

J. L. MAYFIELD.

FLOAT VALVE.

APPLICATION FILED AUG. 29, 1907

963,305.

Patented July 5, 1910.

Fig. 1.

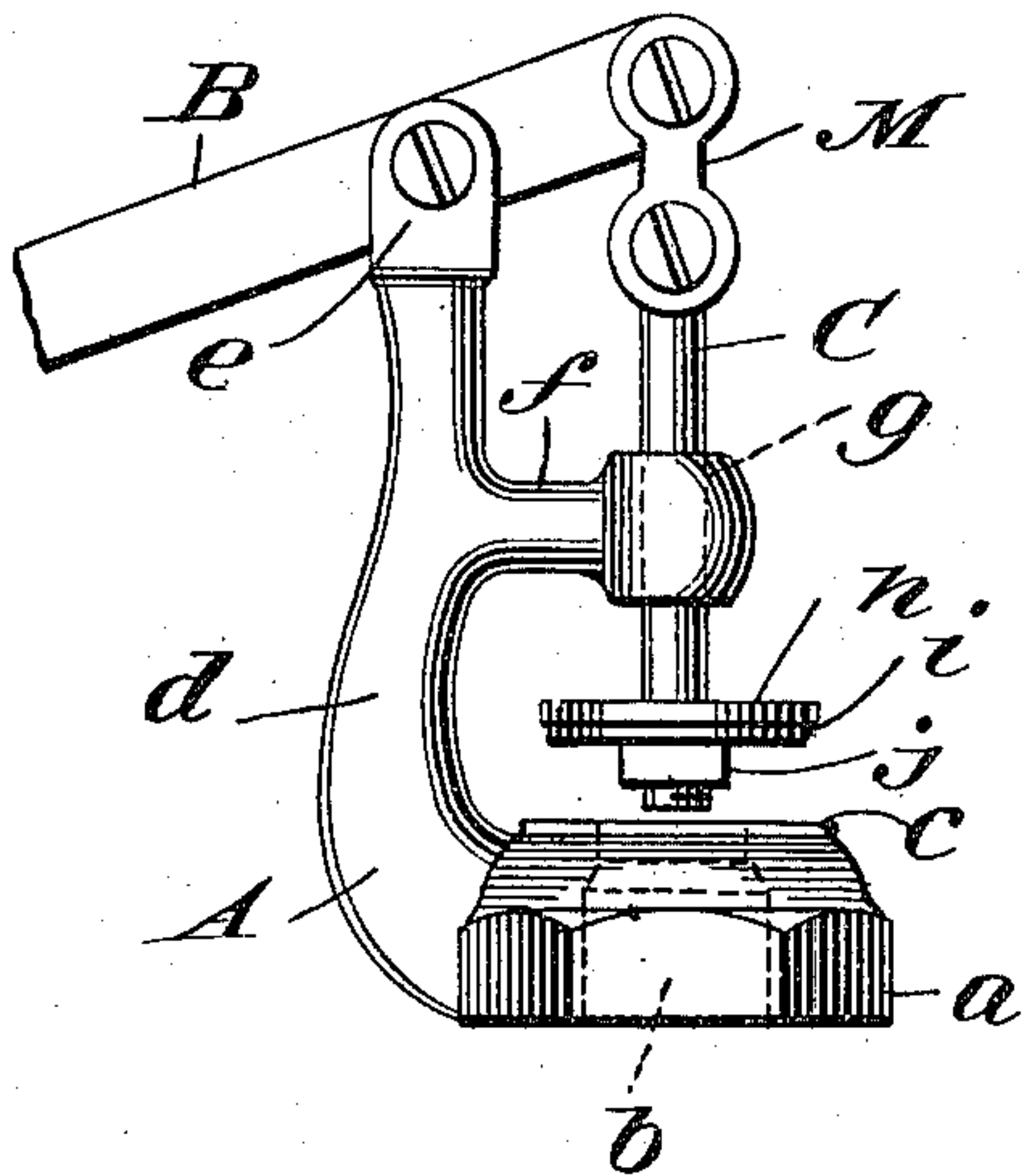


Fig. 2.

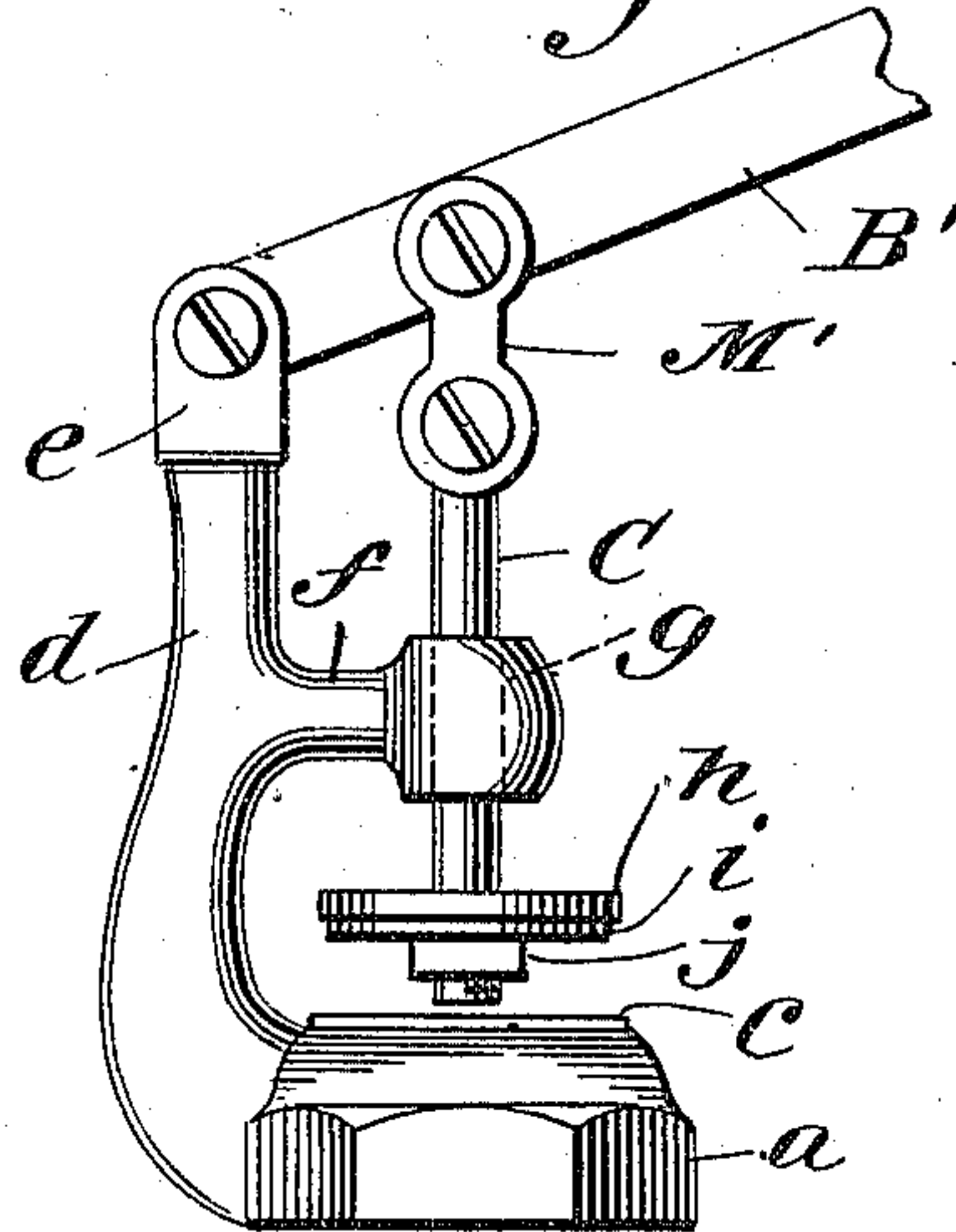


Fig. 4.

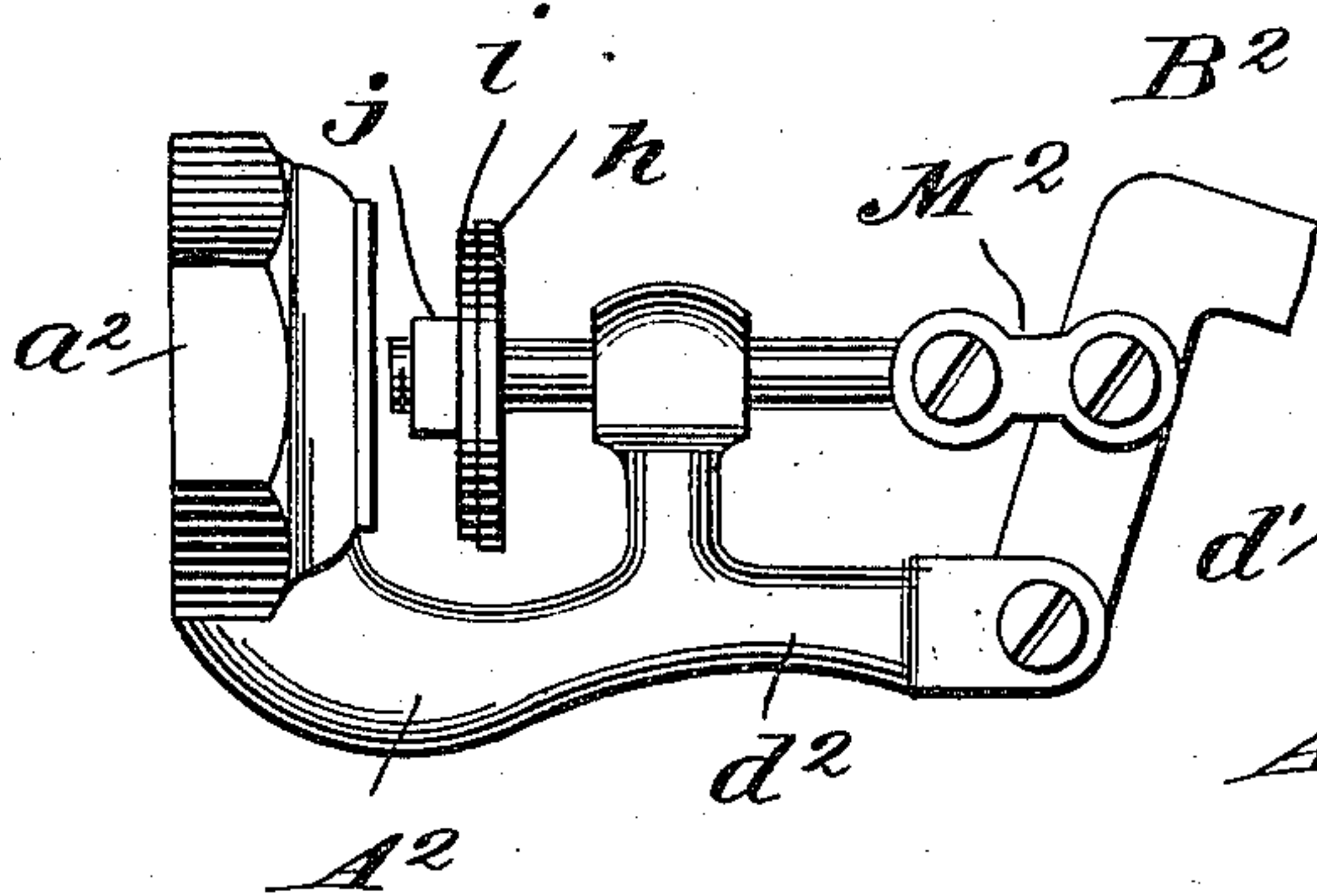
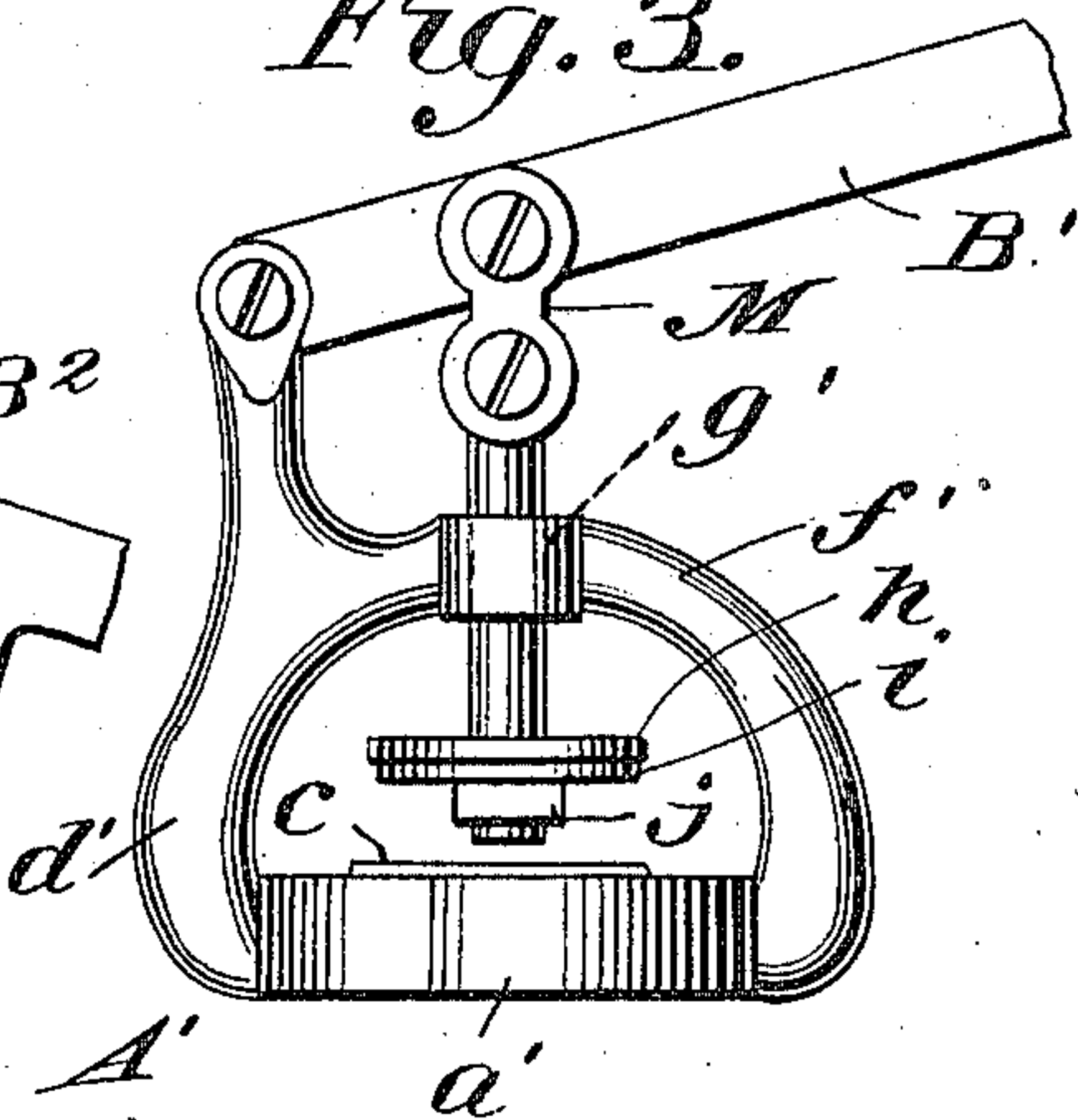


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## FLOAT-VALVE.

963,305.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed August 29, 1907. Serial No. 390,632.

*To all whom it may concern:*

Be it known that I, JESSE L. MAYFIELD, citizen of the United States, residing at Brenham, in the county of Washington and State of Texas, have invented new and useful Improvements in Float-Valves, of which the following is a specification.

My invention pertains to float valves; and it has for its object to provide a simple and compact float valve, and one which is reliable in operation, and is adapted to operate practically without friction, whereby it is calculated to withstand for an indefinite period the usage to which float valves are ordinarily subjected.

The invention will be fully understood from the following description and claim when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a side elevation of an upright embodiment of my invention. Figs. 2 and 3 are elevations of modified forms of upright valves constructed in accordance with my invention. Fig. 4 is a side elevation of a horizontal type of float valve embodying my invention.

Referring by letter to the said drawings, and more particularly to Fig. 1 thereof: A is the main frame of the valve. The said main frame is cast in one piece of metal, and is made up of a body *a* having an aperture *b* to adapt it for connection to a pipe leading from a source of water supply, and also having a valve-seat *c*, a standard *d* extending substantially at a right angle from the body *a* and having its outer end bifurcated, as indicated by *e*, and an arm *f* extending laterally inward from the standard *d* at about the middle of the latter and having a smooth bore *g* arranged in line with the center of the aperture *b* in body *a*. In addition to the main frame A the valve of Fig. 1 comprises a lever B fulcrumed at an intermediate point of its length in the bifurcation *e* of the frame standard *d* and designed to bear a float (not shown) on its long arm, a valve stem C movable rectilinearly through the bore *g* in the frame arm *f* and carrying a valve body *h* and packing *i* arranged at the inner side of the body *h* and removably secured in position through the medium of a nut *j*, and a link M extending between and pivotally connected to the short arm of the lever B and the outer end of the valve stem C. The said link M constitutes

an important feature of my novel valve inasmuch as it serves to transmit motion from the lever B to the stem C in such manner that frictional wear of the several parts is practically eliminated and the usefulness of the valve is materially prolonged, so that the valve is enabled with the hardest usage to last for an indefinite period.

In the practical operation of the valve, the valve body is seated when the long arm of the lever B ascends and is raised from its seat on downward movement of the said long arm of the lever B.

It will be gathered from the foregoing that my novel valve is compact and is made up of but a small number of parts, and consequently may be produced and sold with profit for a comparatively small price.

The embodiment of the invention shown in Fig. 2 is identical with that shown in Fig. 1, except that the lever B' is fulcrumed at its end on the standard *d'* of the main frame, and the link M' is interposed between an intermediate portion of the lever B' and the upper end of the stem C. In the operation of the type shown in Fig. 2 the valve body *h* is raised from its seat on upward movement of the long arm of the lever B', and is moved against its seat when the said long arm of the lever B' descends.

The modification shown in Fig. 3 is similar in construction to the type shown in Fig. 2 with the exception that the frame A' has a yoke *f'* in lieu of the lateral arm *f* before described. The said yoke *f'* extends from the standard *d'* to the side of the body *a'* remote from said standard, and is provided with a smooth bore *g'*, for the guidance of the valve stem. The operation of the embodiment shown in Fig. 3 is similar to the operation of the embodiment shown in Fig. 2, and need not, therefore, be described in detail.

In Fig. 4 of the drawings I have illustrated a horizontal type of valve embodying my invention. This horizontal type is similar in construction to the embodiment shown in Fig. 1, with the exception that the lever B<sup>2</sup> is of right angle form, and is pivotally connected at the outer end of its short arm with the standard *d*<sup>2</sup> of the main frame A<sup>2</sup>, and has the link M<sup>2</sup> connected to its said short arm at an intermediate point in the length of the latter.

It will be gathered from the foregoing that the embodiments shown in Figs. 2 to



4 are quite as simple and inexpensive as the construction shown in Fig. 1, and are possessed of all of the practical advantages ascribed to the latter.

5 I am well aware of the patent of one Claffey No. 520,203, the patent of one Schumacher, No. 573,540, and the patent of one Osborne, No. 298,771, and therefore make no claim to anything in common with what is  
10 disclosed in said patents.

What I claim and desire to secure by Letter-Patent, is:

15 In a float valve, a rectilinearly movable valve body, a straight stem fixed to and extending from said body, and a straight link pivoted at one end to the outer end of the stem and extending lengthwise outward therefrom in combination with a casing forming a one-piece frame and having an apertured body constituting a valve-seat opposed  
20 to the valve body, and open all around said valve seat, a standard corresponding in thickness to the apertured body and extending

radially outward from one side thereof and then at a right angle to the body and arranged approximately parallel to the stem 25 and having a bifurcated outer end, and an arm extending laterally inward from the standard at an intermediate point in the length thereof and terminating at its outer 30 end in a smooth-bore eye alined with the center of the aperture in the body and receiving and adapted to guide the valve stem, and a lever pivoted in the outer bifurcated end of the standard comprised in the frame 35 and having a straight portion arranged opposite the apertured body of the frame and pivotally connected directly to the outer end of the straight link.

In testimony whereof I have hereunto set 40 my hand in presence of two subscribing witnesses.

JESSE L. MAYFIELD.

Witnesses:

ROBT. W. HAYNIE,  
THOS. B. BOTTS, Jr.