D. S. DE LAVAUD.

CENTRIFUGAL CASTING MACHINE.

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1,240,546.

Patented Sept. 18, 1917.

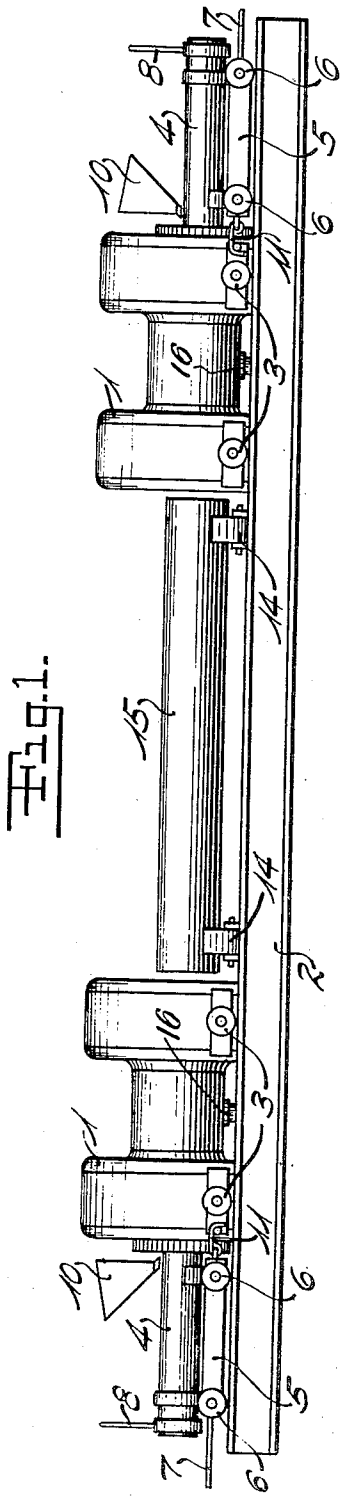


Fig. 1.

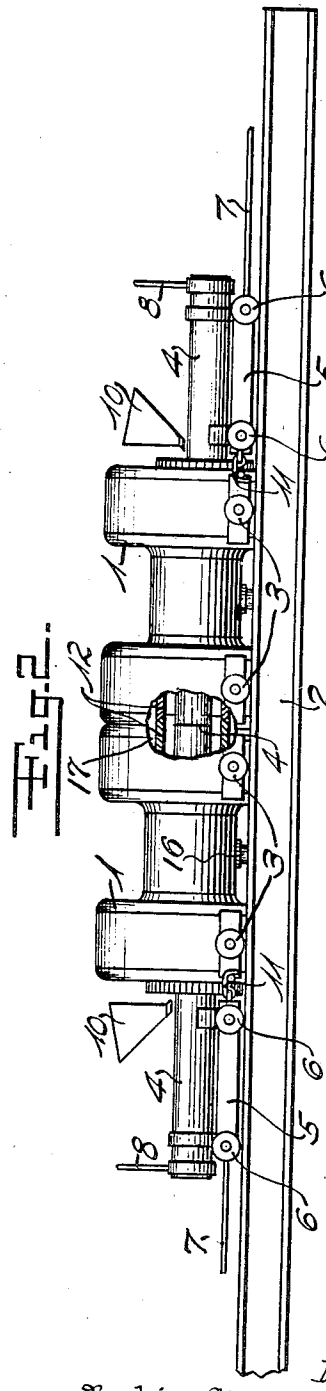


Fig. 2.

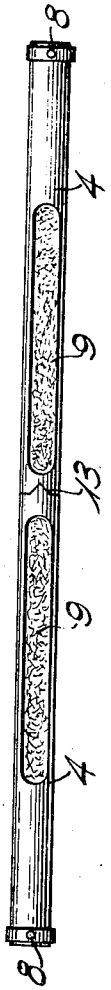


Fig. 3.

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CENTRIFUGAL CASTING-MACHINE.

1,240,546. Specification of Letters Patent. Patented Sept. 18, 1917.

Application filed December 15, 1916. Serial No. 137,130.

To all whom it may concern:

Be it known that I, DIMITRI SENSAUD DE LAVAUD, a citizen of the Republic of Brazil, residing at 201 Huntington avenue, Buffalo, New York, have invented new and useful Improvements in Centrifugal Casting-Machines, of which the following is a specification.

My invention relates to centrifugal casting machines for the making of pipes and other hollow bodies.

The objects of my invention are to make it possible to cast pipes or other hollow bodies of double the usual length by so constructing the machines that two machines may be used in combination to form a single pipe; to provide a construction of centrifugal casting apparatus which will render easy the extraction or withdrawal of the casting from the apparatus; and further to provide means whereby the metal feeding troughs of the separate machines may be interconnected so as to be jointly rotated by a single operation to distribute the metal evenly over the interior of the mold.

My invention consists of the construction, combination and arrangement of parts herein illustrated, described and claimed.

In the accompanying drawings, in which the same reference characters designate corresponding parts in all views, I have illustrated a form of apparatus suitable for carrying out my invention; in these drawings,

Figure 1 is an elevation showing a pair of casting machines and a pipe at the completion of the operation;

Fig. 2 is an elevation showing the machines in position for casting, partly in section to show the joint between the molds, and,

Fig. 3 is a detail showing the metal feeding troughs in plan view.

Referring to these drawings, a pair of centrifugal casting machines 1 are mounted in such a way that they may be moved with relation to each other, preferably upon rails 2, and may be provided with wheels 3 so that they may be readily moved upon the rails. These machines may be of the type which have rotary molds 12 preferably cooled by water entering by the passages 16 and circulating through the space 17 between the molds and the outer shells of the machines, and any suitable means (not shown) may be used for causing the rotation of the molds. The molds 12 are formed, at the ends which come into contact, with corresponding beveled portions which fit into one another and make a joint sufficiently tight to hold the molten metal during the casting operation.

In order to feed the molten metal into the molds, means may be provided such as the troughs 4 mounted upon carriages 5 which are provided with wheels 6 and are adapted to travel upon the rails 2. These carriages may be provided with ropes 7 or other suitable means by which they may be moved upon the rails 2, and in this way the troughs 4 may be projected into the molds, or withdrawn therefrom. Hooks or other fastening means 11 are disposed upon the carriages 5 and arranged to hold the troughs in position within the molds, so that the casting machines may be caused to move along with the carriages 5 if desired.

The troughs 4 are preferably cylindrical in cross section and provided with slots 9 at the part which is normally upward, these troughs being arranged upon the carriages 5 in such a way that they may be rotated to effect the discharge of molten metal through the slots 9 into the molds; and handles or other suitable turning means 8 are provided for rotating these troughs. Funnels 10 may be disposed near the end of the machines for introducing the molten metal into the troughs.

The troughs 4 are arranged to be connected, as by a tapered projection or pin 13 of one trough entering a corresponding slot in the other in such a manner as to bring the slots 9 exactly into line, and to hold the troughs thus so that they may be rotated jointly and caused to discharge their molten metal evenly over the inner surface of the mold.

The apparatus is operated by bringing the casting machines 1 into contact with their axes in line, so that the molds 12 fit into one another and form a joint that will hold the metal during the casting operation. The troughs 4 are then run into the machines, both of the handles 8 being in approximately the same position so that the projection 13 will enter its corresponding slot and bring the slots 9 exactly into line. Molten metal is thereupon poured into each of the funnels 10 and allowed to run into the troughs 4. The troughs 4 are rotated by either handle 8, and the molten metal is thus poured into the rotating molds 12. When the casting has been formed, the machines are drawn

apart and the pipe 15 is received between them upon rollers 14 which are put into position to support the pipe.

Having now described my invention I claim and desire to secure by Letters Patent:

1. The combination, comprising a pair of centrifugal casting machines arranged to be brought into axial alinement, rotary molds within said machines arranged with ends to fit each other to form a continuous mold, means for supplying molten metal to said molds, and means for drawing apart said machines when the casting has been completed to effect the removal of the casting.

2. The combination, comprising a pair of centrifugal casting machines mounted axially in line and slidable in axial direction, rotary molds within said machines arranged with ends to fit each other to form a continuous mold, means for supplying molten metal to said molds, and means for drawing apart said machines when the casting has been completed to effect the removal of the casting.

3. The combination, comprising a pair of centrifugal casting machines adapted to be brought into axial alinement, rotary molds within said machines arranged with ends to fit each other to form a continuous mold, a trough extending through said molds for supplying molten metal thereto, and means for drawing apart said machines when the casting has been completed to effect the removal of the casting.

4. The combination comprising a pair of centrifugal casting machines adapted to be brought into axial alinement, rotary molds within the machines arranged with ends to fit each other to form a continuous mold, revoluble troughs extending into said molds from the outer ends for supplying molten metal to said molds, and means for drawing apart said machines when the casting has been completed to effect the removal of the casting.

5. The combination, comprising a pair of centrifugal casting machines adapted to be brought into axial alinement, rotary molds disposed within the said machines and having beveled ends to fit each other to form a continuous mold, means for supplying molten metal to said molds, and means for drawing apart said machines when the casting has been completed to effect the removal of the casting.

6. In a centrifugal casting machine, the combination comprising a pair of revoluble troughs, arranged to be inserted into the machine from opposite ends, and means for effecting joint rotation of said troughs.

7. In a centrifugal casting machine, the combination comprising a pair of revoluble troughs having longitudinal slots and arranged to be inserted into the machine from opposite ends, and means for connecting said troughs for joint movement and for bringing the slots of both molds into line.

8. The combination, comprising a pair of centrifugal casting machines adapted to be brought into axial alinement, rotary molds within said machines arranged with ends to fit each other to form a continuous mold, revoluble troughs having longitudinal slots and arranged to be inserted into the machines from opposite ends, means for bringing said slots in line and connecting said troughs for joint movement, and means for drawing apart said machines when the casting has been completed to effect the removal of the casting.

9. The combination, comprising a pair of centrifugal casting machines adapted to be brought into axial alinement, rotary molds within said machines arranged with ends to fit each other to form a continuous mold, means for supplying molten metal to said molds, means for drawing apart said machines when the casting has been completed to effect the removal of the casting and means for receiving and supporting the casting on removal.

10. The combination, comprising a pair of centrifugal casting machines arranged to be brought into axial alinement, rotary molds within said machines arranged with ends to fit each other to form a continuous mold, means for supplying molten metal to said molds from both ends, and means for drawing apart said machines when the casting has been completed to effect the removal of the casting.

In testimony whereof I have signed my name to this specification.

DIMITRI SENSAUD DE LAVAUD.