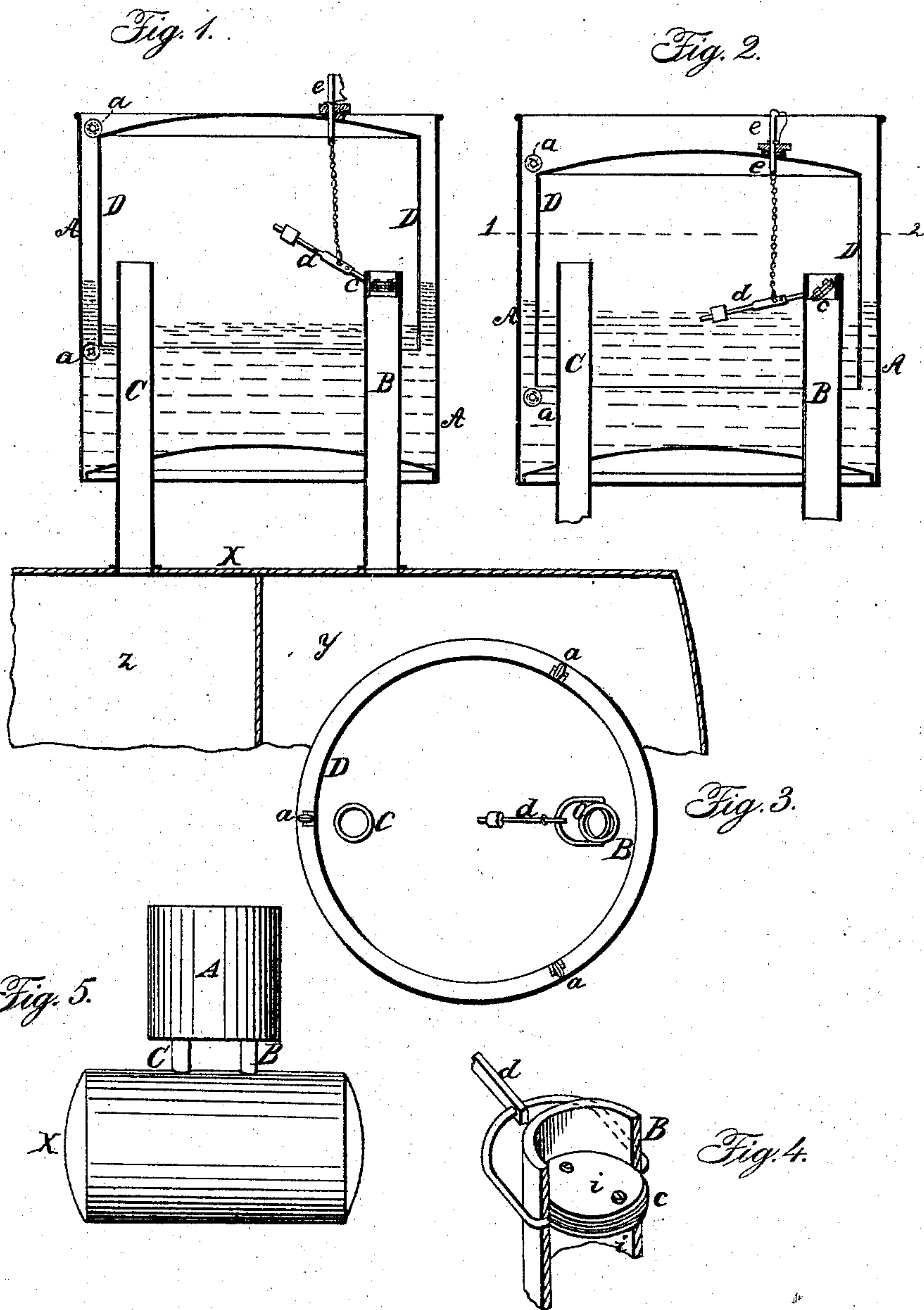


J. H. BEACHER.

Carbureter.

No. 67,840.

Patented Aug. 20, 1867.



Witnesses:

Wm. Albert Steel
John Parker

Inventor:

J. H. Beacher
By Atty.
H. Housen

United States Patent Office.

JOHN H. BEACHER, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 67,840, dated August 20, 1867.

IMPROVED VALVE FOR GAS-GENERATORS.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN H. BEACHER, of Philadelphia, Pennsylvania, have invented an improvement in Gas-Generators; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of a valved regulator, constructed and operating in combination with and forming a part of a gas-generator, as fully described hereafter, so that the gas supplied to the burners may be maintained at an even and uniform pressure.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a sectional view of a regulator applied to a gas apparatus, a portion of the latter being shown in red lines.

Figure 2, the same with the working parts in a different position.

Figure 3 is a sectional plan view.

Figure 4 an enlarged perspective view of the valve of the regulator, partly in section, and

Figure 5 a diagram showing the regulator attached to a gas apparatus.

Similar letters refer to similar parts throughout the several views.

A is a vessel which is open at the top, and in which slides vertically a smaller vessel or receiver, D, open at the bottom, and having at the sides guide-pulley *a a*. Through the bottom of the vessel A pass pipes B C, and in the upper end of the former fits a valve, *c*, which is connected to and controlled by a weighted lever, *d*, a chain, *f*, being connected at one end to the lever, and at the other to a rod, *e*, which passes through a stuffing-box at the top of the receiver. The valve *c* consists of two rigid disks containing between them a leather washer, and is so arranged that it will be closed when the receiver is elevated, and opened as the receiver descends. X is a hollow metal cylinder, (shown by red lines, fig. 1,) and is divided into chambers, *y z*, the former containing a pump by which air is forced through the tube B into the receiver D, the latter containing a series of fibrous strands saturated with gasoline. The vessel A is half filled with water or other suitable fluid, so that the air which passes from the chamber *y* can escape from the receiver only through the pipe C, from which it passes into the chamber *z* and among the saturated strands to the burners, the receiver being elevated as the air passes into the same, and the extent of this elevation being in proportion to the rapidity with which the air is discharged from the pump. In the ordinary gas apparatus a regulator without any valve is used, and as the operation of the pump is very irregular, the quantity of air passing into the receiver D is sometimes greater than at others, the receiver being alternately elevated and depressed, so that the pressure within the pipes, and consequently the size of the flame, constantly vary. By the application of a valved regulator to a gas apparatus the difficulty above alluded to is effectually overcome, as the instant the receiver is elevated (in consequence of an increase in the supply of air furnished by the pump,) the valve *c* is partly closed, so that no greater volume of air can pass into the receiver than at first, while the air confined (under a constantly-increasing pressure) in the pump tends to retard the operation of the latter. In like manner, any interruption of the usual speed of the pump will be followed by a reduction of the pressure within the receiver, and by the descent of the latter the valve will thus be opened to such an extent that the required quantity of air can pass into the regulator and to the burners.

I wish it to be understood that I do not claim the within-described regulator of itself, as it is in many respects similar to gas-regulating devices heretofore used, but I claim as my invention, and desire to secure by Letters Patent—

1. A valved regulator constructed and operating substantially as set forth, in combination with and forming a part of a gas-generating apparatus as specified.

2. The throttle-valve composed of two disks with intervening strips of leather, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN H. BEACHER.

Witnesses:

JOHN WHITE,

W. J. R. DELANY.