S. DYER.

MOLD FOR SASH WEIGHTS.

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904,519. Patented Nov. 24, 1908.

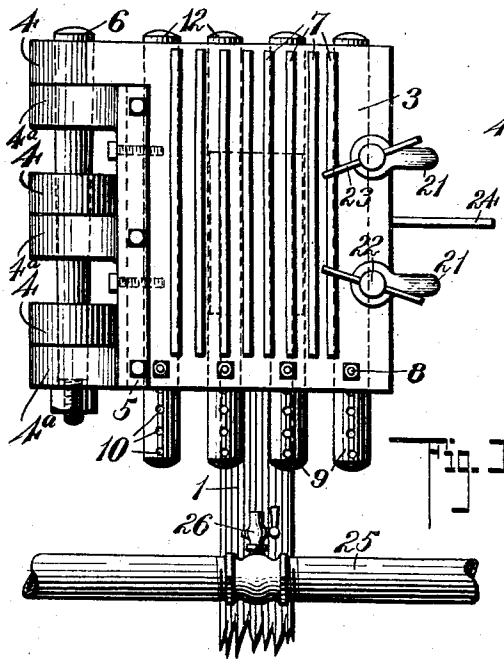


Fig. 1.

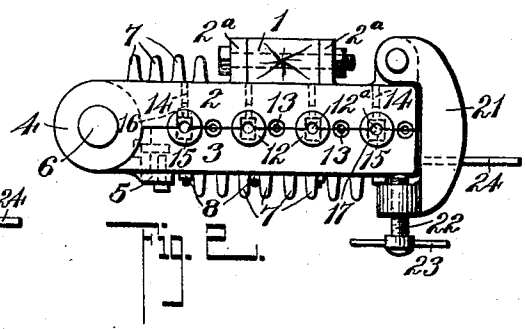


Fig. 2.

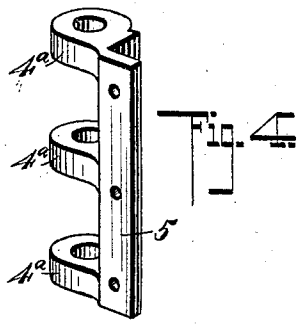


Fig. 4.

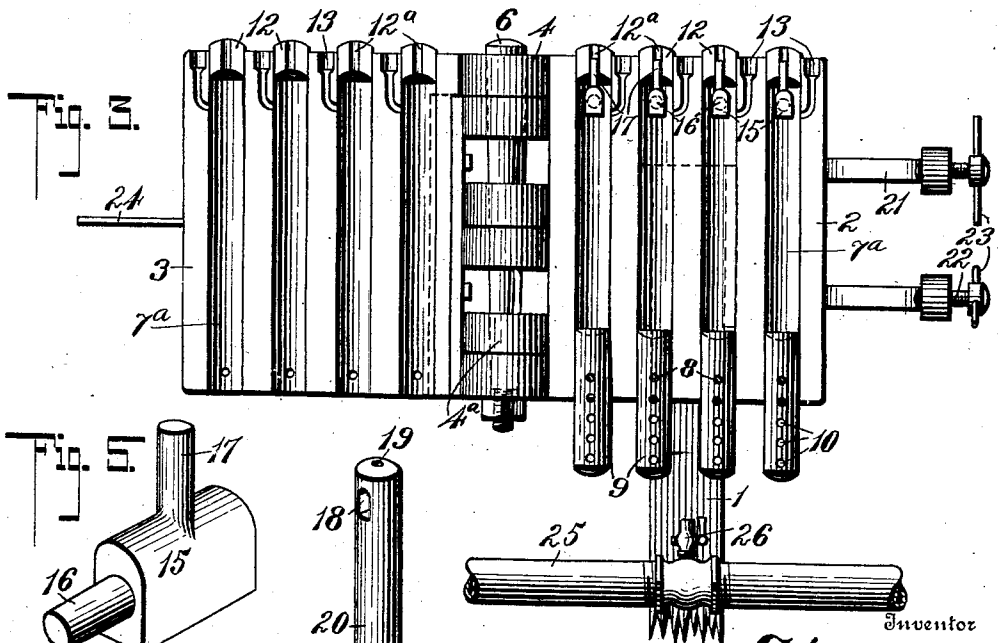


Fig. 3.

Fig. 5.

Fig. 6.

Witnesses

Philip H. Burch

E. B. McBath

Inventor

S. Dyer;

By O'Meara & Burch

Attorneys

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE

SAMUEL DYER, OF MUNCIE, INDIANA.

MOLD FOR SASH-WEIGHTS.

No. 904,519. Specification of Letters Patent. Patented Nov. 24, 1908.

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To all whom it may concern:

Be it known that I, SAMUEL DYER, a citizen of the United States, residing at Muncie, in the county of Delaware and State of Indiana, have invented a new and useful Improvement in Molds for Sash-Weights, of which the following is a specification.

This invention relates to a mold for molding window sash weights.

The object of the invention is a mold in which weights of various lengths can be formed, and in which each weight will be provided adjacent its upper end with a transverse eye intersected by a vertical end bore, each end of the weight being slightly convex.

The invention consists of the novel features of construction hereinafter described, pointed out in the claims, and shown in the accompanying drawings, in which;—

Figure 1 is a side elevation of one of the molds closed. Fig. 2 is a plan view of one of the molds closed. Fig. 3 is a side elevation of a mold in open position. Fig. 4 is a detail perspective view of a form of hinge employed with the mold. Fig. 5 is a perspective view of a core block. Fig. 6 is a perspective view of a sash weight as formed in my mold.

In these drawings 1 represents a suitable upright post, and in the manufacture of sash weights I prefer to place posts firmly in the ground and arranged in a circle about the furnace, each post carrying a mold, and as shown in the drawings each mold is preferably designed to mold four weights, although it will be obvious that the size of the molds and the number of weights formed in each mold can be changed without departing in any way from my invention.

Each mold consists of a fixed section 2 and a movable section 3, the fixed section being provided with lugs 2^a which embrace the post 1 and are bolted thereto, the said section being supported by the post at a suitable distance above the ground to enable the workman to properly attend to the mold. To the fixed section 2 is hinged a section 3 said hinge being preferably formed by means of perforated lugs 4 formed on the fixed section 2 and perforated lugs 4^a formed upon an angle leaf 5 which is bolted to the movable section 3, a suitable pintle 6 passing through the said lugs. Each of these sections is provided upon its exterior face with a plurality of ribs 7, the object of said ribs being to increase or facilitate the radiation of heat from the mold. The corrugating or fluting of the outer face of the mold, or any other convenient method of increasing the exterior of the surface area of the mold would also accomplish this purpose, and the corrugations or ridges formed thereby would be considered as ribs in the sense in which I employ this term. Upon their inner faces the sections 2 and 3 are vertically grooved as shown at 7^a, said grooves being preferably four in number and when the two sections are close together the registering of these grooves forms four cylindrical vertically arranged bores in which the weights are molded. These bores are upwardly and downwardly open and in their lower portions adjustably fit cylindrical bars 9. The bars 9 are each provided with a series of transverse perforations 10, and bolts 8 which pass through suitable bolt openings in the molds pass also through said perforations 10 and hold the bars 9 in place. By providing each bar with a number of perforations I allow for adjustment of the bars 9 at any suitable height. The upper inner faces of these bars are concave, said bars forming the bottoms of the individual molds, and by their vertical adjustment regulating the length of the weight mold. By concaving the upper end portions of the bars the lower end of each weight is formed convex, and by so forming the weight it will move more freely when hung in position within a window sash frame, as the end is not as liable to catch, or hang, as would be the case of a weight having a flat end. In the upper portions of the bores formed by the grooves 7^a are placed suitable blocks 12, said blocks being semi-cylindrical, and being carried by each of the sections 2 and 3, and each block is also provided with a central vertical groove 12^a, is convex upon its lower inner end, and concave upon its upper outer end.

When the two sections are swung together the blocks form a cylindrical plug provided with a central bore, and the convex inner ends of these plugs round the upper end of the weights, and the concave upper faces of the plugs, which project above the top of the mold prevent molten metal from flowing into the grooves 12^a formed in said blocks and by clogging the same preventing escape of gases, as there would be danger of its doing if the blocks were formed with flat ends, or they were flush with the top of

the mold. Suitable metal filling vents 13 are provided by means of which the molten metal may be poured into the bores by the registering of the grooves 7ª. In the fixed section 2 and adjacent the top of said section are formed transverse bores 14 which open into the grooves 7ª of said section immediately below the blocks 12. In order to form the eye of the weight, and also to form the vertical end bore communicating with the eye, a core block 15 is placed in each bore 7ª, said block being provided with a pin 16 which enters a bore 14 thus locking the core block 15 in position, and with an upwardly projecting rod 17 which enters the bore of the plug formed by the blocks 12, thus forming an eye 18 and a vertical bore 19 in the complete weight 20.

To lock the two sections together I hinge angled arms 21 to the fixed section 2 and suitable threaded bolts 22 having operating rods 23 passing through their heads, bear upon the movable section 3 and lock the same in closed position. A handle 24 is secured to the movable section 3 by which it may be readily swung into open or closed position. I also run an air pipe 25 from the cupola fan beneath the molds, providing the said pipe with a suitable valve controlled vent, so that the molds can be cooled by air from the said fan when desired.

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

1. A mold formed in two sections, one of said sections being fixed, and one movable, semi-cylindrical grooves being formed in each of said sections, the grooves of one section alining with those of the other, bars having convex ends adjustably held in said grooves, plugs having central openings therethrough fitting in the ends of said grooves opposite the bars, each of said plugs being formed of two sections, and cores held in said grooves and having projecting rods fitting the openings in the plugs.

2. A sash weight mold comprising a fixed and a movable section, said sections being hinged together, registering semi-cylindrical grooves being formed on the inner faces of each section, transverse bores being formed in the fixed section and opening into said grooves, semi-cylindrical blocks also provided with grooves, said blocks fitting in the upper ends of the grooves of the sections, vertically movable bars held in the grooves of the sections, said bars having convex inner ends and forming bottoms for the bores formed by the registering of the grooves of the sections when they are closed, and eye forming cores arranged in said grooves, said cores having pins fitting in the transverse bores of the fixed section, and having rods extending into the grooves of the semi-cylindrical blocks.

3. A device of the kind described comprising a fixed section vertically grooved upon its inner face, a hinged section vertically grooved upon its inner face, means for locking the two sections together, the grooves of the two sections forming vertical bores, transversely perforated bars adjustably held in the lower portions of said bores, sectional plugs held in the upper portion of said bores, the inner faces of said plugs being convex and their outer faces being concave and extending above the sections of the mold, the sections forming said plugs being grooved to form central bores through said plugs, the fixed mold section having transverse bores opening into the grooves formed in the section adjacent said plugs, an eye forming core fitting in the grooves formed in the mold sections, pins carried by said cores engaging the said transverse grooves, and rods carried by the cores, said rods projecting into the bores of the sectional plugs.

4. A mold formed of two hinged sections, one of said sections being held stationary, means for locking the two sections together, the sections having their inner faces grooved to form vertical bores, ribs formed upon the outer face of said sections, vertically adjustable bars closing the lower ends of the bores, plugs having central openings arranged in the upper ends of the bores, said bores having filling vents communicating therewith beneath said plugs, and eye forming cores held in the bores, said cores having upwardly projecting rods extending into the plugs.

5. The combination with a sectional hinged mold having the inner faces of the sections longitudinally grooved, of plugs formed in semi-cylindrical sections, said sections fitting in said grooves, and each plug section being centrally and longitudinally grooved, the inner ends of said sections being convex and the other ends of said plug sections being concave and projecting above the upper ends of the mold sections, said mold sections being provided with filling vents adjacent said plugs, as and for the purpose set forth.

SAMUEL DYER.

Witnesses:
JOHN F. BLACK,
E. W. WILEY.