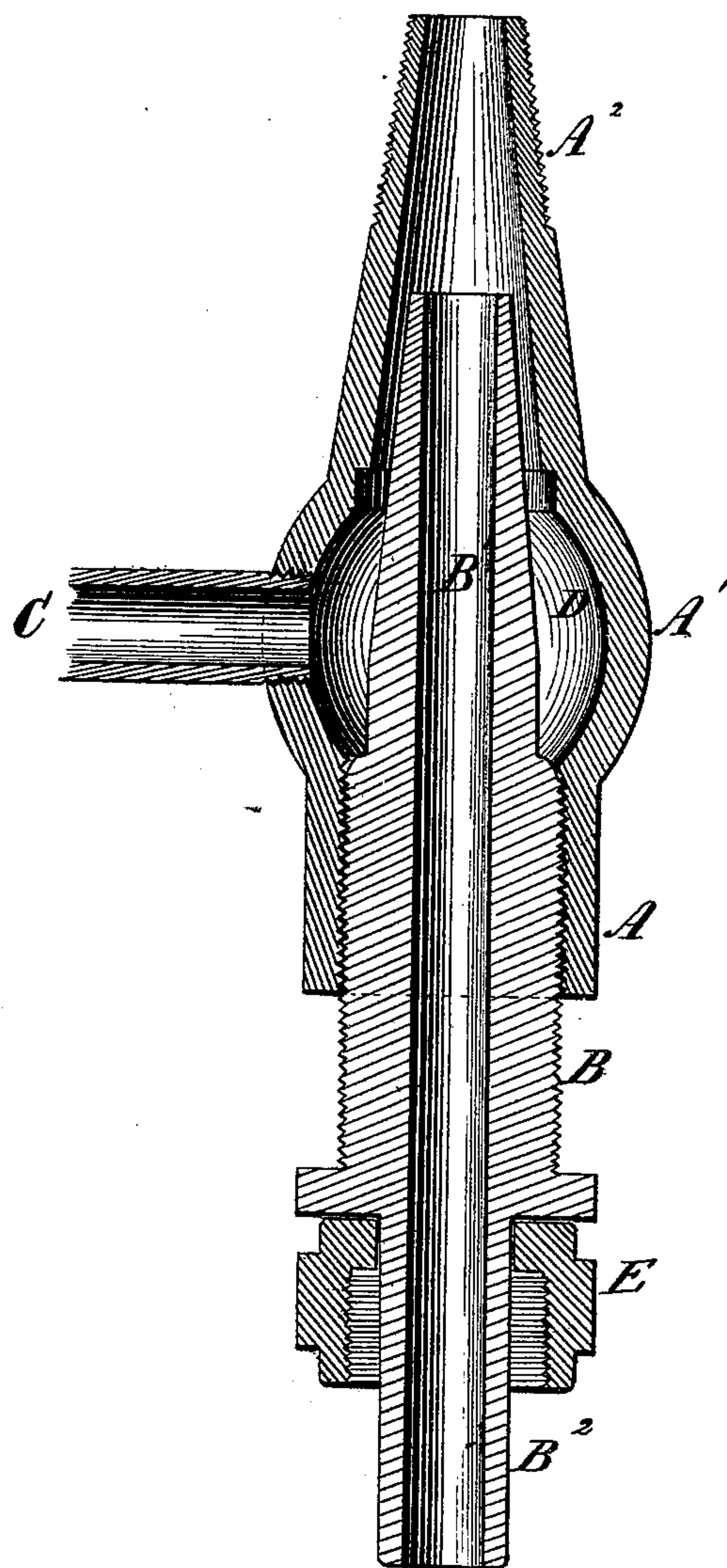


R. D. COX & W. F. COX.

Improvement in Steam-Water Ejectors.

No. 126,525.

Patented May 7, 1872.



Witnesses.
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C. C. J. Cile

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UNITED STATES PATENT OFFICE.

RICHARD D. COX AND WILLIAM F. COX, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN STEAM WATER-EJECTORS.

Specification forming part of Letters Patent No. 126,525, dated May 7, 1872.

Specification describing a certain Improvement in Apparatus for Raising Water, invented by RICHARD D. COX and WILLIAM F. COX, residing at Philadelphia city and county, and State of Pennsylvania.

My invention consists in combining with an annular steam orifice an internal water-nozzle, so constructed that the thickness of the annular jet of steam may be regulated at the will of the operator without detaching either the steam-pipe or the water-elevating pipe, so that the apparatus may be adapted to the work to be done without derangement of any of its fixed parts, as has been necessary with the apparatus heretofore known.

The drawing represents a sectional elevation of our improved apparatus for raising water.

The lower end A of the case is made cylindrical, with an internal screw-thread for the reception of the screw-threaded portion B of the nozzle of the water-pipe. Above the cylindrical portion a bulb, A¹, is formed in the case, from the upper end of which extends the tapering nozzle A², which is bored taperingly, as clearly shown.

Steam is introduced through the pipe C into the bulb of the case, which forms an annular steam-chamber, D, around the lower end of the tapering portion B¹ of the water-pipe nozzle. The latter enters the nozzle A² of the case, and is of such a size that, by screwing it into said nozzle far enough, it may close it and prevent the escape of steam from the chamber D. By unscrewing the nozzle of the water-pipe an

annular opening is formed between its upper end and the nozzle A² of the case for the escape of steam in an annular jet, which, acting upon well-known principles, causes the water to rise in the pipe to be discharged from the nozzle A², or a pipe attached thereto, mingled with the steam. By adjusting the nozzle of the water-pipe and the case on each other the area of opening for the discharge of steam can be regulated with reference to the results aimed at. The nozzle B B¹ terminates at its lower end in a cylindrical tube, B², to be connected to the water-pipe by means of a slip-joint coupling, E, or in other preferred manner.

What we claim as our invention, and desire to secure by Letters Patent, is—

In combination with the external tapering pipe and annular steam-chamber, an internal adjustable water-nozzle, forming between itself and the external pipe an annular eduction-opening for the steam, said nozzle being connected with the standing water-pipe, substantially as set forth, so as to admit of the adjustment of the annular opening to control the escape of the steam without detaching the parts.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

RICHARD D. COX.
WILLIAM F. COX.

Witnesses:

J. J. BUCHEY,
B. H. SMITH, Jr.