

W. FAWCETT.
LADLES FOR METAL-FOUNDING.

No. 191,128.

Patented May 22, 1877.

Fig. 1.

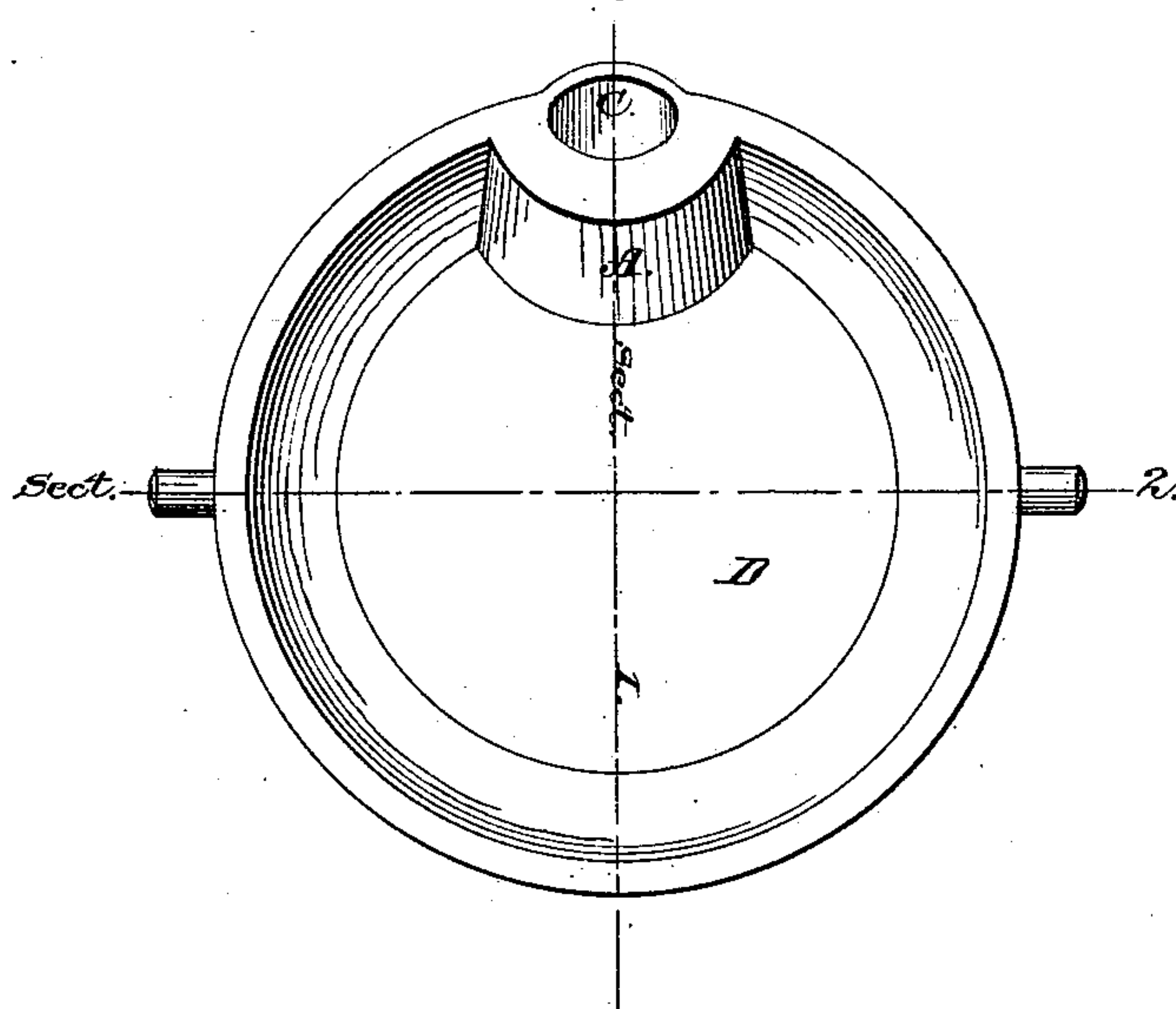


Fig. 2.

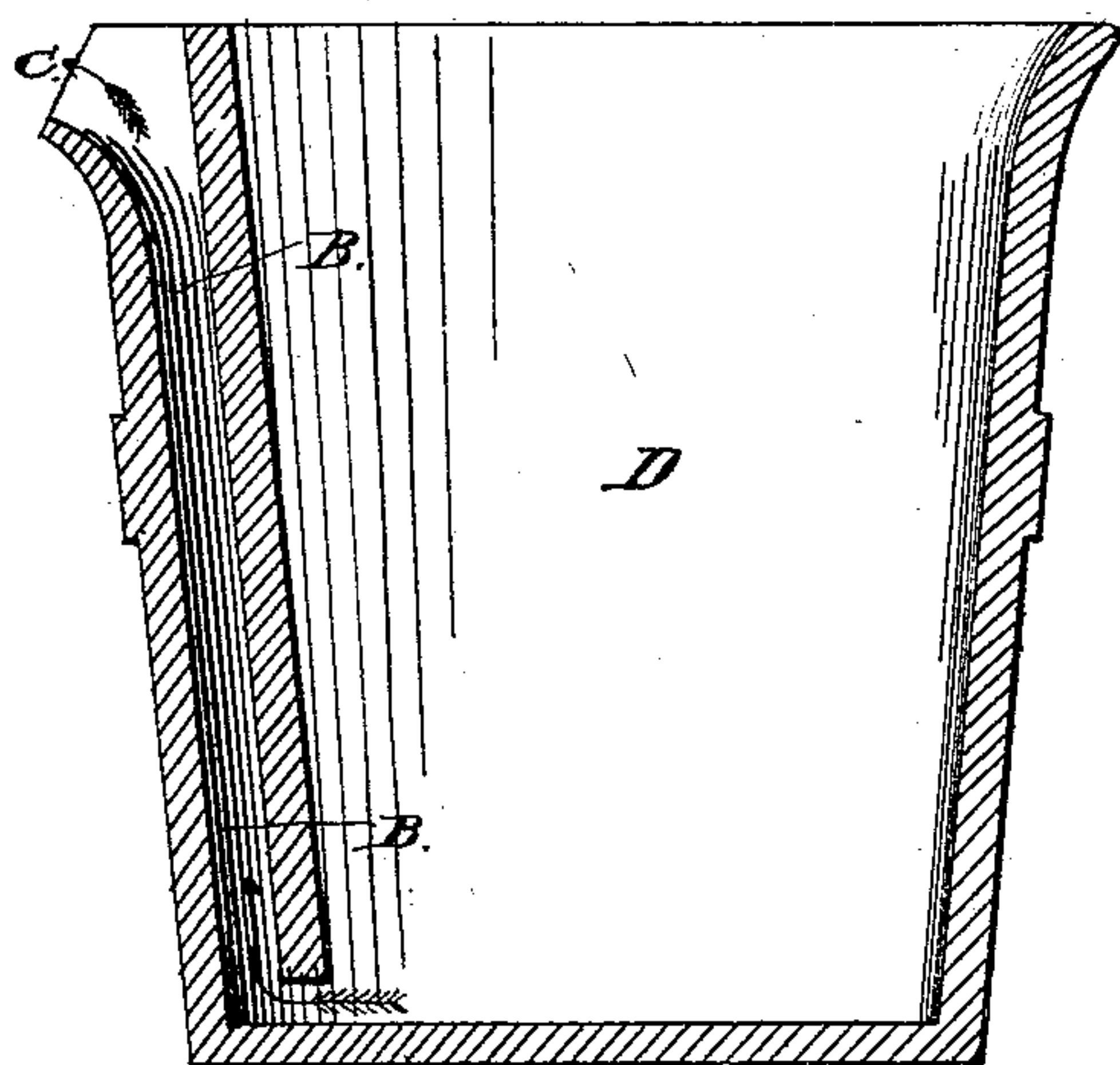
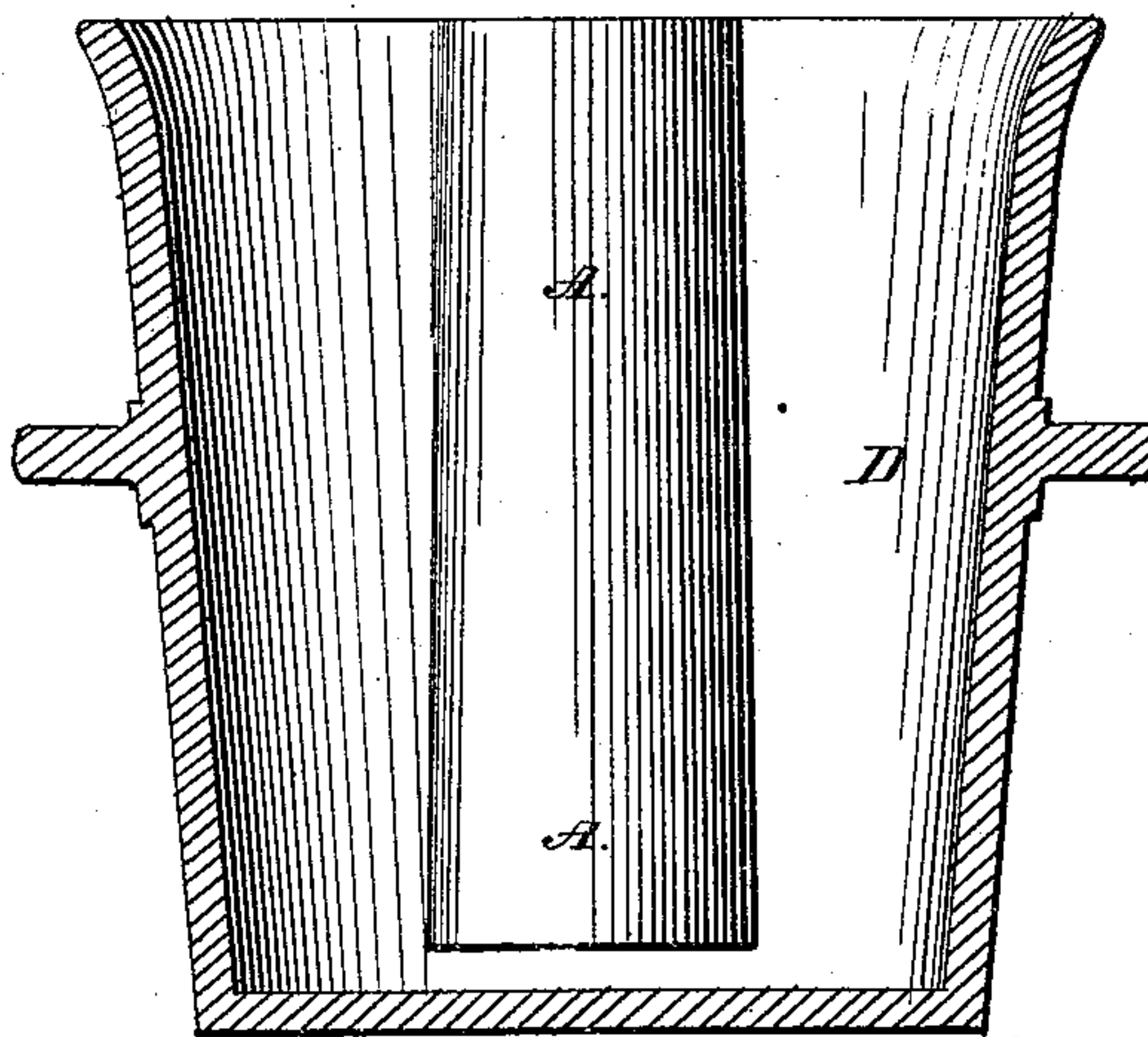


Fig. 3.



Attest:

Pyron Reed
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UNITED STATES PATENT OFFICE.

WILLIAM FAWCETT, OF OMAHA, NEBRASKA.

IMPROVEMENT IN LADLES FOR METAL-FOUNDING.

Specification forming part of Letters Patent No. **191,128**, dated May 22, 1877; application filed February 22, 1877.

To all whom it may concern:

Be it known that I, WILLIAM FAWCETT, of Omaha, in the county of Douglas and State of Nebraska, have invented a new and Improved Metal-Founding Ladle; 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, in which—

Figure 1 is a plan view. Fig. 2 is a vertical section through line marked "section 1" in Fig. 1, and Fig. 3 is a vertical section through line marked "section 2," at right angles to "section 1."

The object of this invention is to provide a ladle for metal-founding purposes which shall cause the stronger and more dense portions of the molten metal, which settle to the bottom, to flow first into the mold, thereby producing with the same material a greatly superior grade of castings, free from all impurities, and of greater strength and density than can be obtained in the ordinary manner.

The invention consists in constructing the ladle, with a vertical conduit in the side thereof, which opens into the bottom of the ladle, so that as the latter is tilted the purer and denser metal at the bottom of the ladle passes up said conduit, and discharges first into the mold, leaving behind the lighter metal and the scoria floating in the top of the ladle.

In the drawing, D represents the ladle, which is of the ordinary shape, with nearly vertical sides, flared outwardly at the top. Said ladle is constructed with a vertical conduit, B, in the side thereof, which is formed by means of a second inner wall, A. The conduit thus formed opens into the ladle near the bottom, and has a lip at the discharge outlet at the top, the inner wall A being extended a little above the outer wall at this point, so as to insure the discharge from the outlet without the spilling over of the lighter metal floating on the top within the ladle.

Now, when the ladle is tilted the purer and denser metal from the bottom of the ladle passes up the conduit in the direction of the arrows, and is the first to be discharged into the mold.

The advantages of my improvement are that it is inexpensive, and easily formed in ladle, while its successful working makes it of especial value when castings of great strength and closeness of texture are desired.

I am aware of the fact that the object of my invention has been sought to be accomplished by a ladle constructed in the form of a ram's horn or of a curved trumpet shape, from which the metal is designed to be poured through the smaller end, the same being shown in the English Patent No. 3,087 of 1870. In this case, however, the passage of the metal through the orifice, which is exposed all around to the air, chills it too much to make it desirable. In my invention it will be seen that the metal, although passing through a comparatively small conduit, B, is not chilled, as in the case referred to, for the reason that the contact of the bulk of the hot metal in the ladle against the wall A of the conduit keeps the same hot, and permits always of the discharge of the metal from said conduit at the proper temperature and state of fluidity.

Having thus described my invention, what I claim as new is—

The ladle D, having a conduit, B, formed in the side thereof, and opening into the bottom of the ladle, substantially as and for the purpose described.

In testimony whereof I herewith subscribe my name in the presence of two witnesses.

WILLIAM FAWCETT.

In presence of—

BYRON REED,
W. G. CHAMBERS.