

No. 661,761.

Patented Nov. 13, 1900.

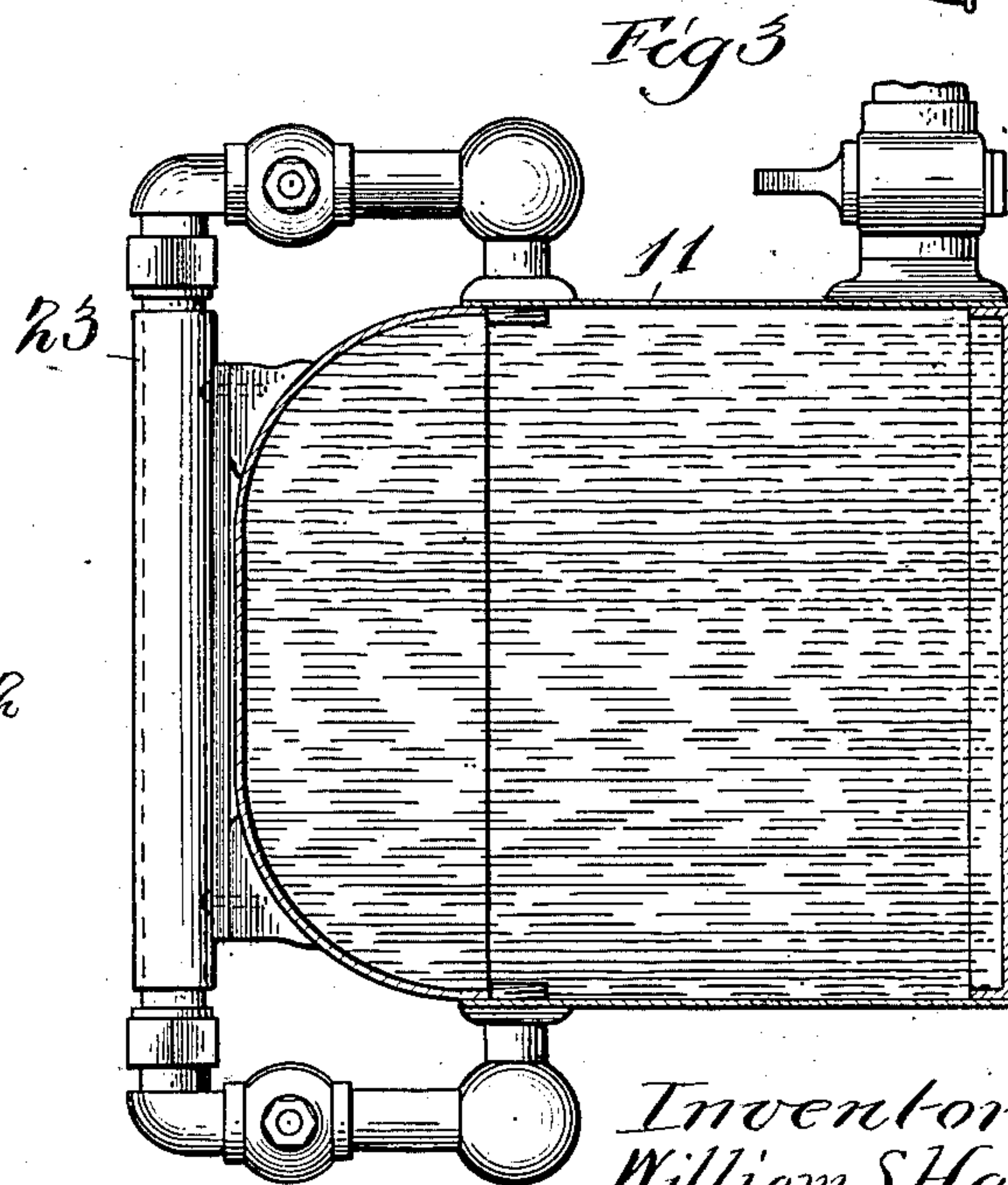
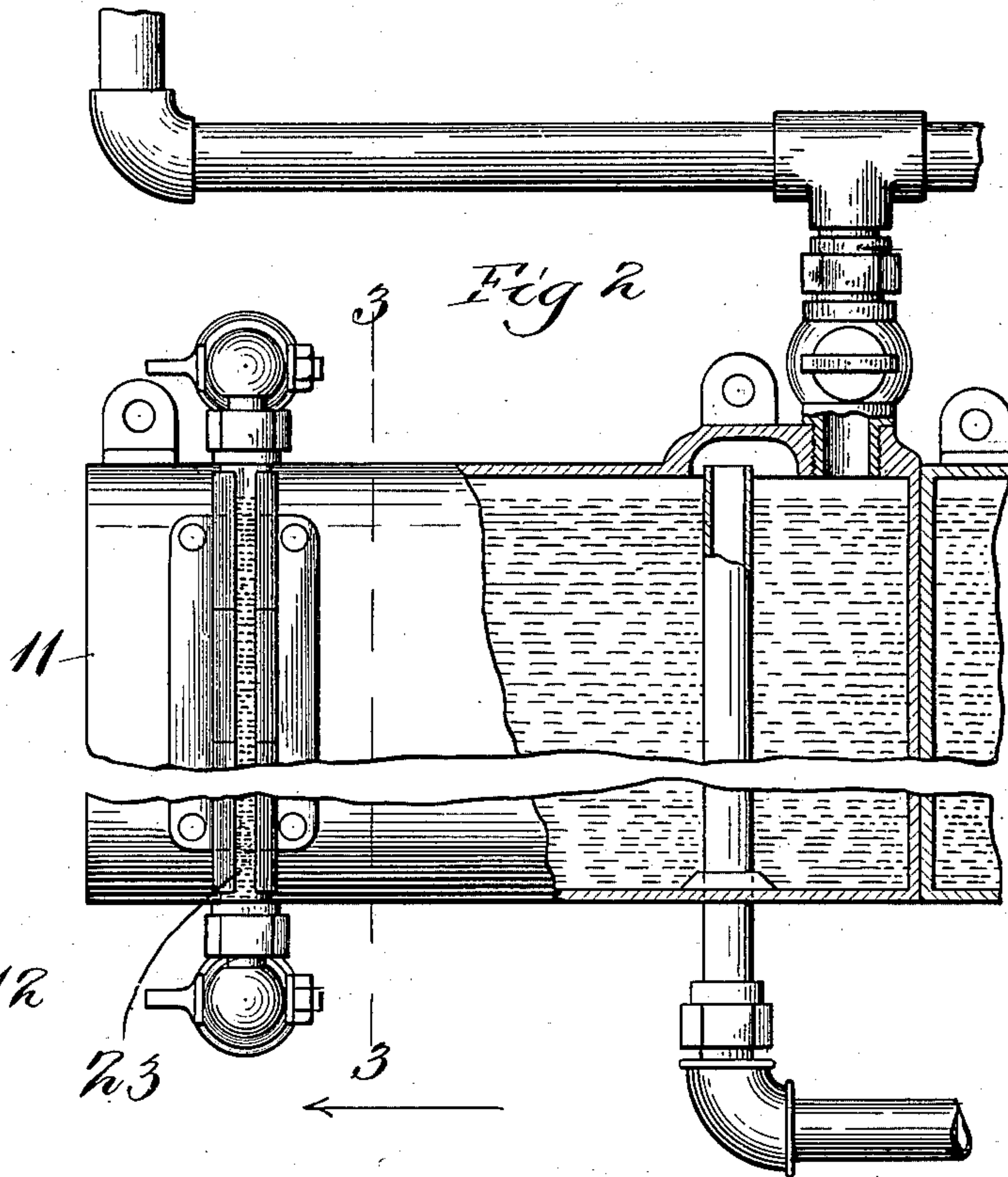
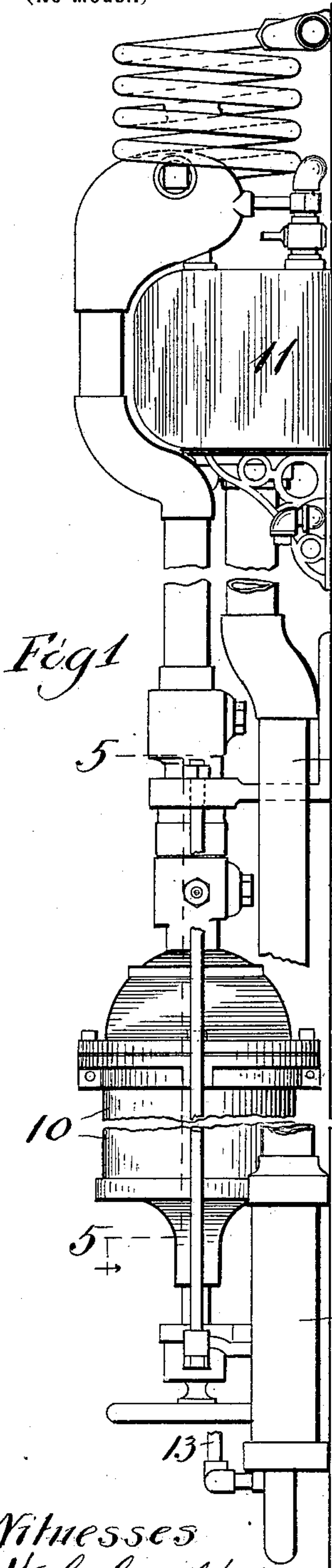
W. S. HAMM.

ACETYLENE GAS GENERATOR.

(Application filed Feb. 26, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
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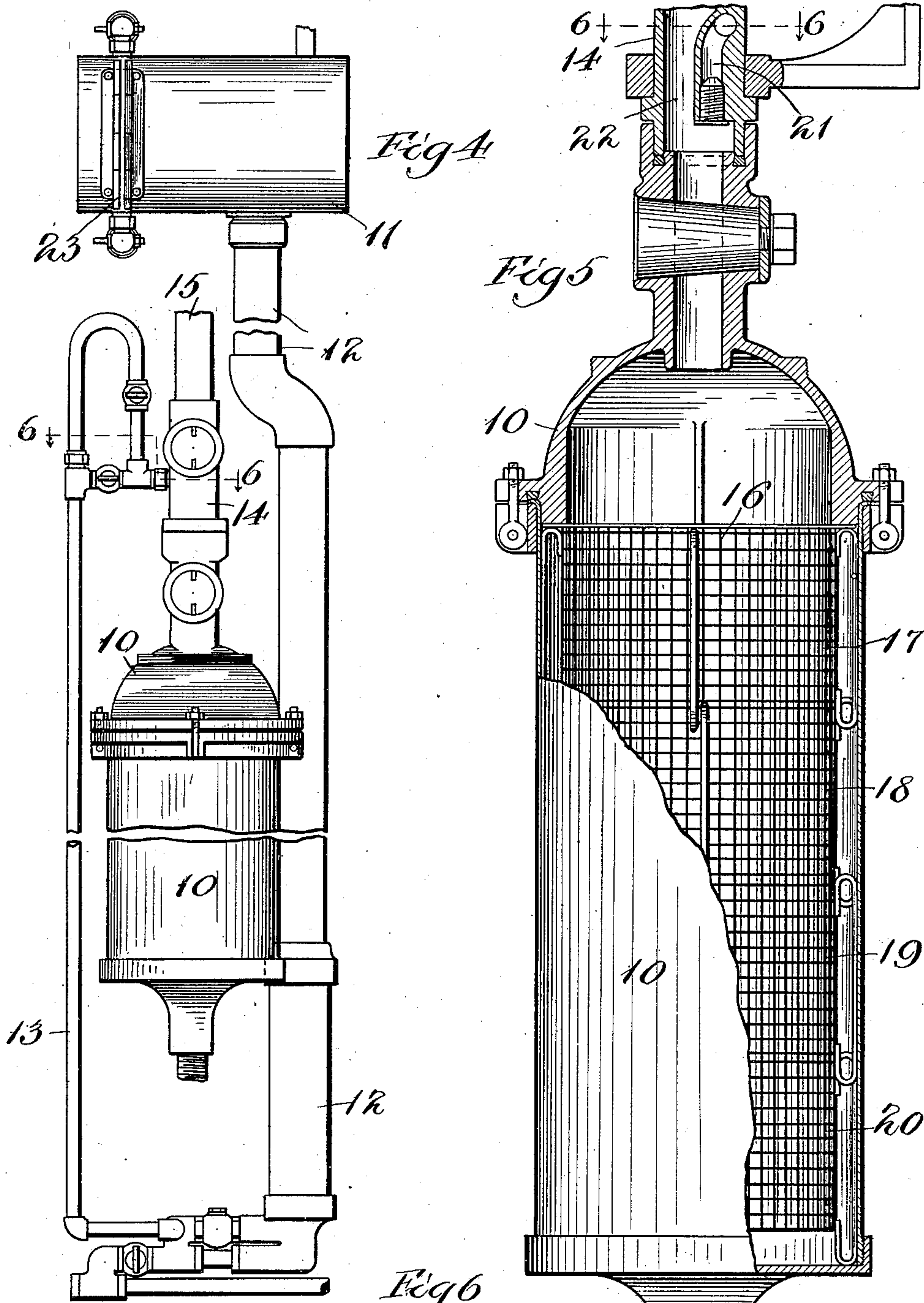
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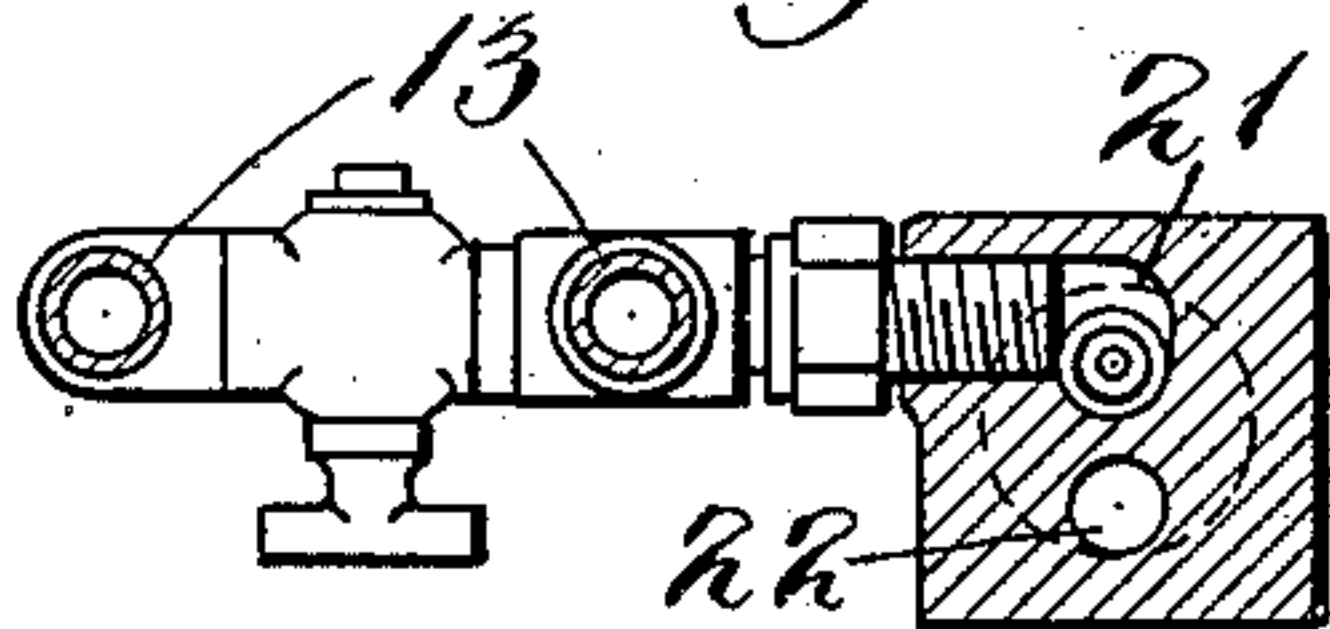
(Application filed Feb. 26, 1900.)

(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

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ACETYLENE-GAS GENERATOR.

SPECIFICATION forming part of Letters Patent No. 661,761, dated November 13, 1900.

Application filed February 26, 1900. Serial No. 6,528. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. HAMM, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Acetylene-Generators, of which the following is a specification and which are illustrated in the accompanying drawings, forming a part thereof.

10 This invention relates to what are known as "dry" generators, in which a quantity of carbid is stored in the generating-cell and water is fed thereto for the purpose of setting up the chemical action. It is impractical to
15 inspect the contents of a generating-cell while the same is in operation or, indeed, after the carbid therein has been fully spent without removing the same from the car or building within which it is in use. In railway-train
20 service this becomes impractical for the reason that the inspection must be quickly accomplished and the inspector must be able to determine accurately the condition of the charge.

25 The object of the invention is to provide means for determining the extent to which the chemical action has proceeded within the generating-cell by means of the state or stage of the water within the reservoir or tank; and
30 this object is attained by the construction hereinafter fully described and which is illustrated in the accompanying drawings, in which—

Figure 1 is a detail side elevation of an acetylene-generator. Fig. 2 is a detail front elevation of the reservoir of the same, partly in section. Fig. 3 is a sectional view on the line 3 3 of Fig. 2. Fig. 4 is a detail front elevation of the generator, some of the parts being
40 removed. Fig. 5 is a detail section on the line 5 5 of Fig. 1, and Fig. 6 is a plan section on the line 6 6 of Fig. 4.

The particular form of generator is not essential to the present invention. For the purpose of illustration I have shown the generator invented by John A. Mosher and forming the subject of a concurrently-pending application for Letters Patent.

The generating-cell is shown at 10 and the

water tank or reservoir at 11. The feed-water pipe is shown at 12 and extends below the generating-cell and is thence carried upwardly, as shown at 13, and discharges into the cell through a duct 21 in a connection 14, through which connection there also leads a gas-duct 22, which discharges into the pipe 15.

Within the cell 10 there is placed a carbid-basket 16, formed of wire and subdivided into a plurality of vertically-arranged compartments, as 17, 18, 19, and 20, each of which is intended to contain a quantity of carbid. The water-feed being through the dome of the generating-cell is delivered on top of the carbid, and the chemical action proceeds thence downward gradually until all of the carbid is reduced, there being no chemical action set up in the lower compartments of the basket until all of the compartments above have been exhausted. The water-tank and the carbid-basket are so proportioned relatively that the state or stage of water within the tank, both the tank and basket having been filled at the commencement of the operation, will at all times indicate the extent to which the chemical action has been carried in the basket. A suitable water-gage 23, of any preferred form, is applied to the tank and is provided with a scale corresponding with the compartments of the basket 16. In the device as shown in the drawings the basket being subdivided into four compartments the water-gage is correspondingly scaled, and when the carbid in the upper compartment 17 of the basket has been completely slaked the water will have fallen to the upper mark on the scale of the gage.

This invention is especially serviceable in connection with generators in which there is employed a plurality of generating-cells, as it enables the inspector to determine at a glance which of the cells require to be recharged. In railway-train lighting provision is made at certain stations to inspect the generator and to replace exhausted cells with others newly charged and to refill the water-tanks.

I claim as my invention—

In an acetylene-generator, in combination,

a fixed nipple, a generating-cell removably attached thereto and having a plurality of vertically-arranged carbid-receptacles, the nipple and cell being so formed that water
5 will be delivered upon the top of the carbid, a water-tank and connection leading therefrom to the nipple, and a water-gage scaled

to indicate the quantity of water required for slaking the contents of each carbid-receptacle.

WILLIAM S. HAMM.

In presence of—

E. M. KLATCHER,
PAUL CARPENTER.