

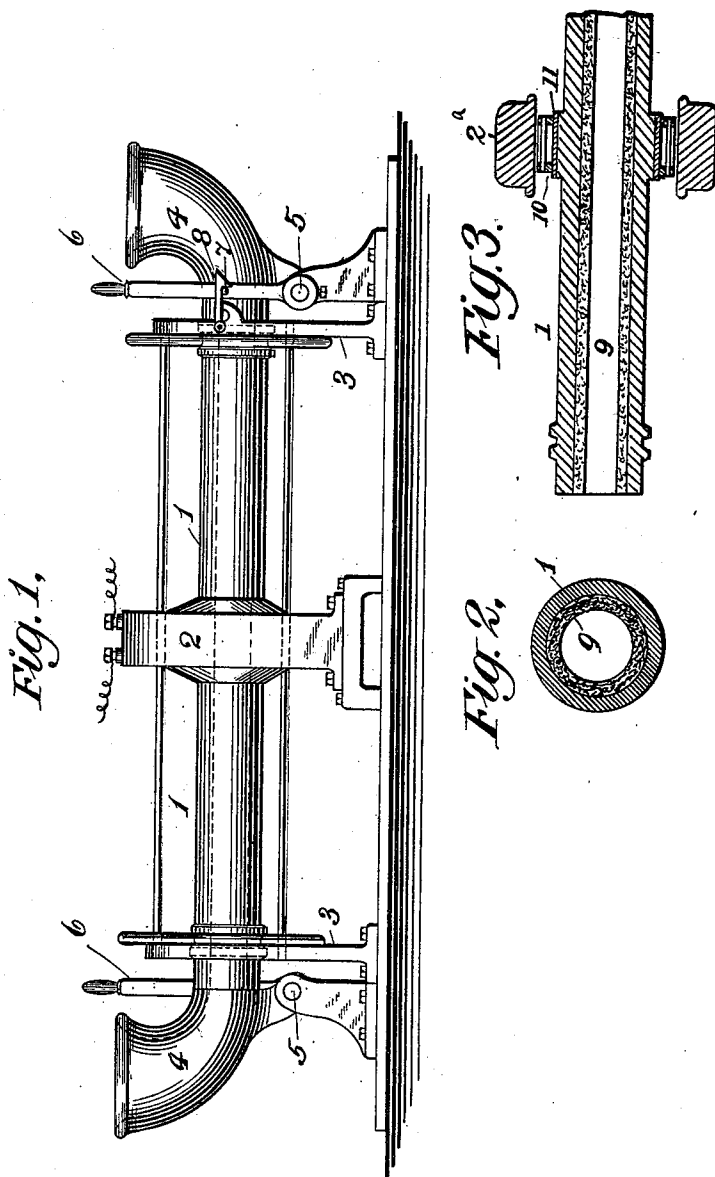
No. 652,756.

F. DEMING.
ROTARY MOLD.

Patented July 3, 1900.

(No Model.)

(Application filed Jan. 8, 1897.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

FERDINAND DEMING, OF WATERBURY, CONNECTICUT, ASSIGNOR, BY
MESNE ASSIGNMENTS, TO MAMIE B. CLOWES, OF SAME PLACE.

ROTARY MOLD.

SPECIFICATION forming part of Letters Patent No. 652,756, dated July 3, 1900.

Application filed January 8, 1897. Serial No. 618,426. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND DEMING, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented a certain new and useful Improvement in Rotary Molds, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

This invention relates to improvements in rotary molds designed for the production of hollow ingots or castings.

I will describe an apparatus embodying my invention and then point out its novelty in the claims.

In the accompanying drawings I will illustrate a construction embodying my invention, in which—

Figure 1 is a side elevation. Fig. 2 is a transverse section of the mold, and Fig. 3 is a detail sectional view of the mold and its driving-motor.

In the several views of the drawings like figures of reference refer to like parts.

Referring to the drawings in detail, 1 represents a hollow mold designed to be rotated at a high rate of speed. As shown in the drawings, the mold is designed to be rotated by a motor 2 and is shown as directly connected to and passing through the armature of said motor. The electric motor illustrated is adapted to be operated by a three-phase current with a short-circuited armature and requires neither insulation nor a commutator. As shown in Fig. 3, 2^a designates the field of the motor, which in the present instance is circular in form, and 10 indicates the armature, mounted upon a steel ring 11, surrounding and secured to the mold 1. The ends of the mold are supported on standards 3. At each end of the mold is a funnel-shaped mouth 4. Each of the funnel-shaped mouths is mounted on a trunnion 5.

6 represents a lever keyed to the shaft of the mouth 4; this lever being for the purpose of tilting upward and backward the funnel-shaped mouth to and from position opposite the mold-opening. On each of these levers is a stud 7, which engages with a latch 8 on the standard 3. The mold 1 is provided with an inner lining 9 of asbestos or like non-conductor of heat.

The operation of the device is as follows: The mold 1 is rotated at a very high rate of

speed. The funnel-shaped mouths 4 are set in position opposite the ends of the mold, and while said mold is rotating molten metal is rapidly poured down the funnel-shaped mouths, so as to pass into the molds, the two streams of molten metal meeting in the middle of the mold. Owing to the rapid rotation of the rotary mold, the molten metal contained therein is caused to assume a tubular formation, caused by the centrifugal force generated by the rotation of the mold and the metal contained therein. When the metal has sufficiently cooled, rotation is stopped and the funnel-shaped mouths are turned down, so as to rest on the ground, and the ingot contained in the mold is left until it has by cooling contracted sufficiently to be easily extracted. By reason of the mold being lined with asbestos or like non-conductor of heat the metal is preserved in a molten condition until the two streams meet in the center and make a continuous homogeneous ingot.

It will be understood that I do not limit myself to the specific means for moving the funnel-shaped mouths to and away from the ends of the molds nor to the means shown for driving the molds, as the molds might be driven by a belt and pulley or gearing.

What I claim as new is—

1. The combination of a rotary mold having an open end, a pouring-mouth hinged to a support adjacent to said open end, a lever for swinging said mouth into or out of engagement with the open end of the mold, and detachable means to lock the pouring-mouth in engagement with the mold, substantially as set forth.

2. The combination of a rotary mold horizontally arranged and open at both ends, a pouring-mouth at each end of the mold hinged to a fixed support, means to move said mouths independently into or out of engagement with the respective ends of the molds, and detachable means for locking said mouths in engagement with the mold, substantially as set forth.

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

FERDINAND DEMING.

Witnesses:

V. M. SHAW,
W. B. MAYNARD.