

(No Model.)

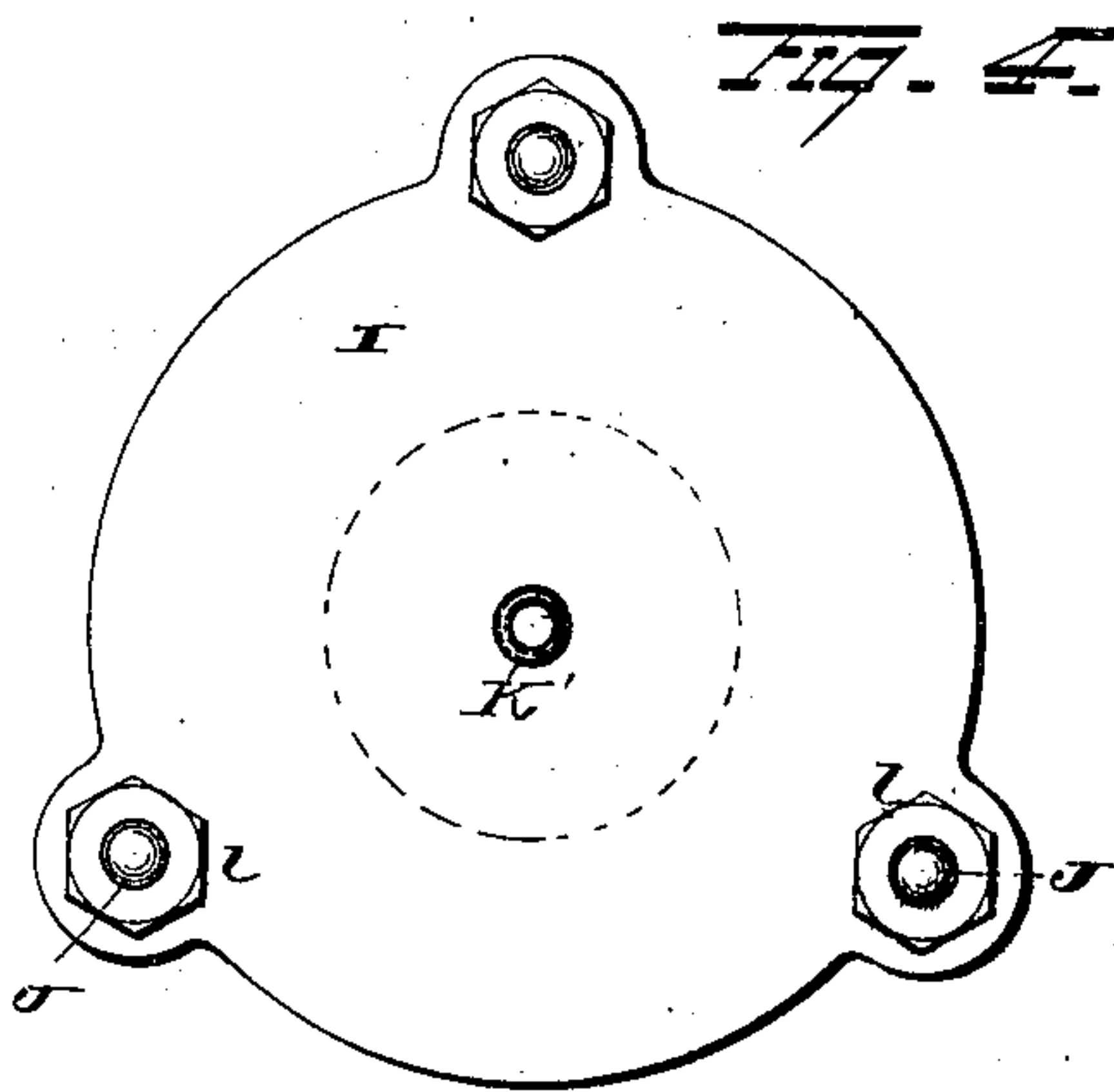
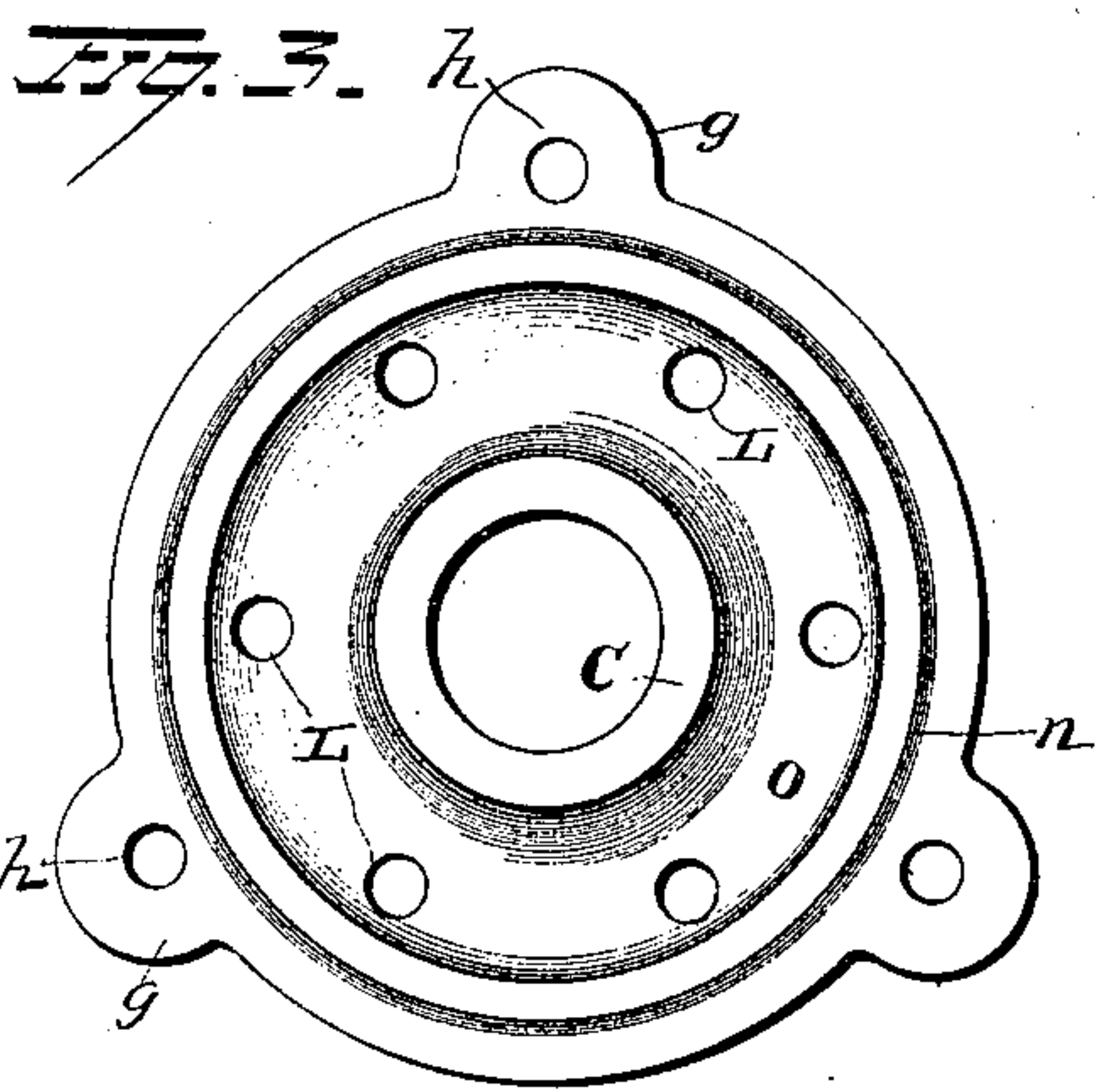
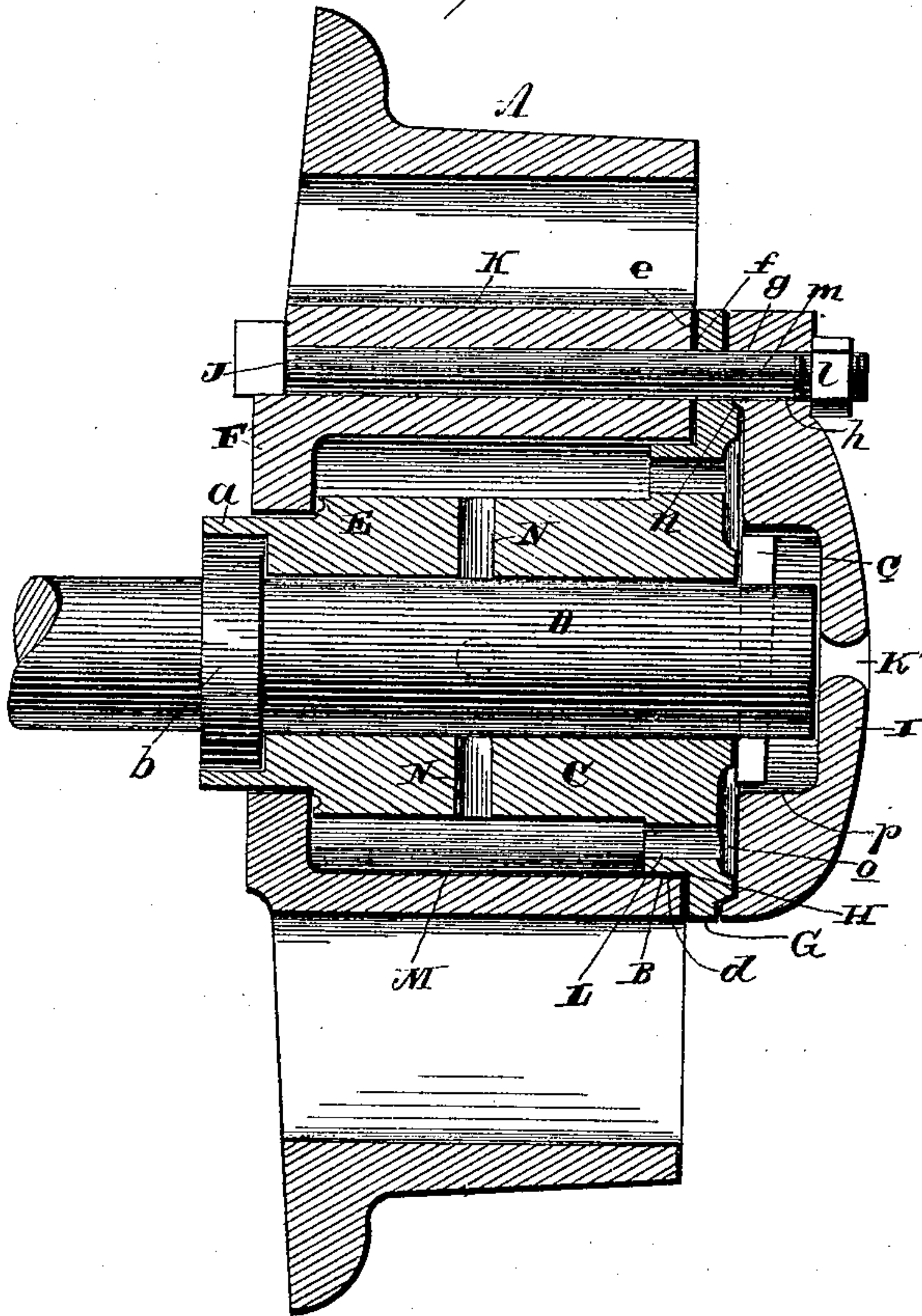
2 Sheets—Sheet 1.

P. B. PERKINS.

SELF LUBRICATING CAR WHEEL.

No. 321,243.

~~Fig. 1~~ Patented June 30, 1885.



WITNESSES
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(No Model.)

2 Sheets—Sheet 2.

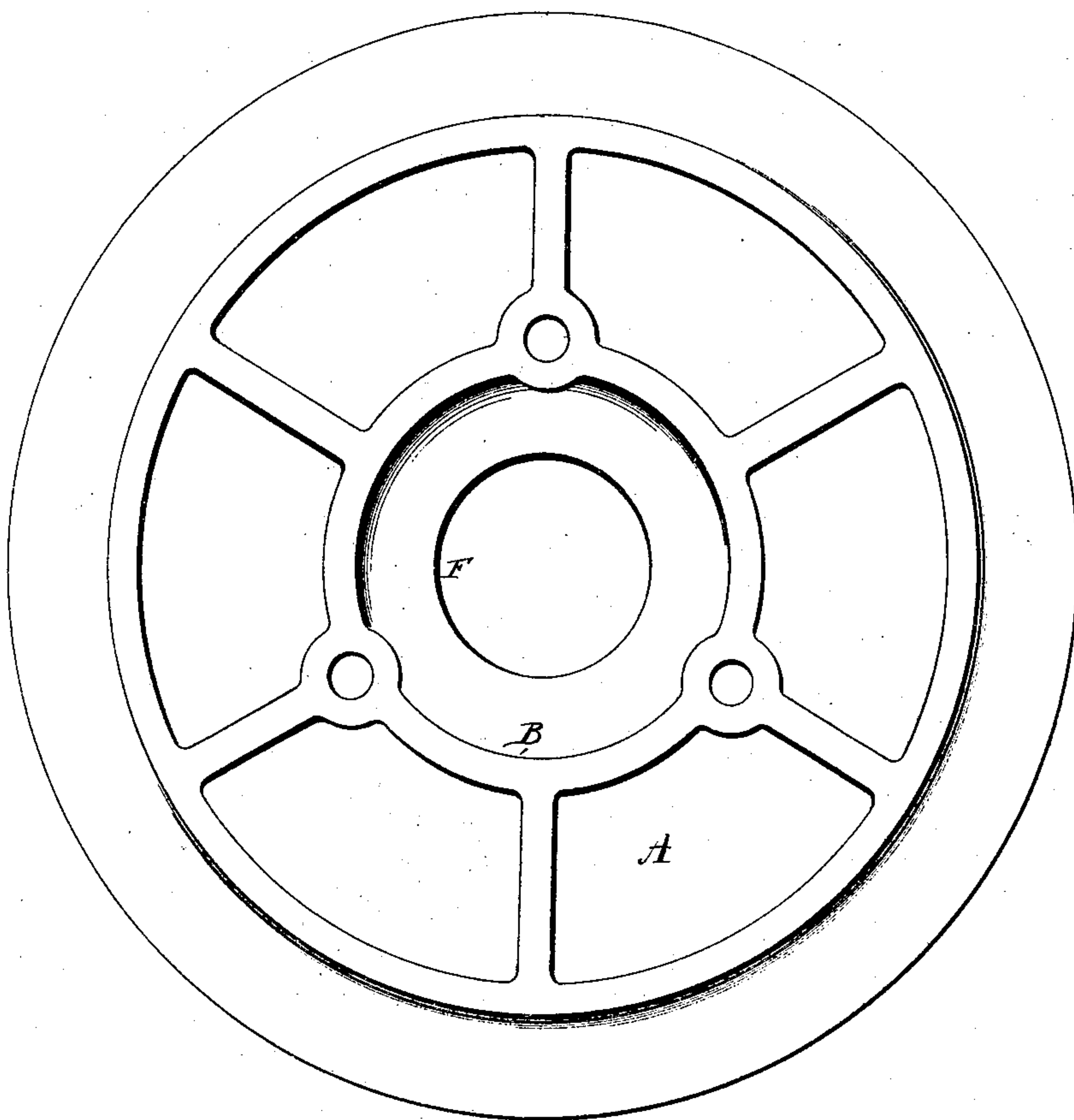
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Fig. 2.



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UNITED STATES PATENT OFFICE.

PAUL B. PERKINS, OF NORTH SPRINGFIELD, MISSOURI.

SELF-LUBRICATING CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 321,243, dated June 30, 1885.

Application filed April 21, 1885. (No model.)

To all whom it may concern:

Be it known that I, PAUL B. PERKINS, of North Springfield, in the county of Greene and State of Missouri, have invented certain
5 new and useful Improvements in Removable Self-Oiling Journal-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as
10 it appertains to make and use the same.

My invention relates to an improvement in removable self-oiling journal-boxes for car and other wheels and pulleys.

The object of the invention is to provide a
15 journal-box that may be readily removed and renewed when unduly worn, and of such construction that it shall constitute an oil-receptacle into which oil may be supplied and be
20 automatically fed to the journal as required, the oil-receptacle to be of such size that a quantity of oil sufficient to last for a comparatively long time may be held therein.

With these ends in view, my invention consists in certain features of construction and
25 combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in vertical section of a car-wheel provided with my improvement. Fig. 2 represents a front elevation of the car-wheel with
30 the axle-box and cap removed. Fig. 3 is a front elevation of the axle-box, and Fig. 4 is a front elevation of the removable cap.

A represents a car-wheel, which may be
35 made of any desired form or material. It is constructed with an enlarged central opening, B, within which is inserted the removable axle-box C, which latter fits upon the journal D. One end of the axle-box is provided with
40 an annular recess, *a*, within which is received the collar *b* on the rear end of the journal, while a linch-pin, *c*, passing through the outer end of the journal, retains the axle-box against displacement in the opposite direction. Axle-
45 box C is formed with an annular shoulder, E, at its inner end, which seats against an inwardly-projecting flange, F, on the inner face of the wheel and forms a tight joint therewith. If desired, a gasket or packing of rubber,
50 leather, or soft metal may be inserted between the meeting faces of the annular shoulder E on the axle-box and the face of the inwardly-pro-

jecting flange on the wheel, and thus insure a liquid-tight joint between such parts. The other end of the axle-box is provided with an outwardly-projecting flange, G, which is formed
55 with an annular shoulder, H, the face *d* of which fits against the inner surface of the opening in the wheel, while the face *e* engages the annular seat *f* on the side of the wheel.
60 This flange is also provided with projecting lugs or arms *g*, having holes *h* formed therein, the perforated arms registering with and placed upon the perforated seats *i* on the car-wheel.
65

I represents a cap formed with bolt-holes *j*, through which bolts J are inserted, which pass
through the holes K in the wheel and holes *h* in the axle-box flange, and are secured against
70 displacement by the nuts *l*, or any suitable form of nut-lock being employed, if desired. Thus it will be observed that the bolts J secure together the wheel, axle-box, and cap,
75 and by simply removing the nuts the parts may be readily separated for inspection, repair, or renewal. The inner face of the cap is provided with a bevel-face, *m*, which engages a correspondingly-beveled face, *n*, on
80 the axle-box flange, whereby the cap is enabled to be forced tightly and snugly in contact with the axle-box flange and form a tight joint therewith. Cap I is provided with an
opening, K', centrally located therein, through which oil is supplied to the box. This opening
85 may be closed by a pivoted shield, or it may be screw-threaded and closed by a short bolt, and the ingress of dust to the axle-box thereby be prevented. As the oil is poured
90 through the feed-opening K', it flows through the openings L formed in the flange of the axle-box and enters the annular oil-chamber M, and from thence passes through the opening N in the axle-box to the journal and lubricates the same.

As represented in the drawings, the forward
95 face of the axle-box is provided with channels *o* to insure a free passage of the oil from the chamber within the cap to and through the holes in the axle-box flange. The cap is formed with an inwardly-projecting
100 shoulder, *p*, that projects over the linchpin and prevents the latter from working loose.

From the foregoing description it will be observed that the oil-chamber may be quickly

filled or replenished, and that a considerable quantity of oil may be stored in the receptacle, as the latter may be filled until the oil is on a level with the feed-opening in the cap, 5 and will be retained therein in any position the wheel may assume while in use. The wheel may be cored out in casting so as to form an oil-chamber of any desired size, and within such chamber waste may be packed, if 10 desired, so as to carry the oil to the journal by capillary attraction.

While I have shown my improvement as applied to a car-wheel, I intend it for use in connection with other kinds of wheels, as also 15 for pulleys as well.

As it is evident that many slight changes in the construction and form and relative arrangement of parts might be resorted to without departing from my invention, I would 20 have it understood that I do not restrict myself to the exact construction and arrangement of parts shown and described; but,

Having fully described my invention, what I claim as new, and desire to secure by Letters 25 Patent, is—

1. The combination, with a wheel or pulley having a central opening and a removable axle-box secured therein and adapted to form an annular oil-chamber, said axle-box being provided with a perforated flange, of a cap 30 provided with an oil-supply opening and secured to the flanged end of the axle-box, substantially as set forth.

2. The combination, with a wheel having a central opening, of a flanged axle-box passing 35 through said opening and provided with oil passage-ways L and N, a cap resting against the flange of the axle-box, and bolts for securing the cap and axle-box to the wheel, substantially as set forth. 40

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

PAUL B. PERKINS.

Witnesses:

CHAS. BROOKS,
H. WALKER.