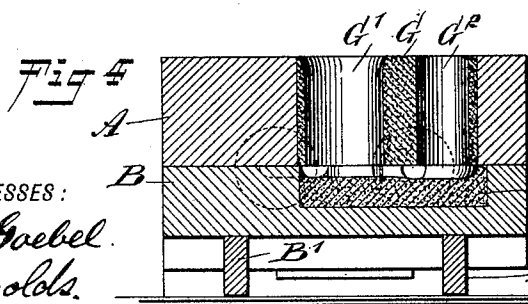
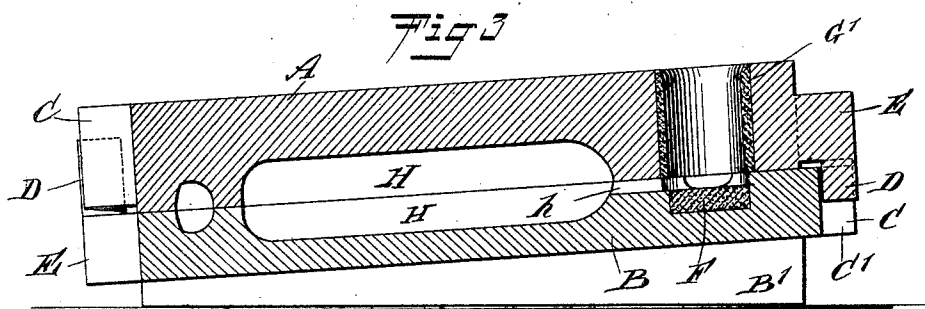
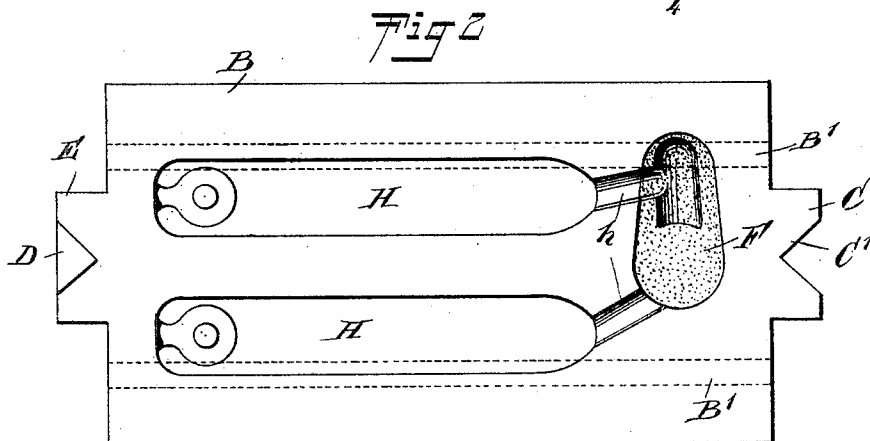
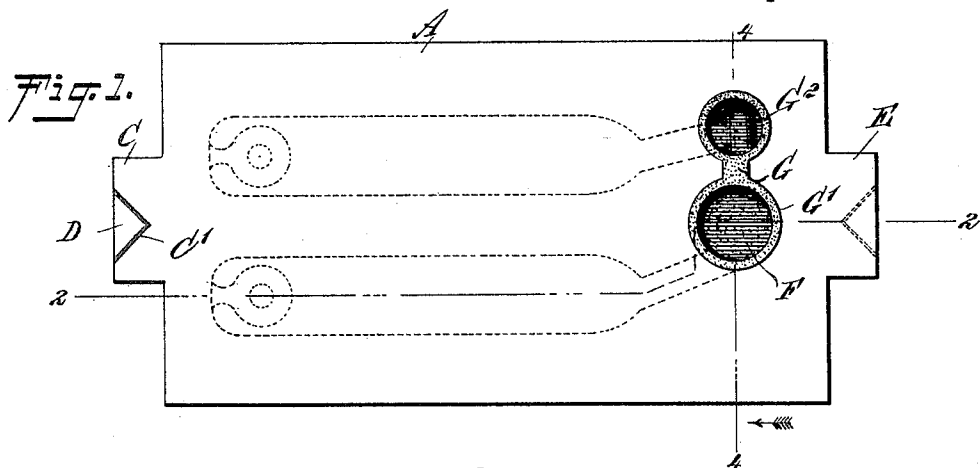


(No Model.)

R. H. WILSON.
MOLD.

No. 581,640.

Patented Apr. 27, 1897.



WITNESSES:

William P. Gaebel.
H. L. Reynolds.

INVENTOR

R. H. Wilson.

BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ROBERT H. WILSON, OF BOONTON, NEW JERSEY.

MOLD.

SPECIFICATION forming part of Letters Patent No. 581,640, dated April 27, 1897.

Application filed December 26, 1896. Serial No. 617,067. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. WILSON, of Boonton, in the county of Morris and State of New Jersey, have invented a new and Improved Mold, of which the following is a full, clear, and exact description.

My invention relates to that class of molds which are intended for rapidly producing large numbers of some particular object, and hence are formed of metal or similar material which is not destroyed by casting.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a top plan view of my mold. Fig. 2 is a top plan view of the nowel or under half of the mold. Fig. 3 is a longitudinal section taken on the line 2 2 of Fig. 1, and Fig. 4 is a cross-section taken on the line 4 4 of Fig. 1.

My device consists of two plates having the mold formed in their opposing surfaces, and provided with automatic centering means by which they are made to register by simply sliding the cope upon the nowel until stopped by the centering devices; also of a removable and insertible pouring-gate and riser, which is made in one piece of a refractory earthy material, and which protects the mold at the points where the heat of the metal is most likely to affect it, and also enables the gate to be easily removed.

The mold shown in the drawings is one adapted to casting sash-weights. The same principles may, however, be used in casting any other article. The mold is preferably made of iron, and consists of the two members A and B, the former being the cope and the latter the nowel. These parts are formed with cavities H H, shaped to correspond with that of the desired casting. In this respect they are made like the usual mold. At one end of these molds gates *h* are formed, connecting with the pouring-gate G' and riser G². The nowel is formed with a recess beneath the lower end of the pouring-gate, which recess is filled with a block or plate F of refractory material, adapted to receive the metal when first poured into the gate G', and thus prevent the cutting of the iron forming the nowel or lower portion of the mold. This

block F may be readily renewed when cut out by the hot metal. The riser and pouring-gate are formed as a mold-section G in one piece and of suitable refractory material. The outline of this is shown clearly in Fig. 1. The cope is provided at this point with a hole adapted to receive this removable section and has sides which are approximately parallel, so that the section may be readily inserted or removed therefrom and will be held snugly when in place. This section may be made in quantities, if desired, so that one may be readily inserted when the one in use has been injured or destroyed in any manner.

In pouring hot metal into an iron mold the metal of the mold is liable to be gradually burned by the action of the hot metal at the point where the stream first strikes the mold. In my mold, as shown in the drawings, this is provided against by the insertible member G, containing the pouring-gate and riser, and by the insertible block or plate F, located beneath the same.

The nowel is provided with two ribs B' upon its lower side and extending longitudinally therewith. These ribs serve to strengthen the lower portion of the mold and are also made thicker at one end than the other, so that the pouring end of the mold is higher than the opposite one. This insures better flow of the metal into the mold. Each member of the mold is provided with the half of a locking mechanism, which will automatically center the two parts by sliding the cope upon the nowel until it is stopped by the centering device. This centering device consists of a lug E upon one end of each member of the mold, which lug is provided with a pin D, triangular in horizontal cross-section and extending beyond the parting surfaces of the mold. The other end of each member is provided with a lug C, having a triangular notch C' formed in the outer end thereof, which notch corresponds in shape with the triangular pin D. The two halves of the mold are provided with the notched lug C and triangular pin D upon opposite ends, so that the notched lug upon one end of one member of the mold engages the triangular pin upon the other end of the other member of the mold. In consequence, when the cope is slid downward upon the upper surface of the nowel,

the pins and the notches will engage each other and bring the two halves of the mold into exact registry. This makes the exact placing of the two parts certain and quick of accomplishment, and also provides for free and unrestricted expansion of the parts under the influence of heat, and thus prevents undue strains.

In order to provide for the lifting effect of the iron on the mold, the upper half or cope is made heavier than the lower half or nowel. With this device it is possible to very rapidly pour articles, such as that for which the mold as shown in the drawings is designed. The same form of mold can, of course, be made for casting many other articles.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A metallic mold having its cope provided with mold-cavities and with an elongated opening at the side of said cavities and extending therethrough from top to bottom, a pouring-gate and riser formed in one piece and of refractory earthy material, said device being removably inserted in said opening and having communication with the cavities, a nowel provided with a recess below the afore-

said opening in the cope, and a block of refractory earthy material removably received in said recess, being located directly beneath said pouring-gate and riser, as and for the purpose set forth.

2. A mold having a metal body, the cope of which is provided at one end with a notch of angular shape opening toward one end and at the other end with a projection of corresponding angular section, a pouring-gate and riser formed in a single piece of refractory earthy material and removably inserted in said cope, and the nowel provided with a projection and notch arranged to automatically register with the aforesaid projection and notch when the cope is slid thereon, a recess beneath the pouring-gate and riser and in which is removably inserted a block of refractory material, and the strengthening-ribs extending longitudinally of the under face of said nowel and holding said mold in an inclined position, as and for the purpose set forth.

ROBERT H. WILSON.

Witnesses:

JAMES L. RINGLEIB,
JAMES TRIMBLE.