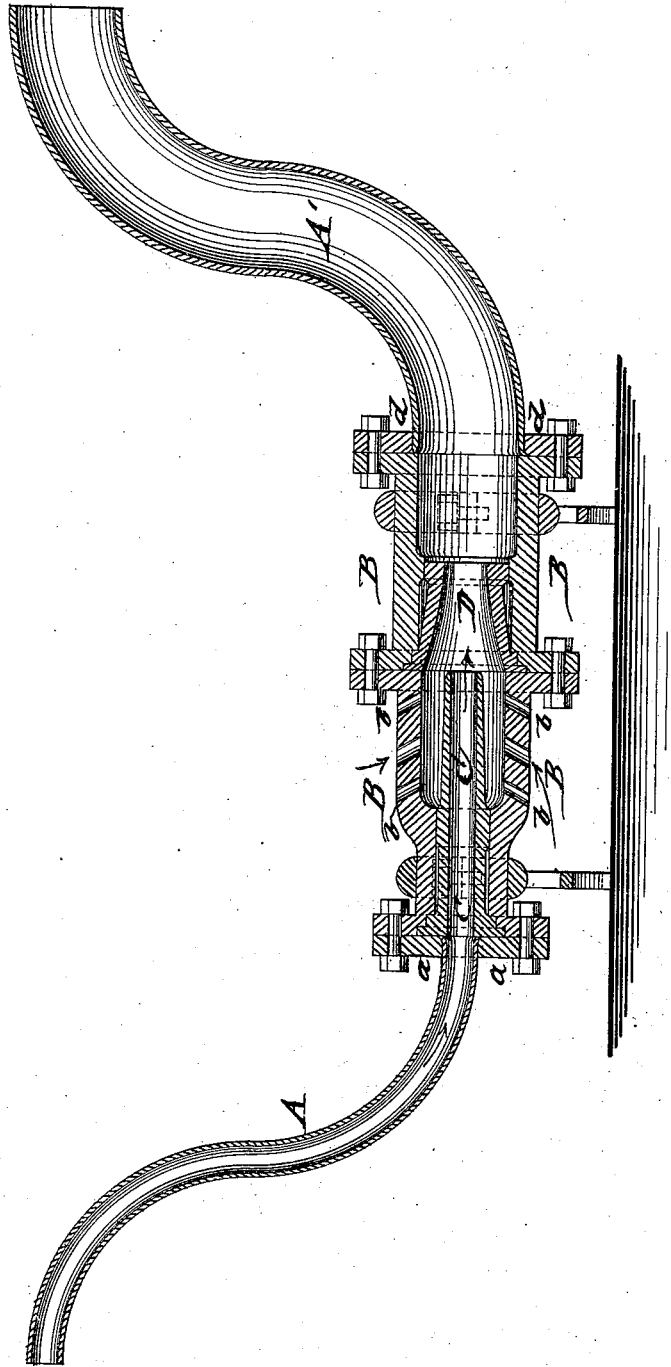


A. WRIGHT.
WATER-ELEVATOR.

No. 187,339.

Patented Feb. 13, 1877.



WITNESSES:

H. Rudquist
J. H. Scarborough

INVENTOR:

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BY

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UNITED STATES PATENT OFFICE.

ALEXANDER WRIGHT, OF HAVANA, CUBA.

IMPROVEMENT IN WATER-ELEVATORS.

Specification forming part of Letters Patent No. **187,339**, dated February 13, 1877; application filed October 23, 1876.

To all whom it may concern:

Be it known that I, ALEXANDER WRIGHT, of Havana, Cuba, have invented a new and Improved Steam-Pump, of which the following is a specification:

The accompanying drawing represents a vertical longitudinal section of my improved steam-pump.

The invention relates to an improved steam-pump for raising water by the direct action of the steam, in analogous manner as in steam-injectors; and the invention consists of a steam-pipe with a nozzle, seated in a perforated casting submerged in the water, and drawing in and raising the water through a tapering spout and wider exit-pipe by the action of the steam.

In the drawing, A represents a steam-conducting pipe, which is preferably placed within an outer pipe, and surrounded by coal-ashes or other non-conducting material, to prevent condensation.

The steam-pipe A is bolted, by a face-plate, *a*, to a flanged casting, B, of cylindrical or other shape, so as to be readily detached therefrom, for changing without removing the casting from the seats. The casting B is submerged into the water, and made of two flanged sections, which are jointed together, one section supporting, in suitable bearings, the nozzle C, that connects with the steam-pipe A; the other section supporting in similar manner a tapering collar or spout, D, through the contracted opening of which

the water is drawn through perforations *b* of the nozzle-section, and forced, by the action of the steam, into the wider discharge-pipe A'. The exit-pipe A' is attached, by a face ring or plate, *d*, binding on the flanged rim of the pipe, to the opposite end of the casting B, so as to be changed with the same facility as the steam-pipe.

The principle on which the pump works is analogous to that of steam-injectors, the action of the steam producing a partial vacuum and creating a suction, that draws in the water to be raised, forcing it forward and upward to any height through the water-discharge pipe.

The pump may also be used with advantage as a bilge-pump on board of steamers, the construction being simple and effective for this purpose.

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

A steam-pump made of a submerged sectional casting, of which one section is perforated, and provided with a nozzle and steam-supply pipe, while the other section has a tapering collar or spout and wider water-discharge pipe, substantially in the manner and for the purpose set forth.

ALEXANDER WRIGHT.

Witnesses:

W. H. PARKER,
W. B. HUNTER.