

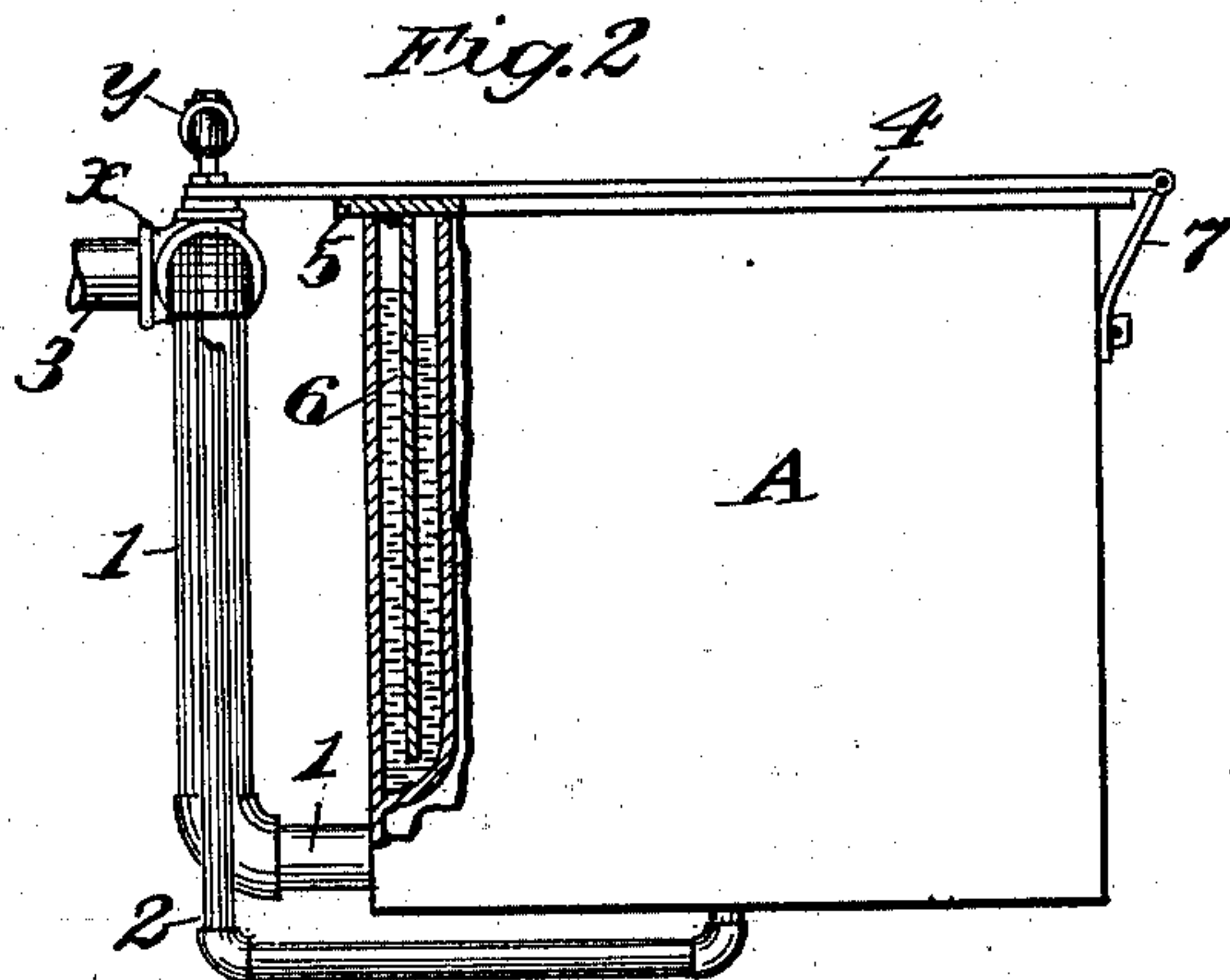
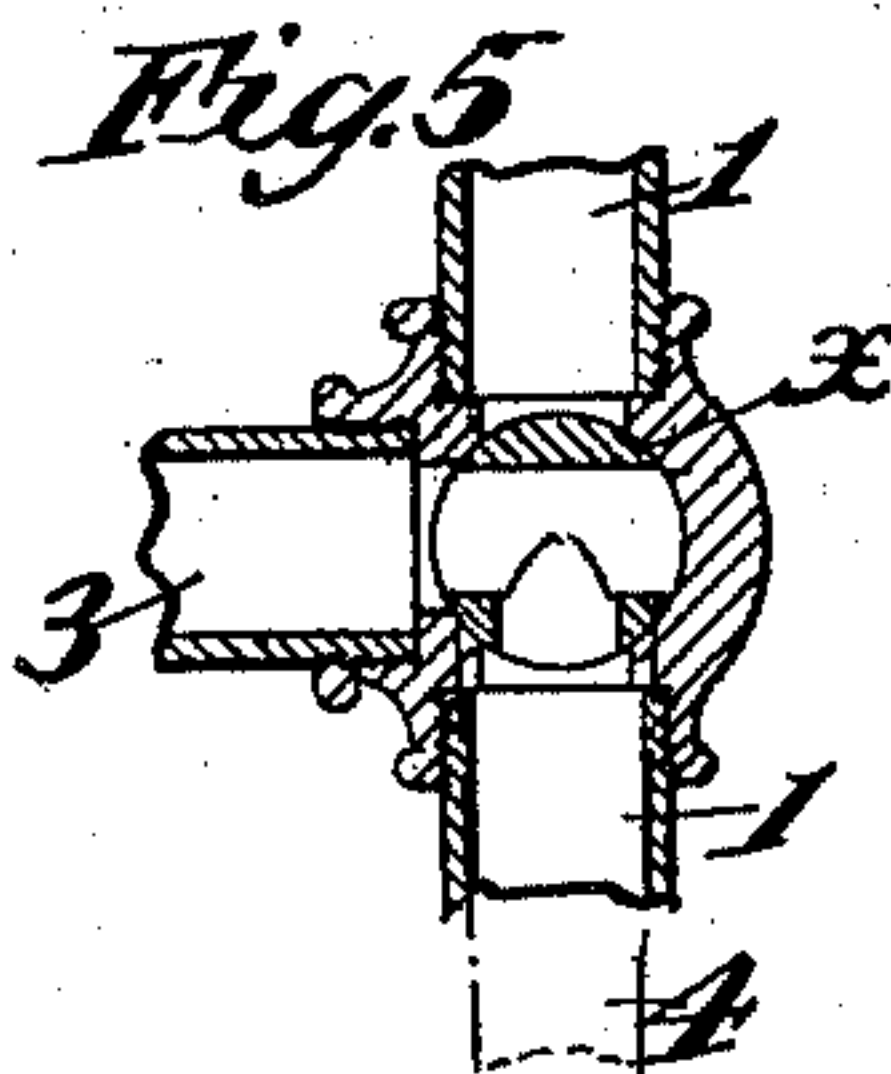
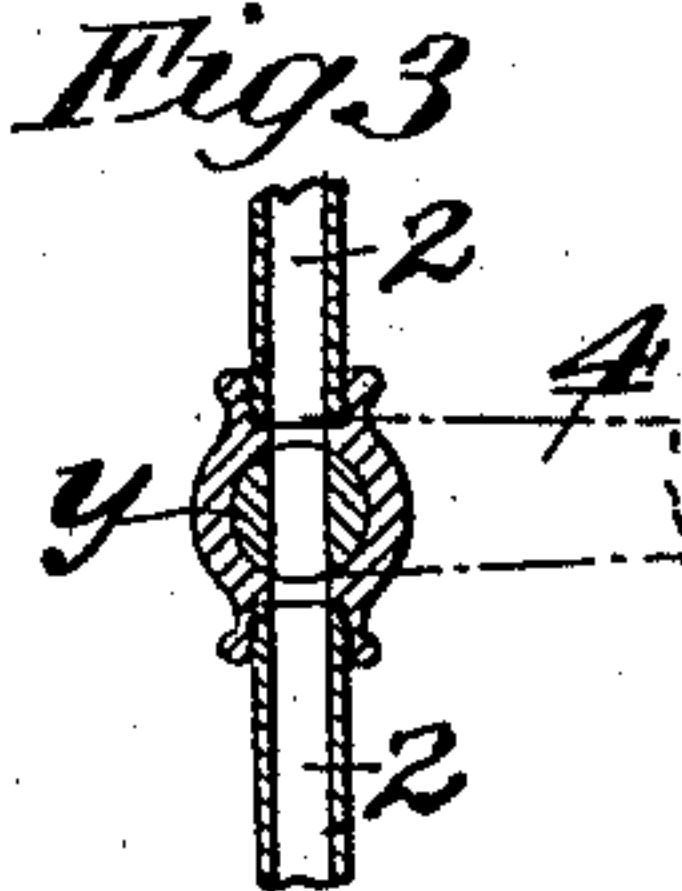
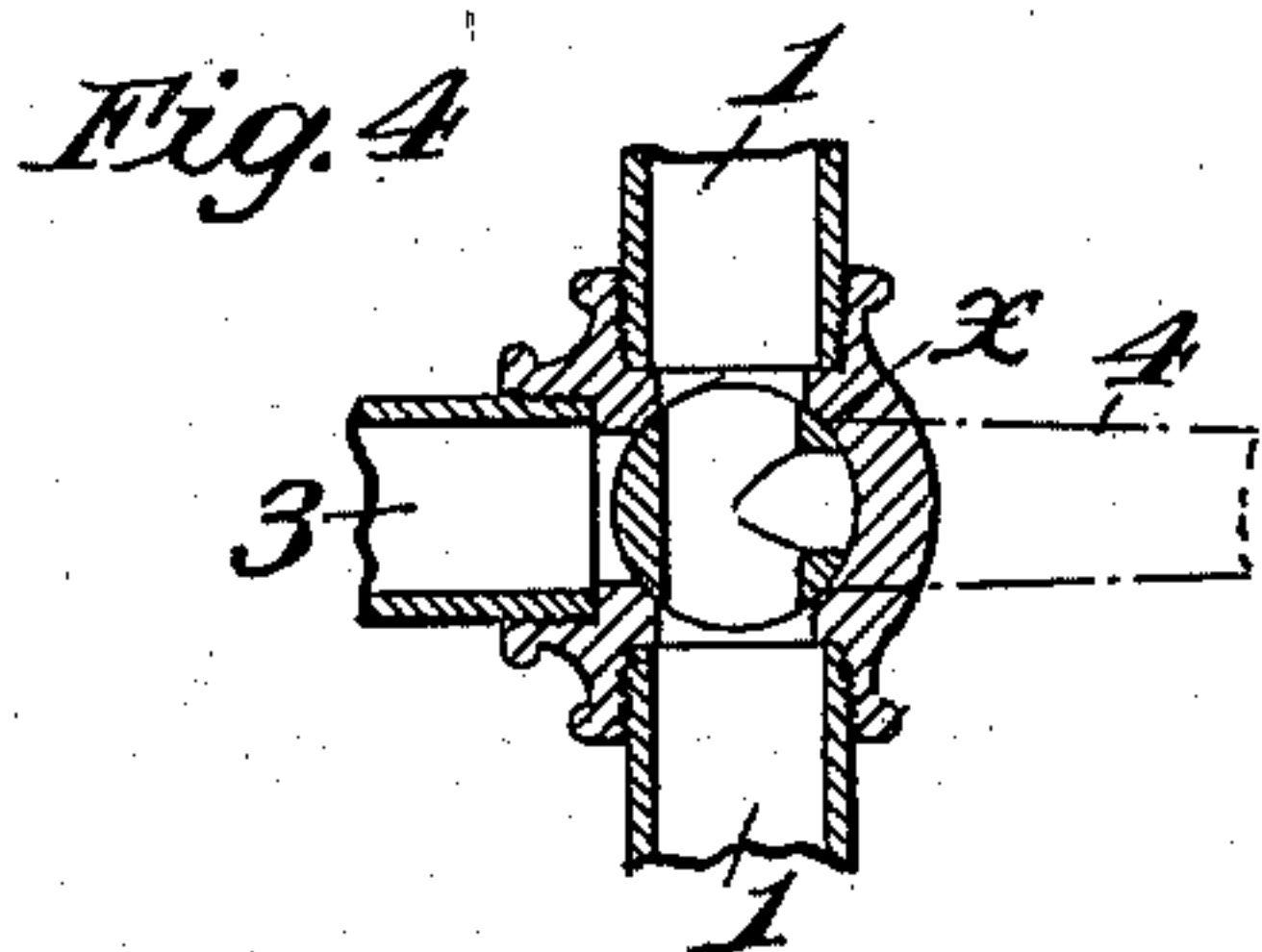
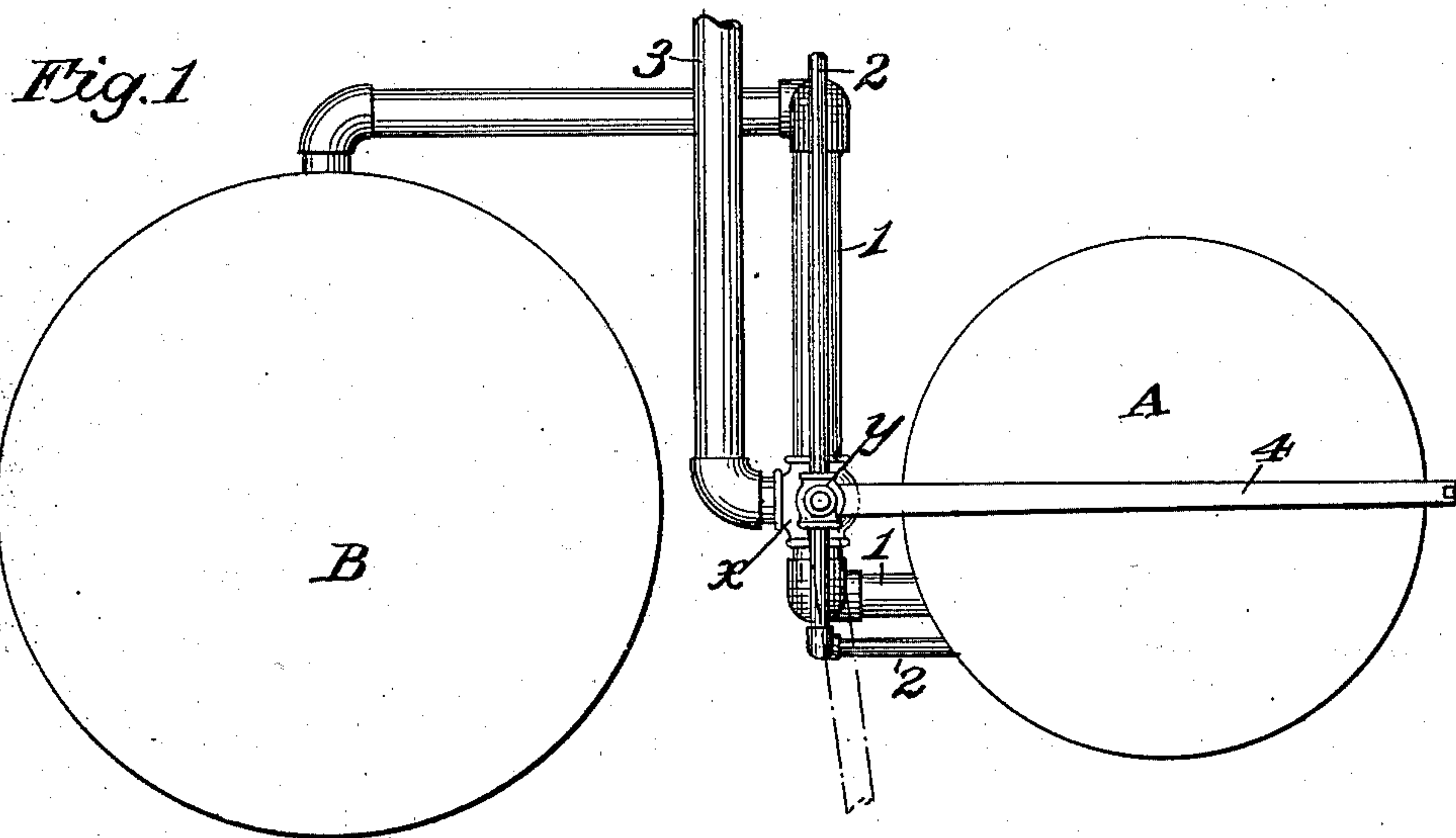
No. 698,633.

Patented Apr. 29, 1902.

M. D. COMPTON.  
ACETYLENE GAS GENERATOR.

(Application filed Feb. 8, 1900.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

MELVIN D. COMPTON, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO  
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## ACETYLENE-GAS GENERATOR.

SPECIFICATION forming part of Letters Patent No. 698,633, dated April 29, 1902.

Application filed February 8, 1900. Serial No. 4,446. (No model.)

*To all whom it may concern:*

Be it known that I, MELVIN D. COMPTON, a citizen of the United States, and a resident of East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Gas-Generators, of which the following is a specification.

My invention relates to gas-generators, more particularly to the kind employed with acetylene gas.

It relates especially to means for sealing the generators, to simplifying the apparatus, and to the prevention of accidents arising from careless or inexperienced handling. To this end I have so arranged the various parts of the generator, gas-holder, and their accessories that the simple act of opening or closing the generator for the purpose of charging or discharging the gas-making material to or from the generator automatically opens or closes the three pipes upon whose proper position the safe working of the apparatus depends.

In the drawings, Figure 1 shows a top view of the generator and gas-holder and the pipes connected therewith; Fig. 2, a side view of the generator and pipes, a portion of the generator being broken away in order to show the water seal; Fig. 3, the position of the straightway valve when the water-pipe is open and ready to admit water to the generator; Fig. 4, the position of the three-way valve when the generator and gas-holder are connected, the water-pipe being open to the generator; Fig. 5, a section of the valve (three-way) when the generator is shut off from the holder and connected with the vent-pipe, the water being cut off from the generator.

Referring to the drawings, A is the generator, and B the gas-holder, both connected by the gas-outlet pipe 1.

2 is the pipe for supplying water to the generator; 3, the vent-pipe for relieving the vacuum in the generator when the cover 5 is lifted out of the water seal.

4 is a horizontally-swinging lever, to whose pivoted end are attached the two-way valve *y* and the three-way valve *x*. By its move-

ments the lever 4 simultaneously controls the admission of water to the generator through the pipe 2 and the connection of the generator and gas-holder through the pipe 1, the vent-pipe being closed by means of the three-way valve *x*. Vice versa, the movement of the lever 4 in the other direction closes the valve *y*, shutting off the water and simultaneously cutting off the generator from the gas-holder and connecting the former with the vent-pipe. The arrangement is such that when the generator is giving off gas and the lever 4 is in the position shown in Fig. 1 in full lines (in Figs. 3 and 4 in dotted lines) the relation of the parts of the straightway valve *y* is that indicated in Fig. 3, and the parts of the three-way valve *x* stand as illustrated in Fig. 4. The water-pipe and the gas-outlet to the holder are then open, and the pipe 3 is closed. When no gas is being generated and the lever is swung into the position indicated by dotted lines in Fig. 1, the valve *y* stands at right angles to that shown in Fig. 3, shutting off the water-supply and putting the three-way valve into the position indicated in Fig. 5, thereby establishing communication between the generator and the vent-pipe, allowing the cover 5 to set into or be removed from the water seal 6, as may be desired.

The operation is as follows: Suppose the gas-producing material in the generator A to be exhausted, so that the generator must be recharged. The latch 7 of the cover 4 is lifted and the lever 4 swung to the left horizontally. As before explained, this cuts off the water-supply through the valve *y*, at the same time operating the three-way valve *x*, thereby shutting off the gas-outlet 1 and opening the vent-pipe 3. When now the generator-cover 5 is lifted, the suction cannot draw gas from the holder B, but lets in air through the pipe 3 and relieves the vacuum that would be produced in the generator. Having filled the generator with the gas-producing material, the cover 4 is replaced, the air finding vent through the pipe 3. The lever is swung into place, fastening the cover, and by this swinging movement water-pipe 2 is opened, the vent-pipe 3 is closed, and the gas-holder

connected with the generator through the three-way valve *x* and the pipe 1. The generator is now ready to produce gas.

My improvement is applicable to any generator in which the following elements are found—viz., a water-sealed cover, a water-supply pipe, and a vent-pipe and a gas-outlet.

Having thus fully described and illustrated my invention, what I claim is—

10 In acetylene-gas-generating apparatus the combination of a carbid-holder, a removable covering therefor, a water-supply conduit entering the holder, a gas-conduit leading out of the holder, a gas-vent, a single valve-piece

common to the said conduits and the vent, 15 and cover-securing means in the form of one or more horizontally-swinging latches operatively connected with the said valves, where- by displacement of the securing means ef- 20 fects the closure of the water and gas con- duits and opening of the vent.

Signed at New York, in the county of New York and State of New York, this 7th day of February, A. D. 1900.

MELVIN D. COMPTON.

Witnesses:

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