Feb. 6, 1934. F. C. ELDER 1,945,887

APPARATUS FOR CASTING BILLETS

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Fig. 1.

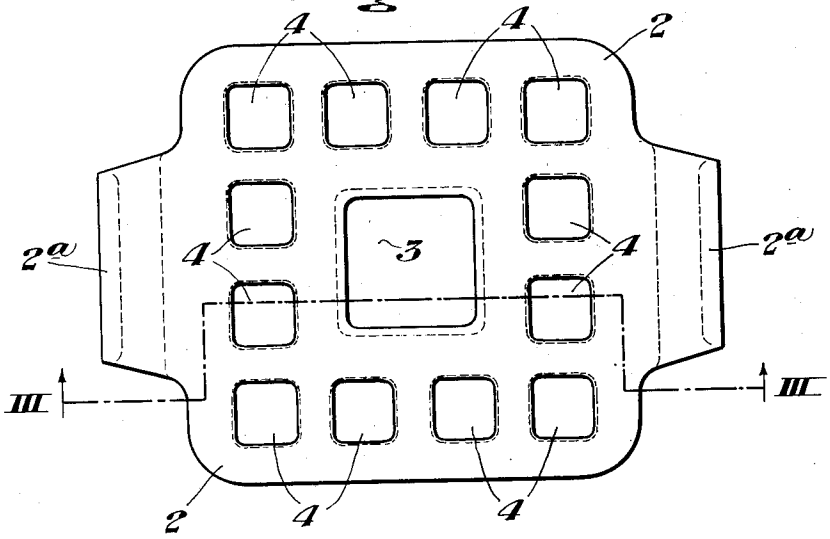

Fig. 2.

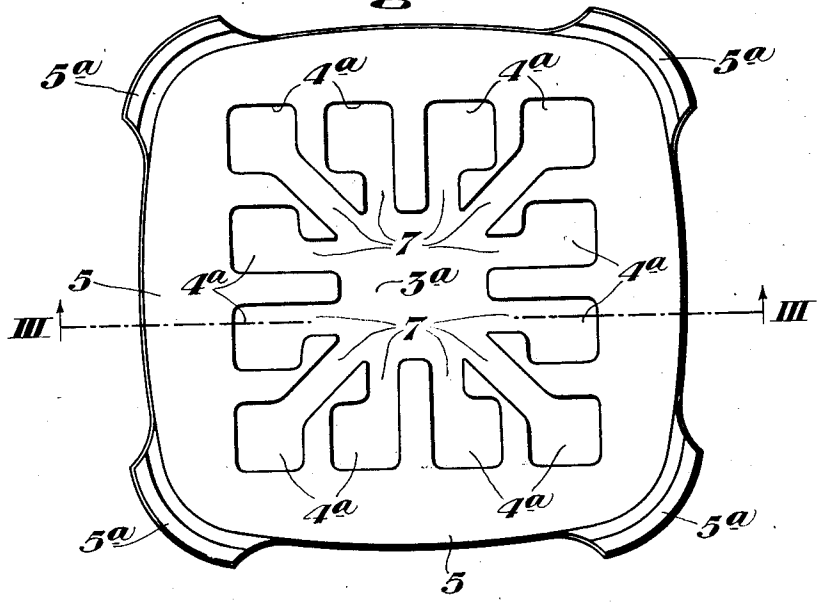

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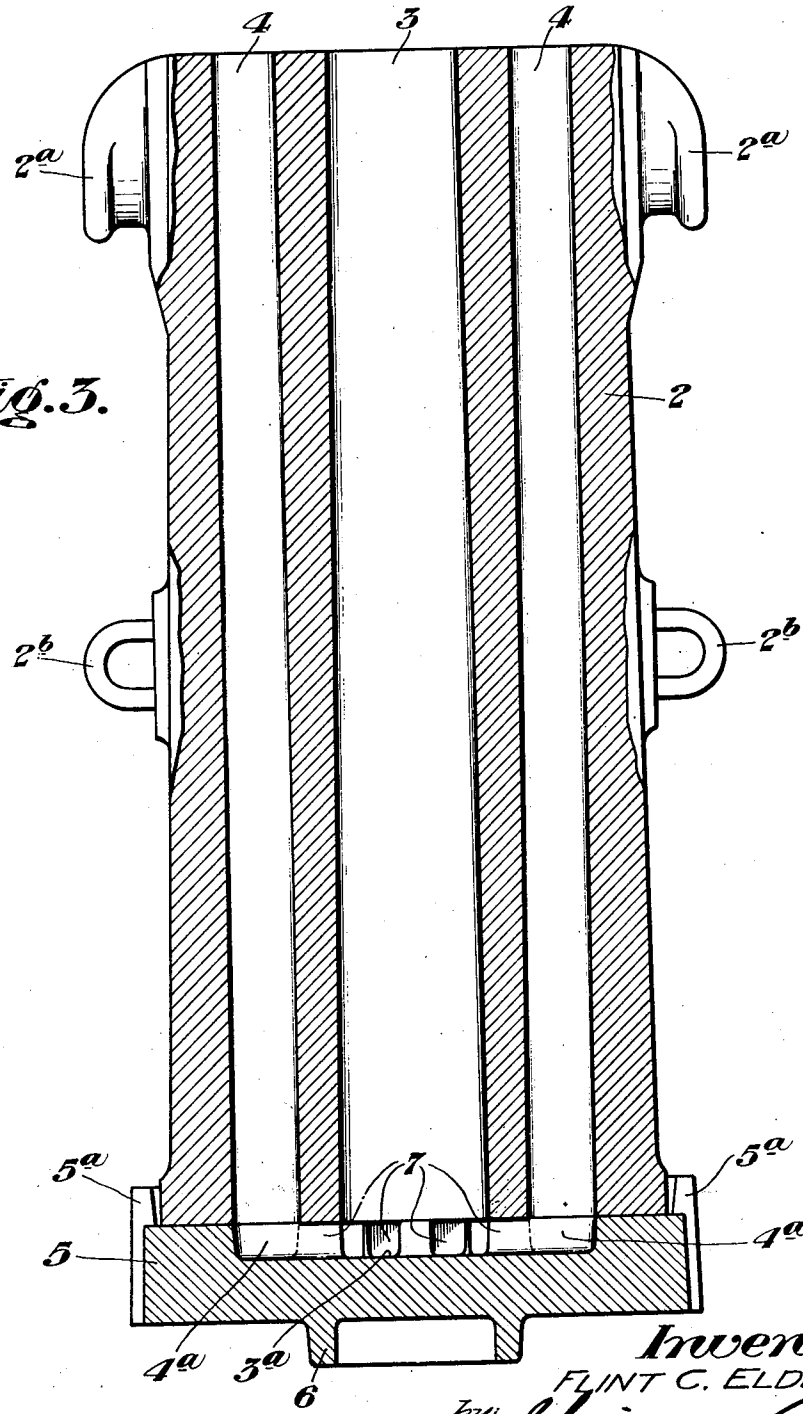
Fig. 3.



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Patented Feb. 6, 1934 1,945,887

UNITED STATES PATENT OFFICE

1,945,887

APPARATUS FOR CASTING BILLETS

Flint C. Elder, Cleveland Heights, Ohio, assignor to The American Steel and Wire Company of New Jersey, a corporation of New Jersey

Application December 31, 1932
Serial No. 649,717

1 Claim. (Cl. 22—139)

This invention relates to improvements in a method and apparatus for casting billets or blooms, and has among its objects the provision of a novel method for pouring the metal of the billet or bloom, together with a novel type of mold.

Other objects of the invention are to provide a method and apparatus in which billets are obtained in a rapid and efficient manner, and of suitable commercial size, reducing the number of processing or metal working operations usually necessary for billets as produced by rolling in accordance with the present practice, and in particular avoiding the use of a blooming mill.

These and other objects will be apparent after referring to the drawings, in which:

Figure 1 is a plan view of the upper part of the apparatus of the invention.

Figure 2 is a plan view of the lower part of the apparatus.

Figure 3 is a sectional elevation of the assembled apparatus and taken on the lines III—III of Figures 1 and 2.

Referring more particularly to the drawings, the numeral 2 indicates a mold provided with a large vertically disposed central recess 3 and a series of surrounding smaller vertical recesses 4, all of which extend through the ends of the mold. The volume of the central recess 3 is substantially an even multiple of the volume of the surrounding recesses 4.

A sprue plate 5, which also serves as a stool, having enlarged and extended corner portions 5^a, is adapted to rest upon an integral seat 6 and support the mold 2. The plate 5 is provided with a central recess 3^a, a series of surrounding recesses 4^a, forming extensions for the recesses 3 and 4, respectively, of the mold, and gutters 7 for connecting the same.

A pair of bosses 2^a and hook-eyes 2^b are provided for facilitating the "stripping" of the mold 2.

In operation, molten metal is poured in the upper end of the central recess 3 of the mold, filling the central recess 3^a, the gutters 7 and the recesses 4^a in the sprue plate, and rises into the recesses 4. This is continued until the entire mold is filled. The mold is then "stripped" and the runners formed by the gutters 7 removed, resulting in a plurality of commercial billets.

While I have shown and described one specific embodiment of my invention it will be understood that I do not wish to be limited exactly thereto, since various modifications may be made without departing from the scope of my invention, as defined in the following claim.

I claim:

A mold comprising a one-piece mold body having a central billet recess, a plurality of adjacent billet recesses, the volume of said central billet recess being an even multiple of the volume of said adjacent billet recesses, and a stool having gutters connecting said adjacent recesses with said central recess.

FLINT C. ELDER.