No. 790,270. PATENTED MAY 23, 1905.

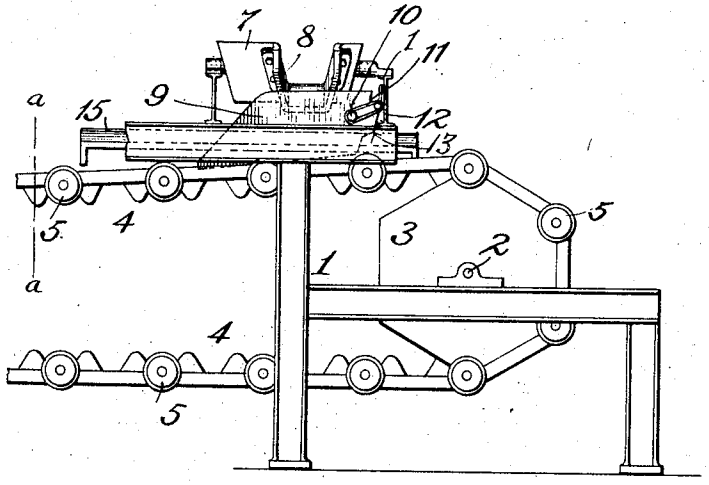
D. BAKER.

CASTING MACHINE.

APPLICATION FILED MAR. 23, 1904.

2 SHEETS—SHEET 1.

Fig. 1.



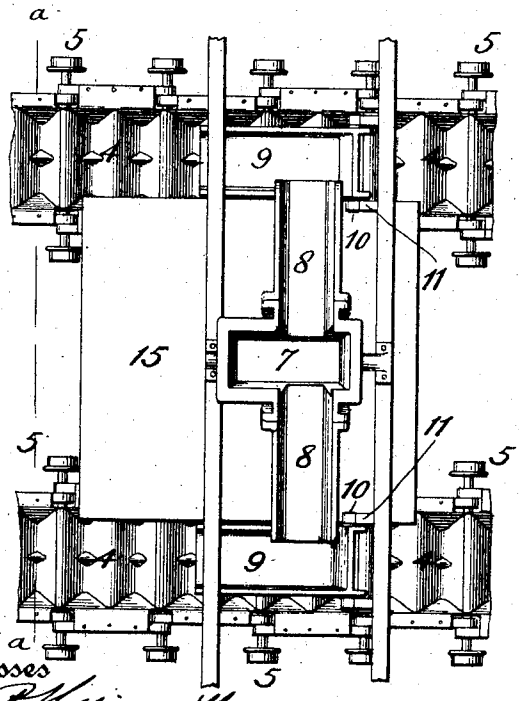


Fig. 2

Witnesses

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Attorney

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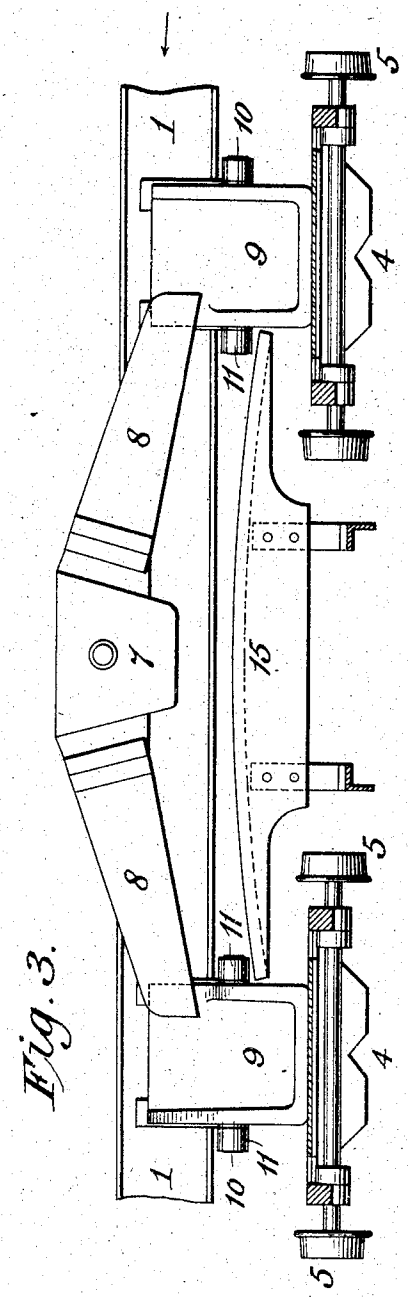


Fig. 3.

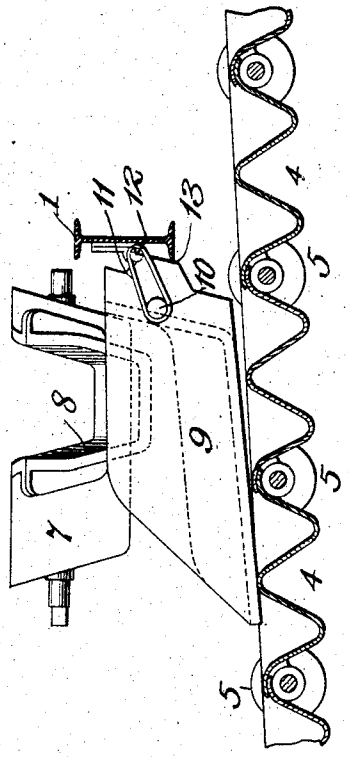


Fig. 4.

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UNITED STATES PATENT OFFICE.

DAVID BAKER, OF NEWTON, MASSACHUSETTS.

CASTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 790,270, dated May 23, 1905.

Application filed March 23, 1904. Serial No. 199,562.

To all whom it may concern:

Be it known that I, DAVID BAKER, of Newton, county of Middlesex, and State of Massachusetts, have invented a new and useful Improvement in Casting-Machines, of which the following is a specification.

This invention relates to the casting of metal, and has reference more particularly to pig-casting machines of the type wherein the molds are supported on an endless carrier which travels beneath a filling-trough by which the molds are supplied with the molten metal, whence they pass to and are immersed in a cooling-bath, and after emerging from the bath the cast pigs are finally discharged from the molds.

It is the aim of my invention to provide for the filling of the molds with a minimum waste of metal, to prevent the metal from falling on or lodging in the joints of the carriers, and generally to render the operation as a whole uniform and effective; and to this end my invention consists in improved means for mounting and sustaining the filling-trough, in means for preventing any escaping metal from reaching the joints of the carrier, in means for directing this escaping metal into the molds, and in various details of construction and combination of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of one end of a casting-machine having my invention embodied therein. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical transverse sectional elevation, on an enlarged scale, on the line *a a* of the preceding figures. Fig. 4 is a side elevation of the parts illustrated in Fig. 3 as viewed in the direction indicated by the arrow in said figure.

Referring to the drawings, 1 represents a suitable frame or structure in which is mounted on a horizontal shaft 2 two sprocket-wheels 3, over which pass two endless series of transversely-extending molds 4, jointed together and provided with carrying-wheels 5, by which they are properly guided and sustained. These molds as now commonly constructed are provided with cavities V-shaped in cross-section, and each mold in the present instance is formed with two cavities between joints, the result being that the traveling bed of molds presents series of transverse partitions and alternate cavities.

7 represents a receiving basin or reservoir for the molten metal, which basin is suitably sustained by the framework above the molds and which is provided at opposite sides with oppositely-extending distributing-spouts 8.

9 9 represent two filling-troughs, one for each chain of molds, which troughs are arranged over the molds beneath the ends of the respective distributing-spouts, so as to receive the metal flowing from said spouts. The filling-troughs are closed at their forward ends and are open at their opposite ends to permit the metal supplied to them to run into the molds, and these troughs are jointed at their forward ends on a horizontal transverse axis to the framework, and at their delivery ends they rest loosely on the traveling molds. The purpose of this construction and arrangement is to afford the shortest possible distance for the molten metal to travel or fall in passing from the end of the filling-trough into the molds in order that spattering may be avoided, and the jointed connection of the trough with the framework permits the former to rise and fall or yield vertically in the event of being encountered by an obstruction on the molds, such as an accumulation of cold metal, and so as to permit the delivery end of the spout to freely rise and fall as the transverse partitions between the mold-cavities pass in succession beneath the spout.

The connection between the filling-troughs and framework is of such character that the troughs may be readily disconnected and removed when it is desired to replace them by new ones. This connection is illustrated in Figs. 3 and 4, where it will be seen that the troughs are provided on opposite sides at their forward ends each with laterally-extending studs or trunnions 10, over which are passed links 11, whose forward ends encircle a horizontal removable fastening-pin 12, passed through sockets 13 on the framework. When it is desired to remove the trough and replace it by a new one, this pin is withdrawn

and the connecting-links released, which latter may be removed from the studs and applied to the new trough.

From the construction described it will be seen that the delivery end of the filling-trough rests directly on the molds traveling beneath, while the forward portion of the spout is held free of the molds by means of the link, the latter extending at an inclination upwardly and forwardly, with the forward end of the spout abutting against the framework, the delivery end being thus freely movable vertically as it rests on the traveling molds. As a result the metal from the trough is delivered directly into the molds without traversing an intervening space, so that there is little or no liability of spattering and no danger of injury to the parts in the event of an obstruction on the molds encountering the trough, in which case the latter will yield vertically and permit the obstruction to pass.

In order that any metal escaping from the distributing-spout in its passage into the filling-trough may be prevented from flowing down into the joints of the endless carriers, I propose to fix to the framework and beneath the receiving-basin a horizontal plate or shield 15, having its upper surface curved slightly downward, so as to shed the escaping metal, and extending beneath the distributing-spouts, with the side edges of the plate terminating over the molds and in such position that it will receive on its surface the escaping metal and direct it into the molds. From this it will be seen that the joints of the carriers are protected by the overlying plate, and the escaping metal, which would otherwise flow downward and lodge in the joints of the carrier, is received by the shield 15 and directed into the molds traveling beneath.

Having thus described my invention, what I claim is—

1. In a casting-machine and in combination with the frame, a series of traveling molds forming a mold-bed containing a series of mold-cavities separated by transverse partitions, and a filling-trough thereover sustained by the frame with its delivery end resting loosely on and receiving its support from the transverse partitions between the mold-cavities, and movable freely vertically as the molds pass in succession beneath the trough.

2. In a casting-machine, the combination with the frame, of a series of traveling molds containing mold-cavities separated by transverse partitions, and a filling-trough jointed at its forward end to the frame on a horizontal transverse axis and held free of the molds at this point, and having its delivery end resting loosely on and receiving support from the transverse partitions, said delivery end being movable freely vertically as the molds pass in succession beneath it.

3. In a casting-machine, the combination with the frame, of a series of traveling molds, a filling-trough thereover with its delivery end in position to deliver the molten metal into the molds, links jointed at one end to the trough, and means for connecting the opposite ends of the links detachably with the frame.

4. In a casting-machine, the combination with the frame, of a series of traveling molds, a filling-trough arranged thereover, a distributing-spout discharging into the trough, and means for directing into the molds any metal escaping in its passage from the spout to the trough.

5. In a casting-machine, the combination with the frame, of a series of traveling jointed molds, a filling-trough arranged thereover, a distributing-spout discharging into the trough, and means disposed with relation to the spout and molds for preventing any metal which might escape in its passage from the spout to the trough, from lodging in the joints of the molds.

6. In a casting-machine, the combination with the frame, of a series of traveling molds, a filling-trough arranged thereover, a distributing-spout discharging into the trough, and a shield or plate beneath the spout with its edge terminating over the molds.

7. In a casting-machine, two endless chains of molds, filling-troughs arranged thereover, a receiving-basin arranged between the chains of molds, distributing-spouts extending from opposite sides of said basin with their delivery ends arranged to discharge into the filling-troughs, and a shield or plate situated beneath the basin and spouts, with its ends terminating over the molds.

In testimony whereof I hereunto set my hand, this 23d day of February, 1904, in the presence of two attesting witnesses.

DAVID BAKER.

Witnesses:

HARLEY BROOKHOUSE,

FRANKLIN T. TILLER.