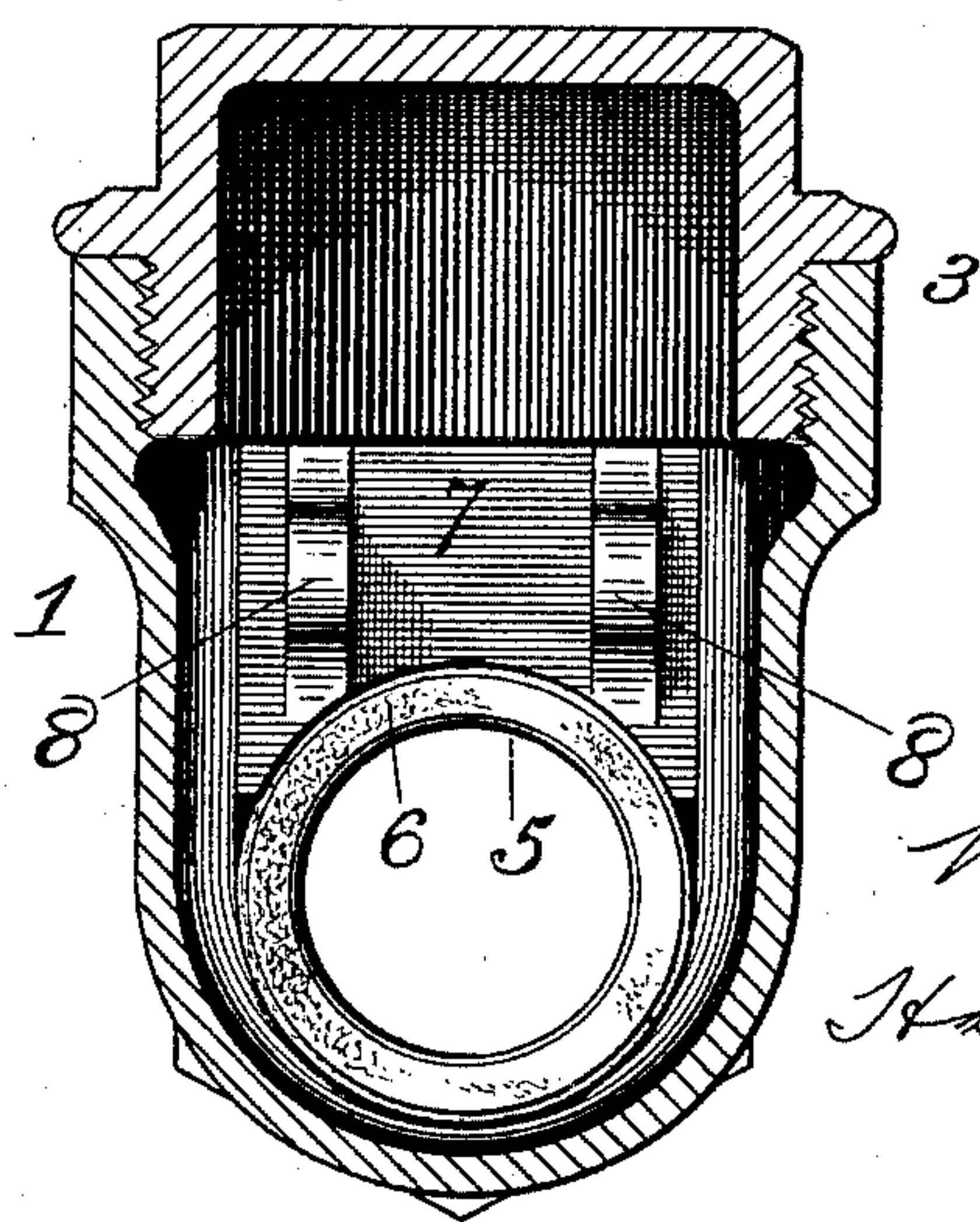
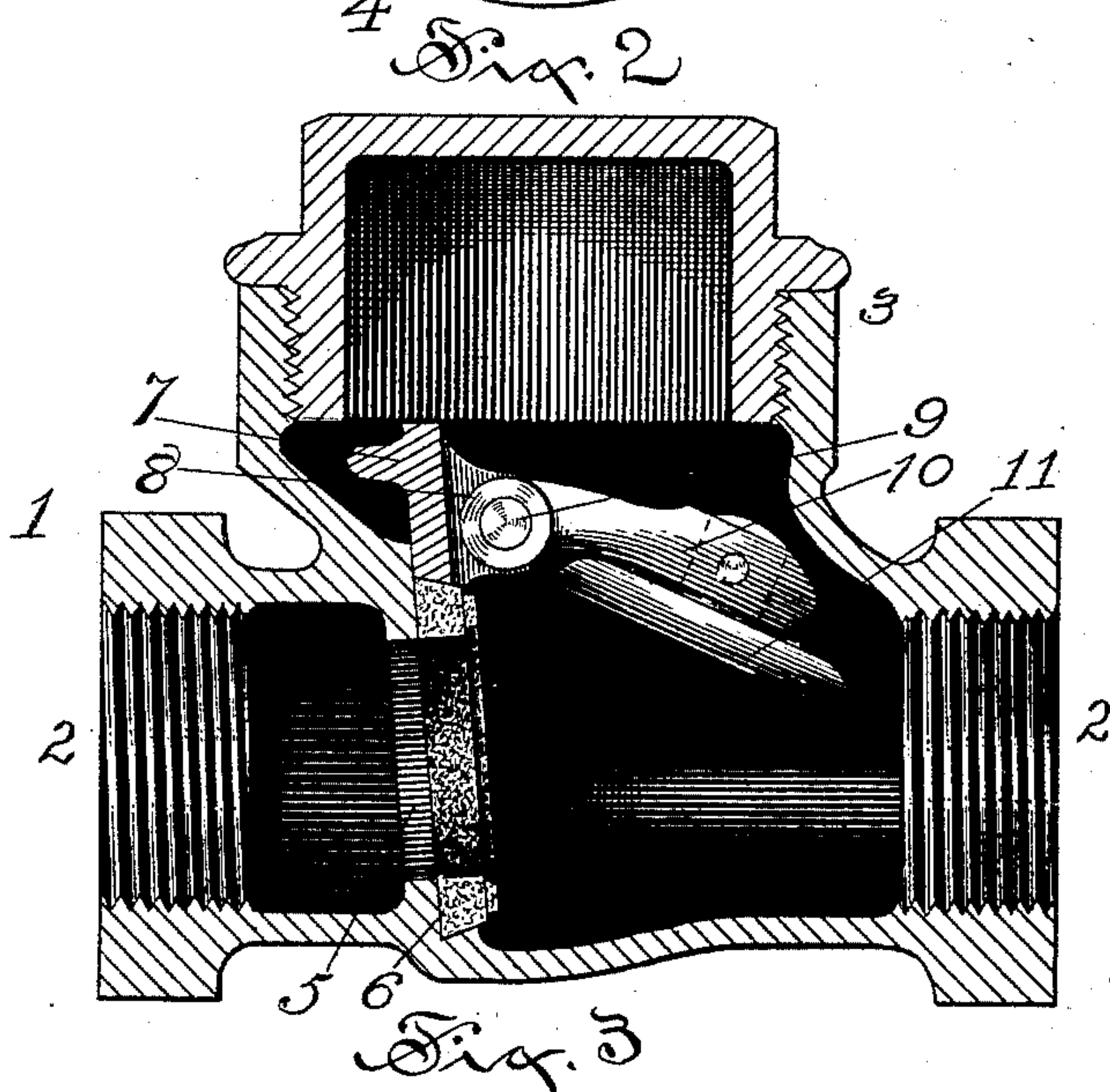
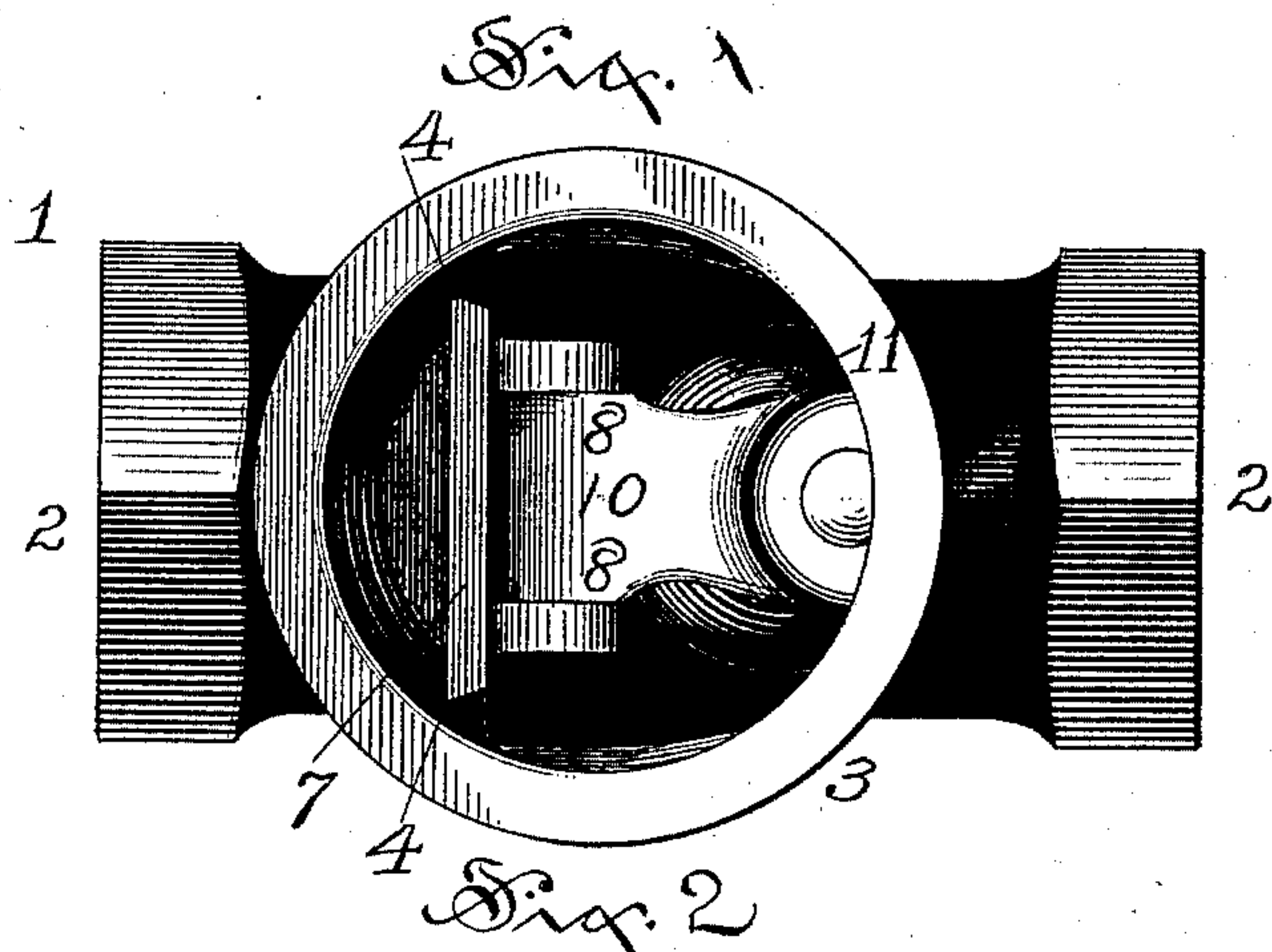


(No Model.)

W. S. LOVELAND.
RENEWABLE CHECK VALVE.

No. 485,745.

Patented Nov. 8, 1892.



Witnesses:
C. E. Becklund.
P. A. Phelps.

Inventor:
Walter S. Loveland,
Harry R. Williams
attys.

UNITED STATES PATENT OFFICE.

WALTER S. LOVELAND, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE
STANDARD MANUFACTURING COMPANY, OF SAME PLACE.

RENEWABLE CHECK-VALVE.

SPECIFICATION forming part of Letters Patent No. 485,745, dated November 8, 1892.

Application filed April 14, 1892. Serial No. 429,115. (No model.)

To all whom it may concern:

Be it known that I, WALTER S. LOVELAND, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Renewable Check-Valves, of which the following is a full, clear, and exact specification.

The invention relates to the class of straight-way check-valves having a removable disk, the object being to so construct such a valve that it is cheap, light, strong, and readily assembled, from which both the disk and seat can be readily and quickly removed for renewing, repairing, and cleaning.

Referring to the accompanying drawings, Figure 1 is a plan of the valve with the cap removed. Fig. 2 is a longitudinal vertical section, and Fig. 3 is a transverse vertical section of the same.

In the views, 1 indicates the body of the valve, which is cast to shape, of brass, bronze, iron, or other suitable material, with pipe ends 2 for making the connections, and cap end 3, which may be opened for removing or inspecting the disk or seat. These ends are usually threaded, as shown, but may, of course, be belled or flanged, if desired, for other forms of connections.

In making the valve, grooves or mortises 4 are cut in the walls upon each side from top to bottom of the interior chamber adjacent to the port 5. These grooves usually incline from the top to the bottom and are preferably milled with a beveled or V-shaped cutter, the wall of the body ordinarily being slightly thicker to accommodate the grooves. An annular seat or ring 6, of brass, babbitt, asbestos, composition, or any other suitable material, with beveled edges to fit the grooves, is loosely placed in the interior, so as to lie against the face around the part 5, and upon this, with its lower edge formed to fit the top of the seat and with its side edges beveled to

slide in the grooves, is placed a plate 7. From the front of this plate project lugs 8, that in perforations support a pivot 9, upon which oscillates an arm 10, bearing a disk 11, having a face of brass, babbitt, asbestos, leather, or any other suitable material which is durable and will fit tightly and closely against the front face of the loose seat that is in front of the port.

When the valve has been connected with pipes in position, the seat is dropped into the interior, so as to lie around the port with its side edges in the grooves and its lower edge resting on the bottom of the body. The plate bearing the swinging arm and disk is then placed upon the seat and when the cap is screwed to place it holds the plate down, so that the seat is also firmly held in position. As there are no openings in the body except for the connections and cap, the walls may be made light and still be strong. The grooves are easily milled, the seats are cheaply formed, and the plates accurately made and readily placed in position to hold the seats firmly in place, while the cap holds the plate in place, so that the disk will fit closely and tightly against the seats, always in the same position, without special accurate fitting. When the cap is removed, the disk and seat can be lifted out for renewing, repairing, or cleaning.

I claim as my invention—

A valve consisting of a body having grooves in the interior extending from top to bottom of the opposite walls, an annular seat loosely inserted in the grooves, a plate loosely inserted in the same grooves and resting upon the annular seat, ears projecting from the plate, an arm pivoted to the ears, a disk supported by the arm, and a cap for holding the plate in position, substantially as specified.

WALTER S. LOVELAND.

Witnesses:

H. R. WILLIAMS,
C. E. BUCKLAND.