

A. EGLI.
MACHINE FOR CASTING AND PREPARING CURVED STEREOTYPE PLATES.
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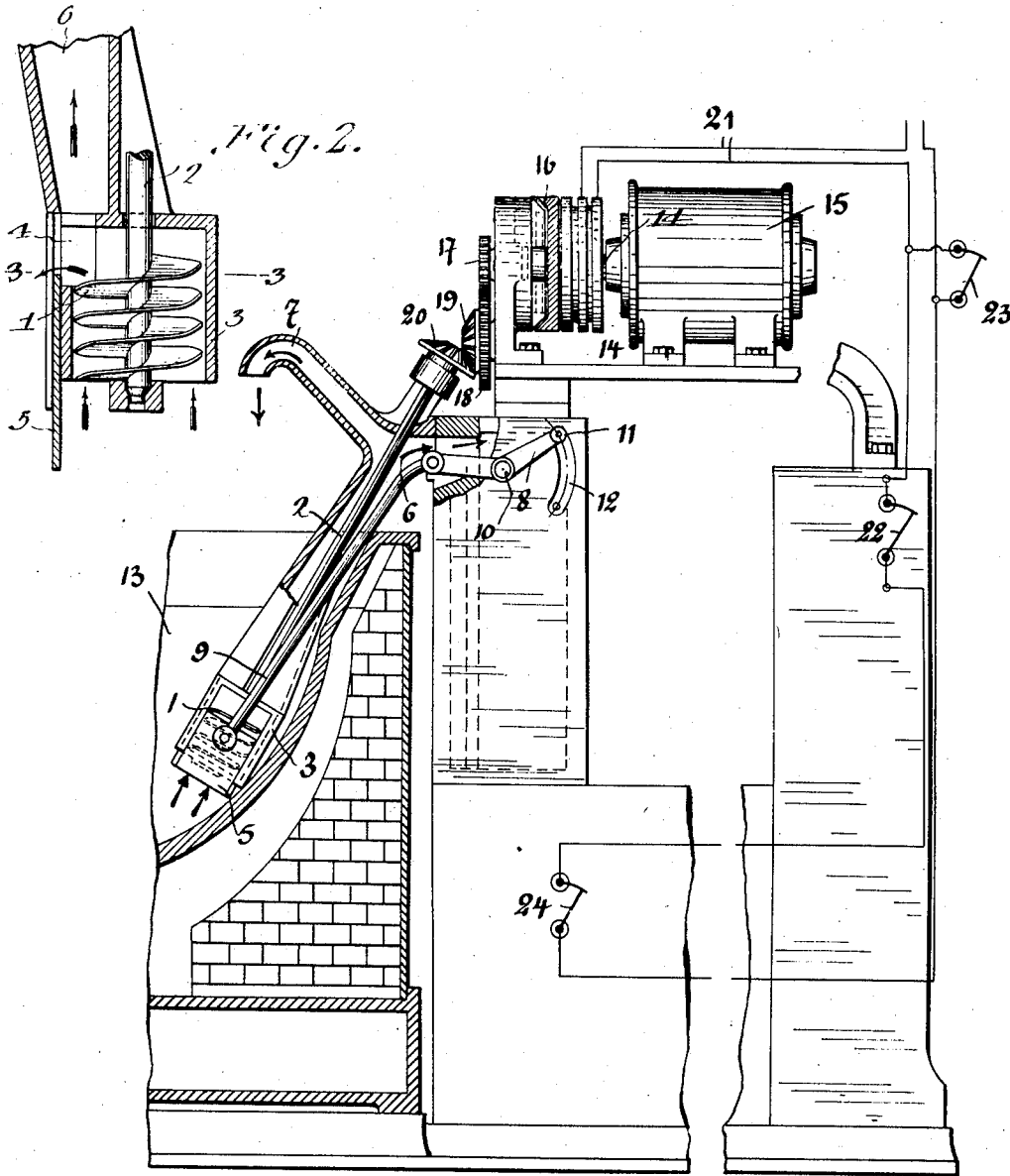


Fig. 1.

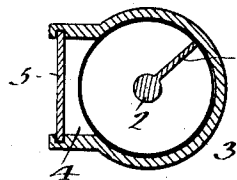


Fig. 3.

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UNITED STATES PATENT OFFICE.

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MACHINE FOR CASTING AND PREPARING CURVED STEREOTYPE-PLATES.

1,063,668.

Specification of Letters Patent.

Patented June 3, 1913.

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To all whom it may concern:

Be it known that I, ARNOLD EGLI, a subject of the King of Prussia, residing at Plauen i. Vogtl., in the Kingdom of Saxony and German Empire, have invented certain new and useful Improvements in Machines for Casting and Preparing Curved Stereotype-Plates, of which the following is a specification.

My invention relates to certain improvements in machines for casting and preparing curved stereotype plates, as illustrated and described in the specification accompanying United States Letters Patent No. 998081 and particularly to the conveyer device which is provided on the machine for supplying the casting metal from the melting tank to the mold or molds.

The object of my invention is to provide a conveyer of that kind adapted to operate either only as such for short periods of time or permanently as mixing (agitating), and conveyer mechanism alternately, or even only as mixing (agitating) mechanism so that when the tank is supplied with metal in blocks, broken plates or the like, or the molten metal is at a comparatively low temperature the casting metal in the tank can be mixed and agitated in order to produce a more rapid melting and a uniform temperature in the melting tank and if it is desired to cast at the same time my new construction allows of mixing or agitating the metal in the tank and at the same time feeding molten metal from the tank to the mold or molds. At times when the molten metal in the tank is very hot and mixing or agitating acts prejudicially for that or any other reasons the mixing or agitating operation can be discontinued for any length of time.

My invention is illustrated in the accompanying drawings in which the portion of the melting furnace with the conveyer device in the melting tank is shown in section in Figure 1. Fig. 2 is a fragmentary longitudinal section through the bottom of the pump casing at right angles to Fig. 1, while Fig. 3 is a section along line 3—3 in Fig. 2.

The mixing, agitating and conveying device consists of a feeding screw 1 on a shaft

2 in a casing 3 with preferably three outlets of which the outlet 4 near the screw is adapted to be closed by a slide 5 while at the top the outlet 6 communicates with the casting mold and the outlet 7 branches off the outlet 6 as an overflow pipe. The slide 5 is connected with a lever 8 by means of a rod 9. Said lever is adapted to be turned about its pivot 10 by means of a handle 11. In the drawing the slide 5 is shown in the open position and the lever arm with the handle 11 is in the upper position. When the handle 11 is depressed along its sector 12 the slide 5 is raised and the outlet 4 thereby closed.

If the handle 11 occupies its lower position, that is to say, when the outlet 4 is closed the metal fed from the tank 13 by the screw 1 must rise in the outlet 6 and when the mold is full, flow back into the tank 13 through the overflow pipe 7. If the handle 11, however, is in the upper position (Fig. 1) and the slide 5 is open, as shown, the metal fed by the screw 1 passes through the outlet or opening 4 back into the tank 13 whereby a mixing and agitating of the metal and a circulation in the tank is produced.

The driving shaft 2 of the screw 1 is positively connected with the driving shaft 14 of the motor 15 by means of a clutch 16 and intermediate gearing such as the gear wheels 17, 18 and beveled gear wheels 19, 20. The said clutch is electrically operated by means of conductors 21 provided with operating switches 22 and 23 which arrangement allows the mixing and conveyer device to be operated only periodically for conveying the molten metal to the mold as above described, the outlet 4 having previously been closed. At other times the outlet 4 can be left open. In this case upon closing the electric circuit by means of the switch 23, the screw 1 only acts as an agitator. If, in this case the slide 5 is raised and lowered periodically by means of the handle 11 connected with lever 8 the device operates alternately as a mixer, or agitator, and a conveyer.

In order to render casting impossible, while the casting mold is open, the electric circuit includes a safety switch 24 which is automatically closed when the casting mold

is closed and ready for casting, but is open and therefore interrupts the circuit when the casting mold is open.

What I claim is:—

5 1. In an apparatus for casting curved stereotype printing plates, a melting tank, a mold, a feed-screw for delivering the molten metal from said tank to said mold, a source
10 of power for operating said feed-screw, a clutch for operatively connecting said feed-screw with said source of power, means for actuating said clutch, a casing inclosing said
15 feed-screw and having three openings, one communicating with the mold, one acting as an overflow and one for admitting the molten metal to the screw-casing.

2. In an apparatus for casting curved stereotype printing plates, a melting tank, a mold, a feed-screw for delivering the molten metal from said tank to said mold, a
20 source of power for operating said feed-screw, a clutch for operatively connecting said feed-screw with said source of power, means for actuating said clutch, a casing in-

closing said feed-screw and having three 25 openings, one communicating with the mold, one acting as an overflow and one for admitting the molten metal to the screw-casing, a slide adapted to close said last mentioned opening, and means for operating 30 said slide.

3. In an apparatus for casting curved stereotype-printing plates, a melting tank, a mold, a conveyer for delivering the molten metal from said tank to said mold, a source 35 of power, an electric clutch for operatively connecting said conveyer with said source of power, an electric circuit including said clutch, a switch in said circuit for operating said clutch and an automatic switch in said circuit, normally open, and adapted to be closed only on the closing of said mold.

In testimony whereof I have affixed my signature in presence of two witnesses.

ARNOLD EGLI.

Witnesses:

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