

(No Model.)

W. SCHWAN.
METHOD OF CASTING WINDOW WEIGHTS.

No. 535,510.

Patented Mar. 12, 1895.

Fig. 1.

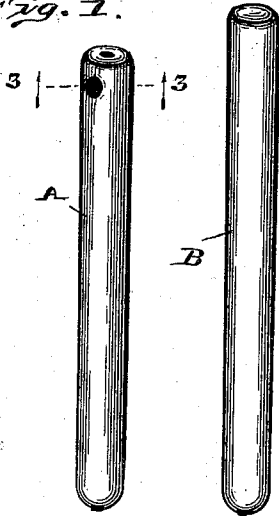


Fig. 4

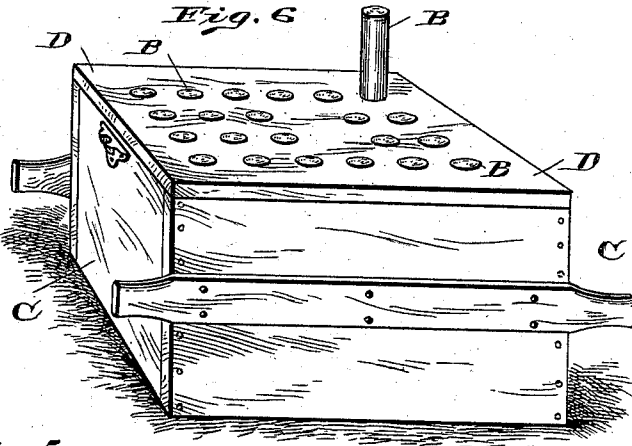


Fig. 2.



Fig. 5.



Fig. 3.



Fig. 7.

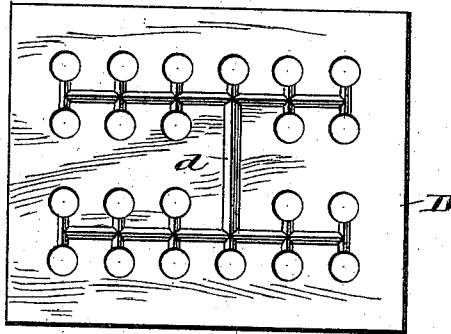


Fig. 9.

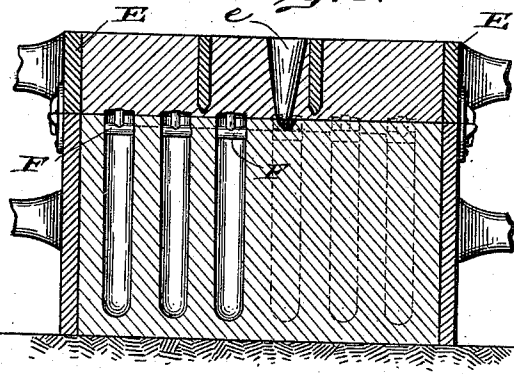


Fig. 8.

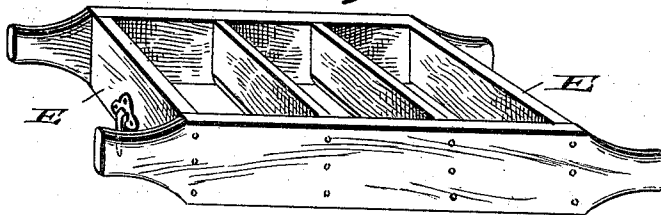


Fig. 10.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM SCHWAN, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO EWALD
OVER, OF SAME PLACE.

METHOD OF CASTING WINDOW-WEIGHTS.

SPECIFICATION forming part of Letters Patent No. 535,510, dated March 12, 1895.

Application filed November 23, 1894. Serial No. 529,733. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SCHWAN, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Methods of Casting Window-Weights, of which the following is a specification.

My invention has for its object a method whereby window weights and such like castings may be produced but with little trouble in molding, and without irregularities upon the sides.

The method, and the apparatus which I employ in carrying it out, will be first fully described, and the novel features thereof then pointed out in the claim.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a perspective view of a window weight cast in accordance with my said invention; Fig. 2, a view of the bottom end thereof; Fig. 3, a horizontal section looking upwardly from the dotted line 3 3 near the upper end thereof; Fig. 4, a view of the pattern from which it is cast or molded; Fig. 5, a view of the bottom end of the pattern; Fig. 6, a perspective view of the lower part or "drag" of the molding flask with the templet board and gate pattern placed thereon and filled with patterns for the window weights to be cast, one of said patterns being shown as only partially inserted; Fig. 7, an under side plan view of the combined templet and gate pattern; Fig. 8, a perspective view of the frame of the "cope" or upper portion of the molding flask; Fig. 9, a vertical sectional view through the flask after the molding has been done, and all is ready for the casting, and Fig. 10, a perspective view of one of the cores used to form the orifices in the upper end of the window weight.

The weight A is or may be of substantially the ordinary and well known form, except that it is perfectly smooth upon its sides, and is adapted to have a figure representing its weight upon the end, instead of upon one side as usual.

The orifices in the upper end are in the form of an inverted T, the longitudinal perforation extending in a short distance, and

lateral perforations, extending thence each way to the sides, which perforations are for the purpose of receiving the window cord as usual, and the latter of which should be of larger diameter than the former so as to conveniently receive the knot on the end of said cord.

The patterns B are exactly like the weights A, except that they are somewhat longer and have no perforations. They are tapered slightly and are smallest at the lower end, to facilitate the operation of withdrawing them from the sand.

In molding weights by my improved process, the drag C, which preferably has no cross-bars, is first filled with sand, of the appropriate quality, and in the proper condition, and packed to the proper degree of hardness, as is well understood by persons skilled in the art. I have found it preferable in filling the drag with sand to first fill it heaping full, moderately firm, but without ramming, and then level it off with the hand. This being done, the combined templet and gate pattern D (in foundries called the "false parting board") is placed thereon and firmly forced into place, so that the gateways will be impressed in the surface of the sand, and its lower surface will rest firmly upon the upper edge of the drag, as will be readily understood.

A sufficient quantity of patterns B having been provided they are forced down through the perforations in the templet D nearly the full length, so that their upper ends project slightly above the surface of said templet, sufficiently to form shallow impressions on the sand in the cope E. Parting sand is then dusted on the surface of the templet D, the gate-plug for gateway *e* is set, and the cope put in place and filled with sand, which is packed tightly down against the surface of the templet D and rammed in solid. Shallow impressions are formed in the under side of the sand in the cope by the slightly projecting ends of the pattern B, which shallow impressions, of course, register exactly with the weight mold matrices in the body of the sand in the drag, when said two surfaces come together, as shown in Fig. 9 and as will be readily understood. The main gateway *e* through the sand of the cope, formed by the gate plug above referred to,

connects with the main gateway formed in the sand of the drag by the gate pattern *d* on the combined templet and gate pattern D. After the sand has been properly packed into the cope or upper part of the flask, said cope is removed and set to one side, the patterns B are withdrawn, and the combined templet and gate pattern D removed. The cores F, the horizontal portions whereof are slightly longer than the diameter of the molds which have been formed by the patterns, are then put in place in the upper ends of said molds, the ends of said cores thus pressing slightly into the walls in the sand and are thereby held in place. The cope is then again replaced, as shown in Fig. 9, which presses the cores in uniformly, and the flask, being properly weighted or secured, is ready for molding the window weights, which is accomplished by pouring the molten metal in through the gateway *e*, whence it distributes itself to the several molds, in the manner which will be readily understood by those skilled in the art.

The window weights, when cast, are, as before stated, entirely smooth upon their surfaces, while the work of molding is very much less than by former methods. I thus produce a superior article at a reduced cost. Of course,

the cope is weighted or otherwise held with sufficient force to prevent it from rising when the molten metal is poured in.

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

The method of molding window weights which consists in providing a drag properly filled with sand, placing a combined templet and gate pattern over said drag, forcing patterns of the shape of the weight to be produced through the holes in said templet to the required distance, placing the cope above said templet, removing the cope, templet and patterns, inserting cores in the upper ends of the molds thus formed, replacing the cope on the drag, and pouring the metal in through the gate ways thus formed, thereby producing window weights with smooth sides and at a reduced cost, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 19th day of November, A. D. 1894.

WILLIAM SCHWAN. [L. S.]

Witnesses:

EWALD OVER,
JAMES A. WALSH.