

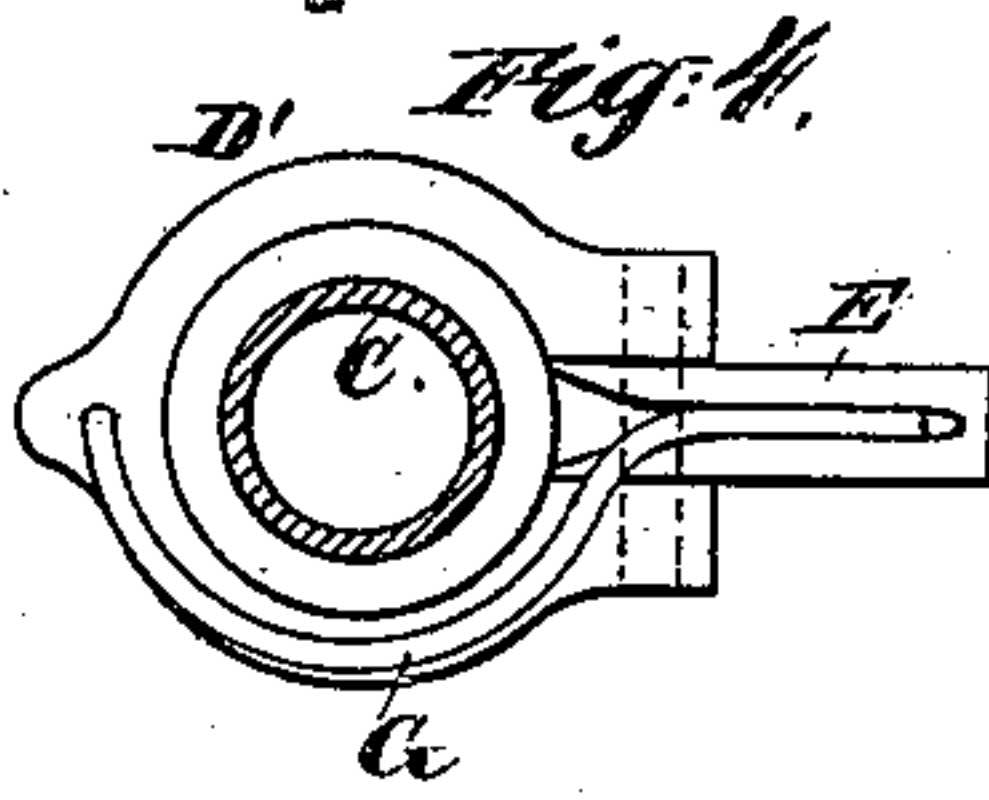
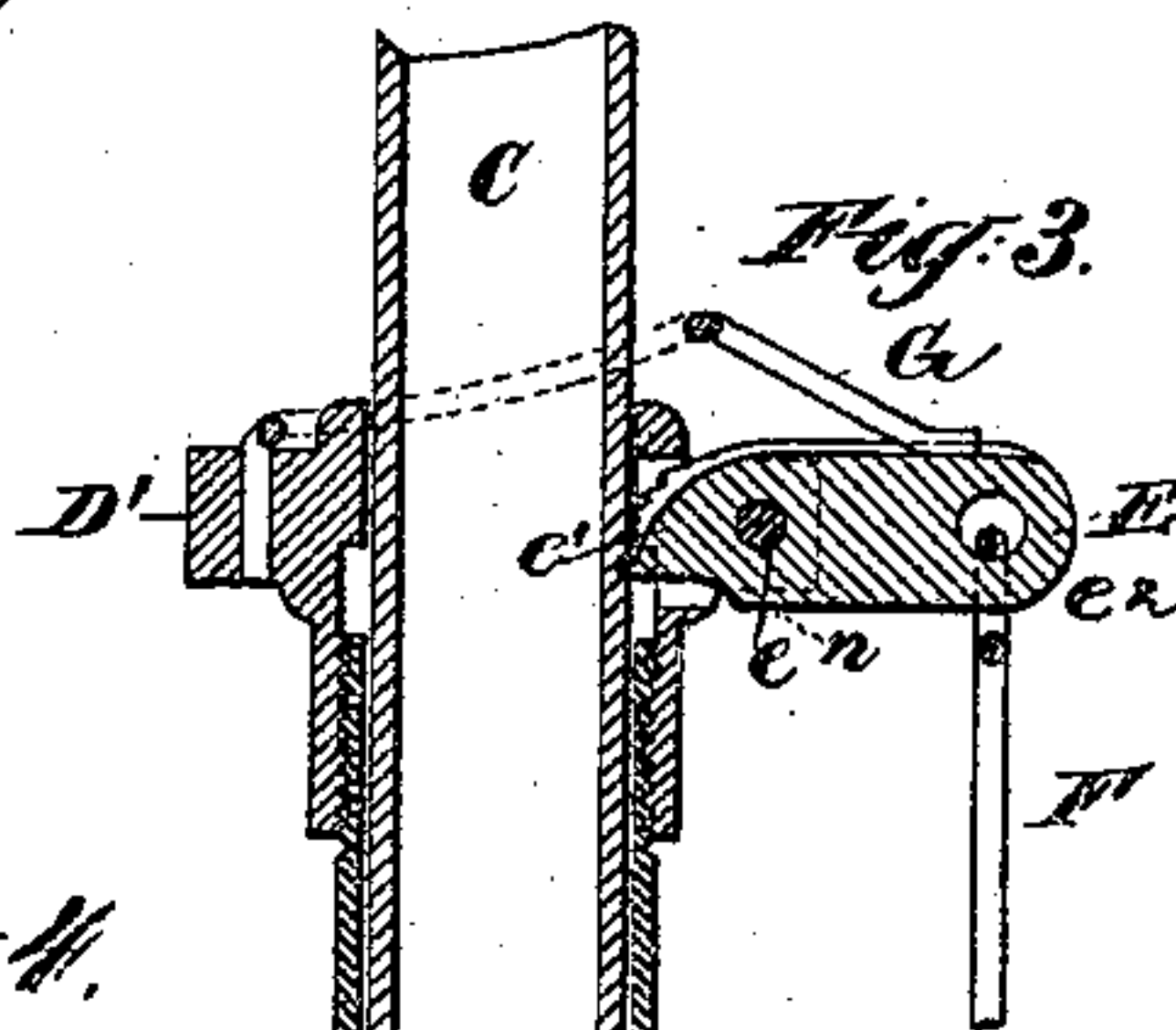
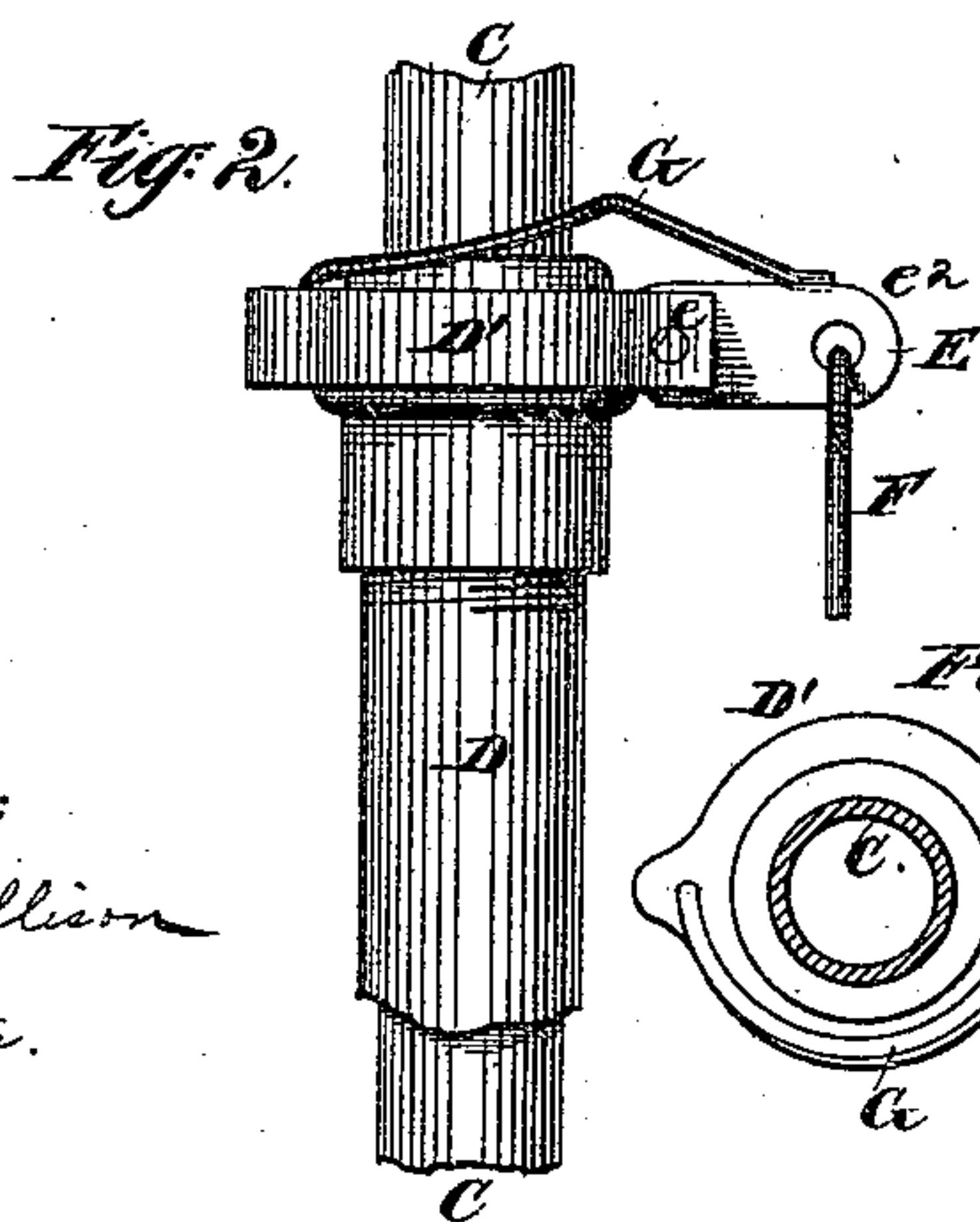
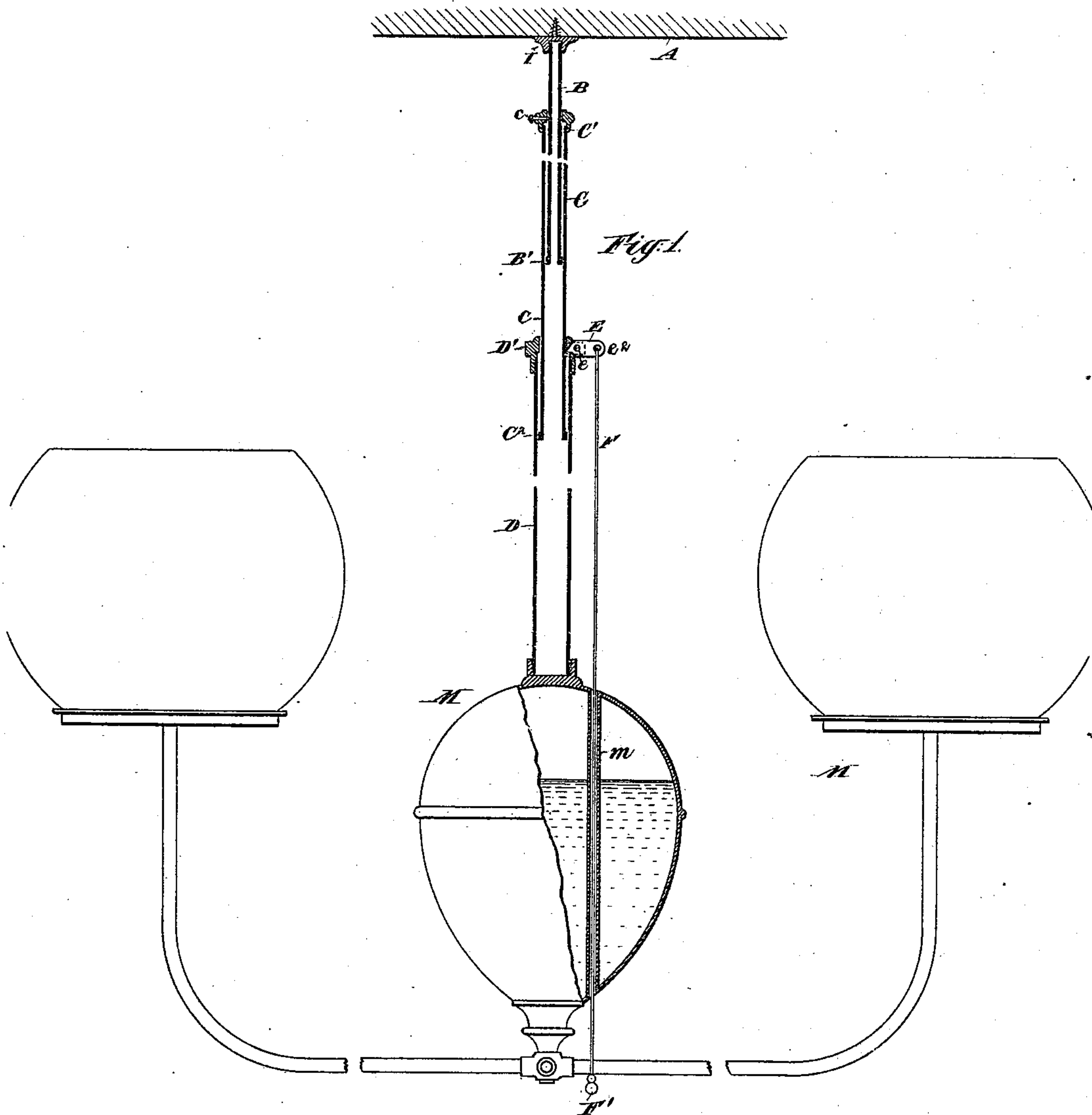
(No Model.)

A. M. SOUTHARD.

EXTENSION SUPPORT FOR CHANDELIERS.

No. 355,845.

Patented Jan. 11, 1887.



Witnesses:
Manning Ellison
H. A. Johnston.

Inventor:
A. M. Southard
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Thomas Drew Stetson

UNITED STATES PATENT OFFICE.

ABRAHAM M. SOUTHARD, OF DENVER, COLORADO, ASSIGNOR TO THE
SOUTHARD PORTABLE GAS COMPANY, OF SAME PLACE.

EXTENSION-SUPPORT FOR CHANDELIERS.

SPECIFICATION forming part of Letters Patent No. 355,845, dated January 11, 1887.

Application filed March 29, 1886. Serial No. 196,964. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM M. SOUTHARD, of Denver, Arapahoe county, Colorado, have invented a certain new and useful Improvement in Extension-Supports for Chandeliers, of which the following is a specification.

I have in my experiments applied the invention to chandeliers carrying lamps for burning oil. I will describe it as thus applied; but I believe it may, by the addition of a suitable stuffing-box or analogous means for maintaining a tight joint between the telescoped pipes, be used successfully for chandeliers supplied by gas. In such case it will be understood that the gas is admitted to the chandelier through the interior of the extension-support.

I provide for efficiently clamping the parts of the extension-support together under ordinary conditions, and for relaxing the clamp to allow the chandelier to be raised or lowered by the direct application of force by the hand or otherwise. I clamp and unclamp the parts by very simple and conveniently-operating means. These parts may be so small as to be inconspicuous, and may be operated from a convenient point near the center of the bottom of the chandelier. They do not interfere with the effect, but on the contrary slightly contribute to the æsthetic effect. I employ a lever having a toothed surface on one end. This toothed surface is curved. Its curve is eccentric to the pivot or axis of the lever. I employ means for turning this lever in the direction to grip and hold up the chandelier. The force of the hand is applied when desired to turn this lever in the opposite direction and release the chandelier. The weight of the chandelier, acting on the toothed and rounded surface, tends to increase the bite or the grip with which it is held.

The accompanying drawings form a part of this specification, and represent what I consider the best means of carrying out the invention.

Figure 1 is a central vertical section, partly in elevation. The remaining figures each show a portion on a larger scale. Fig. 2 is an elevation. Fig. 3 is a central vertical section; and Fig. 4 is a plan view, partly in horizontal section.

Similar letters of reference indicate corresponding parts in all the figures where they occur.

A central tube, B, which may, if preferred for oil-lamps, be a solid rod, extends down from the ceiling A, and is flanged out at the bottom, as indicated by B'.

C is a tube inclosing the flanged bottom B', and having a contracted head, C', adapted to traverse easily up and down on B. A pinching-screw, c, holds it in any desired position on B. The bottom of C is flanged, as indicated by C².

D is a tube of sufficient size to inclose the flange C². Its lower end is rigidly connected by screw-threads or otherwise with the chandelier M, which latter may be of any form or description. The upper end of D carries a head, D', which fits closely around and is adapted to move tightly and easily up and down on the main body of the tube C. A slot on one side allows the play of a lever, E, which turns on a pivot, e, set in lugs on the head D'. The inner end of E is toothed, as indicated by e'. Its outer end is perforated and engages with a straight rod, F, extending downward. A tube, m, extending up and down through M, constitutes an inclosed passage, through which the rod F extends, and is at liberty to be moved up and down by the force of the hand applied to a knob or other suitable handle, F'.

A spring, G, which may be a hard brass wire, is fixed in the head D', and is bent, as shown, so as to press with sufficient force on a point near the outer end of the lever E. The upper edge of the latter is grooved to retain the contact of the spring G and allow it to move slightly outward and inward as required. The toothed end e' of the lever E is preferably rounded, as shown. The surface presented to the tube C is of circular outline, being a segment of a circle a little eccentric to the axis of the pin e. When the parts are at rest, the weight of the rod F and the force of the spring G, depressing the outer end, e², turn the lever E and engage the sharply-toothed surface e' with the tube C. The tube D and its connections are supported by the force with which the toothed end e' of the lever E is pressed against C. If additional force is applied to

pull down the chandelier M, and consequently the tube D, it will, by drawing downward more forcibly on the pin *e* while the toothed end is kept engaged, turn the lever E by still further depressing the outer end, *e*², and thus still more tightly gripping the tube D by the end *e*' of the lever E. It is reliably supported.

If it is desired to raise or lower the chandelier, the operator first takes the weight of the chandelier on one hand, or by other suitable device, and then by pushing up on the handle F' of the rod F lifts the outer end of the lever E against the force of the spring G. This turns the lever and releases its hold on the inclosed tube D. It can then be shifted into any position higher or lower, and on again relaxing the thrusting force on the rod F the outer end of the lever E is again depressed by the gravity of F and the force of the spring G.

The parts are simple and the operation peculiarly efficient. The parts may be made very small, so as to attract little attention. They may be, and preferably are, nicely finished.

The toothed surface *e*² is curved, as shown, the curvature being struck from a center, *n*, eccentric to the pin *e*. When the rod D is released, the spring G turns the lever E until its toothed and rounded surface *e*² engages with the tube C. If it does not engage with sufficient force, but allows the chandelier to descend slightly, such movement, by the eccentricity of the toothed surface *e*², tightens the grip. The firm holding thus induced is easily relaxed, when desired, by lifting on the chandelier a little at the same time that the rod F is pushed up.

By my construction I avoid the necessity of counter-weights and also the necessity of tooth-
ing the supporting part C. The eccentric portion of the lever E allows the gravity of the chandelier to tighten the contact between the lever and the supporting device C. I deem this feature of the invention important.

Modifications may be made in the forms and proportions without departing from the principle or sacrificing the advantages of the invention. The tubes need not be round. They may be of square section, or hexagonal, or various other forms. I prefer that the end *e*' of

the lever E shall be hollowed to engage kindly with the exterior of the tube D when it is round.

Parts of the invention may be used without the whole. I can dispense with the tube *m* and let the rod F F' extend up and down on the outside of the reservoir. The tube C may connect directly to the ceiling A, instead of having an adjustable connection to a still smaller tube or rod, B. It will be understood that when the latter is employed the elevation of the tube C may be varied at will by simply slacking the pinching-screw *c* and raising or lowering C to the extent required and resetting *c*. I have shown the connection of B to the ceiling as formed by a screw-plug, I, having a hollow threaded recess on its lower face, which receives a corresponding threaded end of the tube or rod B. The parts below I may be connected and disconnected at will by turning around the part B.

I claim as my invention—

1. The tube or rod C, exteriorly flanged below and supported above, the tube D, inclosing it, having an interiorly contracted head, D', and the lever E, centered on D' at *e*, and having the end *e*' formed eccentric and toothed, as shown, in combination with each other and with the operating-rod F and chandelier M, as herein specified.

2. The spring G, lever E, having eccentric and tooth *e*', rod F, tube D D', chandelier M, and sustaining rod or tube C, combined and arranged for joint operation as herein specified.

3. The tube *m* in the chandelier-body M; and the rod F, playing through such tube, in combination with each other and with the lever E, having eccentric and tooth *e*', tube D D', and tube or rod C, with means for reliably supporting the latter, all arranged for joint operation as herein specified.

In testimony whereof I have hereunto set my hand, at New York city, New York, this 4th day of March, 1886, in the presence of two subscribing witnesses.

ABRAHAM M. SOUTHARD.

Witnesses:

MANIERRE ELLISON,
EDW. W. FRANCIS.