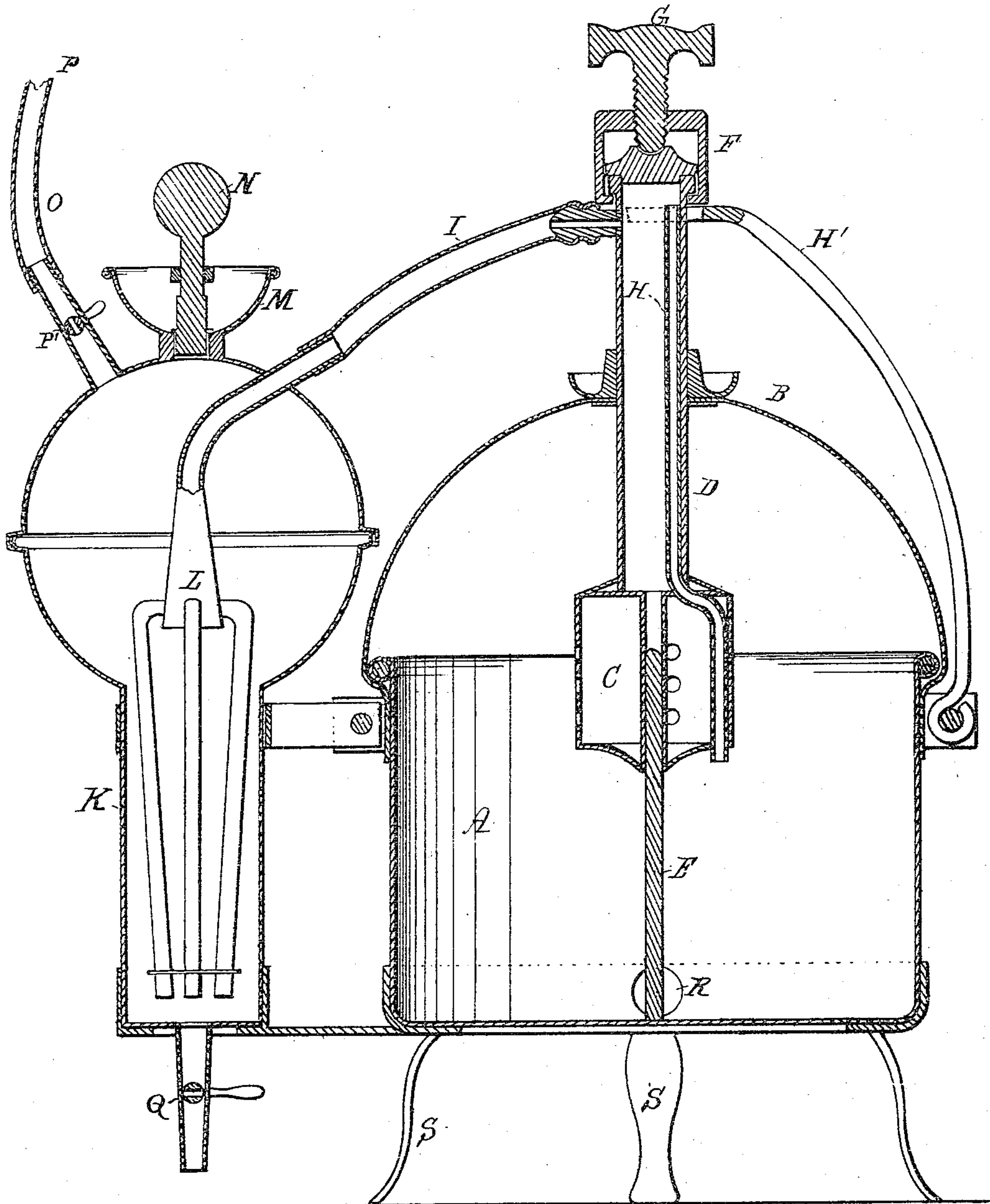


H. RYFFEL.

Carbonic Acid Gas Generators.

No. 148,627.

Patented March 17, 1874.



Witnesses.

Inventor.

*Hermann Seitz
J.B. Smith*

H. Ryffel

UNITED STATES PATENT OFFICE.

HENRI RYFFEL, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF
HIS RIGHT TO HERMAN PIETSCH.

IMPROVEMENT IN CARBONIC-ACID-GAS GENERATORS.

Specification forming part of Letters Patent No. 148,627, dated March 17, 1874; application filed
January 12, 1874.

To all whom it may concern:

Be it known that I, HENRI RYFFEL, of Milwaukee, in the county of Milwaukee, in the State of Wisconsin, have invented certain Improvements in Carbonic-Acid-Gas Generators, of which the following is a specification:

My invention has for its object the generating of carbonic-acid gas; and for the purpose I construct a generator, the bottom of which is copper, lined with lead, or made of any other suitable material, with a cover of rubber or other suitable material, having a basket attached to the cover, and for the purpose of guiding the basket and holding it steady in its place a spire is attached to the bottom of the generator, and enters a hole in the bottom of the basket, and a guide in the basket, which will let the basket slide up and down, and keep the spire from striking the marble in the basket, and a brace or bail to hold the basket up when wanted.

Figure 1 is a sectional upright view of my invention.

A is the generator; B, the rubber cover; C, the basket; D, the pipe which connects with the basket, and through which the marble chips are conveyed to the basket; E, the guide, which is secured to the bottom of the generator, and, standing up, enters the bottom of the basket to keep it in position; F, a bail, which comes down over and hooks under a rim on the head of pipe D; G, a screw, which passes through a bar across the top of bail F, and on the bottom of this screw is a valve or plug, which fills the head of pipe D; H, a small pipe on the inside of pipe D, through which to pour acid into the generator A; H', a brace or bail to hold up the basket and pipe D whenever

necessary; I, a pipe from the top of pipe D to convey the gas to the washer; L, pipes connected to pipe I, and running down into the washer, to convey the gas to the bottom of the same; M, a cover and inlet through which to fill water to the washer; N, a safety-valve and stopper to the opening in the washer; O, pipe from the washer to convey the gas wherever wanted for use; P, a hollow plug or bung connected to pipe O to fill into a hole in a cask; P', a cock in the pipe O; Q, pipe and cock to draw the water from the washer; R, outlet-pipe and plug to the generator; S, legs.

The operation of this machine is as follows: First fill in acid through pipe H to the generator A, raising up the basket by the pipe D, and setting the bail H' under the head of pipe D to hold the basket up out of the acid; then fill in marble chips through pipe D to basket C; then close the top of pipe D and turn back the bail H', and let the marble press the basket down over spire E into the acid, and, as the acid acts on the marble, gas will be generated, and the pressure of the gas will lift the cover B and the basket with it out of the acid, and the gas will pass to the washer through pipe I, and from the washer to wherever wanted for use.

I claim as my invention—

1. The combination of basket C, pipe D, bail H', and pipe H, substantially as specified.
2. The combination of pipe I, washer K, and pipes L, arranged substantially as specified.

HENRI RYFFEL.

Witnesses:

J. B. SMITH,
HERMANN PIETSCH.