

J. E. HANRAHAN.

TYPE MOLD.

APPLICATION FILED JULY 23, 1909. RENEWED MAY 20, 1911.

1,015,020.

Patented Jan. 16, 1912.

FIG. 1

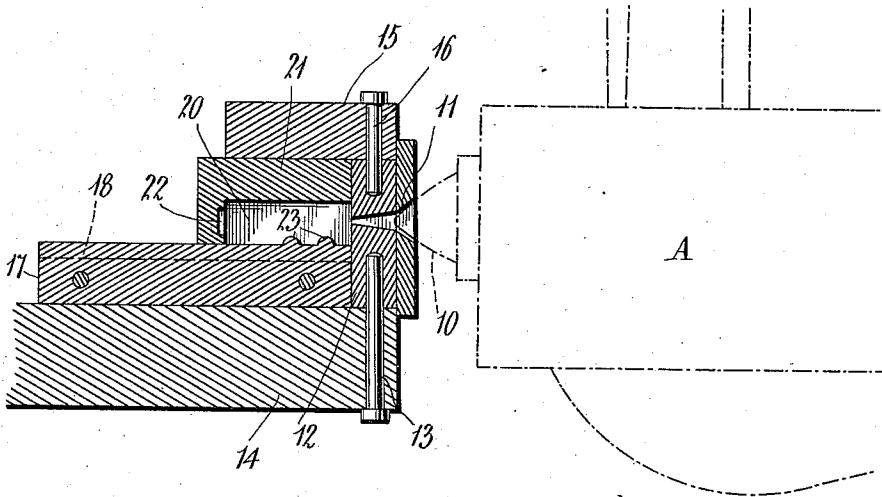


FIG. 2

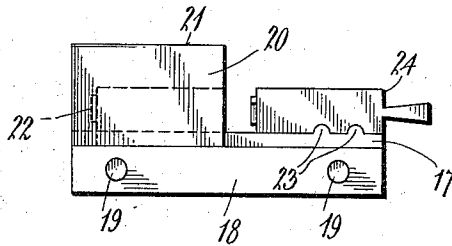


FIG. 3

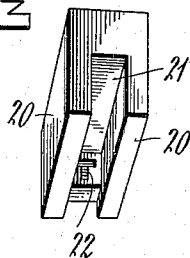
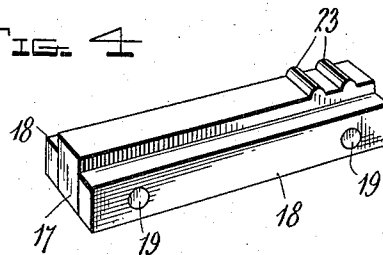


FIG. 4



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UNITED STATES PATENT OFFICE.

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TYPE-MOLD.

1,015,020.

Specification of Letters Patent.

Patented Jan. 16, 1912.

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To all whom it may concern:

Be it known that I, JOHN E. HANRAHAN, a citizen of the United States, residing at Baltimore, in the State of Maryland, have
5 invented certain new and useful Improvements in Type-Molds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as
10 it appertains to make and use the same.

This invention relates to type founding and has special reference to an improved form of mold for use in the casting of type. It is well understood among those skilled in
15 the art that this mold in the usual construction is composed of separate sides and back pieces and that the matrix forms one end of such a mold. It is also well known that
20 owing to the fact that the mold is thus composed of separate pieces great difficulty is experienced in obtaining successive type having uniform dimensions throughout as
25 well as that the type cast in such a mold are extremely liable to have fins projecting from the edges and corners, this being caused by the molten type metal working into the
cracks in the mold between the various parts.

The object of the present invention is to construct a type mold of such character that
30 repeated castings of type may be had therefrom, each of the type so cast being of uniform dimensions throughout. This object is accomplished by a novel formation of the matrix and mold and this formation preferably
35 takes the shape of constructing the matrix, the top and sides of the mold as an integral structure.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of an integral structure
40 forming the sides and back of a type mold together with certain other novel features of construction and combinations of parts hereinafter fully described, illustrated
45 in the accompanying drawings, and specifically set forth in the claims.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and Figure 1 is a vertical section
50 through a mold constructed in accordance with this invention, the view showing the melting pot and lead pump as ordinarily used. Fig. 2 is a detail view showing the manner of removing the type from the mold.
55 Fig. 3 is a detail perspective of the top,

sides and matrix of a mold. Fig. 4 is a detail perspective of a mold base.

The letter A in general indicates the melting pot with its accompanying lead pump and is to be taken as typical of any such device, since this melting pot forms no part of
60 my invention. This melting pot A is provided with the ordinary nozzle 10 which leads to an opening 11 formed in the foot block 12 of a type mold and which is
65 securely attached by pins 13 to a casting table 14. To the upper edge of this foot block 12 is secured a member 15 which projects inwardly over the casting table, said member
70 being attached to the block 12 by means of a suitable pin 16. Carried on the casting table 14 is a slide which comprises a central portion 17 and two side portions 18. These side
75 portions are of less height than the central portion and the three portions are detachably connected by means of suitable pins, the heads of which are shown at 19. The
central portion 17 is of such width as to fit closely between the side walls 20 of the integral
80 mold portion comprising these side walls 20 and the cap 21. Between these side walls is the matrix 22 and this matrix is so arranged as to contact closely with the top
85 face of the slide member 17 when the mold is in position for casting. The slide member 17 is further provided with projections 23 for the purpose of forming the nicks in the
type as well as to hold said type immovable while being freed from the matrix in the
90 manner hereinafter described.

In using this mold the members 17 and 18 forming the bottom of the mold are positioned on the casting table and the structure
disclosed in Fig. 3 is placed thereon so that the sides 20 embrace the members 17 and
95 rest upon the members 18, with the fixed matrix opposite the opening 11. The matrix with the sides and cap of the mold fixed thereto are pushed forward under the member
15 and are there held by any suitable
100 means not deemed necessary here to be disclosed as it may be any of the means common in type casting mechanisms used for the purpose of holding the mold in position
105 while casting. The mold having thus been positioned the lead pump is actuated and the requisite quantity of lead forced in the mold through the opening 11 so that the mold is
entirely filled with the lead. When the type
110 has been cast the upper portion of the mold

with the matrix fixed therein is drawn away from the foot of the mold and by reason of the projections 23 in the base of the mold the type which is here indicated at 24 in Fig. 2 will remain behind and may readily be sheared from the stem which forms in the opening 11 by any of the usual means.

It is found that with type cast in a mold of this description there is no variation in the width, length or thickness, but that all of the type of a given character are absolutely of uniform dimensions no matter whether they are cast in the mold without disassembling the same or whether they are cast from different assemblings of said mold. By "disassembling" in this sense it is meant the entire separation of the several parts of the mold and not the mere withdrawal of the movable part from the immovable part. It will be observed that these results are accomplished first by having the sides and cap of the mold integral and second by having the matrix fixedly mounted between said sides and fixedly connected to the cap.

Having thus described the invention, what is claimed as new, is:—

1. The combination with a mold base including an upstanding longitudinal rib; of a member held on said base and slidable therealong, including a pair of mold sides, a mold cap and a matrix, said sides, cap and matrix being fixed together.

2. In a mold for type, the combination with a base having projections and arranged to form a surface of a type and the nicks therein; of a member held on said base and slidable therealong, said member including a pair of mold sides, a mold cap and a matrix, said sides, cap and matrix being integral.

3. The combination with a mold base including an upstanding longitudinal rib, of a member held on said base and slidable therealong, said member including a pair of mold sides, a mold cap and a matrix.

4. In a mold for type the combination with a base having projections and arranged to form a surface of a type and the nicks therein, of a member held on said base and slidable therealong, said member including a pair of mold sides, a mold cap and a matrix.

5. The combination with a mold base including an upstanding longitudinal rib, of

a member on said base and having a mold cavity one side of which is formed by the said rib, one of the said elements being movable longitudinally with respect to the other.

6. The combination of a member having a mold cavity and a second member having a rib forming one side of said mold cavity and with respect to which rib the first named member is slidable.

7. The combination with a member having a mold cavity, of a member slidably related to the first named member and having a rib forming one side of the said mold cavity.

8. The combination with a mold base including an upstanding longitudinal rib, of a member on said base and having a mold cavity one side of which is formed by the said rib, said rib having a projection to form a nick in the type.

9. The combination with a mold base including an upstanding longitudinal rib, of a member on said base and slidable therealong, said member including a pair of mold sides, a cap and a matrix, the said rib of the said mold base entering the space between said pair of mold sides and forming one side of the mold cavity.

10. In type molding mechanism a casting table, a slide thereon, a foot block also on said table, a member secured to the foot block and spaced above the slide, and a mold member slidable on the slide and between the latter and the member which is secured to the foot block, said mold member having a mold cavity therein, one side of which is formed by the said slide.

11. In type molding mechanism a casting table, a slide thereon, a foot block also on said table, a member secured to the foot block and spaced above the slide, and a mold member slidable on the slide and between the latter and the member which is secured to the foot block, said mold member having a mold cavity therein, one side of which is formed by the said slide, the said slide having a rib extending into the said side of the mold cavity.

In testimony whereof, I affix my signature, in presence of two witnesses.

JOHN E. HANRAHAN.

Witnesses:

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