W. DOTEY.

STEAM WATER-ELEVATORS.

No. 194,809. Patented Sept. 4, 1877.

Fig. 1

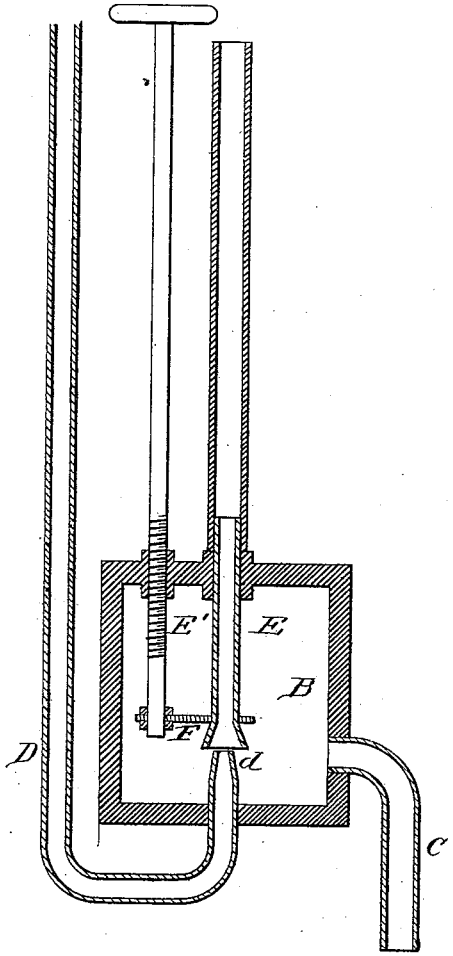
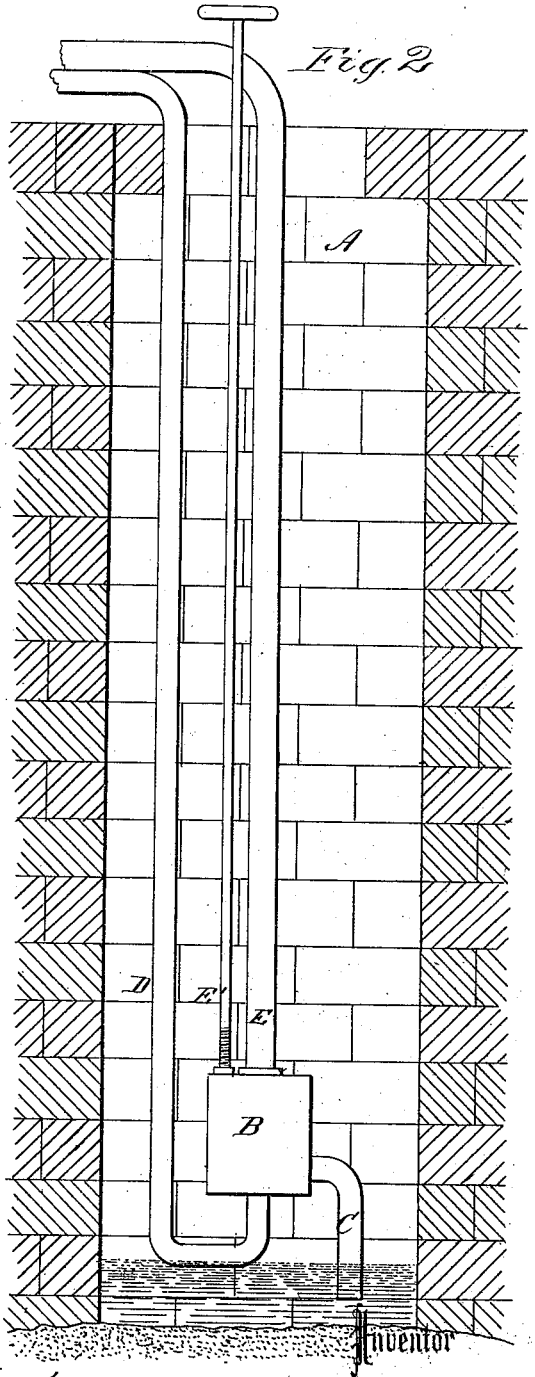


Fig. 2



Witnesses

J. B. Connolly

A. C. Cassell

Inventor

William Doty

By Connolly Bros

Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM DOTEY, OF WILMINGTON, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO S. M. THORNE, OF SAME PLACE.

IMPROVEMENT IN STEAM WATER-ELEVATORS.

Specification forming part of Letters Patent No. **194,809**, dated September 4, 1877; application filed June 25, 1877.

To all whom it may concern:

Be it known that I, WILLIAM DOTEY, of Wilmington, in the county of Clinton and State of Ohio, have invented a certain new and useful Improvement in Steam-Pumps; 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, in which—

Figure 1 is a vertical central section, and Fig. 2 a side elevation, of my invention.

This invention has relation to that class of steam-pumps in which a jet of steam is employed to create a vacuum in the water-conduit, as in a steam-boiler injector, for the purposes of which this apparatus may be used.

The improvement consists essentially in the combination, with the steam pipe or nozzle and the hot-water tank, of an adjustable water-pipe and suitable adjusting mechanism, whereby the capacity of the water-inlet is regulated to suit the boiler-pressure and to change the temperature of the water.

Referring to the drawings, A designates a supply well or tank, in which is arranged the feed-tank B, having communication with the several pipes C D E. The pipe C enters the bottom of the tank B, and conveys the supply from the well A. The pipe D leads from the boiler, rises through the bottom of the tank B, and terminates in a conical nozzle, *d*. The pipe E rises from the tank B, within which it depends, and communicates with the boiler or with the receptacle to be supplied. This pipe, or a section thereof, is vertically adjustable, and opens directly above and close to the point of the steam-nozzle, to correspond with the conical form of which the pipe-opening may be made flaring or bell-shaped. The sliding section may be in the form of a sleeve or inner pipe.

The adjusting device consists of a threaded rod, E′, passing through a nut or screw aperture in the top of the tank B. This rod is journaled at its lower end to the sliding portion of the pipe, or to an arm or collar projecting therefrom, as shown at F.

The operation of the apparatus is simple and obvious. The steam from the pipe D, entering the mouth of the pipe E, creates a vacuum in the latter, to fill which the water from the tank B enters the pipe and is conducted upward. The partial vacuum created in the tank causes the water from the well to rise and keep the tank B supplied. Sufficient warmth is imparted to the water from the steam. As the pressure of steam or the temperature of the water varies, the water-pipe is adjusted so that the size of the water-inlet to the discharge-pipe E shall be correspondingly increased or lessened.

What I claim is—

In a steam-ejector for raising water from wells, the combination, with the tank B, of the water-inlet C, steam-induction pipe D leading downward outside and rising through the lower part of said tank, the adjustable discharge-pipe E rising from tank B, and the adjusting mechanism, consisting of the threaded rod E′ and connection F, said rod extending above the well, all substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of April, 1877.

his
WILLIAM × DOTEY.
mark.

Witnesses:
R. E. DOAN,
C. I. HOCKETT.