

L. KIMBALL.

Improvement in Apparatus for Generating Carbonic-Acid.

No. 127,893.

Fig. 1.

Patented June 11, 1872.

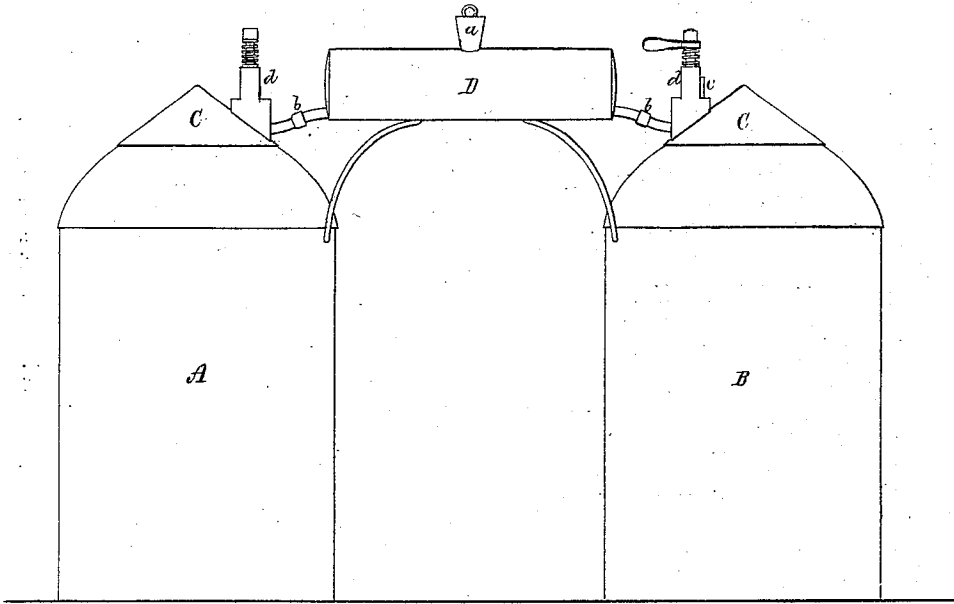
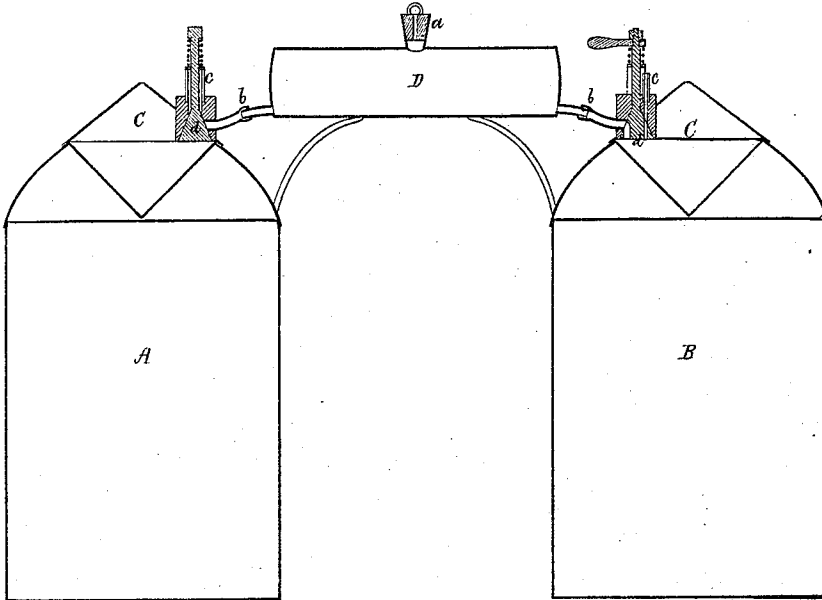


Fig. 2.



Witnesses

S. W. Piper.
L. N. Collier.

Leverett Kimball.

by his attorney.
R. M. Eddy

UNITED STATES PATENT OFFICE.

LEVERETT KIMBALL, OF BRADFORD, MASSACHUSETTS.

IMPROVEMENT IN APPARATUS FOR GENERATING CARBONIC ACID.

Specification forming part of Letters Patent No. 127,893, dated June 11, 1872.

To all persons to whom these presents may come:

Be it known that I, LEVERETT KIMBALL, of Bradford, of the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Apparatus for Generating Carbonic-Acid Gas; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawing, of which—

Figure 1 denotes a front elevation, and Fig. 2 a vertical section of my improved apparatus which is designed for use in extinguishing fires.

In the drawing, A and B denote two closed vessels or generators each being provided at top with what is termed an acid chamber or holder, c, formed as shown.

In carrying out my invention I combine with either or both of the said vessels and its acid-chamber, another vessel or reservoir, D, arranged as shown. The said reservoir D is a close vessel provided with a mouth or filling induct, a, which may be arranged at its middle, as shown, and I also connect such vessel with each acid-chamber by a pipe or conduit, b, and I provide the conduit and acid-chamber with a glass "tell-tale" or pipe, c, and a valve or cock, d, the latter to be capable of opening or closing communication between the reservoir and acid-chamber, and between the latter and the tell-tale pipe, which may or generally should be open at its upper end.

The acid-chamber is intended to hold the requisite amount of acid for the alkaline charge to be contained in its vessel or generator A or B.

The object of the reservoir D is to hold a much larger quantity of acid (sulphuric, for instance) than either or both the chambers C, in order that the chamber or chambers C may be supplied with charges of the acid, as circumstances may require.

In carbonic-acid-gas fire-extinguishers mounted on wheels, and furnished with one or more generators it has been customary to fix to the rear or tail part of the carriage-body a vessel or reservoir to hold the acid, it being drawn therefrom in vessels, and raised and poured by manual labor into the acid-chamber of each generator.

My improvement saves such manual labor, and all necessity of applying an acid-cistern

to the carriage as heretofore. It also enables an attendant to see when the acid-measuring chamber of the generator is full or properly charged, as in such case the acid will rise in the tell-tale pipe to the height required, and be visible to the attendant. There should be a vent at the top of the acid-chamber to allow of the escape of air. Such vent may be provided with a suitable stopper, and there should be an educt at the bottom of the acid-chamber, provided with a valve having a handle or means of raising it, such being common to other apparatus of the kind. So there may be a tube to lead from the upper part of the acid-chamber down into the generator or alkaline solution vessel, such pipe being to equalize the pressure within the acid-chamber and generator.

It will be seen that the acid will be discharged from the reservoir by the force of gravity. There are advantages in having a single reservoir to two generators, as described, as in such case only one induct suffices for the reservoir, and as a consequence, less labor in filling the reservoir would be required, such being accomplished when the engine may be in its house.

I make no claim to an acid-chamber and a generator arranged and combined as set forth.

What I claim as my invention is—

1. The combination and arrangement of the reservoir, and its educt and valve or cock with the acid or charge-chamber and generator, all being as set forth and represented.

2. I also claim the combination and arrangement of the gas-generator, the acid charge-chamber, the reservoir, the educt, the tell-tale, and a valve constructed so as to open and close the tell-tale and educt, substantially as and for the purpose specified.

3. I also claim the arrangement and combination of the single reservoir, its discharge-pipes and their valves with the two generators and their acid-chambers, all being substantially as explained and represented.

LEVERETT KIMBALL.

Witnesses:

R. H. EDDY,
J. R. SNOW.