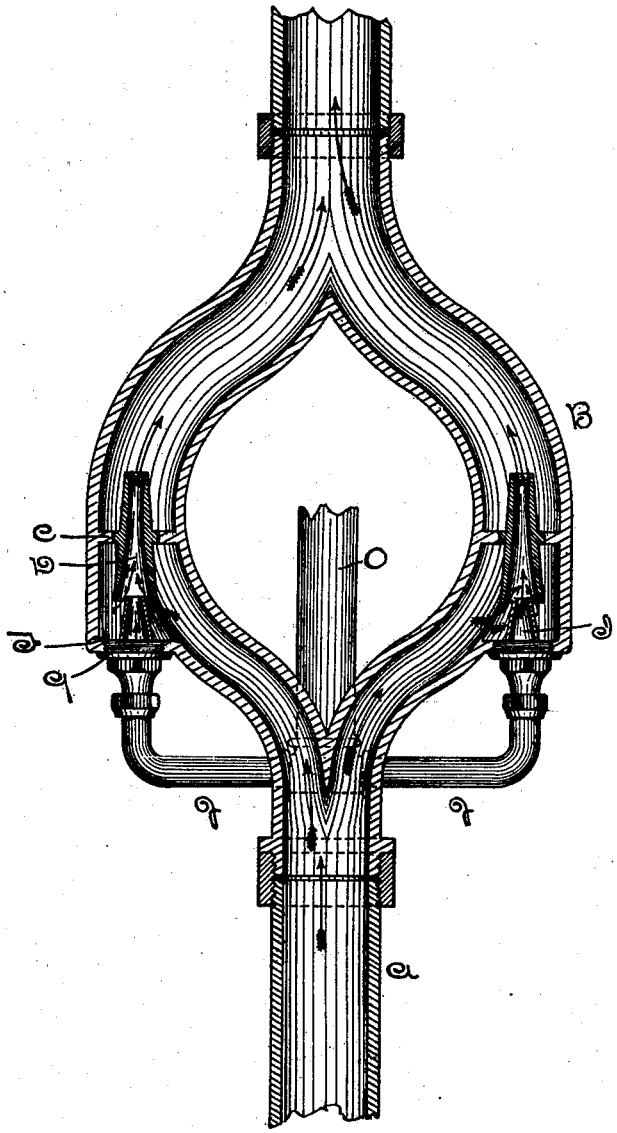
No. 676,239. Patented June 11, 1901.

W. D. LABADIE.

DUPLEX STEAM EJECTOR.

(Application filed Nov. 13, 1900.)

(No Model.)



Witnesses:
George Oltsch
Hugo Oltsch

Inventor
W. D. Labadie,

UNITED STATES PATENT OFFICE.

WILLIAM D. LABADIE, OF SOUTH BEND, INDIANA, ASSIGNOR OF ONE-HALF TO JOSEPH G. DUCK, OF MILWAUKEE, WISCONSIN.

DUPLEX STEAM-EJECTOR.

SPECIFICATION forming part of Letters Patent No. 676,239, dated June 11, 1901.

Application filed November 13, 1900. Serial No. 36,382. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. LABADIE, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Duplex Steam-Ejectors; 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 appertains to make and use the same.

My invention relates to an improvement in duplex steam-ejectors; and its object is to use in different branches of the same pipe separate ejectors, so as to enable a larger amount of water to be raised than has heretofore been done with the same amount of steam.

My invention consists in a pipe through which the water is raised and which is provided with several branches combined with a separate ejector for each one of the branches and a steam-pipe which feeds all of the ejectors, as will be more fully described hereinafter.

The accompanying drawing represents a vertical section of an ejector which embodies my invention.

A represents the suction-pipe, through which the water rises to the ejectors, and placed upon the top of this pipe is the casting B, having two or more curved branches, which branches diverge from the same point near the lower end of the casting and unite at its top. These branches are preferably made curved, as here shown, so as to present less obstruction to the free flow of the water, and in each branch is placed a horizontal partition C. Extending through each one of these partitions is an ejector D, which is preferably formed entirely separate from the partition and inserted into position, or it may be cast as a part of the partition, as may be desired. Below the lower end of each ejector D there is formed a square shoulder F in the casting, and through these shoulders are made suitable openings which are closed by the screw plugs or couplings G. Projecting beyond the plugs G are the conical pipes I, which have their upper ends to project into the lower ends of the ejector-pipes D any desired distance in the usual well-known manner. Connected to each of the plugs or couplings G are branches J, extending outwardly from the lower end of the steam-pipe O, and through which steam-pipe and its branches J steam is forced through the ejectors for the purpose of raising water in the usual manner. I have discovered that by connecting more than one branch to the main suction-pipe and using a separate ejector in each branch a larger amount of water can be raised with the same amount of steam than has heretofore been possible by the use of a single pipe. Owing to the ejector devices placed in the pipes, but a limited amount of water can be forced through the devices, and hence a powerful pressure of steam is necessary to raise anything like a considerable volume of water. By having a number of branches connected with the suction-pipe and placing an ejector in each one the amount of water that can be raised by the same pressure of the steam is very greatly augmented and a great saving in expense is made.

Having thus described my invention, I claim—

In an ejector, the suction-pipe, a casting B secured to its upper end and having two or more curved branches extending therethrough, each of the branches being provided with a partition, and a shoulder, combined with the ejector-pipes D, which project through the partition, the steam-nozzles G, plugs or couplings for closing the perforations through the shoulders in the casting, the branch pipes J, and the steam-pipe O, from which all of the ejectors are fed simultaneously, substantially as specified.

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

WILLIAM D. LABADIE.

Witnesses:
GEORGE OLTSCH,
HUGO OLTSCH.