(No Model.) 2 Sheets—Sheet 1.

J. G. PAVYER.

APPARATUS FOR CASTING TYPE.

No. 604,635. Patented May 24, 1898.

Fig. I.

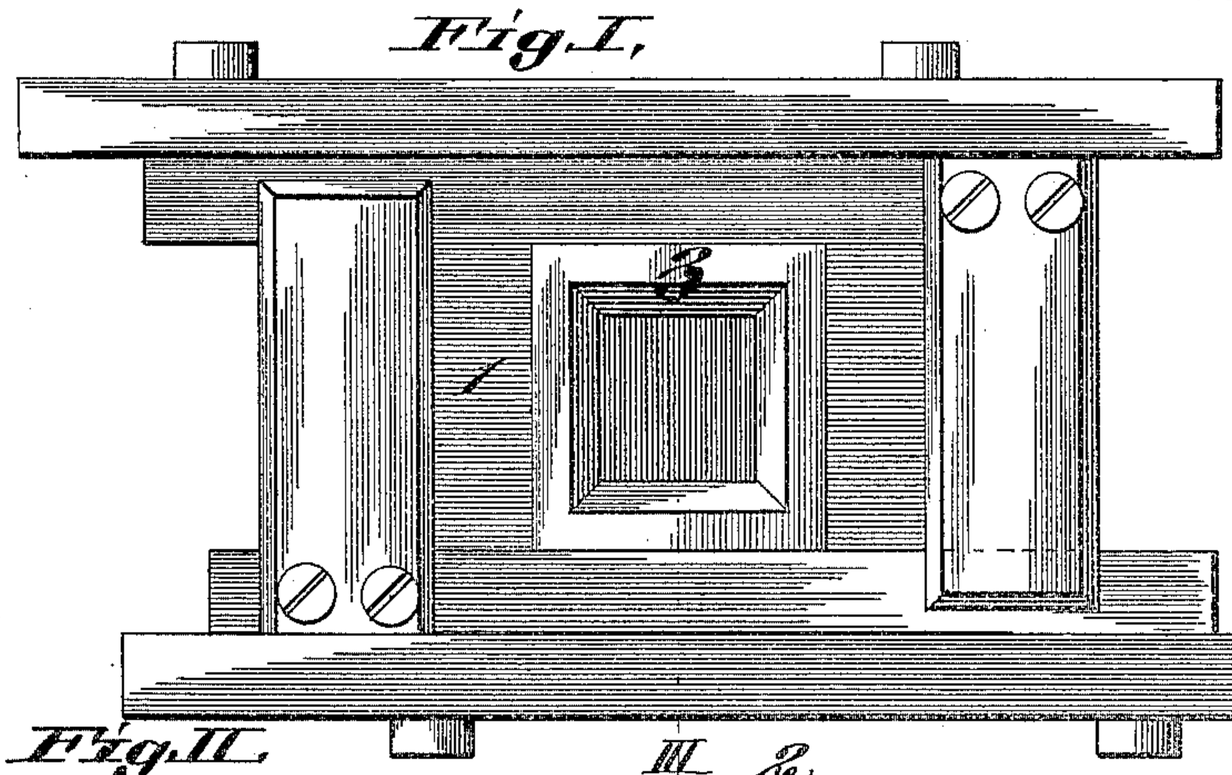


Fig. II.

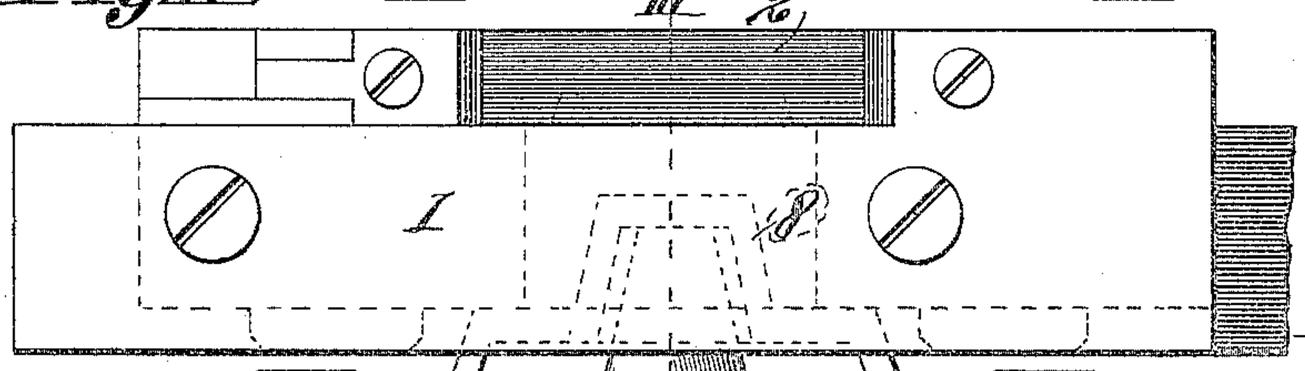


Fig. III.

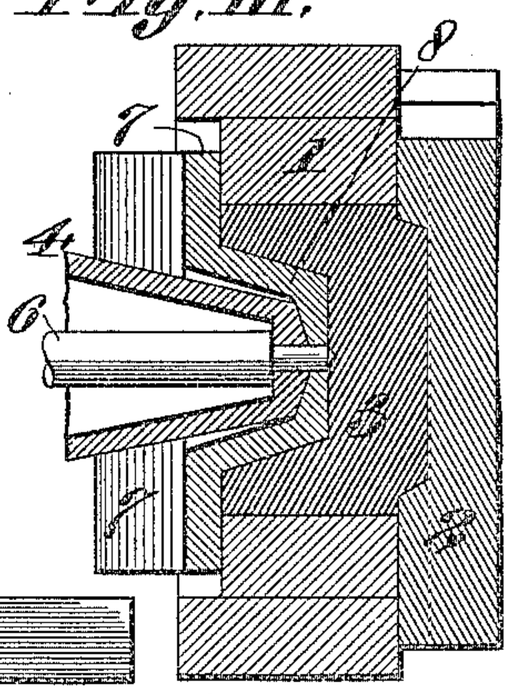


Fig. VII.

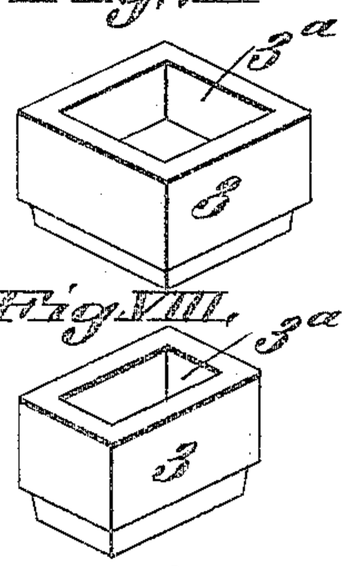


Fig. VIII.

Fig. IX.

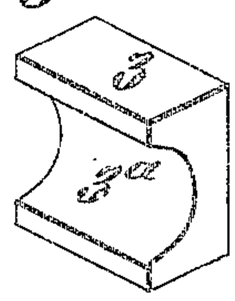


Fig. IV.

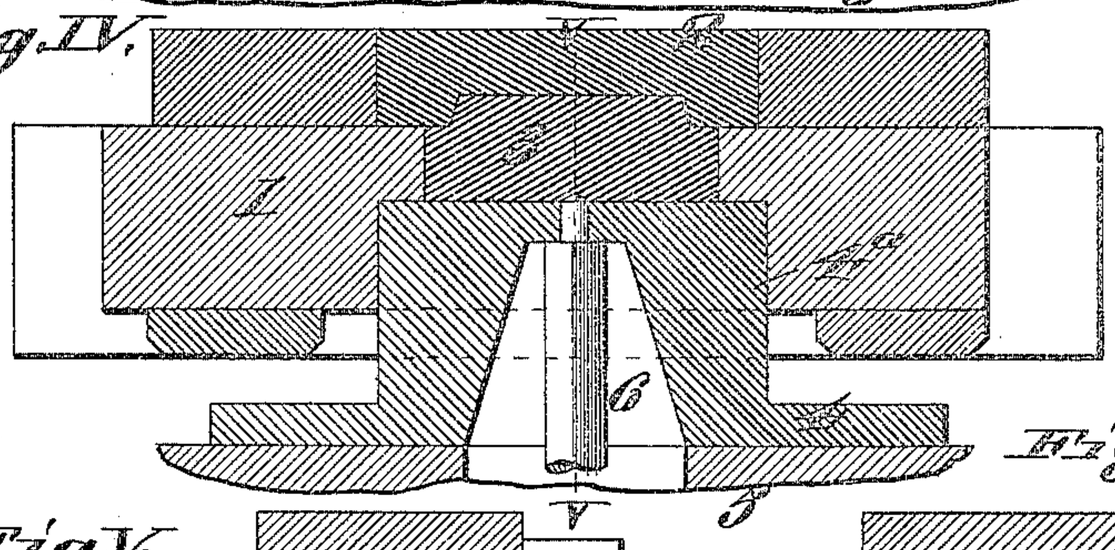


Fig. VI.

Fig. V.

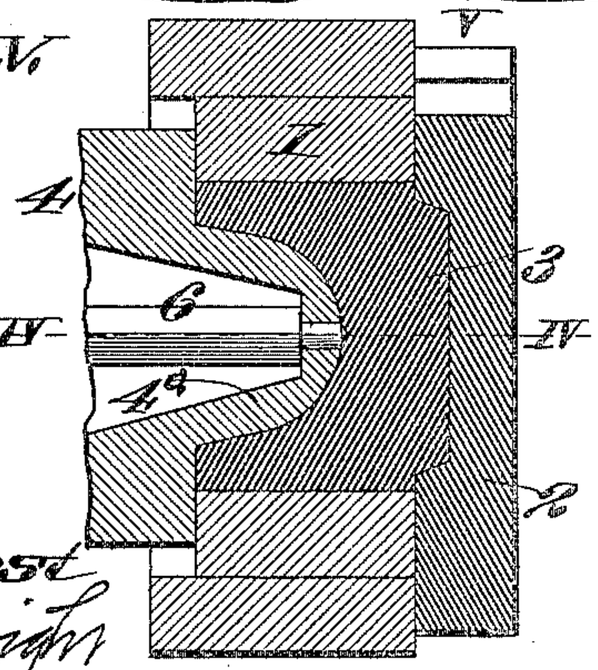
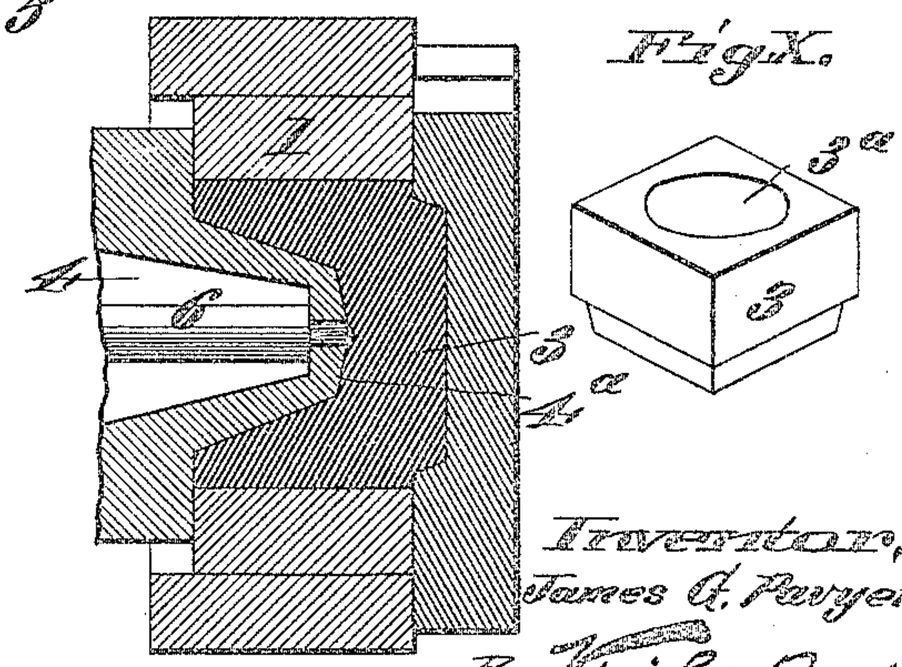


Fig. X.



Attest
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By Wright, Brt
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(No Model.) 2 Sheets—Sheet 2.

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APPARATUS FOR CASTING TYPE.

No. 604,635. Patented May 24, 1898.

Fig. XI.

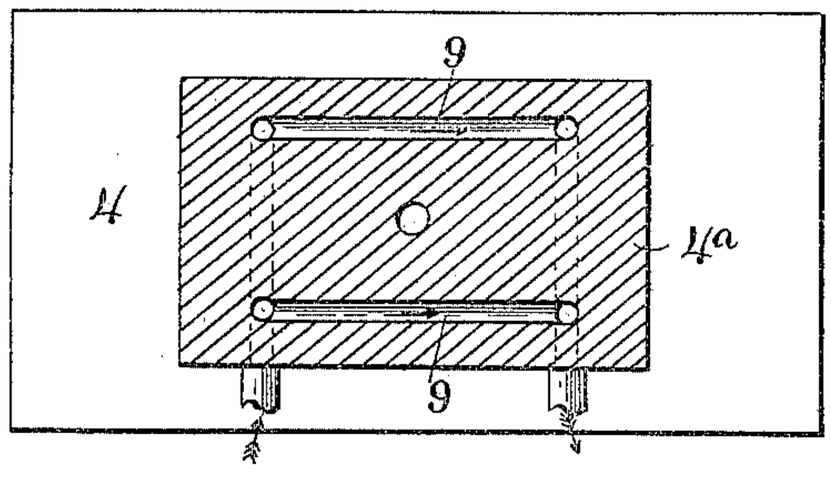
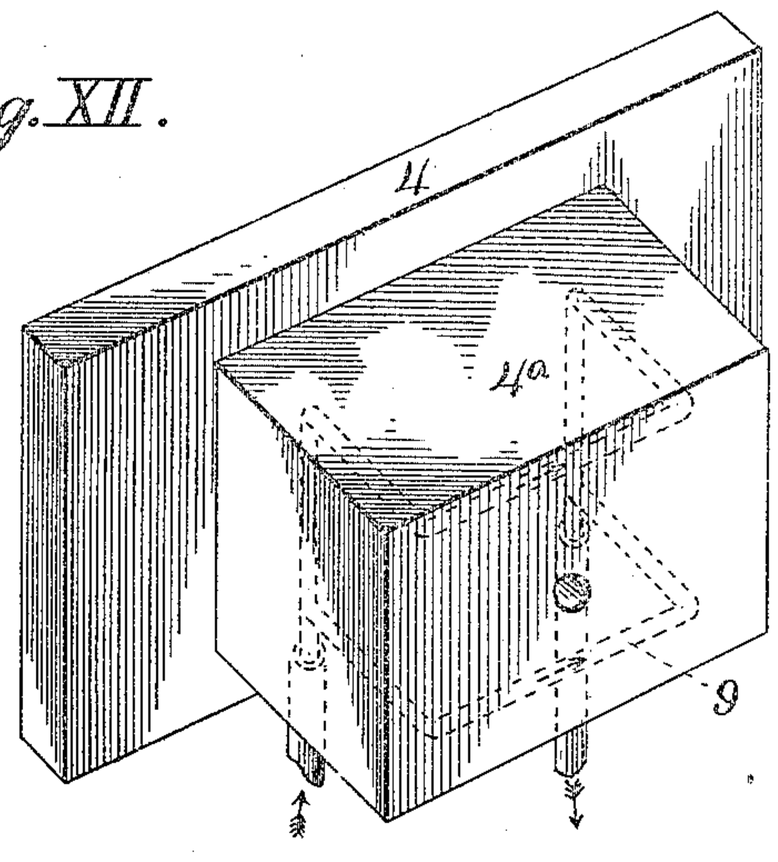


Fig. XII.



Attest.

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Walter Allen

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By Knights Bros.
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UNITED STATES PATENT OFFICE.

JAMES G. PAVYER, OF ST. LOUIS, MISSOURI.

APPARATUS FOR CASTING TYPE.

SPECIFICATION forming part of Letters Patent No. 604,635, dated May 24, 1898.

Application filed June 21, 1897. Serial No. 641,608. (No model.)

To all whom it may concern:

Be it known that I, JAMES G. PAVYER, a citizen of the United States, residing at the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Apparatus for Casting Type, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to an improvement in means for casting recessed or channeled type, whereby the necessity of removing the jet-sprue is avoided, and at the same time the type is rendered much lighter and there is a resultant saving in the amount of metal employed. This I accomplish by the employment of a core inserted into the mold at the time of casting the type, from which core the interior cavity of the type is formed.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, Figure I is a rear elevation of the mold employed in carrying out my invention. Fig. II is a top view of the mold and a fragment of the melting-pot and the nipple and nipple-plate carried by such pot. Fig. III illustrates a vertical transverse section taken on line III III, Fig. II. Fig. IV illustrates a horizontal section taken on line IV IV, Fig. V, showing a modified form of device in which the nipple-plate is dispensed with. Fig. V illustrates a vertical transverse section taken on line V V, Fig. IV, showing the employment of a channel-forming core extension on the nipple. Fig. VI is a view similar to Fig. V, showing the employment of a cavity-forming core extension on the nipple. Figs. VII and VIII are perspective views of type having varied angular-shaped cavities such as may be produced by means of my invention. Fig. IX shows a type or quad with a channel formed at its base. Fig. X is a perspective view of a type formed with a circular cavity as distinguished from the angular-shaped cavities shown in Figs. VII and VIII. Fig. XI is a vertical section of a nipple provided with a channel for cooling liquid. Fig. XII is a perspective view of the nipple, showing the arrangement of the channel.

In the drawings, 1 designates a type-mold, the main body of which is of ordinary form, and 2 the matrix, secured in the mold in common manner. The mold is provided with a type-forming recess in which the type 3 is formed in contact with the matrix 2.

The object to be attained in the employment of my improvement—namely, the production of recessed or channel type—may be accomplished by the employment of the form of device shown in Figs. I to III, inclusive, or with the modification illustrated in Figs. IV to VI, inclusive, the prime feature in either instance being the use of a core by which the recess or channel is produced. I will first describe the device shown in Figs. I to III, inclusive.

4 designates the nipple carried by the melting-pot 5, in which nipple is the choker-valve 6, adapted to control the passage-way in said nipple.

7 designates a nipple-plate hung by suitable means upon the melting-pot. This nipple-plate is provided with a core extension 8, that is adapted to project into the mold and to occupy a central location with relation to the type to be cast, whereby when the molten metal is introduced from the nipple through the nipple-plate it will flow around the core extension 8, and a central cavity or channel 3^a will be formed at the rear of the type. It will be understood that where it is desired to produce a type having a cavity the core extension 8 is of such shape as to leave a space around it, while where a channel is to be formed the core extension 8 is of such form as to extend the width of the type.

In the form of device shown in Figs. IV to VI, inclusive, the core for producing the cavity or channel 3^a in the type consists of an extension 4^a on the nipple 4, the nipple-plate in this form of device being dispensed with. In Figs. IV and V the core extension is elongated to produce a channel at the rear of the type, while in Fig. VI is shown an extension that partakes of the form of a cavity to be produced in the type.

It will be observed that the cavity or channel 3^a being formed at the rear of the type and the jet-opening of the nipple being located at the base of the cavity or channel, any jet-sprue produced upon the type will be

wholly within the cavity or channel, and inasmuch as in such position it cannot interfere with the rear face of the type there is no necessity of removing such sprue, the type being in condition for use without dressing of any nature.

For the purpose of cooling the core extension 8 of the nipple-plate 7, or the core extension 4^a of the nipple and thereby cooling it, I form a channel 9, (see Figs. XI and XII,) through which water or other cooling liquid may be caused to flow. By this means the core extensions may be cooled and the separation of the core extension from the type in either instance be more readily effected.

I claim as my invention—

1. An apparatus for casting type comprising a type-mold, a matrix, a nipple having a core extension formed with a jet-opening and whereby a recess or channel is formed in the base of the type, and a choker-valve constructed and arranged to enter and fill the jet-opening and thereby displace the molten metal at the base of the core extension, whereby the necessity of removing the sprue is avoided; substantially as described.

2. An apparatus for casting type comprising a type-mold, a matrix, a nipple-plate having a core extension formed with a jet-opening and whereby a recess or channel is formed in the base of the type, a nipple adapted to seat in the core extension, and a choker-valve constructed and arranged to enter and fill the jet-opening and thereby displace the molten metal at the base of the nipple and core extension, whereby the necessity of removing the sprue is avoided; substantially as described.

JAMES G. PAVYER.

In presence of—
N. FINLEY,
E. S. KNIGHT.