

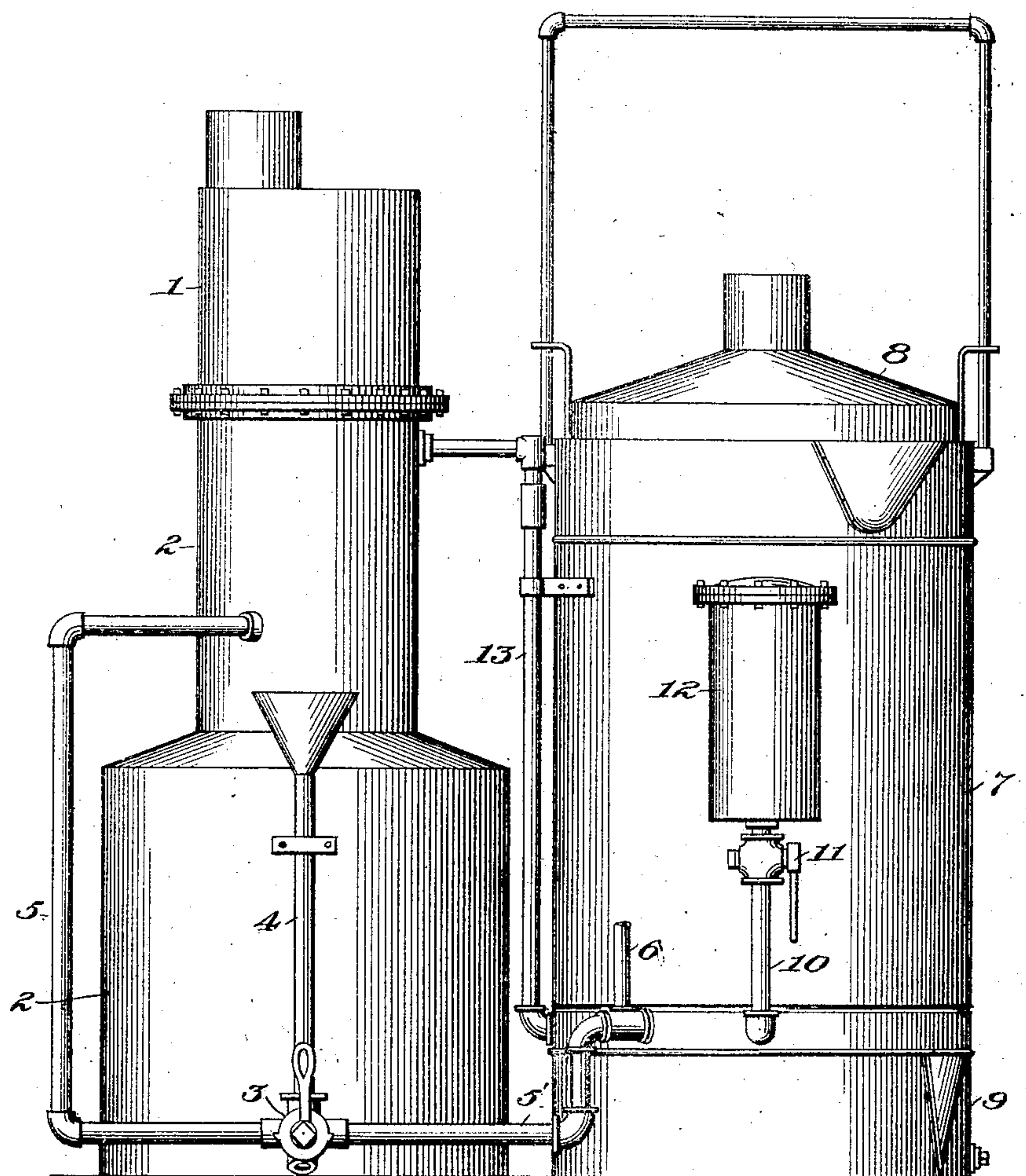
940,110.

J. ZANDER.  
ACETYLENE GENERATOR.  
APPLICATION FILED MAR. 21, 1907.

Patented Nov. 16, 1909.

2 SHEETS—SHEET 1.

*Fig. 1.*



Witnesses:  
Chas. H. Potter.  
E. A. Fullam

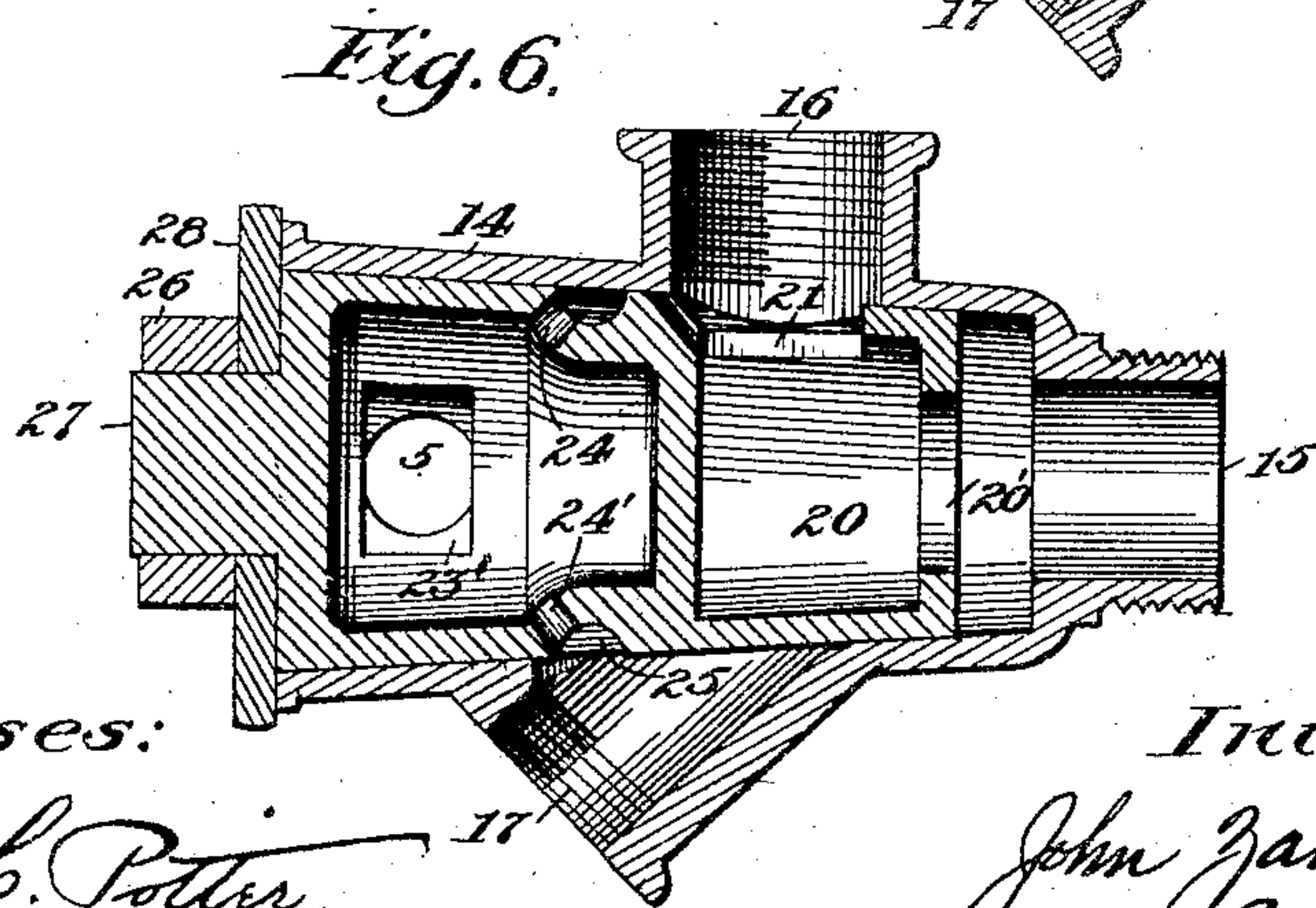
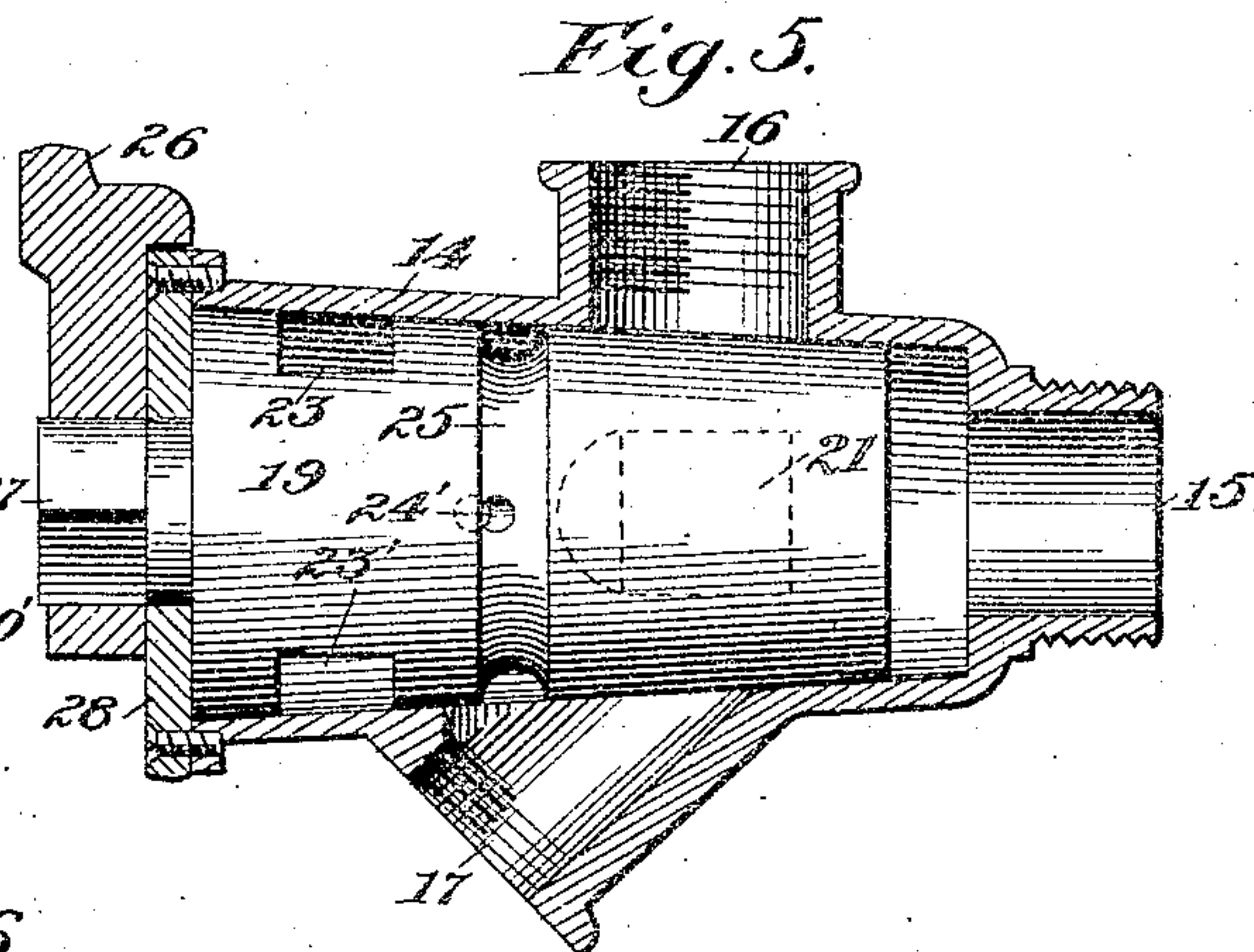
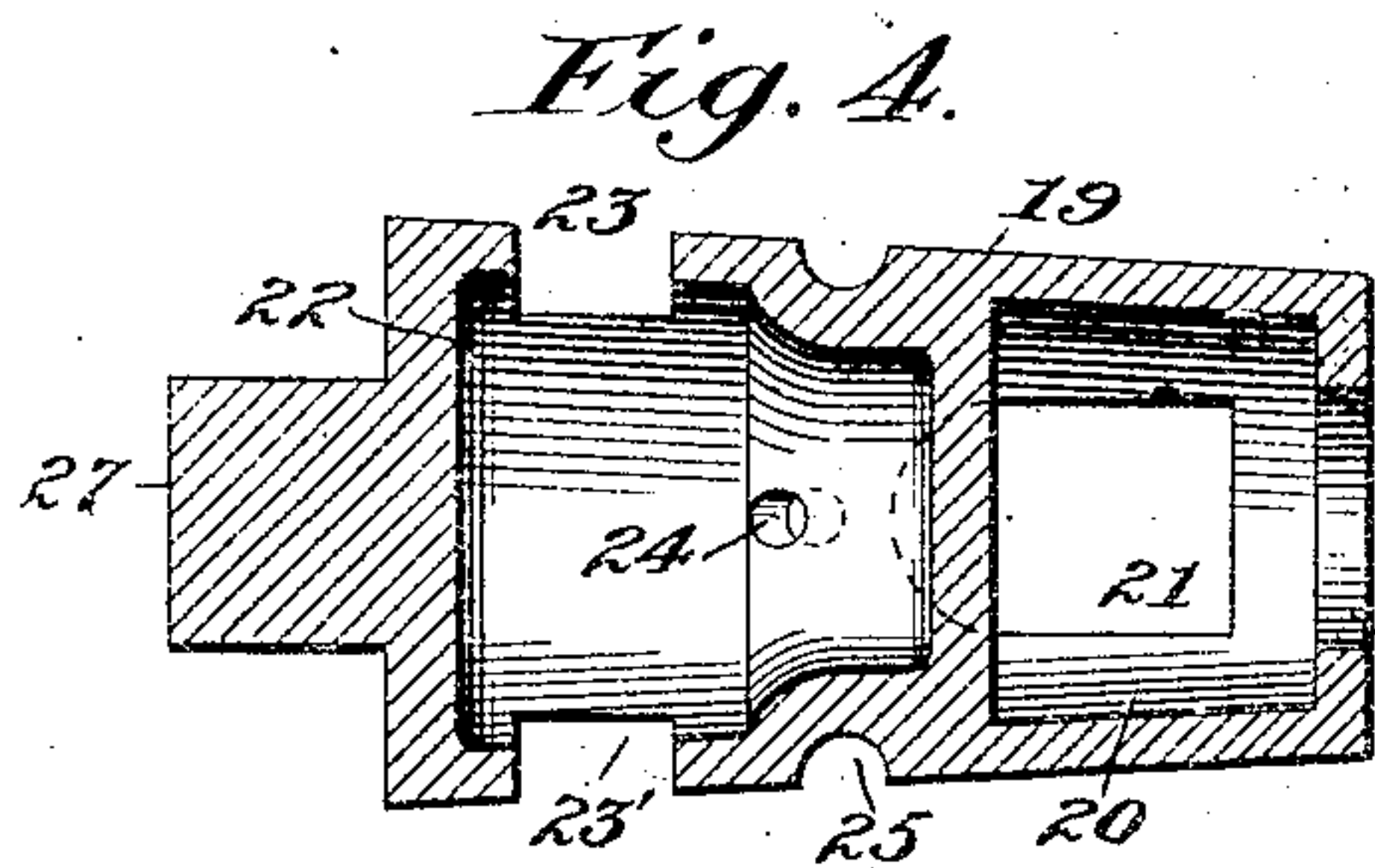
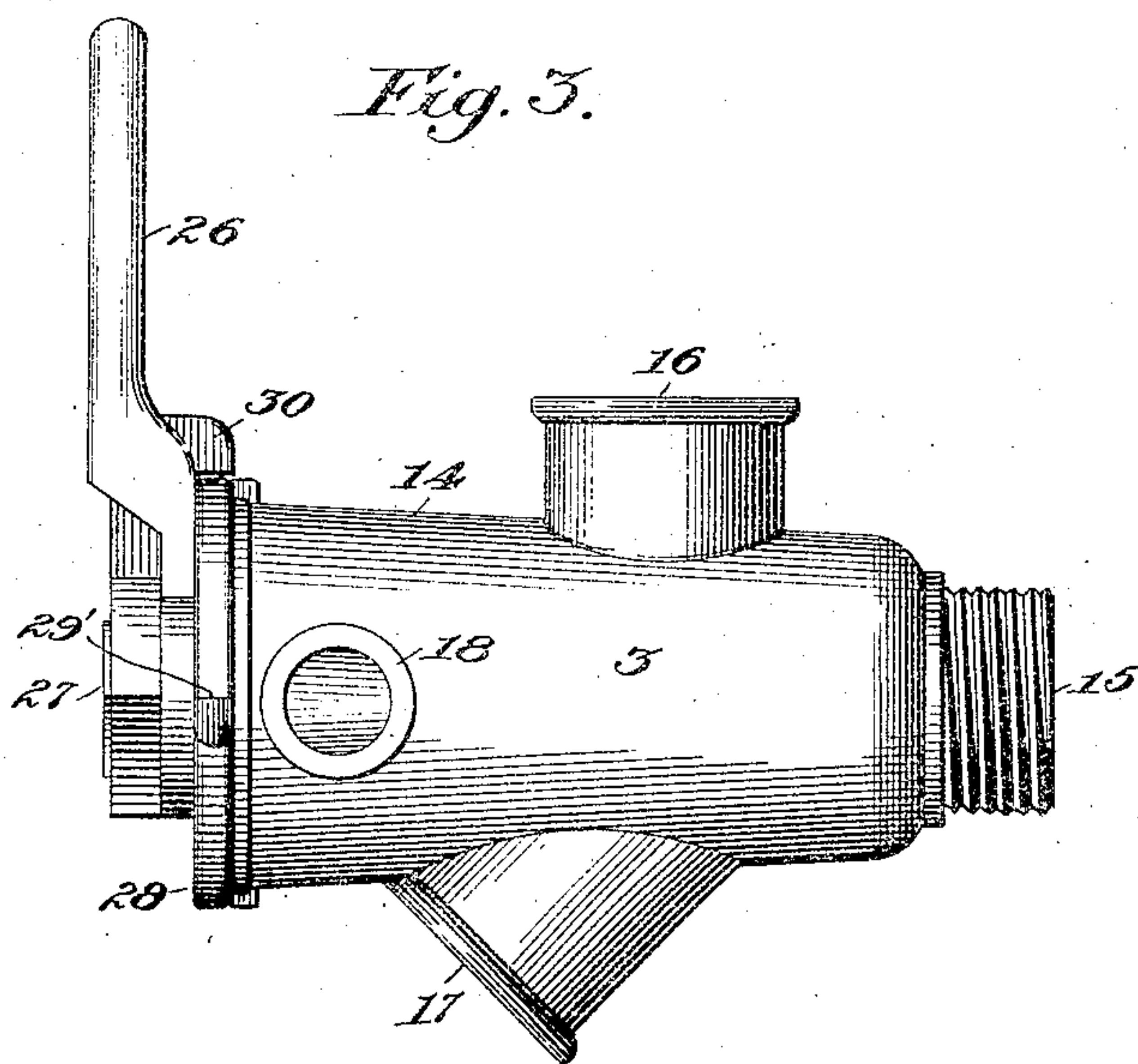
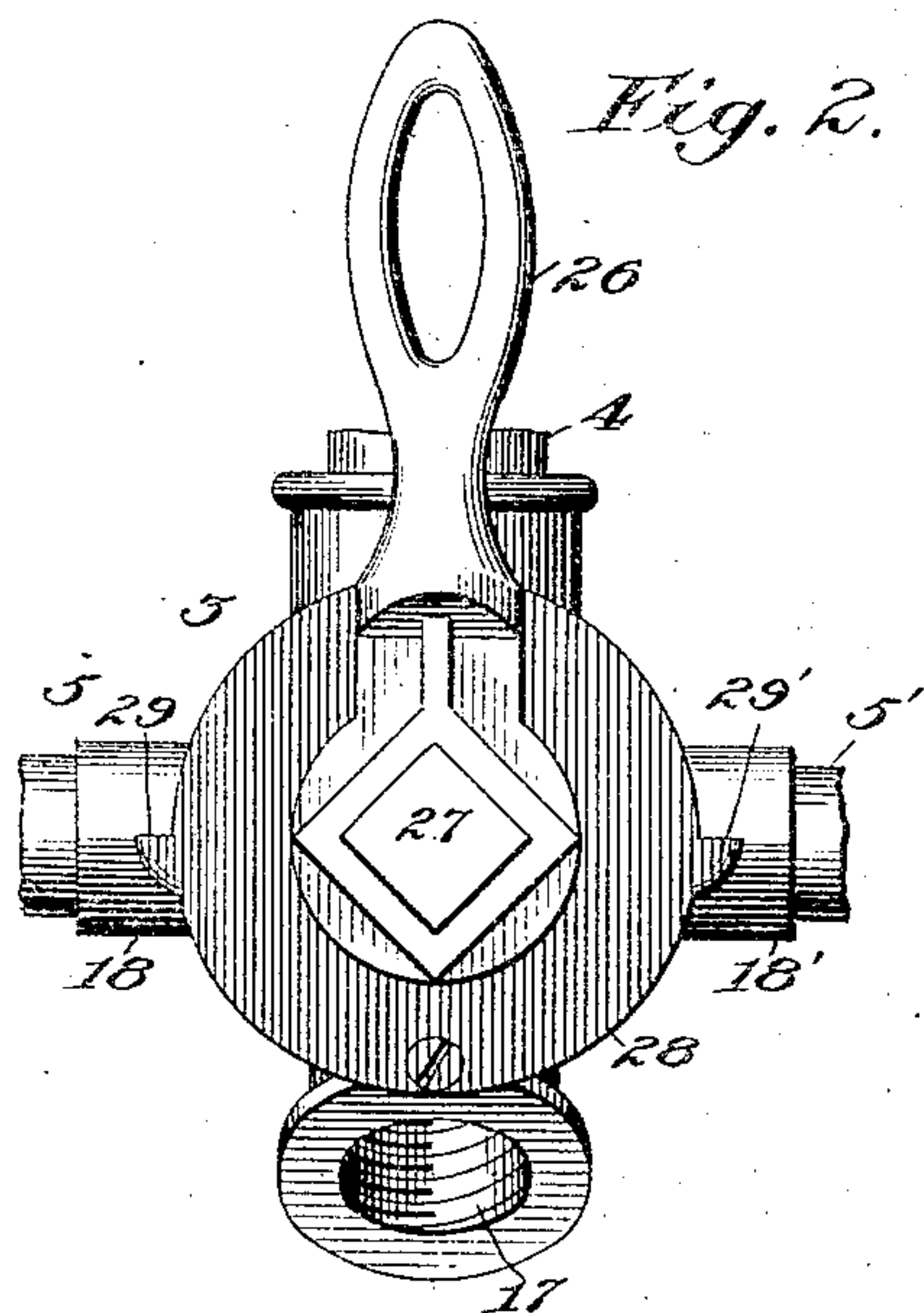
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

JOHN ZANDER, OF CHICAGO, ILLINOIS, ASSIGNOR TO ACETYLENE APPARATUS MANUFACTURING CO., OF CHICAGO, ILLINOIS, A CORPORATION OF WEST VIRGINIA.

## ACETYLENE-GENERATOR.

940,110.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed March 21, 1907. Serial No. 363,584.

*To all whom it may concern:*

Be it known that I, JOHN ZANDER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Acetylene-Generators, of which the following is a specification.

This generator is provided with a single valve-mechanism for venting the generating chamber when water is supplied to or residuum is withdrawn therefrom.

Referring to the accompanying drawings: Figure 1 is a side elevation of the generator, holder and piping; Fig. 2 is a front elevation of the valve; Fig. 3 is a side elevation of the valve; Fig. 4 is an axial section of the valve-plug; Fig. 5 is a vertical axial section of the valve-casing, showing the plug in elevation; and Fig. 6 is a vertical axial section of the valve, the plug being shown in a position at right angles to that of Fig. 5.

The generator illustrated is of the well-known type, comprising an upper chamber 1 for holding and feeding carbid and a lower chamber 2 for holding water and generating the gas. A horizontal valve 3 communicates with the generating chamber near its base and the casing of this valve has openings receiving the water-supply pipe 4, a vent-pipe 5 leading from the upper part of the chamber, and a vent-pipe 5' which is connected to the usual holder vent-pipe 6. The holder, also shown of conventional type, comprises a water-chamber 7, bell 8, sealpan 9, and service pipe 10 having valve 11 and filter 12. A gas-delivery pipe 13 leads from the generator to the holder.

The valve 3 comprises a tubular casing 14 the rear end 15 of which is threaded and screwed through the side wall of the generating chamber. This casing has an upper port 16 receiving the water-supply pipe 4 and a lower port 17 for the discharge of residuum, which may receive a pipe leading to a sewer. The casing also has, at its front end, opposite ports 18, 18' which receive the vent-pipes 5, 5'. The rear end of the plug 19 has a chamber 20, communicating by the opening 20' and the threaded neck 15 of the casing with the generating chamber. The side wall of chamber 20 has a rectangular aperture 21 which, by rotation of the plug, may be caused to register either with the inlet-port 16 or the outlet-port 17 or to be

closed by the valve-casing. The front end of the valve-plug has a chamber 22 the side walls of which have oppositely arranged vent-apertures 23, 23', adapted in two positions to register with the ports 18, 18', and in other positions to be closed by the valve casing.

Oppositely arranged drain-holes 24, 24', diametrically at right angles to the apertures 23, 23', open rearwardly and outwardly from the chamber 22 into an annular groove 25, which communicates with the outlet port 17. The valve-plug has a handle 26, secured on a squared portion 27 at its front end. The valve-plug is forced to its seat in the casing by a closing piece 28, screwed to the flanged front end of the casing. This piece has lugs 29, 29', projecting peripherally at the ends of its horizontal diameter. These lugs are arranged in the path of a stop 30 which projects rearwardly from the handle 26 and limit the rotation of the valve-plug to a semicircular arc.

When the valve-handle 26 is in the position shown in Figs. 1, 2, 3 and the valve-plug is in the position shown in Fig. 5, the four ports of the valve-casing are closed. When the handle is rotated to the right until its lug 30 strikes the stop 29', the plug-aperture 21 is brought into register with the upper port 16 and the plug-apertures 23, 23' into register with the ports 18', 18, as shown in Fig. 6. The generating chamber is thus opened at the base for the introduction of water through the supply-pipe 4 and is vented at the top through the pipes 5, 5', 6 and the plug-apertures 23, 23'. When the handle 26 is rotated to the left until the lug 30 strikes the stop 29, the plug-aperture 21 is brought into register with the port 17 and the apertures 23, 23' with the vent-ports 18, 18', thus permitting the escape of residuum from the bottom of the generating chamber and the entrance of air through the pipes 6, 5', 5.

The drain-holes 24, 24' of the valve-plug being arranged in a position diametrically at right angles to that of apertures 23, 23', one of these holes is in position to drain any condensed water from the vent-pipes when the plug is rotated either to the right or left, one hole then being in its lowermost position as shown in Fig. 6.

I claim:

1. A gas generator comprising a generat-



ing chamber having a vent-pipe, a liquid-inlet and a flush-out, and unitary means for (1) simultaneously opening or closing both the liquid-inlet and the vent-pipe or (2) simultaneously opening or closing both the flush-out and the vent-pipe.

2. A gas generator comprising a generating chamber having an opening, means, including a two-way valve, for supplying liquid and withdrawing residuum through said opening, and a chamber-vent passage controlled by said valve.

3. A gas generator comprising a generating chamber having an opening, a valve having passages for supplying liquid and withdrawing residuum through said opening, a chamber-vent pipe, and a valve-passage arranged to open or close said vent-pipe when either the liquid-inlet or flush-out is opened or closed.

4. A gas generator comprising a generating chamber having an opening controlled by a valve, the casing of said valve having a liquid-inlet port, a flush-out port and two vent-ports, a supply-pipe connected to said liquid-inlet port, a chamber-vent pipe connected to one vent-port, and a valve-plug constructed to open and close either the liquid-inlet port and the vent-ports or the flush-out and the vent-ports.

5. A gas generator comprising a generating chamber having an opening controlled by a valve, the casing of said valve having a liquid-inlet port, a flush-out port and two vent-ports, a supply-pipe connected to said liquid-inlet port, a chamber-vent pipe connected to one vent-port, and a valve-plug having one passage arranged to connect either the liquid-inlet port or the flush-out port and the generating chamber, and another passage arranged to connect the vent-ports.

6. A gas generator comprising a generating chamber having an opening controlled by a valve, the casing of said valve having a liquid-inlet port, a flush-out port and two vent-ports, a supply-pipe connected to said liquid-inlet port, a chamber-vent pipe con-

nected to one vent-port, and a valve-plug having one passage arranged to connect either the liquid-inlet port or the flush-out port and the generating chamber, another passage arranged to connect the vent-ports, and a drain-hole leading from the second passage.

7. A gas generator comprising a generating chamber having an opening controlled by a valve, the casing of said valve having a liquid-inlet port, a flush-out port and two vent-ports, a supply-pipe connected to said liquid-inlet port, a chamber-vent pipe connected to one vent-port, and a valve-plug having one passage arranged to connect either the liquid-inlet port or the flush-out port and the generating chamber, another passage arranged to connect the vent-ports, and opposite drain-holes leading from the second passage.

8. A gas generator comprising a generating chamber having an opening controlled by a valve, the casing of said valve having a liquid-inlet port, a flush-out port and two vent-ports, a supply-pipe connected to said liquid-inlet port, a chamber-vent pipe connected to one vent-port, and a valve-plug having one passage arranged to connect either the liquid-inlet port or the flush-out port and the generating chamber, another passage arranged to connect the vent-ports, a peripheral groove opening into the flush-out port, and a drain-hole or holes leading from the second passage to said groove.

9. In combination, a gas-generating chamber having a liquid-inlet, flush-out and chamber-vent pipe, a holder having a service pipe and a vent-pipe, and a valve constructed to connect either the liquid-inlet or the flush-out and the generating chamber and to connect said vent-pipes when either the liquid-inlet or flush-out port is opened.

In testimony whereof, I affix my signature in presence of two witnesses.

JOHN ZANDER.

Witnesses:

E. F. PRICE,

EARL G. JOHNSTONE.