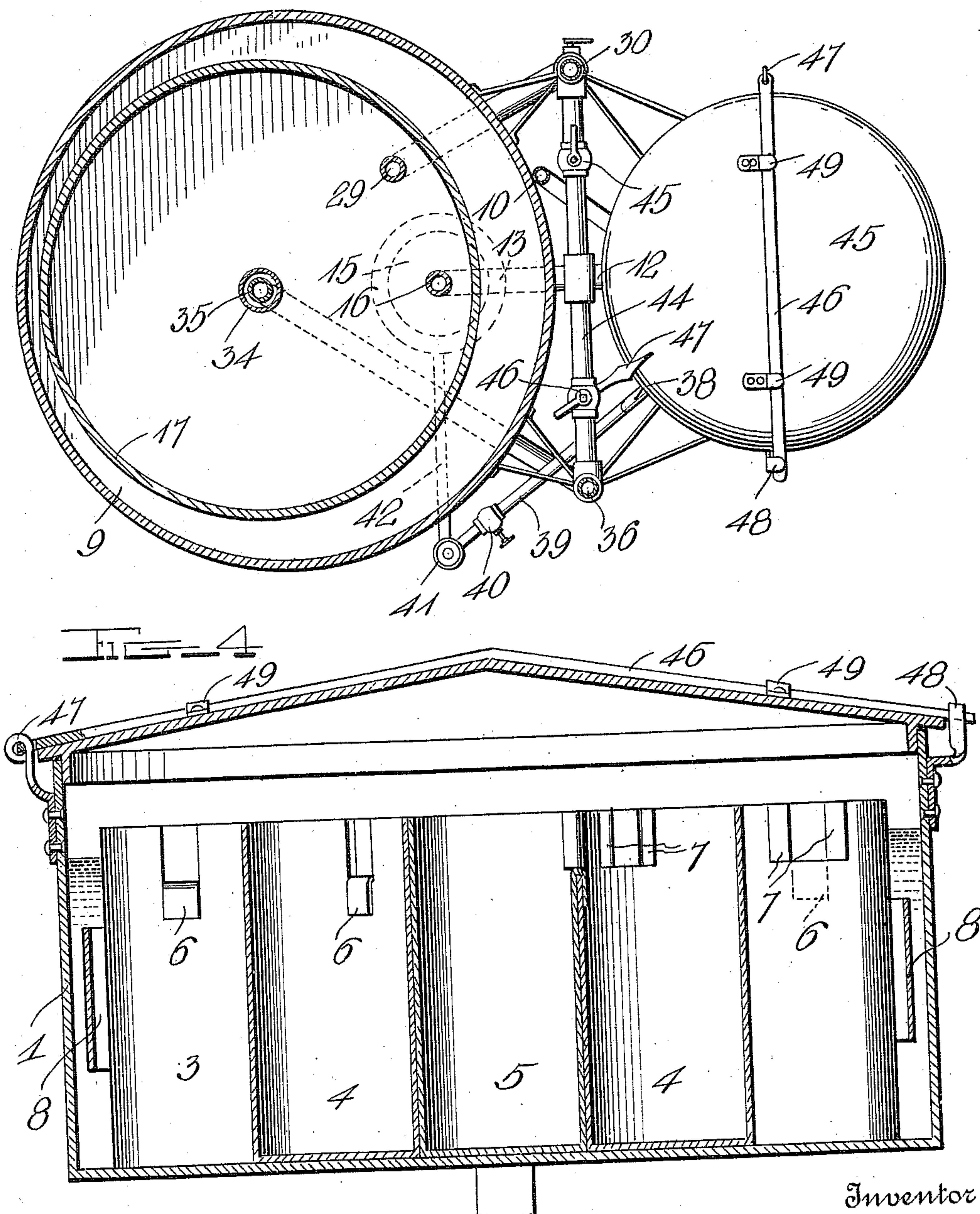
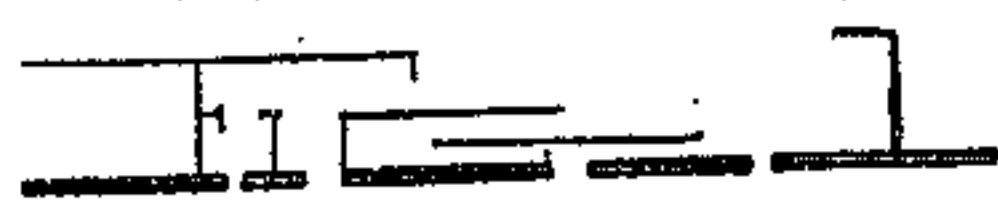


A. HENNEY.
ACETYLENE GAS GENERATOR.
APPLICATION FILED APR. 4, 1910.

Patented Jan. 31, 1911.

3 SHEETS-SHEET 1.

982,962.



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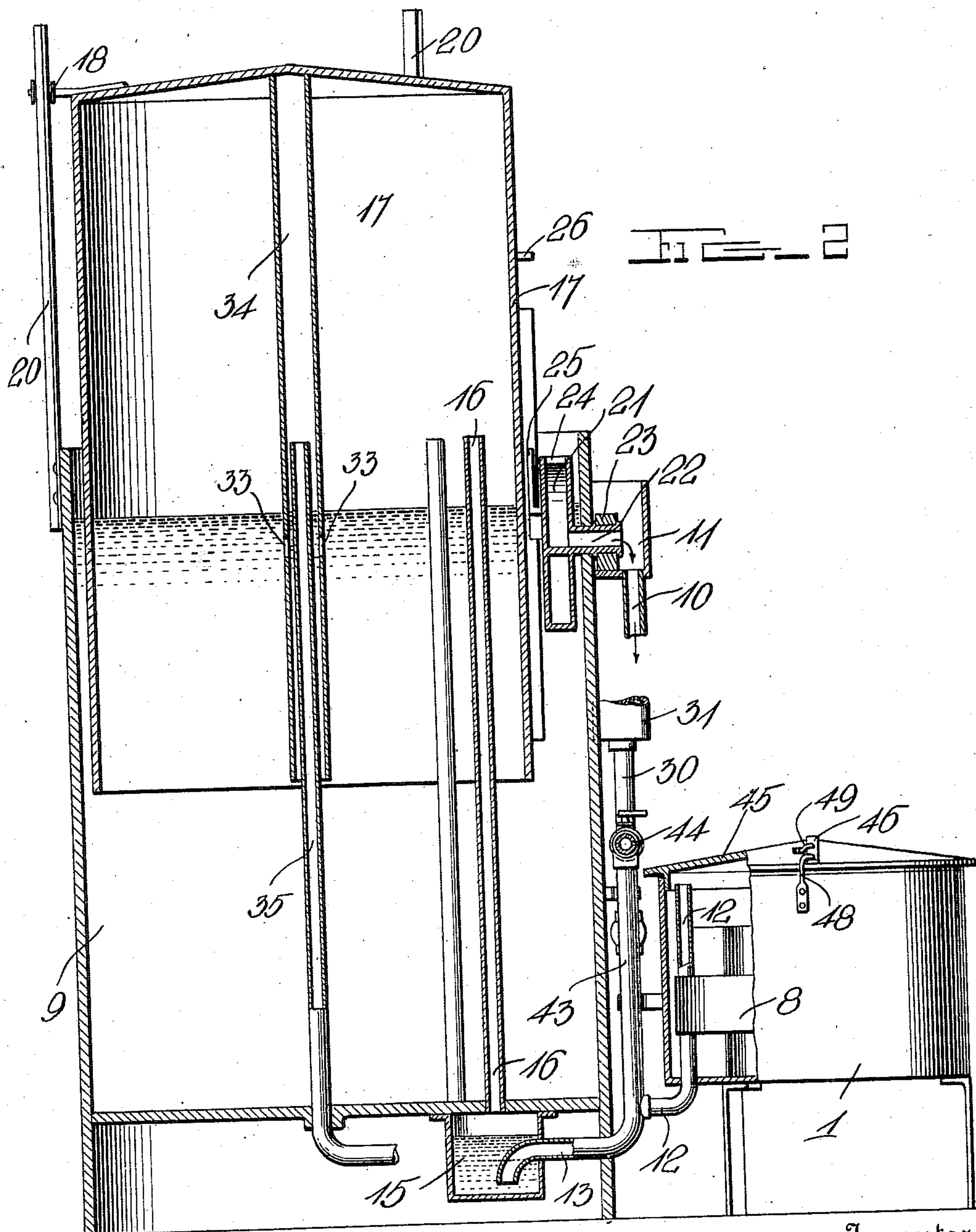
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3 SHEETS-SHEET 2.

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3 SHEETS—SHEET 3.

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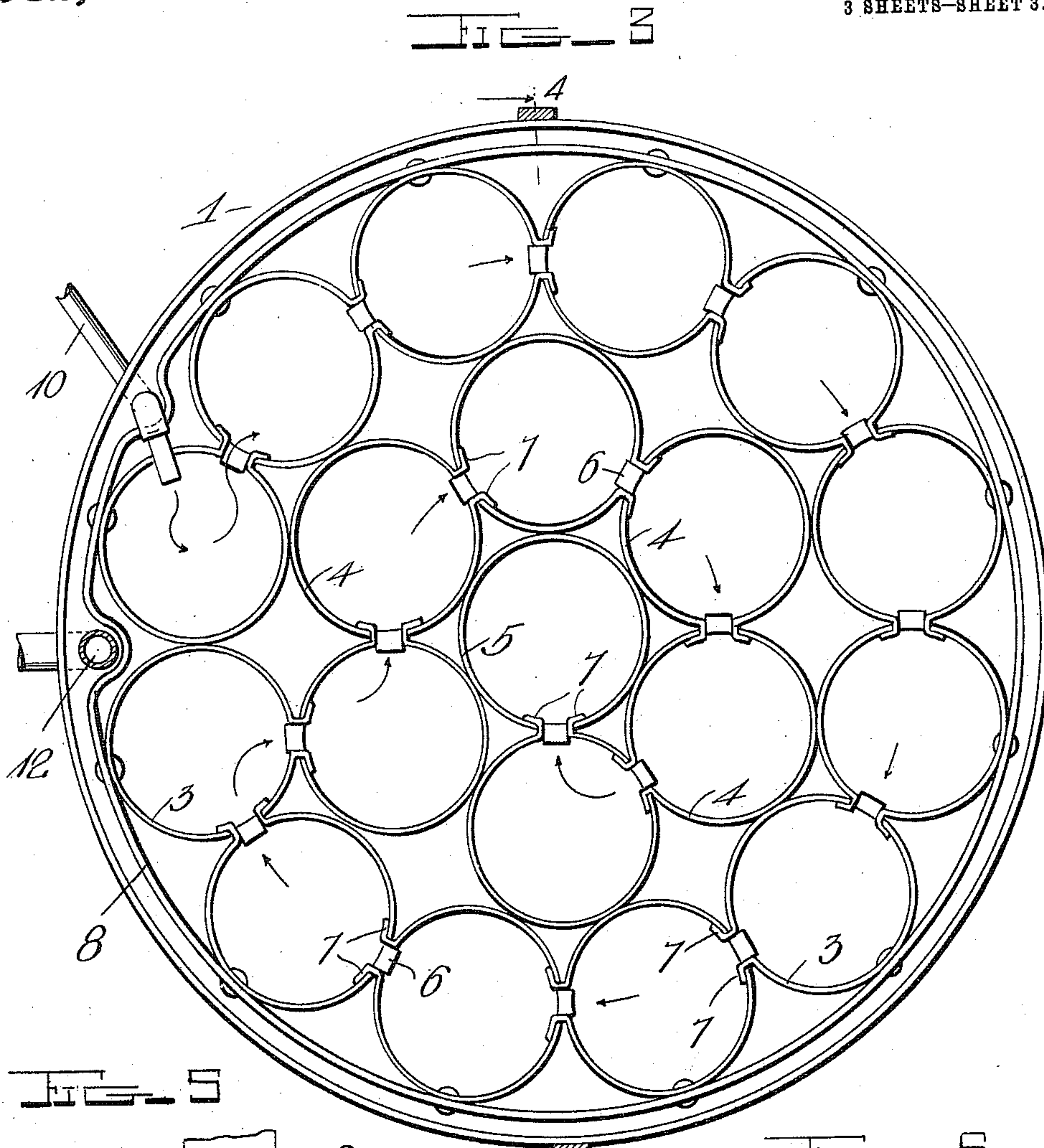
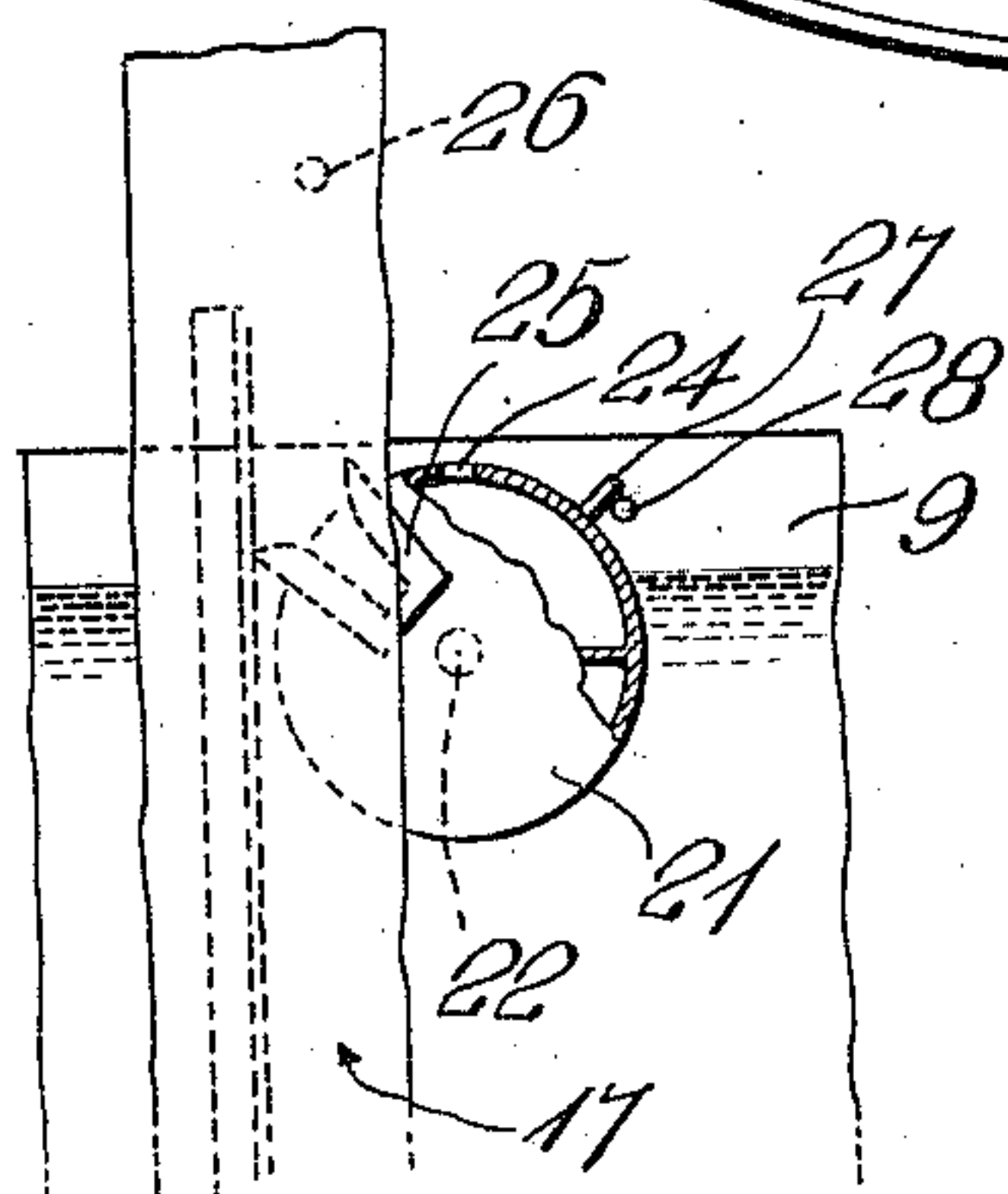


FIG. 1

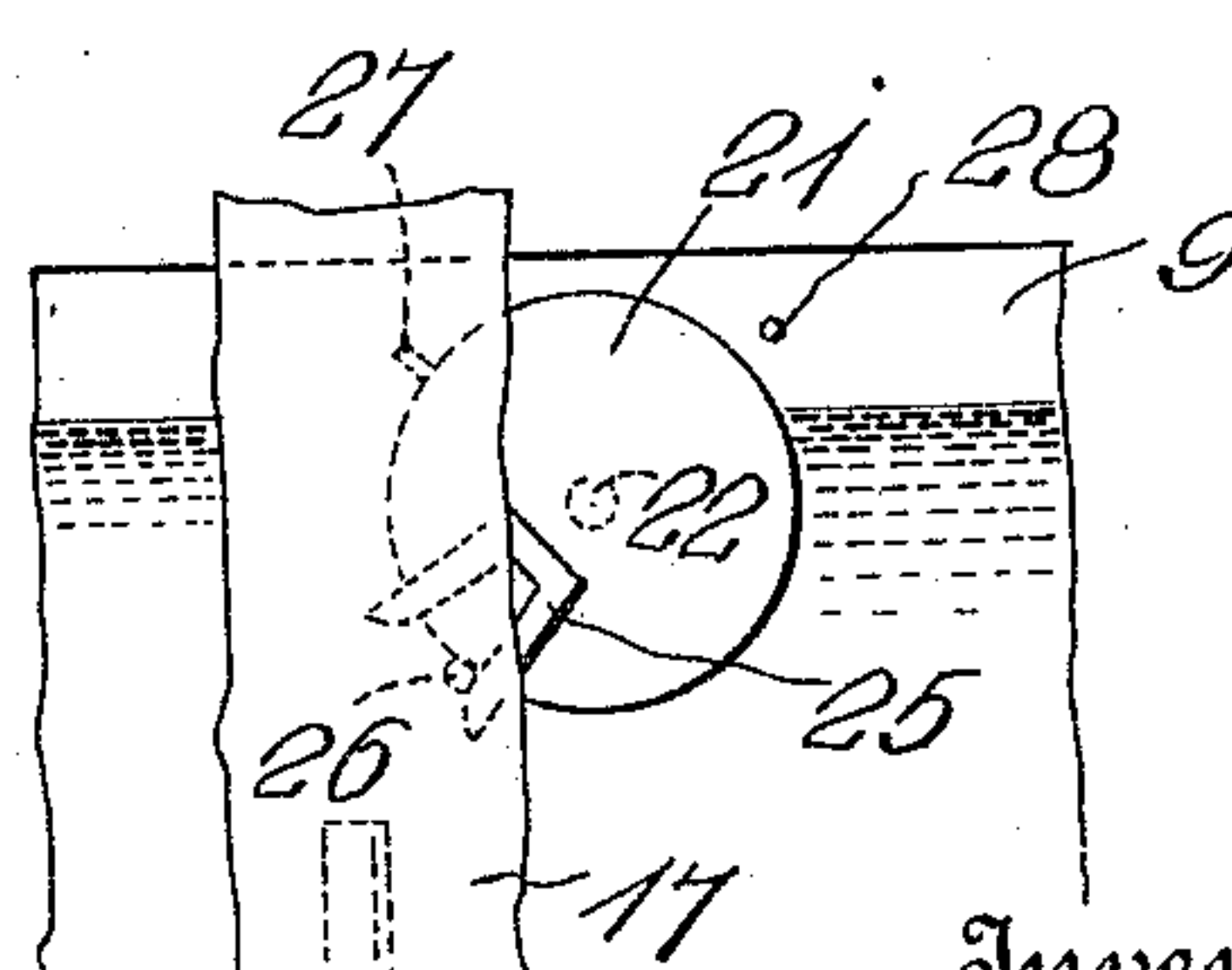


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FIG. 6



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UNITED STATES PATENT OFFICE.

ARTHUR HENNEY, OF BELLEVUE, OHIO.

ACETYLENE-GAS GENERATOR.

982,962.

Specification of Letters Patent.

Patented Jan. 31, 1911.

Application filed April 4, 1910. Serial No. 553,188.

To all whom it may concern:

Be it known that I, ARTHUR HENNEY, a citizen of the United States, residing at Bellevue, in the county of Huron and State of Ohio, have invented certain new and useful Improvements in Acetylene-Gas Generators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in carbid receptacles for acetylene gas generators.

The object of the invention is to provide a carbid receptacle having a plurality of cells interlockably connected and provided with means for affording communication between said cells.

With this and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is a horizontal section of an acetylene generator equipped with a carbid receptacle constructed in accordance with this invention. Fig. 2 is a vertical section thereof with the carbid receptacle partly in side elevation: Fig. 3 is a horizontal section taken through the carbid receptacle with the parts shown on an enlarged scale: Fig. 4 is a vertical transverse section taken on the line 4-4 of Fig. 3; and Figs. 5 and 6 are detail fragmentary views showing the two positions of the rotary water inlet valve.

Referring to the drawings for a more particular description of the invention, which are for illustrative purposes only and therefore not drawn to a scale; a generator is shown in which a carbid receptacle 1 is arranged said receptacle comprising a series of communicating carbid cells consisting of outer and inner concentric circular series of cells 3 and 4 respectively, and the central cell 5.

As shown in the drawings, a portion of the upper edge of one cell is slit and bent downwardly against the inner surface of an adjacent cell to form a connecting tongue 6, while portions of the last mentioned cell are bent laterally in opposite directions against the inner surface of the first men-

tioned cell to form the connecting tongues 7. A clamping band 8 encircles the outer series of cells and is riveted or otherwise secured to each cell of said series. By employing this clamping band and connecting the cells in the manner heretofore described, the cells are held together as securely as though they were a unitary structure.

9 indicates the water receptacle, which is preferably of cylindrical form and is arranged adjacent to the carbid receptacle 1. A feed pipe, as 10, for the water is arranged with one end communicating with a cup 11 arranged at the exterior of the water receptacle and with its lower end extending vertically through the bottom of the carbid receptacle. This pipe, as will be understood, feeds the water from the water chamber at the proper intervals to the carbid receptacle, to cause the generation of the gas as fast as it is utilized. The generated gas passes through the pipe 12 extending downwardly through the bottom of the pipe 13, to the filter 15, and from the filter into the gas pipe 16, which delivers it into the gas chamber. The gas chamber is formed by the cylindrical casing 17, arranged in the water receptacle. This casing rises and falls as the gas is generated and consumed, and is held against rotary or axial displacement by the grooved pulleys 18, which work against the angle-irons 20, suitably attached at their lower ends to and projecting vertically above the upper end of the water receptacle. The water is fed to the carbid receptacle by the hollow rotary disk-shaped valve 21, provided with the hollow shaft 22, mounted in the bearing 23, and projecting into the water cup 11. This valve is provided in its edge or periphery with the inlet opening, and with the fork 25, which receives a pin or extension 26, projecting from the casing 17. The valve is held against backward or retrograde movement by a pin 27, on the valve adapted to engage a stop pin 28, projecting from the inner surface of the water receptacle 9.

In the operation of the device, as the gas is consumed the casing 17 is lowered in the receptacle 9, and in doing so turns the valve 21 to bring the inlet opening 24 thereof into communication with the water receptacle, which permits the water to flow through the valve and its hollow shaft into the water cup 11, and from the water cup into the feed pipe 10 to the carbid receptacle. As the gas is

generated and passes into the gas chamber the casing 17 is again raised, which brings the rotary valve into its former position and cuts off further supply of the water. The generated gas passes out of the pipe 29 projecting through the bottom of the water receptacle, and thence through the vertical pipe 30 and the filtering device 31, to the service pipe. In case the gas accumulates too rapidly in the gas chamber, when the casing 17 is raised sufficiently to bring the inlet ports 33 of the pipe 34 above the water level, the surplus gas flows through said ports into the pipe 34, and from the latter into the upper end of the safety pipe 35, and the pipe 36 to the atmosphere. A waste pipe 38 is arranged with its vertical portion communicating with the upper end of the carbide receptacle 1, and with its horizontal section 39 provided with the valve 40. A water cup 41 is arranged near the bottom of the water receptacle and communicates through the pipe 42 provided with the valve 42' with the bottom of the filter 15. By this means the water in the filter may be replenished from time to time. The water receptacle 9 is provided with water through the trough 43. It is to be particularly observed that the several cells in the carbide receptacle communicate with each other and that water passing into one cell flows in the direction indicated by the arrows, into all of the cells. After the water has filled the cells it flows into the spaces therebetween, which keeps the generated gas cool at all times. The carbide receptacle is provided with a cover 45, which is clamped in position by the clamping bar 46, one end of which is pivoted to the receptacle as at 47, and the opposite of which is held by the catch 48. The cover is provided with keepers 49 to receive the clamping bar. To take care of any overflow from the carbide receptacle, the valve 40 is opened and valve 42' closed while in order to replenish the supply of water in the filter, the valve 42' is opened.

A vertical outlet pipe 43 communicates at its lower end through the pipe 12 with the interior of the carbide receptacle and at its upper end with the horizontal branch pipe 44 disposed between and communicating with the main and auxiliary outlet pipes. The pipe 44 is provided at opposite sides of the pipe 43 with valves 45 and 46. The valve 46 is provided with an arrow shaped finger 47 which, when the valve is closed, engages the top of the cover of the carbide receptacle. It will be observed that before removing the cover of the carbide receptacle it is necessary to turn the valve 46 to bring the finger 47 out of engagement with the cover which necessarily opens the valve and allows any gas in the carbide receptacle to pass out

to the atmosphere through the auxiliary outlet pipe.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined in the appended claims.

Having thus described my invention, what I claim is:—

1. In an acetylene gas generator, a carbide receptacle comprising a plurality of cells, each of said cells having a tongue cut in its upper edge for interlocking engagement with an adjacent cell, said cut out edge portions of the cells affording communication between the same.

2. In an acetylene gas generator, a carbide receptacle comprising a plurality of cells, each of said cells having its upper edge cut to provide connecting passages between adjacent cells, said cut edges of the cells providing tongues adapted to be engaged over the edges of the communicating passages of co-adjacent cells to lock said cells together.

3. In an acetylene gas generator, a carbide receptacle comprising a plurality of circular series of cells, means formed on each cell for interlocking engagement with the next adjacent cell of the same series, said interlocking means also providing communicating passages between the adjacent cells, and means for clamping said series of cells together to prevent movement of the cells of one series with respect to those of the other series.

4. In an acetylene gas generator, a carbide receptacle comprising an inner and outer circular series of cells, means carried by the cells of each series for interlocking engagement with the adjacent cell of the same series, additional interlocking means carried by one cell of each series for locking the series of cells together, said interlocking means between the individual cells of each series and between the series of cells affording communicating passages therebetween, and a clamping band encircling the outer series of cells to clamp the cells of each series against movement with respect to those of the other series.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ARTHUR HENNEY.

Witnesses:

SAMUEL LOOSE,
ALLAN G. AIGLER.