

(No Model.)

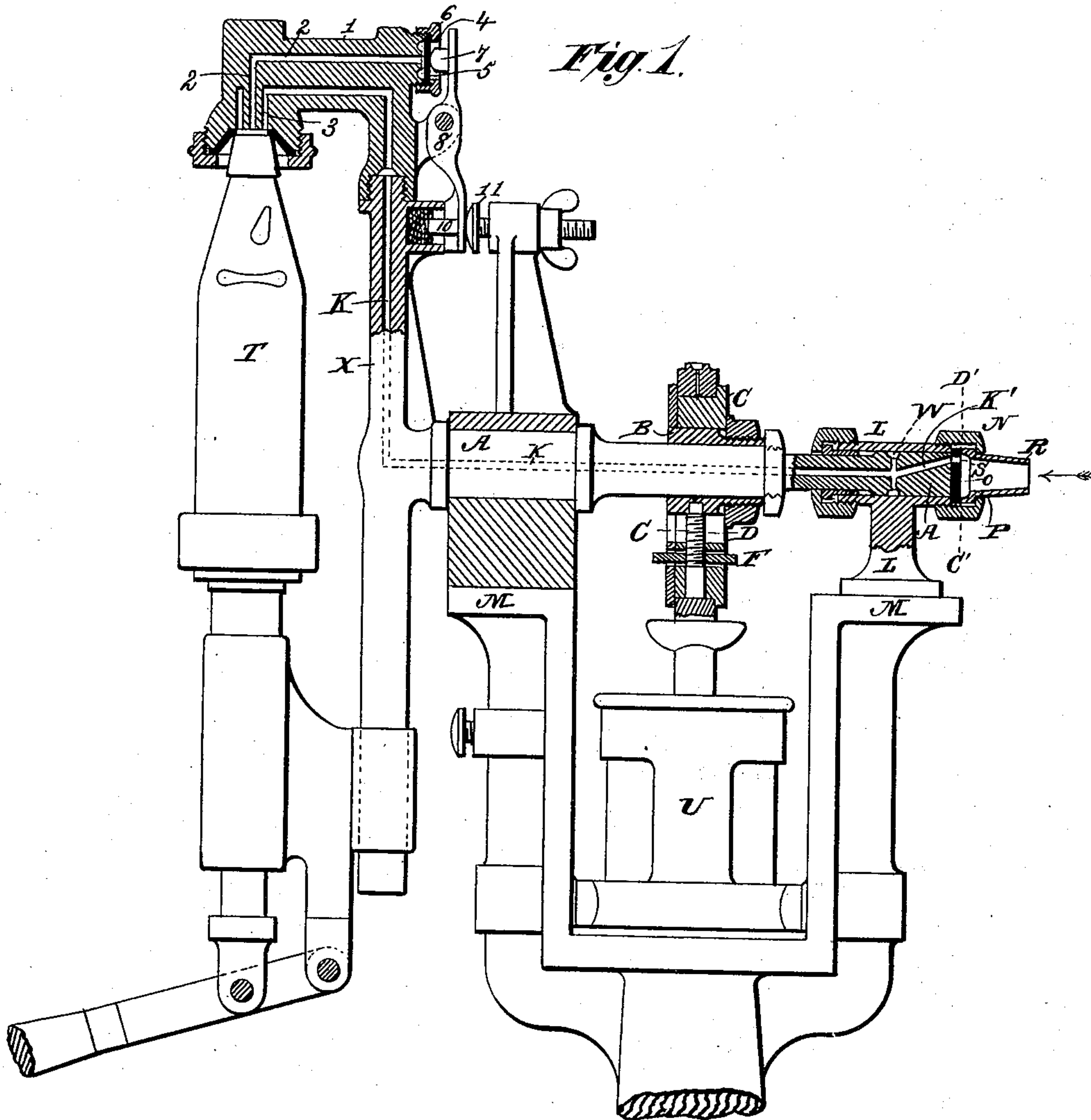
2 Sheets—Sheet 1.

J. McEWEN.

APPARATUS FOR FILLING AND SIRUPING AERATED BEVERAGES.

No. 322,738.

Patented July 21, 1885.



Witnesses.

Robert Corbett

J. A. Rutherford

Inventor.

James McEwen.

By

James L. Norris.

Atty.

(No Model.)

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Fig. 3.

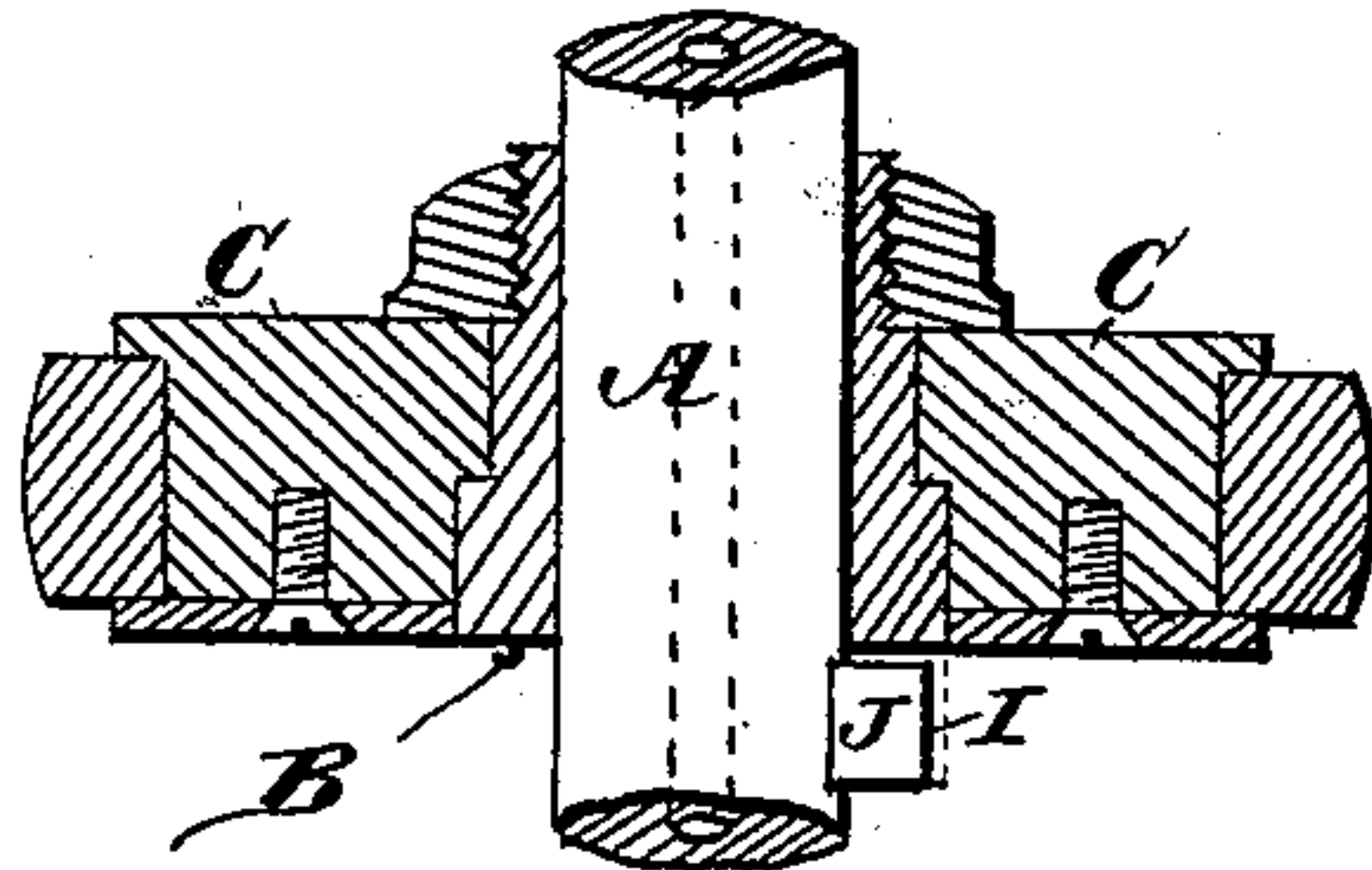


Fig. 2.

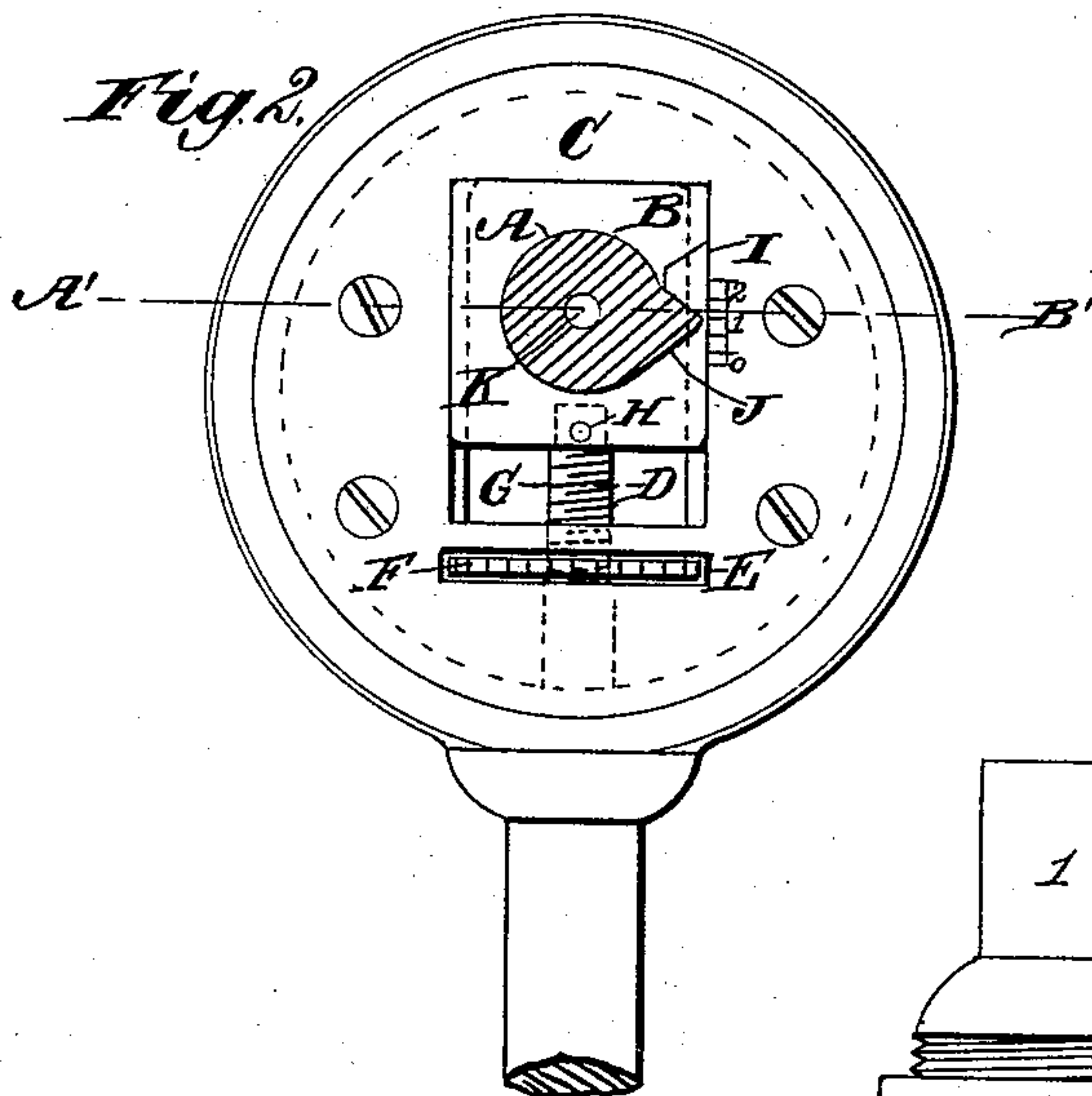


Fig. 4.

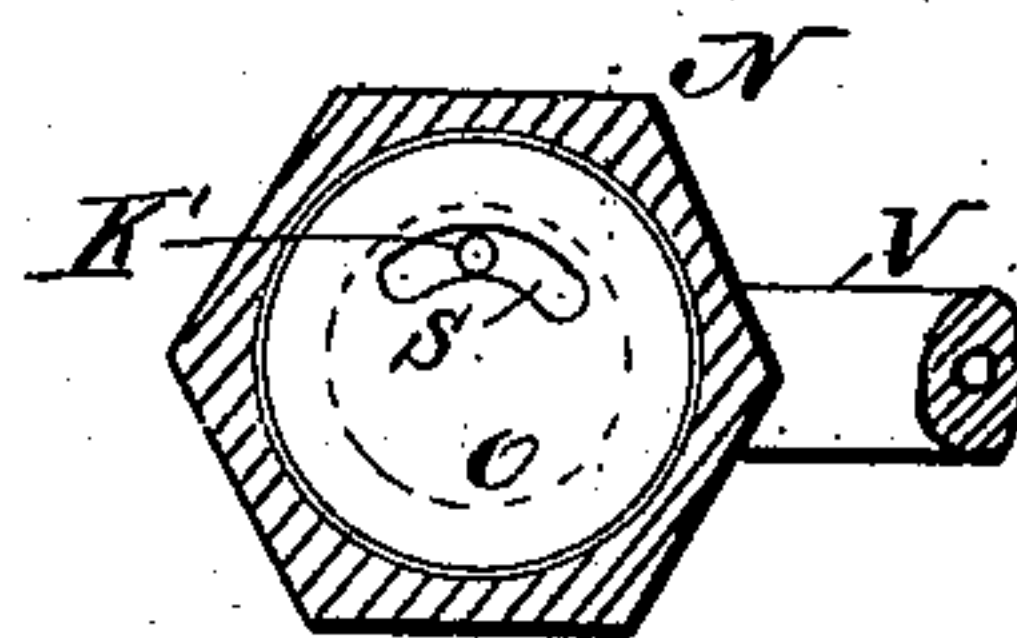


Fig. 5.

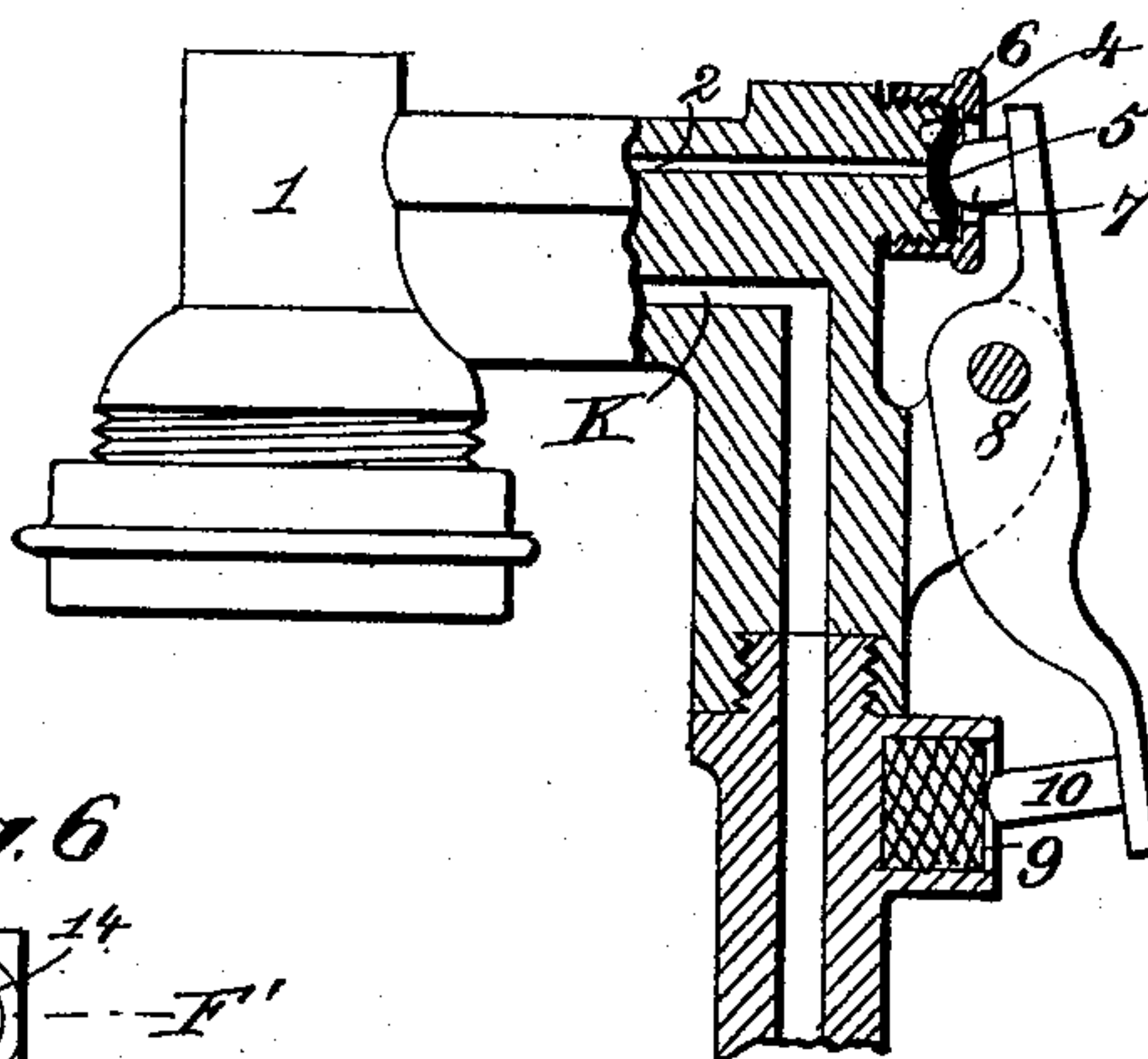


Fig. 6.

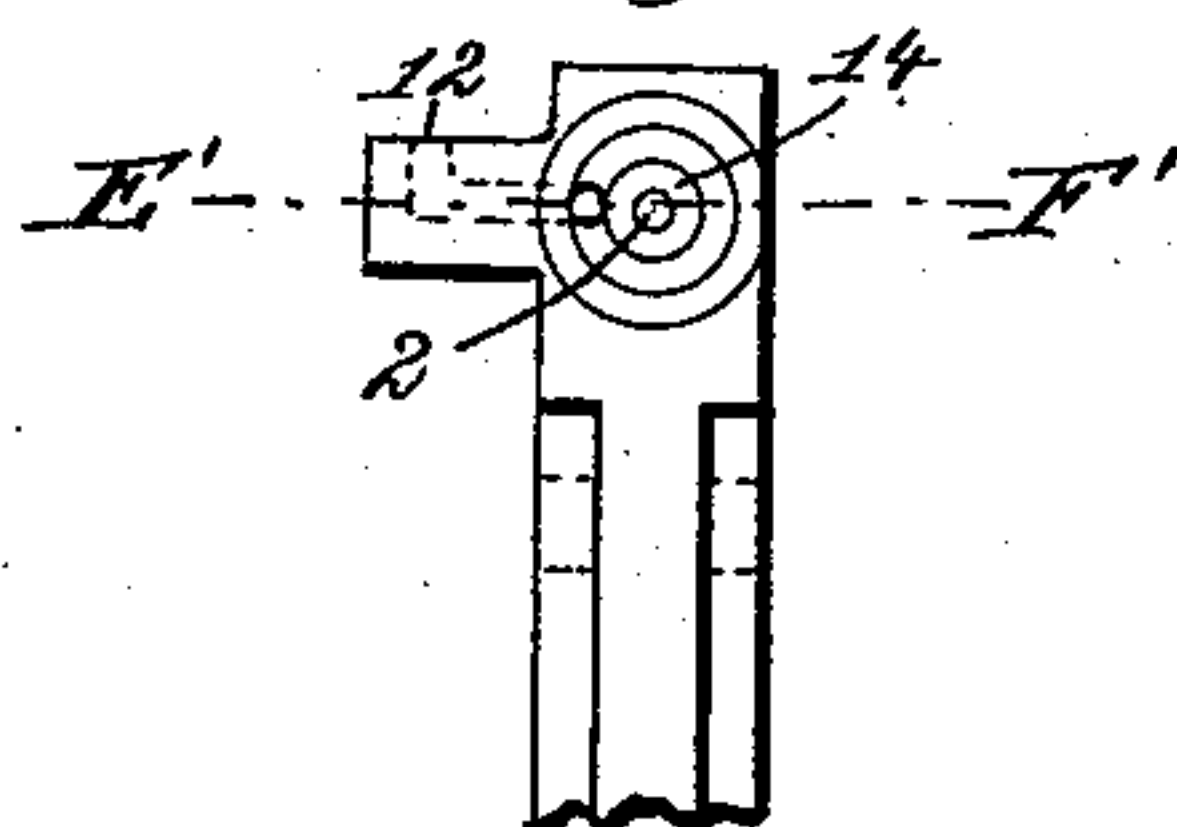
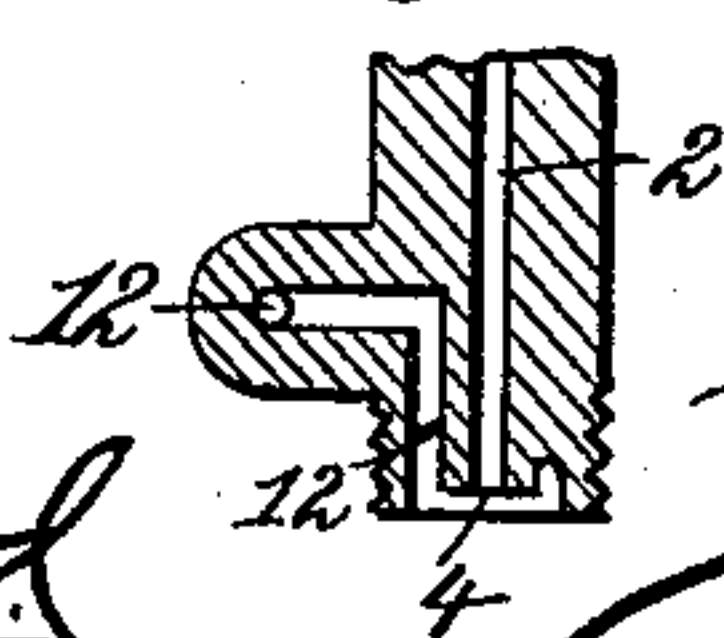


Fig. 7.



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UNITED STATES PATENT OFFICE.

JAMES McEWEN, OF MANCHESTER, COUNTY OF LANCASTER, ENGLAND.

APPARATUS FOR FILLING AND SIRUPING AERATED BEVERAGES.

SPECIFICATION forming part of Letters Patent No. 322,738, dated July 21, 1885.

Application filed April 8, 1885. (No model.) Patented in England February 10, 1885, No. 1,822.

To all whom it may concern:

Be it known that I, JAMES McEWEN, a subject of the Queen of Great Britain, residing at Manchester, England, have invented new and useful Improvements in Apparatus for Filling and Siruping Aerated Beverages, (for which I have obtained a patent in Great Britain, No. 1,822, of February 10, 1885,) of which the following is a specification.

This invention relates principally to improvements upon the subject-matter of Letters Patent granted to myself and S. Spencer, No. 292,565, dated January 29, 1884; and it consists in the novel construction and combination of devices, hereinafter described and claimed, whereby more certain and efficient actions are obtained in apparatus for bottling aerated beverages—such as soda-water, lemonade, ginger-beer, &c. For this purpose I arrange the mechanical movements, constructions, and arrangements of mechanism in the manner I will describe, referring to the accompanying drawings.

Figure 1 is a part sectional elevation of my aerated water-filling machine with my improvements applied. On the center or revolving shaft, A, is mounted the block or sleeve B, on which is fitted the eccentric C. The eccentric is provided with the opening or slot D, for the purpose of receiving the block or sleeve B, being sufficiently long to allow of the travel of the eccentric and sirup-pump being regulated or varied according to requirements when bottling. In the body of the eccentric C is formed the slot E in which is mounted the nut F on the screw G, the latter being fixed into the block or sleeve B by the pin H. When it is necessary to alter the stroke of the pump, it is accomplished by simply turning the nut F by the fingers, thereby dispensing with the necessity of operating the lock-nut named in my former patent and the appliances for effecting the same, as well as simplifying the action. For the purpose of facilitating the alteration of the stroke of the sirup-pump to give a stated quantity of sirup each stroke, the side of the eccentric body is indexed, as in Fig. 2, whereby the center mark on the stop I can be placed, by sliding the block or sleeve B by the screw G, opposite the stated quantity

on the index. The block or sleeve B is provided with the driving-stop I, which is operated by the tongue J on the shaft A of the machine.

Fig. 2 is a front view of my improved variable eccentric, and Fig. 3 is a sectional plan of the same through line A' B'. The center or revolving shaft, A, is provided with the hole K through which aerated water and sirup pass, and is supported at the inlet end in the stuffing-box L, attached by any suitable or convenient means to the fixing M. The stuffing-box L is provided with the union N, for coupling to the usual pipes and connections. The end of the shaft A in the stuffing-box is provided with a perfectly flat face, against which the flat seat O is placed, the latter being composed of leather or other analogous substances, and held in position against the end of the revolving shaft by the hollow disk P on the end of the connecting-pipe R in the union N. The stationary pliable seat O is kept tight on the face or end of the shaft A, forming the valve, by the pressure of aerated water on the inlet or admission side, which is in the direction indicated by the arrow. The stationary pliable seat O is provided with the circular oblong hole or opening S, as shown in Fig. 4, and of sufficient length to enable the bottle to be filled while revolving, through which opening the aerated water passes into and through the angular or diagonal openings K' to the center passage, K, in the revolving-shaft A. When the angular or diagonal opening K' in the shaft A passes the circular oblong hole S in the stationary pliable seat O, aerated water is admitted to the machine, from whence it is filled into the bottle T. After the opening K' has passed the oblong hole S in the pliable seat O the supply of aerated water is shut off, when the bottle is ready for removal. Sirup is supplied in the usual way from the sirup-pump U through the ordinary pipes (not shown) to the pipe or connection V on the side of the stuffing-box L, (shown in Fig. 4,) the inlet being directly opposite the recess W in the outer end of the revolving-shaft A in the stuffing-box L, from whence the sirup is forced through the opening K into the bottle T.

Fig. 4 is a sectional view through line C' D',

showing the stationary pliable seat O with the oblong hole or opening S.

In filling bottles in an upright position, as in Fig. 1, it is necessary the air from the bottles should be got away with as little hindrance as possible to the admittance of aerated water and sirup, to effect which the head 1 on the end of the revolving arm X, for receiving the neck of the bottle T, is provided with the chamber or passage 2, communicating from the passage 3 to the back side of the said head. The back end or side of the head 1 is provided with the recessed facing 4, against which is placed the stationary india-rubber or other pliable disk 5, being secured into position by the screw cap or cover 6. The cap or cover 6 is provided with an opening to admit the pap or spindle 7 on the end of the pivoted lever 8, which operates against the stationary pliable disk 5, as shown in Fig. 5, and by which it is held firmly against the facing by the india-rubber buffer 9, or by other equivalents operating against the spindle 10 on the opposite end of the lever 8, thus making the pliable disk air-tight on the facing 4. When the bottles are being filled, as in Fig. 1, it is necessary the air be removed, which is performed by the end of the pivoted lever 8 coming in contact with the stop 11, which releases the pap or spindle 7 from the pliable disk 5, and allows the air to force the same from the facing, whence the air escapes through the hole 12 in the cavity round the recessed facing 4, which will be readily understood by referring to Fig. 6, of which Fig. 7 is a sectional plan through line E' F' with the cap 6 and disk 5 removed. The air is conducted from this point in any convenient way by pipes or other equivalents.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the pump and the horizontal hollow revolving shaft of a bottle-

filling machine, of a sleeve, B, secured to the shaft, the eccentric C, having the vertical slot D on the sleeve, and provided with a transverse slot, E, below the vertical slot, the rotatable nut F, arranged in the transverse slot, and the screw G, fixed to the sleeve and passing downward through the nut, substantially as and for the purpose described.

2. The combination, with the pump U and the horizontal hollow revolving shaft A of a bottle-filling machine, of the sleeve B, the slotted eccentric C, the non-rotating screw G, fixed to the sleeve, and the rotatable thumb-nut F on the screw, the rotation of the nut acting to raise or lower the screw and the sleeve, substantially as and for the purpose described.

3. The combination of the pump U, horizontal shaft A, having longitudinal opening K and recess W, the stuffing-box L, connection V, sleeve B, eccentric C, screw G, and nut F, substantially as described.

4. The combination of the shaft A, having longitudinal opening K, provided with a diagonal termination, K', the stuffing-box L, seat O, having opening S, the pipe R, having a hollow disk, P, and the coupling N, substantially as described.

5. The combination of the revolving arm. X, head 1, having passages 2 3 and recessed facing 4, the stationary pliable disk 5, perforated cap 6, lever 8, having spindles or studs 7 10, the buffer 9, and stop 11, substantially as described.

The foregoing specification of my improvement in apparatus for filling and siruping aerated beverages signed by me this 16th day of March, 1885.

JAMES McEWEN.

Witnesses:

THOS. N. CRETNEY,
Manchester.

ED. CHADWICK,
Bolton.