

J. LE MAY.
DISTRIBUTOR FOR ROTARY CASTING APPARATUS.
APPLICATION FILED APR. 13, 1915.

1,161,701.

Patented Nov. 23, 1915.

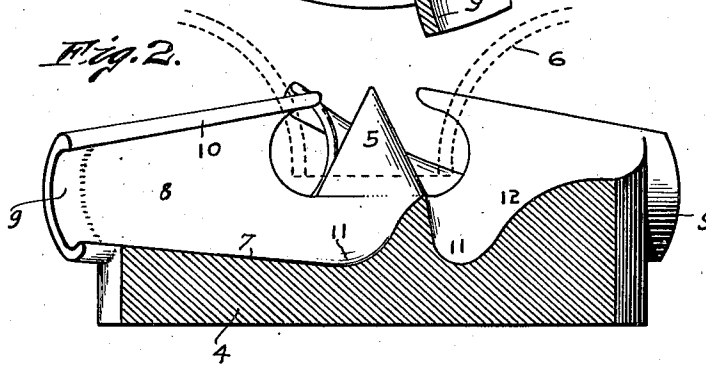
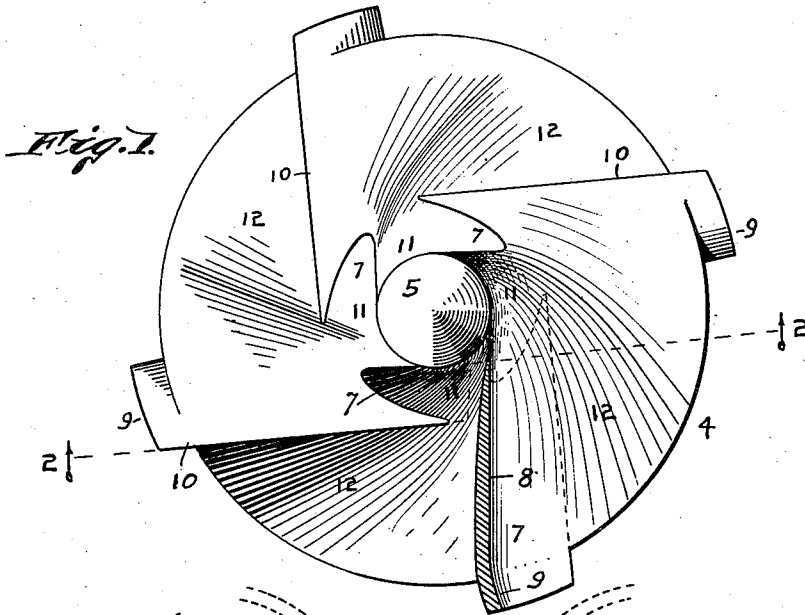
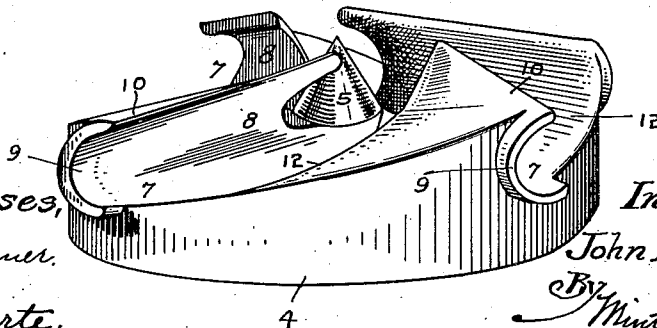


Fig. 3.



Witnesses,
L. B. Moorme,
Wm. Hurte.

Inventor
John Le May.
By Minter & Moorme
Attorneys.

UNITED STATES PATENT OFFICE.

JOHN LE MAY, OF INDIANAPOLIS, INDIANA.

DISTRIBUTER FOR ROTARY CASTING APPARATUS.

1,161,701.

Specification of Letters Patent.

Patented Nov. 23, 1915.

Application filed April 13, 1915. Serial No. 21,029.

To all whom it may concern:

Be it known that I, JOHN LE MAY, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Distributers for Rotary Casting Apparatus, of which the following is a specification.

This invention relates to rotary casting apparatus wherein metal in a hot molten condition is distributed from a single supply to a plurality of equi-distant dies.

The object of the invention is to distribute the metal equally to the several dies without splashing and splattering it which tends to chill it, thereby clogging the apparatus, and to cause chilled particles to enter the dies or molds in a manner to impair the quality of the product.

The object, also, is to eliminate the collection of the chilled metal on the surface of the distributor to a large extent, and to provide open conduits in the distributor which will be readily accessible for cleaning the chilled metal therefrom, should there be any, without removing a covering member or requiring the previous manipulation of any portion of the distributor.

I accomplish the above and other objects which will hereinafter appear, by the means illustrated in the accompanying drawings, in which:

Figure 1 is a top plan view and partial horizontal section of the distributor. Fig. 2, is a vertical section on the line 2—2 of Fig. 1 and Fig. 3 is a perspective view.

Like characters of reference indicate like parts throughout the several views of the drawings.

As is well known to those familiar with the centrifugal casting art, a series of dies or molds are mounted concentrically of and are rotated with a distributor, the latter being located at the center of rotation and providing the means through which molten metal supplied to it is distributed and thrown into the dies. This invention relates only to the construction of said distributor, and, inasmuch as the associated parts are of common form, and well known, it is deemed unnecessary to illustrate the latter.

The distributor which I have selected for illustration has four discharge channels diverging from the middle thereof and equi-distant from each other, to serve a like number of dies or molds located opposite

the discharge ends of the channels, but as a distributor with two or more channels may be made to operate in a satisfactory manner it will be understood that I have shown one with four channels only by way of illustration.

The body 4, of the distributor is of any suitable size and shape, depending upon the number of channels in it and the work to be done. It is provided with a spreader 5 at its center, here shown in the form of a cone which enters the discharge end of a funnel 6, shown in dotted lines in Fig. 2, through which the molten metal is delivered. Diverging from the base of the spreader are the channels 7, the inside walls 8, of which, are planes which are substantially straight and tangent to the base of the spreader 5, except near their outer ends where the portions 9 are bent forward to give a radial discharge to the metal issuing from the end of the channel. The upper portions of the inner wall 8 merge by curved lines into an overhanging top 10 which projects forward of the wall 8 sufficiently to restrain the metal from leaving the channel in that direction, but not to obstruct the removal of chilled or cold metal through the open front when it is necessary to clean the distributor.

A pocket 11 is formed at the lower and inner end of the channel by forming the channel-bottom inwardly oblique, as shown clearly in Fig. 2. This pocket gathers some metal which serves as a cushion to the main quantity which passes over it and by reason of this cushion the splash and splatter of the metal entering from the funnel 6 is prevented.

The bottom of the channel in front or opposite the wall 8, merges into a helicoid surface 12, which extends to the top cover of the next channel on that side. The surface 12 does not obstruct the entrance to the channel from which it springs, but leaves the latter very open so the cold metal, during the cleaning of the distributor, will come out easily and freely.

The channel as bounded by its upwardly sloping bottom and by the top 10 which slopes in the opposite direction, is outwardly tapering to concentrate the molten metal discharging through the channel and to direct it with greater precision into the mouth of the die.

The construction illustrated is preferable

because the centrifugal action to discharge the molten metal is developed more quickly and is an appreciable force to turn the main quantity of metal as it passes the pocket 11.

5 While I have described my invention with more or less minuteness as regards details of construction and arrangement and as being embodied in certain precise forms, I do not desire to be limited thereto unduly
10 or any more than is pointed out in the claims. On the contrary I contemplate all proper changes in form, construction, and arrangement, the omission of immaterial elements and the substitution of equivalents
15 as circumstances may suggest or as necessity may render expedient.

I claim—

1. A rotatable distributor for a centrifugal casting apparatus having a plurality
20 of conduits diverging from its center said conduits having longitudinal openings for the ready removal of chilled metal therefrom.

2. A rotatable distributor for a centrifugal casting apparatus having a plurality
25 of conduits diverging from its center said conduits being open toward the direction of rotation of the distributor for the ready removal of chilled metal therefrom.

3. A rotatable distributor for a centrifugal casting apparatus comprising a centrally located spreader and a plurality of
30 conduits tangent to said spreader said conduits being open toward the direction of rotation of the distributor for the ready removal of chilled metal therefrom.
35

4. A rotatable distributor for a centrifugal casting apparatus having a plurality
40 of conduits diverging from its center said conduits being open toward the direction of rotation of the distributor for the ready re-

moval of chilled metal therefrom the outer ends of the conduits being bent forward of the major body-portions thereof.

5. A rotatable distributor for a centrifugal casting apparatus having a plurality
45 of conduits diverging from its center said conduits being open toward the direction of rotation of the distributor for the ready removal of chilled metal therefrom said conduits having pockets at their inner ends.
50

6. A rotatable distributor for a centrifugal casting apparatus comprising a centrally located conical spreader and a plurality of conduits each having a substantially straight side tangent to the base of the
55 conical spreader, a bottom merging in the direction of rotation of the distributor into a helicoid surface forming an opening to the conduit for the ready removal of chilled
60 metal therefrom.

7. A rotatable distributor for a centrifugal casting apparatus comprising a centrally located conical spreader and a plurality of conduits each having a substantially straight side tangent to the base of the
65 conical spreader but bent forward near its discharge end, a bottom lowest at its inner end and merging with a gradual curve in the direction of rotation of the distributor into a helicoid surface to provide an opening to the conduit for the ready removal of
70 chilled metal therefrom.

In witness whereof, I, have hereunto set
75 my hand and seal at Indianapolis, Indiana, this sixth day of April, A. D. one thousand nine hundred and fifteen.

JOHN LE MAY. [L. S.]

Witnesses:

F. W. WOERNER,
JOSEPH A. MINTURN.