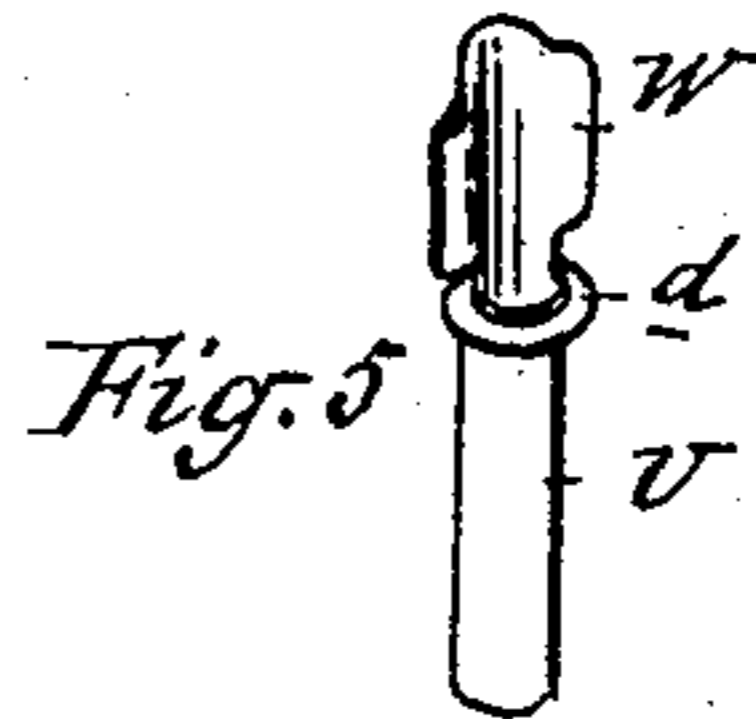
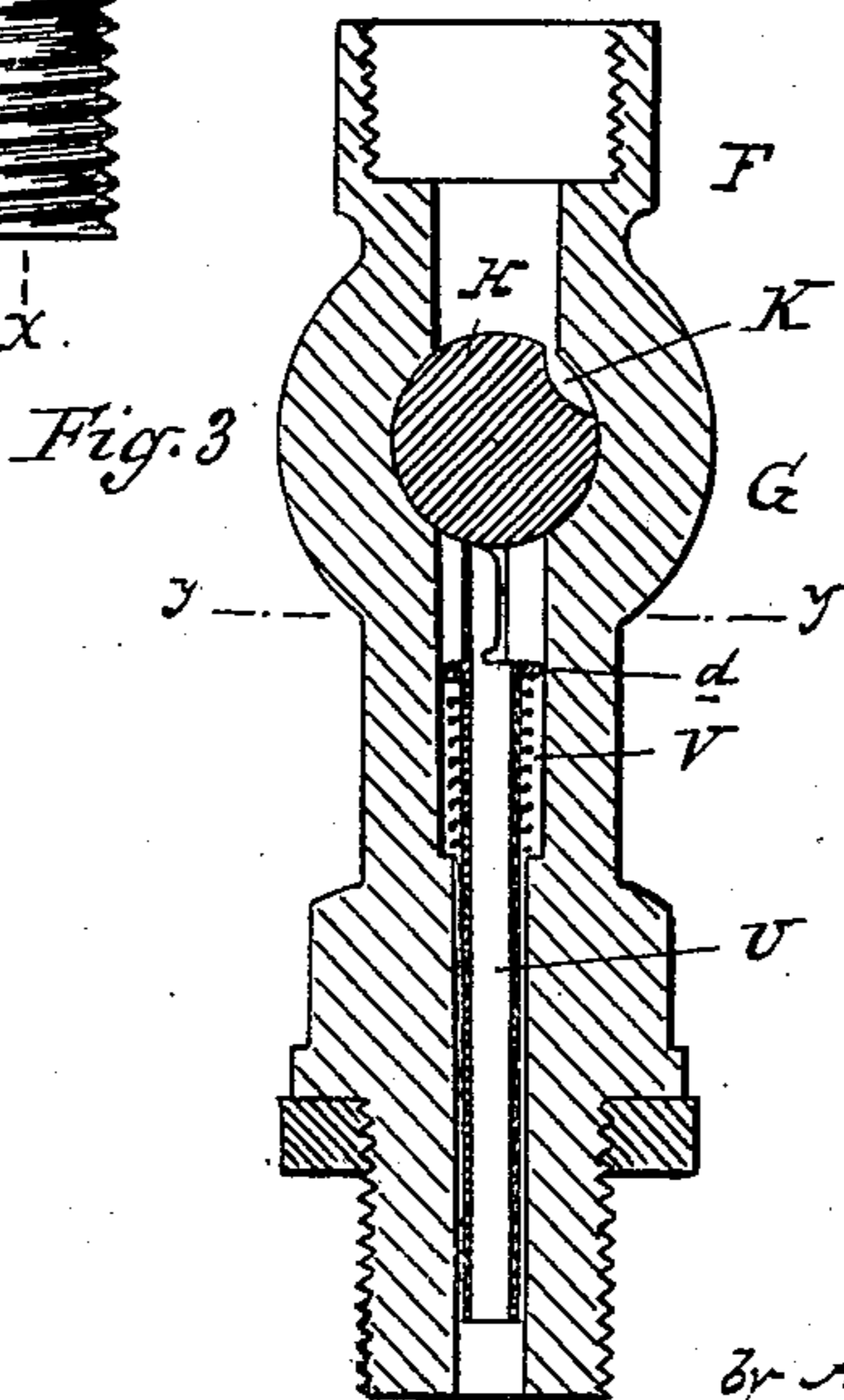
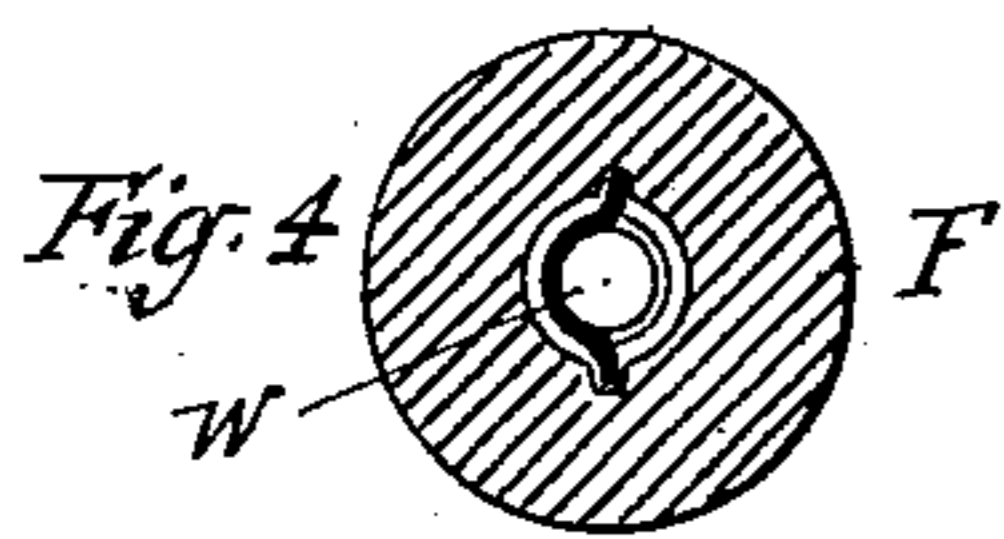
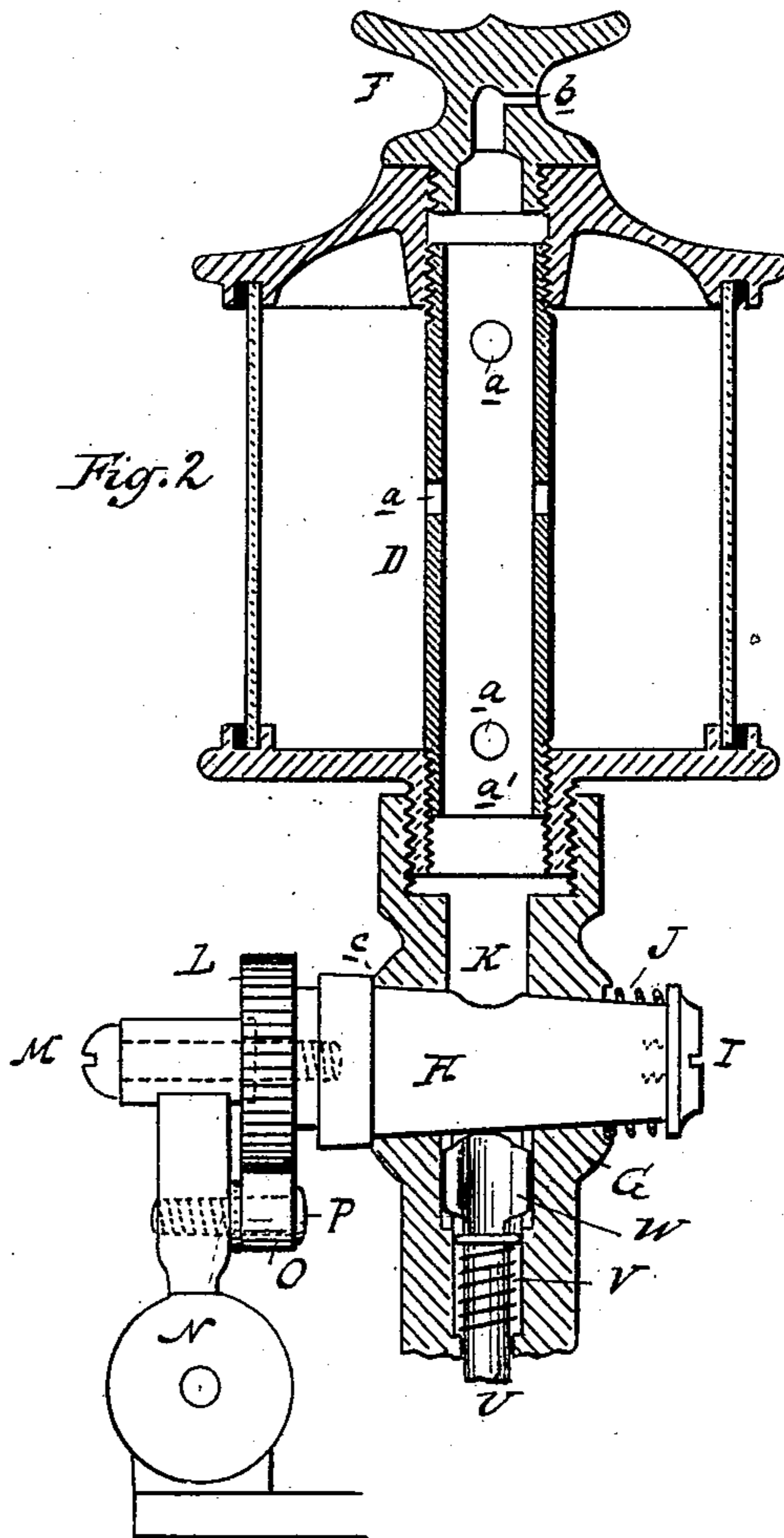
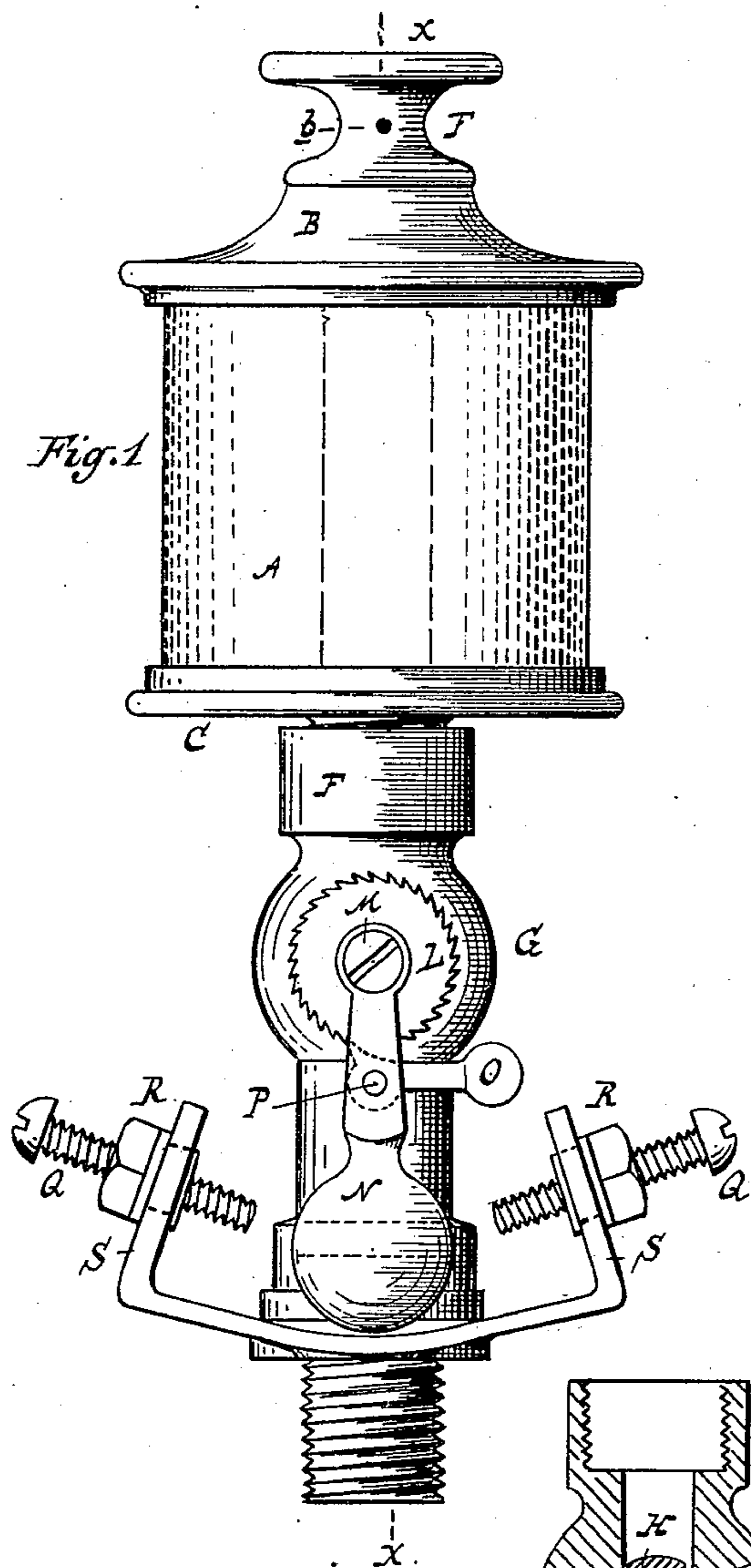


(No Model.)

A. B. SMITH.
CRANK PIN OILER.

No. 284,767.

Patented Sept. 11, 1883.



Attest:
A. Barthel
[Signature]

Inventor:
Alfred B. Smith

By Atty *[Signature]* Thos. A. Sprague

UNITED STATES PATENT OFFICE.

ALFRED B. SMITH, OF CHICAGO, ILLINOIS, ASSIGNOR TO H. W. ROOD AND ADOLPH WEBER, BOTH OF DETROIT, MICHIGAN.

CRANK-PIN OILER.

SPECIFICATION forming part of Letters Patent No. 284,767, dated September 11, 1883.

Application filed July 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALFRED B. SMITH, of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Crank-Pin Oilers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in the construction of lubricating devices especially adapted to crank-pins, eccentric-straps, &c., while it may be beneficially used upon either rotary or reciprocating parts of machinery.

The invention consists in the new and novel construction of parts and their various combinations, by means of which a steady and adjustably limited supply of oil may be utilized at will, as more fully hereinafter described.

Figure 1 is an elevation of my improved lubricator. Fig. 2 is a vertical central section on the line X X in Fig. 1. Fig. 3 is a vertical central section through the discharge-tube, taken at right angles to the section shown in Fig. 2. Fig. 4 is a horizontal section on the line y y in Fig. 3. Fig. 5 is a detached perspective of the upper end of the tube and scoop or scraper.

In the accompanying drawings, which form a part of this specification, A represents the glass walls of the cup, provided with a top, B, and bottom C, made of any suitable metal, and secured to the ends of the wall of the cup in any of the known ways of making such joints tight. Rods passing through the flanges of the top and bottom, outside the glass wall of the cup, may be employed to secure them together, although in my estimation the preferable way is to employ the tube D, open at both ends, screwed into the bottom, and with the top screwed onto the top of said tube, as shown in Fig. 2, as this holds the top and bottom rigidly in position.

E is a filler-plug screwed into the top and to be removed in order to fill the cup with oil, which is poured into the tube D and passes out of the same into the cup through the holes a in the walls of said tube. In this filler-plug a vent-hole, b, admits air to the interior of the cup.

An extension, F, made of any suitable metal, is screwed onto the bottom C, and is provided with an enlargement, G, to receive the plug H, which is tapering in form, as shown in Fig. 2. A screw, I, is tapped into the smaller end of said plug, the head of said screw projecting beyond the sides of the plug to form a point of resistance for the coil-spring J, which surrounds this end of the plug between the head of the screw and the side of the enlargement G.

K is a pocket cut in the periphery of the plug H in line with the vertical discharge from the cup through the hole a' in the tube D, the spring J tending to hold the plug tightly in its seat, and, to prevent the plug sticking in its seat by being drawn too tightly therein, said plug is provided with a shoulder, c, which rests, under the action of the spring J, against the front face of the enlargement, as shown in Fig. 2. To the front end of the plug is secured a ratchet-wheel, L. A screw, M, is tapped into the end of the plug, as shown in Fig. 2, that portion of the screw projecting beyond the ratchet-wheel, forming a wrist-pin, upon which is suspended or sleeved the ball-pendulum N.

O is a gravity-dog sleeved upon the screw P, by which the dog is secured to the arm of the pendulum, the parts being so arranged that as the pendulum swings in one direction the dog passes over the teeth of the ratchet-wheels, and in the reverse motion the gravity of such dog compels its engagement with the ratchet, whereby the plug H is turned in its seat and the length of the stroke of the pendulum is controlled by adjusting-screws Q—one upon each side—so that the dog will strike in every tooth of the ratchet; or as many may be omitted as the length of the stroke will allow. The adjusting-screws pass through the nuts R, which have a nearly vertical movement in slots in the arms S, so that the position of the screw may be regulated in any direction required to arrest the stroke of the pendulum by the impingement of the end of the screw against the center of the ball. The rotation of the plug H by the means described gradually turns the pocket K (filled with oil) down until the pocket is presented downward.

U is a tube adapted to have a vertical mo-

tion in the lower end of the extension F, such movement being controlled by the coil-spring V, which surrounds the tube U beneath the collar d, above which projects the scoop or scraper W, the upper end of which rests against the periphery of the plug until the pocket therein is presented downward, when the spiral spring forces the scoop or scraper into the pocket and leads the oil down the tube. The lower end of the extension is provided with a thread, by means of which it is secured to the part to be lubricated. The motion of the crank will cause the pendulum to vibrate, and when the device is attached to a reciprocating motion each change of direction in such motion at its arrival at the end of the stroke will also cause the pendulum to vibrate, and by this means the oil, in regulated quantities and at regular intervals, is fed.

What I claim as my invention is—

1. As a means for rotating the plug of an oiler, said plug having a pocket to receive the oil, which has been delivered at a certain point in regulated quantities, the ratchet, dog, and pendulum, combined and operating as described.

2. In a lubricator constructed substantially

as described, the plug H, provided with the shoulder c, in combination with the screw I and spring J, substantially as specified.

3. As a means for adjustably controlling the stroke of the pendulum of a lubricator constructed substantially as described, the combination of the screw Q, nut R, and arm S, said nut having a reciprocating movement in or upon said arm, substantially as set forth.

4. In an oiler constructed substantially as described, and in combination with the plug H, provided with pocket K, the tube U, provided with scraper W, and adapted to conduct the oil from the pocket to the part to be lubricated, substantially as described.

5. An oiler wherein the oil is discharged from the cup into the pocket of a rotating plug and the rotation of such plug is controlled by the movement of the part to which the oiler is attached, substantially as specified.

In testimony whereof that I claim the above as my invention I hereunto set my hand this 16th day of June, 1883.

A. B. SMITH.

Witnesses:

CHARLES J. HUNT,
H. S. SPRAGUE.