Baragwanath & Van Wisker,

Fire Extinguisher,

No. 51,284, Patented Dec. 5, 1865.

Fig. 1

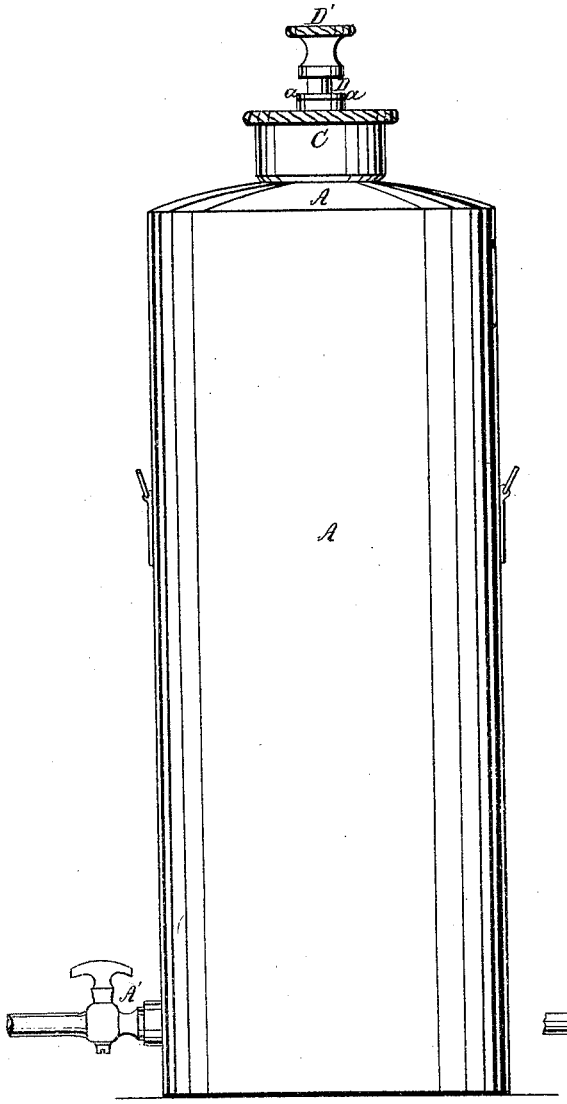
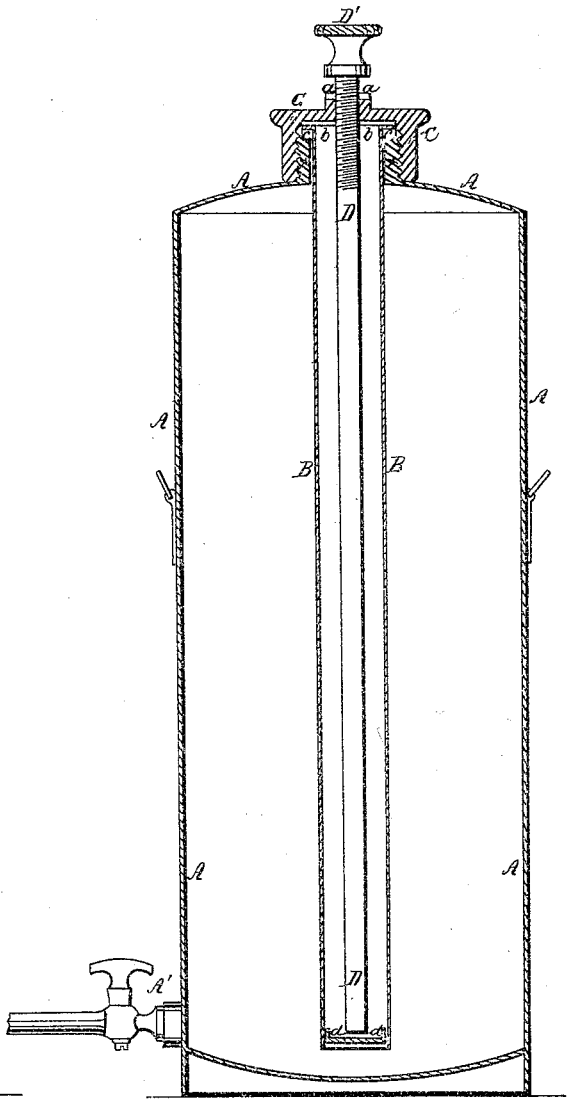


Fig 2



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY BARAGWANATH AND MARTIN VAN WISKER, OF NEW YORK, N. Y.

IMPROVED FIRE-ANNIHILATOR.

Specification forming part of Letters Patent No. **51,284**, dated December 5, 1865.

To all whom it may concern:

Be it known that we, HENRY BARAGWANATH and MARTIN VAN WISKER, both of the city, county, and State of New York, have invented a new and Improved Means of Extinguishing Fires; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is an elevation, and Fig. 2 a central vertical section, of the apparatus employed in our invention.

The nature of our invention consists, first, in the discharge of water impregnated with carbonic-acid gas upon any burning mass; and, second, in applying the pressure of the generation of the gaseous water to its discharge at the will of the operator.

Our apparatus for producing and discharging at pleasure a supply of aerated water consists of a strong metallic vessel, A, into which is inserted a long metallic tube, B. This tube B is inserted through a contracted mouth or opening in the top of the vessel A, encircled by a flange or neck, *x*. The inner upper edge of the neck *x* is rabbeted, so as to form a shoulder, upon which is placed a packing-ring, *c*, of leather, india-rubber, or other suitable material, to receive a rim projecting from the upper edge of the tube B, said tube being supported by this rim when inserted in the vessel. The mouth of the vessel is closed by a metallic cap or stopper, C, which screws over it, so as to make an air-tight joint therewith, and which is provided with a washer of rubber or other suitable packing material, so that when screwed down it shall press firmly upon the upper edge or rim of the inner tube, and making a water-tight joint therewith. The tube B is of such a length as to reach nearly to the bottom of the vessel, and is provided with a water-tight valve, *d*, at its lower end. This valve is kept closed by a powerful spring; but may be opened at pleasure by means of a rod, D, screwing down through the cap C and extending to the valve *d*. The head of the rod projects somewhat above the top of the cap C when the valve is closed, and by simply screwing it home the valve will be opened. We contemplate also securing the valve-rod directly to the cap, so that by screwing down the cap the rod will act upon the valve. A discharge-aperture, fitted with a tube and closed by a stop-cock or valve, A′, is formed in the lower part of the vessel A, and to this discharge-tube is connected a flexible tube and nozzle suitable for directing and delivering in any direction the jet of aerated fluid discharged from the apparatus.

In charging the apparatus constructed substantially as described the cock A′ is carefully closed and the tube B withdrawn from the vessel A. This vessel A is then nearly filled with water, acidulated by the addition of about one pound of tartaric acid, or its equivalent, to every two gallons of water, and the tube B with about one pound of dry bicarbonate of soda, pulverized or crystallized, (or any other alkaline equivalent,) for every two gallons of water placed in the vessel. The tube, with its bottom valve tightly closed, is then replaced by being inserted through the neck of the vessel until its rim finds resting place upon the shoulder formed therein, and the apparatus is hermetically sealed by screwing down the cap or stopper C to its place, the screw valve-rod therein being first elevated, so as not to reach the valve *d* in the bottom of the tube. The joint between the upper part of the vessel and the top of the tube is made water-tight by the pressure of the stopper C against the packing-rings *b* and *c* on either side of the rim of the tube, so that the fluid in the vessel cannot possibly reach the contents of the tube in whatever position it may be thrown.

The apparatus is made ready for immediate use by simply screwing down the valve-rod D by means of its projecting head. This will force open the valve *d* and allow the bicarbonate of soda (or other equivalent alkaline substance) to drop into and mingle with the acidulated water in the vessel A, thereby generating instantaneously a volume of carbonic-acid gas in the water, which will, however, remain confined within the vessel until the cock A′ is opened, when the expansion of the gases will force out the aerated water in a very powerful jet, which, with a proper nozzle, may be thrown against a burning mass or object to a distance of from twenty to forty feet. This water thus impregnated with carbonic-acid

gas will immediately extinguish flame and prevent combustion not only where it strikes, but also for a considerable distance around it.

We do not limit ourselves in our invention to the within-described means of obtaining and discharging aerated water against or upon burning objects, but contemplate any equivalent forms of apparatus for accomplishing the object, substantially as set forth.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

Subduing and extinguishing fire by means of aerated water produced and applied substantially in the manner and for the purpose herein set forth.

The foregoing specification of our improved means of extinguishing fires signed by us this 16th day of September, A. D. 1865.

HENRY BARAGWANATH.
MARTIN VAN WISKER.

In presence of—
CHAS. H. CARR,
C. G. SPENGLER.