

(No Model.)

2 Sheets—Sheet 1.

H. C. HANSEN.
TYPE CASTING MACHINE.

No. 458,050.

Patented Aug. 18, 1891.

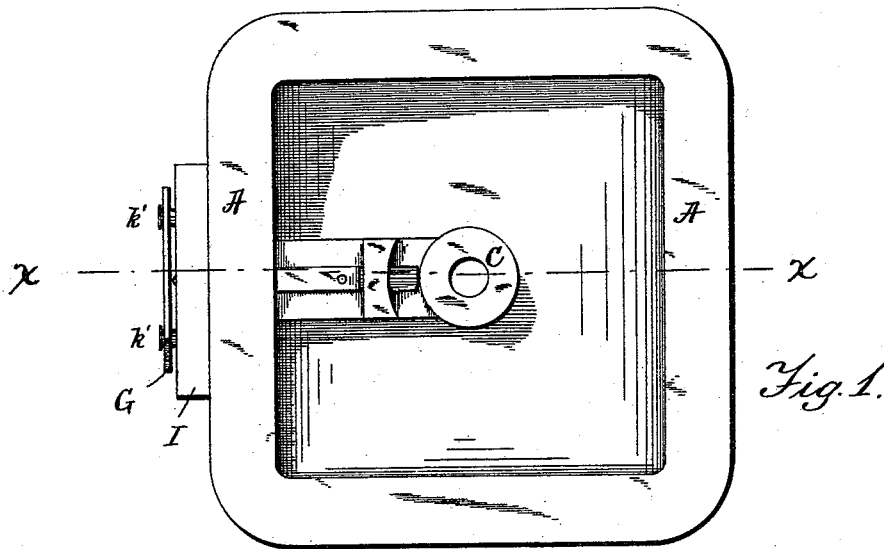


Fig. 1.

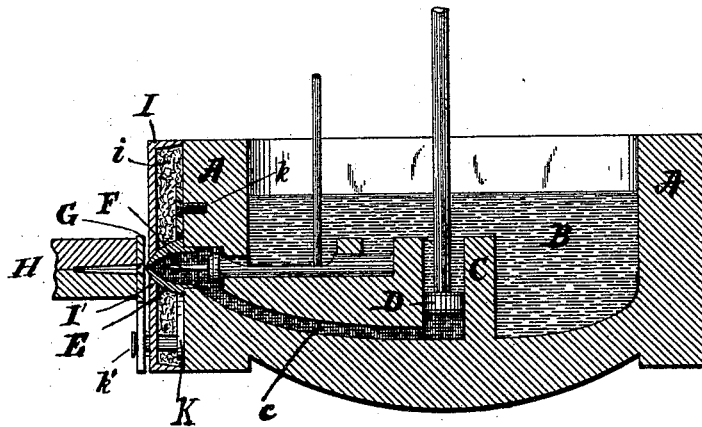


Fig. 2.

WITNESSES
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INVENTOR
Hans C. Hansen
by *Alban Andrien*
his ATT'Y

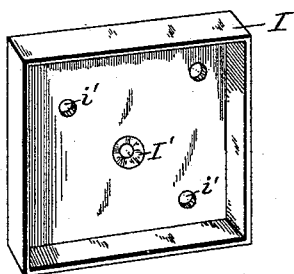
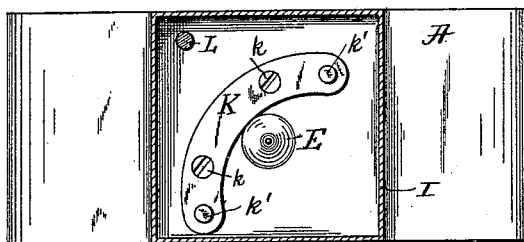
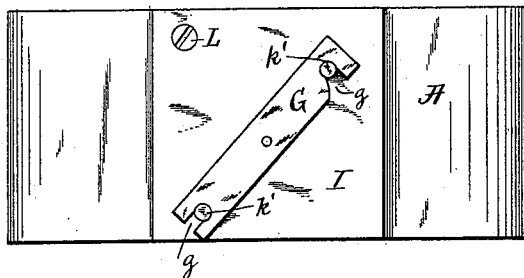
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2 Sheets—Sheet 2.

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TYPE CASTING MACHINE.

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WITNESSES

Living & Hay.
E R Prusom

INVENTOR

Hans C Hansen
by Alvan Andren
his — ATT'Y

UNITED STATES PATENT OFFICE.

HANS C. HANSEN, OF BOSTON, MASSACHUSETTS.

TYPE-CASTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 458,050, dated August 18, 1891.

Application filed April 30, 1891. Serial No. 391,074. (No model.)

To all whom it may concern:

Be it known that I, HANS C. HANSEN, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Type-Casting Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to type-casting machines, and has for its object to provide novel means for preventing the cooling of the nipple and the molten metal contained therein.

To accomplish this object my invention involves the features of construction and the combination or arrangement of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 represents a plan view of the fount of an ordinary type-casting machine. Fig. 2 represents a cross-section on the line X X, shown in Fig. 1. Fig. 3 represents a front elevation of the fount. Fig. 4 represents a similar front elevation showing the nipple-box in section, and Fig. 5 represents a detail perspective view of said nipple-box.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

In the drawings, Figs. 1, 2, 3, and 4, A represents the usual fount or type-metal reservoir containing molten type-metal B. (Shown in Fig. 2.)

In the fount A is located the pump-cylinder C, in which the piston D is movable, as is common in devices of this kind. From the bottom of the pump-cylinder C leads a conduit *c* to and terminating within the usual nipple E, as shown in Fig. 2.

F is a reciprocating nipple-closer, as usual, for the purpose of closing the exit-perforation of the nipple as soon as the piston D has forced out of the nipple-perforation the requisite amount of type-metal for forming the type.

The mechanism for operating the piston D and nipple-closer F is not shown in the drawings, as it is well known in the art and forms no part of my present invention.

In machines of this kind the nipple is made to project outside of the fount A, and the

molten metal contained within it is liable to be unduly cooled, especially as a cold-air blast is usually employed in machines of this kind for the purpose of cooling off the mold rest-plate G, against which the type-mold H is held during the operation of casting the type.

For the purpose of preventing said nipple from being cooled and to retain a proper temperature of the molten metal contained within it, I make use of a hollow metal box I, which is open at the rear, and at this place held in contact with the outside of the fount A, as shown in the drawings, and by this arrangement a hollow air-chamber is arranged around the nipple, by which radiation of heat from the latter is in a great degree prevented. If so desired, the box I may be filled with asbestos or other suitable heat-retaining material for the purpose of still further preventing the cooling off of the nipple E, as shown in Fig. 2. The delivery end of said nipple is made to project through a perforation I' in the front end of the box I, as shown in Figs. 2 and 5.

In practice I prefer to secure the box I to the fount A by means of a plate K, fastened to the outside of said fount by means of screws *k k*. (Shown in Figs. 2 and 4.) The said plate K is provided with outwardly-projecting studs or pins *k' k'*, adapted to pass through corresponding perforations *i' i'* in the front end of the box I, by which the latter is hung and supported on said pins. The box I is secured in position to the front end of the fount A, preferably by means of a screw L, as shown in Figs. 3 and 4.

The mold rest-plate G is preferably provided with notches *g g*, adapted to receive the outer ends of the pins *k' k'*, as shown in Figs. 1 and 3.

By the arrangement above described the cooling of the nipple and metal contained within it is effectually prevented.

What I wish to secure by Letters Patent, and claim, is—

1. In a type-casting machine, the combination, with the type-metal fount having a perforated nipple, of a hollow box detachably secured to the fount, surrounding and inclosing the nipple to prevent radiation of the heat

therefrom and provided with an orifice for the passage of the type-metal from the nipple, substantially as described.

2. In a type-casting machine, the combination, with the type-metal fount having a perforated nipple, of a hollow box filled with a non-conducting material detachably secured to the fount over the nipple to prevent radiation of heat from such nipple and provided
10 with an orifice for the passage of the type-metal from the nipple, substantially as described.

3. In a type-casting machine, the fount A and nipple E, combined with the hollow box
15 I, surrounding and inclosing the nipple, a plate K, secured to the fount and having studs or pins *k'*, adapted to enter corresponding perforations in the box, and means co-op-

erating with the studs or pins for securing the box in place, substantially as described. 20

4. In a type-casting machine, the fount A and nipple E, combined with the hollow box I, surrounding and inclosing the nipple, the plate K, secured to the fount, and having pins
25 *k'*, adapted to serve as supports for the hollow box, and the mold rest-plate G, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 27th day
30 of April, A. D. 1891.

HANS C. HANSEN.

Witnesses:

ALBAN ANDRÉN,
JOSEPH F. HAWKINS.