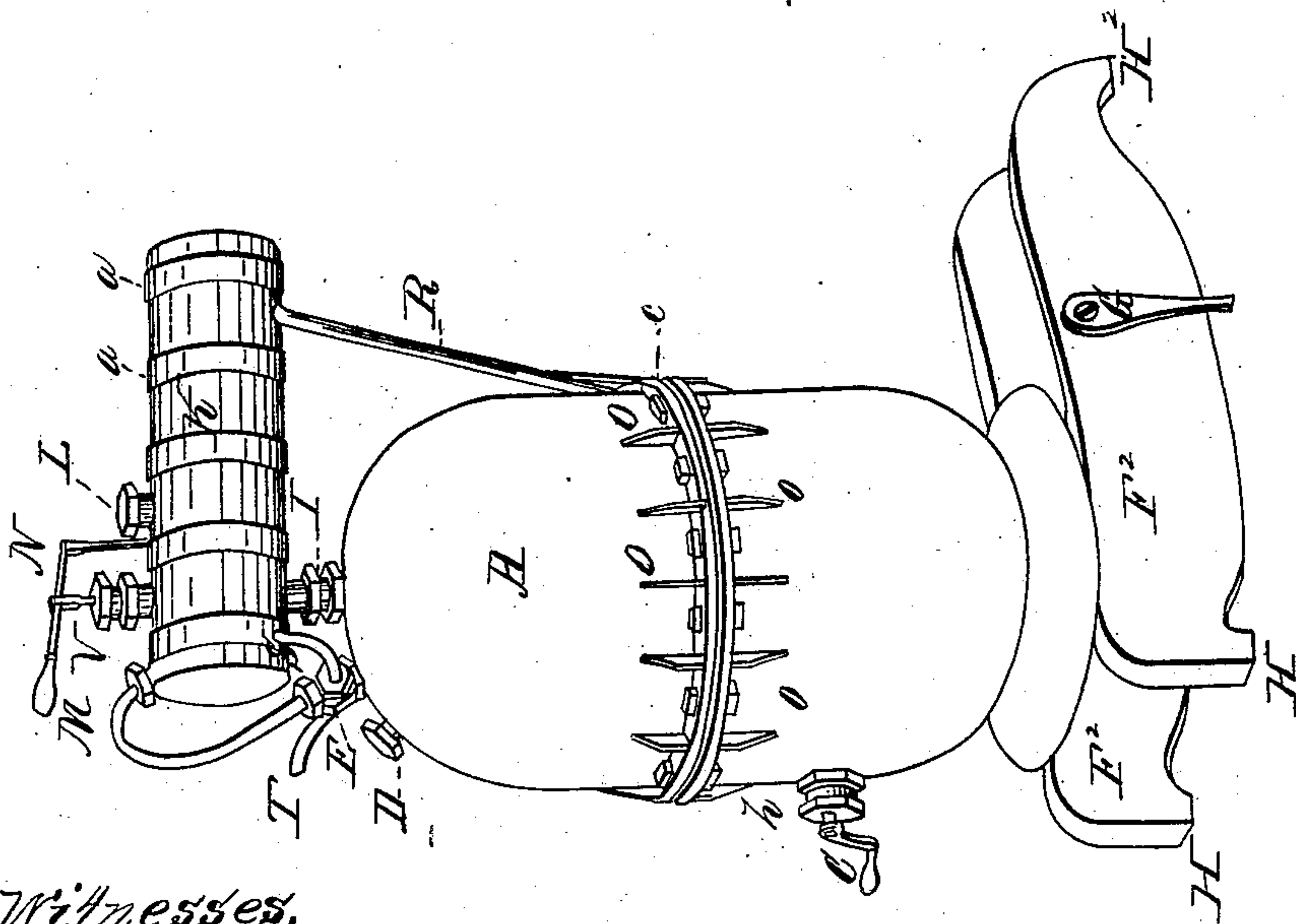
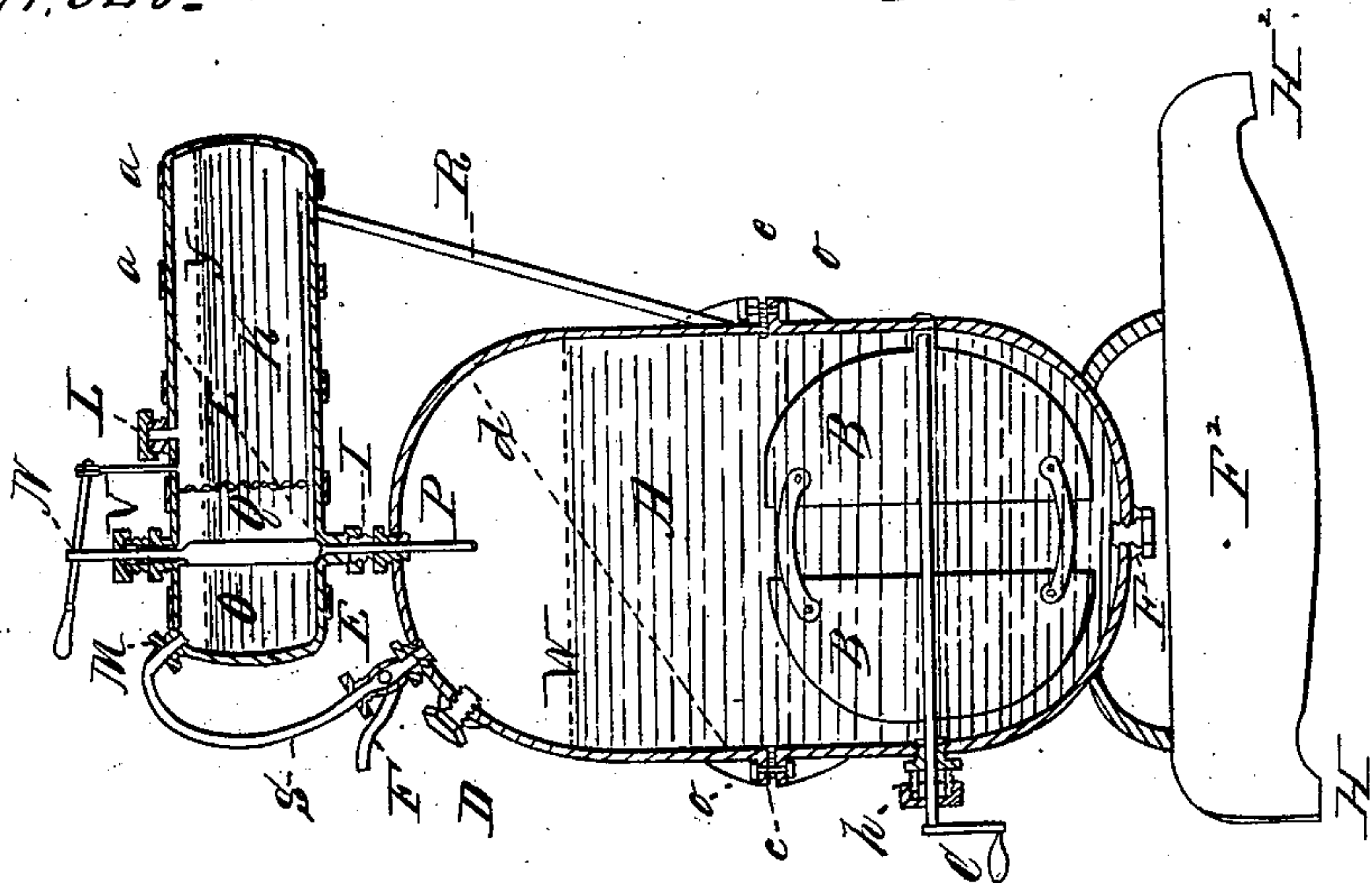


J. D. Lynde,
Gas Generator,

N^o 71,028.

Patented Nov. 19, 1867.



Witnesses,
W. P. Hubert
Nathan Dodge.

Inventor,
John D. Lynde.

United States Patent Office.

JOHN D. LYNDE, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 71,028, dated November 19, 1867; antedated November 9, 1867.

IMPROVED APPARATUS FOR CHARGING SODA-WATER.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that I, JOHN D. LYNDE, of Philadelphia, in the county of Philadelphia, and State of Pennsylvania, have invented new and useful Improvements in Generators for Making Gas for Charging Soda or Mineral-Waters.

The object of the invention is to obviate the use of leaden linings (which so often prove a great annoyance by getting loose and bilging) in gas-generators, and also to remedy the trouble and lessen the danger arising from the great liability of the valve between the acid-chamber and the body containing the alkali getting out of order, and permitting the acid to pass through when not wanted; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view.

Figure 2, a longitudinal elevation.

A is the body or alkali-chamber, constructed of cast iron, and lined with enamel or porcelain. It is made of two disks, and joined, with flanges, bolts, and packing, at *c c*. B, the paddles and shaft, operated by the crank C. *h* is a stuffing-box around the paddle-shaft. D, the plug, at which the alkali is put in. E is a three-way plug, through which gas passes to the gauge, the acid-chamber, and to the fountains, for use. The gauge may be placed in any convenient manner, and be of any common construction. F, the plug at which the mixture is drawn off when exhausted. F² are rockers, on which the generator stands. G are latches on the rockers, to keep the generator in an upright position when in use. H are knobs on the bottom of the rockers, to prevent the generator tipping forwards. H² are also knobs on the bottom of the rockers, for stops, when the generator is tilted back when not in use. I is a coupling-joint, to fasten the acid-chamber K to the top of A. L is a plug, at which the acid is put in. M is a nipple, through which gas is passed to equalize the pressure between A and K. N is a lever, with which the leaden plug O is raised to permit acid to pass to A, through the leaden pipe P. V is the stuffing-box, around the stem of plug O. R is the support under the acid-chamber K. The acid-chamber K is constructed of lead pipe, of suitable diameter and thickness, (now used four-inch diameter and one-quarter inch thick,) of any required length, (the valves, and fittings, and connection being near to one end,) and strengthened by the metal bands *a a a*, and is placed at right angles with A.

To operate the apparatus, A is filled, say, two-thirds full, (to the line W,) with the proper alkali. K is filled, say, to the dotted line *y*, with sulphuric acid, which will be about three-fourths full. Raise the lever N, and acid falls into A. Turn the crank C, and gas will be generated. After using, raise the latches G, and let the whole tip back and rest on the knobs H². The acid will retire to the then lower end of K, the top forming the dotted line Z, leaving the valve bare or uncovered, so that no leak of acid can occur in case the valve should be out of order or imperfect, which it is likely to soon become from the grit which so often accompanies the acid getting into it from the clay that is used in stopping the carboys. Q is a leaden strainer across K, to prevent as much as possible such grit from getting to the valve. *o o* are braces to strengthen the flanges, to prevent breaking as they are being fastened together with the bolts.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Constructing the acid-chamber K in such form that when combined with the body of the generator, and charged for use, and tilted back, the acid in the chamber will recede or flow back from the valve, substantially as set forth.
2. Supplying strainers to the inside of acid-chambers of gas-generators, for the purpose described.
3. The application of enamel or porcelain lining to the alkali-chamber or body of gas-generators.
4. The application of the rockers F² to gas-generators, as described.
5. Tilting gas-generators, for the purpose set forth.
6. Providing gas-generators or fountains, constructed of cast iron, with the braces *o o* to strengthen the flange, substantially as described.

JOHN D. LYNDE.

Witnesses:

W. P. HEBLIEND,
NATHAN DODGE.