(No Model.)

J. F. GABEL & J. B. GUELPA.

NIPPLE PLATE FOR TYPE CASTING MACHINES.

No. 327,079. Patented Sept. 29, 1885.

Fig: 1.

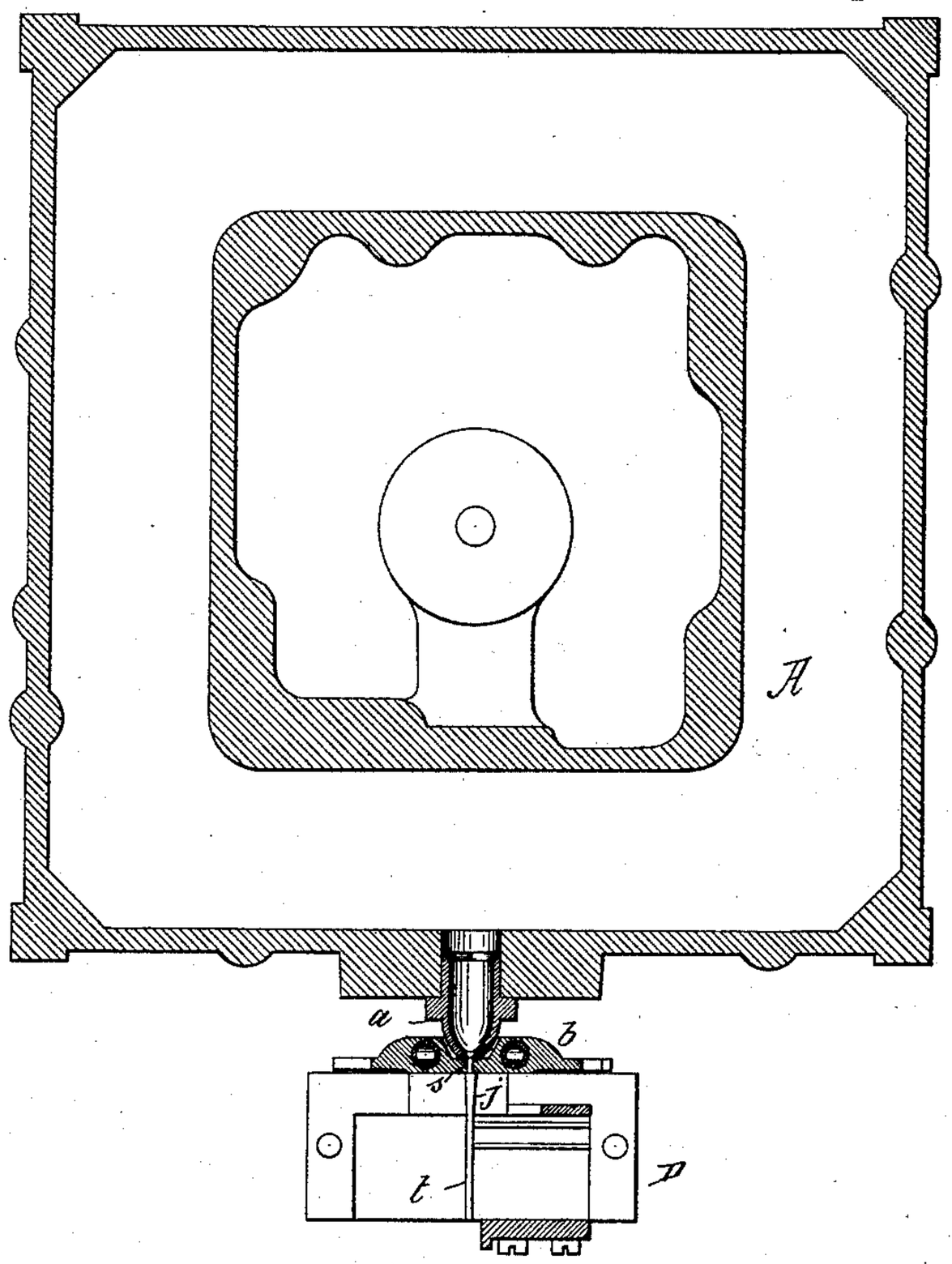
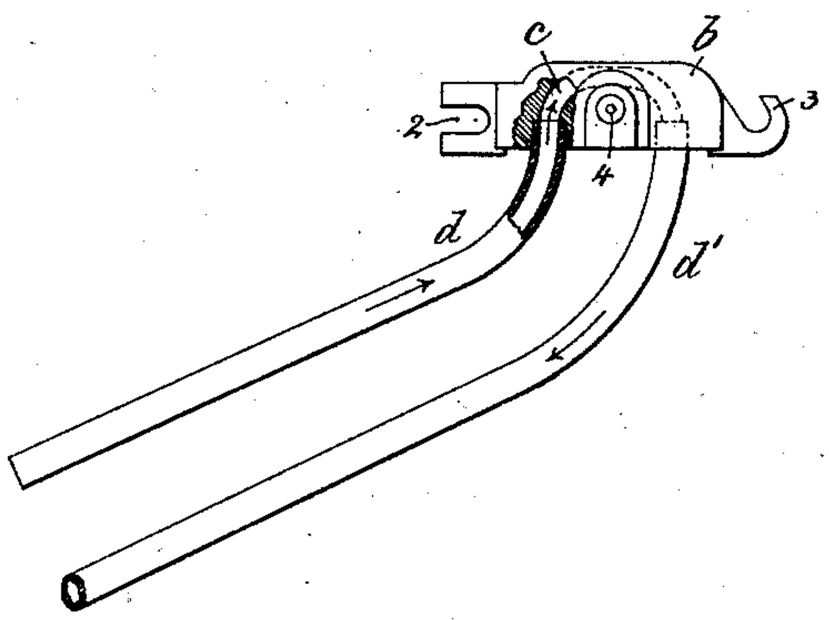


Fig: 2.



Witnesses.

Arthur Lispenard.
John F. C. Printhorst

Inventors.

John F. Gabel and
John B. Guelpa
by Crosby & Gregory attys

UNITED STATES PATENT OFFICE.

JOHN F. GABEL AND JOHN B. GUELPA, OF CHELSEA, MASS.; JOHANNA M. GABEL EXECUTRIX OF SAID JOHN F. GABEL, DECEASED.

NIPPLE-PLATE FOR TYPE-CASTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 327,079, dated September 29, 1885.

Application filed January 12, 1885. (No model.)

To all whom it may concern:

Be it known that we, JOHN F. GABEL and JOHN B. GUELPA, of Chelsea, county of Suffolk, and State of Massachusetts, have invented an Improvement in Nipple-Plates for Type-Casting Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In machines for casting type the molten metal held in a metallic vessel is forced at proper intervals out through a nipple and a throat into a die, having the matrix placed next the opposite side of the die. In accordance with our invention, and to avoid the heating of the nipple-plate and prevent its hole from becoming clogged, we have provided the said plate with a cooling-chamber through which either a cooling-liquid—such as water—or cold air may be made to circulate.

Figure 1 is a sectional detail showing the vessel to hold the molten metal, its nipple, and part of the usual mold in which the type is cast, one of our improved nipple-plates being interposed between them; and Fig. 2 is a top plan view, partly broken out, of one of our improved nipple-plates.

The metal box A, to hold the molten metal from which to cast the type, and its attached nipple *a* and the mold D are all as usual in type-casting machines, so need not be herein further described. In the drawings the upper half of the mold is removed, showing the type *t*, with its connected jet *j* and sprue *s*, the latter resting in the hole in the nipple-plate *b*. The nipple-plate *b*, herein shown, is shaped like other nipple-plates in use, so far as the slot 2, hook 3, and hole 4 are concerned.

In accordance with our invention we have provided the nipple-plate with a chamber or passage, *c*, which encircles the central part of the plate more or less, the said chamber being in communication with the pipes *d d'* to conduct a cooling-fluid—such, for instance, as cold water—or for the passage of cold air, to thus keep the nipple-plate sufficiently cool to enable the sprue to always harden quickly and drain out of the hole 4 of the nipple-plate with the jet, thus always leaving the nipple-plate free and clear of sprue or dross.

By the employment of our improved cooled nipple-plate it is possible to do about twenty per cent. more work each day on the machine than has heretofore been accomplished with any machine to us known, inasmuch as very much time heretofore wasted in cooling the nipple-plate is saved; and it is also possible, owing to the hole 4 in the nipple-plate always being kept open, to work harder metal and to produce type with fewer imperfections and with better and more distinct faces than we have previously been able to do.

When the hole in the nipple-plate is free and clear, the metal enters the mold with greater ease and speed and gets well into the mold, freely filling all parts of it before the metal has a chance to set.

The pipes *d d'* will be connected with any cold water or cold air supply, either of which may be forced through the pipes by a pump or otherwise.

We do not desire or intend to limit our invention to the exact shape of the nipple-plate or the form of the cooling-chamber.

We claim—

The nipple-plate for a type-casting machine having an attached cooling-chamber for the passage or flow of a cooling medium, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN F. GABEL.
JOHN B. GUELPA.

Witnesses:
G. W. GREGORY,
B. J. NOYES.