

No. 731,942.

PATENTED JUNE 23, 1903.

H. E. PARSON.

ROTATING STEAM OR WATER VALVE.

APPLICATION FILED MAY 3, 1902. RENEWED MAY 5, 1903.

NO MODEL.

Fig. 1.

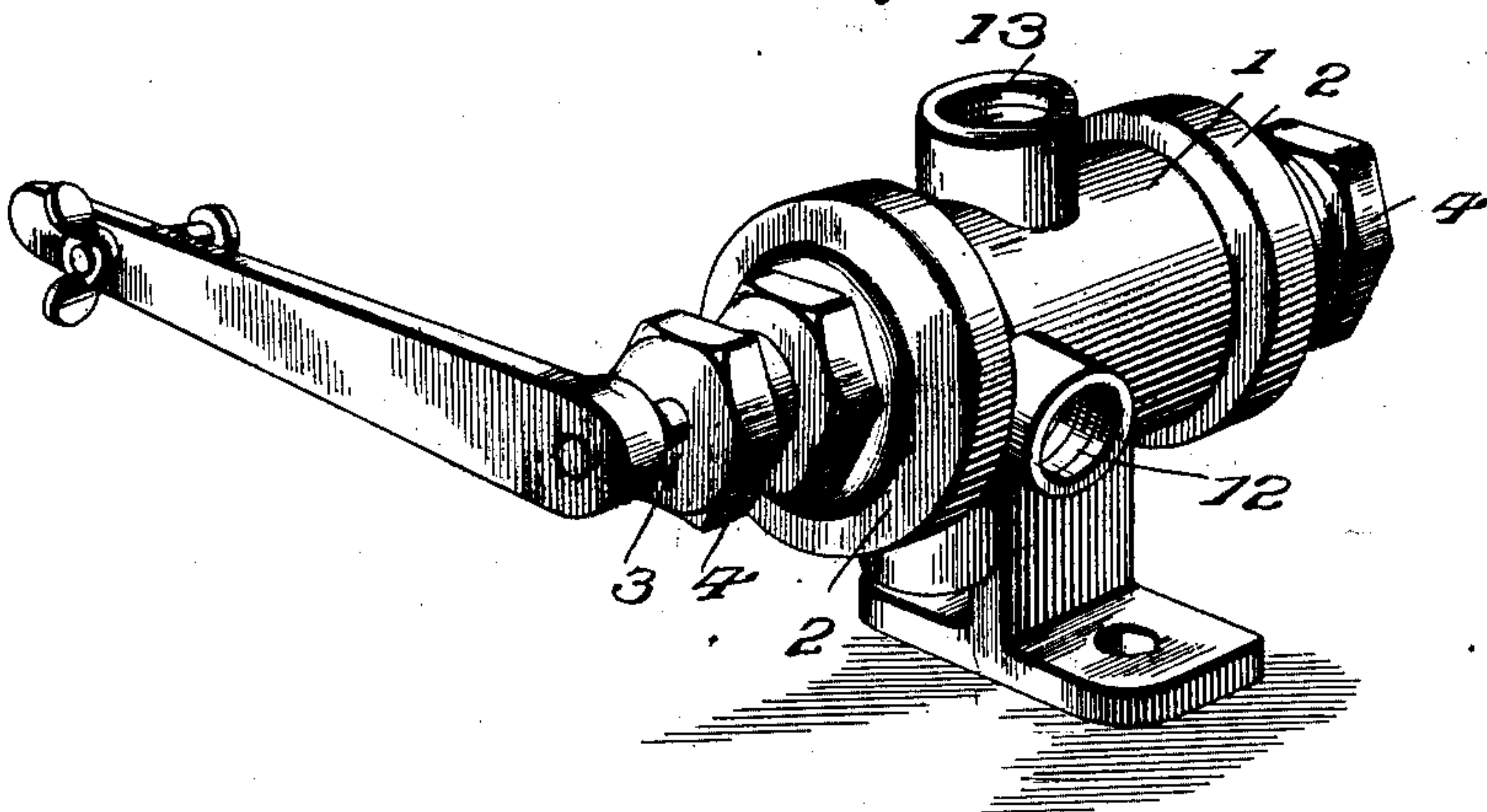


Fig. 2.

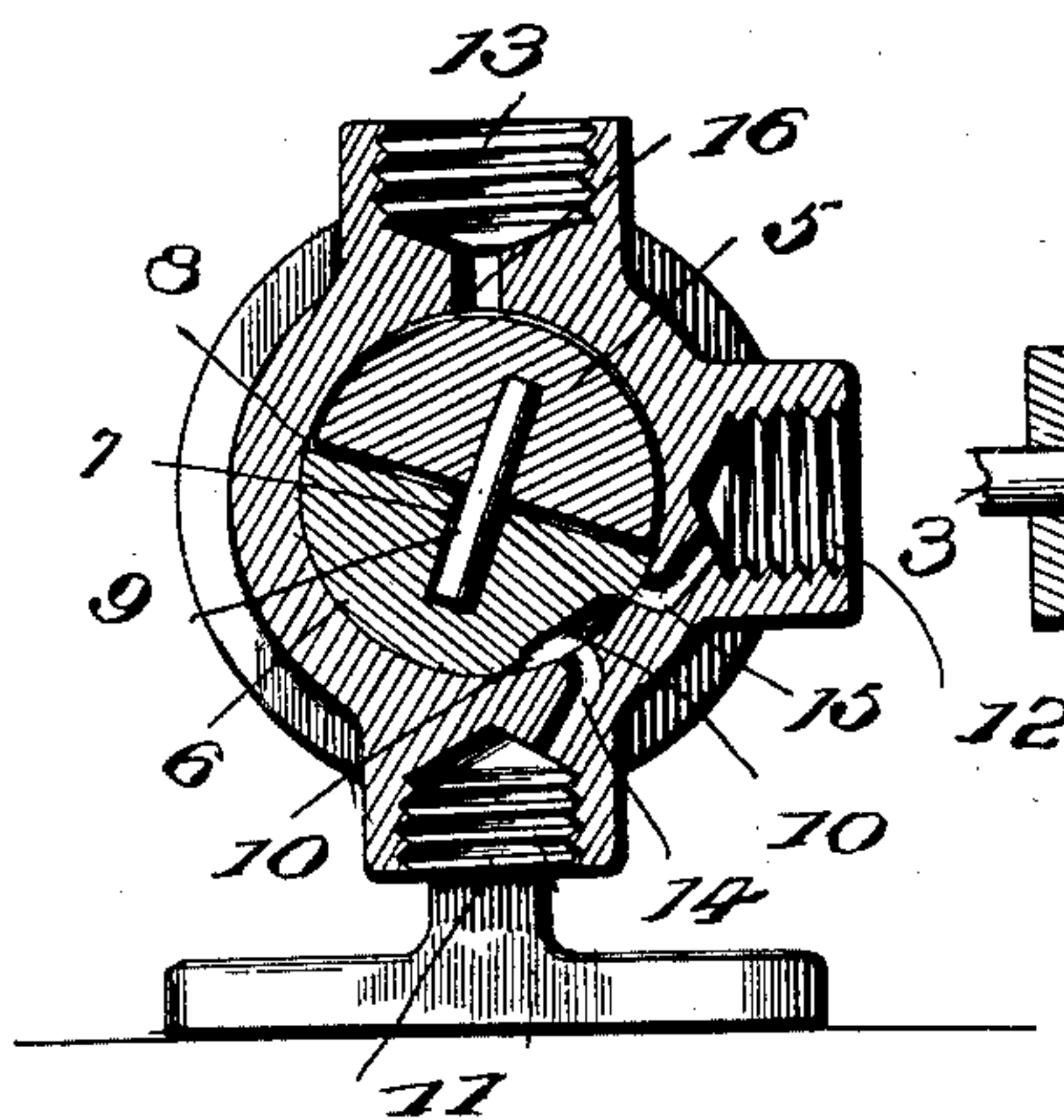


Fig. 3.

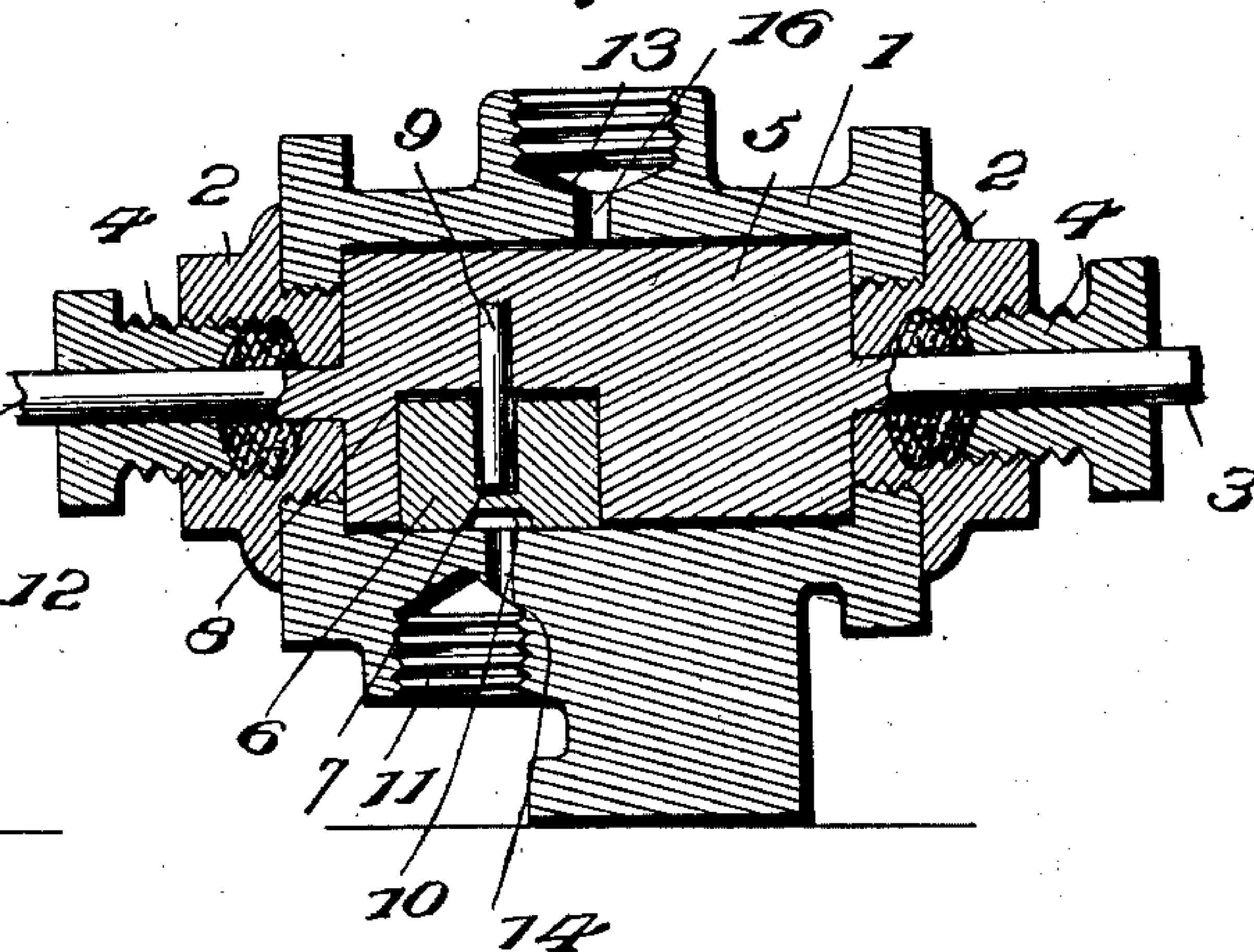


Fig. 4.

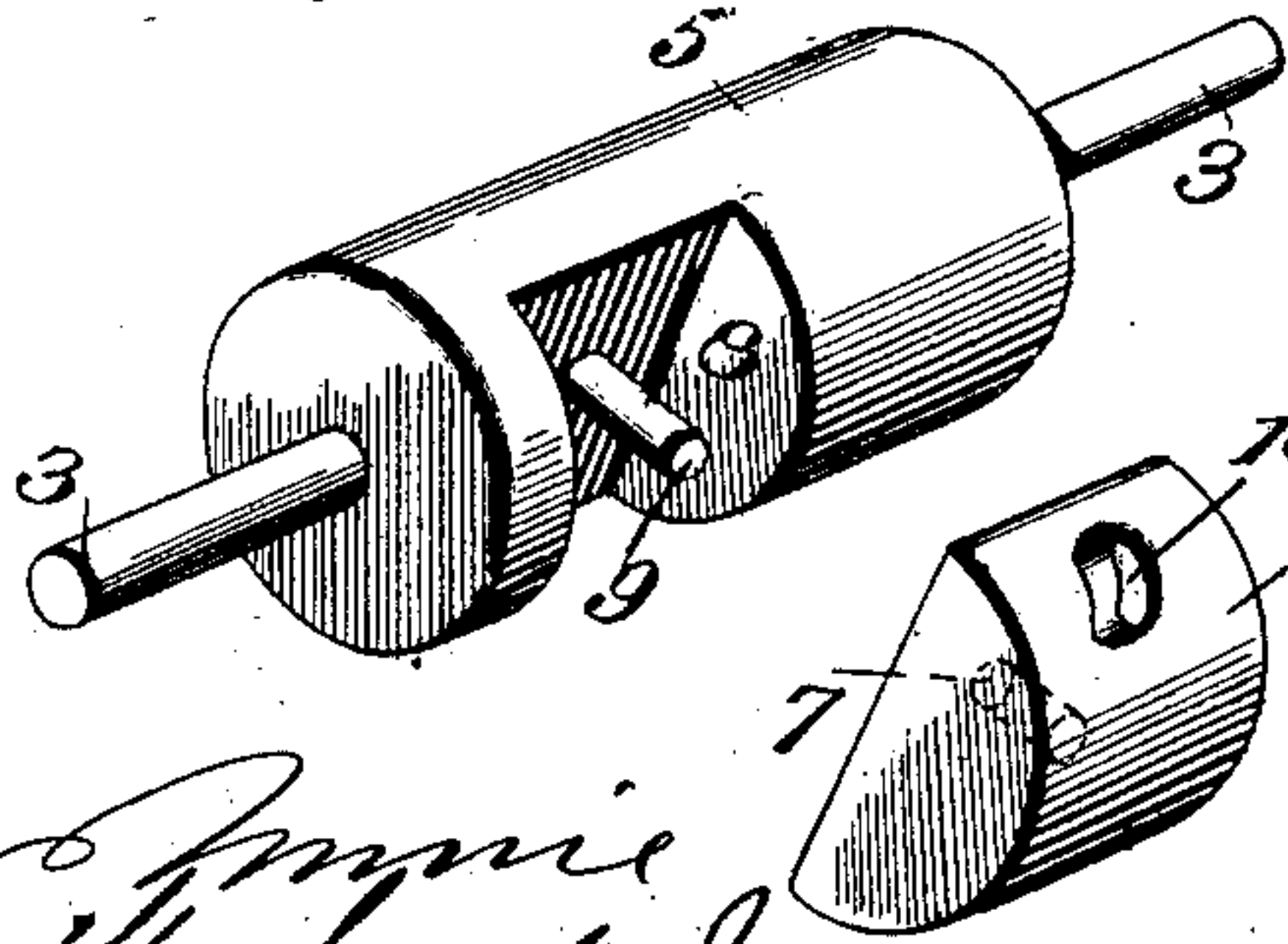


Fig. 5.

Witnesses

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HENRY E. PARSON, OF BROOKLYN, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO PARSON MANUFACTURING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

ROTATING STEAM OR WATER VALVE.

SPECIFICATION forming part of Letters Patent No. 731,942, dated June 23, 1903.

Application filed May 3, 1902. Renewed May 5, 1903. Serial No. 155,791. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. PARSON, a citizen of the United States of America, and a resident of Brooklyn, county of Kings, State of New York, (post-office address 457 Putnam avenue, Brooklyn, New York,) have invented certain new and useful Improvements in Rotating Steam or Water Valves, of which the following is a specification.

My invention relates to a rotating steam or water valve so constructed as to cause the valve to be maintained upon its seat by the pressure of the fluid, and thus to constantly wear itself to a perfect bearing. The valve may have a single port or be two or three way. The valve is semicylindrical in shape and rests upon a cylindrical valve-seat. Fluid-pressure is maintained upon its flat side, and it is moved by a shaft arranged axially of the cylindrical valve-chest and to which the valve is connected.

In the specification the same numbers represent the same parts in all figures.

Figure 1 is a perspective view of the exterior of the valve-casing, showing the valve-stem and lever by which the valve is moved. Fig. 2 is a vertical transverse section of the valve-casing and the valve. Fig. 3 is a vertical longitudinal section of the valve-casing and valve. Fig. 4 is a perspective view of the core by which the valve is rocked. Fig. 5 is a perspective view of the valve itself.

The form of valve shown is a two-way valve.

Referring to Fig. 1, 1 is the valve-chest, having heads 2 2 at each end, through the centers of which protrude the valve-stem 3 3 through stuffing-boxes 4 4. 5 is a central core, which occupies the valve-chest. It is fitted into the chest with a clearance-space sufficient to permit the free flow of steam or fluid around the core within the chest. 6 is a valve consisting of a semicylindrical piece of metal provided in the center of its flat side with a hole 7. The core 5 is slotted on one of its sides down to a plane which is axial of the core, and the slot is of the same width as the valve itself. The slot is marked 8. In the center of the bottom of the slot is a pin 9, adapted to enter the hole 7 and turn the valve

6. In the side of the valve 6 there is a notch or indentation 10, which forms the port by which communication is established between the entrances and exits from the valve-chest. The valve-chest is provided with three openings, 11 in the bottom, 12 on one side, and 13 on the top. The opening 11 is provided with a port 14, entering the valve-chest on one side of the center, and the opening 12 with a port 15, entering the valve-chest at a point near the mouth of port 14. The ports 14 and 15 enter the valve-chest at points close together. The distance between the outside edges of the ports 14 and 15 is the same as the width of the notch 10 in the valve, so that the notch 10 may straddle them and throw them into communication with one another. The opening 13 has a port 16 entering the valve-chest.

Referring to Fig. 2, it will be seen that the core 5 is made sufficiently smaller than the interior of the valve-chest to provide a steam or water passage from the port 16 to the port 15 when the valve 6 is so turned as to uncover the port 15.

In Fig. 2 the valve is shown with all ports closed. This valve is used in a boiler-pressure regulator, which is the subject of a concurrent application, Serial No. 105,810, filed May 3, 1902, and is designed to admit boiler-pressure from port 16 to port 15 when the valve is in one position and to cut off steam and to exhaust-port 15 into port 14 when the valve is in another position. The length of the pin 9 is such as to maintain a steam-space between the flat side of the valve 6 and the bottom of the slot 8 in the core 5. This results in the maintenance of a constant pressure of steam or fluid upon the flat surface of the valve, pressing it closely upon its seat, and maintaining a steam-tight joint over the ports 14 and 15. By this means I am enabled to maintain a self-seating valve which will always wear tight and at the same time rotate the valve around a center by means of a device which is not pressed upon any seats or surfaces by steam-pressure, with the result that a minimum of power is required to turn the valve and the valve is seated by steam-pressure.

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

1. A rotary valve comprising a valve-chest, 5 a core therein of slightly-less diameter than the valve-chest and formed with a radial notch, a semicylindrical valve fitting the notch in the core and seated on the interior wall of the valve-chest, and a shaft connected 10 to the core and protruding through the center of one of the heads of the valve-chest.

2. A rotary valve comprising a valve-chest, a core therein formed with a notch on one side, a semicylindrical valve seated on the interior wall of the valve-chest and fitting the 15 notch in the core, and a shaft integral with the core, located axially in the valve-chest and protruding through the centers of both heads thereof.

3. A rotating valve comprising a valve-chest provided with two ports entering through the cylindrical wall thereof, a core of slightly less diameter than the valve-chest, 20 located therein, and formed with a notch on one side, a semicylindrical valve fitting the

notch in the core and formed with a notch of a size to span said ports, and a shaft integral and axial with the core and protruding through the center of one of the heads of the valve-chest. 30

4. A rotary valve comprising a valve-chest, a core therein of slightly-less diameter than the valve-chest and formed with a radial notch, ports formed in the valve-chest, a semicylindrical valve fitting the notch in the core, 35 seated against the interior wall of the valve-chest and formed with a notch in its curved surface adapted to span said ports, a pin fixed in the core and projecting within the notch therein, said pin being adapted to enter a hole in the valve, and a shaft integral 40 with and axially of the core and protruding through the center of one of the heads of the valve-chest.

Signed by me at New York, N. Y., this 5th 15 day of March, 1902.

HENRY E. PARSON.

Witnesses:

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