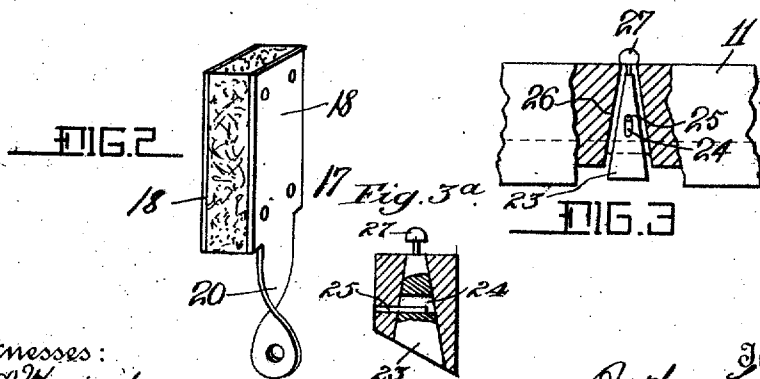
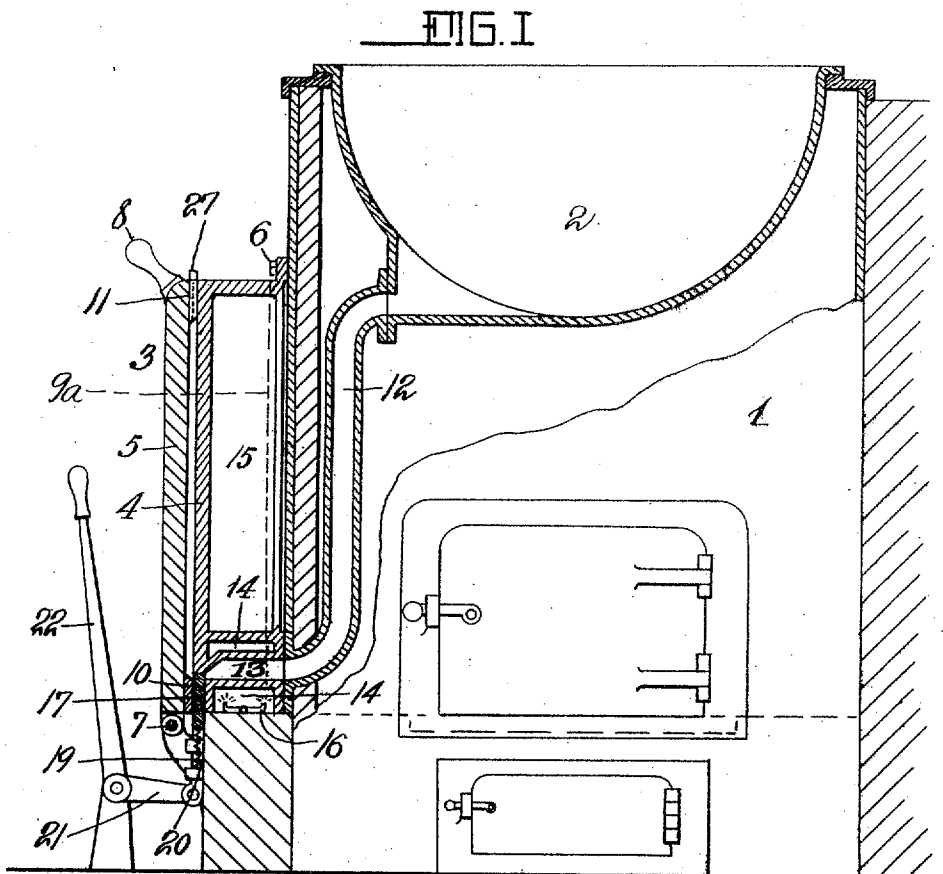


902,941.

Patented Nov. 3, 1908.

2 SHEETS—SHEET 1.



Witnesses:
Ed. Heringberg
R. L. Hilborn

Inventor
Arthur L. Case
 By his Attorney
Wm. V. Becken

A. L. CASE.
STEREOTYPING MACHINE.
APPLICATION FILED MAR. 14, 1907.

902,941.

Patented Nov. 3, 1908.

2 SHEETS—SHEET 2.

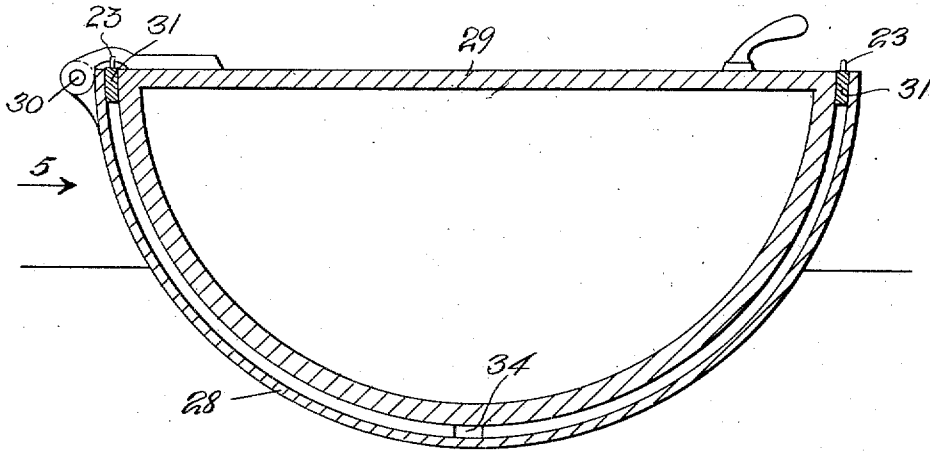


FIG. 4

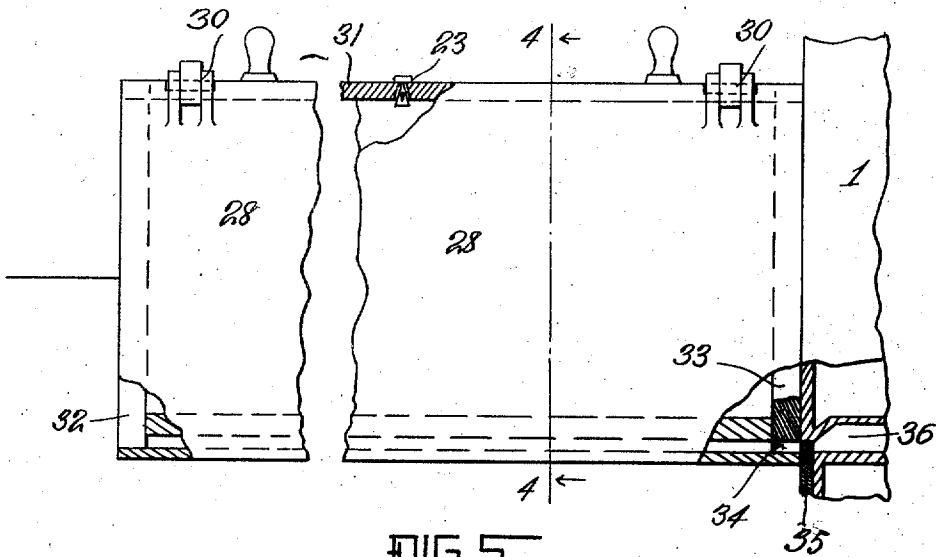


FIG. 5

Witnesses:
R. L. Halborn
R. L. Halborn.

Inventor
Arthur L. Case
By his Attorney
W. V. Becken

UNITED STATES PATENT OFFICE.

ARTHUR L. CASE, OF PLAINFIELD, NEW JERSEY.

STEREOTYPING-MACHINE.

No. 902,941.

Specification of Letters Patent.

Patented Nov. 3, 1908.

Application filed March 14, 1907. Serial No. 362,343.

To all whom it may concern:

Be it known that I, ARTHUR L. CASE, a citizen of the United States of America, and a resident of Plainfield, Union county, New Jersey, have invented certain new and useful Improvements in Stereotyping-Machines, of which the following is a specification.

The present invention relates to stereotype plate casting machines.

10 In the prior art of stereotyping machines it has been customary to have a casting chamber larger than the size of the plate to be made, thereby producing a plate having considerable overcast. This plate has to be 15 trimmed and the surplus metal removed.

The chief object of the present invention resides in casting a stereotype printing plate without overcast.

20 The invention embraces a stereotype casting mold composed of a plurality of members forming an inclosed casting chamber of substantially the contour and dimensions of the plate to be cast, a valve for introducing molten metal into the mold, which, when 25 closed, forms a part of the wall of the casting chamber, and a valve adapted to be automatically closed for allowing the air to escape from the said casting chamber, and which, when closed, forms a part of the wall 30 of the casting chamber.

The invention may be applied either to a vertical, inclined or horizontal casting mold, and the words "upper end" and "lower end" depend purely upon which end of the 35 mold happens to be uppermost or lowermost.

Other features of construction, combination of parts, and arrangement of elements will appear as the specification proceeds.

40 In the accompanying drawings the invention is embodied in a concrete form showing several modifications, but one of which is a preferred form. It is to be understood, however, that variations may be made in the construction without departing from the legitimate and intended scope of the invention.

50 In the said drawings: Figure 1 is a view in elevation and partly broken away and in section of a stereotype casting machine embodying the invention. Fig. 2 is a detail view of the valve for regulating the admission of metal to the casting chamber. Fig. 3 is a detail view of one of the head gages, partly broken away. Fig. 3^a is a transverse 55 vertical section, partly broken away, through the center of the valve 23 shown in Fig. 3,

showing the said valve in its closed position. Fig. 4 is a transverse section of the line 4-4 of Fig. 5, showing the invention applied to a horizontal casting mold. Fig. 5 is a view 60 looking in the direction of the arrow 5 of Fig. 4 and partly broken away and in section.

Similar characters of reference indicate corresponding parts of the different views.

Referring to Figs. 1 to 3^a inclusive, 1 indicates a metal melting furnace of any usual or suitable structure and provided with the melting pot 2. Located adjacent to this metal melting furnace is an upright stereotype casting mold, indicated by 3. The casting 70 mold is composed of two parts, a stationary part, here called the drag and indicated by 4, and a movable part, here called the cope indicated by 5. The stationary part can conveniently be placed with its back 75 against the metal melting furnace and is secured thereto by any suitable means, as the bolts 6. The means for moving the cope toward and away from the drag may be of any suitable construction. In the present instance, the cope is hinged at its lower end 80 by means of the pivot 7 and may be provided with the operating handle 8.

The casting chamber 9 is inclosed by the cope and drag, by the two side gages 9^a and 85 by the oppositely beveled lower and upper head gages indicated respectively by 10 and 11.

Suitable means of communication from the pot to the casting chamber are provided. 90 The particular form here followed consists of a duct 12 leading from the pot and extending downwardly within the metal melting furnace, and outwardly to the exterior thereof where it communicates with a horizontal passage 13 in the lower end of the 95 drag which leads into the casting chamber. This passage 13 is surrounded by an air space 14 which separates it from or renders it free from contact with the usual water 100 back 15, so that the water in the latter will not tend to cool the metal before it enters the casting chamber. If desired, some auxiliary heating means, as the gas jets 16, may be utilized to heat the passage 13. 105

17, indicates a valve for regulating the admission of the molten metal into the casting chamber. This valve consists of two plates 18 of sheet metal, between which are interposed a body of asbestos or the like. It is 110 normally held in its closed position by means of the spring 19 and is opened by means of

the lever 20 and connections 21 and 22. When this valve is closed it forms a part of the wall of the casting chamber as shown.

Located in the upper head gage is a valve 23 for allowing the air to escape as the casting chamber is filled. This valve is provided with a slot 24 in which plays the screw or stop 25 carried by the gage so that the valve by its own weight is, normally held open. The rise of the molten metal serves to close the valve in its seat 26 by reason of the complementary tapered surfaces in the valve and seat, and when so closed it forms a part of the wall of the casting chamber. A signal or indicator 27 can conveniently be carried by this valve and will be caused to rise or project outside the mold when the latter is full.

Referring to Figs. 4 and 5 which show the invention applied to a horizontally disposed mold, 28 indicates the drag and 29 the cope hinged together by means of the pivots 30. In this instance the two side gages 31 will be at the upper end of the casting mold and the valves 23 may conveniently be carried by the said side gages. 32 indicates one of the head gages and 33 indicates the other of the head gages. In this instance the gage 33 has a cut-away portion 34 through which the metal is admitted when the valve 35 is opened. 36 indicates a passage leading to the melting pot. As will be noticed in this instance and with this particular construction there will be a slight amount of over casting equal to the size of the opening 34. This, however, could easily be removed from the finished plate.

What is claimed is:—

1. A stereotype casting mold comprising: a plurality of members forming an inclosed casting chamber of substantially the contour and dimensions of the plate to be cast, a valve for introducing molten metal into the mold which, when closed, forms a part of the wall of the casting chamber, and a valve adapted to be automatically closed for allowing the air to escape from the said casting chamber, and which, when closed, forms a part of the wall of the casting chamber.

2. A stereotype casting mold comprising: a cope, a drag, side gages, and head gages at both ends forming an inclosed casting chamber of substantially the contour and dimensions of the plate to be cast, means for introducing molten metal into the said casting chamber, and means for allowing the air to escape from the said casting chamber.

3. A stereotype casting mold comprising: a cope, a drag, side gages, and head gages at both ends, forming an inclosed casting chamber of substantially the contour and dimensions of the plate to be cast, a valve for introducing molten metal into the mold which, when closed, forms a part of the wall of the casting chamber, and a valve adapted to be automatically closed for allowing the air to escape from the said casting chamber, and which, when closed, forms a part of the wall of the casting chamber.

4. A stereotype casting mold comprising: a cope, a drag, side gages, and oppositely beveled head gages at both ends, forming an inclosed casting chamber of substantially the contour and dimensions of the plate to be cast, a valve for introducing molten metal into the mold, which, when closed, forms a part of the wall of the casting chamber, and a valve adapted to be automatically closed for allowing the air to escape from the said casting chamber, and which, when closed, forms a part of the wall of the casting chamber.

5. The combination of a metal melting furnace, a melting pot, a stereotype casting mold located exteriorly of the furnace and having a casting chamber, a conduit extending from the melting pot interiorly of the furnace to the lower end of the mold, a water back on the said mold, and means of communication in the said mold, connecting the conduit leading from the pot and the casting chamber and free from contact with the water back.

Signed at New York city this 8th day of March 1907.

ARTHUR L. CASE.

Witnesses:

AXEL V. BEEKEN,
GEO. A. MARSHALL.