to bear on the sleeve of frame C at the side of the axle opposite the motor.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an electric locomotive, the combination with an axle and a swinging frame mounted on the axle, said frame having arms projecting laterally from the axle, of a motor-casing mounted between the arms of the swinging frame, lugs projecting from said motor-casing, pockets in the swinging frame at the opposite side of the axle from the arms of said frame, rods or bolts passing through said lugs and seated in said pockets, washers or disks at the upper ends of said rods or bolts, springs bearing against said lugs and washers or disks and other springs seated in said pockets and bearing against the under faces of said lugs, substantially as set forth.

2. In an electric locomotive, the combination with an axle and a vertically-swinging frame mounted on the axle, of a motor-casing mounted in said vertically-swinging frame, lugs projecting from the side of the motor-casing next to the axle, said lugs being located in proximity to the ends of said casing, pockets on the part of the swinging frame which is mounted on the axle, rods or bolts seated in said pockets and passing through the lugs on the motor-casing, disks on the upper ends of said rods or bolts, springs seated in the pockets and bearing against the lugs and springs disposed between the lugs and disks, substantially as set forth.

3. In an electric locomotive, the combination

with an axle and a swinging frame mounted
on the axle, of a motor-casing mounted in the
swinging frame, pockets formed on that part
of the swinging frame which is mounted on
5 the axle, said pockets having recesses in their
bottoms, lugs projecting from the motor-
casing, rods or bolts passing through said
lugs and having heads seated in the recesses
in the pockets, springs on said rods seated
10 in said pockets and bearing against the lugs,
and other springs on said rods or bolts bear-

ing at one end against the lugs on the motor-
casing, and disks on said rods or bolts against
which the upper ends of said last-mentioned
springs bear, substantially as set forth. 15

In testimony whereof I have signed this
specification in the presence of two subscrib-
ing witnesses.

SIDNEY H. SHORT.

Witnesses:

M. A. KENSINGER,
R. T. BONE.