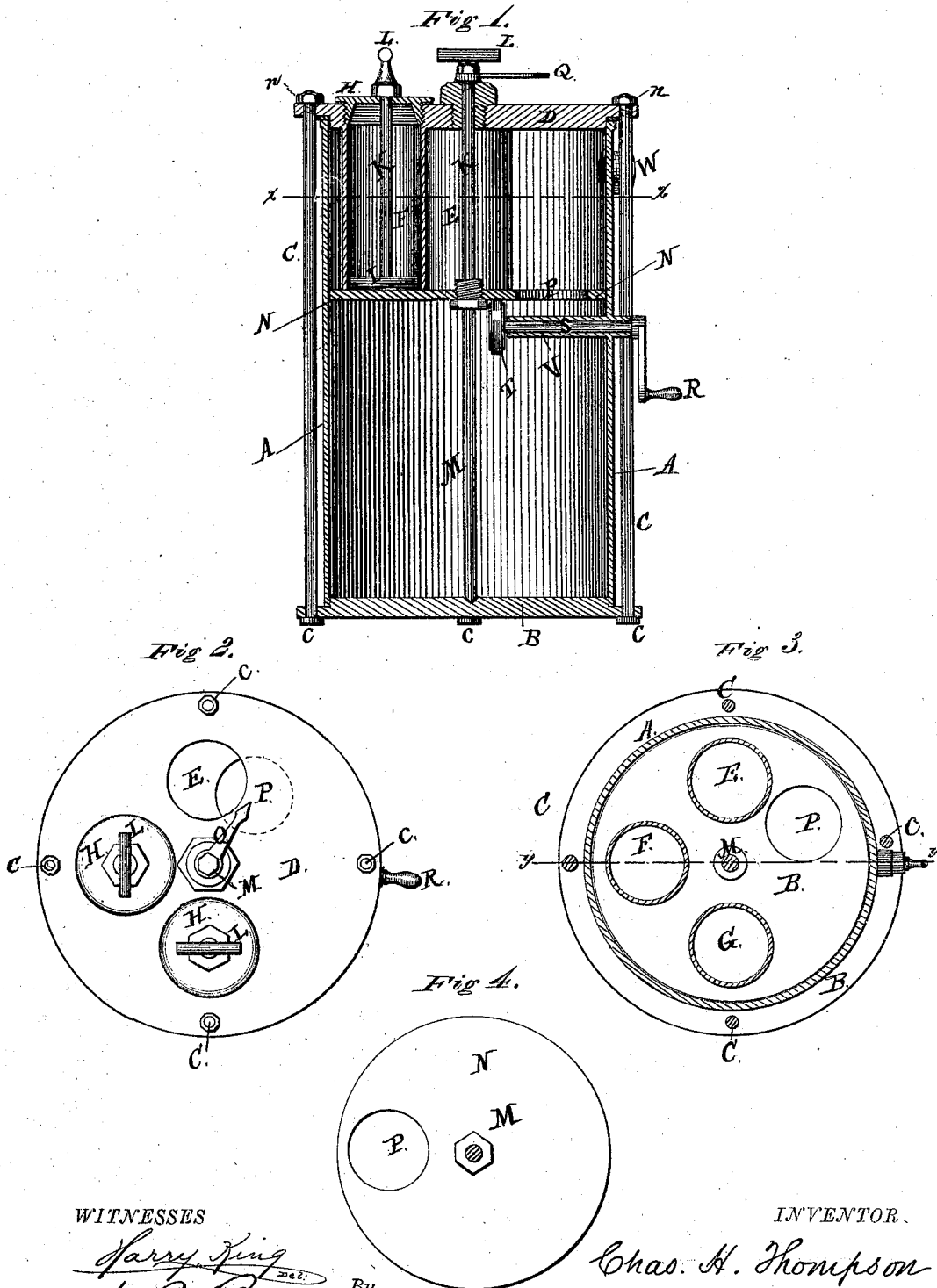


C. H. THOMPSON.
Fire-Extinguishers.

No. 150,730.

Patented May 12, 1874.



WITNESSES

Harry King
H. P. Bell

By

INVENTOR.

Chas. H. Thompson

Stansbury & Munn, Attorneys

UNITED STATES PATENT OFFICE.

CHARLES H. THOMPSON, OF CLEVELAND, OHIO, ASSIGNOR TO A. J. JUIL-
LARD, OF NEW YORK, N. Y.

IMPROVEMENT IN FIRE-EXTINGUISHERS.

Specification forming part of Letters Patent No. **150,730**, dated May 12, 1874; application filed
April 1, 1874.

CASE A.

To all whom it may concern:

Be it known that I, CHARLES H. THOMPSON, of Cleveland, Ohio, have invented certain new and useful Improvements in Gas-Generators for Fire-Extinguishers; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical central section of my improved generator on line *y y* of Fig. 3. Fig. 2 is a view of the top of the apparatus. Fig. 3 is a horizontal section on line *xx* of Fig. 1. Fig. 4 is a detached view of the revolving bottom plate.

The same part is marked by the same letter of reference wherever it occurs.

My invention relates to that class of fire-extinguishers in which the generation of the carbonic-acid gas is effected by dropping successive charges of carbonate of soda into an acid solution contained in the gas-generating chamber. It consists in placing in the upper part of the gas-generator a series of cylinders for holding the carbonate of soda, any one of which cylinders can be opened at the bottom to discharge the soda into the acid by means of a revolving bottom plate having a circular hole cut in it of equal diameter with the cylinders, which hole can by turning the plate be brought directly under either cylinder when it is desired to empty it, all as hereinafter more particularly set forth.

In the drawings, A marks the walls of the large cylinder forming the generating-chamber. The bottom plate B of this cylinder is united by the rods C C, &c., to the top plate D, and secured by the nuts *n n*, &c. In the plate D are three circular openings to receive the cylinders E F G, which are open at top and bottom, and provided with covers H, which can be screwed on. In each of these cylinders is accurately fitted a piston, I, provided with a piston-rod, K, which runs through a boss on the top of the cover H, and is provided with a handle, L, at top, by which the piston can be drawn up or forced down when required. A vertical shaft, M, is stepped in

the middle of the bottom B of the generating-chamber, and projects through a boss on the center of the top plate D. To it is attached the circular plate N, which turns in close contact with the open bottoms of the cylinders E F G. This plate has a circular hole, P, cut in it of equal diameter with those cylinders. An index, Q, attached to the top of shaft M, is placed directly over the hole P, so as to indicate the position of the hole in every position of plate N. R is a winch on the end of horizontal shaft, S, entering cylinder A through a sleeve, V, and carrying a friction-wheel on its inner end, which turns in contact with the lower side of plate N, and imparts rotary motion to it. By turning the winch the hole P can be brought under the lower end of either of the cylinders E F G, and the index Q will always point to the cylinder under which the hole is placed. W is the discharge-opening for the delivery of the gas.

The operation is as follows: Dilute sulphuric acid is placed in the generating-cylinder. The plate N is turned so that the hole P shall not be under either of the cylinders E F G. Those cylinders are filled with carbonate of soda, and the covers H are screwed down, the pistons I resting on top of the charge. The apparatus is then ready for use. To generate a supply of gas the winch R is turned, so as to bring the hole P under the bottom of one of the cylinders. The piston of that cylinder is then driven down, and the charge of soda which it contained is dropped into the acid solution, and furnishes by its decomposition a supply of carbonic-acid gas, which is delivered through orifice W to hose or pipes for use at the desired point. By further turning plate N the second and third cylinders can be discharged in a like manner into the generator, while the first is receiving a fresh charge of soda. Thus a continuous succession of charges can be dropped into the dilute acid until its capacity to decompose the soda has been exhausted. The usual arrangements may be made for drawing off the effete liquid, and replacing it by a fresh solution.

The apparatus may be made of any desired size, and may be mounted on a carriage for transportation in the ordinary way.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the gas-generating chamber A, of the cylinders D E F, provided with the pistons I, and the revolving plate N, with its hole, P, all constructed and in the manner and for the purpose set forth.

2. The combination of the winch R, shaft S, wheel T, plate N, shaft M, and index Q, in the manner and for the purpose described.

The above specification of my said invention signed and witnessed at Washington, this 22d day of January, A. D. 1874.

CHARLES H. THOMPSON.

Witnesses:

W. P. BELL,

CHAS. F. STANSBURY.