No. 707,279. Patented Aug. 19, 1902.

J. E. SWEET.

INGOT MOLD.

(Application filed Mar. 28, 1902.)

(No Model.)

Fig. 3.

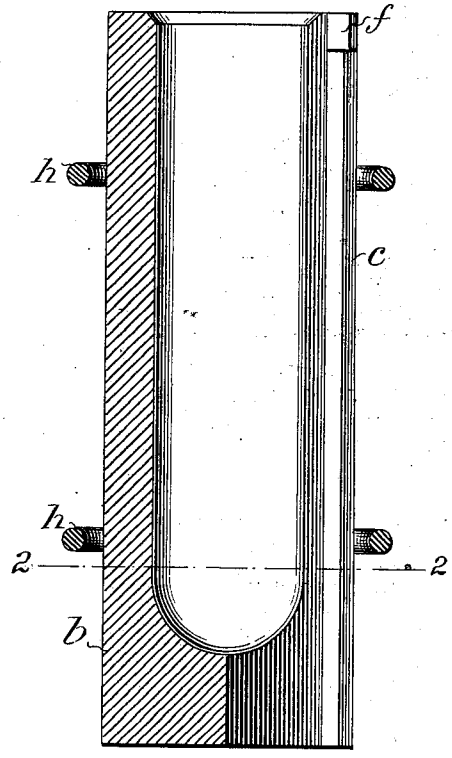


Fig. 4.

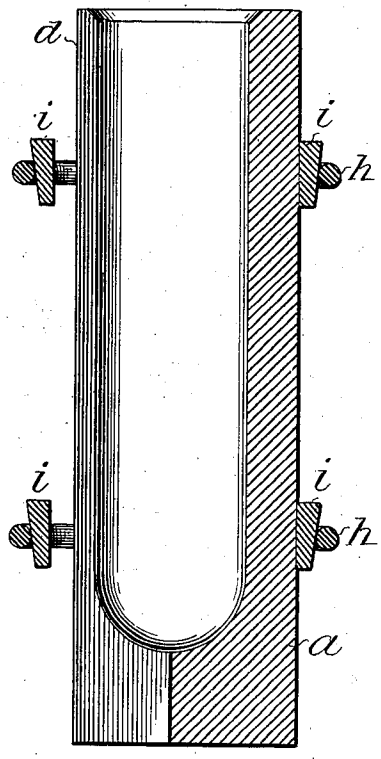


Fig. 1.

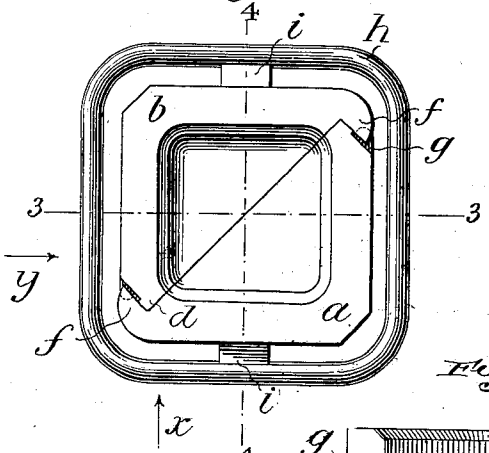


Fig. 2.

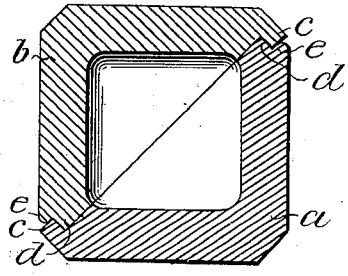
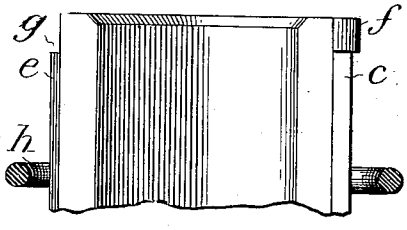


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN E. SWEET, OF SYRACUSE, NEW YORK.

INGOT-MOLD.

SPECIFICATION forming part of Letters Patent No. 707,279, dated August 19, 1902.

Application filed March 28, 1902. Serial No. 100,394. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. SWEET, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Ingot-Molds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide a means for producing ingots of cast-steel of better form and of greater perfection than has been practicable by the means hitherto in general use and at less expense.

To this end my invention relates to metal molds, preferably of cast-iron, not those of the the larger sizes, such as are commonly used for Bessemer and open-hearth steel castings, but those used for casting tool-steel, which are universally made in halves, usually parted flatwise and tongued and grooved together. As the two halves have to be cast from different patterns and planed separately, it is quite difficult and practically impossible under ordinary conditions to keep the patterns from warping and to so conduct the planing that the two halves will accurately match, the result being that the ingots cast in such molds are more or less uneven on the sides and show fins, making it necessary to do considerable chipping to prevent seams and streaks in the finished product. To avoid all this expense and the unsatisfactory results notwithstanding, I make my improved mold in two identical halves, cast from the same pattern or from facsimile patterns, said halves thus being exact counterparts, having the dividing plane of the mold diagonal with relation to the ingot, which is commonly of approximately square section with rounded corners. These said halves or members are not encumbered with mechanical appendages for joining them—such as keys, levers, links, bolts, or hinges—but are simple blocks of cast metal of identical form which can be set end to end in the planing-machine and planed by the same stroke and tool, so that no matter what the imperfections of the pattern may have been the completed products are facsimiles and when placed together will accurately coincide at the juncture. They are held together when in use by the customary detachable rings and wedges.

In the drawings forming a part of this specification, Figure 1 is a plan view of the mold joined up for use. Fig. 2 is a transverse section of the mold on line 2 2, Fig. 3. Fig. 3 is a longitudinal section of the mold, taken on line 3 3, Fig. 1, with the part *a* removed, viewed in the direction of arrow *x*. Fig. 4 is a longitudinal section of the mold, taken on line 4 4, Fig. 1, with the part *b* removed, viewed in the direction of arrow *y*. Fig. 5 is an elevation with the lower part broken away of either half of the mold viewed on a line normal to the dividing plane, showing the lug and recess for locating the parts vertically.

The dividing plane of the mold is through opposite corners *a b*, being the opposed halves or members, each having a longitudinal ledge *c*, Figs. 2, 3, to engage with the angle *d* of the counterpart and prevent lateral slipping when clamped. A rounded lip or bead *e* is supplied outside the angle *d* for symmetry and security. To locate and fix the contacting halves vertically, I also employ interlocking means, as shown, for example, in Figs. 1, 3, and 5, where *f* is a lug or horn on each member engaging with a recess or seat *g* on the opposed member; but any equivalent means is within the scope of my invention.

h h are the rings usually employed for confining the two members together, and *i i* are the wedges used in conjunction with said rings.

I claim and desire to secure by Letters Patent—

An ingot-mold for metal castings, consisting of identical halves finished at the same time in a machine by the same operation, free from all attached means for securing the halves together, each half provided with engaging means fitting the other half for preventing transverse displacement, and interlocking means for preventing longitudinal displacement, each upon the other, substantially as specified.

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

JOHN E. SWEET.

Witnesses:

W. H. THOMAS,

W. T. POWERS.