E. Sander,

Fire Annihilator.

No. 111,877. Patented Feb 14, 1871

Fig. 1.

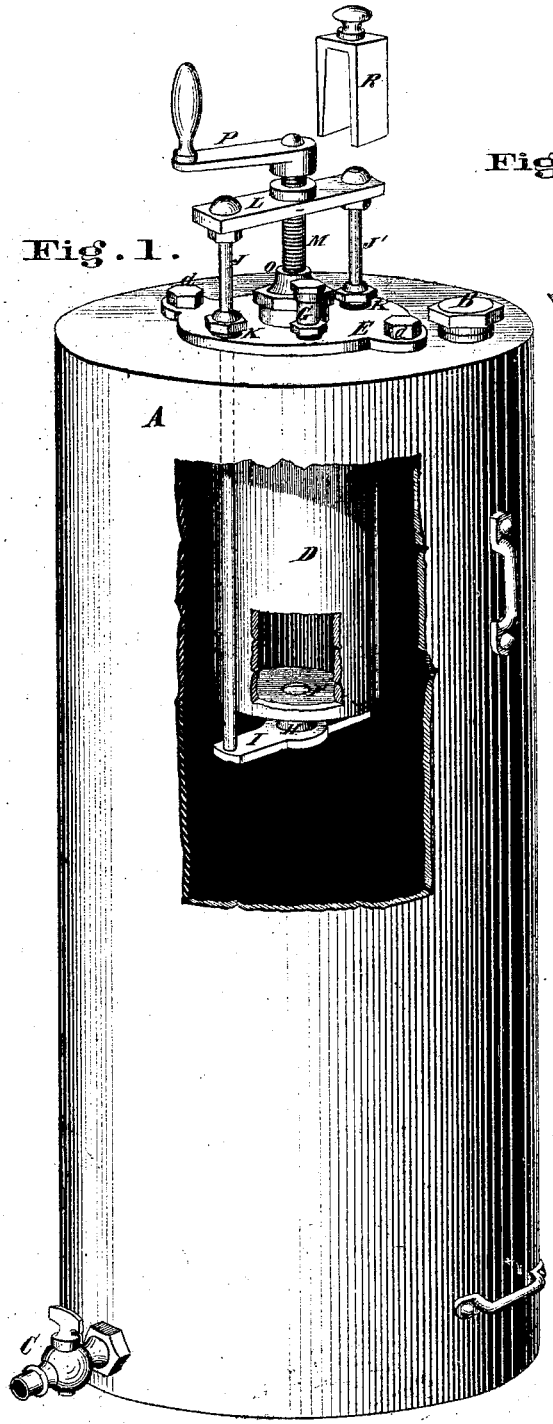
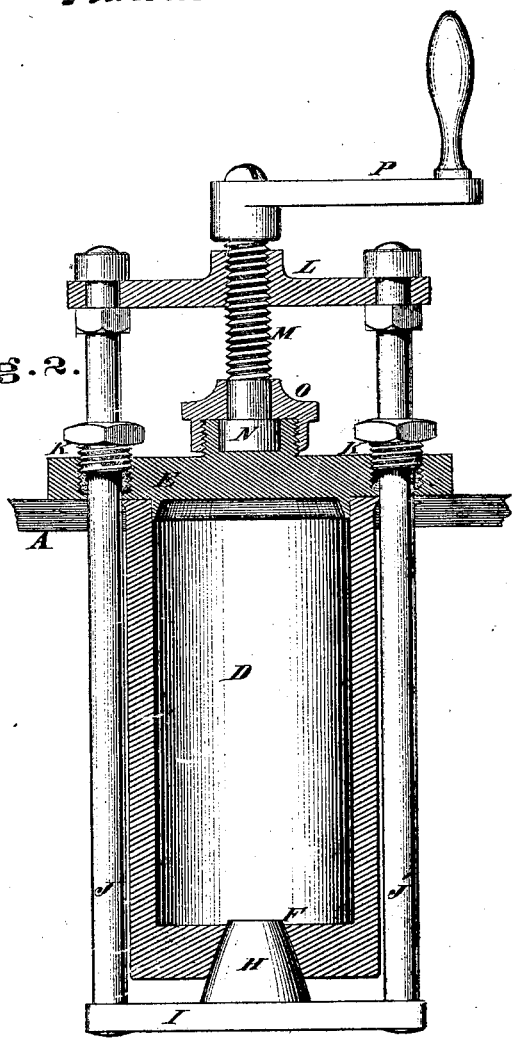


Fig. 2.



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ENNO SANDER, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN FIRE-EXTINGUISHERS.

Specification forming part of Letters Patent No. **111,877**, dated February 14, 1871.

To all whom it may concern:

Be it known that I, ENNO SANDER, of St. Louis, St. Louis county, State of Missouri, have invented a certain new and useful Improvement in Fire-Extinguishers; and I hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable one skilled in the art to which my invention appertains to make and use it, reference being had to the accompanying drawing, making part of this specification.

Nature and Objects of Invention.

My invention relates to fire-extinguishing apparatus which embodies an acid-chamber within a generating-tank, the acid-chamber being adapted to be emptied of its contents, wholly or partially, when desirable, upon the water and alkaline contents of the tank, for the purpose of generating carbonic-acid gas, the pressure created by the generation of which will forcibly expel and carry the contents of the tank to a fire; and my invention consists of a peculiar device for opening and closing the discharge-opening of the acid-chamber, the object of my invention being a valve-operating device, which, while adapted for operation at the top of the tank, does not require any of its parts to be passed through the acid-chamber.

Figure 1 is a perspective view of a fire-extinguishing apparatus embodying my invention, small portions of the tank and acid-chamber being broken away to exhibit the interior construction. Fig. 2 is an axial section of the acid-chamber and valve-operating devices.

General Description.

A is the gas-generating tank, and B a screw-capped opening, through which it is filled with the liquid and soda. C is the discharge valve or cock for tank A, to which fire-hose may be attached, in the ordinary way. D is the acid-chamber. It is composed of lead, and securely fastened by bolts *d d*, through its cap E or otherwise, a "ground" or gasket joint being made between the cap and tank to prevent the escape of gas.

A conical valve-opening, F, is formed in the leaden bottom of the chamber D for the discharge of the acid, and a screw-capped pipe, G, is fitted to the chamber, through which it can be filled.

A conical valve, H, is closely fitted to the opening F, and connected to the cross-head I.

The valve and cross-heads are connected to and operated by the side rods, J J′, which pass through stuffing-boxes K K and connect at the top by the cross-head L, the latter having a screw-threaded hole in the center, through which the operating-screw M is fitted.

The screw is retained in place by means of a collar, N, and screw-cap O.

The handle P is designed to operate the screw, and this may be secured tightly in any position to prevent accidental displacement by locking-staple R, which slips over the lever of the handle and the cross-head L when the two are in line.

Operation.

By simply turning the crank-handle P in the required direction the side rods, J J′, may be forced up or down through the stuffing-boxes K K, and the valve H thereby opened or closed, and, when closed, forced to a tight seat. The operating mechanism of the valve, being on the outside of the chamber D, is not exposed to the corrosive action of the acid, as in other apparatus, and will therefore be always clean, in readiness for action, and easily and smoothly operated.

Claim.

In connection with the acid-chamber D and tank A of a carbonic-acid-gas-generating apparatus, the downwardly-opening valve H, cross-heads I L, side rods, J J′, and operating-screw M, connected and operating substantially in the manner and for the purpose set forth.

In testimony of which invention I hereunto set my hand.

ENNO SANDER.

Witnesses:
FERD. VARRELMAN,
JAMES CARROLL.