H. HENLEY.

Improvement in Fire-Extinguishers.

No. 129,134. Patented July 16, 1872.

Fig. 1.

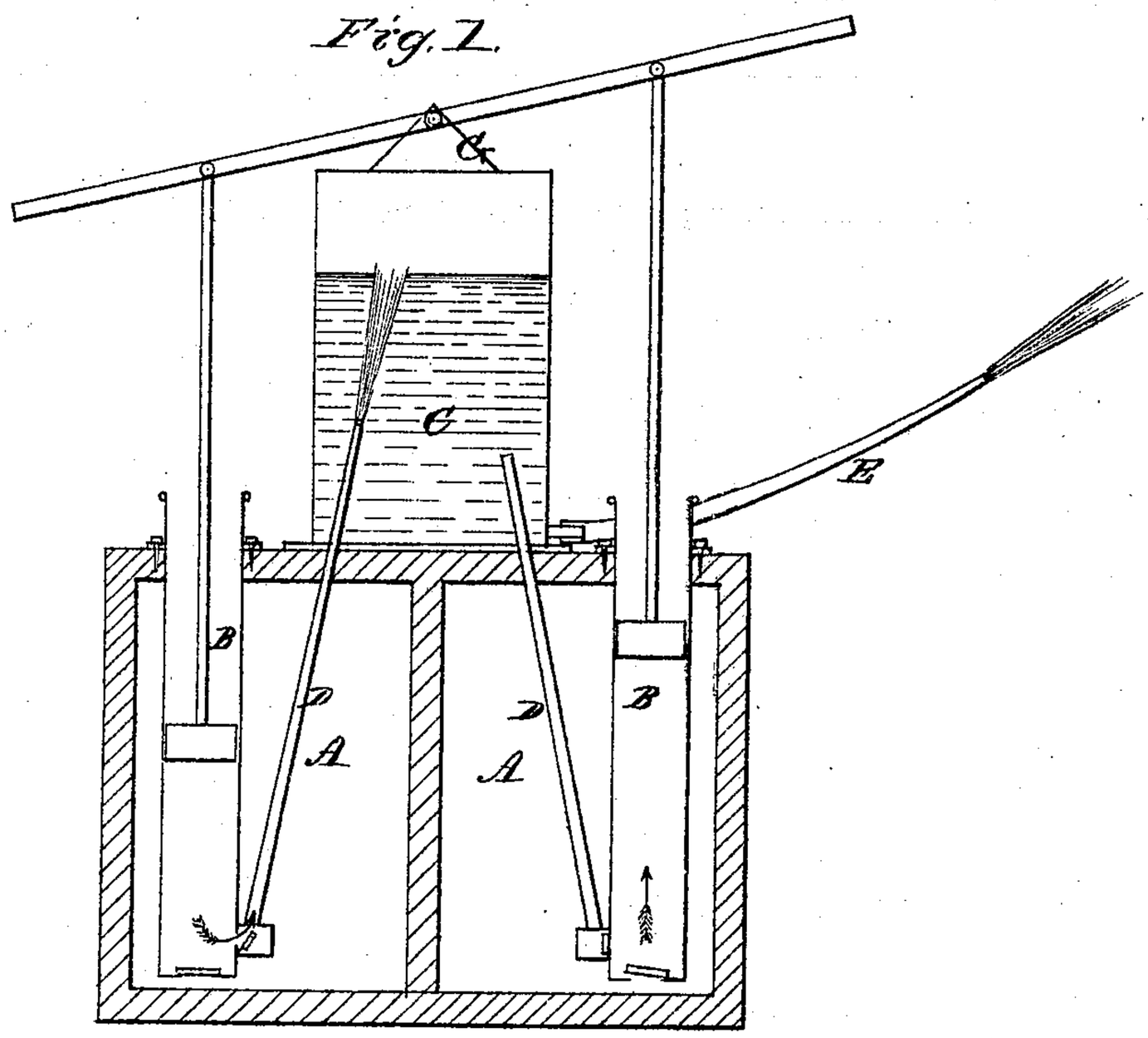
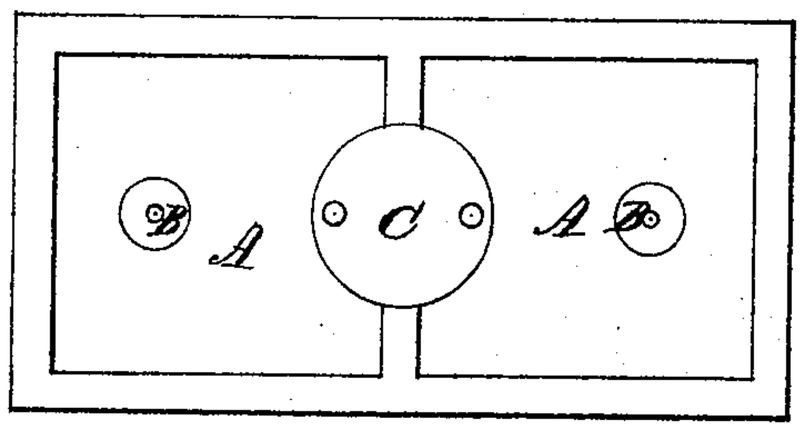


Fig. 2.



Witnesses
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129,134

UNITED STATES PATENT OFFICE.

HENRY HENLEY, OF BLOOMINGTON, ASSIGNOR TO HIMSELF AND JOHN F. ALLISON, OF WORTHINGTON, INDIANA.

IMPROVEMENT IN FIRE-EXTINGUISHERS.

Specification forming part of Letters Patent No. 129,134, dated July 16, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, HENRY HENLEY, of Bloomington, in the county of Monroe and State of Indiana, have invented certain new and useful Improvements in Fire-Extinguishers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a "fire-extinguisher," having separate acid and alkali chambers capable of being recharged while the extinguisher is in operation and without stopping the same, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section, and Fig. 2 a plan view, of my machine.

A A represent two boxes made separate, and connected together to form one whole or two compartments in one box, one to contain the solution of common soda and the other sulphuric acid and water. Attached to this box is a double-acting force-pump, B, drawing the solution from both the boxes or compartments at the same time, and forcing them together into a common tank or chamber, C, where the chemical action instantly takes place, generating the gas, which has an expansive power sufficient to elevate over or through any ordinary building, by using the necessary amount of hose. D D are the pipes through which the solutions are forced into the water and gas chamber C. E is the hose through which the water and gas are discharged into the fire. G is the support for the lever of the force-pump. The boxes containing the chemicals may either be open or provided with a loose lid, so that they can be replenished and filled up at any time, even while the machine is in operation. For example, the operation may be commenced with the boxes full or only partly filled, and, if it is found that the fire is of such a character as to require it, the boxes may be filled up in a very few moments, and if necessary continue to fill up while the machine is in operation, and without stopping it. In other words, by my mode of uniting the chemicals I am enabled to run the machine as long as may be necessary, and throw an indefinite amount of gas without having to stop and reload.

In the fire-extinguishers now known, which use hydrogen gas only, a very limited amount can be used, when it becomes necessary to stop the machine to open the chambers and recharge, at the expense of some minutes of precious time.

The gas-chamber may be provided with a safety-valve, though the amount of pressure is felt all the time in working the pump, as the greater pressure in the chamber makes the pump work harder. The pumps are stopped when they work too hard, and start up again when they work easy. The heavier the pressure is, the harder to force the water into the chamber and the harder the pump works; but the continual discharge from the chamber soon relieves the high pressure, when the pump stops.

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

1. A fire-extinguisher having separate chambers or compartments to contain the acid and alkali, when said chambers or compartments are open at the top, or otherwise so constructed that they can be recharged as often as necessary without stopping the operation of the machine, substantially as herein set forth.

2. The combination of the boxes or compartments A A, double-acting force-pump B, pipes D D, gas-chamber C, and discharge-pipe E, all constructed and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

HENRY HENLEY.

Witnesses:

DAVID GARRY,

HIRAM MCCORMICK.