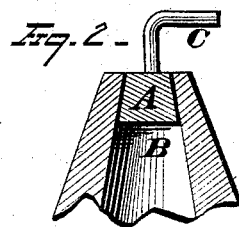
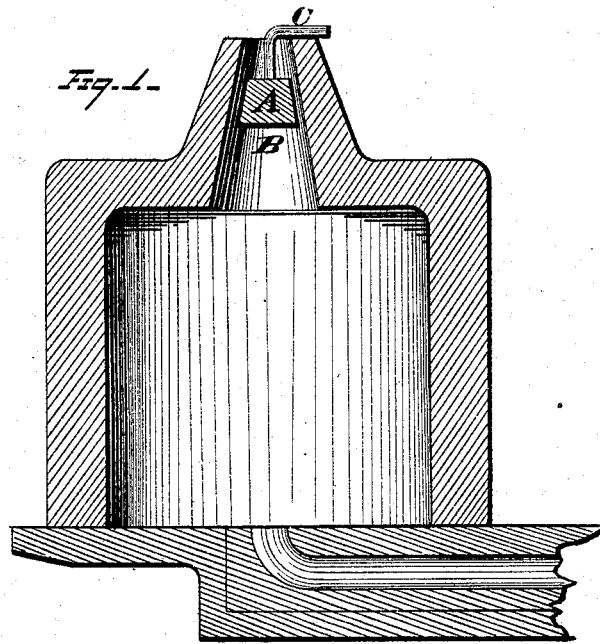


C. M. RYDER.
INGOT-MOLD.

No. 182,856.

Patented Oct. 3, 1876.



WITNESSES
Edw. A. Nottingham
Albert H. Bright

INVENTOR
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UNITED STATES PATENT OFFICE.

CHARLES M. RYDER, OF CLEVELAND, OHIO.

IMPROVEMENT IN INGOT-MOLDS.

Specification forming part of Letters Patent No. **182,856**, dated October 3, 1876; application filed August 7, 1876.

To all whom it may concern:

Be it known that I, CHARLES M. RYDER, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Ingot-Molds; 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 pertains to make and use it, reference being had to the accompanying drawing, which form part of this specification.

My invention relates to ingot-molds; and consists of an improved construction whereby said molds are covered or stopped automatically by the action of the molten metal during the process of pouring.

In the drawing, Figure 1 represents a view of an ingot-mold embodying my invention. Fig. 2 shows the cover thereof in the closed position.

The cover A is made of clay or other suitable material. It is formed larger at the base than at the upper part—that is, is shaped like a truncated cone or pyramid—and the inclination of its sides or surface should be the same as that of the interior of neck B of the mold. The cover is suspended within the neck of the mold by means of a wire or rod, C, attached thereto and to a horizontal rod, the latter when resting on the top of the neck holding the cover in its lowest position; or the vertical rod secured to the cover may be bent at right angles to itself, its horizontal part rest-

ing as before stated, or any device may be employed which serves to suspend the cover and permits a certain requisite amount of vertical play thereof.

The operation of the device is as follows: The molten metal is poured into a conduit or pipe, technically called a "runner," and enters the mold from below, as shown in the drawing. As it rises in the mold there is free escape for the gas and air, and when the metal comes in contact with the bottom of the cover it pushes the same upward and thus closes the neck of the mold very quickly, and without allowing the escape of any metal or the formation of any fire about the cover which would injure the ingot by causing surface cracks.

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

In combination with the neck of a mold smallest at its mouth and gradually enlarging downwardly, a cover in the shape of a truncated cone or pyramid, its smallest end upward suspended within said neck and capable of movement in a vertical direction, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES M. RYDER.

Witnesses:

FRANCIS TOUMEY,
WM. BEHRENS.