

No. 747,387.

PATENTED DEC. 22, 1903.

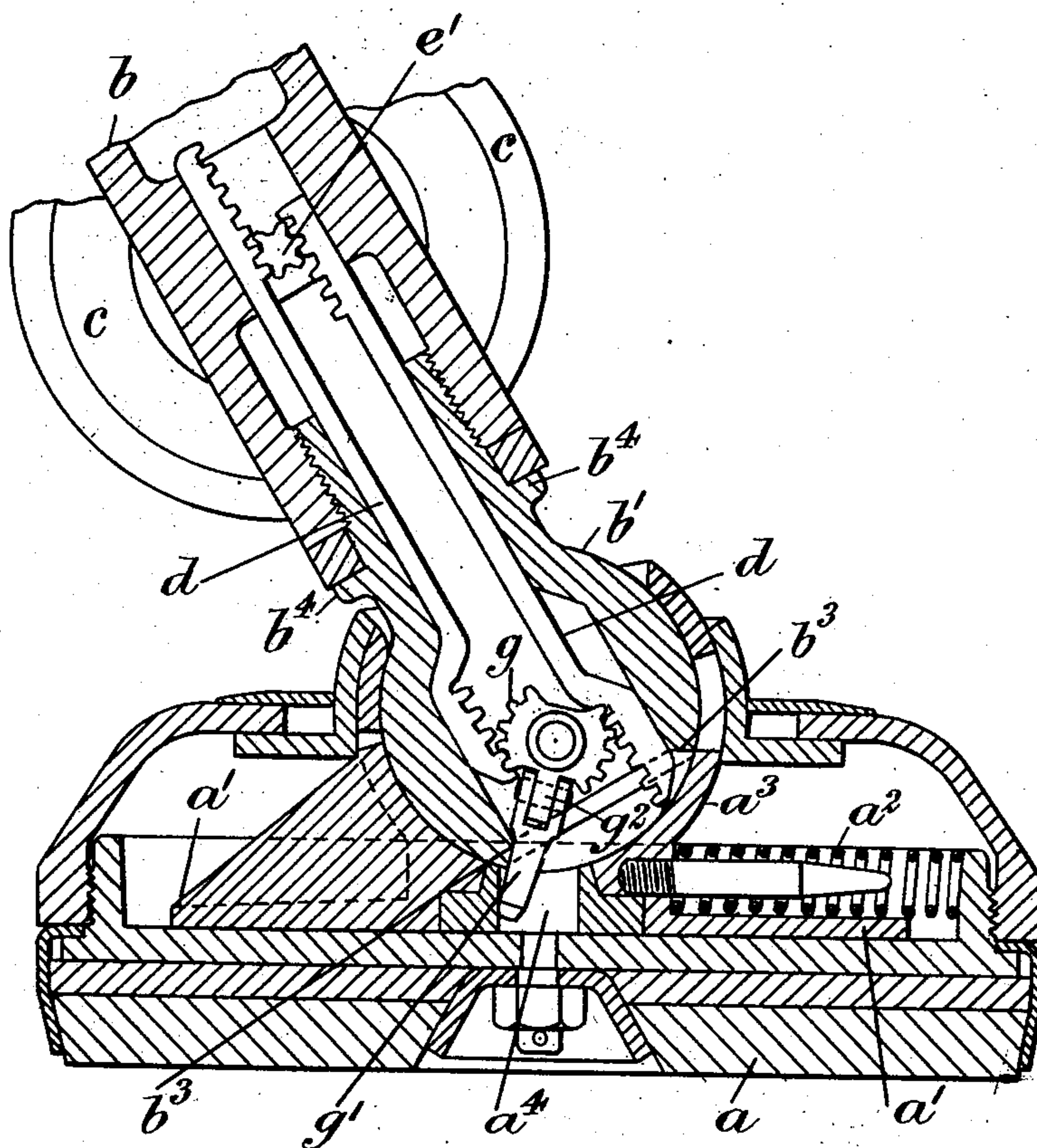
B. J. DIPLOCK.
TRACTION ENGINE.

APPLICATION FILED MAR. 21, 1903.

NO MODEL.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses

A. M. Parkins.

E. W. Farland.

Inventor

Bramah Joseph Diplock,

By his Attorney,

Baldwin, Davidson & Wright.

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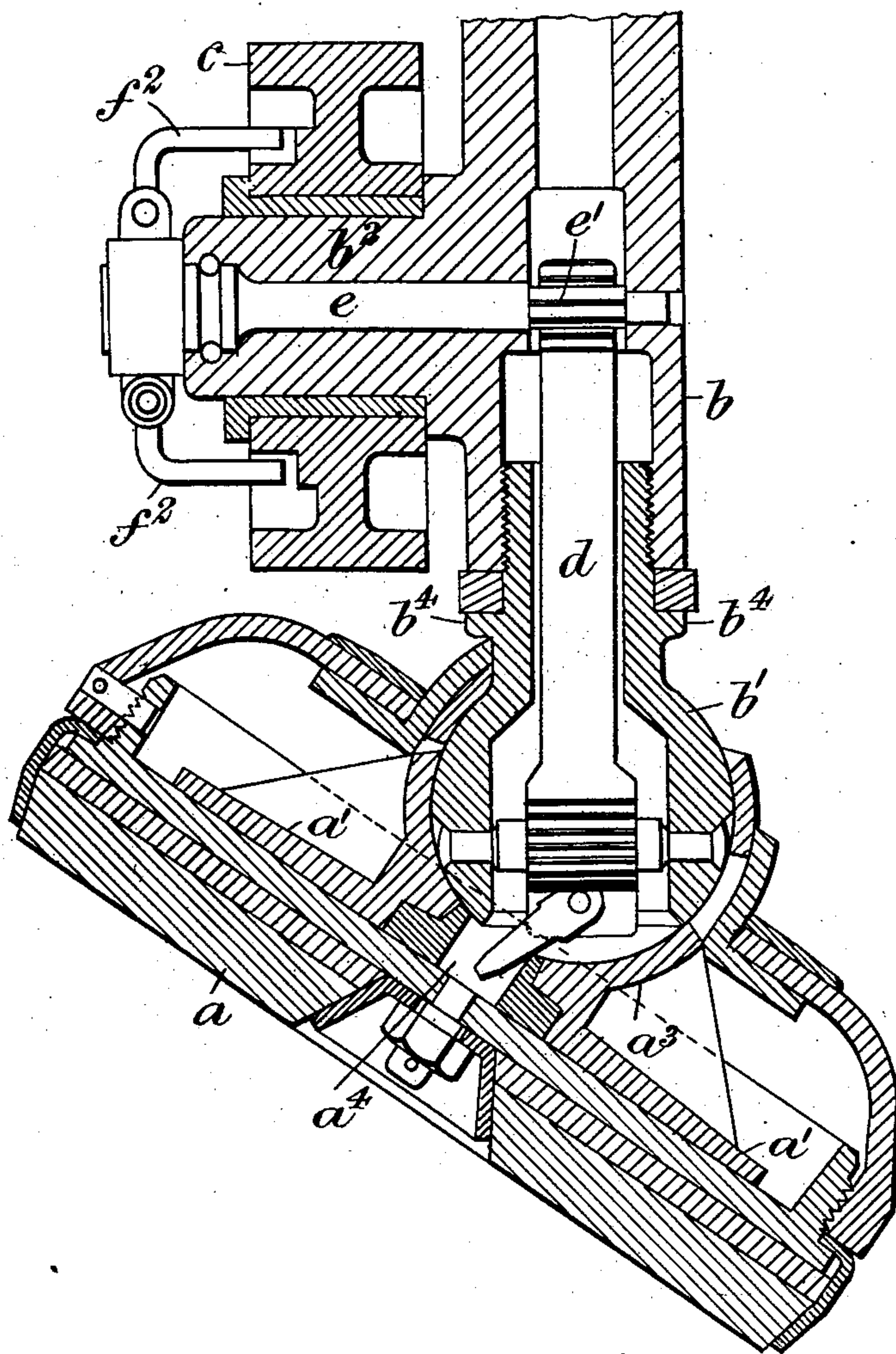
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3 SHEETS—SHEET 2.

Fig. 2.



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Baldwin, Davidson & Wright.

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3 SHEETS—SHEET 3.

Fig. 3.

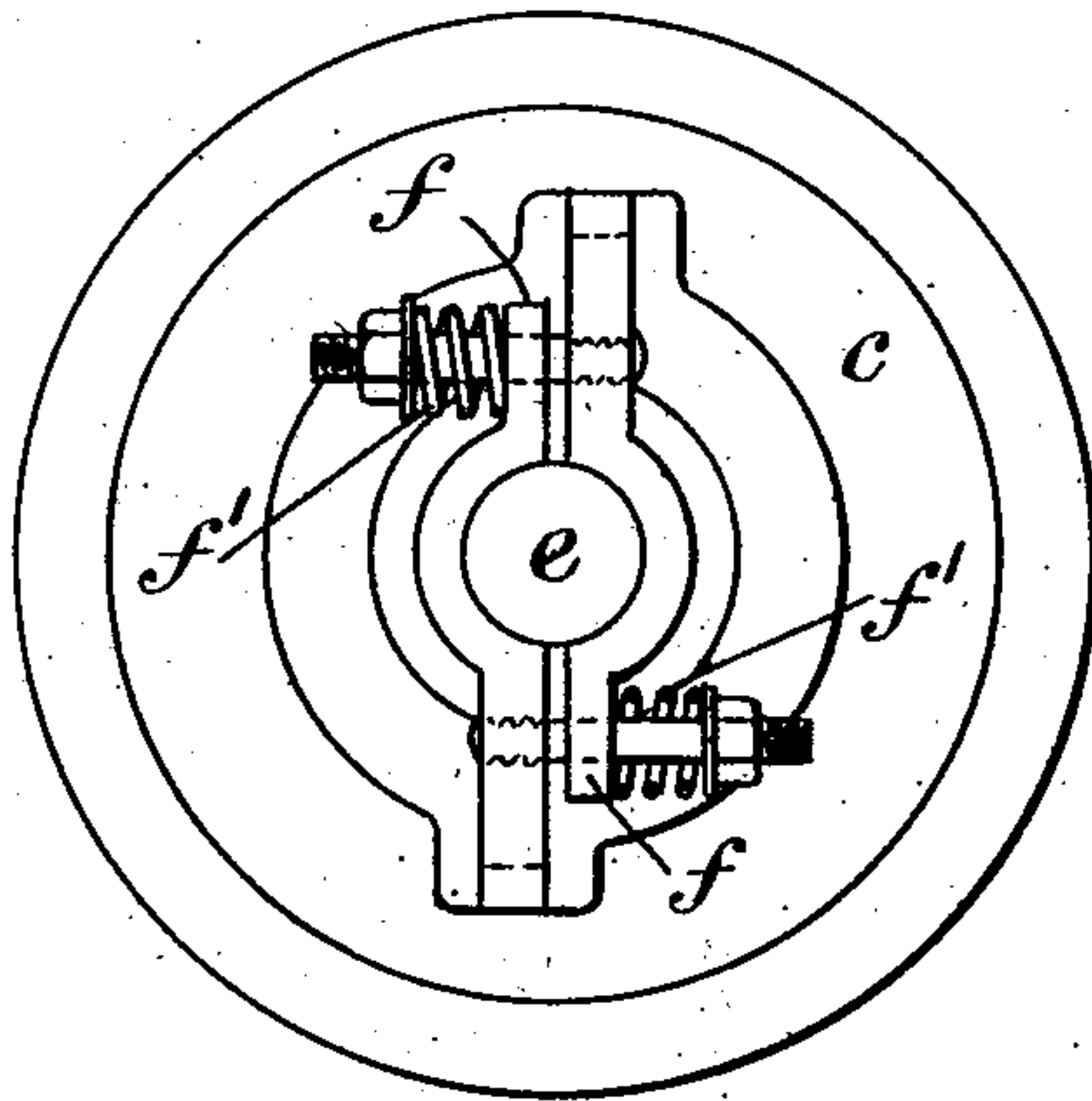


Fig. 4.

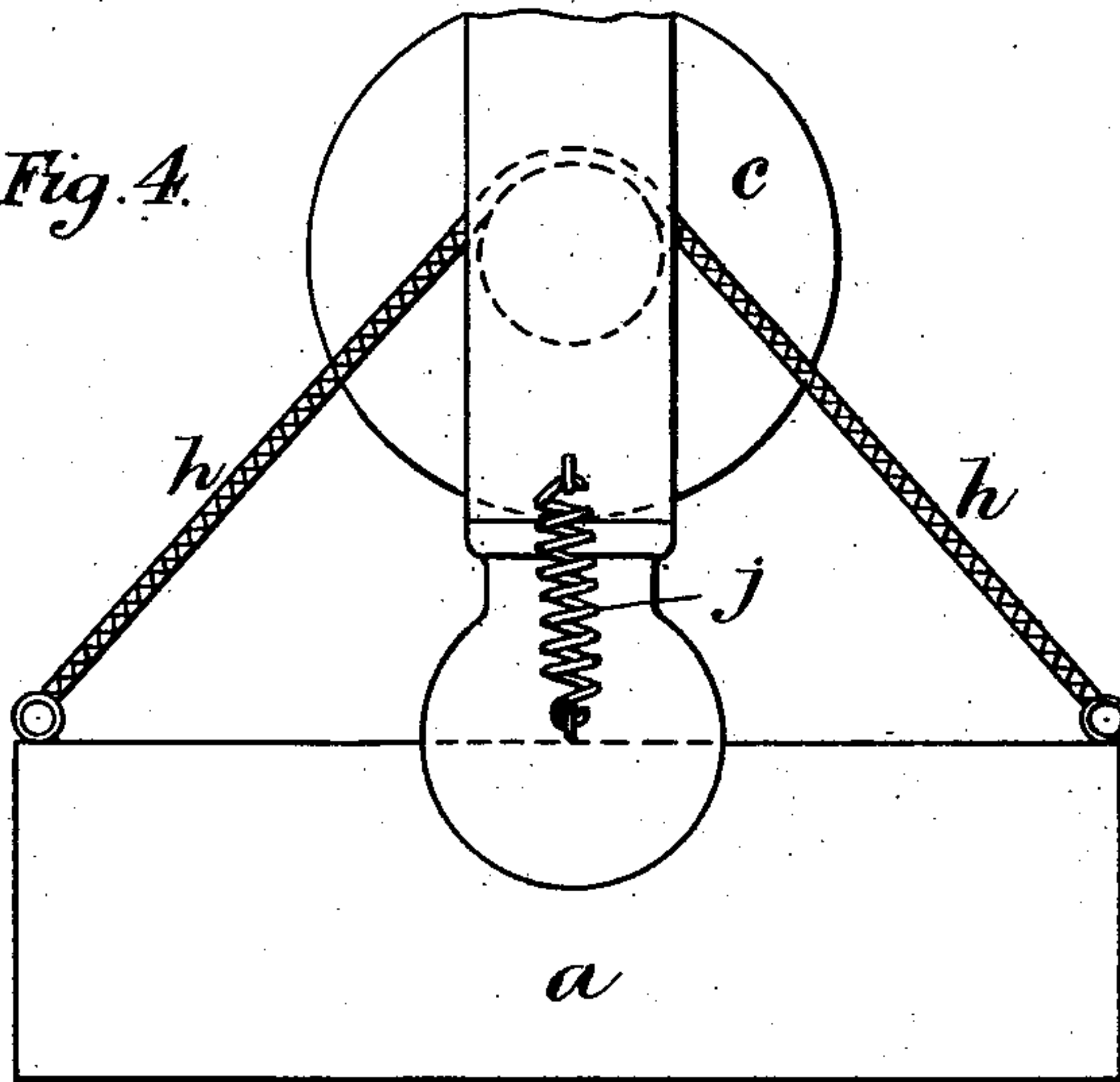
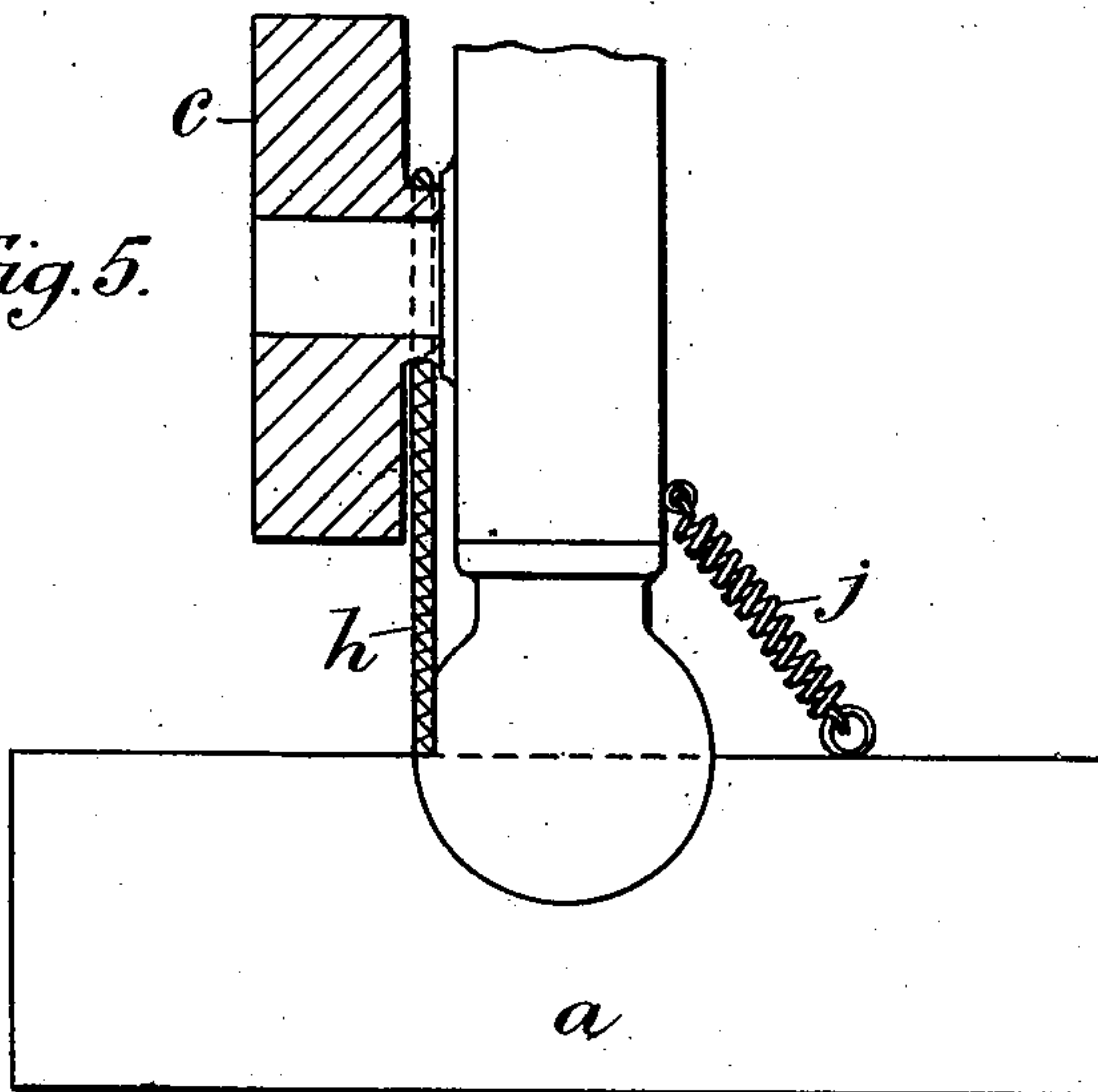


Fig. 5.



Witnesses

A. M. Parkins.

E. W. Farland

Inventor

*Bramah Joseph Diplock,
By his Attorneys,
Beaman, Davidson
& Wright.*

UNITED STATES PATENT OFFICE.

BRAMAH JOSEPH DIPLOCK, OF WESTMINSTER, ENGLAND.

TRACTION-ENGINE.

SPECIFICATION forming part of Letters Patent No. 747,387, dated December 22, 1903.

Application filed March 21, 1903. Serial No. 148,977. (No model.)

To all whom it may concern:

Be it known that I, BRAMAH JOSEPH DIPLOCK, engineer, a subject of the King of Great Britain, residing at 53 Ashley Gardens, in the city of Westminster, England, have invented certain new and useful Improvements in Traction-Engines and other Vehicles, of which the following is a specification.

This invention relates to traction-engines and other vehicles mounted on feet instead of wheels, and especially those—such, for example, as are described in my United States Patent No. 658,004, of September 18, 1900—which have fixed to them rails running on rollers carried by a ring of pivoted feet, which as the vehicle moves are placed in succession on the ground. In such vehicles it is found that the centrifugal force resulting from the revolution of the ring of feet tends to prevent the feet from being turned about their pivots by gravity into their proper positions, so that they do not always come flat onto the ground, as they should do. This defect is, according to this invention, remedied by connecting the feet to the rollers through friction-gear, so that they tend to turn with the rollers, stops being provided to arrest them when at the proper angle.

Figure 1 is a vertical longitudinal section of the arrangement I prefer to adopt, and Fig. 2 is a transverse section of the same with the foot tilted sidewise. Fig. 3 is an elevation of the friction device. Figs. 4 and 5 are diagrammatic side and end elevations of a modification.

In Figs. 1 to 3, a is one of the feet, having inside it a slide a' , kept central by springs a^2 and carrying a socket a^3 , working on a ball b' , fixed to the end of the spoke b . c is a roller mounted on a stud b^2 , fixed to the spoke b . These parts are similar to those described in my patent above referred to and require no further description.

The spoke is hollow and has within it a pair of racks d , whose upper ends gear with a pinion e' , fixed to a spindle e , passing axially through the stud b^2 . The outer end of the spindle e carries a head formed of two clips f pressed together by springs f' , as shown in Fig. 3. Each clip has pivoted to it a finger f^2 , which enters a hole or notch in the roller c , so that the head f turns with the roller and tends to turn the spindle e with it. The lower ends of the racks d gear with a pinion g , to which a finger

g' is pivoted on a longitudinal pivot g^2 . The finger g' enters a circular hole a^4 in the slide a' , and as the roller c revolves and the clips f frictionally drive the spindle e and racks d the finger g' comes against the side of the hole and turns the foot a into the position shown at Fig. 1. The movement of the finger g' is limited by the edge b^3 of the hole in the ball b' , and when it is arrested the clips f slip on the spindle d . If, owing to an inequality of the ground, the foot a is tilted sidewise, the finger g' is simply turned about its pivot g^2 , as shown at Fig. 2; but since the pivot is longitudinal, it is still able to turn the foot a into the position shown in Fig. 1, as above described. The turning movement of the foot in all directions is limited by the shoulder b^4 on the spoke b , so that it is impossible for it to sheer off the finger g' .

In the modification shown at Figs. 4 and 5 the foot a is tilted by an elastic band h , frictionally driven by the roller c . j is a spring tending to balance the tension of the band h .

It will be obvious that in all cases the frictional drive need not necessarily be taken from the roller c , but may be obtained from the movement of the spoke relatively to any other part—such, for example, as the axle or frame of the machine.

What I claim is—

1. The combination of a spoke, a foot pivoted to the spoke and friction-gear tending to turn the foot about its pivot.

2. The combination of a spoke, a foot pivoted to the spoke, a roller pivoted to the spoke and friction-gear connecting the roller and the foot.

3. The combination of a spoke, a foot pivoted to the spoke, a stud fixed to the spoke, a roller free to turn on the stud, and friction-gear connecting the roller and the foot.

4. The combination of a spoke, a foot pivoted to the spoke, a stud fixed to the spoke, a roller free to turn on the stud, a spindle passing through the stud, a friction device connecting the roller and the spindle, a pinion fixed to the spindle, a rack gearing with the pinion, a second pinion gearing with the rack, and a finger carried by the second pinion and engaging with the foot.

BRAMAH JOSEPH DIPLOCK.

Witnesses:

ROBERT B. RANTFORD,
JOHN H. WHITEHEAD.