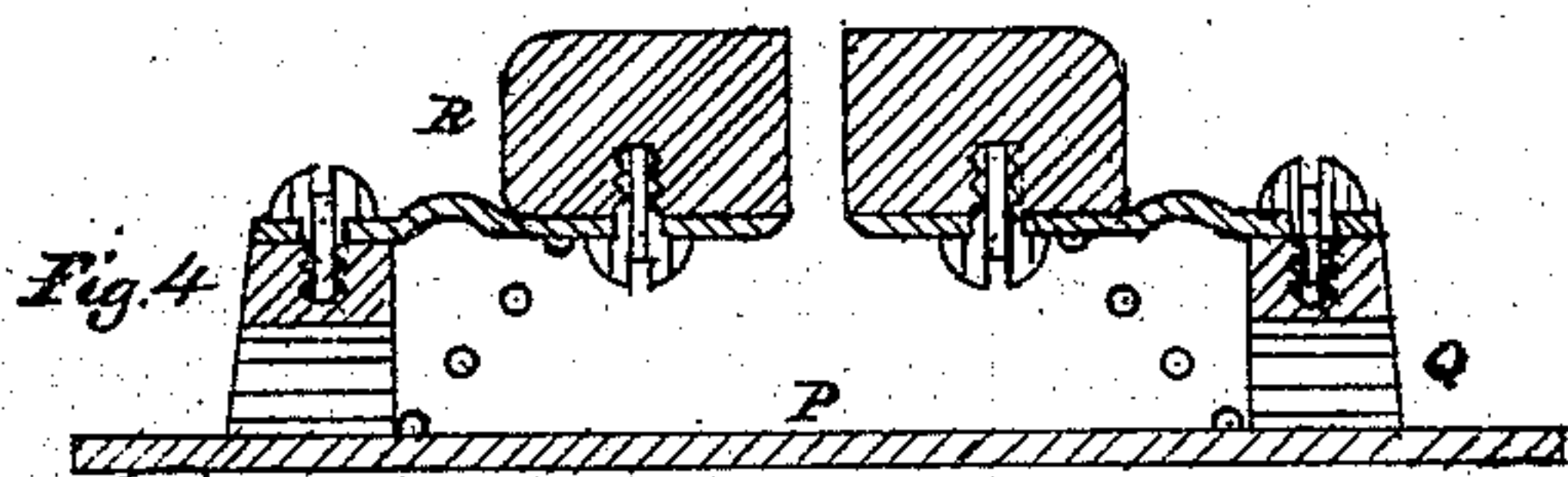
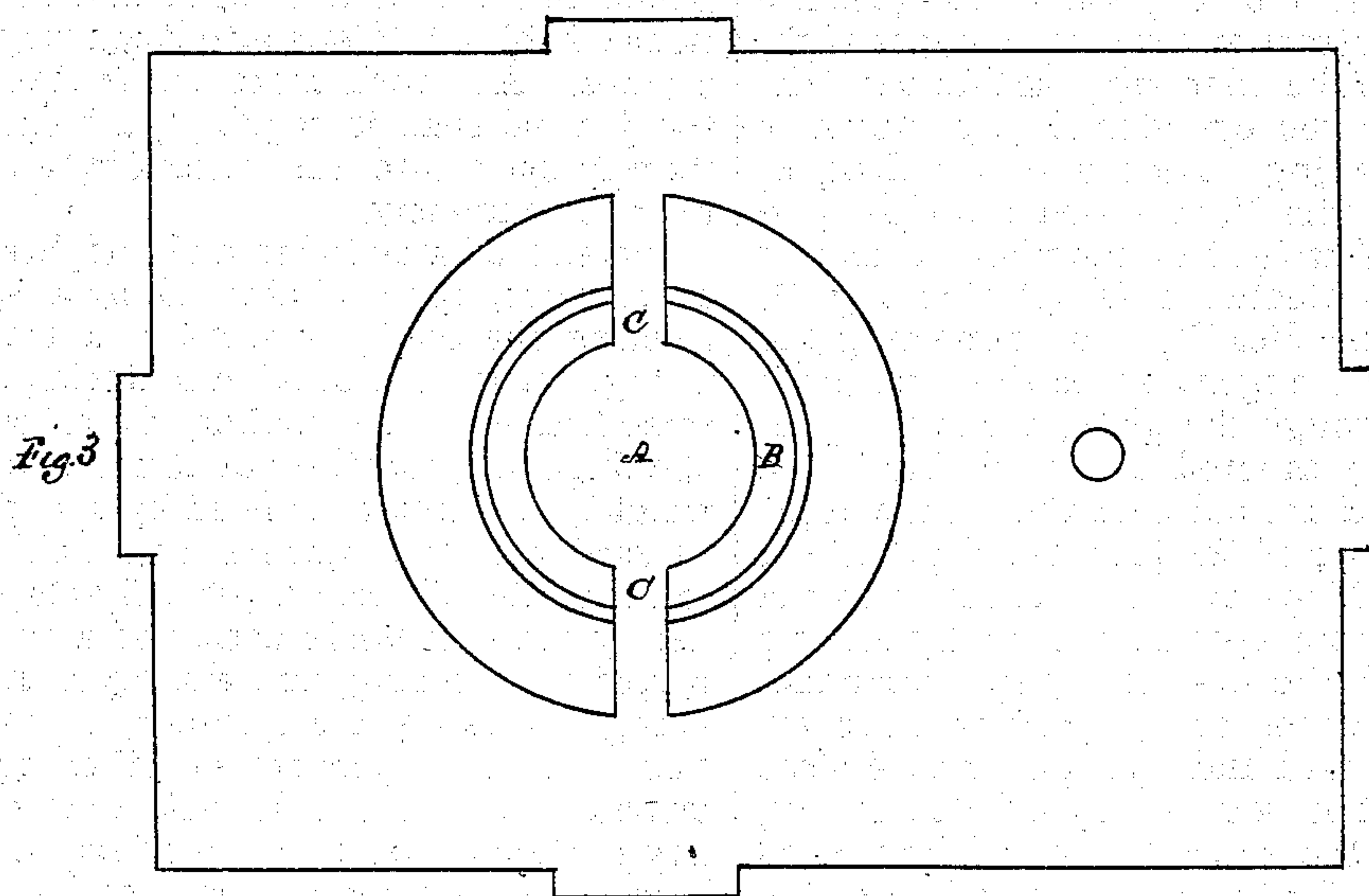
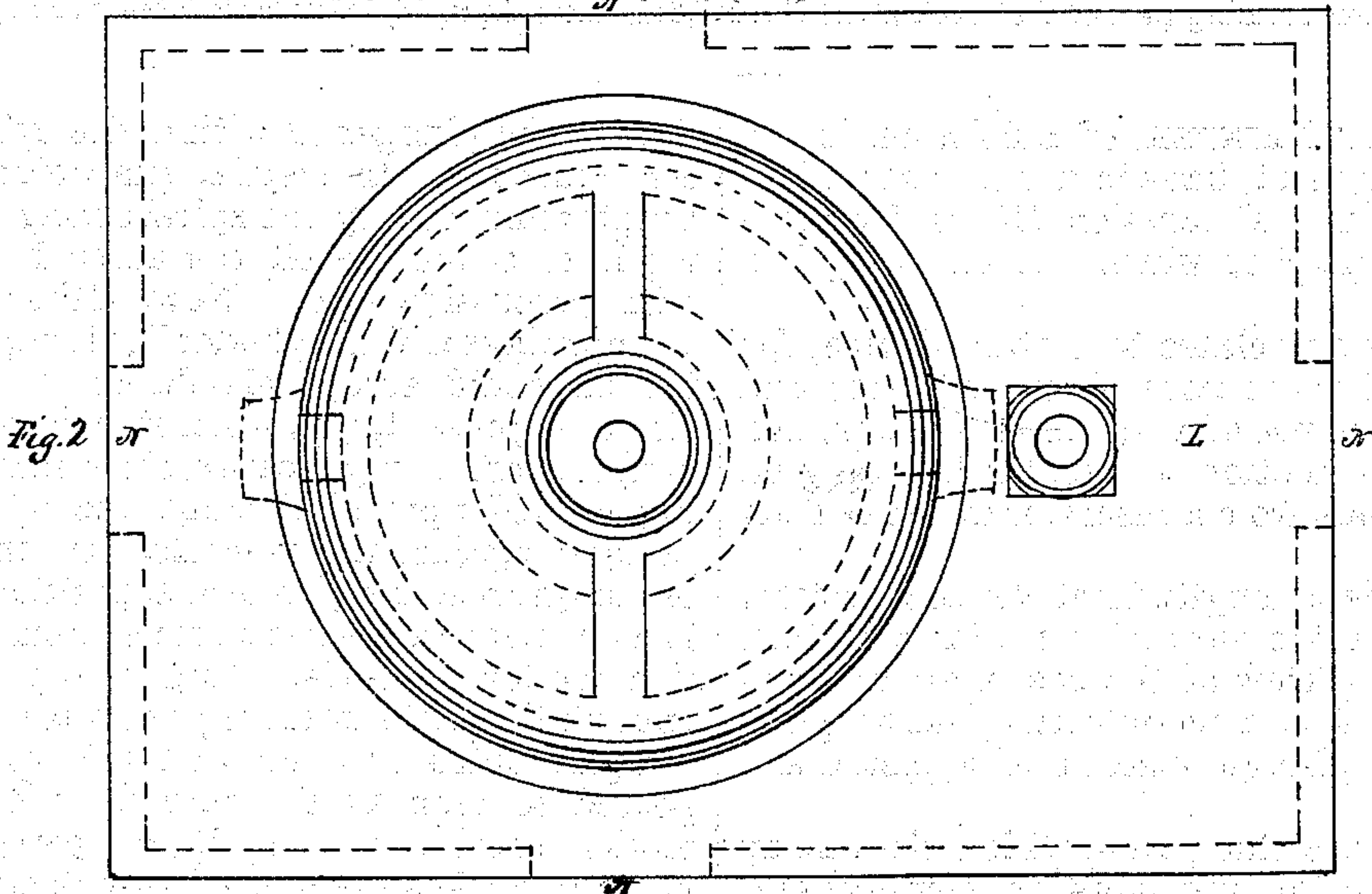
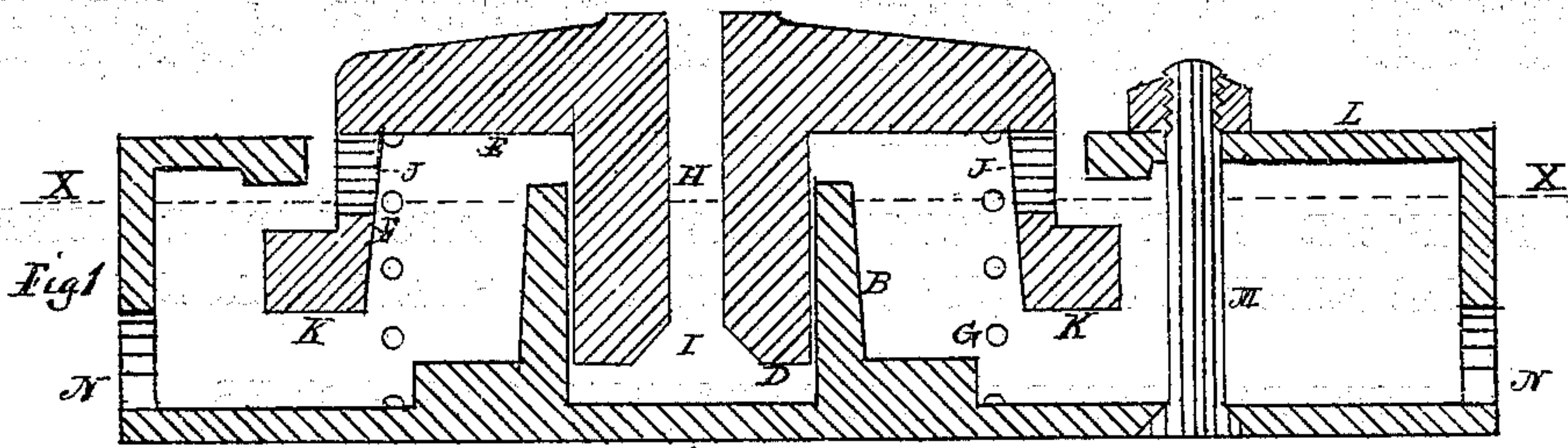


WILLIAM PAINTER.
No. 125,841.

Lubricating Car Axles.
Patented April 16, 1872.



Witnesses:

Levi R. Keweenaw
John H. Ground.

William Painter

UNITED STATES PATENT OFFICE.

WILLIAM PAINTER, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF HIS RIGHT TO LEWIS R. KEIZER, OF SAME PLACE.

IMPROVEMENT IN LUBRICATING CAR-AXLES.

Specification forming part of Letters Patent No. 125,841, dated April 16, 1872; antedated April 3, 1872.

I, WILLIAM PAINTER, of Baltimore, in the State of Maryland, have invented certain Improvements in "Percussion Oilers for Railroad-Car Axles," of which the following is a specification:

My invention relates to certain devices for supplying oil to the axles of railroad cars; and consists in the use of a percussion-ejector, actuated by the motion of car, for throwing oil on the journals from a reservoir at the bottom of the box.

Figure 1 is a longitudinal vertical section, and Fig. 2 a top view of the oiler complete. Fig. 3 is a top view of the base-plate and cylinder. Fig. 4 is a modification, showing the use of a diaphragm instead of a piston and cylinder.

A is the base-plate, from which rises a cup or cylinder, B, having slots or openings C C for the admission of oil, which occupies the space in the bottom of car-box, rising as high, with respect to the oiler—say, as line *x x*. Fitting loosely in the cylinder B is a piston or plunger, D, having attached to it a disk, E, and projecting rim F, intended principally to give additional weight to the plunger, and as a guide and protection to a spiral spring, G, lying under the disk E, and supporting the weight of the plunger and the several parts attached. Through the plunger B is an opening, H, slightly tapered at I to facilitate the exit of oil. J J are holes for the escape of air from the interior of the inverted cup, formed by rim F. K K are two lugs attached to rim F, which limit its upward motion by coming in contact with the shell or cover L surrounding it. This cover has projecting sides extending downward and fitting over base-plate A, to which it is secured by a bolt and nut, M. Through the sides of cover L are openings N N N N, for the admission of oil to the interior.

The oiler is placed in the usual reservoir in the bottom of car-box, and upon oil being poured in it finds its way through openings C C and N N to the cylinder B so long as any remains in the reservoir.

The operation may be understood by reference to the cylinder B and plunger D, supported on spring, and partially immersed in oil. When the car to which the oiler is attached is running, the jarring motion imparted to the box causes a vertical vibratory mo-

tion of the plunger D within the cylinder B, consequent on its inertia, (its weight being counterbalanced by the spiral spring G,) causing it to strike the oil contained in cylinder with percussive force. Now, although there are openings C C in cylinder B, through which the oil would escape should the plunger be slowly depressed, yet, when its motion is sudden, a portion only escapes, the remainder being ejected upward through the opening in plunger against the journals. On the piston or plunger resuming its normal position, (which is at or near the center of its extremes of vertical motion, the spiral spring being just strong enough to retain it there,) the vacated space is again filled with oil, and the action is repeated so long as the succession of jarring motion continues. The oil, on being ejected upward, strikes the journal principally at one point, but the longitudinal and rotary motions combine to distribute it entirely over the surface. As much more oil is thrown upon the journal than is required, the excess finds its way back into the reservoir, and is used over continuously.

Instead of a cylinder and weighted piston or plunger, counterbalanced by a spring for ejecting the oil by percussion, a flexible diaphragm of leather or other material, O, Fig. 4, stretched over a chamber, P, to which are openings Q Q for the admission of oil, and a weight, R, counterbalanced by a spring, may be used with the same result; the object being to expel the oil from a partially-closed chamber by the percussive action of a weight supported by a spring, and employed either as a plunger working in a cylinder, or in connection with a diaphragm or other equivalent means. Therefore I do not limit myself to any particular construction or arrangement of parts, as they may be varied without in anywise affecting the distinctive features of the device.

What I claim as my invention is—

The percussion-oiler for car-axles, consisting of a weighted plunger, supported by a spring, and working in a cylinder for ejecting the oil by percussive force, substantially as described.

WILLIAM PAINTER.

Witnesses:

LEWIS R. KEIZER,
JOSEPH E. MURRILL.