(No Model.) 2 Sheets—Sheet 1.

N. C. BASSETT.

ELECTRIC LOCOMOTIVE.

No. 483,204. Patented Sept. 27, 1892.

Fig. 1.

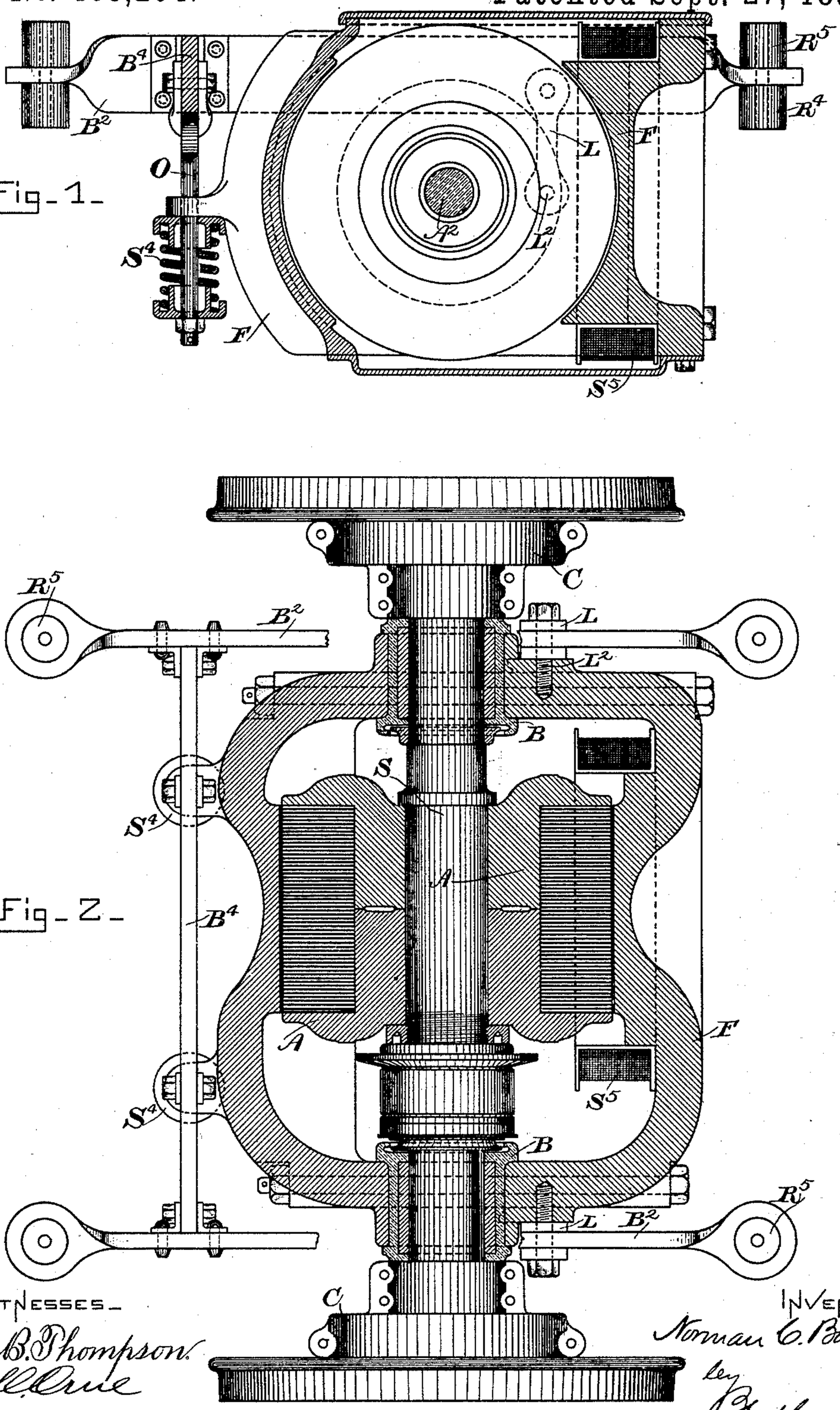

Fig. 2.

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A. H. Cate

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

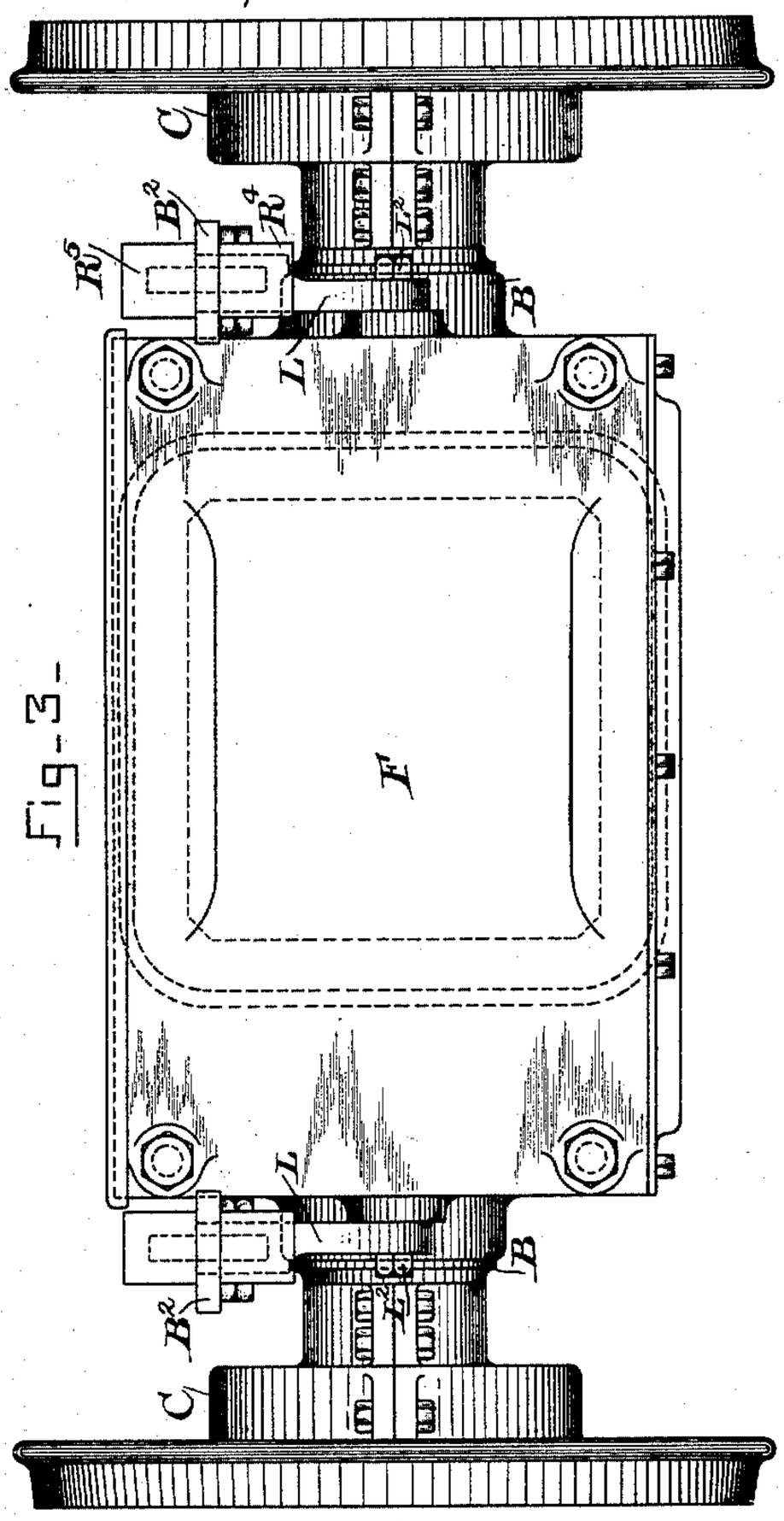


Fig. 4.

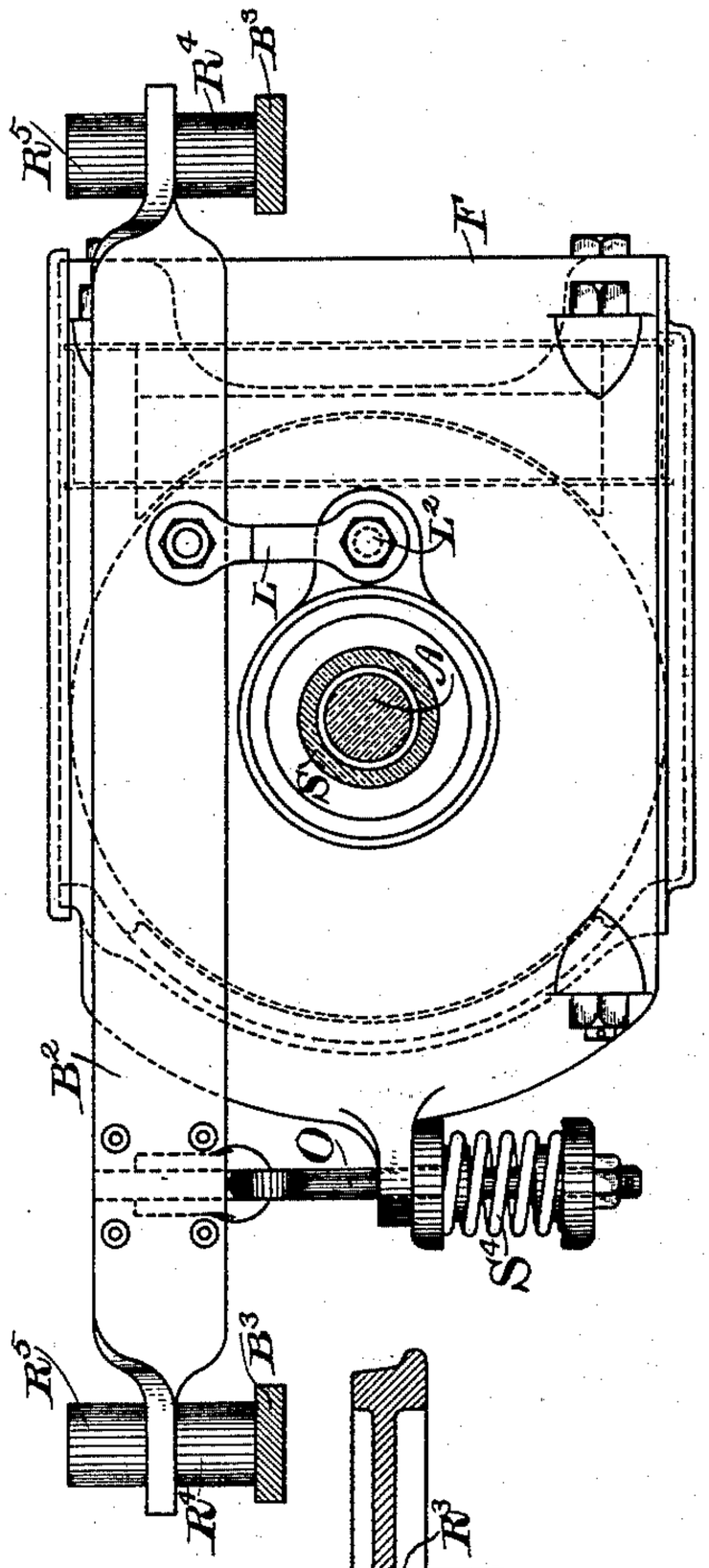


Fig. 5.

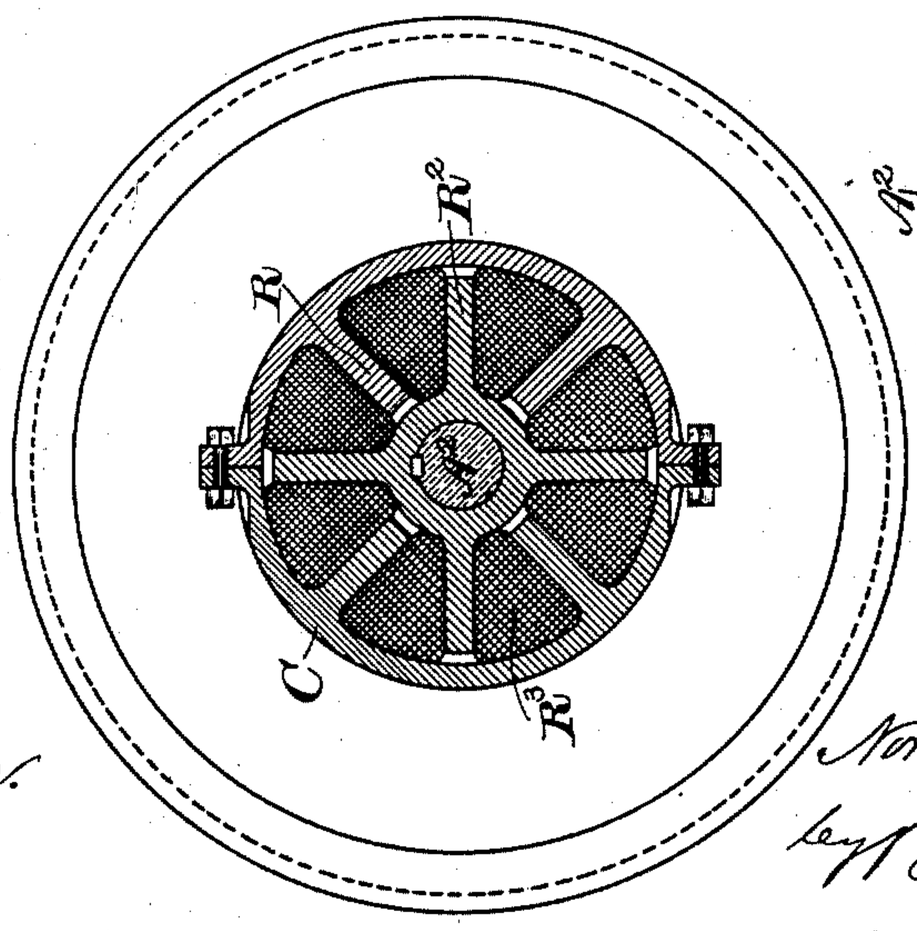
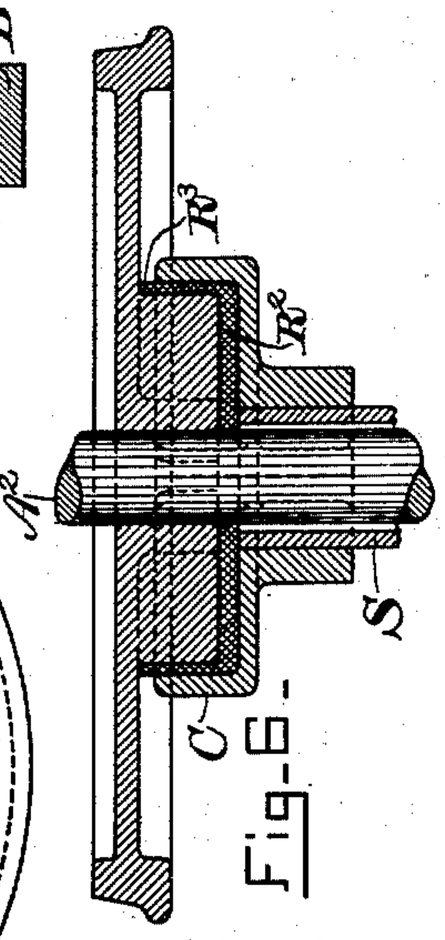


Fig. 6.



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UNITED STATES PATENT OFFICE.

NORMAN C. BASSETT, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE THOMSON-HOUSTON ELECTRIC COMPANY, OF CONNECTICUT.

ELECTRIC LOCOMOTIVE.

SPECIFICATION forming part of Letters Patent No. 483,204, dated September 27, 1892.

Application filed April 1, 1891. Serial No. 387,201. (No model.)

To all whom it may concern:

Be it known that I, NORMAN C. BASSETT, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Electric Locomotives, of which the following is a specification.

My invention relates to electric locomotives; and it consists in devices by means of which the motor is supported so that its armature may be concentric with an axle of the locomotive.

Referring to the accompanying drawings, Figure 1 is a vertical section on a plane transverse to the axle. Fig. 2 is a horizontal section through the axle. Figs. 3 and 4 are respectively end and side elevations of the motor; and Figs. 5 and 6 are longitudinal and transverse sections of a wheel and axle of the locomotive, showing means for connecting the wheel with the armature-shaft.

Referring to the drawings, A is the armature of an electric motor concentric with the axle A^2 and mounted on a hollow shaft S, through which the said axle passes.

F is a field-magnet surrounding the armature and having a single magnetizing-coil S^5. This field-magnet is provided with journal-boxes B, forming bearings for the armature-shaft, so as to secure alignment between the armature and field-magnet.

The motor thus described is supported free of the axle by means of connections to the frame of the locomotive, as follows:

B^2 represents longitudinal beams forming a part of the motor framework. These beams are supported on transverse beams B^3, with intermediate springs R^4 R^5.

B^4 is a transverse bar connecting the two beams B^2. From the beams B^2 the main weight of the motor is supported by means of links L, extending from said beams, respectively, to pivotal points L^2 in line with the center of gravity of the motor, as nearly as may be. A supplementary support is afforded by means of rods O, which support the free end of the motor through springs S^4 from the transverse bar B^4.

The hollow shaft of the armature is connected with the wheels of the locomotive in order to properly drive them by means of the following connections: The hub of the wheel is provided with four radial arms or flanges R^2. Surrounding these is a drum C, made in two parts and fast on the hollow shaft S. This drum has an interior series of radial arms or flanges R, corresponding to the arms or flanges R^2. A series of triangular springs or cushions R^3 is interposed between the radial arms of the wheel and the drum, respectively, and is held in place by the inclosing parts.

By the arrangement thus described I produce a locomotive in which the armature is directly on the axle, but yet out of contact therewith, and in which the armature drives the wheels directly with intermediate spring-cushions.

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

1. The combination, in an electric locomotive, of a motor having its armature concentric with an axle of the locomotive and having a field-magnet with a single coil embracing the armature, a hollow shaft for the armature, through which passes the axle, a yielding connection between the said shaft and the wheel, and a yielding support for the motor from the frame of the locomotive.

2. The combination, with an electric locomotive, of a motor and means for suspending it from the frame of the locomotive, comprising links extending to the center of gravity of the motor.

3. The combination, in an electric locomotive, of a motor suspended from the frame of the locomotive by links extending to the center of gravity of the motor and a supplementary spring connection between the motor and the frame.

4. The combination, in an electric locomotive, of a motor having its armature concentric with the axle, a field-magnet having bearings to secure proper alignment between it and the armature, a yielding connection between the said armature and a wheel of the vehicle, and means for supporting the motor, consisting of links extending from the frame of the locomotive to the center of gravity of

the motor, and a spring connection between the motor and frame.

5. In an electric locomotive, the combination, with a motor-armature having a hollow shaft concentric with the axle, of a wheel having radial arms, a drum made in two parts clamped on the hollow shaft and provided with radial ribs, and yielding cushions between the arms and ribs, substantially as set forth.

In witness whereof I have hereunto set my hand this 30th day of March, 1891.

NORMAN C. BASSETT.

Witnesses:
JOHN W. GIBBONEY,
OTIS K. STUART.