

(No Model.)

G. W. BURR.
VALVE.

No. 444,156.

Patented Jan. 6, 1891.

Fig.1.

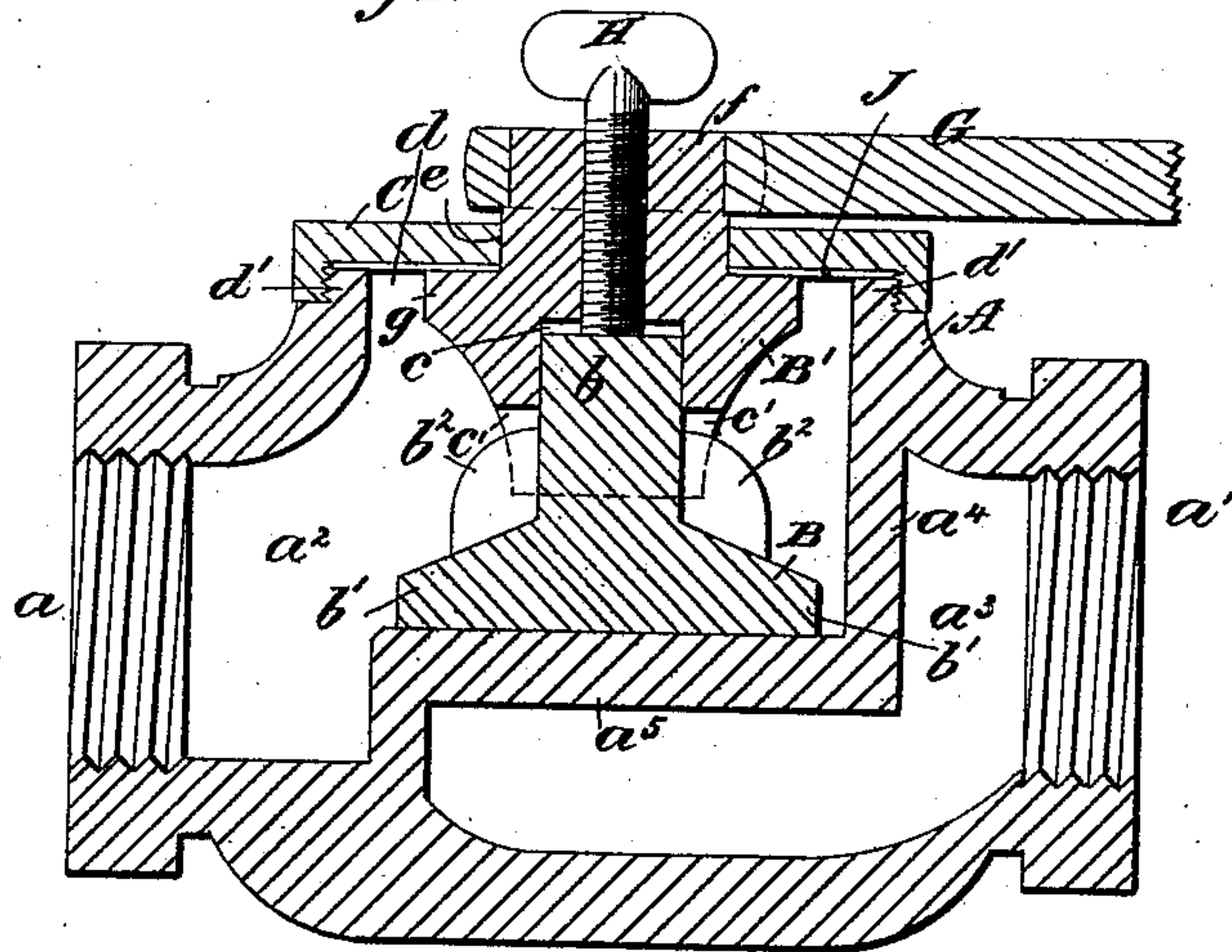


Fig.2.

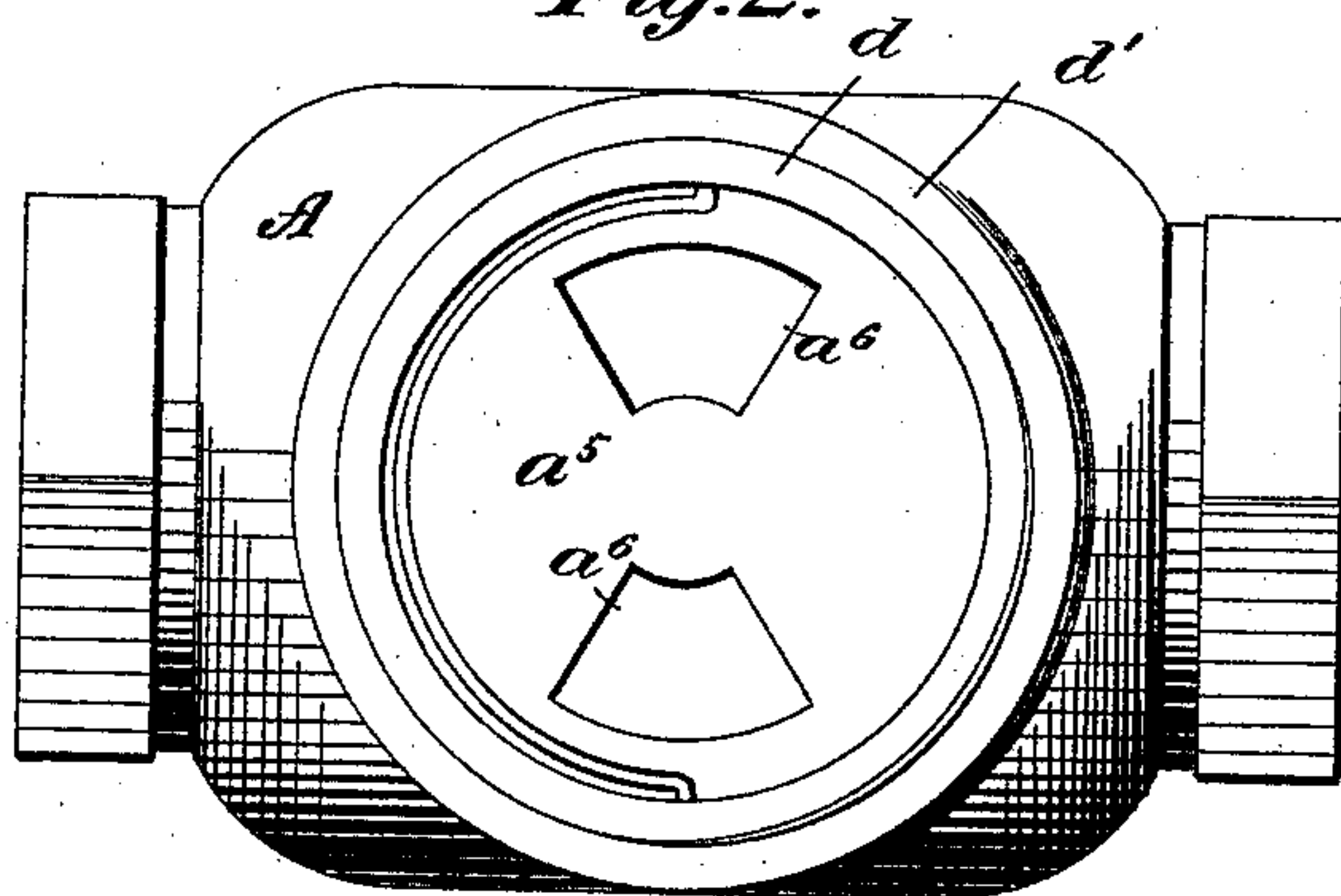


Fig.3.

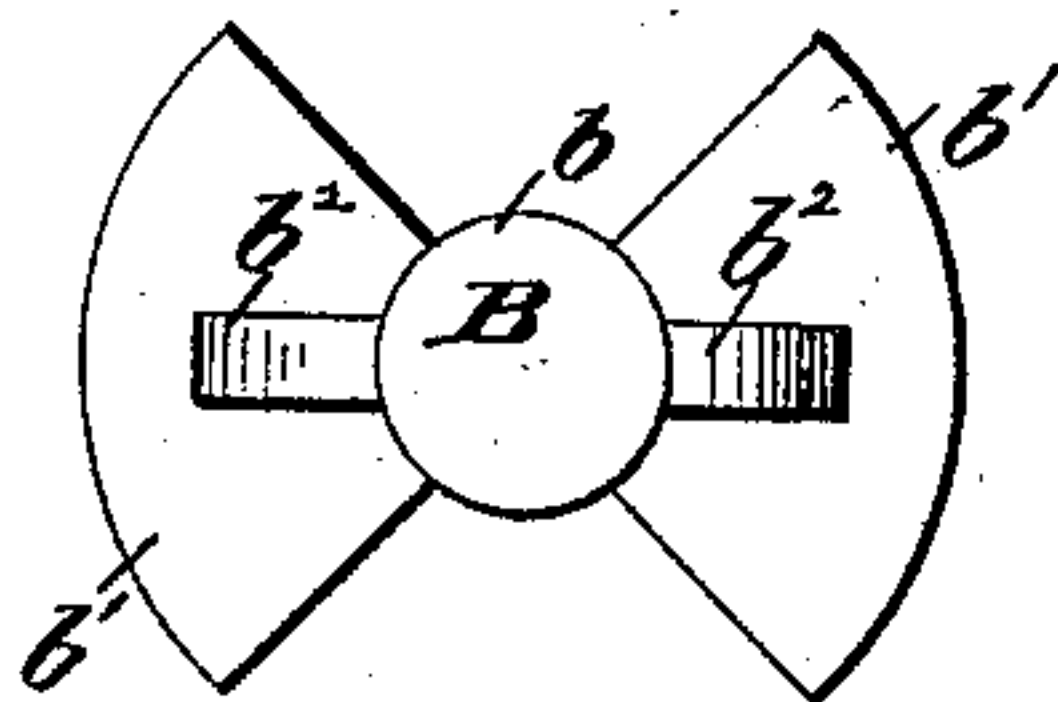


Fig.5.

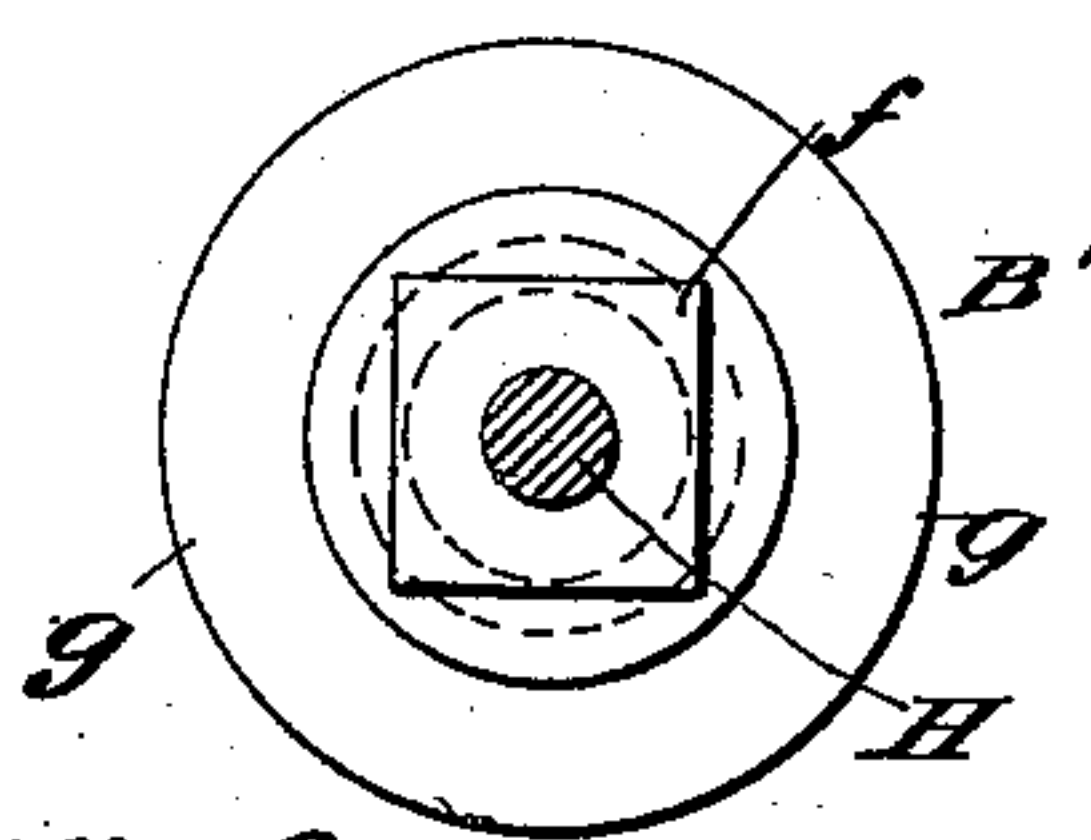


Fig.4.

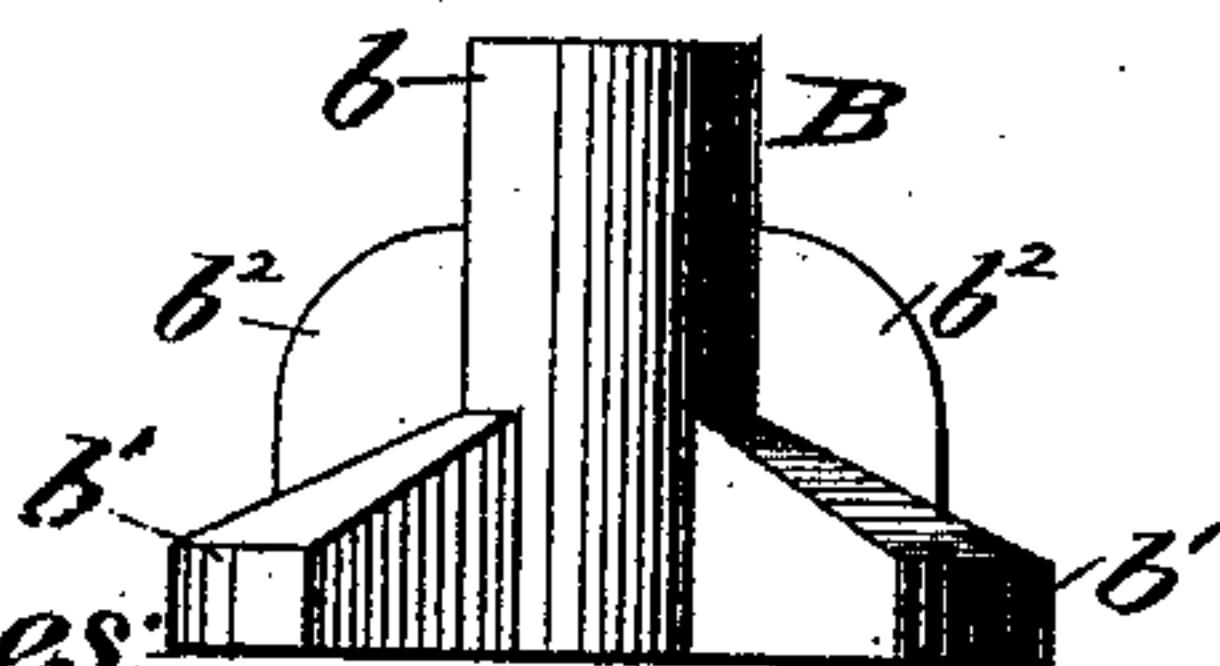
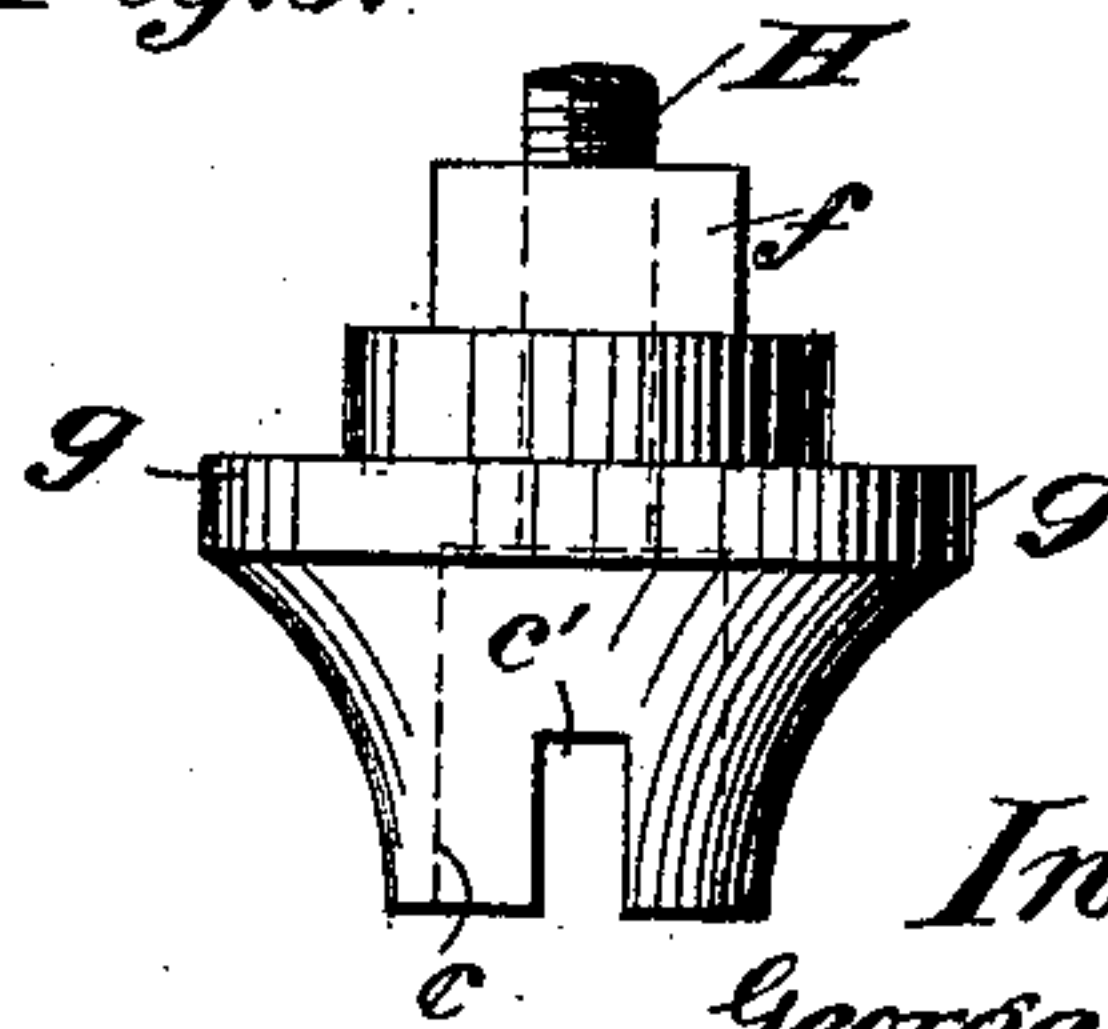


Fig.6.



Witnesses:

J. H. Haynes

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Inventor:

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by his attorneys

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UNITED STATES PATENT OFFICE.

GEORGE W. BURR, OF ROUND LAKE, NEW YORK.

VALVE.

SPECIFICATION forming part of Letters Patent No. 444,156, dated January 6, 1891.

Application filed February 19, 1890. Serial No. 341,041. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BURR, of Round Lake, in the county of Saratoga and State of New York, have invented a certain new and useful Improvement in Valves, of which the following is a specification.

My improvement relates to that class of valves termed "damper-valves."

I will describe in detail a damper-valve embodying my improvement, and then point out the novel features in the claim.

In the accompanying drawings, Figure 1 is a vertical longitudinal section of a valve embodying my improvement. Fig. 2 is a plan or top view of the valve-shell, the cover therefor and the valve being removed. Fig. 3 is a detail in plan of a portion of the valve. Fig. 4 is a side elevation of the same. Fig. 5 is a detail in plan of another portion of the valve. Fig. 6 is a side elevation of the same.

Similar letters of reference designate corresponding parts in all the figures.

A designates the valve-shell, provided with an inlet-port a , an outlet-port a' , an inlet-chamber a^2 , and an outlet-chamber a^3 . The chambers a^2 a^3 are separated from each other by a diaphragm a^4 , having a horizontally-extending portion a^5 , constituting the valve-seat. In the valve-seat and extending through the same are apertures a^6 . These apertures, as shown, are arc-shaped and are arranged opposite each other. Water entering the inlet-chamber a^2 will, when the valve is open, pass through the apertures a^6 into the outlet-chamber a^3 .

B B' designate the valve. The portion B constitutes the valve proper and a part b of the stem of the valve. The portion B' constitutes another part of the stem, which is made separate from the part b , but is adapted to engage therewith, so that when the portion B' is rotated rotary motion will also be imparted to the portion B. The portion B of the valve comprises two segments b' , which are opposite each other and are preferably formed integral with the part b of the valve-stem. Extending upwardly from the segments b' are wings or projections b^2 . The segments b' are of somewhat greater extent than are the apertures a^6 in the valve-seat. The valve when rotated will therefore cause the closing or opening of the apertures a^6 , accord-

ing to the direction in which the valve is rotated.

The portion B' of the valve is provided centrally and upon its under side with a recess c , the wall of which is provided with vertically-extending notches c' , which notches are in this example of my improvement arranged opposite each other. When the portions B B' of the valve are placed together, the part b of the stem will extend into the recess c , while the wings or projections b^2 will be received in the notches c' therefor. When rotary motion is imparted to the portion B', the portion B of the valve will also be rotated.

The upper side of the valve-shell is provided with an opening d , surrounded by an externally-screw-threaded flange d' . With this flange engages a cap C, which cap is provided about centrally with an aperture e . The portion B' of the valve is provided upon its upper side with a shank f , which shank, when the parts are in place, extends through the aperture e in the cap C. Below the cap C the portion B' is provided with a circumferentially-extending shoulder g , which shoulder abuts against the under side of the cap C. The cap C thus prevents longitudinal displacement of the portion B' in an outward direction. The shank f is, as shown, circumferentially shouldered outside the cap C, in order to receive a handle G, by which the valve may be rotated.

In the example of my improvement shown in Fig. 1, H designates a screw extending longitudinally and about centrally through the portion B' of the valve and engaging therewith. This screw also extends into the recess c , formed in the portion B', and bears upon the upper end of the part b of the valve-stem. It will readily be perceived that when the screw H is rotated in one direction the portions B B' of the valve will be forced thereby from each other, and that upon its rotation in the other direction said portions B B' will be allowed to approach each other. By this means the pressure which the portion B of the valve will be caused to exert upon its seat a^5 may be varied, as desired. Preferably the pressure thus exerted will be sufficient to maintain a permanently water-tight joint between the under surface of the portion B of the valve and the surface of the seat a^5 , with

which it contacts. This will prevent any dirt or sediment entering between the portion B of the valve and the valve-seat, and will consequently prevent the cutting of the contact-surfaces, which would result in a leaking valve. If the portion B of the valve should from any cause wear loose from its seat, it may be easily tightened by a manipulation of the screw H. The screw H may, if desired, be suitably packed to prevent leakage about it.

A suitable washer J, I have shown as arranged between the shoulder *g* of the portion B' and the cap C, which will prevent leakage around the shank *f*.

What I claim as my invention, and desire to secure by Letters Patent, is—

In a valve, the combination, with a shell provided with an inlet-port and an outlet-port,

of a valve-seat provided with an opening for the passage of liquid, a rotary plane-faced valve in engagement with and bearing and rotating upon said seat and adapted when rotated to open or close said opening, the valve being composed of two interlocking portions, one of said interlocking portions projecting through the shell, and a screw seated in said valve portion, which projects through the shell and having an engagement with the other valve portion to regulate its pressure upon its seat, the screw being accessible from the outside of the shell, substantially as set forth.

GEORGE W. BURR.

Witnesses:

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JOSEPH S. PHILLIPS.