

995,325.

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

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UNITED STATES PATENT OFFICE.

WILLIAM CLARKSON, OF CORSICANA, TEXAS.

DIE FOR SASH-WEIGHTS.

995,325.

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To all whom it may concern:

Be it known that I, WILLIAM CLARKSON, a citizen of the United States, residing at Corsicana, in the county of Navarro and State of Texas, have invented new and useful Improvements in Dies for Sash-Weights, of which the following is a specification.

The present invention relates to devices for casting sash weights and similar bodies.

10 It comprehends, primarily, an improved die for forming the end of the weight and for removably supporting, during the molding operation, the eye to which the sash cord or the like is attached, the die being so constructed that no special fitting of the member constituting the eye to the seat provided therefor in the die is necessary, and, further, that removal of said die from the mold is rendered possible as soon, or practically so, as the pouring of the metal has been completed, leaving the said eye member embedded in the metal. This result is obtained by utilizing a solid die formed with an unobstructed seat which opens through the upper face thereof and is adapted to receive the eye member. Said member, however, occupies only a portion of the seat, the remainder of the latter, *i. e.* the space between the opposite branches of the member, being filled with molding sand which obviously offers no obstruction to the withdrawal of the die from the mold.

The invention will be readily understood from the accompanying drawing, wherein—

35 Figure 1 is a perspective view of the improved die; Figs. 2 and 3 are central vertical sections taken at right angles to each other through Fig. 1; Fig. 4 is a detail view of the preferred form of eye member; Fig. 5 is a vertical sectional view of the molding device complete; and Fig. 6 is a detail view of the finished weight.

In said drawing, 1 indicates, in a general manner, the mold, 2 the improved die, and 45 3 the eye member. The first of these elements may be of the ordinary or any preferred type and is provided with the usual vertical mold cavity or bore 4.

The die, or, as it is generally termed, 50 "chill", is constituted by a solid metal body, as opposed to the split, or two-part, dies or chills frequently used. The upper face thereof may, if desired, be concaved to produce the cup 5 for shaping the adjacent end of the weight 6, as shown in Fig. 6. There is also formed in said die the seat 7 for cen-

tering and supporting the eye member. This seat has the shape of a narrow half-loop; its bottom wall being rounded to conform to the bight portion of said eye member, which latter is preferably constituted by a bent nail or similar headed device. It is to be observed that said seat opens unobstructedly through the cupped upper face of the die, the term "unobstructed" as applied, indicating that the opening in said face has substantially the same shape and dimensions as the bottom wall of the seat, thus differentiating from a U-shaped groove or seat wherein a solid portion or "land" exists or lies between the two branches or legs of the groove. Where a U-shaped or circular eye member is employed, the same may be readily fitted into and withdrawn from a half-loop or unobstructed seat without requiring any special finishing either of the seat or of the member itself, whereas such a member can obviously be utilized in connection with a U-shaped seat only when the die wherein the latter is formed is of the two-part type, and even in that instance, special finishing will frequently be necessary.

The molding operation is carried out substantially as follows: The eye member is fitted in its seat in the die, but occupies only a portion of such seat, owing to the open or unobstructed character thereof, so that a space, indicated by the numeral 8 in Fig. 5, is left between the branches or legs of the member. This space is filled with molding sand, designated by the numeral 9, the filling being readily inserted by reason of the above-described character of the seat. The die, with the eye member and filling in place, is then positioned in the lower end of the mold cavity or bore 4, after which the molten metal is poured therein in any suitable manner. As soon, or approximately as soon, as the pouring operation has been completed, the die is removed from the mold, leaving the eye member embedded in the weight, the sand being carried out of the space 8 as the eye member is withdrawn. It will be seen, therefore, that the structural characteristics of the die are such that it may be inserted directly into the mold bore or cavity rather than merely at the bottom end thereof, that no special operations are necessary to enable the eye member to be fitted in and removed from its seat in said die, (*i. e.* opening and closing the parts of

the die, and careful positioning of said member), and that no accurate or particular finishing of said die is essential.

As regards the eye member itself, such member is preferably in the form above described and shown in Fig. 4, that is to say, a bent or U-shaped nail whose embedded head 10 prevents it from working loose and falling or being pulled out. It is to be understood, however, that a staple of the common type, or a loop-shaped strip of wire, may be used in lieu of the nail, any one of the devices above specified being capable of use with equal facility, so far as the die is concerned, although the nail is deemed most advantageous for the reason stated.

I claim as my invention:

1. The combination of a solid die of integral construction formed with a vertical seat of substantially half-loop shape opening unobstructedly through the upper face thereof, and a substantially U-shaped eye member removably supported in said seat

with its bight portion in contact with the bottom wall of the seat.

2. The combination of a solid die of integral construction formed with a vertical seat of substantially half-loop shape opening unobstructedly through the upper face thereof, a substantially U-shaped eye member fitted in said seat and arranged for withdrawal endwise directly through the open end of the same, and a filling of granular material occupying that portion of the seat which lies between the two legs of said member, said filling being removable from said seat when said member is withdrawn therefrom.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM CLARKSON.

Witnesses:

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