

No. 654,995.

Patented July 31, 1900.

N. H. MEDBERY.

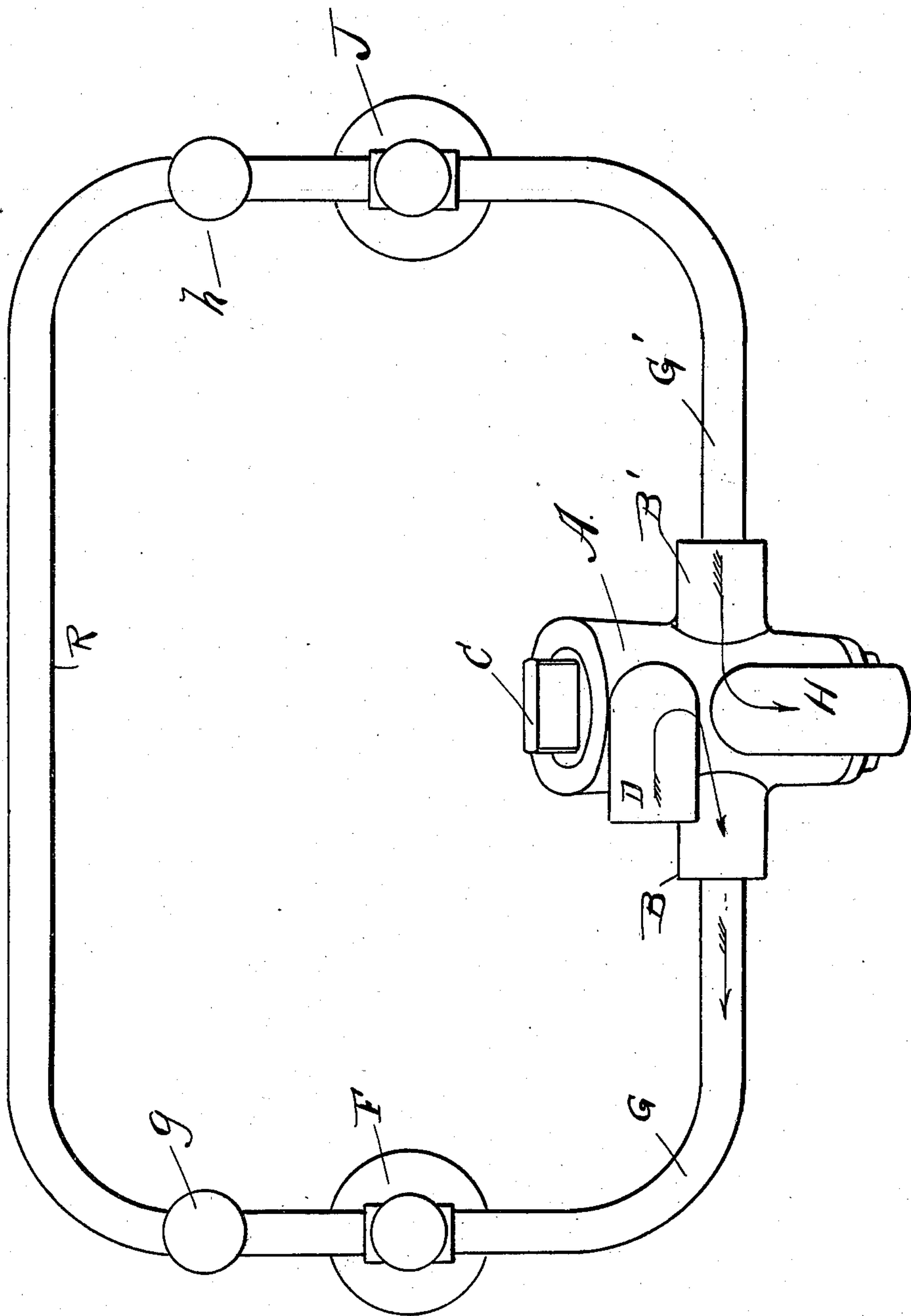
SWITCH COCK FOR GAS MACHINES.

(Application filed Dec. 9, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



Witnesses.

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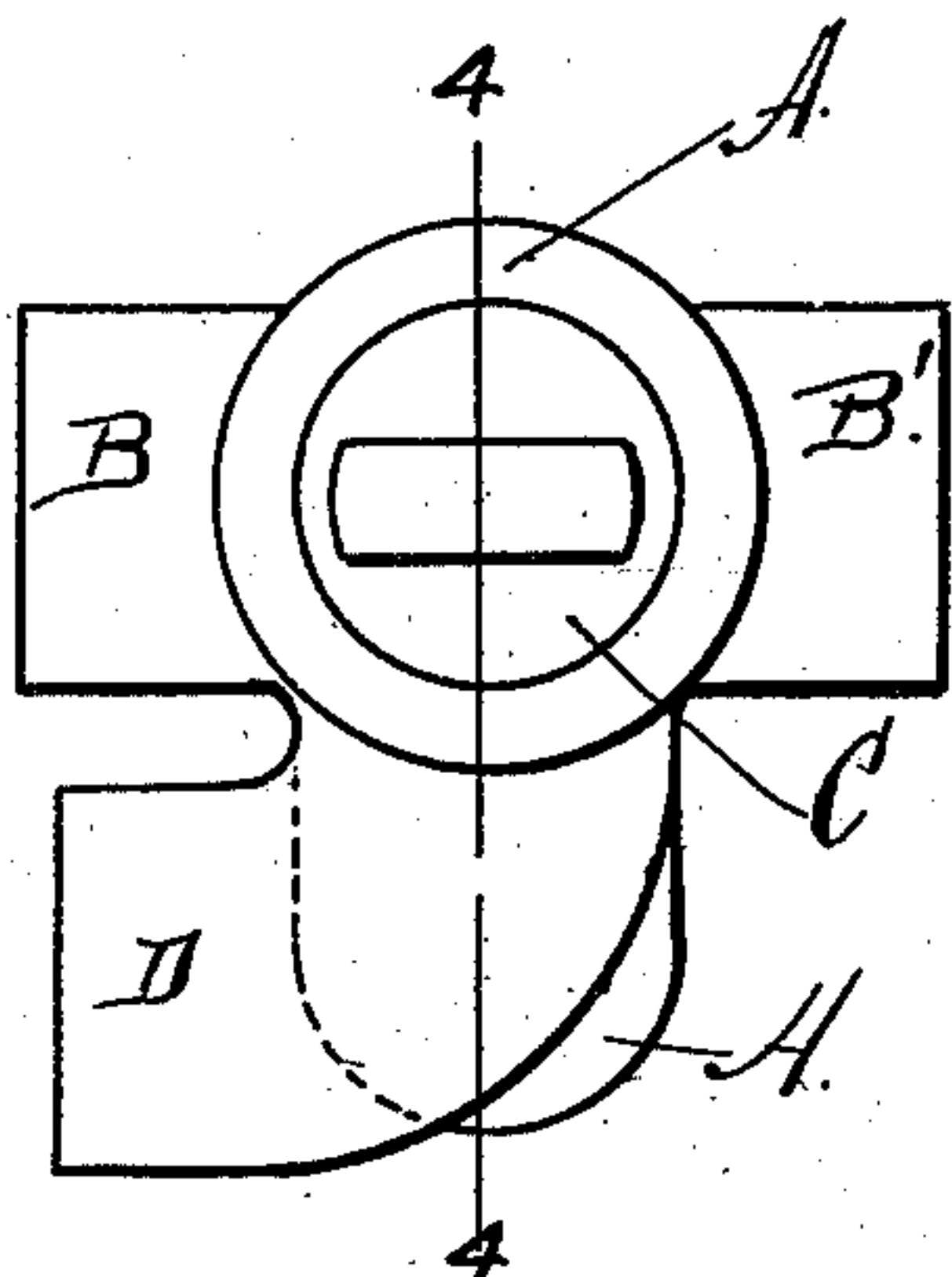


Fig. 2.

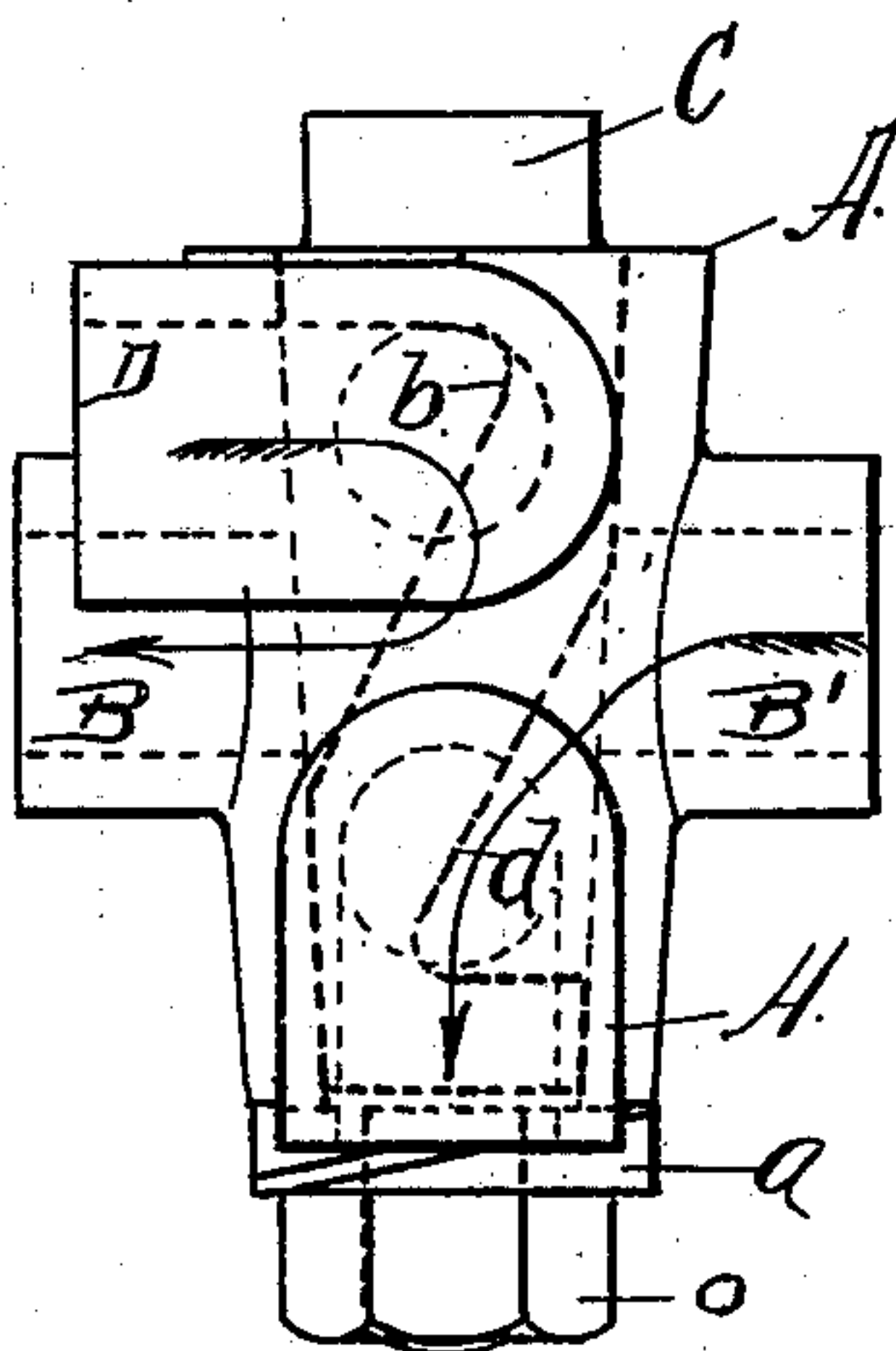


Fig. 3.

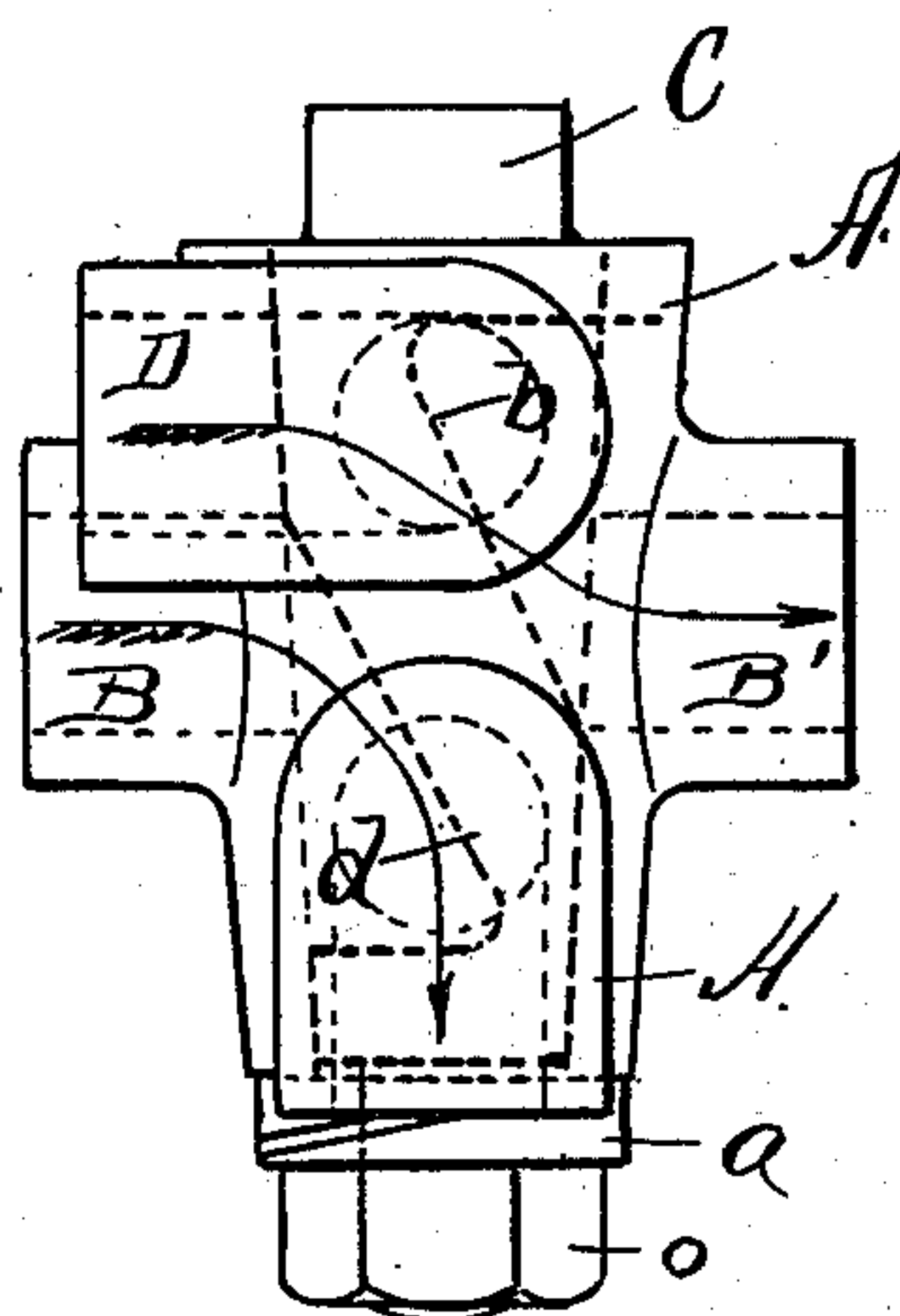


Fig. 4.

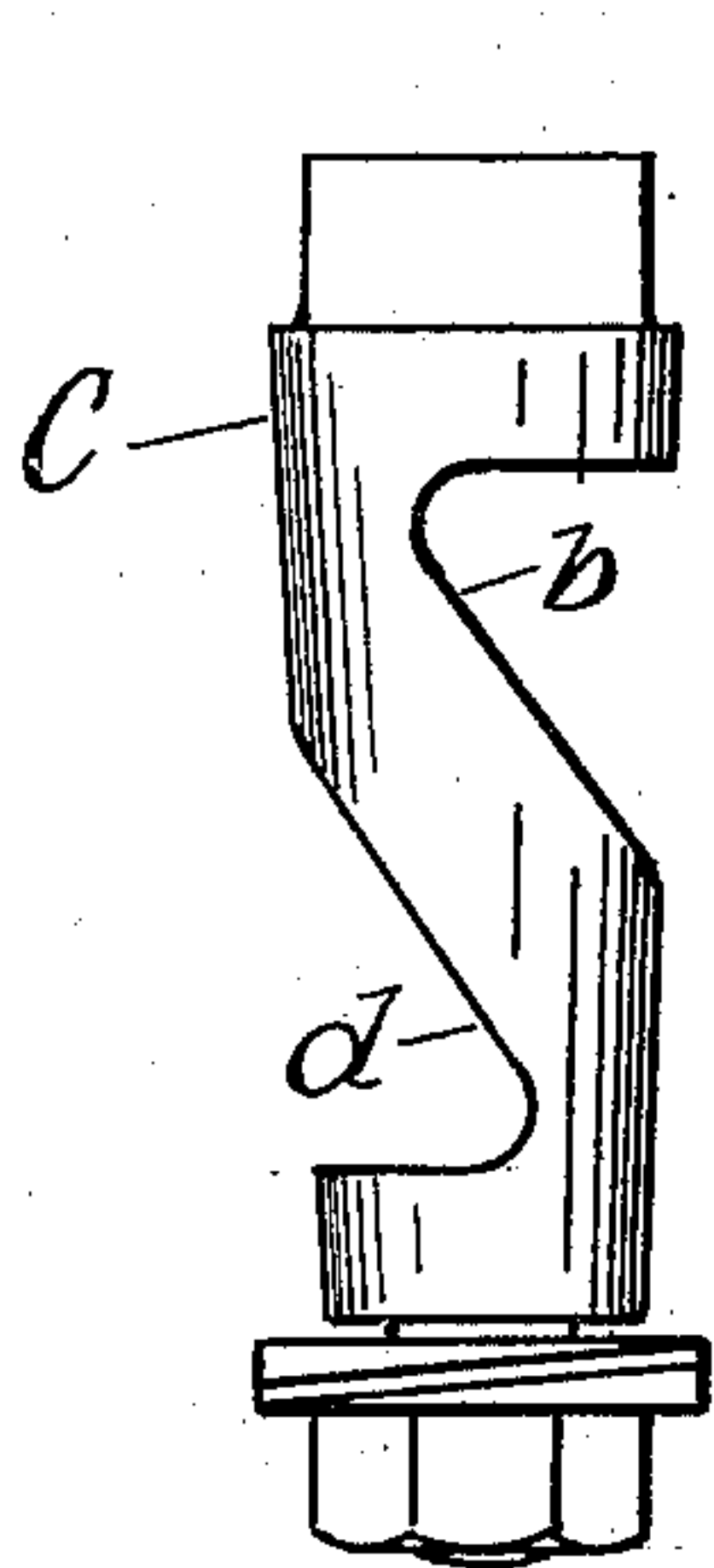


Fig. 7.

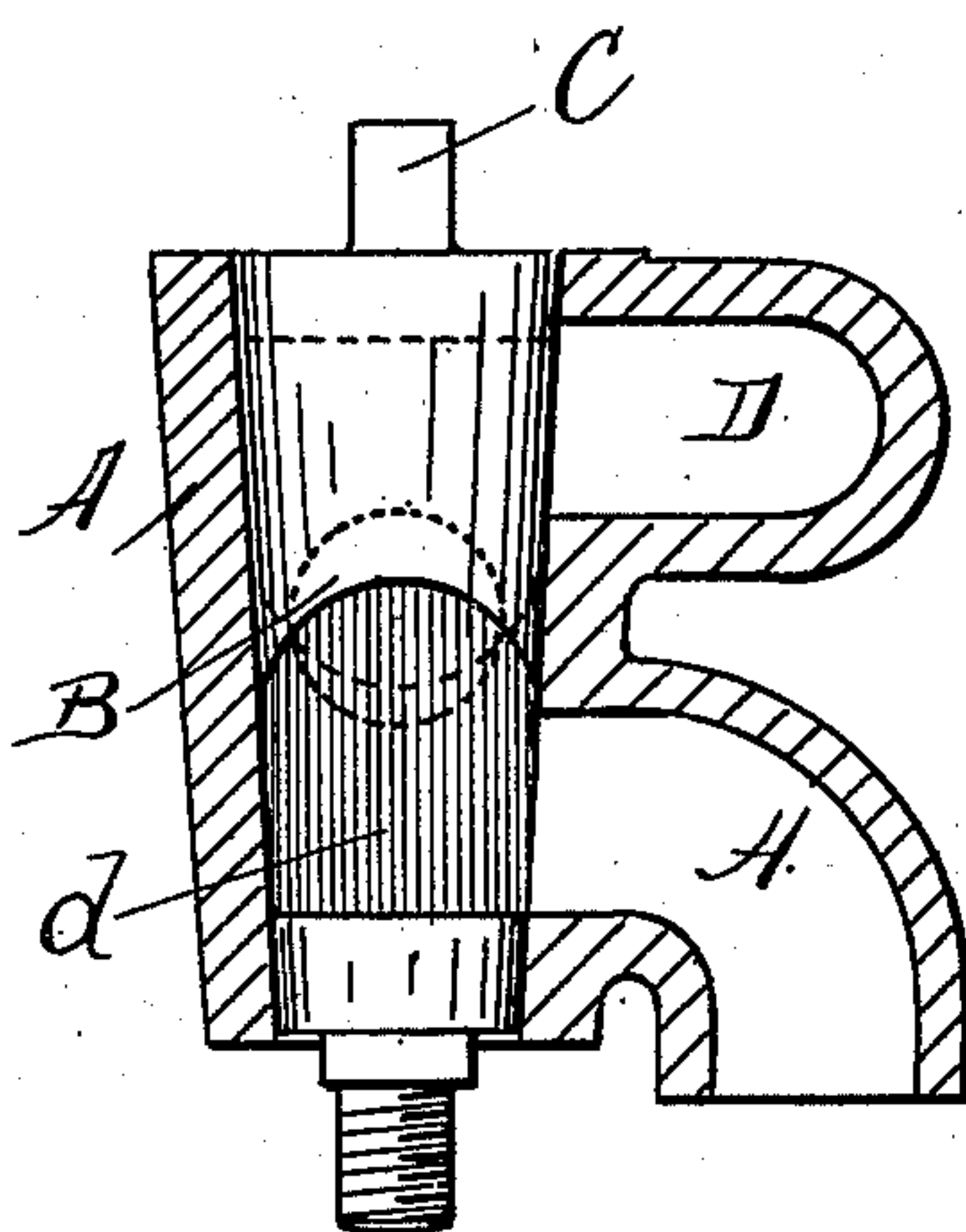


Fig. 6.

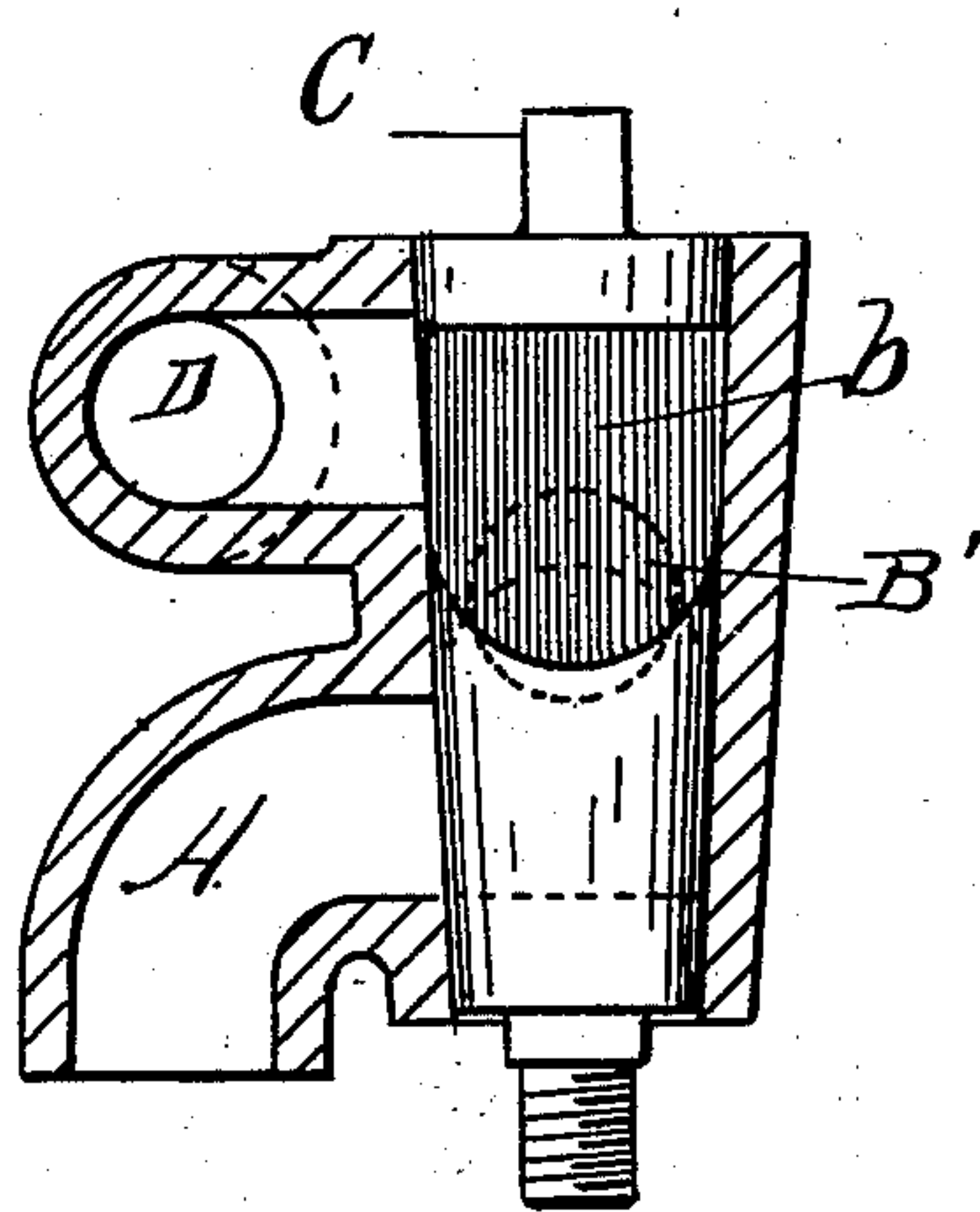


Fig. 5.

Witnesses.

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UNITED STATES PATENT OFFICE.

NELSON H. MEDBERY, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO
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SWITCH-COCK FOR GAS-MACHINES.

SPECIFICATION forming part of Letters Patent No. 654,995, dated July 31, 1900.

Application filed December 9, 1899. Serial No. 739,789. (No model.)

To all whom it may concern:

Be it known that I, NELSON H. MEDBERY, of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Switch-Cocks for Gas-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to the class of cocks and their arrangement for determining the direction of circulation of the fluids in the pipes of gas-machines and the like. It is fully explained and illustrated in this specification and the accompanying drawings.

Figure 1 shows the application of the invention to a gas-machine. Fig. 2 is a top view of the switch-cock separate. Fig. 3 shows a front elevation of the cock. Fig. 4 shows an elevation of the front of the cock, the plug having had a half-turn from the position shown in Fig. 3. Fig. 5 shows a vertical section of the shell with the plug in elevation, taken on line 5 5, Fig. 2, looking to the left. Fig. 6 is the same as Fig. 5 looking to the right of line 5 5 in Fig. 2. Fig. 7 shows in elevation the plug of the cock separate.

The object of this invention is to produce a switch-cock for use in gas-machines that shall simplify the running of them by reducing the number of parts and of the motions necessary to be made in changing the receptacles of material that there may be less liability of forgetting or neglecting any one of them through oversight or ignorance.

The construction and mode of operation are as follows:

A represents the shell of the cock, and C the plug. The shell A has two side pipes B B', one on each side. (See Fig. 2.) On the front there is an upper pipe D turned to the left (see Figs. 2 and 3) and a lower pipe H, which turns down, and the usual taper-hole is made down through the center of the shell A, into which the taper-plug C (seen in Fig. 7) is fitted to turn, with the usual spring *a* and screw-nut *c* fitted on its lower end to draw it into the shell and keep it tight as it wears in

use. The plug C has two scarfed passages cut in it, (see Fig. 7,) the upper one of which, *b*, is made by cutting squarely in on one side near the upper end and then down obliquely, so as to come out a little below the middle of the plug on the same side. The lower passage *d* is made the reverse by cutting squarely in near the lower end on the opposite side of the plug and coming out a little above the middle of the plug. When the plug C is put in the shell A with the passage *b* in front, as in Fig. 5, the upper pipe D will communicate through passage *b* with side pipe B'; and by turning the cock half around the other side will be as seen in Fig. 6, where the side pipe B communicates through the passage *d* with the lower pipe H. This position would appear in front, as seen in Fig. 4. Then if the plug C is given a half-turn in the shell the position of the passage *b* and *d* will be as shown by the dotted lines *b d* in Fig. 3, and the direction the fluid will pass is indicated by the arrows in both Figs. 3 and 4.

In Fig. 1 is shown the application of the switch-cock to a gas-machine. The cock is inserted in the pipe connecting the two receptacles F and J for holding the material of which the gas is to be made. The receptacles F and G are also connected by a pipe R, in which the two telltales *g* and *h* are inserted.

The operation is as follows: The water is supplied by way of the pipe D, with the plug C in position as shown in Fig. 3, and will pass through the passage *b* into the pipes B and G' to the receptacle F, and the gas made there will pass by the pipe R around to and through the receptacle J and pipe G' to the pipe B', thence through the passage *d* to the outlet H. When the material in receptacle F is exhausted and the water begins to pass beyond it, the telltale *g* will show it. Then the plug G is given a half-turn, which cuts the water off from the pipe B and directs it into the pipe B', as shown in Fig. 7, and through pipe G' to receptacle J, and the receptacle F is replaced by a full one, and the process goes on in receptacle J until it is exhausted. Then the plug is turned back and receptacle F is replaced, so that there is always a full receptacle in reverse while an old one is being used, and there is

only one simple motion—that of turning the plug a half-turn—necessary to keep the passages all right.

Having thus described my improvements,
5 I claim as my invention and desire to secure by Letters Patent—

A switch-cock for gas-machines and the like, consisting of a shell having a tapering hole through it, an outlet on two sides opposite to each other and about midway of its
10 length, an upper and a lower outlet on the front side, in combination with a plug having an

upper and a lower passage in it on opposite sides, each passage being cut almost directly in near the end and gradually sloping out to the side a little beyond the middle of the plug, substantially as described. 15

In testimony whereof I have hereunto set my hand this 6th day of December, A. D. 1899.

NELSON H. MEDBERY.

In presence of—

BENJ. ARNOLD,
H. E. BARLOW.