

E. MOYEL.

Feed Water Heaters for Locomotives.

No. 135,438.

Patented Feb. 4, 1873.

Fig. 1.

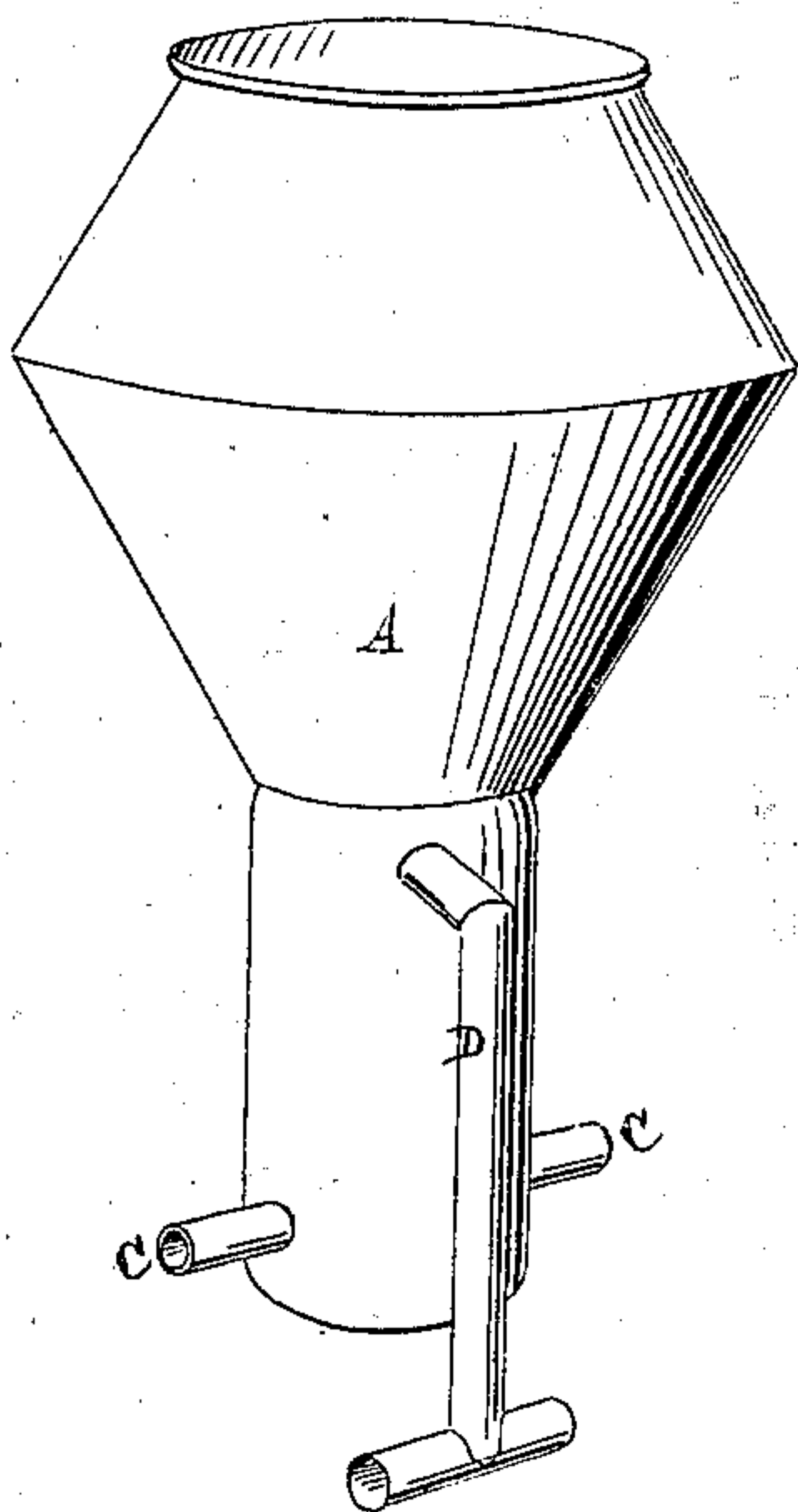
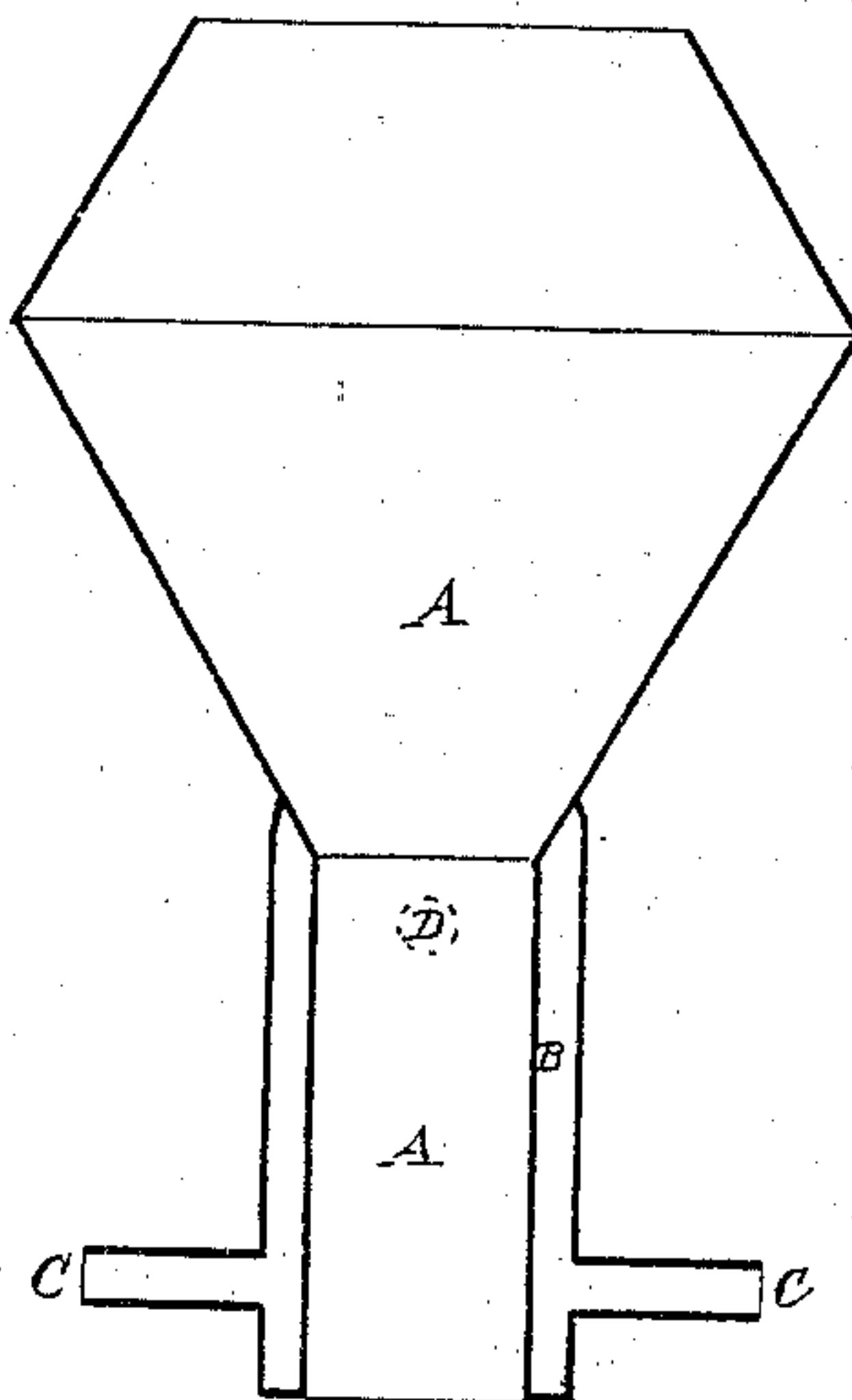


Fig. 2.



ATTEST :

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UNITED STATES PATENT OFFICE.

EDWARD MOYEL, OF WYANDOTTE, KANSAS.

IMPROVEMENT IN FEED-WATER HEATERS FOR LOCOMOTIVES.

Specification forming part of Letters Patent No. **135,438**, dated February 4, 1873.

To all whom it may concern:

Be it known that I, EDWARD MOYEL, of Wyandotte, in the county of Wyandotte and State of Kansas, have invented a new and useful Improvement in Feed-Water Heaters for Locomotives; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of the smoke-stack of a locomotive with my invention attached, and Fig. 2 is a vertical section of the same.

Like letters refer to like parts in each figure.

The nature of this invention relates to the construction of feed-water heaters to be attached to the smoke-stacks of locomotives and other engines; and it consists of a water-tight shell attached to the straight portion of a smoke-stack, into which the water is forced directly from the pumps through suitable pipes. The water is here partially heated by the waste heat passing up the stack before it is conveyed to the boiler, as is more fully hereinafter set forth.

In the drawing, A represents the smoke-stack of a locomotive, around which I place a water-tight jacket or shell, B. Near the bottom of this jacket are secured the induction-pipes C, the other ends of which are connected directly with the pumps of the engine. D is the outlet-pipe from near the top of the jacket, descending perpendicularly along the face of it to a point a little above the boiler. At this point it is connected with a pipe, E, bent to the contour of the boiler, the ends of the pipe E being connected to the check-valves of the engine, thus each delivering one-half of the feed-water used through these check-valves to the boiler.

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

The stack A having the jacket B about its straight portion only, induction-pipes CC, and eduction-pipe D, the latter being arranged to deliver one-half of the water to each side of the boiler, as described.

EDWARD MOYEL.

Witnesses:

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