

J. F. CORY.

BASIN-COCK.

No. 176,774.

Patented May 2, 1876.

Fig: 1.

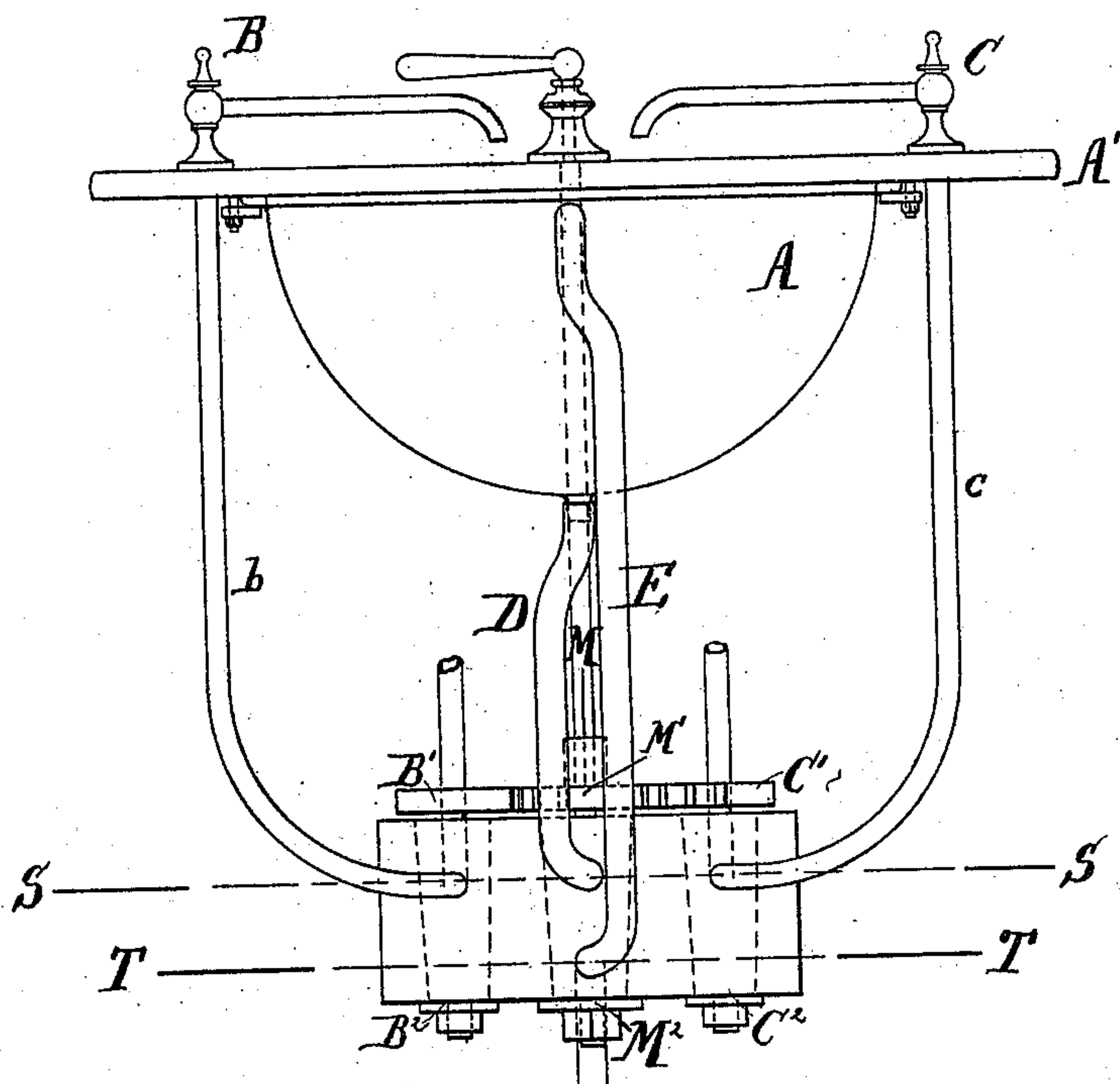


Fig: 2.

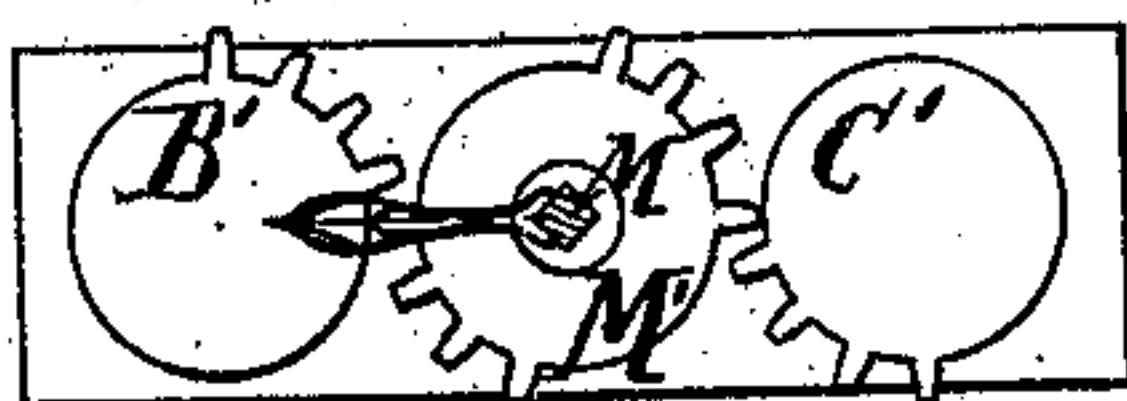


Fig: 3.

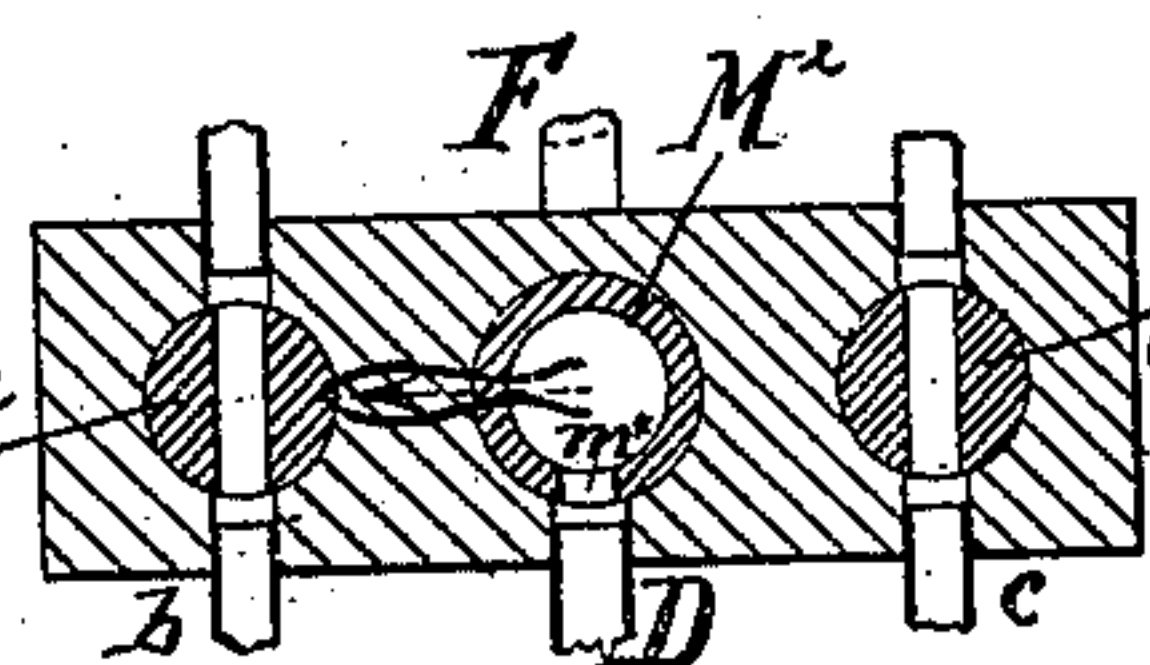


Fig: 4.



Fig: 5.

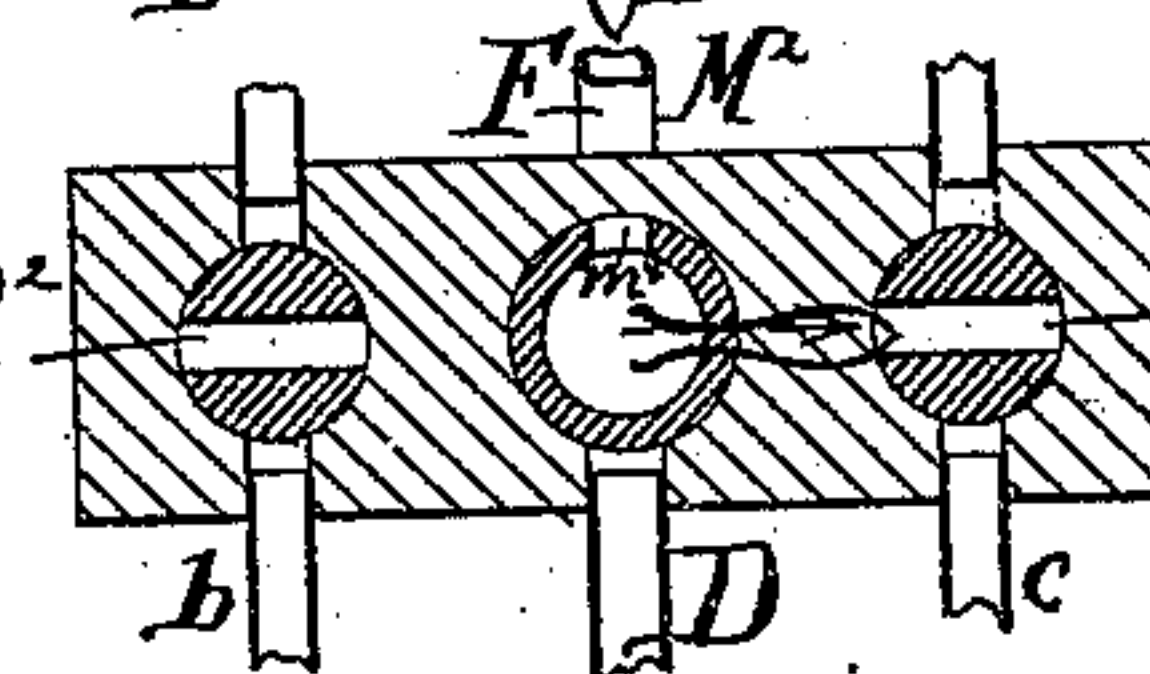


Fig: 3^a.

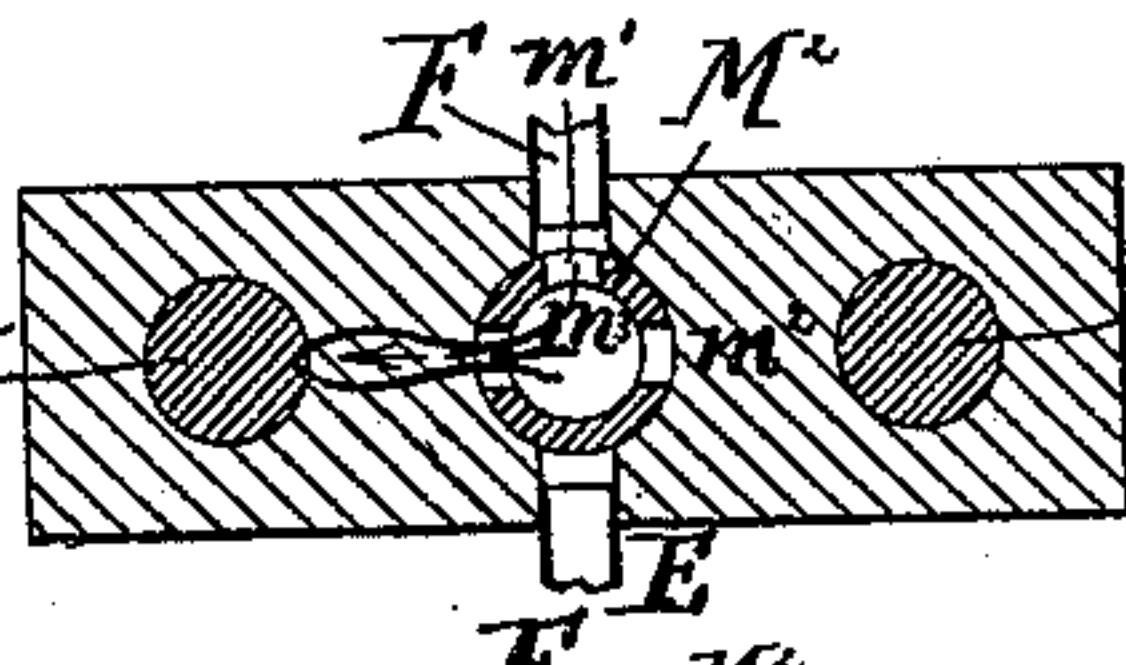


Fig: 4^a.

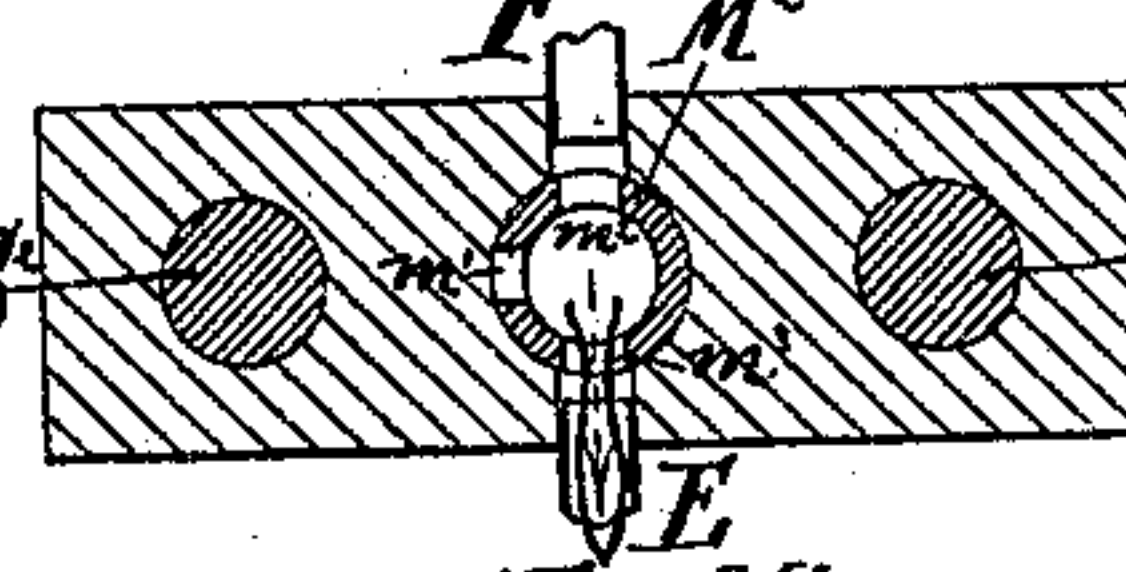
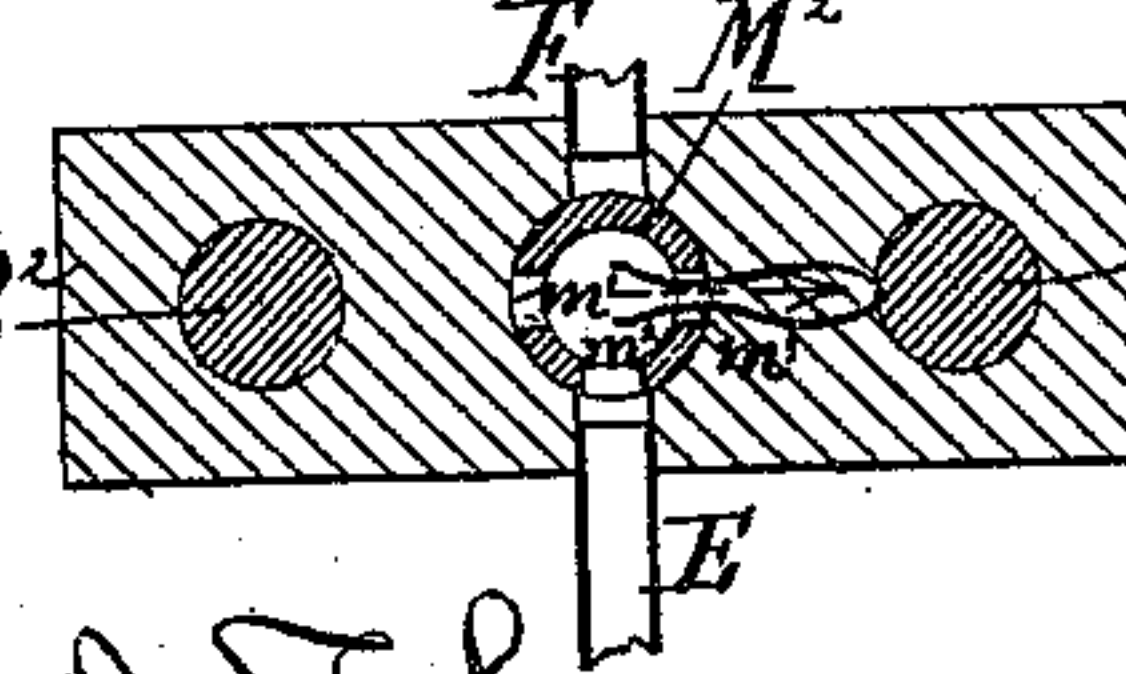


Fig: 5^a.



Witnesses,
Abbey & Co.
C. C. Stetson.

John F. Cory,
by his attorney
C. C. Stetson

UNITED STATES PATENT OFFICE

JOHN F. CORY, OF NEW YORK, N. Y.

IMPROVEMENT IN BASIN-COCKS.

Specification forming part of Letters Patent No. 176,774, dated May 2, 1876; application filed February 26, 1876.

To all whom it may concern:

Be it known that I, JOHN F. CORY, plumber, of the city of New York, State of New York, have invented certain Improvements relating to Water-Connections for Hand-Basins, of which the following is a specification:

The object of the invention is to afford additional security against the escape of gas from the sewer or from the house drain-pipes. The ordinary traps may be used in addition.

The imperfect results attained by the ordinary crooks in the pipe, designated as "traps," are well known, and frequently induce fevers and death. Sometimes the escape of gases into apartments is difficult of explanation, but the fact is evident to the senses. My device may be left permanently in such position as to be of no effect. In cases where any sewer-gas is detected in the apartment, and preferably in all cases, the device may be availed of with advantage. Its operation requires but a small amount of attention.

The accompanying drawings represent what I consider the best means of carrying out the invention.

Figure 1 is a front view with the parts in the position in which they are most liable to be left after the basin has been used—that is to say, with the water turned off by the ordinary basin-cocks—my apparatus having been set in such position that the water is freely discharged through the ordinary discharge-pipe connected at the bottom of the bowl. In this condition, and also ordinarily when the bowl is left standing full, the overflow-pipe is open. As it will obviously involve a liability of mischief if the overflow-pipe is ever closed when the water is running, my connections are provided with three stop-cocks peculiarly connected to a single handle above. The relation of these parts is such that when the water is turned on and the discharge-pipe is closed, the overflow-pipe is certain to be open, thus enabling it to perform the function of insuring against an overflow of water from the parts being carelessly or ignorantly left in an improper position; but when the water is shut off below by my side cocks, one of which controls the hot water and the other the cold water, then both the discharge-passage and the overflow-pipe are closed by my central cock. In

order to discharge the water the central cock and the connected cocks are turned in a position which discharges the water through the discharge-pipe from the bottom of the bowl. In this position they would let it on through both the hot and cold water pipes, but both the latter should then be closed by the basin-cocks above.

It will be seen that my invention is here carried out by the employment of three additional stop-cocks peculiarly related, and which are placed in the space below the wash-bowl, with a connecting-shaft leading from the central one up to a convenient point to be operated by a handle or lever. The other parts—the basin-cocks, &c.—may be of any ordinary or suitable character, the only difference presented to the eye being the additional lever, which may be, and is represented, as located in the back of the bowl between the basin-cocks. Another difference which may be presented to the eye is the absence of any plug to stop the orifice at the bottom of the bowl. The central cock of my set, being turned in such position as to close the discharge-pipe, will perform that function effectually.

Fig. 2 is a plan view, representing the means of operating my three cocks. The additional figures (3, 4, and 5) represent sections on the lower plane T T.

Sections 3 and 3^a belong together. They represent the water-passages open through my side cocks, controlled only by the basin-cocks above. The discharge-passage is open; the overflow is closed. This is the condition represented in Figs. 1 and 2, and the one in which the parts are liable to be left during the active part of the day. The receipt of water from the pipes will be understood as being stopped off by the basin-cocks above.

Sections 4 and 4^a belong together, and represent the parts in position to draw water and fill the bowl—that is to say, my side cocks allow the hot and the cold water to flow up to the respective basin-cocks, and according as either or both the latter are open, the proper stream will flow. The discharge-passage is closed, and the overflow-passage is open.

Figs. 5 and 5^a belong together. They represent the apparatus as adjusted for the night, or for any considerable period of disuse. In

cases where the liability to sewer-gas is particularly great, the emptying of the bowl should be waited for by the operator, and the parts placed in this condition after each use at any period. In this condition the water is stopped off by my side cocks, and there is, therefore, no necessity for the overflow-passage being open, and my central cock is turned in such position that both the discharge-passage and the overflow-passage are closed. In this condition of the apparatus everything connected with the entire set of basins and connections is entirely stopped.

It will be understood that similar letters of reference indicate like parts in all the figures.

A is the bowl, and A' the ordinary marble slab which supports the bowl and the connections. B and C are the basin-cocks. The corresponding pipes *b c* form connections thereto from the street-main or from other source. (Not represented.) In addition to the ordinary basin-cock B, the pipe *b* may be shut off by the cock B², having a partially-gear wheel, B¹, firmly fixed on its upper end, and by which its positions may be controlled. The pipe *c* is correspondingly cut off by the cock C², having firmly fixed on its upper end a partially-gear wheel, C¹, by which its position may be controlled. D is the discharge-pipe, and E the overflow. Both these pipes lead downward and connect with the central cock. The shaft M, controlled by a handle conveniently placed above the slab A', extends downward, and carries a peculiar stop-cock, M², chambered in its interior, and provided with orifices, as denoted by further letters *m¹ m²*, &c., which, in certain positions, open communication with the pipes D E, and with the ultimate drain-pipe or connection to the sewer, marked F. The hollow plug M² is provided with two holes, *m¹ m²*, to obtain the desired connections to the ultimate drain-pipe F, and with one hole, *m³*, for the overflow-pipe E, and with one hole, *m⁴*, for the discharge-pipe D. In the position shown in Figs. 3 and 3^a the hole *m⁴* communicates with the discharge D, and the hole *m¹* communicates with the drain F. In Figs. 4 and 4^a the hole *m⁴* is turned out of connection with the discharge D, and the hole *m¹* out of connection with the drain F; but the hole *m²* has now opened communication with the drain F, and the hole *m³* is brought into connection with the overflow E. In Figs. 5 and 5^a the discharge-passage D is closed off, the hole *m³* is in connection with the overflow E, but the ultimate drain pipe F is entirely closed off, and thus every connection to the sewer from which gas may arise is effectually closed. On the shaft M, above the stop-cock M², is a partially-gear wheel, M¹, engaging under certain conditions with the adjacent wheels B¹ and C¹. The cock M² is effective in three positions. One is shown in the principal figures and in Figs. 3 and 3^a. When the partial gears are not engaged they stand in the position plainly indicated in Fig. 2. When the cock M² has been

turned about one-fourth of a revolution, and the parts are in the positions shown in sections 4 and 4^a, the gearings on the other cocks are still not engaged. It will be understood that (referring to Fig. 2) the central cock M² has been turned to the left until the teeth on this cock have commenced to have contact with the teeth of the adjacent wheel, but as yet they have communicated no motion thereto. By the further turning of the same cock M² another quarter of a revolution to the left, the wheels B¹ C¹ will, by the engagement of the gears on the wheels M¹ with the teeth on said wheels, have turned the latter about a fourth of a revolution, and bring the parts to the position shown in Figs. 5 and 5^a. The position of the cock M² is plainly indicated by the handle on the upper end of the shaft M, and it is hardly possible that the most ignorant or youngest member of the household can mistake; the worst result that can follow a mistake in the position is a failure to obtain water when the cocks B and C are operated. I prefer to mount all the cocks, B², C², and M², in a single substantial casting of iron or other suitable material; but the mode of connecting the cocks, as also many of the details, may be modified within wide limits.

It is very important that the connections be so controlled that the water shall never be let on while the overflow is shut off, and that both the overflow and the discharge may be entirely closed when desired to prevent the possible passage of sewer-gas.

The three cocks M² B² C², geared together as shown, I esteem the best means of carrying out the invention, because, among other advantages, it allows the dispensing with a plug to stop the bottom of the bowl A; but some of the advantages of the invention in other respects may be obtained by other arrangements.

I claim as my invention—

1. The cock or valve M², adapted to close the discharge and overflow passages, in combination with a hand-basin, and with means for simultaneously insuring the closing of the water-supply, substantially as and for the purposes herein specified.

2. The gears or partial gears B¹ C¹ M¹, in combination with each other and with the cocks B² C² M², controlling the several passages, adapted to be operated by the single shaft M, and to not only forbid the access of water to the bowl while the discharge is closed, but also to properly control the passages for the filling or emptying the bowl, or retaining the contents at will, as and for the purposes herein specified.

In testimony whereof I have hereunto set my hand this 23d day of February, 1876, in the presence of two subscribing witnesses.

JOHN F. CORY.

Witnesses:

G. HENRY GENTNER,
C. C. STETSON.