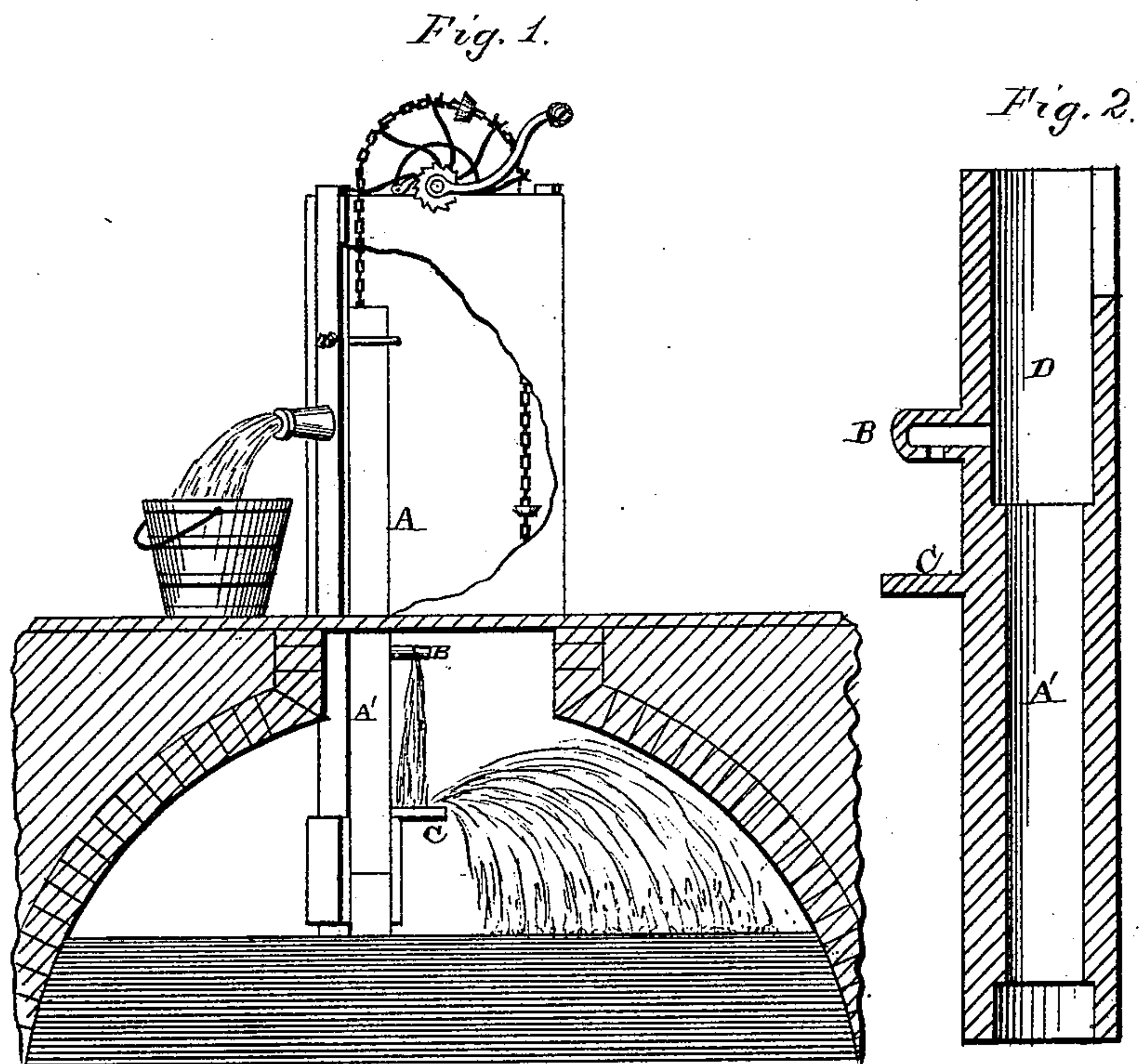


(No Model.)

C. L. MERRILL.  
PUMP AND WATER ELEVATOR.

No. 246,801.

Patented Sept. 6, 1881.



*Witnesses.*

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# UNITED STATES PATENT OFFICE.

CHARLES L. MERRILL, OF INDIANAPOLIS, INDIANA.

## PUMP AND WATER-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 246,801, dated September 6, 1881.

Application filed February 28, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES L. MERRILL, of Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Pumps and Water-Elevators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in pumps and water-elevators of all kinds; and it consists in inserting in the stock a stop cock or tube, through which the water runs while the water is being raised in the stock, and, falling upon a shelf placed below it, rebounds therefrom and falls down into the well or cistern in fine spray, as will be more fully described hereinafter.

It further consists in the method of purifying the water of wells and cisterns by dropping back into the well or cistern a portion of the water raised in the form of a fine spray.

The object of my invention is not only to oxygenate the water by causing it to fall back in a fine spray into the well or cistern, but to carry down fresh air with it, and thus create a circulation of air in the well for the purpose of purifying the water.

In the accompanying drawings, Figure 1 represents a perspective of my invention, partly in section. Fig. 2 is a vertical section of that part of the tubing to which the tube or stop-cock is secured.

A represents a pump or water elevator of any suitable kind, and which has a tube or stop-cock, B, projecting from its side, and through which a portion of the water flows while being elevated. As the water drops from this tube or stop-cock it falls upon a shelf, C, placed any suitable distance below it, and from this shelf it rebounds and falls in fine

spray down into the well or cistern below. As this spray falls it not only becomes oxygenated, but it carries fresh air downward with it, and by thus causing a circulation of air the dead heavy air which settles down upon the water is displaced to a great degree, and the water is thus rendered purer and sweeter.

That part A' of the tubing to which the stop-cock or tube B is secured is reamed out at its top, as shown at D, Fig. 2, to a slight distance below the tube, so that this part will be larger than the buckets on the chain. By this means the water will quickly settle in this reamed-out part, and so have force enough to run out of the tube with considerable force and make a larger amount of spray. Another advantage consists in the fact that the water will quickly settle down in this part D below the freezing-point and before it has a chance to freeze in the the stock above.

Having thus described my invention, I claim—

1. The combination of the stock with a tube or stop-cock extending therefrom and a shelf upon which the water falls so as to be converted into spray, substantially as shown.

2. In purifying water in wells or cisterns, the method of producing a downward current of fresh air to displace the dead air upon the surface of the water, which consists in dropping back into the well or cistern in the form of spray a portion of the water being raised, substantially as described.

3. The combination of the stock A', having the enlargement D in its upper end, with the tube B and shelf C, whereby the water is forced more rapidly from the stock, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES LEE MERRILL.

Witnesses:

JOSEPH GREENWOOD,  
C. D. WHITEHEAD.