

(No Model.)

J. B. NEFF.
MOLDING APPLIANCE.

No. 525,355.

Patented Sept. 4, 1894.

Fig. 1.

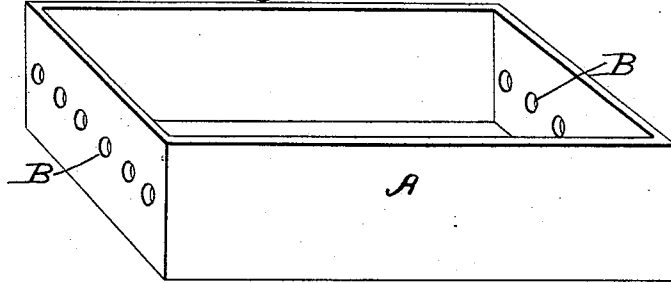


Fig. 2.

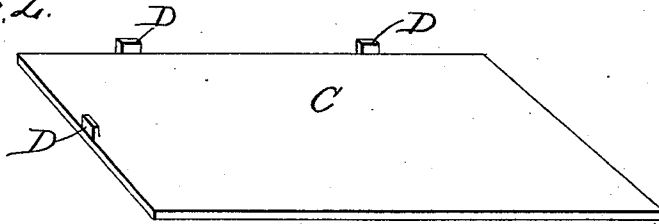


Fig. 3.

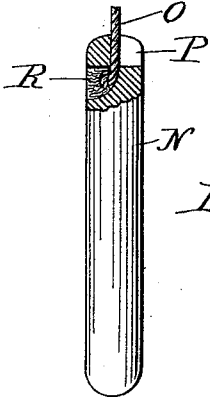
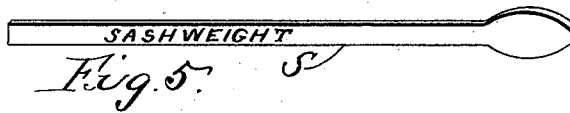
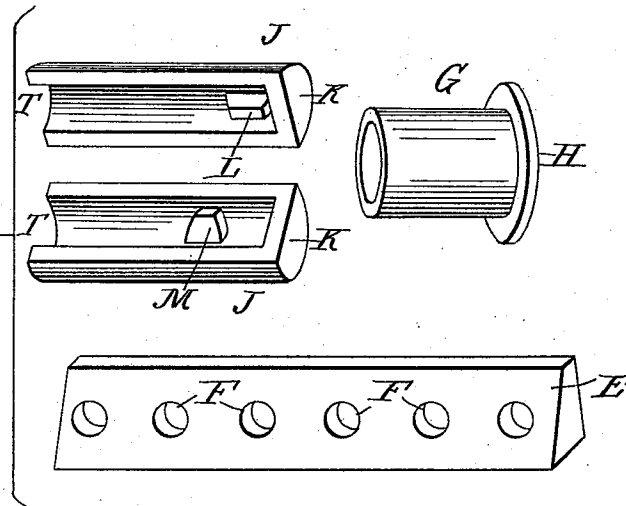


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH B. NEFF, OF BUSHNELL, ILLINOIS.

MOLDING APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 525,355, dated September 4, 1894.

Application filed January 17, 1894. Serial No. 497,166. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH B. NEFF, a citizen of the United States, residing at Bushnell, in the county of McDonough and State of Illinois, have invented certain new and useful Improvements in Molding Appliances; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has reference to means for molding, in which chills are utilized for part of the result, and the ordinary sand mold used for the residue.

In this application my invention is shown as applied to the casting of a peculiar formation of sash weights, in which, in order that said weights may hang in an exact vertical position and clear of the walls of the compartment in which they are hung, there are formed in the suspended upper end thereof a lateral recess to receive the knot on the lower extremity of the suspending rope, and a centrally located vertical opening at the top for the insertion of said rope, and includes means for marking the same with designating letters or figures.

My invention comprises also instrumentalities for coincidentally casting a number of such weights, and also coincidentally casting weights of different lengths. The means employed are a reversible flask, follow-board, suitable collars, and an adjustable gate, and suitable chills. These parts are illustrated in the accompanying drawings in detail, in which—

Figure 1 exhibits one form of flask employed. Fig. 2 is a perspective of the follow-board. Fig. 3 is a perspective of the gate, collar, and chills in detail. Fig. 4 is a perspective of the finished sash weight. Fig. 5 is a perspective of the marking paddle referred to.

A is a rectangular flask, constructed of two sides and two ends, and open at its top and bottom. The flask A is provided in each of its end walls with a horizontal series of openings B.

C is the ordinary follow-board, adapted to

be used, as hereinafter specified, in connection with the flask A, and provided with upwardly extending lugs D to prevent its casual slipping.

E is a gate, somewhat widened at its base, and provided with horizontal openings F.

G is a collar, consisting of a short cylinder, provided at one end with the external annular flange H.

J—J are the respective halves of the chill employed to cast the end of the sash weight, and are each constructed with the one closed end K, and one open end T, and one of them with the internal end core L, which produces the aforesaid end opening in the sash weight, and the other with the central core M, which produces the lateral opening aforesaid in said weight. The chills J—J are semi-circular in cross-section, and therefore, when placed with their flat sides in contact, form a cylinder having one open, and one closed end, with the side of the core M in contact with and overlapping the end of the core L, so as to make the resulting opening, created by said cores, continuous from the side of said weight to the crest thereof. To insure a ready conjunction of the chills J—J, and to hold them in proper mutual relation as well, the upper edge of the core M is slightly beveled toward its apex, and the lower edge of the core L has the same formation in reverse. When the chills J—J are placed together the cores L and M are projected sufficiently past each other to insure the continuity of the opening aforesaid, and their adjacent surfaces are made to fit sufficiently close to prevent the interposition of any of the molten metal.

In Fig. 4, N is the finished sash weight, O the suspending cord, P the vertical opening aforesaid created by the core L, and R the lateral opening caused by the core M. S is the paddle referred to, provided with indicating raised letters.

I will now proceed to describe the method of using the aforesaid parts. The follow-board C is placed upon a level surface, and the flask A placed thereon. The gate E is then seated transversely of the flask A at such locality in the latter as the desired length of the sash weights N may require. In casting two series of such weights of different lengths, the gate E would be placed

proportionately at one side of the center of the flask A. The collar G is then placed on the end of each pattern for said weight, and said pattern introduced into the flask A through the opening B therein; the end of said pattern, on which said collar is placed, resting in said collar within the opening B, and the opposite end of said pattern, which is slightly tapered for that purpose, supported in the corresponding opening F in the gate E. All of the openings B and F having been thus occupied, the flask is then filled with molding sand. The flask and follow-board are then inverted, the latter removed, and the flask suitably filled, on its then upper side, with sand. The patterns and afterward the collars G, are withdrawn, the chills J—J placed in conjunction, oiled, and inserted in the opening left by said collars, after which the molten metal is introduced through the opening formed by the removal of the gate F. After the metal cools the weights are removed from the flask and broken from the sprue formed in the opening left by the removal of the gate F. After the withdrawal of the pattern, and before the collar G is removed, I introduce into the opening left by the pattern, a suitable paddle S, upon which are formed the raised letters or numerals designed to be reproduced upon the weights, and by a slight lateral pressure on said paddle, the letters or figures thereon, are forced into the wall of said opening, so that when the molding is completed said letters or figures will be shown upon the exterior of the weights by the metal having filled the impressions made by said paddle, as aforesaid.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. The combination of the flask A provided with openings B, follow-board C, gate E provided with openings F, collar G, and chills J provided, respectively, with overlapping cores L and M, in the manner substantially as hereinbefore stated, and for the purpose specified.

2. In combination with a suitable flask, gate and sand filling, the semi-circular chills J provided, respectively, with closed ends K, and interior contiguous cores L and M; the contacting surfaces of which cores overlap each other and are beveled or inclined in opposite directions substantially as shown, and for the purpose specified.

3. In appliances for casting sash weights, a pair of chills, each comprising a semi-cylindrical section, one end of which is closed and provided with a core, one of the cores being located at a short distance from the closed end of its chill, and the other one extending from the closed end of its chill to the other core, the contacting surfaces of said cores overlapping each other, whereby an opening is made through the center of the weight with a recess on each side, one of which extends from the opening to the end of the weight, substantially as set forth.

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

JOSEPH B. NEFF.

Witnesses:

S. W. DURHAM,
SOLON BANFILL.