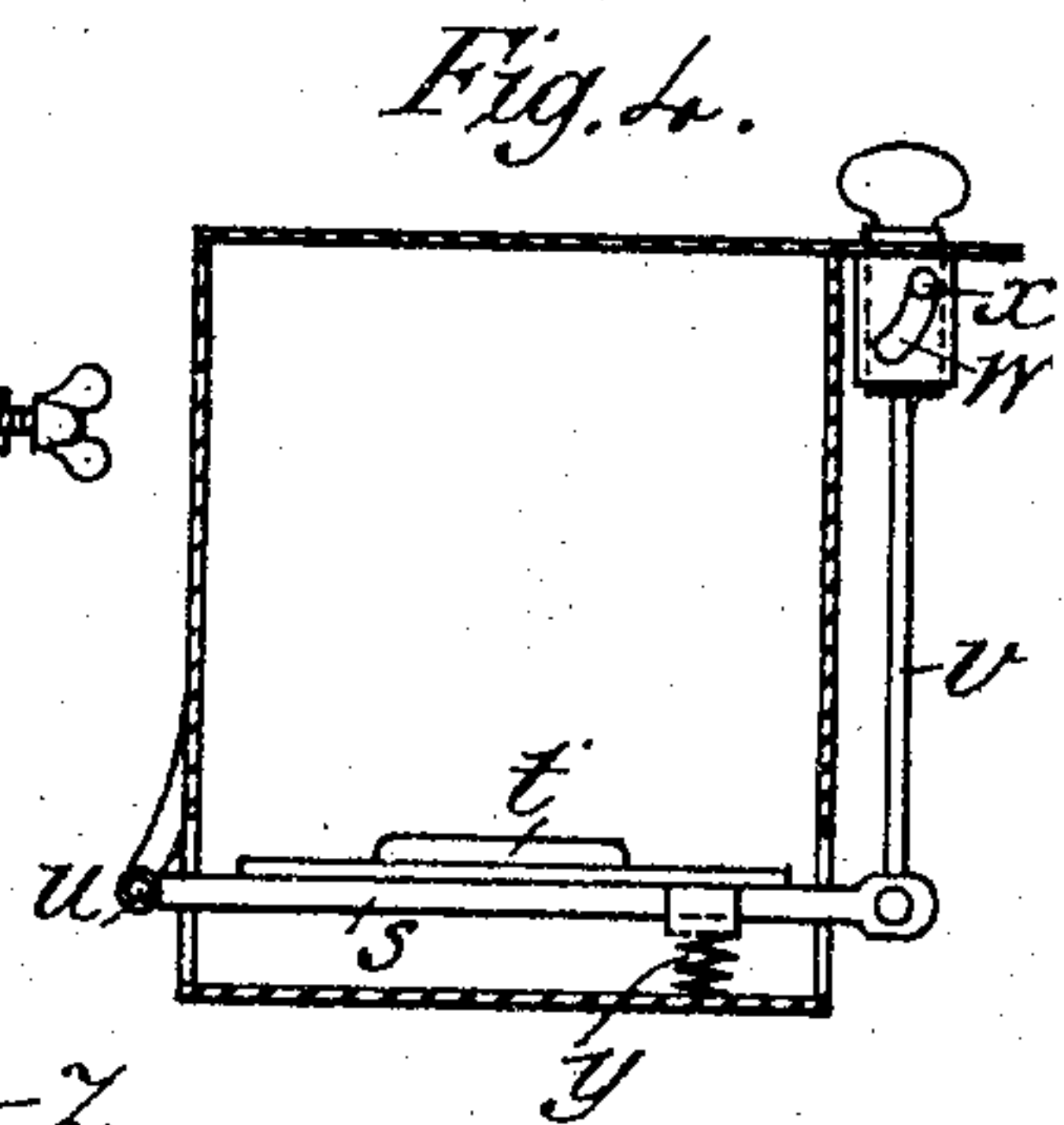
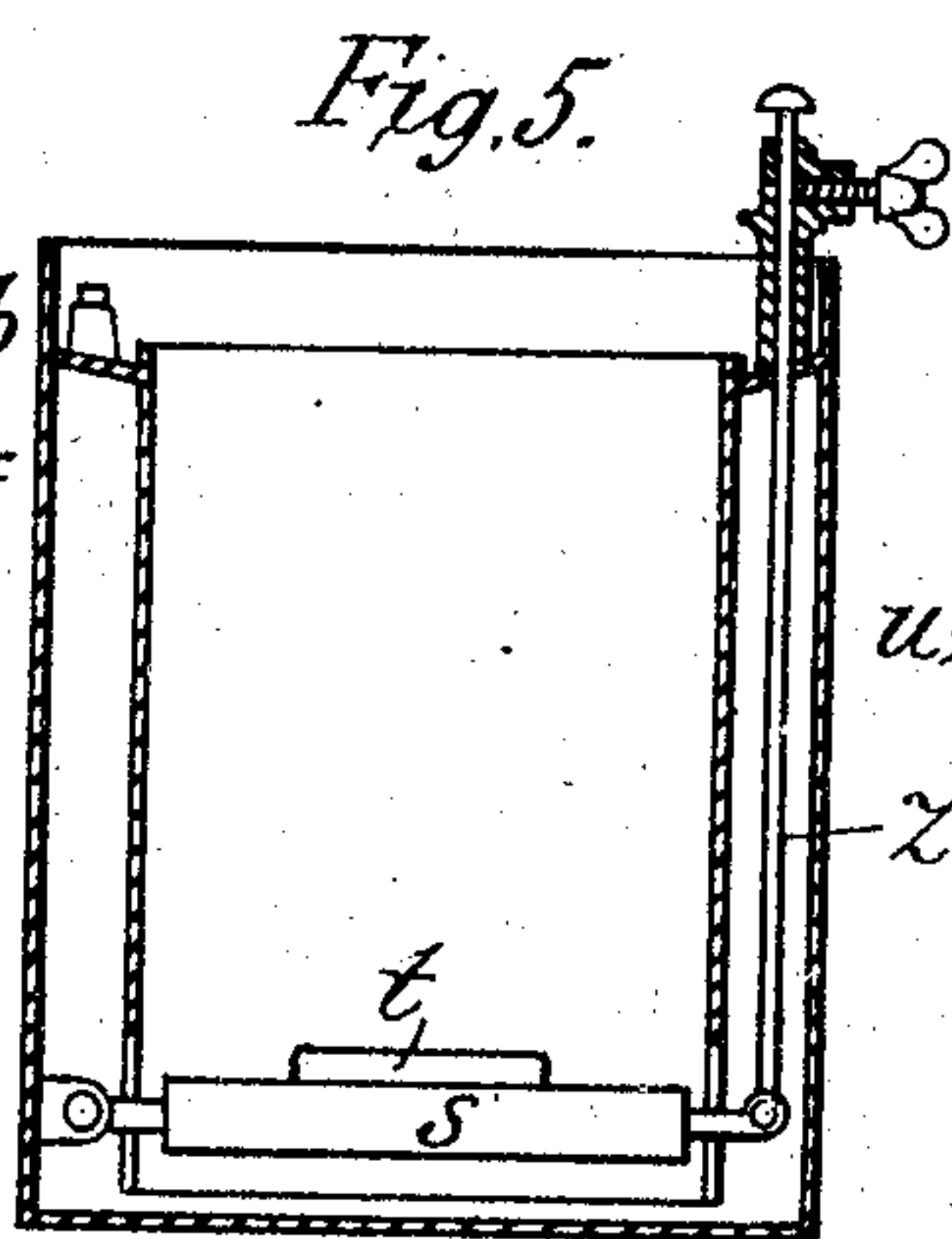
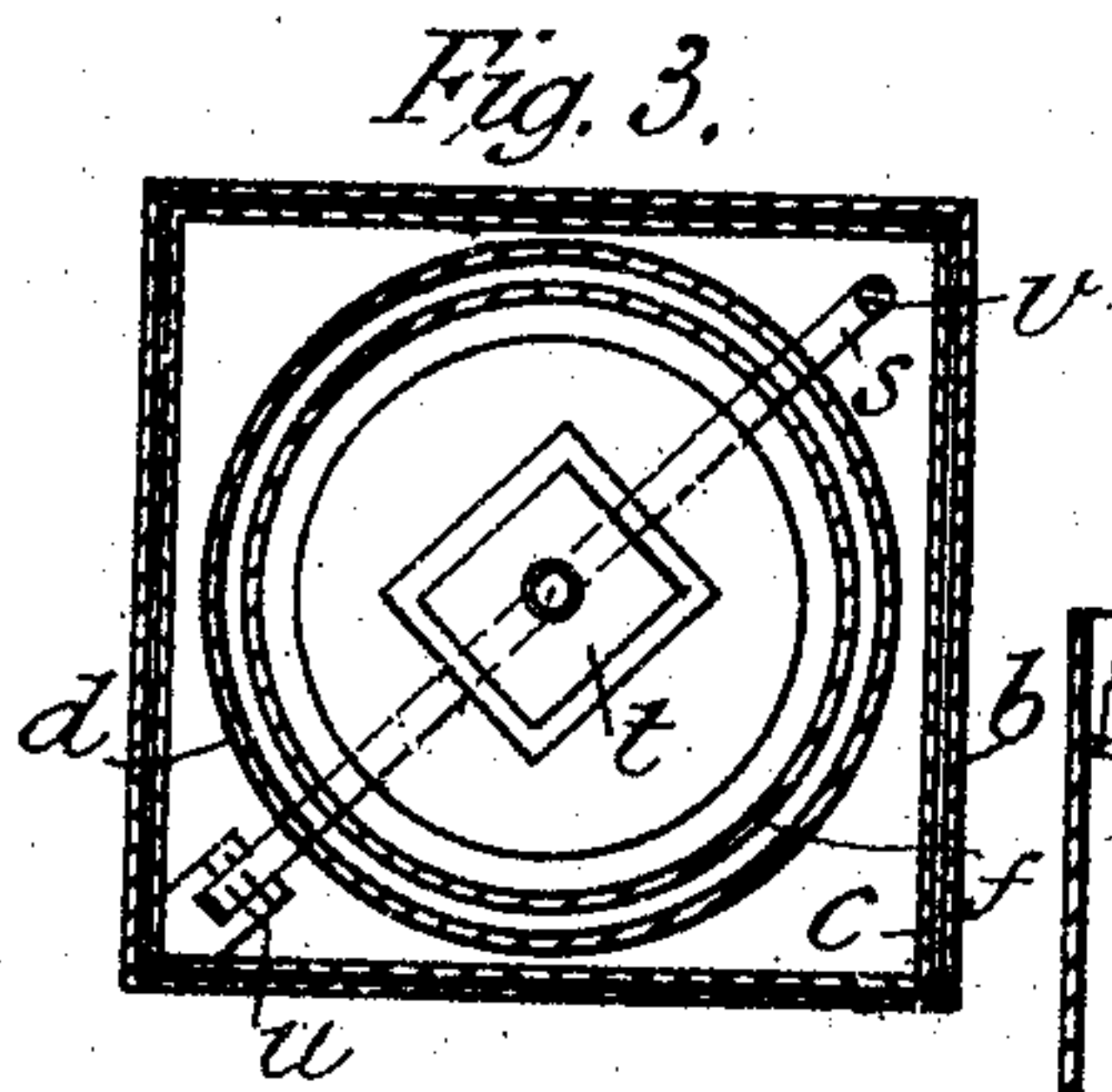
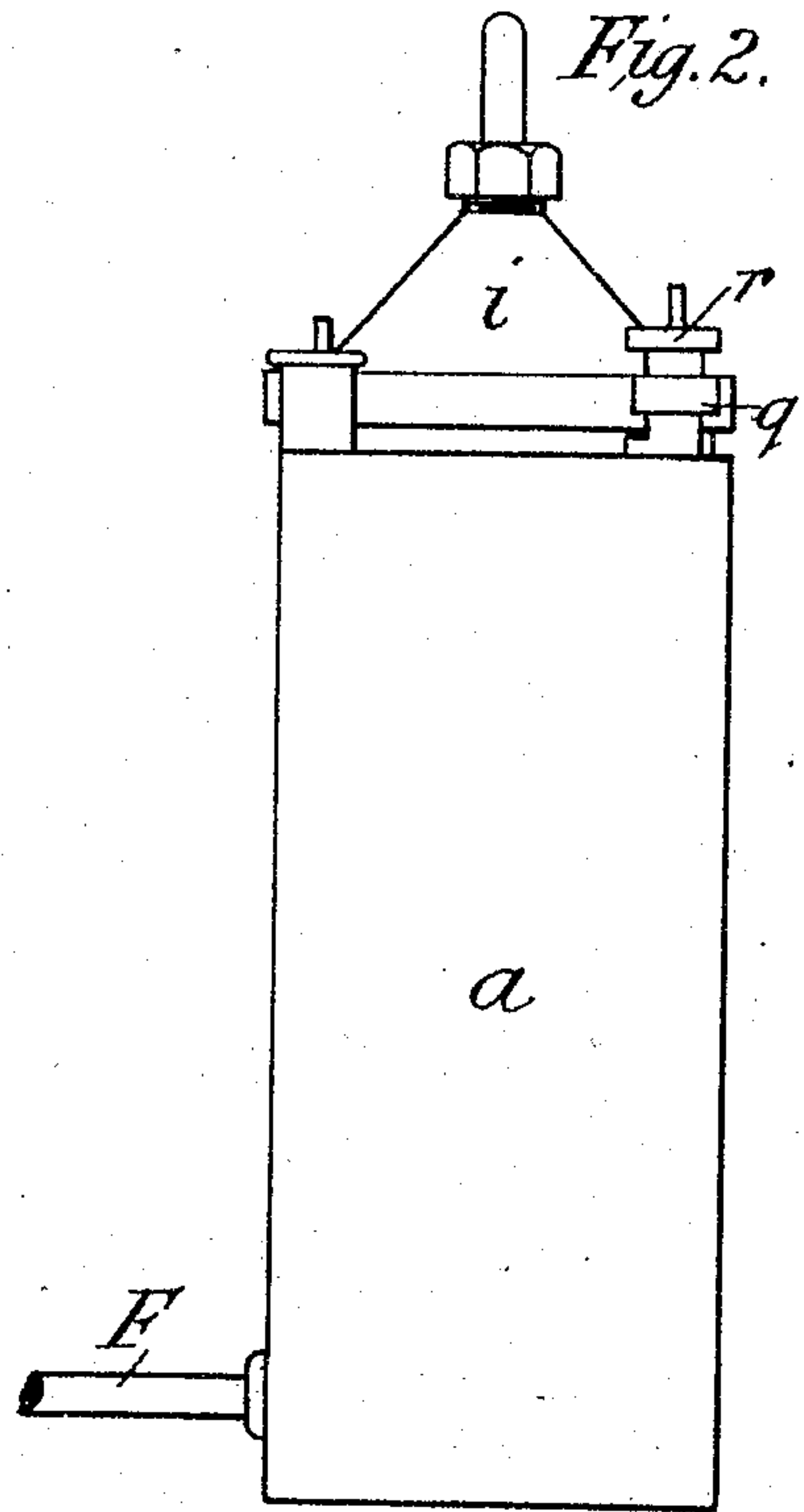
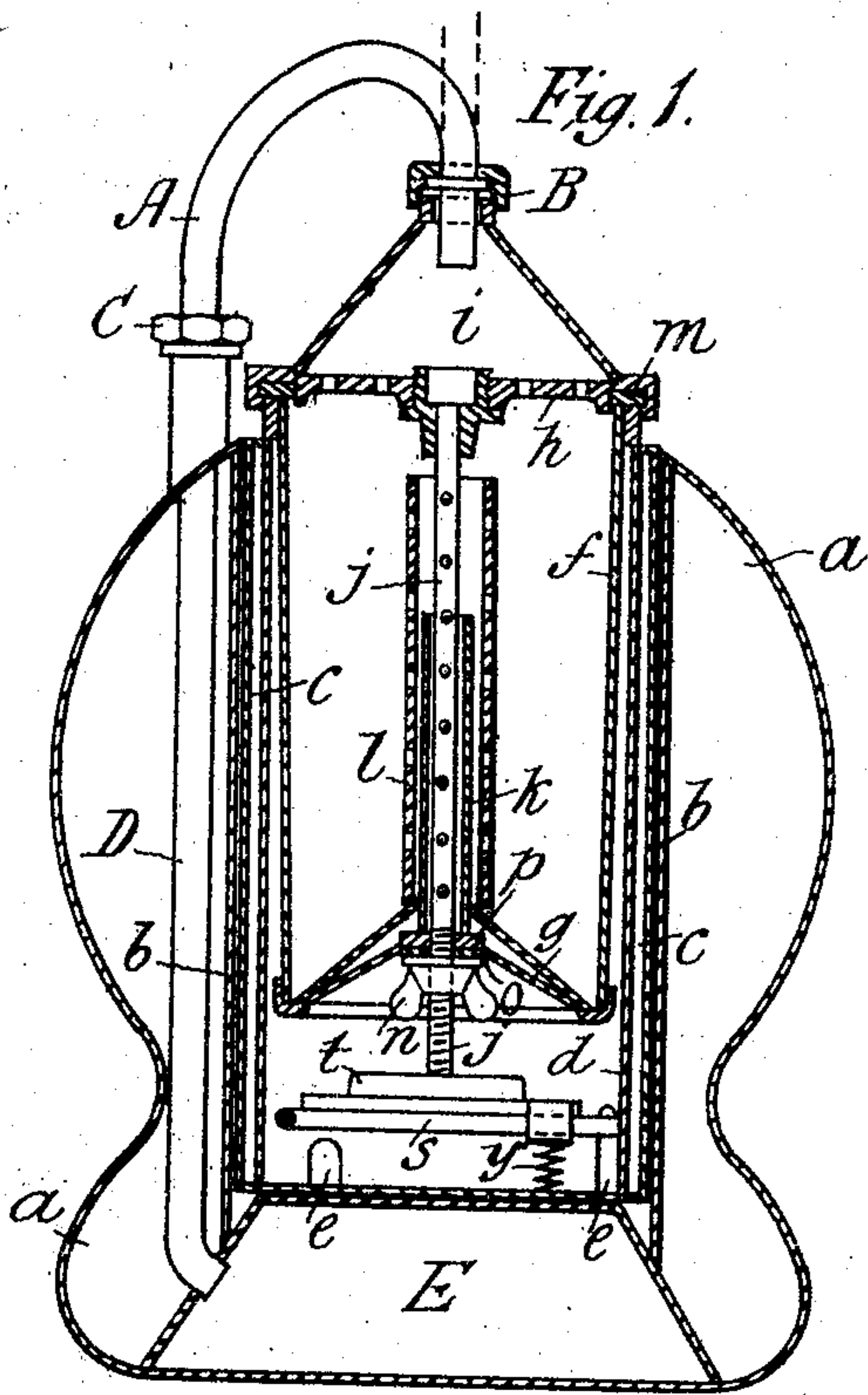


No. 780,969.

PATENTED JAN. 31, 1905.

J. BARTLETT.
ACETYLENE OR OTHER LAMP.
APPLICATION FILED AUG. 27, 1903.



Witnesses

Sid. O. Stanley.
J. J. Rowley,

Inventor
James Bartlett.
per J. B. Fleuret
Attorney

UNITED STATES PATENT OFFICE.

JAMES BARTLETT, OF SOUTH TOTTENHAM, ENGLAND.

ACETYLENE OR OTHER LAMP.

SPECIFICATION forming part of Letters Patent No. 780,969, dated January 31, 1905.

Application filed August 27, 1903. Serial No. 170,949.

To all whom it may concern:

Be it known that I, JAMES BARTLETT, plumber and electrician, a subject of the King of Great Britain and Ireland, residing at 1 Markfield road, South Tottenham, in the county of Middlesex, England, have invented certain new and useful Improvements in Acetylene or other Lamps, of which the following is a specification.

10 This invention relates to acetylene-gas lamps of the kind in which a removable chamber or cartridge containing the carbid is carried and in which the water is led upward to the said carbid.

15 In the accompanying drawings, illustrating my invention, Figure 1 is a vertical section of my improved generator as applied to a motor-car lamp, and Fig. 2 is an elevation at right angles to the same. Fig. 3 is a sectional plan of generator. Fig. 4 is a section of a generator-case, showing the valve; and Fig. 5 is a similar view showing another method of operating said valve.

20 *a*, Figs. 1 to 3, is the outer case of the back part of a lamp, and *b* an inner chamber fitted thereto.

30 *c* is the inclosed structure of the generator, and *d* an inner circular chamber formed at the bottom, with openings *e* for admitting water from *c*.

35 *f* is the carbid-holder or cartridge, formed with a conical bottom *g*, and *h* is a perforated plate forming the cover, provided with a conical chamber *i*, filled with wadding or other packing. The carbid-holder *f* is soldered or otherwise attached at its upper end to the top of the circular chamber *d*, so as to be supported by the latter.

40 *j* is a central perforated tube screwed to cover *h*, and *k* is an outer perforated tube carried by the cone *g*. *l* is a loose perforated tube or sleeve surrounding said tubes, outside of which the carbid is held in the cartridge.

45 *m* is a rubber ring or washer fitted to the cover and bearing upon the upper edge of chamber *f* and chamber *d* to form a tight joint when the wing-nut *n* is screwed on a threaded portion of the tube *j* against a washer *o*, bearing against a soft-metal plug *p*, fixed in the cone *g*, the plug *p* being formed of soft metal

to insure a liquid-tight joint between it and the cone and the washer *o*, screwed tightly against it.

The cover is fixed to the chamber *c* by screws passing through lugs *q* and engaging with 55 nuts *r*.

s is the valve for regulating the supply of water through a perforation in the bottom of the tube *j* to the carbid. This valve consists of a rod *s*, carrying a disk, to which is fixed a 60 leather or india-rubber washer *t*, and is pivoted at *u* to the inclosed structure *c*, its other end being jointed to the vertical rod *v*, which, as shown in Fig. 4, passes through a fixed sleeve formed with the spiral slot *w*, into which 65 passes a pin *x*, fixed to the rod *v*. Upon turning this rod the pin *x* is forced to travel along the path of the slot, pushing the rod *v* down and with it the valve *s*, so as to remove the washer *t* away from the end of the tube *j* and 70 allow the water to pass to the same through the openings *e* in the cylinder *d*, the friction on the pin *x* in the slot *w* keeping the valve in its open position until the said pin is turned back again by the rod *v*, when the valve is 75 returned to its closed position by the spring *y*. In the modification shown in Fig. 5 the valve is operated by simply pressing upon or raising the rod *z*, the latter being held in either position by a set-screw. 80

The operation of the lamp is as follows: The valve *s* being forced away from the tube *j*, the water in the case *c* passes up the said tube through its perforations and through those 85 in the tube *k* and sleeve *l* to the lower stratum of carbid, the water falling down the conical bottom *g*, so as to reach the lowest part of the carbid-holder. The gas as it is formed passes through the perforations in the cover *h* to the chamber *i*, where it mixes with the packing 90 material and is purified, and then passes directly to the burner through a tube, as shown in dotted lines, or through the curved tube *A*, coupled to the chamber by the packing-nut *B* and also to the lamp-case *a* by the nut *C*, the 95 end of the tube being ground to its seat to form a tight joint without the use of washers. I thus dispense with the use of india-rubber connections and washers in the said coupling, the latter being easily effected by simply 100

screwing up the nut. A tube D leading from the coupling passes down through the casing *a* and leads the gas to a second purifying-chamber E, filled with packing material, at the bottom of the lamp before proceeding to the burner. The burner-tube F screws into front of chamber E and is removed for filling the latter.

Instead of fixing the cover *h* by means of screws, as aforesaid, it may be secured by means of a bayonet-joint, the coupling-nut B permitting of the turning movement of the cover for this purpose without disconnecting the tube A.

My improved generator may be applied to domestic, advertising, and other lamps, as well as to motor-car lamps.

Having now fully described the nature of my said invention, what I claim, and desire to secure by Letters Patent, is—

1. The improvements in acetylene-gas lamps comprising the combination of an outer case and an inner chamber provided with openings for admitting water thereto from said case, a carbid-holder formed with a solid conical bottom, a perforated plate provided with a conical chamber, forming the cover of the same and the inner chamber, a curved pipe coupled to the conical chamber and to the lamp-case and a purifying-chamber at the bottom of said case to which chamber the

said pipe and the burner are connected, substantially as described.

2. The improved carbid-holder or cartridge consisting of a chamber formed with a conical bottom and fitted with a cover, the said cover being secured by a central perforated tube screwed thereto and passing through the conical bottom to which it is secured by a wing-nut screwing on a threaded portion of the same and bearing against a soft-metal washer fixed to said cone an india-rubber ring being fitted to the cover to form a tight joint for same, and loose and fixed perforated or slotted tubes or sleeves carried outside the central tube within the cartridge, substantially as described.

3. In acetylene-gas lamps the improved valve consisting of a pivoted disk carrying a leather or rubber washer which bears against the lower end of the central tube of the cartridge when closed, a rod provided with a pin, a fixed sleeve formed with a spiral slot with which the said pin engages for operating the valve, and a spring for returning the valve to its closed position, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JAMES BARTLETT.

Witnesses:

FREDERICK MICAH MELLOR,
JOHN JAMES ROWLEY.