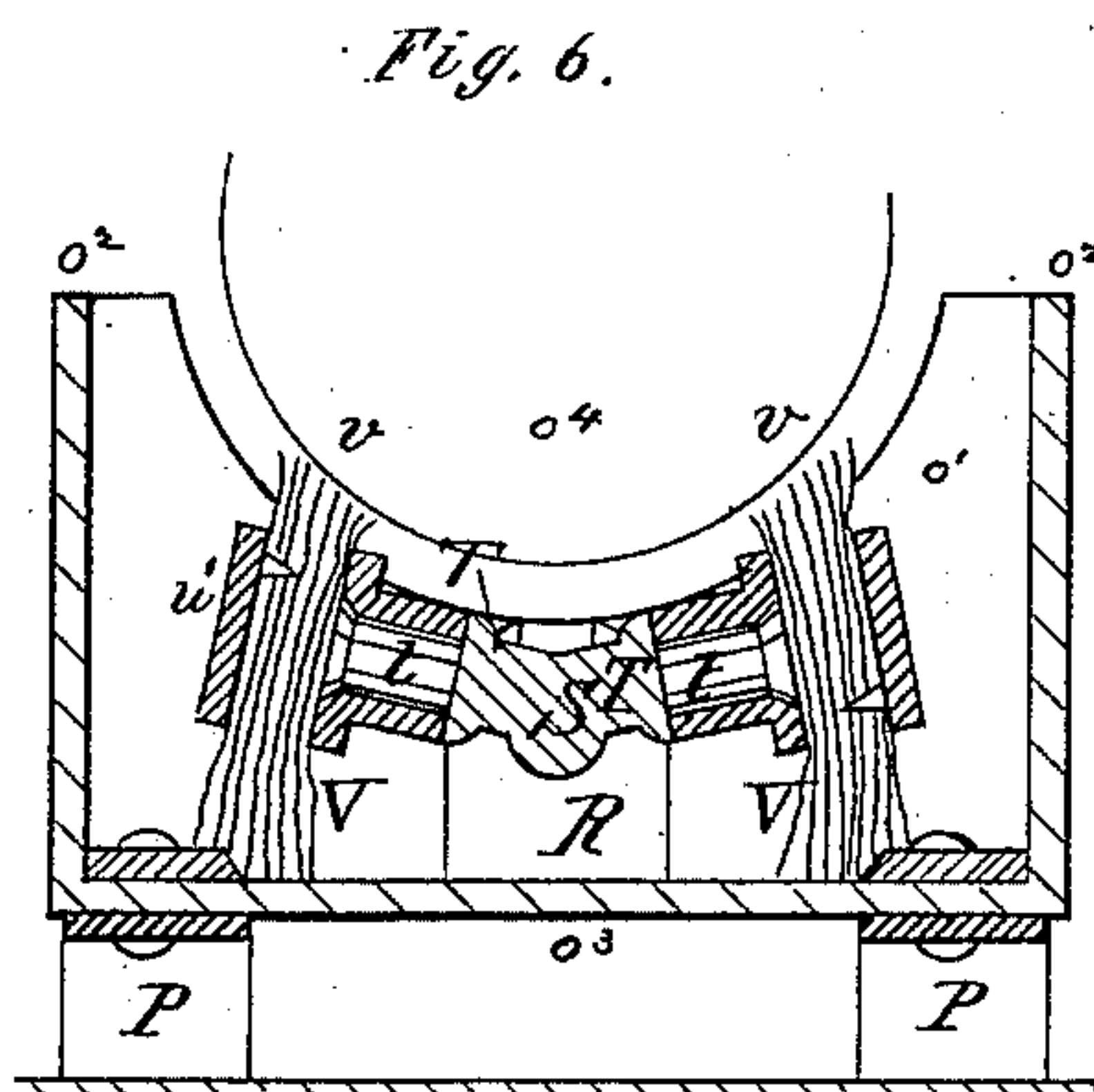
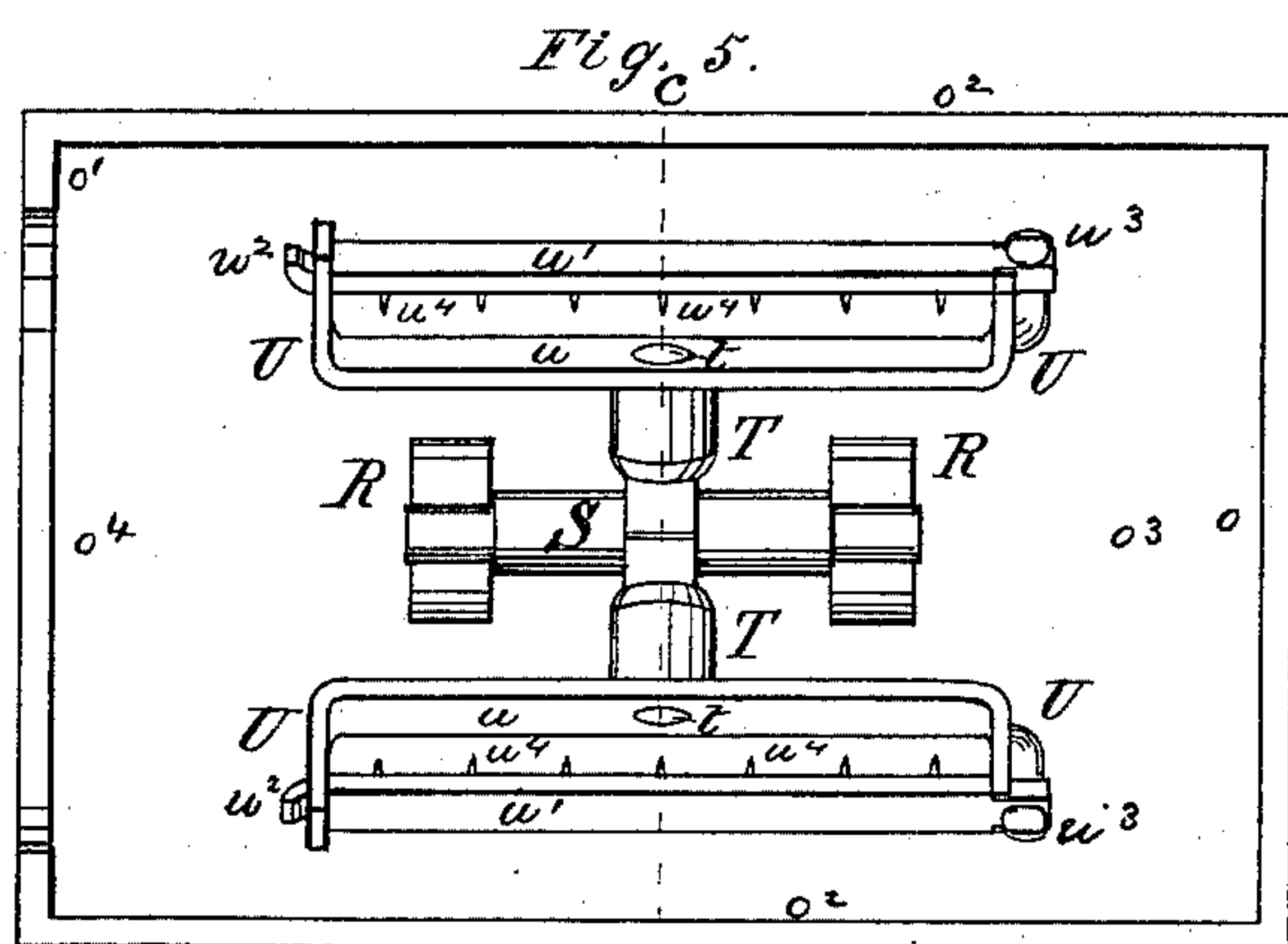
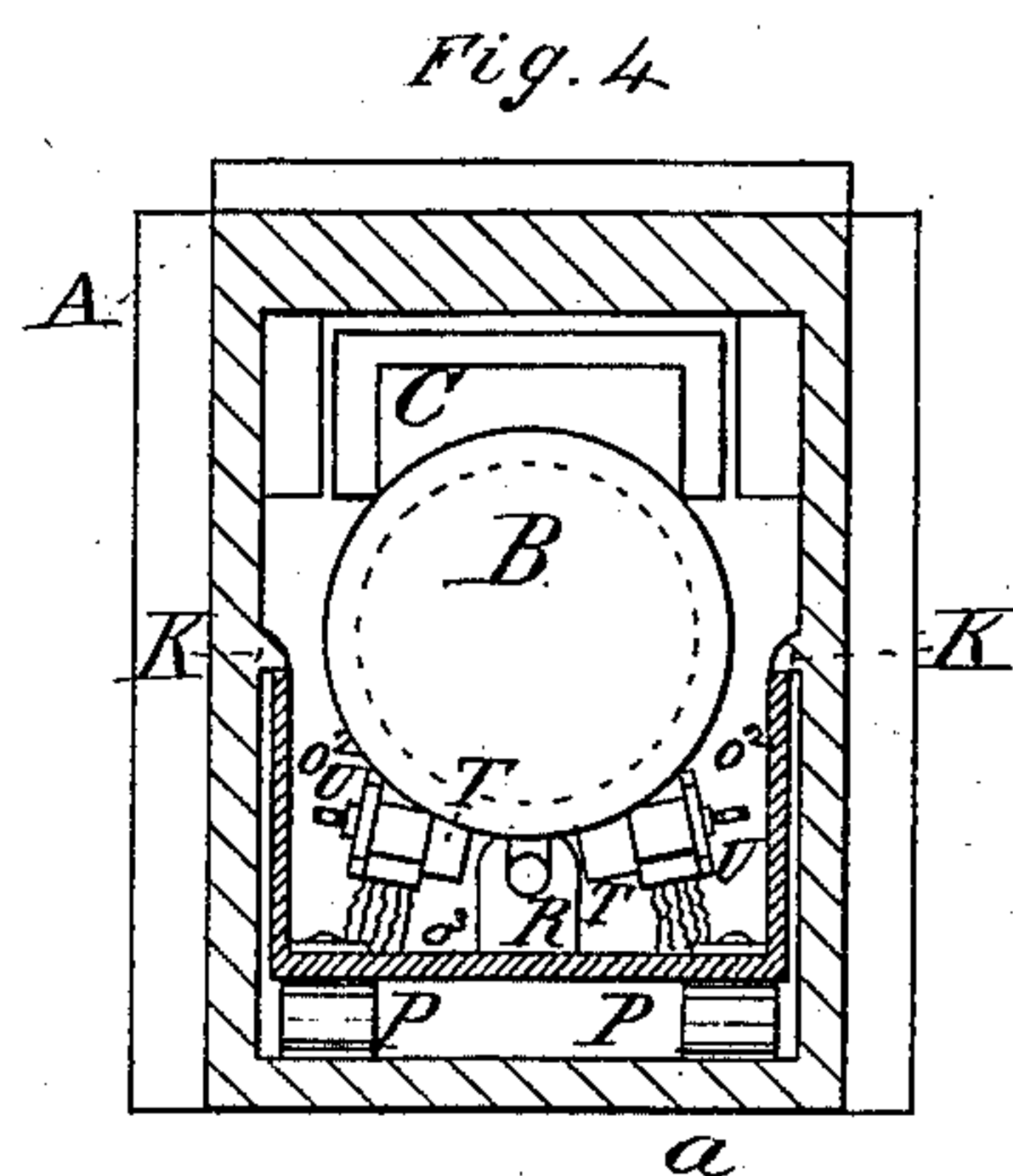
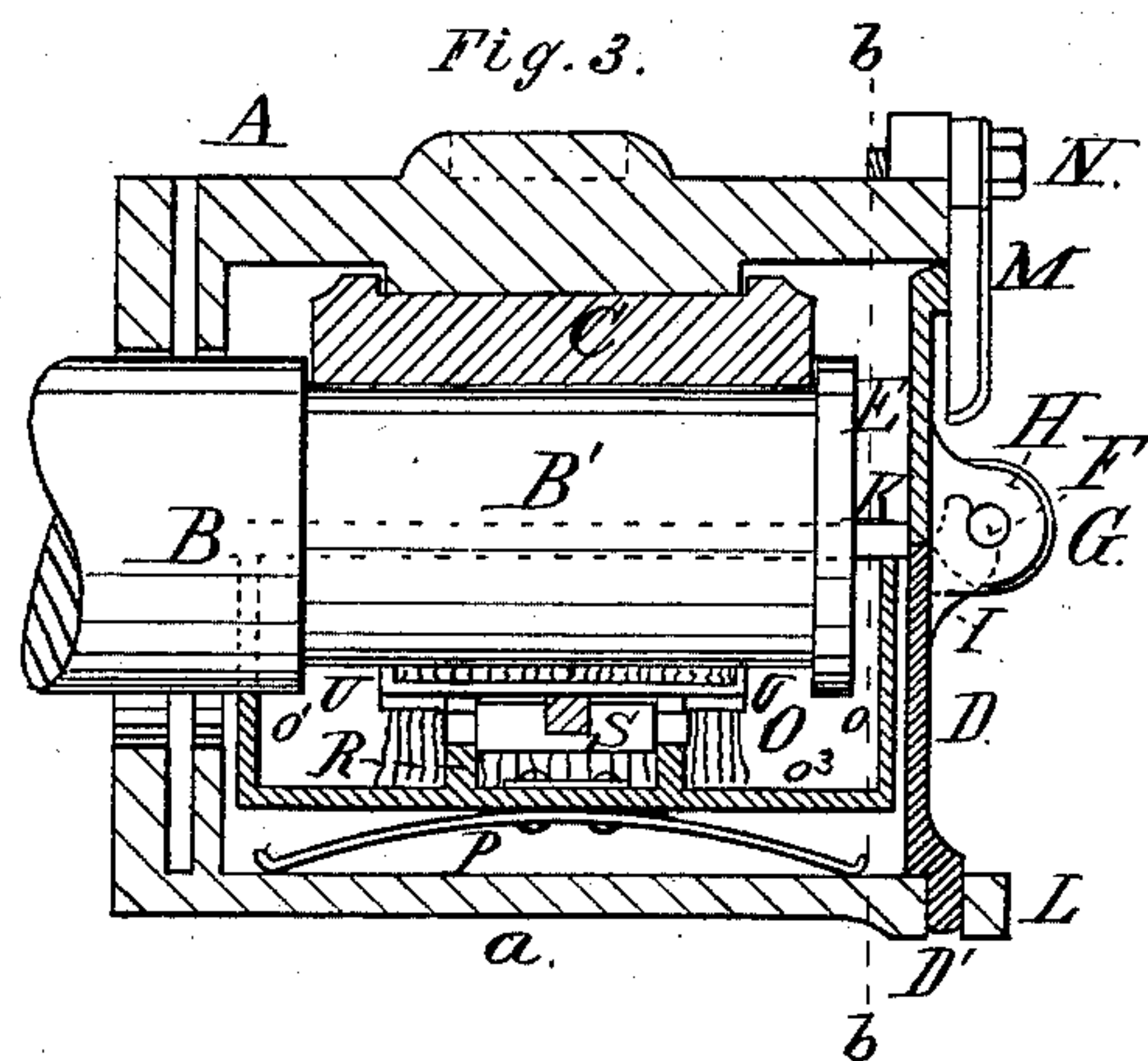
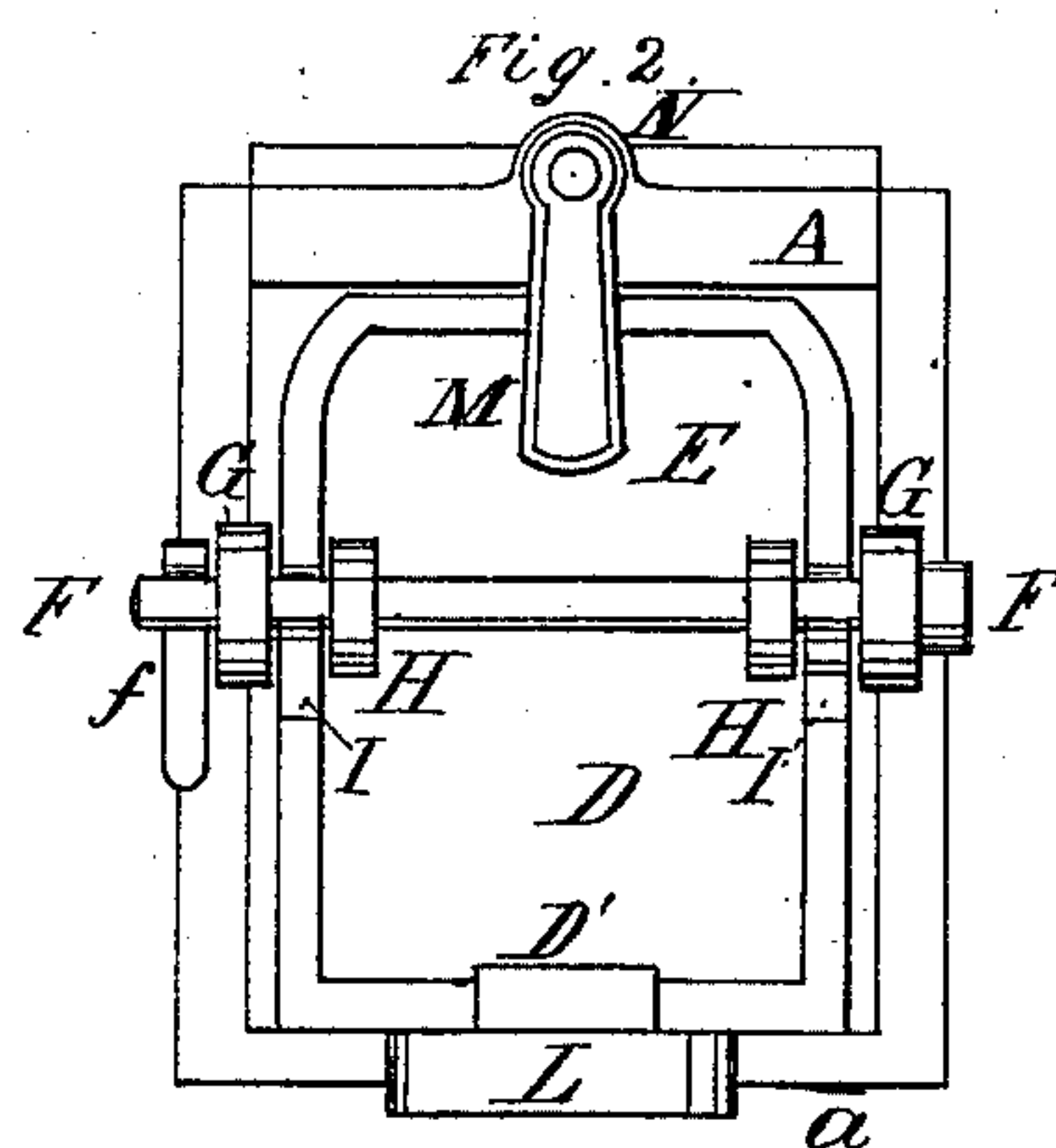
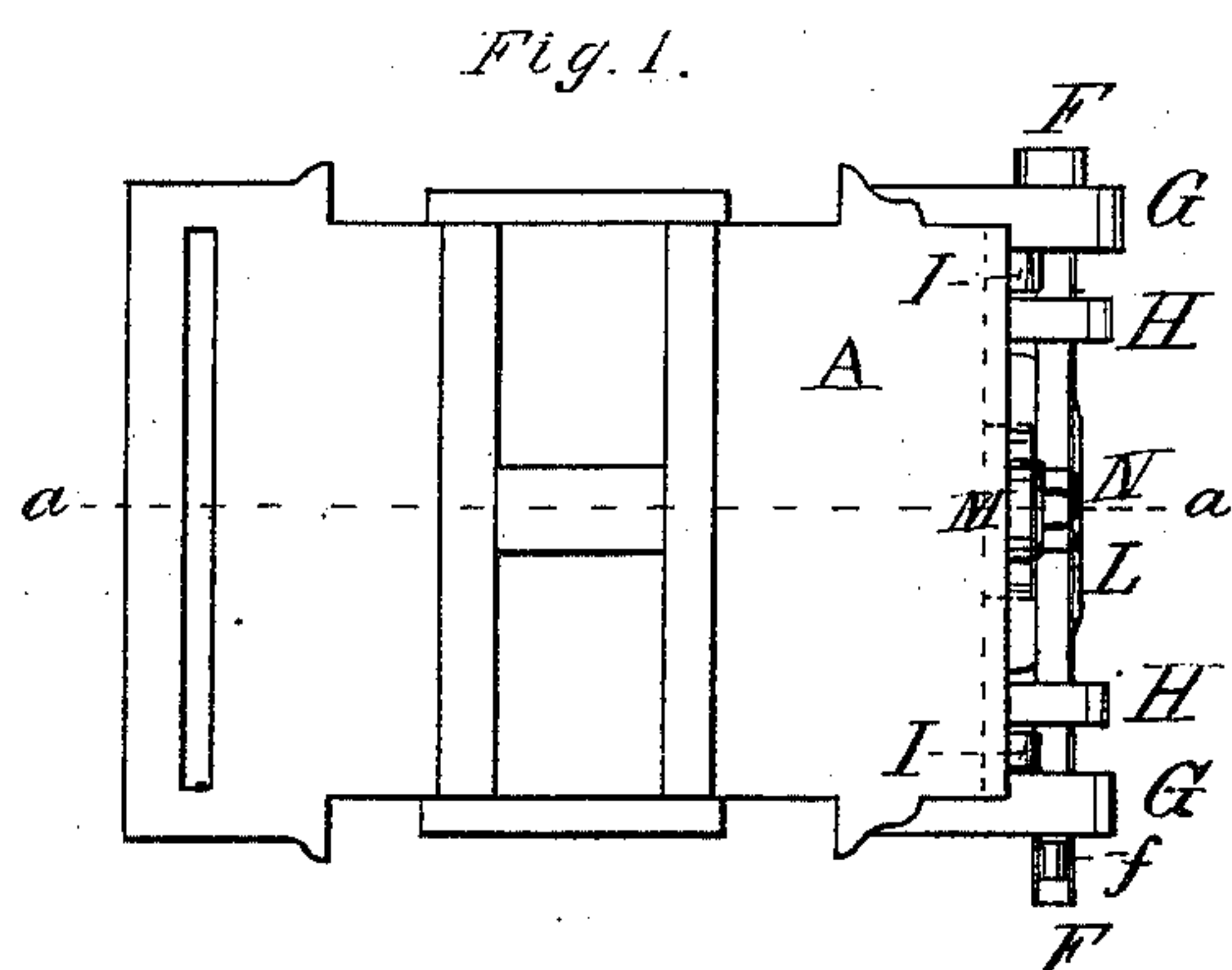


(No Model.)

T. H. BURRIDGE.
Car Axle Box.

No. 231,993.

Patented Sept. 7, 1880.



Witnesses:
Geo. H. Knight.
Walter J. Allen

Inventor:
Thomas H. Burridge
By Knight Book
Atty.

UNITED STATES PATENT OFFICE.

THOMAS H. BURRIDGE, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF
OF HIS RIGHT TO GEORGE W. WARE, OF SAME PLACE.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 231,993, dated September 7, 1880.

Application filed June 10, 1880. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. BURRIDGE, residing at the city of St. Louis, Missouri, have invented Improvements in Car-Axle Boxes, of which the following is a specification.

My improvement relates to the class of automatic oilers for car-axles; and it consists in making the box with a removable end and a removable oil-pan which gives support to an oscillating oiler similar in some respects to that shown in Letters Patent No. 158,358, granted for a former invention of mine, and dated 5th January, 1875. In the present invention the oil-pan is supported on springs, preventing injury to the oiler on the ascent of the box on the axle.

In the drawings, Figure 1 is a top view of the box. Fig. 2 is a front view of the same. Fig. 3 is a longitudinal section at *a a*, Fig. 1. Fig. 4 is a transverse section at *b b*, Fig. 3. Fig. 5 is an enlarged top view of the oil-pan and oiler with the cotton or capillary material removed to show points of construction. Fig. 6 is a transverse section at *c c*, Fig. 5.

A is the axle-box, made to receive the end of an ordinary car-axle, B, and to fit an ordinary pedestal. C is an ordinary journal-box or "brass" resting on the journal B' of the axle.

The grease-box A is made with a removable front end consisting of two parts or plates, D and E. A pin extends across in front of the plates D and E at about the mid-height of the box, said pin forming the hinge-pin of the upper plate or door, E, and holds in the upper end of the plate D. This pin F runs through the ears G, projecting from the sides of the box, and through lugs or ears H, projecting from the lower part of the plate or door E. The plate D has at the upper end lugs I, parts of which are shown in broken lines in Fig. 3. The lugs I rest against the pin F and hold the upper end of the plate inward, the inner side of the plate resting against the ends of the ledges K at the upper edge. The lower end of the plate D is held in position by a lip, D', which rests in a slot in a lug, L, projecting from the bottom *a* of the box A.

The door or plate E turns on the pin F, and when closed is kept shut by a gravitating

catch, M, which turns on a pin, N, and hangs down therefrom. The door E is opened for the introduction of oil into the oil-pan and for examination of the parts. It is only necessary to remove the plate D when putting in or taking out the oil-pan. The pin N is held in by a split pin or key, *f*.

O is the oil-pan, with ends *o o'*, sides *o²*, and bottom *o³*. The oil-pan is supported on springs P P, which rest on the bottom *a* of the axle-box A, and which hold the upper edges of the pan in contact with the horizontal ledges K K on the inner sides of the box A, the ledges limiting the ascent of the pan.

The chief use of the springs P is to allow the ascent of the box A on the axle without injury to the oiling apparatus, so that it will not be necessary to remove the oiler when jacking up the truck or car, and the oiler will not be subject to injury from inequalities in the track.

R R are standards in the bottom of the oil-pan, supporting the rock-shaft S, which latter has arms T T, ending in pivot-pins *t t*, upon which are pivoted clamp-frames U U, consisting each of a bar, *u*, capable of oscillation on the pivot *t*, and whose ends are turned outward at about a right angle for the attachment of a removable bar, *u'*, that is secured to the outturned ends of the bar *u* in any suitable manner. I have shown as a means of attachment a pin, *u²*, at one end, which enters a hole in the outturned end of the bar *u*, and a thumb-screw, *u³*, at the other end, which passes through the end of *u'* and screws into the end of the bar *u*. The inner side of the bar *u'* is armed with spikes *u⁴*, which engage the cotton or other capillary material V. The other bar, *u*, may also have spikes upon the inner side for a like purpose. Spikes are all the more necessary because the cotton cannot be pinched very tight, so as to prevent the upward passage of oil from the pan to the journal.

The inner end, *o'*, of the oil-pan has a circular recess, *o⁴*, that fits the axle inside the journal B', to prevent the escape of oil. It is necessary that the orifice in the oil-box through which the axle passes should allow vertical play in the axle, so that there is a space left below the axle through which the oil escapes,

and the box cannot be filled with oil above the bottom of the apperture. Thus the surface of the oil must always be considerably below the bottom of the axle.

5 It will be seen that my pan is in direct contact with the axle at all times, owing to the accommodating springs P, so that the oil may be filled in up to the bottom of the axle without running out, and as the end of the pan
10 snugly fits the axle the oil is prevented from materially escaping along the surface of the axle.

The described way of preventing the escape of oil from the pan is an important feature, because it saves much loss of oil.

15 The pads *v* at the top of the material V are kept soaked with oil by capillary attraction as long as any oil remains in the pan, and by the oscillation resulting from the shaking of
20 the box the oil is communicated to the journal. It will be observed that the pads *v* are not

kept in constant contact with the journal and never pressed hard against it, so that very little wear takes place.

I claim as my invention—

1. The combination of the oscillating oiler with the removable oil-pan O, supported upon spring P. 25

2. The combination of the oscillating oiler with the oil-pan O, supported on springs P, and fitting the axle B inside the journal B', substantially as and for the purpose set forth. 30

3. The combination, in a car-axle box, of the removable front D E, hinge-pin F, removable oil-pan O, springs P, and oscillating oiler having rock-shaft S, arms T, pivot-pins *t*, and clamping-bars U, for the purpose set forth. 35

THOMAS H. BURRIDGE.

Witnesses:

SAML. KNIGHT,
GEO. H. KNIGHT.