

No. 658,264.

Patented Sept. 18, 1900.

A. HUSSON.
ACETYLENE GAS GENERATOR.

(Application filed Jan. 15, 1900.)

(No Model.)

2 Sheets—Sheet 1.

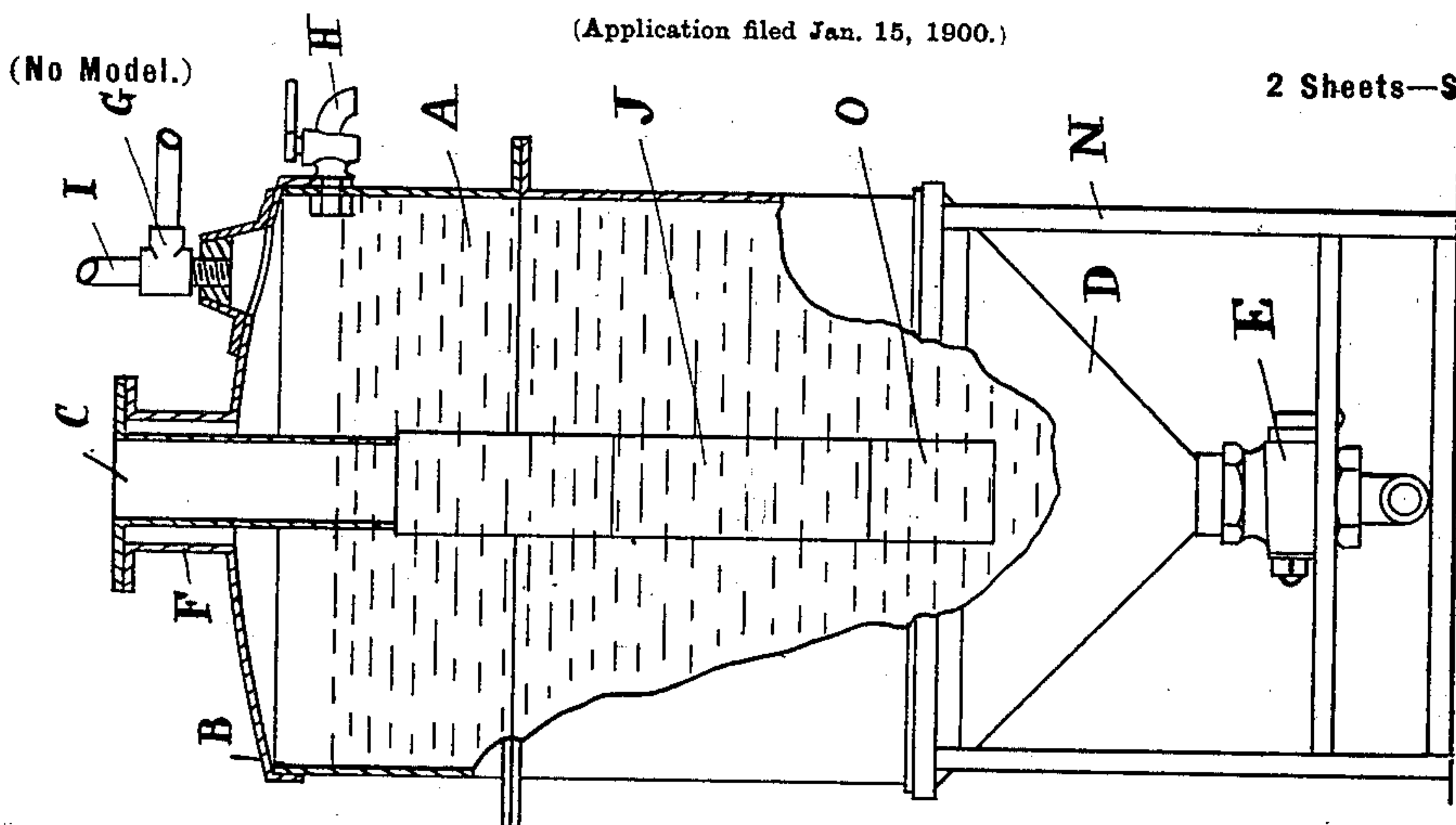


Fig. 2.

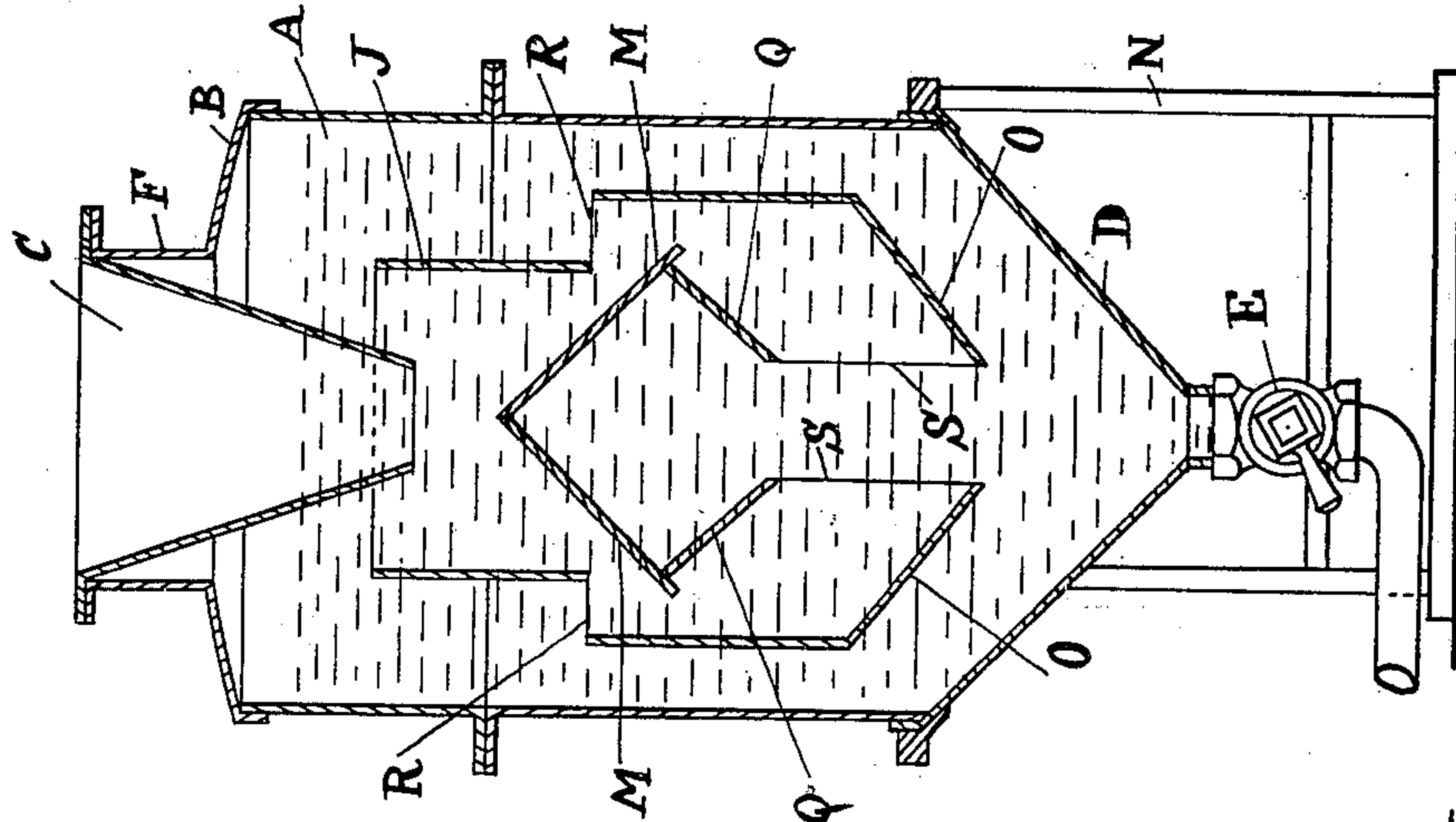


Fig. 1.

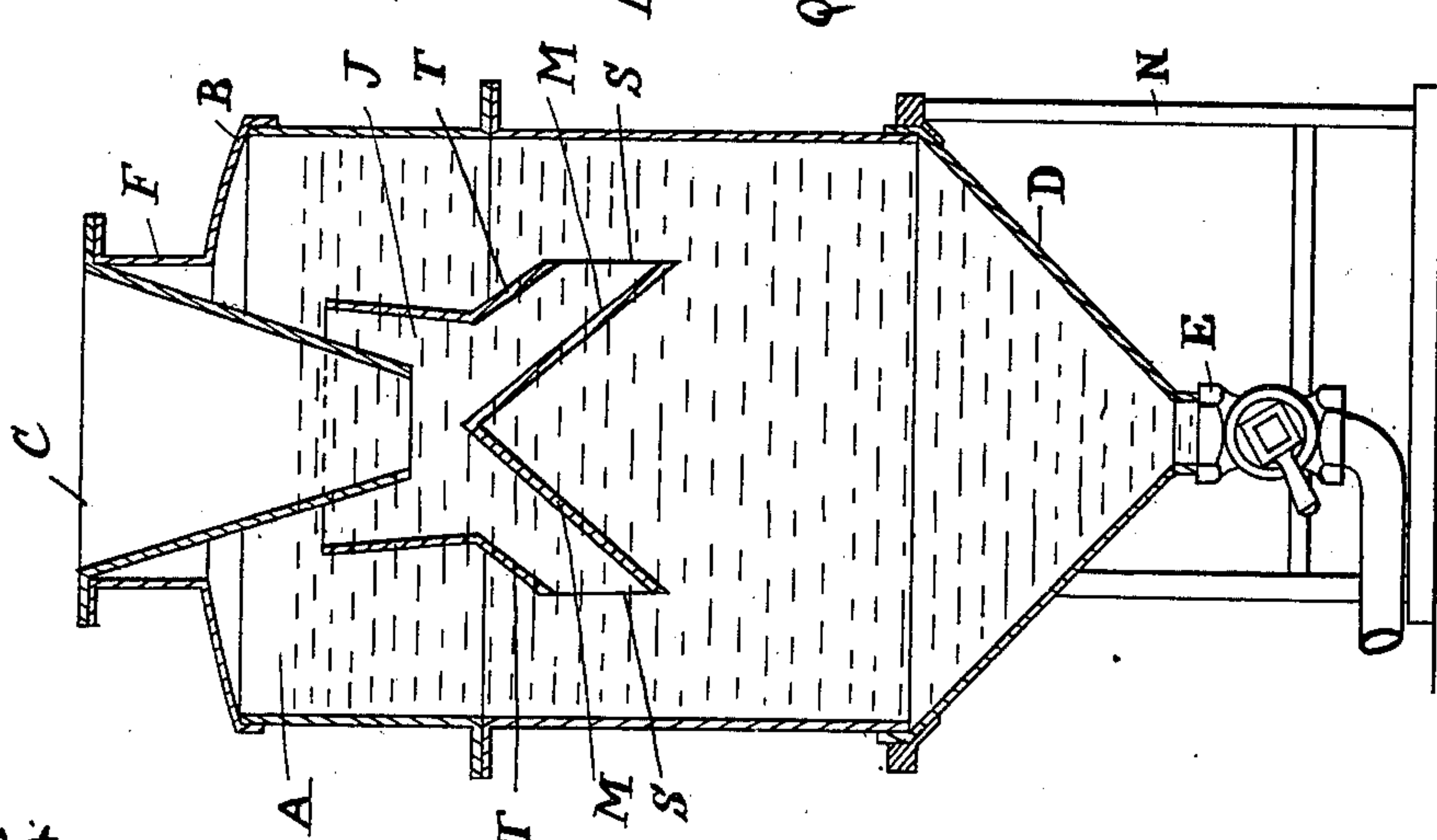


Fig. 3.

Witnesses
John Clarke
J. E. Dunham

Inventor
Albert Husson
per J. E. Halford
attorney

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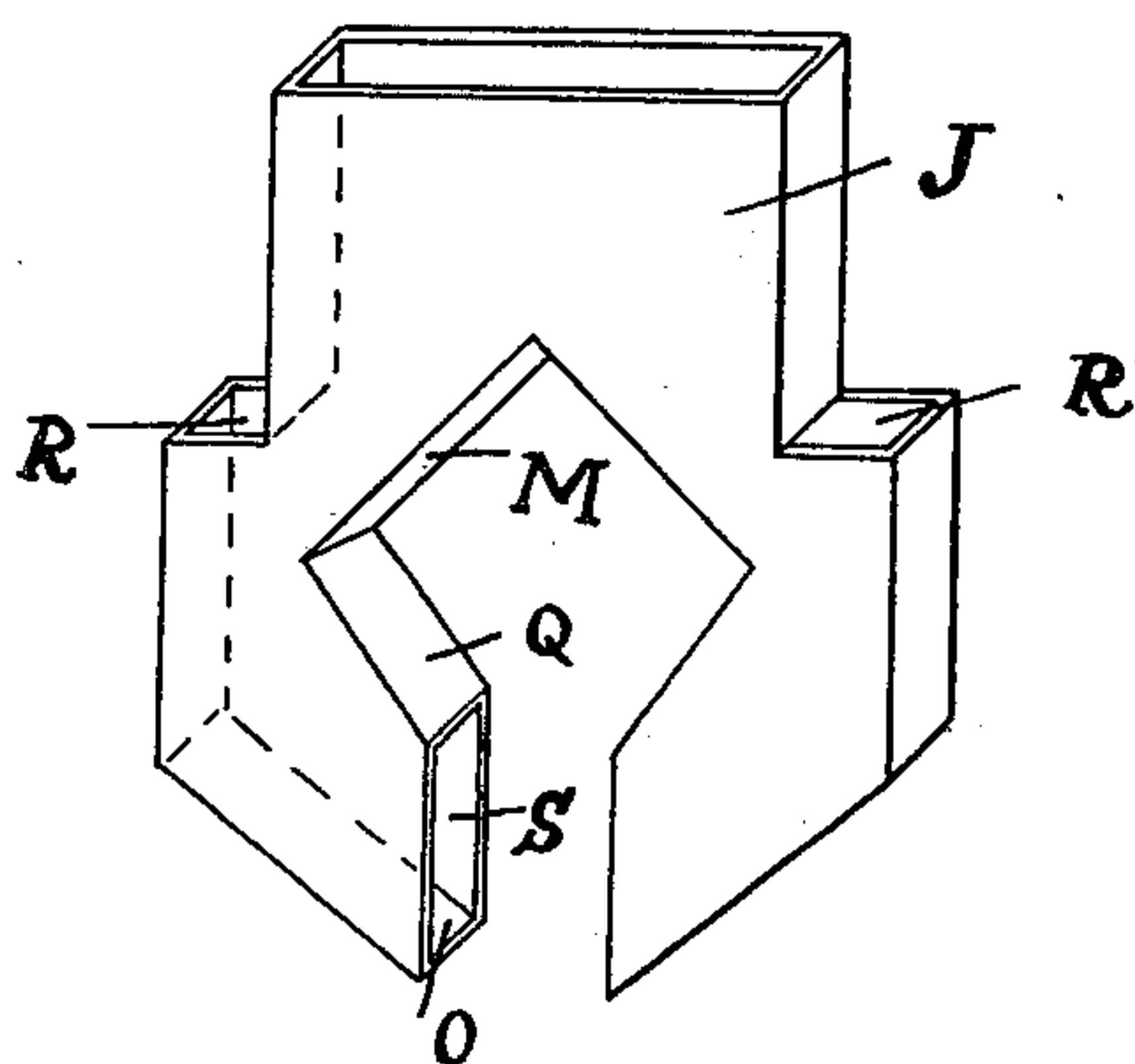


Fig. 4.

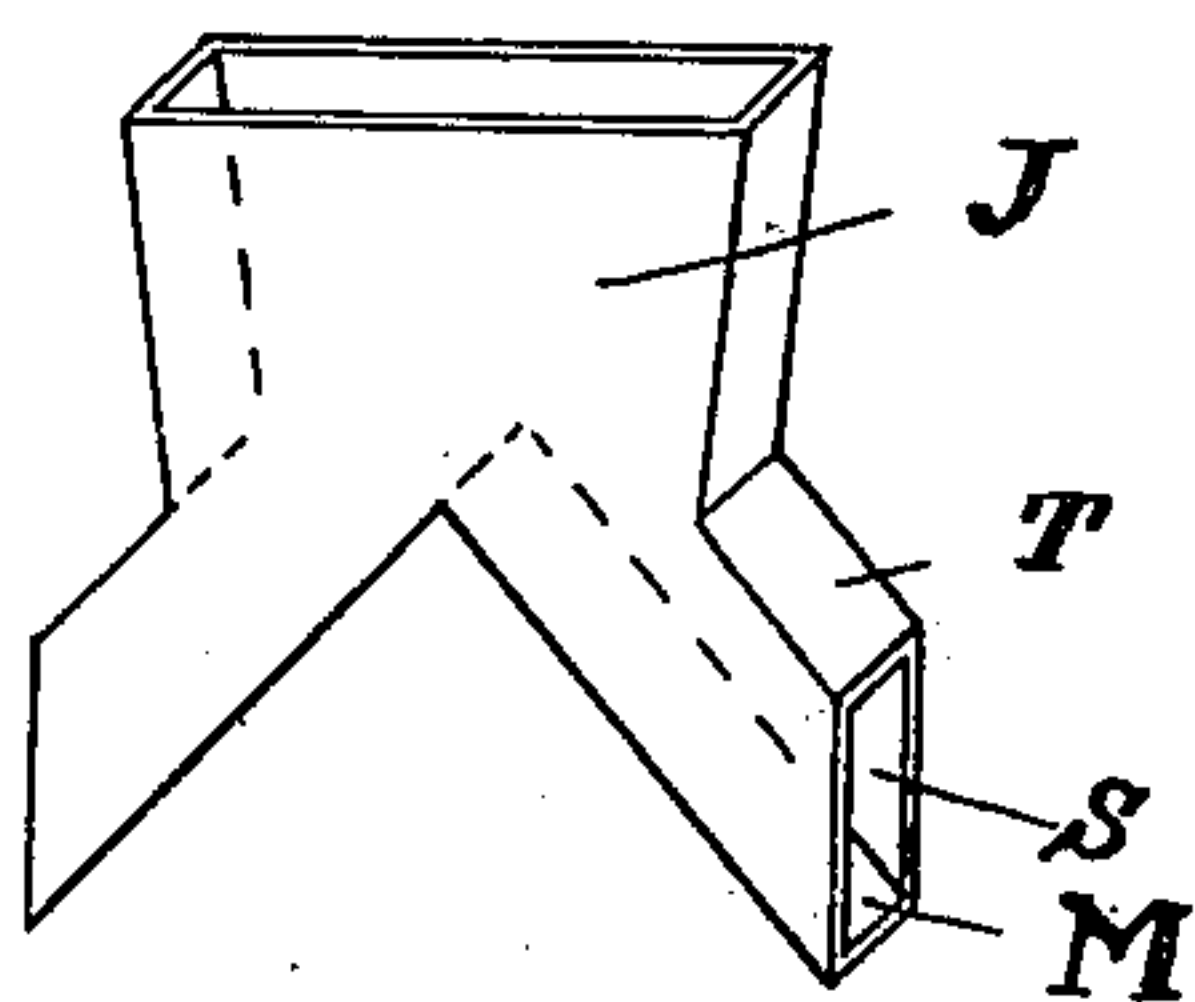


Fig. 5.

Witnesses
John Clarke
J. H. Dunham

Inventor
Albert Husson
per J. E. Halford
Attorney

UNITED STATES PATENT OFFICE.

ALBERT HUSSON, OF PARRENTROY, SWITZERLAND.

ACETYLENE-GAS GENERATOR.

SPECIFICATION forming part of Letters Patent No. 658,264, dated September 18, 1900.

Application filed January 15, 1900. Serial No. 1,711. (No model.)

To all whom it may concern:

Be it known that I, ALBERT HUSSON, a citizen of the Republic of Switzerland, residing at Parrentroy, in the canton of Berne, Switzerland, have invented new and useful Improvements in Acetylene-Generators, (for which I have applied for Letters Patent in Great Britain, No. 13,145, bearing date June 24, 1899,) of which the following is a specification.

My invention relates to acetylene-generators in which the charging material is fed into water contained in the generator; and the objects of my invention are to dispense with all mechanism for feeding the charging material into the generator, to dispense with the perforated disks or trays for receiving the charging material, to prevent the gas from escaping through the charging-orifice without the use of cocks or valves, and to shape the bottoms of the generator and charging-hopper in such a manner as to enable the waste material to be easily removed from the generator. I attain these objects by means of the apparatus illustrated by the accompanying drawings, in which—

Figure 1 is a section of an acetylene-generator constructed according to this invention. Fig. 2 is a section of same at right angles to Fig. 1. Fig. 3 is a section of a similar generator fitted with a modified form of casing. Fig. 4 is a perspective view of the casing shown in Fig. 1. Fig. 5 is a perspective view of the casing shown in Fig. 3.

The same letters denote the same parts in all the figures.

Now according to this invention I provide a vessel A of any suitable size, shape, and material, the said vessel being preferably cylindrical and made of a suitable metal which is not easily oxidized by the charging material and water used. The vessel A is provided with an arched or domed cover B and a conical or tapered bottom D, the said bottom being fitted with a cock or valve E to enable the waste water and other material to be run off or blown out when necessary.

F is a short pipe or neck secured by riveting or otherwise to the cover B of the vessel A.

G is a branch pipe to which is attached the gas-main I and, if necessary, a safety-valve.

H is a test-cock to insure the vessel A being

filled with water to the proper height, the said cock being placed at the working level of the water.

C is the hopper into which the calcium carbide or other suitable material is charged, the said hopper being secured by riveting or otherwise to the pipe or neck F and, if desired, to the cover B, the joint between the pipe or neck F and hopper C being gas-tight. The neck F is also jointed gas-tight to the cover B.

The hopper C may be oblong, square, circular, or elliptical in cross-section and is smaller at the bottom than at the top, as shown by the drawings.

J is a casing, of metal or other suitable material, surrounding the hopper C, to which it is secured by riveting or other suitable means.

The casing J consists of a vessel having an open top and is also provided with lateral openings R R and an inclined bottom O, approximately parallel to the bottom of the vessel A.

M M are inclined planes secured in the casing J below the bottom of the hopper C, and Q Q are baffle-plates, also attached to the casing J.

S S are apertures in the casing J to allow the charging material to fall into the vessel A. As will be seen on reference to Fig. 1, the casing J is narrower at the top than it is at the bottom, the sides of the casing extending from a little above the bottom of the hopper to within a short distance of the bottom of the vessel A, the casing J being open at the top and also at R R, about half-way up the sides thereof, as above stated. In some cases instead of the bottom O of the casing J being parallel or approximately parallel to the bottom of the vessel A it may be inclined in the opposite direction, as shown by Fig. 3, the inclined planes M M forming in this case the bottom of the casing, and instead of the openings S S being at the bottom of the casing two or more orifices S S may be formed at the sides thereof, as shown. The inclined planes M M may have other inclined planes T T parallel to them, so as to form spouts, having the mouths thereof vertical or slightly inclined toward the hopper C at the top.

N is a stand or staging to support the vessel A.

The action of the apparatus is as follows:

The vessel A is filled with water to the level of the cock H, and the carbide of calcium or other material is charged into the hopper C and falls through the water onto the inclined planes M M and thence to the inclined bottom of the vessel A. The gas generated escapes mainly outside the casing J to the surface of the water and collects under the cover B, from whence it is drawn through the branch G and main I. The gas, which ascends into the casing, is deflected outward by the baffle-plates Q Q and escapes through the orifices R R and top of the casing, the gas always tending to take the shortest path to the surface of the water.

If the chutes shown by Fig. 3 are used instead of the baffles, any gas striking the bottom of the chutes is deflected upward and no gas enters the said chutes, as the mouths thereof are vertical or slightly inclined inward, and the gas also rises vertically to the surface of the water.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an acetylene-generator the combination of a vessel, to contain the water and charging material, having a tapering or conical bottom and a domed or arched cover with a tapering or conical charging-hopper the delivery-orifice of which is below the working level of the water in the said vessel a casing surrounding the lower portion of the said hopper inclined planes formed in one with or attached to the casing below the hopper, baffle-plates attached to the casing below the said inclined planes and an inclined bottom to the said casing all substantially as specified.

2. In an acetylene-generator having a tapering or conical bottom the combination of a tapering or conical charging-hopper having

the delivery-orifice thereof below the working level of the water in the generator, a casing wider at the bottom than at the top and provided with a sloping bottom surrounding and attached to the lower portion of the said hopper, inclined planes formed in one with or attached to the said casing and baffle-plates attached to the casing below the inclined planes all substantially as and for the purposes specified.

3. In an acetylene-generator the combination of a vessel, to contain the water and charging material, having a tapering or conical bottom and a domed or arched cover with a tapering or conical charging-hopper the delivery-orifice of which is below the working level of the water in the said vessel, a casing surrounding the lower portion of the said hopper and inclined chutes formed in one with or attached to the casing the said chutes being below the delivery-orifice of the hopper and terminating in vertical mouths or mouths slightly inclined toward the said hopper as specified and for the purposes stated.

4. In an acetylene-generator having a tapering or conical bottom the combination of a tapering or conical charging-hopper having the delivery-orifice thereof below the working level of the water in the generator a casing surrounding and attached to the lower portion of the said hopper and inclined chutes formed in one with or attached to the said casing the mouths of the said chutes being vertical or slightly inclined toward the said hopper all substantially as specified and for the purposes stated.

ALBERT HUSSON.

In presence of—

J. A. CLEMENCE,
G. W. LANCASTER.