

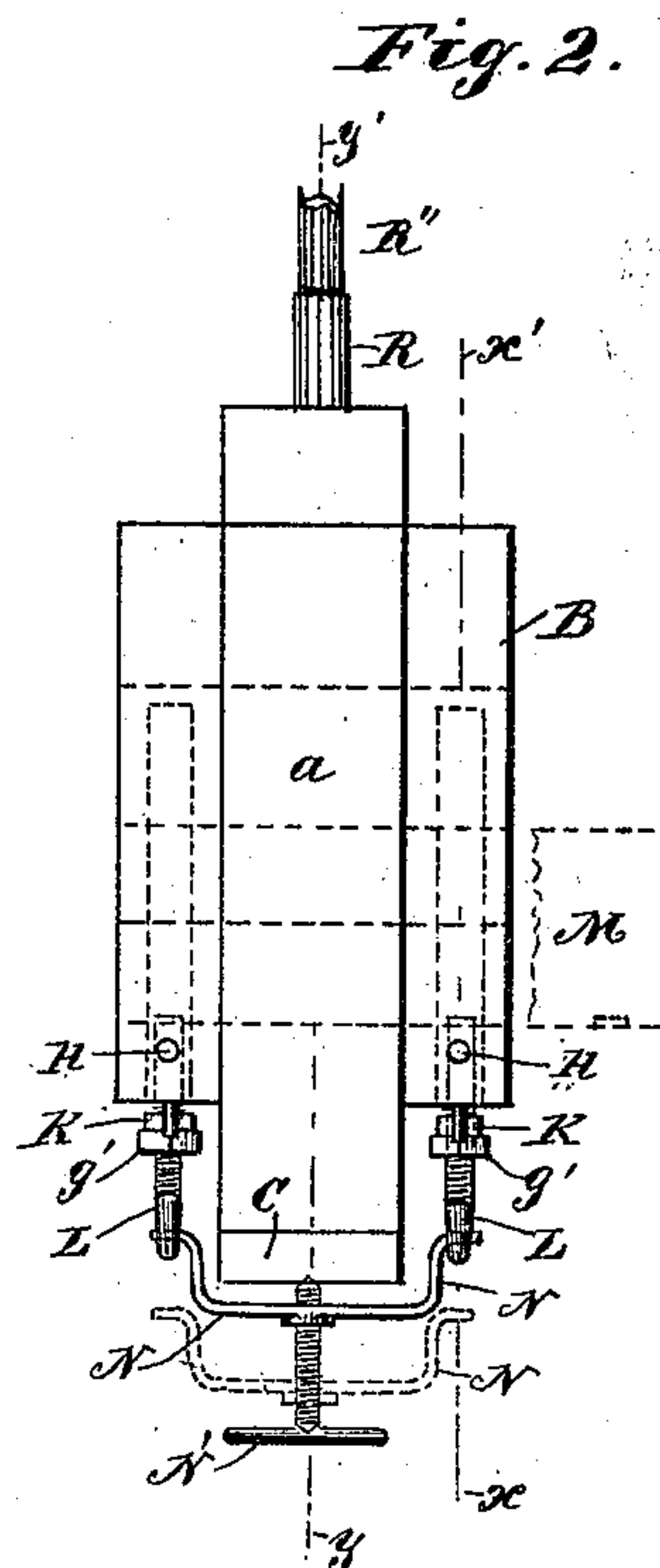
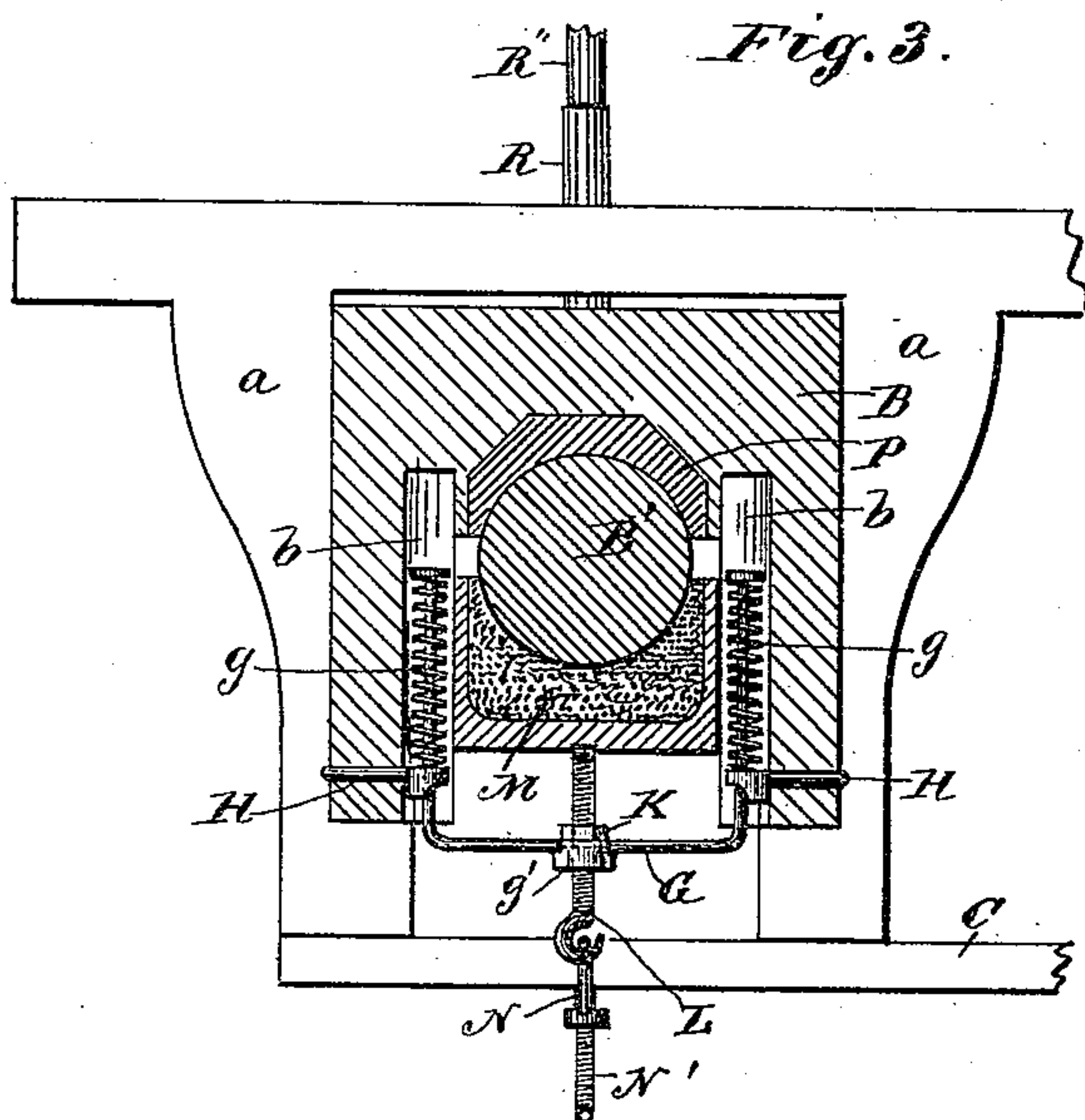
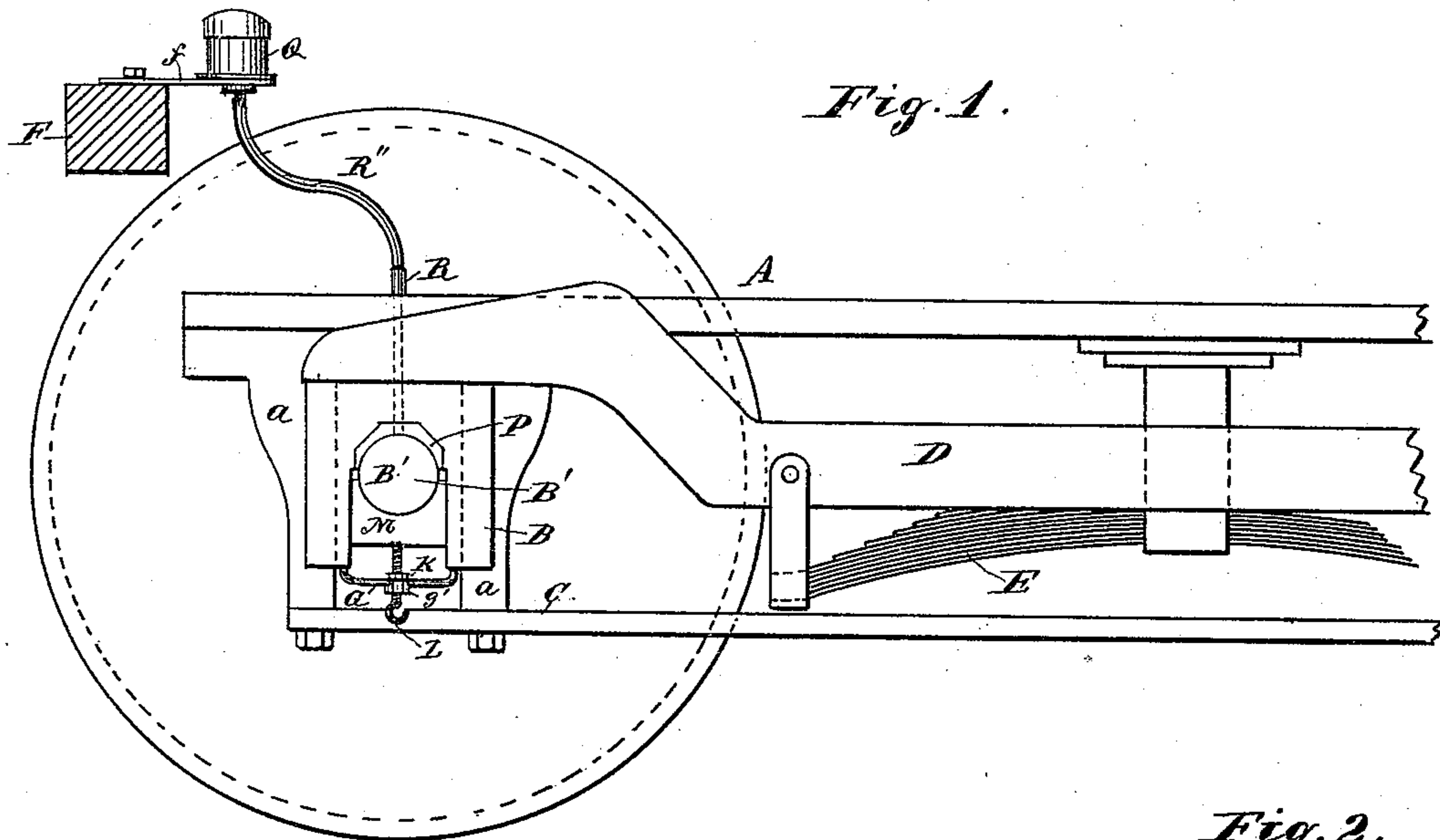
(No Model.)

2 Sheets—Sheet 1.

W. MCINTOSH.  
LUBRICATOR FOR LOCOMOTIVE TRUCKS.

No. 447,081.

Patented Feb. 24, 1891.



Witnesses.  
A. H. Opsahl.  
Emma F. Elmore.

Inventor.  
William M. McIntosh.  
By his Attorney.  
Jas. F. Williamson.

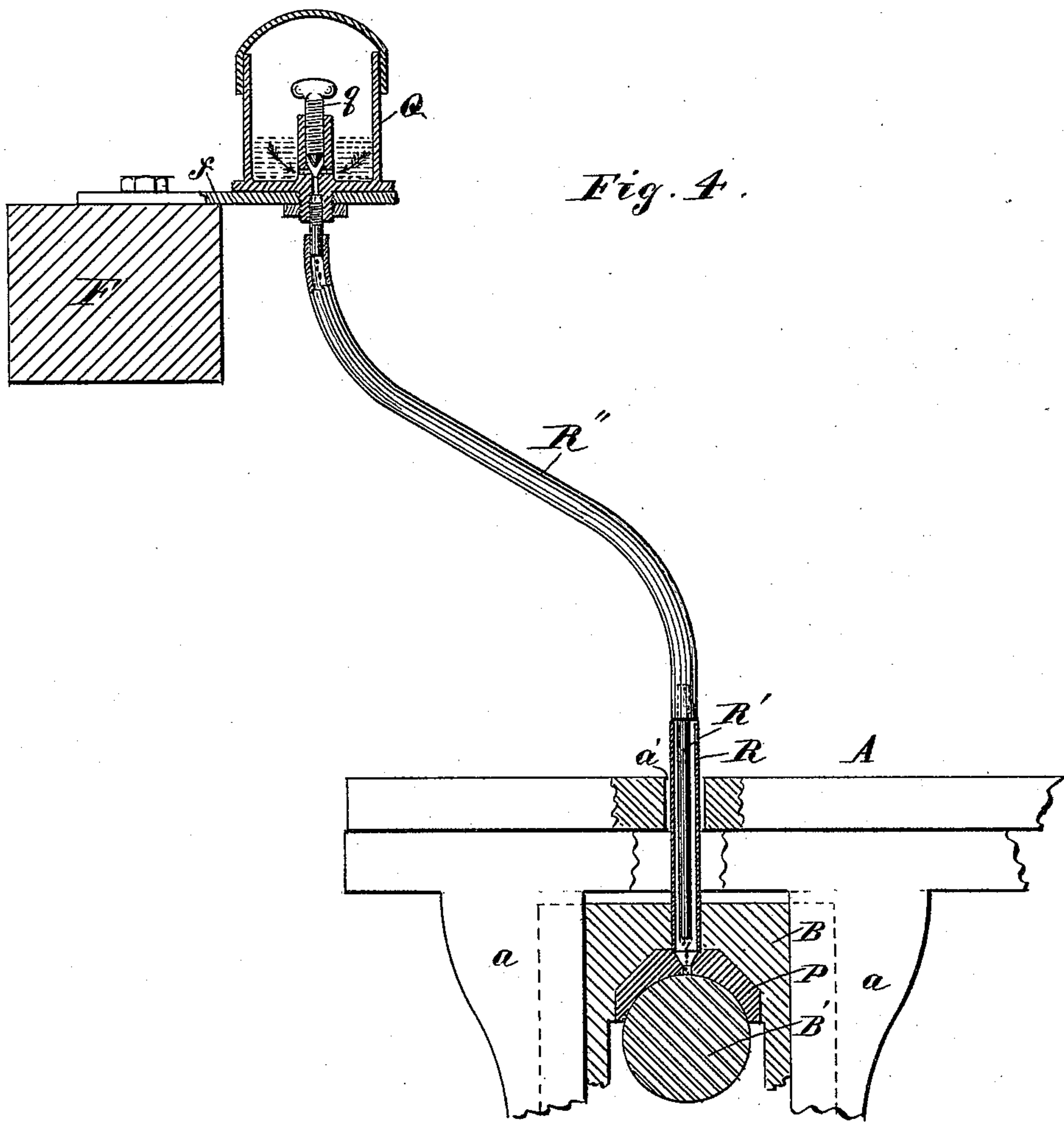
(No Model.)

2 Sheets—Sheet 2.

W. McINTOSH.  
LUBRICATOR FOR LOCOMOTIVE TRUCKS.

No. 447,081.

Patented Feb. 24, 1891.



Witnesses.  
A. H. Opsahl.  
Emma F. Elinore.

Inventor.  
William M. McIntosh  
By his Attorney.  
Jas. F. Williamson



# UNITED STATES PATENT OFFICE.

WILLIAM MCINTOSH, OF WINONA, MINNESOTA.

## LUBRICATOR FOR LOCOMOTIVE-TRUCKS.

SPECIFICATION forming part of Letters Patent No. 447,081, dated February 24, 1891.

Application filed August 22, 1890. Serial No. 362,709. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM MCINTOSH, a citizen of the United States, residing at Winona, in the county of Winona and State of Minnesota, have invented certain new and useful Improvements in Lubricators for Locomotive-Trucks; 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 lubricators for locomotive-trucks and similar bearings, and is directed to the oil-cellar and oil-supply pipes. In the engine-truck journal-box now in common use the oil-cellar is held in place by two cellar-bolts passing through flanges of the box and lugs on the cellar. When the box and the cellar are new and the brass is of maximum thickness, the cellar fits closely to the journal, keeping the packing in contact therewith; but when the brass begins to wear by usage and the cellar-bolt holes become oblong by constant jarring the journal and the cellar separate and keep going farther apart until the brass is worn out. Ofttimes there will be as much as an inch of space between the cellar and the journal. Hence at all times, except when the parts are new and closely fitted, there is a great waste of oil and the lubrication of the journal is very imperfect.

The object of one feature of my invention is to overcome these defects by providing a construction which will cause the oil-cellar to automatically adjust itself to the journal, following up the wear of the brass and keeping the packing at all times in contact with the journal. To this end I support the cellar from yokes spring-seated in the journal-box. The journal-box is provided with four vertical holes or recesses on its opposite corners, and U-shaped headed yokes provided with spiral springs encircling their stems are mounted in the recesses. Forked pins entering transverse holes at the lower ends of the recesses serve as seats for the springs and to hold the yokes in position, the yokes fitting the forks or slotted opening in the heads of the pins. The forks also permit the yokes to pass upward beyond the pin-heads when the cellar is removed, which allows the pins to be

withdrawn and the yokes taken from the recesses whenever so desired. The cellar is held by thumb-screws removably mounted in the cross-bars of the yokes, and to prevent the lateral displacement of the oil-cellar it is provided with mortise-shaped recesses on its under surface in line with the yokes, and the thumb-screws have chisel-shaped upper ends adapted to fit in said recesses. This feature also prevents the thumb-screws from turning in the nuts. These thumb-screws both support the cellar and serve to adjust the tension of the yokes thereon as may be desired. They are preferably mounted in removable nuts which rest in corresponding seats on the upper surface of the yokes. These nut-seats on the yokes are perforated to a larger bore than the thumb-screws, which permits the same to be easily removed. The outer ends of the thumb-screws are hook-shaped or provided with eyelets for co-operation with the cross-bar and hand-screw, working against the base-bar on the oil-box seat as a base of resistance to pull down the yokes against the upward pressure of the springs whenever it is desired to remove the oil-cellar.

In order to supply the oil to the bearing without waste, I construct the supply-pipe in three sections, two of which are rigid and a third flexible. The outer and larger of the rigid sections is fixed to the oil-box directly over the brass and is extended upward through an enlarged opening in the frame, so as to have sufficient clearance to permit the frame to move without affecting the pipe. The other rigid section is smaller and telescopes within the outer section, having its open end terminating close to the lower end of the outer section. The flexible section is attached to the upper end of the smaller rigid section and extends to the oil-cup or other source of supply, which is preferably located on the front cross-bar of the engine-frame or some other relatively-fixed part. The oil-cup is preferably of the force-feed variety. The advantage of this construction of the feed-pipes will be readily understood by all persons familiar with the difficulties in the way of properly oiling engine-truck bearings. By this device the oil-cups may be located wherever desired to make it readily accessible. The supply-pipes are not dis-



turbed by the rising and falling of the axle, and the oil is delivered directly to the perforation in the brass without waste between the brass and the box. In co-operation with the automatically-adjustable cellar it affords perfect lubrication to the trucks.

In the accompanying drawings, wherein like letters refer to like parts throughout, I have illustrated this invention.

Figure 1 is a sectional elevation of part of an engine-truck looking outward toward the right side. Fig. 2 is a front view of the same, some parts being broken away. Fig. 3 is a sectional elevation on the line X X' of Fig. 2; and Fig. 4 is a sectional elevation, part of which is on the line Y Y' of Fig. 2 and the other part through the center of the oil-cup.

A is a part of the truck-frame, provided with the depending arms *a a*, constituting the seat for the journal-box B.

B' is the axle.

C is the base-bar bolted to the outer ends of the arms *a* and is of less width than the journal-box.

D is the equalizer, E the spring, and F the front cross-bar of the engine-frame, all of the usual construction.

*b b* are the vertical recesses in the oil-box.

G are the headed yokes provided with the spiral springs *g*, encircling their stems, and also with perforated nut-seat *g'*.

H are the forked pins on which the springs rest, holding the yokes, as before described.

K are the nuts mounted in the seats *g'*.

L is the thumb-screw, chisel-shaped at its upper end and hook-shaped at its lower end and working in a nut K.

M is the oil-cellar, which may be of any suitable construction and filled with any suitable kind of packing of absorbent material.

N N' are the cross-bar and hand-screw for engaging with the hook on the ends of the thumb-screws and withdrawing the yokes, as before stated.

P is the brass.

Q is the oil-cup mounted on a bracket *f*, secured to the front cross-bar F.

R R' R'' are the feed-tubes, of which R is the rigid section secured in the box B and open at both ends. R' is the inner rigid section telescoping with R, and R'' is the flexible section connected to the upper end of R' and communicating with the oil-cup. The lower end of the flexible section rests on the upper end of the outer rigid section R, thus suspending the inner rigid section R'.

The truck-frame is provided with an opening, as shown at *a'*, for the free passage of the rigid section R, and is large enough to permit the frame or pipe to move freely with reference to each other.

*q* is a force-feed in the oil-cup of any suitable kind.

The operation is evident from the description already given.

In addition to the advantages already named it should be noted that a cellar of

much less size and weight may be employed, much less packing is required, and there is practically no wearing out of any of the parts other than the brass, inasmuch as the springs compensate for all jarring. It should be further noted that the construction may be readily adapted to the journal-box and cellars now in common use.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination, with an oil-box provided with recesses, of yokes spring-seated in said recesses, and an oil-cellar supported by said yokes.

2. The combination, with the spring-seated yokes and the oil-cellar supported thereby, of a tension device for adjusting the spring-pressure.

3. The combination, with the spring-seated yokes and the oil-cellar supported thereby, of a securing device for holding the cellar to the yoke against lateral displacement.

4. The combination, with a recessed body, of spring-seated yokes movable in said recesses, and combined spring-seats and yoke-guides for holding the yokes in position.

5. The combination, with a recessed body, of yokes having springs on their stems mounted in said recesses, and removable forked pins adapted to removably secure the yokes in position and serve as a seat for the springs.

6. The combination, with the spring-seated yokes, of the removable oil-cellar provided with recesses on its under surface in line with the cross-bars of the yokes, and combined tension and cellar securing devices consisting of thumb-screws mounted on the yokes and having chisel-shaped ends fitting said recesses.

7. The combination, with the spring-seated yokes provided with nut-seats on the upper surface of their cross-bars, of nuts fitting said seats, and hand-screws working through said nuts, substantially as described.

8. The combination, with the oil-cellar and spring-seated yokes, of a cross-bar and hand-screw for retracting the yokes against the spring-pressure to permit removal of the cellar.

9. The combination, with a base-bar connecting the pendent ends of the oil-box seat, of the recessed oil-box, the spring-seated yokes mounted in said recesses, the oil-cellar, the thumb-screws mounted in the yokes and supporting the cellar, provided with hooks on their lower ends, a cross-bar engageable with said hooks, and a hand-screw in said cross-bar adapted to bear against said base-bar as a base of resistance for drawing down the yokes and freeing the cellar, substantially as described.

10. A lubricator for engine-trucks, comprising an automatically-adjustable oil-cellar, an oil-cup located on some relatively-fixed and accessible support, an outer rigid section of supply-pipe fixed to the journal-box, an inner rigid section of supply-pipe telescoping with-



in said outer section, and a flexible section connecting said inner section with the oil-cup, substantially as described.

11. A lubricator for engine-trucks and similar bearings, comprising an outer open-ended tube fixed to the oil-box directly over the brass and supported free and independent of the truck-frame, a smaller tube telescoping within the outer tube and having its delivery end in proximity to the journal, and a

flexible tube attached to the outer end of the smaller tube and leading to a supply of oil, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM MCINTOSH.

Witnesses:

D. E. VANCE,

W. I. LAMSON.