

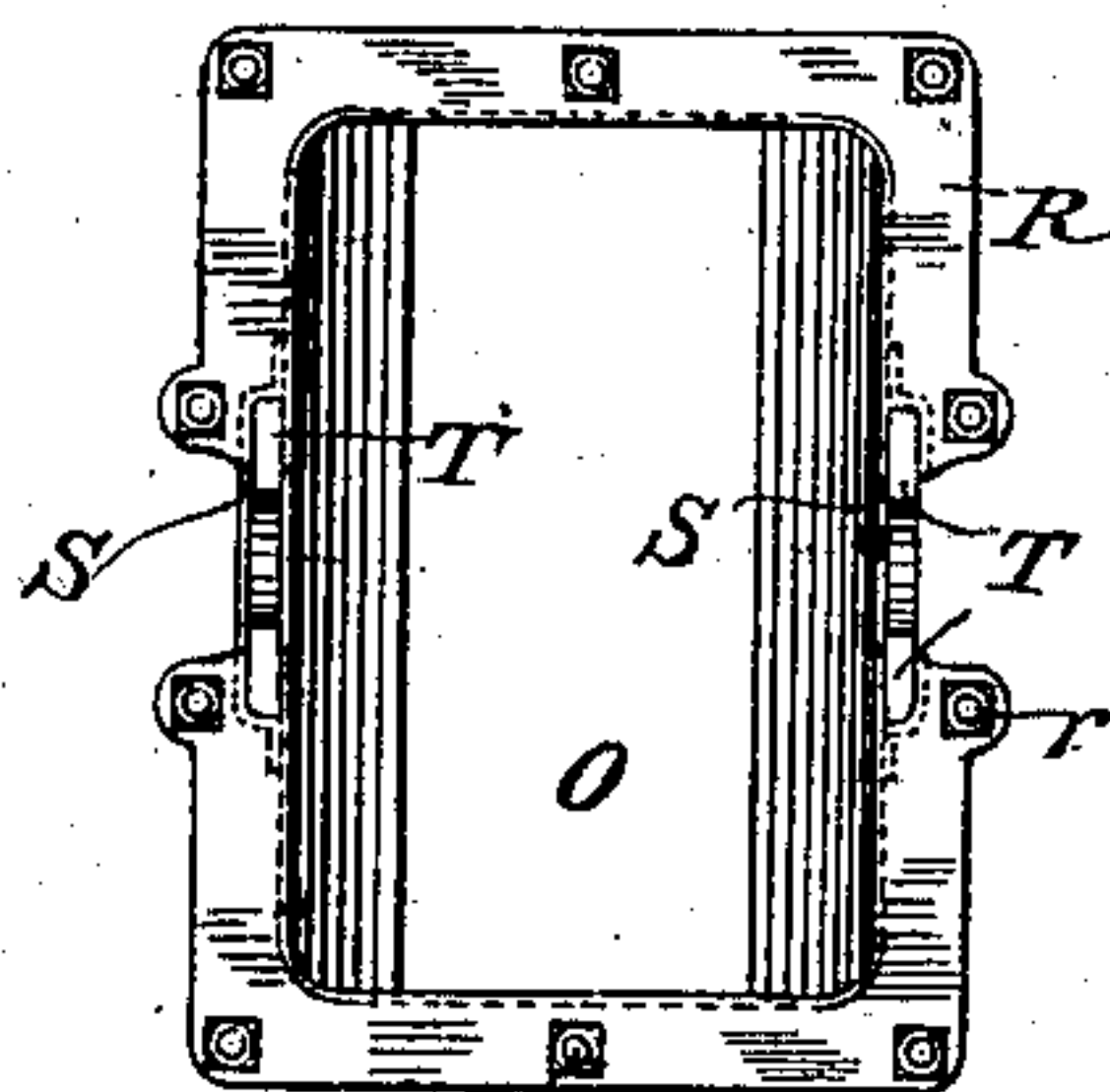
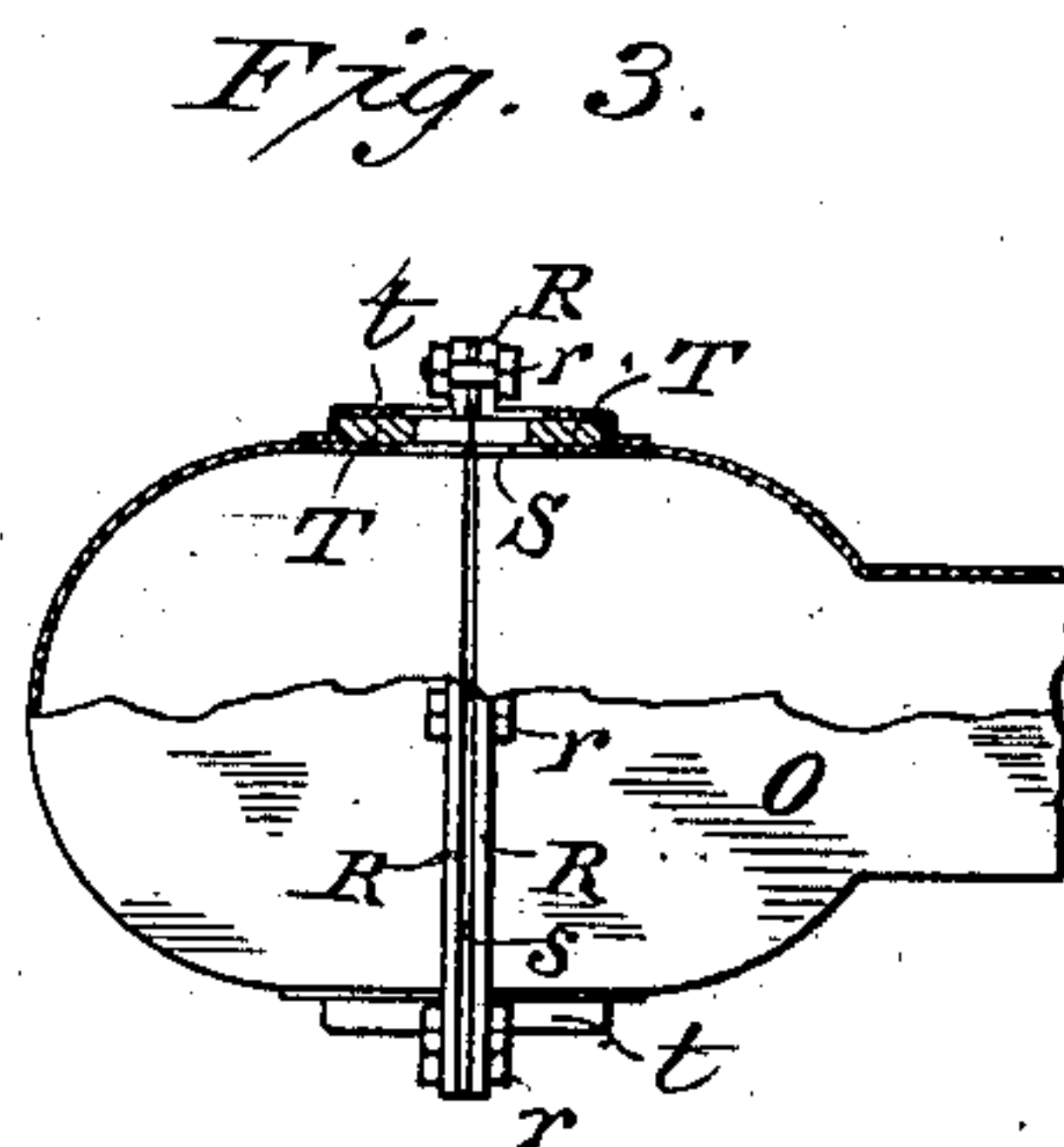
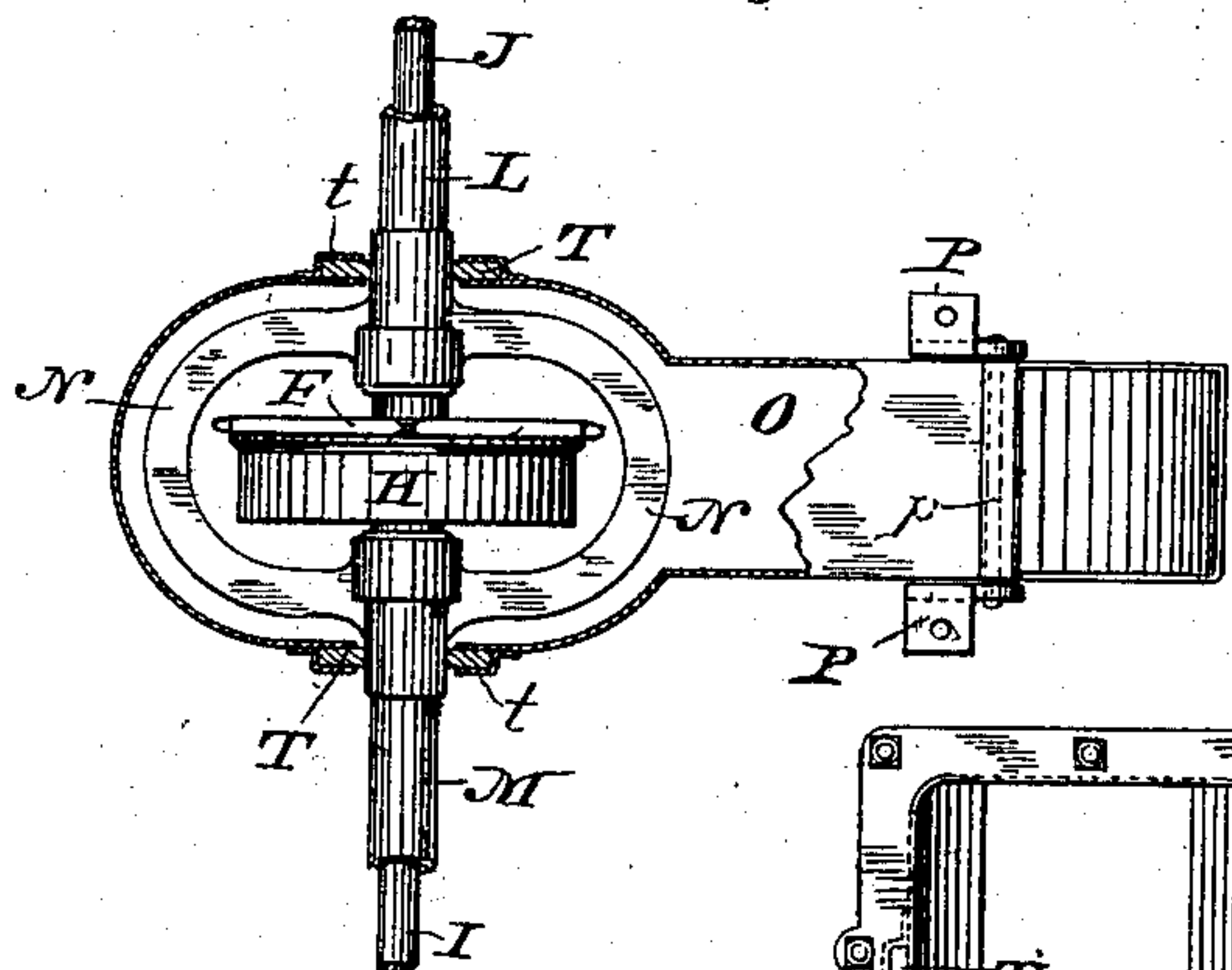
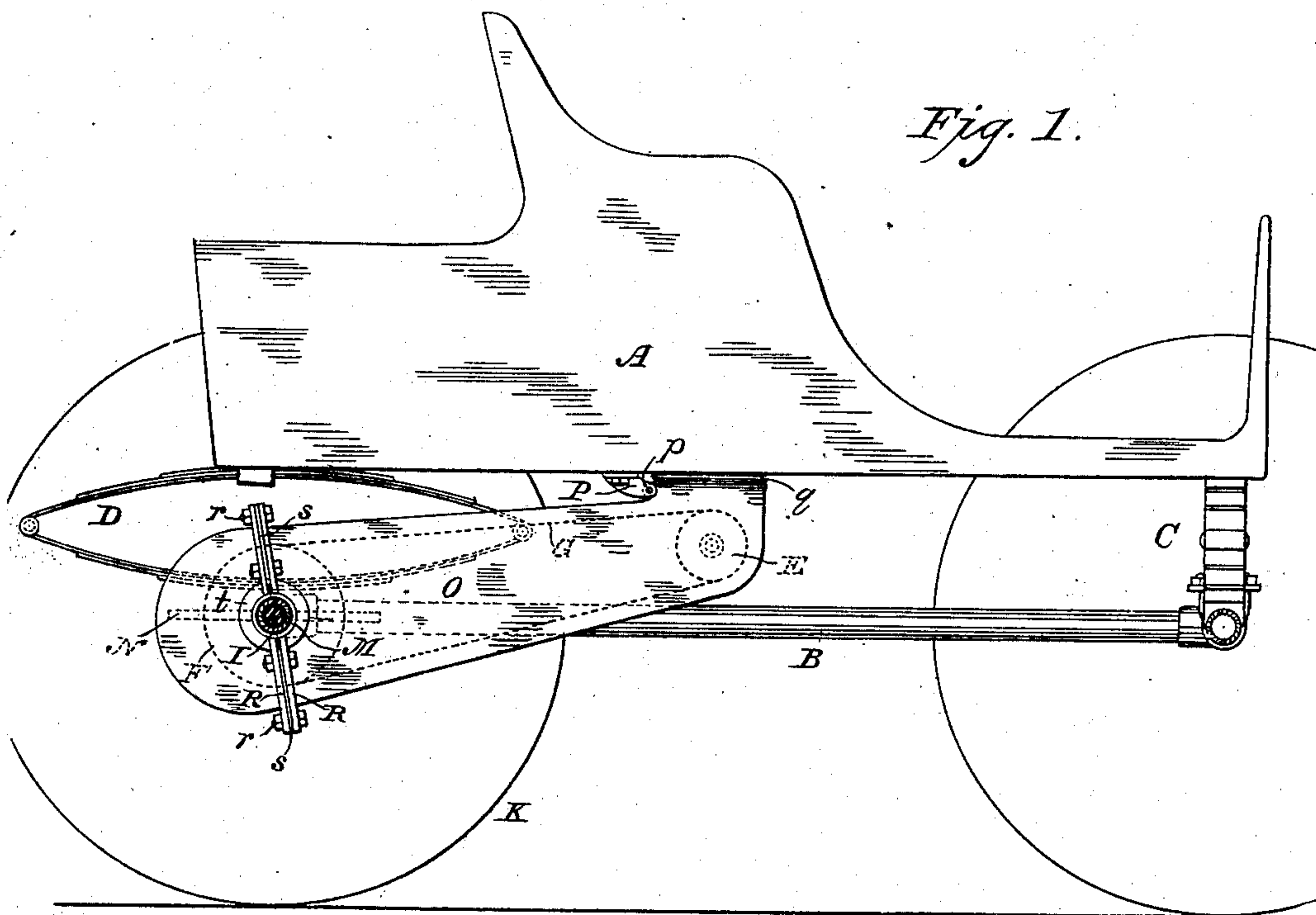
No. 661,583.

Patented Nov. 13, 1900.

F. LAMKIN.
GEAR CASE FOR MOTOR VEHICLES.

(Application filed Sept. 17, 1900.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

FRANK LAMKIN, OF NORWALK, OHIO.

GEAR-CASE FOR MOTOR-VEHICLES.

SPECIFICATION forming part of Letters Patent No. 661,583, dated November 13, 1900

Application filed September 17, 1900. Serial No. 30,260. (No model.)

To all whom it may concern:

Be it known that I, FRANK LAMKIN, a citizen of the United States, residing at Norwalk, Huron county, Ohio, have invented certain
5 new and useful Improvements in Gear-Cases for Motor-Vehicles, of which the following is a specification, that will enable those skilled in the art to which my invention pertains to make and use the same, reference being had
10 to the accompanying drawings.

My invention relates to a casing for such of the exposed parts of the driving mechanism of a motor-vehicle as are located beneath the
15 spring-supported body of the vehicle to inclose and protect them from dirt, &c.

It consists of a suitably-shaped casing or inclosure to cover the exposed mechanism, attached at one end to the body of the vehicle, so as to allow of free flexure or movement
20 of the body on its springs, and at the other end to the running-gear of the vehicle, with suitable soft pads or cushions as will allow of free movement of the parts and absolutely prevent rattling or noise from vibration.

The accompanying drawings show my invention in the form now preferred by me; but obvious changes might be made in the details of construction to adapt it to varying forms of carriages and different styles of power-transmitting mechanism within the skill of a
30 good mechanic and not requiring the exercise of invention without departing from the spirit of my invention as covered by the claims at the end of this specification.

Figure 1 is a side elevation of a motor-carriage with my gear-case applied thereto, the running-gear of the carriage being partly in longitudinal section. Fig. 2 is an enlarged plan view, partly in horizontal section, of my
40 gear-case, showing particularly its application to the rear axle of the running-gear. Fig. 3 is a plan view, partly in section, of the rear end of the gear-case detached from the rear axle. Fig. 4 is a rear face view of the front
45 section of the gear-case, showing the flanges by means of which the two sections are bolted together, so as to embrace the rear axle.

The carriage may be of any usual or desired construction in which the engine or power
50 device is mounted in or upon a spring-hung body and connected to the driven shaft of the

vehicle by sprocket-chains or other suitable power-transmitting mechanism.

The drawing is a diagrammatic illustration, more or less, of a steam-driven vehicle in
55 which the boiler and engine are carried within the carriage-body A, supported upon the running-gear B by suitable springs C and D. In this illustration the front sprocket-wheel E is driven by the engine and is connected to an-
60 other sprocket-wheel F by a chain G. The sprocket-wheel F is formed on the periphery of a drum H, which may serve as a band-brake pulley and which contains a compensating gear of any well-known construction.
65 This compensating-gear mechanism is connected to the two sections I and J of the shaft which turns the rear driving-wheels K of the vehicle. These shaft-sections lie and have
70 bearing in the tubular rear axle or frame-sections L and M of the running-gear, the two frame-sections being united by an open yoke N, which surrounds the drum H, as shown.

My casing O, as shown, is adapted to in-
75 close the two sprocket-wheels, the chain, and the yoke, with its inclosed compensating gear. It may be fastened at its front end to the carriage-body in any suitable manner that will allow the free flexure of the carriage-body on
80 its springs without materially disturbing the relative position of the casing. In the drawings I have shown it as connected by a pivot-shaft p, supported at each end by a bracket P, bolted to the under side of the body. If
85 desired, the space intervening between the top of the casing and the body may be closed by a band of cloth or leather or other flexible material; but this is not deemed essential by me. At its rear end it is divided on a line in-
90 tersecting the rear axle of the running-gear, the extreme rear portion constituting a cap which may be removed independently of the rest of the casing to permit access to the compensating gear and band-brake. The meeting
95 edges of the two portions of the casing are flanged outwardly, as R, and clamped together by bolts r. A gasket or packing-rings, of rubber or other suitable material, is interposed
100 between the abutting flange-faces to make a tight joint and prevent noise. At the points where they embrace the rear axle the sides of

the casing are cut away to form openings S, somewhat larger than the diameter of the axle. Adjacent to the openings are secured pads or rings T, of rubber or other suitable material, the central openings of which are adapted to snugly embrace the axles and carry the entire weight of the rear end of the casing and prevent contact of the metal portions of the casing with the axle. This construction makes the connection absolutely noiseless, while it allows of perfect freedom of action in the rising and falling of the front end of the casing due to any spring action of the vehicle-body and to a sufficient extent also permits of a rolling or sidewise movement of the body. These soft rings or pads are preferably divided on the same line as the casing, each half being attached to a separate section of the casing. These pads may be attached to the sides of the casing-sections by riveting, cementation, or in any other suitable and well-known manner. In the drawings I have shown them as seated in metal or other suitable sockets t, formed on the exterior surfaces of the casing-sections. With this construction the pads may be easily inserted in and withdrawn from the sockets when the casing is detached from the axle. This facilitates repairs or renewal of the parts when they become worn.

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

1. In a motor-vehicle the combination of a motive-power device, a shaft connected to the driven wheels and the mechanism for transmitting power from the motor to the wheel-shaft with a casing inclosing said power-transmitting mechanism supported in suitable manner at the power-device end and at its other end connected to the vehicle-frame by supports of rubber or similar suitable material which constitute the sole contact of the casing with the vehicle-frame, for the purpose herein set forth.

2. In a motor-vehicle the combination of a motive-power device, a shaft connected to the driven wheels and the mechanism for transmitting power from the motor to the wheel-shaft with a casing inclosing said power-transmitting mechanism suitably supported at its power-device end and at the other end connected to the vehicle-frame at or near the wheel-shaft by cushions or pads of rubber or similar suitable material which constitute the sole contact of the casing with the frame for the purpose hereinbefore set forth.

3. In a motor-vehicle the combination of a motive-power device, a shaft connected to the driven wheels and the mechanism for transmitting power from the motor to the wheel-shaft with a casing inclosing said power-transmitting mechanism suitably supported at its power-device end and at its other end connected to the vehicle-frame by cushions or pads of rubber or similar suitable material arranged about the axis of the wheel-shaft substantially as and for the purpose set forth.

4. In a motor-vehicle the combination of a running-gear, a vehicle-body spring supported on said running-gear, a motive-power device carried by said vehicle-body, a driving-wheel shaft supported by the running-gear and mechanism for transmitting power from the motor to the wheel-shaft with a casing inclosing said power-transmitting mechanism suitably connected at one end to the vehicle-body and at the other to the running-gear by cushions or pads of rubber or similar suitable material arranged substantially about the axis of said wheel-shaft as and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK LAMKIN.

Witnesses:

WM. A. SKINKLE,
GEORGE C. HANSEN.