No. 769,959. PATENTED SEPT. 13, 1904.

J. E. PRICE.

APPARATUS FOR MOLDING SASH WEIGHTS.

APPLICATION FILED MAR. 8, 1904.

NO MODEL.

Fig. 2.

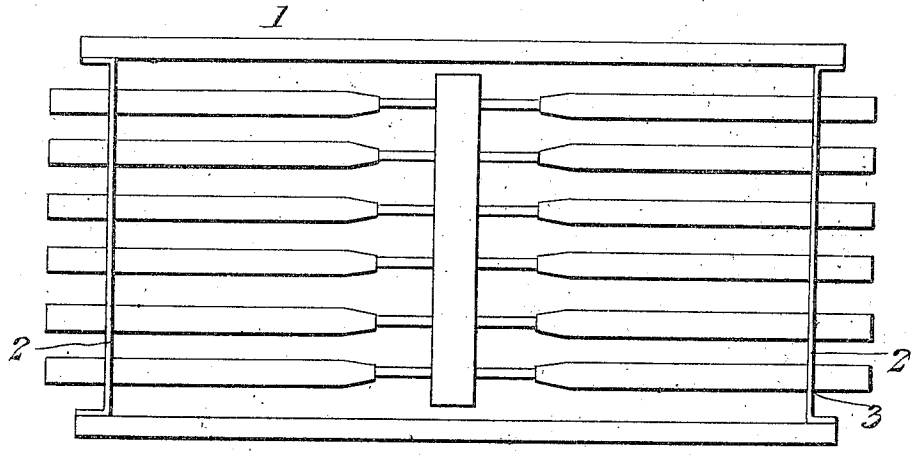


Fig. 1.

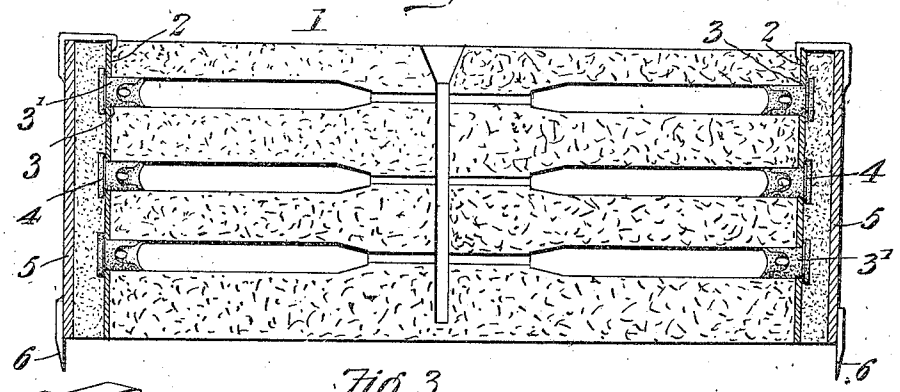


Fig. 3.

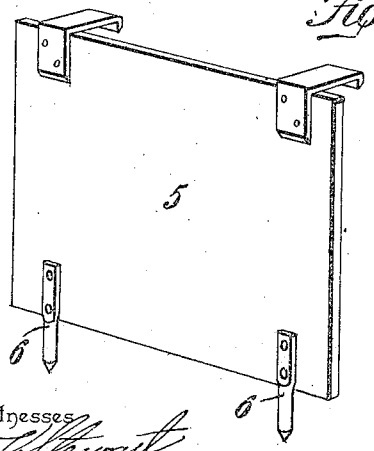
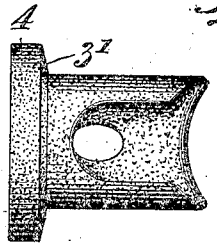


Fig. 4.



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No. 769,959. Patented September 13, 1904.

UNITED STATES PATENT OFFICE.

JONATHAN E. PRICE, OF CHATTANOOGA, TENNESSEE.

APPARATUS FOR MOLDING SASH-WEIGHTS.

SPECIFICATION forming part of Letters Patent No. 769,959, dated September 13, 1904.

Application filed March 8, 1904. Serial No. 197,105. (No model.)

To all whom it may concern:

Be it known that I, JONATHAN E. PRICE, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented a new and useful Apparatus for Molding Sash-Weights, of which the following is a specification.

This invention relates to improvements in the manufacture of sash-weights, and particularly to the formation of the molds in which such weights are cast, one of the principal objects of the invention being to improve the appearance of the eye and cores and prevent the formation of fins or sharp projections which would tend to cut the sash-cord and which ordinarily result from the use of metallic chills such as are commonly employed in the manufacture of sash-weights.

A further object of the invention is to provide a mold in which provision is made for some slight yielding of the mold when the hot metal is introduced.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in the novel construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a sectional elevation of a sash-weight mold, showing the flask and eye-cores arranged in accordance with the invention. Fig. 2 is a plan view of the same, showing the arrangement of a series of molds and their connecting-gates. Fig. 3 is a detail perspective view of one of the end boards used as a support for the core members. Fig. 4 is a detail perspective view of one of the eye-cores.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

In the manufacture of sash-weights as ordinarily practiced the patterns are introduced in a flask, the end walls of the flask being provided with suitable openings through which the pattern extends. The sand is then rammed around the pattern, and after the gates or other portions of the mold are properly formed the patterns are withdrawn through the openings in the end of the flask and metallic chills are introduced for the formation of the cord-attaching eye at the end of the weight. The construction of the eye end of the weight is such that the metallic chill is necessarily made in two pieces, and as a result a fin or sharp projection will be formed at the eye, and thus if not removed by hand-dressing will tend to cut the sash-cord, and hand-work is objectionable on account of the expense.

In carrying out the present invention the principal object is to provide for the formation of the eye ends of the weights without danger of the formation of projections or the like, so that the weight is in condition for the market as soon as it is removed from the mold.

The flask 1 is of the usual character and is provided with end plates 2, having apertures 3, through which the patterns are introduced, the patterns being of any ordinary type and provided, preferably, with projections for the formation of the gateways through which the metal is run. After the sand has been properly rammed around the patterns and the latter have been withdrawn longitudinally through the openings in the end of the flask an eye-core 3′ is introduced through each of the openings and projects into the end of the mold. The eye-core is provided with an outer flange 4, which limits the extent of movement, and the shape of the core, which is shown more clearly in Fig. 4, is such as to form an eye having perfectly smooth walls to which the sash-cord may be fastened without danger of cutting.

The eye-cores are made by suitable molding-machines and baked in the manner usually practiced in the formation of small cores, this well-known process being carried on at very small expense.

When the metal is poured into the mold, there is danger of the cores being forced from position, and where chills are used they are ordinarily confined in place by rigid locking-

bars or similar devices carried by the end plate or by the stationary portions of the flask. This method of fastening them could not be successfully used with baked sand cores, as the latter under pressure of the metal would in many cases be broken. In order to secure the cores in position, an auxiliary plate 5 is employed at each end of the flask. These plates are provided with pointed spurs 6 at their lower edges, the spurs being forced into the floor at some distance from the end of the flask, and to the top of each of the removable cores is secured a clip, which extends over and partly embraces the apertured end plate 2, so that the board will be held a fixed distance from the end plate. Between the end plate and the board sand or similar material is introduced and rammed in order to hold the cores in place and forming a more or less yieldable backing for the cores, so that they may be moved slightly when subjected to the action of the metal, but without danger of breaking. After the metal has cooled sufficiently jacks or other hoisting devices are placed under the flask and the latter is raised, breaking the cores, the flask being removed in the usual manner and the sash-weights left in the sand for subsequent removal, the process being completed when the sprues are removed.

It is obvious that the invention may be applied to the formation of various other articles, and it is to be understood that the application of the invention to the manufacture of sash-weights is merely typical.

Having thus described the invention, what is claimed is—

1. The combination with a flask having pattern-receiving openings at its opposite ends, of a sand-core member adapted to said openings, and a yieldable supporting means for said core member.

2. The combination with a flask having an end opening, of a sand core fitted within the opening, and a yieldable backing for the core.

3. The combination with a flask having an end opening, of a sand core held within the opening, and a yieldable backing for the core.

4. The combination with a flask having an end opening, of a sand core mounted within the opening, said core having a marginal flange for limiting its inward movement.

5. The combination with a flask having an end opening, of a sand core disposed within the opening, and a yieldable sand backing for said core.

6. The combination with a flask having an end opening, of a core, a detachable auxiliary plate, and a sand cushion between the plate and core.

7. The combination with a flask having an end opening, of a core mounted in said opening, a detachable plate, means for connecting the same to the end wall of the flask, and a sand cushion between the plate and core.

8. The combination with a flask, having an end opening, a core disposed within the opening, a removable plate disposed at a short distance from the end of the flask, engaging spurs carried by the plate, and a sand cushion between the plate and the core.

9. The combination with a molding-flask, having a wall provided with a core-receiving opening, a core therein, of a detachable backing-plate separate from the molding-flask, and means for supporting the same in position at a short distance from the vertical wall of said flask.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JONATHAN E. PRICE.

Witnesses:
J. H. JOCHUM, Jr.,
J. ROSS COLHOUN.