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A. T. BATEMAN ET AL

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MOLD STAND

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Fig. 1.

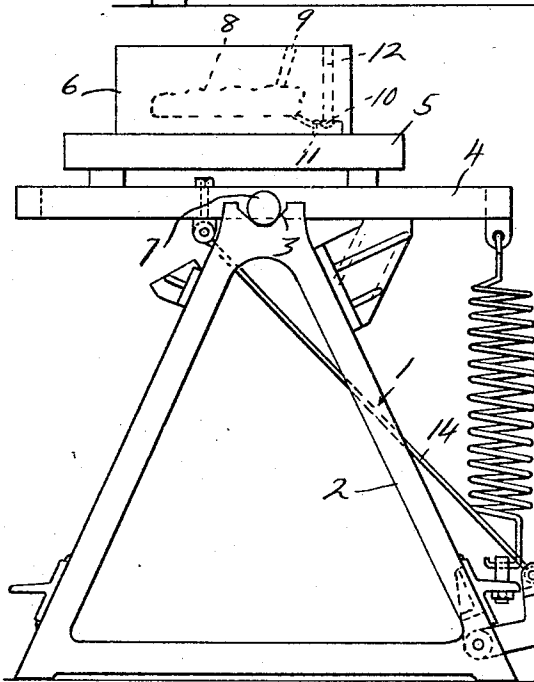
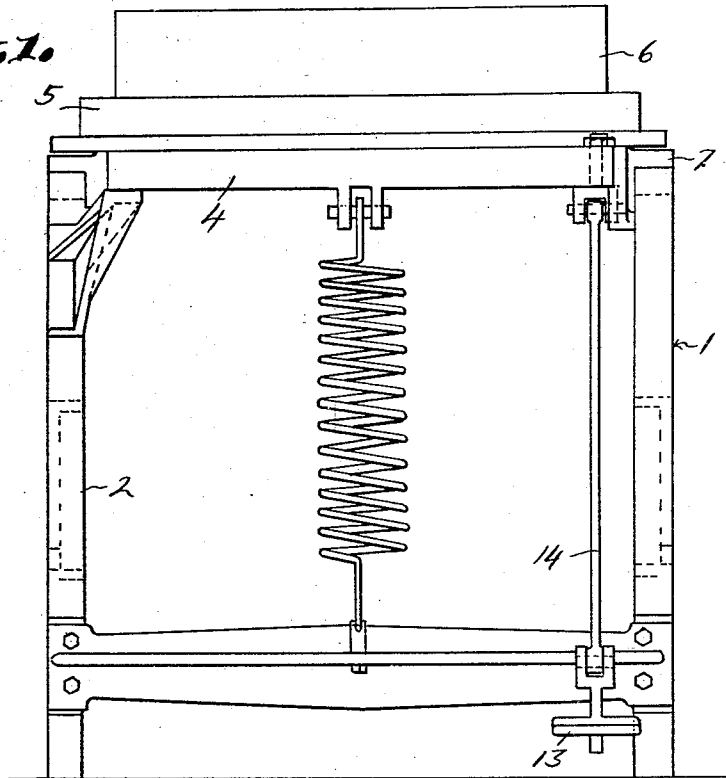


Fig. 2.

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MOLD STAND

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The invention relates to stands for supporting molds and has for one of its objects the mounting of a mold so that it may tilt during the casting operation and thereby provide for the escape of air from the mold cavity and the filling of the mold cavity with the molten metal. Another object is to so mount the mold that it may be continuously tilted during the pouring operation. Further objects of the invention reside in the novel features of construction and combinations and arrangements of parts as more fully hereinafter set forth.

In the drawings:—

Figure 1 is a front elevation of a mold stand embodying our invention;

Figure 2 is an end elevation thereof.

For the purpose of providing for the escape of air from the mold cavity of a mold so that this mold cavity may be completely filled with molten metal, we have provided a construction of mold stand by means of which the mold may be tilted during the casting operation. As shown, 1 is the base of the mold stand having the triangular frame members 2 at its ends, each of which has formed in its top the transversely extending V-shaped groove 3, the grooves of the two frame members being in alignment. 4 is a pivotal member or platform upon which is fixedly secured the base 5 of the mold 6. This pivotal member is provided at its ends with the aligned gudgeons 7, which engage in the grooves 3 and support the pivotal member upon the frame members of the base.

The mold 6, as illustrated in the present instance, is formed of a plurality of permanent sections which cooperate to form the mold cavity 8 connected into from the top of the mold by the gate 9. This mold has the annular passage 10 which encircles the mold cavity and is connected therewith by suitable restricted passages 11. Furthermore, the mold has the vent passages 12 leading upwardly from the annular passage 10 to the top of the mold. The arrangement of mold is such that air within the mold cavity may escape through the restricted passages 11, the annular passage 10 and the vent passages 12.

For the purpose of swinging the pivotal member 4 upon the base 1 to thereby tilt the mold so that the air in the mold cavity will not be trapped and can completely escape, we have provided the lever 13 pivotally connected to the base 1 near its bottom so that this lever may be actuated by the operator's foot. 14 is a rod pivotally connected at one end to the lever 13 and at the other end to the pivotal member 4 laterally beyond the gudgeons 7. To normally hold the pivotal member 4 in a predetermined position relative to the base 1 and in the present instance in a horizontal position, we have provided the coil spring 15, one end of which is connected to the pivotal member 4 on the side of the gudgeons 7 opposite to the pivotal connection of the rod 14 to the pivotal member 4. The other end of this coil spring is secured to the base 1 near its bottom. 17 and 18 are brackets secured to the base 1 near its top and on opposite sides of the gudgeons 7 for respectively limiting the swinging movement of the pivotal member 4 under the influence of the coil spring 15 and the influence of the lever 13 and the rod 14.

With this arrangement of molding stand, the operator may during the pouring of molten metal through the gate 9 into the mold cavity 8 gradually and continuously swing the pivotal member 4 to thereby tilt the mold by applying foot pressure upon the lever 13. As a result, air within the mold cavity may be completely displaced by the molten metal and escape through the restricted passages 11, the annular passage 10 and the vent passages 12.

What we claim as our invention is:

1. In a stand for supporting a mold, the combination of a base, mold supporting means upon said base, including a member movable to provide for tilting of the mold, and means for actuating said movable member to provide for continuous and gradual tilting of the mold during the pouring operation.

2. In a stand for supporting a mold, the combination of a base, mold supporting means upon said base, including a member movable to provide for tilting of the mold, a pivotal lever upon said base, and means connected to

said lever and movable member for actuating the latter from the former.

3. In a stand for supporting a mold, the combination of a base, a mold supporting pivotal member upon said base, a pivotal lever upon said base, and means between said pivotal member and lever for actuating the former from the latter.

4. In a stand for supporting a mold, the combination of a base, a mold supporting member pivotally mounted upon said base, means between said pivotal member and base for resiliently holding said pivotal member in a predetermined position relative to said base, a pivotal lever upon said base, and means between said pivotal member and lever for swinging the former from the latter.

5. In a stand for supporting a mold, the combination of a base, a mold supporting member mounted for tilting movement on said base, yieldable means for normally maintaining said member in a predetermined position and resisting movement thereof, and means for tilting said member against the resistance of said first named means during the pouring operation.

6. In a stand for supporting a mold, the combination of a base, a mold supporting member mounted for tilting movement on said base, means for normally maintaining said member in a predetermined position and resisting movement thereof, and means for tilting said member against the resistance of said first named means, including a foot operated lever pivoted on said base.

7. In a stand for supporting a mold, the combination of a base, a mold supporting member mounted for tilting movement on said base, resilient means for normally maintaining said member in a predetermined position and resisting movement thereof, and means for tilting said member against the resistance of said first named means.

8. In a stand for supporting a mold, the combination of a base, a mold supporting member mounted for tilting movement on said base, a spring for normally maintaining said member in a predetermined position and resisting movement thereof, and means for tilting said member against the tension of said spring.

9. In a stand for supporting a mold, the combination of a base, a mold supporting member pivoted intermediate its ends upon said base, and yieldable means at one side of said pivot for resisting movement of said supporting member and means at the opposite side of said pivot for moving said supporting member against the resistance of said first named means during the pouring operation.

10. In a stand for supporting a mold, the combination of a base, a mold supporting member pivoted intermediate its ends upon said base, a spring at one side of said pivot for resisting movement of said supporting

member, and means at the opposite side of said pivot including a lever pivoted to said base for moving said supporting member against the tension of said spring.

11. In a stand for supporting a mold, the combination of a base, a tiltable mold supporting member upon said base, and means providing for the gradual and continuous tilting of the mold during the pouring operation including an actuator for said mold supporting member.

12. In a stand for supporting a mold, the combination of a base, a tiltable mold supporting member upon said base, means for normally maintaining said member in a predetermined position and resisting movement thereof, and manually operable means for tilting said member against the resistance of said first mentioned means.

In testimony whereof we affix our signatures.

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