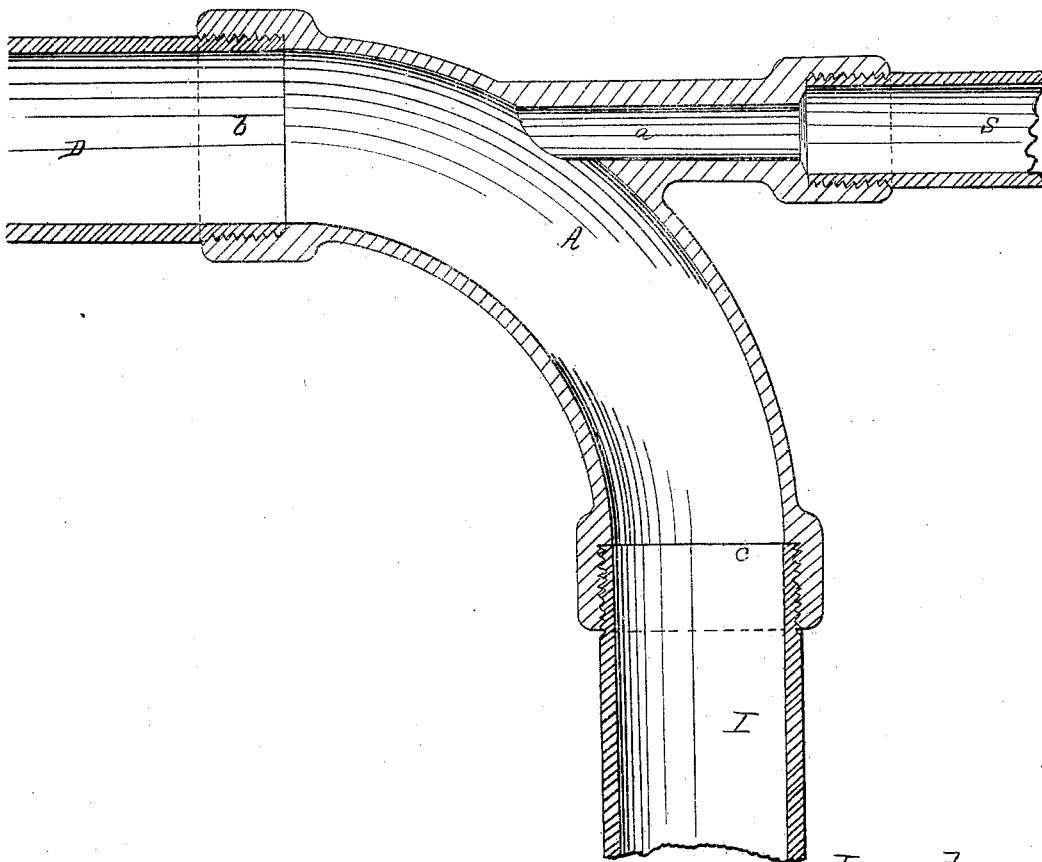


A. Brear,
Ejecting Pump,
N^o 49,602. Patented Aug. 29, 1865.



Witnesses
J. W. Combs
Lucas Holmes

Inventor:
Abel Brear
per Brown Combs & Co
Attorneys

UNITED STATES PATENT OFFICE.

ABEL BREAR, OF SAUGATUCK, CONNECTICUT.

IMPROVEMENT IN LIQUID-EJECTORS.

Specification forming part of Letters Patent No. 49,602, dated August 29, 1865.

To all whom it may concern:

Be it known that I, ABEL BREAR, of Saugatuck, in the county of Fairfield and State of Connecticut, have invented a new and useful Improvement in Ejectors for Water and other Liquids; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, said drawing representing a central vertical section of an ejector constructed according to my invention.

This invention relates to ejectors for ejecting bilge-water from vessels and for raising and forcing other liquids by the direct application of steam or any other aeriform fluid.

It consists in a novel construction of such ejectors, whereby they are greatly simplified, and at the same time the passage through the ejector from the inlet pipe or opening to the discharge pipe or opening is unobstructed, and the liability to the choking of the ejector by any solid substance which enters it is obviated.

To enable others skilled in the art to make and use my invention, I will proceed to describe it with reference to the drawings.

A is the body or principal piece of the ejector, consisting simply of a curved or bent tube, of cast-iron or other material, resembling substantially the bends commonly employed for forming the bent connections of steam and gas tubing, but having a straight external nozzle, *a*, attached to the back or outer curved side opposite to the center of the opening *b*, to which the discharge-pipe D is connected. This nozzle may be cast in the same piece with the body A, or otherwise attached thereto. It is arranged in line with the portion of the discharge-pipe in immediate connection with the opening *b*. To this nozzle *a* is connected the pipe S, which admits the steam or other aeriform body, by the pressure of which the water or other liquid is ejected, raised, or set in motion.

The inlet-pipe I, for the water or other liquid to be ejected or raised, is to be connected with

the opening *c* at the opposite end of the bend or body A to where the discharge-pipe is connected. The curved passage through the body A is of as large an internal diameter as that of the inlet and discharge pipes, and by making the opening of the nozzle *a* terminate in the interior surface of the said passage without any projection thereinto the said passage is left entirely unobstructed, and any chips or other solid matters small enough to enter the inlet-pipe will pass freely through the ejector, instead of choking it up, as they are so liable to do when the steam or air nozzle enters the passage, as it does in most of the ejectors heretofore constructed.

This ejector will be arranged with its inlet-pipe I downward and dipping into the bilge or other place from whence water is to be raised, the said pipe being immersed to any suitable depth.

The steam or other aeriform body admitted through the nozzle *a* drives the water or other liquid before it through the outlet-opening and discharge-pipe and produces a constant upward current of water or liquid through the inlet-opening and through the unobstructed passage of the ejector, the curved form of which is such that the flow through it will be perfectly free.

The extreme simplicity of this ejector as compared with others greatly reduces its cost.

What I claim as my invention, and desire to secure by Letters Patent, is—

The ejector consisting of a simple curved or bent tube, A, having an unobstructed passage, and an external nozzle, *a*, for the admission of the steam or other aeriform fluid, communicating with the said passage on its back or outer curved side at a point directly opposite to and in line with the outlet or discharge opening *b*, substantially as and for the purpose herein specified.

A. BREAR.

Witnesses:

J. W. COOMBS,
A. LECLERC.