

J. H. DANVER & W. H. LOSE.
GUIDING DEVICE FOR MOLDING APPARATUS.
APPLICATION FILED DEC. 11, 1908.

925,687.

Patented June 22, 1909.

Fig. 1.

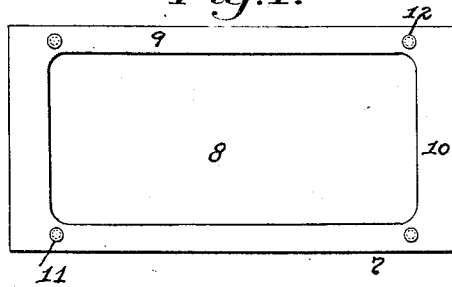


Fig. 2.

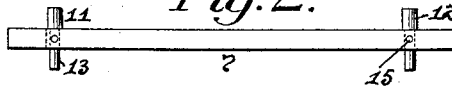


Fig. 3.

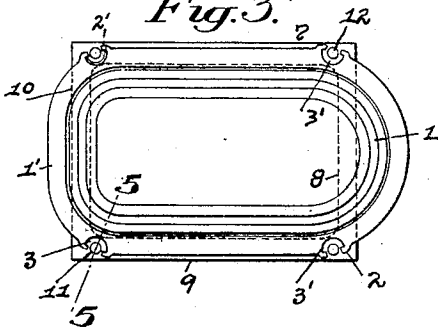


Fig. 4.

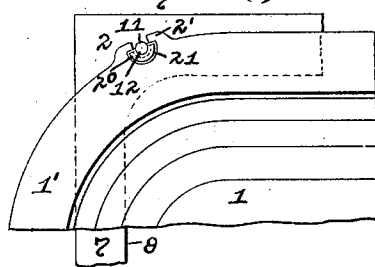


Fig. 6.

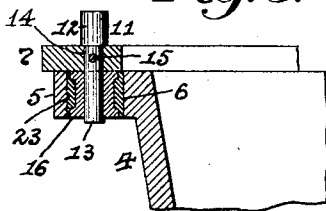


Fig. 5.

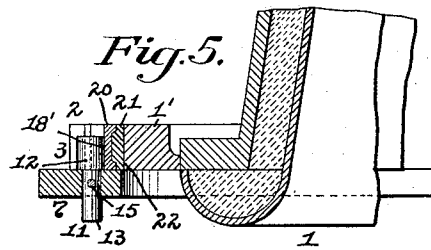


Fig. 7.

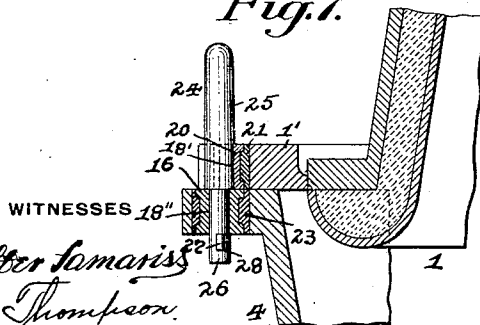
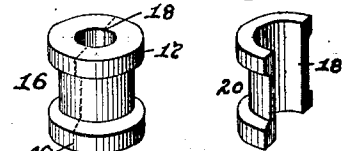


Fig. 8. Fig. 9.



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UNITED STATES PATENT OFFICE.

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GUIDING DEVICE FOR MOLDING APPARATUS.

No. 925,687.

Specification of Letters Patent.

Patented June 22, 1909.

Application filed December 11, 1908. Serial No. 467,083.

To all whom it may concern:

Be it known that we, JAMES H. DANVER and WILLIAM H. LOSE, residents of Beaver and Zelienople, respectively, in the counties of Beaver and Butler, respectively, State of Pennsylvania, have invented a new and useful Improvement in Guiding Devices for Molding Apparatus; and we do hereby declare the following to be a full, clear, and exact description thereof.

Our invention relates to a molding apparatus and has special reference to the guiding of molds, flasks or patterns.

The object of our invention is to provide a cheap, simple and efficient guide means for flasks or patterns for making molds, such as cast molds for bath-tubs, whereby the flasks and patterns when brought to position for forming such molds will be in perfect line to register with each other and properly positioned in place, so that the positioning of the molds with relation to each other will form an even thickness of metal in the article when cast.

Our invention consists, generally stated, in the novel arrangement, construction and combination of parts, as hereinafter more specifically set forth and described and particularly pointed out in the claims.

To enable others skilled in the art to which our invention appertains to construct and use our improved guiding device or means for molding apparatus, we will describe the same more fully, referring to the accompanying drawing, in which—

Figure 1 is a plan view of a templet for use in connection with our invention. Fig. 2 is a side elevation of the same. Fig. 3 is a plan view of a bath-tub pattern showing the templet applied thereto. Fig. 4 is an enlarged plan view of a portion of said pattern and templet. Fig. 5 is an enlarged sectional view of a portion of the pattern and templet on the line 5—5 Fig. 3. Fig. 6 is a sectional view of a portion of a flask showing the templet applied thereto. Fig. 7 is a sectional view of the pattern and flask in position. Fig. 8 is an enlarged perspective view of the spool employed and showing in dotted lines where the same is cut to form half portions for the pattern. Fig. 9 is a like view of one of the half portions.

Like symbols of reference herein indicate like parts in each of the figures of the drawing.

As illustrated in the drawing, 1 represents

a pattern for forming bath-tubs, which is of the usual hollow shape and is provided with the lug portions 2 extending out from the match or stripping plate 1' around said pattern. Four of these lug portions 2 are preferably employed, with two of the same located on each side of the pattern 1 near the ends thereof and each is provided with an opening 3 through the same having an inner semi-circular portion 3' which terminates in a tongue 2' extending over each side of the same and formed on said lug portions. The usual drag flask for these molds is shown at 4 having the usual flange 5 extending out from the upper end of the same and provided with the openings or holes 6 through the same.

7 indicates a templet, which is preferably in the form of a frame provided with a central opening 8 through the same and thereby forming the sides 9 and ends 10 thereon. At each of the four corners of the templet 7 is located a pin 11 which is provided with a circular enlarged portion 12 extending above said templet and with the circular contracted portion 13 fitting within a circular hole 14 in said templet and extending below the same. These pins 11 are removably secured in place in the holes 14 of the templet 7 in any suitable manner, as by a pin or bolt 15 extending through said templet and the contracted portion 13 on said pins.

16 indicates a spool, preferably formed of metal, which is provided with a flange 17 extending from each end of the same and a circular opening or hole 18 through the same.

The manner of constructing, use and operation of our improved guiding means for molding apparatus is as follows—In forming the guides *a* for the pattern 1, two of the spools 16 are cut in half and on the dotted line 19 shown in Fig. 8, which will form four halves or segmental bearing portions 20, such as is shown in Fig. 9, and after the templet 7 has been placed under said pattern, as shown in Figs. 4 and 5, the enlarged portions 12 of the pins 11 on said templet will enter the openings 3 in the lug portions 2 on said pattern. After this is done the semi-circular bearing portions 20 are each placed in the semi-circular portions 3' of the openings 3 on the pattern 1 and against the enlarged portions 12 on the pins 11 in said opening, so that any suitable filling material such as the Babbitt metal 21 can

be placed in the spaces 22 formed around said bearing portions 20 in the portions 3' of said opening to hold said bearing portions in place, and after which the templet 7 and pins 11 are removed to form the pattern guides or seats 18' in said portions 20 for the reception of the dowel pins hereinafter described and from the holes 18 in the spools 16. In forming the guides for the flask 4, four of the complete spools 16, like the one shown in Fig. 8, are used, and these spools have their holes 18 slightly smaller in diameter than such holes for forming the guides 18' in the semi-circular bearing portions 20. After the templet 7 has been placed on the flask 4, so that the contracted lower ends or portions 13 on the pins 11 carried by said templet are within the holes 6 in the flange 5 of said flask, each of the spools 16 are placed in said holes and around said pin portions, and then a suitable filling material, such as the Babbitt metal 23 can be placed in the spaces 22 formed around said spools by said spools and holes to hold said spools in place, and after this is done the templet and pins are removed to form the flask guides or seats 18'' for the dowel pins hereinafter described.

The dowel pins are shown at 24 and they are each provided with an upper enlarged pointed end portion 25 and a lower contracted portion 26 thereon. These dowel pins 24 are adapted to fit by their contracted portions 26 within the guides or seats 18'' in the spools 16 of the flask 4, and are held in place therein by a wedge or key 27 passing through a hole 28 in such portions 26 and bearing against the flange 5 of said flask. When the dowel pins 24 are thus in position on the flask 4, the pattern 1 can be lowered in the usual manner down onto said flask and in such lowering the guides or seats 18' in the bearing portions 20 on said pattern will engage with the enlarged portion 25 on said pins to guide said pattern to place on said flask, as well forming such engagement during the raising of said pattern from said flask in the usual manner.

It will thus be seen that our improved guiding device will enable the formation of guides for the dowel pins in a true and correct line with each other by a single jig or gage so that when the said pins are thus held by the flask the pattern will be guided to its proper position on said flask and be precisely matched therewith to form a mold, which will enable an even thickness of metal to be had when the article is cast from such mold.

It will be evident that our improved guiding device can be applied for matching any flask or pattern flasks and flasks or patterns

and patterns together, and its use will overcome the improper alinement and enlarging of the ordinary holes in these mold parts through casting and wear, while the device will also permit of easy and rapid renewal of the spools for the bearing portions or guides for the pins and thereby prolong the life of the mold ports carrying the guiding means.

Various modifications and changes in the design, arrangement and construction of our improved guiding device may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. Means for forming guiding seats in a molding device, comprising the combination of a molding appliance having openings therein, with a temporary gage fitting in said openings, and bearing members secured in said openings and around said gage for forming said seats.

2. Means for forming guiding seats in a molding device, comprising the combination of a molding appliance having openings therein, with a temporary gage having pins thereon for fitting in said openings, and bearing members secured in said openings and around said pins for forming said seats.

3. Means for forming guiding seats in a molding device, comprising the combination of a molding appliance having openings therein, with a temporary gage having shouldered pins thereon for fitting in said openings, and bearing members secured in said openings and around said pins for forming said seats of different size.

4. Means for forming guiding seats in a molding device, comprising the combination of a molding appliance having openings therein, with a temporary gage having removable pins thereon for fitting in said openings, and bearing members secured in said openings and around said pins for forming said seats.

5. Means for forming guiding seats in a molding device, comprising the combination of a molding appliance having openings therein, with a temporary gage having shouldered removable pins thereon for fitting in said openings, and bearing members secured in said openings and around said pins for forming said seats of different size.

In testimony whereof, we, the said JAMES H. DANVER and WILLIAM H. LOSE, have hereunto set our hands.

JAMES H. DANVER.
WILLIAM H. LOSE.

Witnesses:

J. L. TREFALLER, Jr.,
J. N. COOKE.