J. H. UHRIG
CENTRIFUGAL PIPE CASTING MACHINE

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Inventor
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his Attorney.
My invention relates to centrifugal pipe casting machines and has for its main object to provide means for rotating the mold of such a machine which will leave the mold free to expand and contract without putting any injurious strains on the mold itself or on the driving mechanism. A further object of my invention is to combine loosely connected driving mechanism with a metal mold, the external conformation of which will approximately correspond with its internal form and which will be without the usual radial flanges which I have found to bring about injurious strains in the metal of the mold.

The general nature of my invention as well as specific features thereof will be best understood as described in connection with the drawings, which illustrate a centrifugal casting machine of the kind used in producing De Lavaud cast iron pipes and embodying the improvements which constitute my invention.

In the drawings, Figure 1 is a vertical elevation of the machine taken as on the line 1—1 of Fig. 2.

Figure 2 is an end view taken at the right hand side of Fig. 1 on a reduced scale, and Figure 3 a sectional elevation on the line 2—2 of Fig. 1, also on a reduced scale.

A and A' are respectively the upper and lower sections of the casing of the machine, in which is formed a water jacket for the mold. B is the mold, having as shown, a bell end at B' and a spigot end B'. As shown, the mold, which is formed of a steel forging, is formed with an end extension B', constituting a core seat and formed with radial notches B' to engage the driving dog to be described. B' indicating key holes also formed in the core seat. As shown, the mold is formed with a shoulder B' and a peripheral groove B'. The mold is rotatably supported in the casing on rollers indicated at I, I, and as shown, has secured to its spigot end by bolts indicated at M, a drum L, having packing grooves L, L, formed in it, the packing in which, indicated at P, forms a water tight joint.

C is a driving ring, having, as shown, a gear wheel C' formed on it and rotatably supported on rolls, indicated at H, revolving on ball bearings H' on the shaft G, which is firmly secured at the end of the casing. The supporting rolls H are so located as to support the axis of the ring in approximate coincidence with the axis of rotation of the mold. As shown, the ring C is formed with a shoulder C' in position to abut against the shoulder B' at the bell end of the mold and with an extension C which partly surrounds the mold shoulder B'. It is also formed with an outwardly extending flange C' adapted to fit against a bearing ring, indicated at R and fitting against an inwardly extending flange J' of the casing, the end indicated at J. The packing F forms a water tight joint between the shoulder B' and the extension C'. D is a ring secured to the extension C' of the ring, as by bolts E, and having formed on it inwardly extending driving dogs D' which extend into the notches B' in the core seat extension of the mold. The ring D is also formed with an outwardly extending flange D' which fits against the flange J'.

Q indicates a driving gear engaged with the gear C'. K is the end wall of the water jacket portion of the casing having as shown two inwardly extending portions K', K', against which fit packing rings K', formed as shown in a ring S, secured to the inner end of the ring C.

By preference and as illustrated in the drawing, the connection between the driving ring and the mold is loose so that while the dogs D' engage the notches B' and thus enable the gear ring C to drive the mold, the mold is quite free to expand and contract without incurring any strains through its connection with the driving ring.

While I have illustrated what I believe to be the best embodiment of my invention, I wish it to be distinctly understood that I do not wish to be understood as in any way limiting my claims to the specific construction shown in the drawings, as my invention is clearly capable of being embodied in many different forms of construction.

Having now described my invention, what I claim as new and desire to secure by Letters Patent is:

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