J. S. WOOD.

Gas Regulator.

No. 67,694. Patented Aug. 13, 1867.

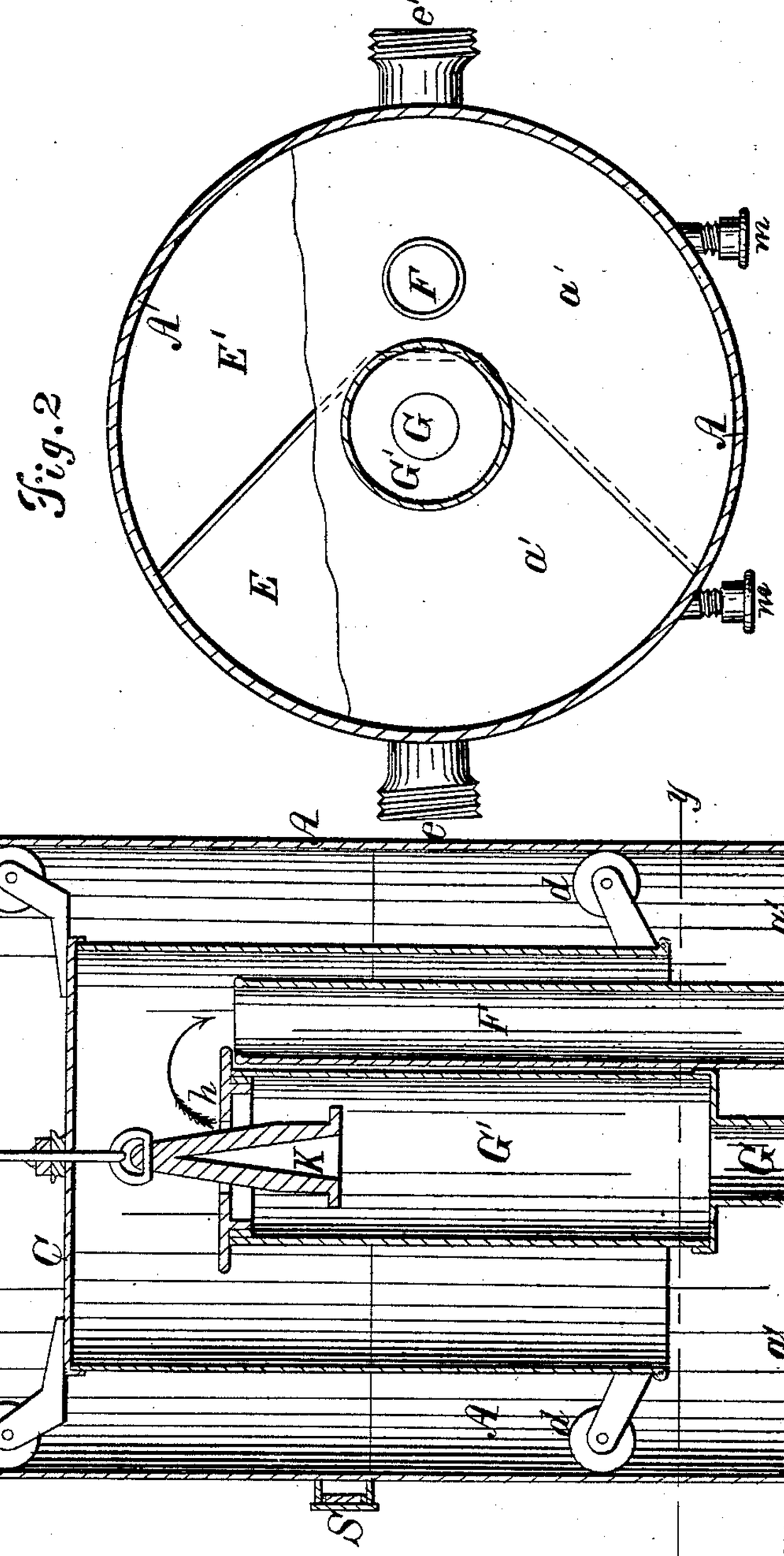

Fig. 1

Fig. 2

Witnesses;
Stanley Clayton
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JOSEPH S. WOOD, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 67,694, *dated August* 13, 1867.

IMPROVEMENT IN GAS-REGULATORS.

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, JOSEPH S. WOOD, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful "Gas-Regulator;" and I do hereby declare the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of my invention is to make a "gas-regulator" which shall equalize the pressure of gas through the various burners in a house or building, so that, whatever the number of burners in use, the pressure through each will be nearly constant.

The present invention is designed to form a more rigid connection between the couplings, and also to provide a reservoir for the accumulation of the condensed water; this is accomplished by a double bottom divided into two compartments, hereafter explained.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure 1 is a cross-section.

Figure 2 is a horizontal section through $x\ y$.

I construct my regulator of a tin vessel or tank, A, which is filled with water up to outlet S. C is an air-tight receiver open to the water at the bottom. The weight of this receiver is regulated to the proper buoyancy for the pressure of gas required. This receiver is steadied, in its movement up and down, by guide pulleys d. About one and one-half inch above the bottom a^2 of the vessel A is a false bottom, a^1, forming between them a reservoir for the accumulation of the condensed water. This is divided off into two chambers or compartments E and E′, and into E is inserted an inlet coupling, e. A short pipe, G, also leads from it into a larger pipe, G′, the top of which terminates in a ring, h, having a central circular opening above the water-line. In this ring h is suspended a conical valve, K; the said valve is fast to the receiver C, and rises and falls with it. From the compartment E′ the pipe F leads upward, terminating above the water line in the receiver C; an outlet coupling, e', also leads from it. The drip-cocks are shown by letters $m\ m$.

The action of my regulator is this: The gas from the meter passes through inlet e into compartment E, up pipe G to G′, through valve K into receiver C, then down pipe F into compartment E′, and through outlet e'.

An air-chamber may be attached to the receiver C, or the inlet and outlet pipes may be carried inside and connected to the compartments, as shown in my patent of August 21, 1866.

This mode of constructing a gas-regulator provides a large receptacle for the condensed water, with great simplicity of construction and convenience in form.

I do not claim the inverted receiver C, or the valve K suspended to it, as those are used in various ways; but I claim—

The combination of the tank A with its chambers E and E′ formed between the two bottoms $a^1\ a^2$, and the pipes F and G, valve K, and receiver C, when constructed and arranged substantially as described.

JOSEPH S. WOOD.

Witnesses:

STANLEY C. HYLTON,

EDW'D BROWN.