A. C. MOTT.

MOLDING MACHINE.

APPLICATION FILED MAY 26, 1913.

1,074,518. Patented Sept. 30, 1913.

Fig. 5.

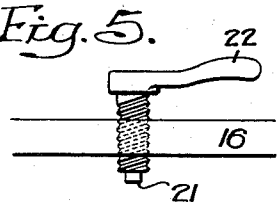


Fig. 1.

Fig. 2.

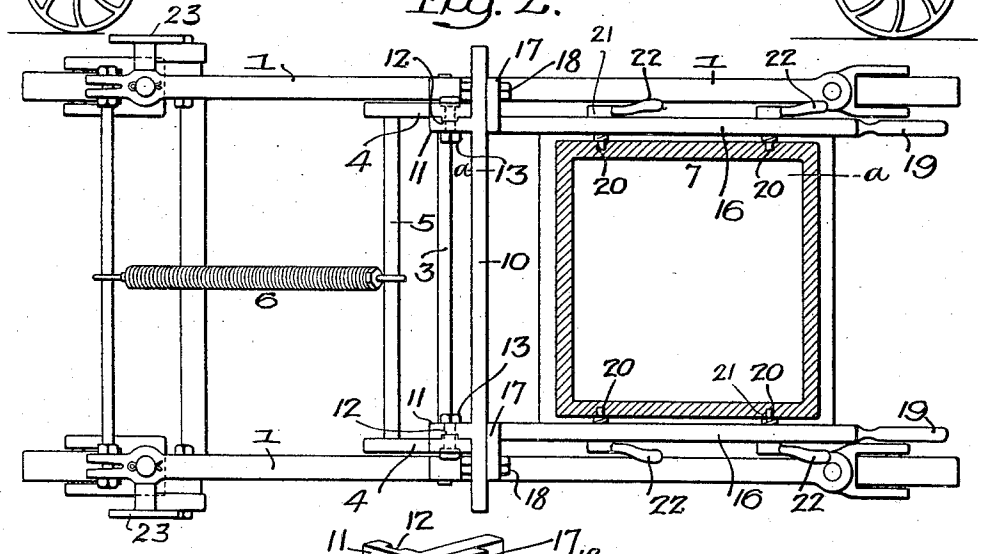


Fig. 4.

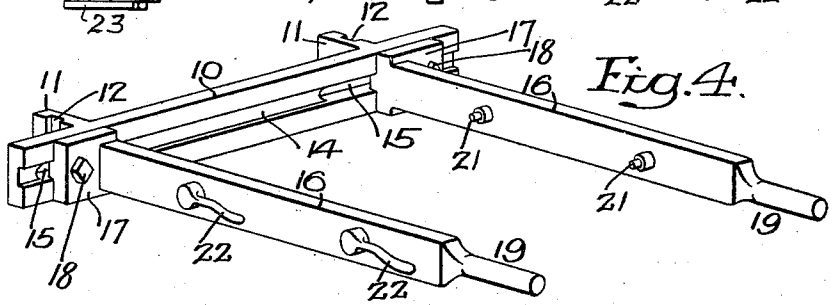
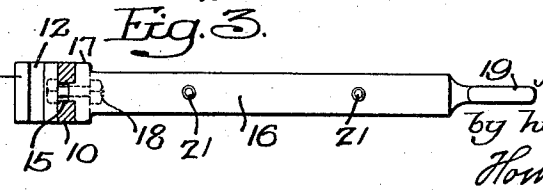


Fig. 3.



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MOLDING-MACHINE.

1,074,518. Specification of Letters Patent. Patented Sept. 30, 1913.

Application filed May 26, 1913. Serial No. 769,899.

To all whom it may concern:

Be it known that I, ABRAM C. MOTT, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Molding-Machines, of which the following is a specification.

My invention relates to certain improvements in that type of molding machine in which one of the flasks is carried by a head pivotally mounted on the frame of the machine so that it can be turned in order to bring either surface of the flask uppermost.

One object of the invention is to construct the carrier for the movable portion of the flask so that the flask can be secured to the carrier or removed therefrom at will.

A further object of the invention is to make the carrier adjustable to accommodate flasks of different sizes.

In the accompanying drawings: Figure 1 is a side view of a molding machine illustrating my improvement; Fig. 2 is a plan view; with the flask in section; Fig. 3 is a sectional view on the line *a*—*a*, Fig. 2; with the flask removed; Fig. 4 is a detached perspective view of the carrier; and Fig. 5 is a view of the locking pin.

Referring to the drawings, 1 is the frame of the molding machine.

2 is a standard in which is mounted a pivot shaft 3, carrying the heads 4, one located at each side of the machine. These heads are connected together by a rod 5 to which a spring 6 is attached which counterbalances the flask carried by the heads, when the heads are turned on the pivot. The heads carry the flask 7 and this flask can be turned either into the position illustrated in Fig. 1, or into the position on the opposite side of the pivot.

8 is a table supported by a frame 9, in the present instance, carried by the main frame 1.

10 is a cross bar having projections 11, which have vertical grooves 12 therein, and these grooves fit ribs on the heads 4 and are held by bolts 13 which are adapted to vertical slots in the heads so that the bar 10 can be adjusted vertically in the heads. The bar 10 has a longitudinal groove 14 extending across its face and each end of the bar is slotted at 15.

16—16 are two arms having bases 17 which have ribs to fit the groove 14 and these bases are clamped to the bar by bolts 18 which extend through the slots 15 so that the arms 16 can be adjusted laterally to accommodate different widths of flasks and can be firmly secured in the position to which they are adjusted by means of the said bolts 18. There are handles 19 at the outer ends of the arms which project beyond the flask so that the carrier, consisting of the cross bar and arms, can be turned on the pivot.

The flask 7 has recesses 20 in the side walls and on the arms 16 are pins 21 which can be moved longitudinally. These pins are preferably provided with handles 22, and may have a steep screw thread adapted to the threaded opening in the arms, as illustrated in Fig. 5, so that upon turning the pins a half turn they can be projected into the recesses in the flasks, or withdrawn therefrom. When it is desired to attach a flask to the arms all that is necessary is to bring the arms into such position in relation to the flask that the pins will be opposite the recesses and by turning them they can be projected, thus firmly securing the flask to the arms. Other means for detachably securing the flasks to the arms may be used without departing from the essential features of the invention.

It will be understood that the ordinary clamps are used to secure the flask 24 and bottom board 25, Fig. 1. These clamps have been omitted to avoid confusion.

The operation is as follows: If, for instance, it is desired to use a flask of a certain size in which is to be formed a mold, then a particular flask is selected and the arms are laterally adjusted so as to fit on each side of the flask. After these arms are secured in the position to which they are adjusted, the flask is placed between the arms, and the pins, carried by the arms, are projected into the recesses in the flask, firmly securing the flask to the arms. In making a mold, for instance, the flask is turned back and rests upon the support 23 on one side of the pivot. The pattern board is then placed in position within the flask, and the flask 24, in the present instance, is positioned on the pattern board. The flask 24 is then filled with sand and rammed, after which the bottom board 25 is clamped to the flask. Both flasks are then turned over onto the table 8, the bottom board resting on the table. The flask 7 is then

filled with sand and rammed. Then the arms 16, with the flask attached, are turned on their pivots and the pattern board is removed, after which the flask 7 is again placed in position above the flask 24. The pins 21, carried by the arms 16, are then withdrawn, releasing the flask 7 from the arms and the entire mold, including the flasks 7 and 24, and the bottom board 25, is removed from the machine and another flask is secured in position and the operation is repeated.

I claim:

1. The combination in a molding machine, of a frame; a flask; a table for supporting the flask; a head pivoted to the frame; arms carried by the head; and means for rigidly securing the arms to the sides of the flask so as to leave the upper and lower portions of the flask clear.

2. The combination in a molding machine, of a frame; a pivot thereon; a head mounted on the pivot; a table at one side of the pivot; a support on the opposite side of the pivot; arms detachably and adjustably mounted on the pivot; a flask located between the arms; means for detachably securing the arms to the sides of the flask so as to leave the top and bottom of the flask unobstructed.

3. The combination in a molding machine, of a frame; a shaft pivotally mounted therein; heads carried by the shaft; a transverse bar mounted on the heads; arms laterally adjustable on the bar; a flask mounted between the arms; and means for removably securing the flask to the arms.

4. The combination in a molding machine, of a frame; a shaft pivotally mounted on the frame; two heads on the shaft; said heads being connected together; a spring secured to the connection; a cross bar having projections, said bar being vertically adjustable on the heads; means for securing the bar to the heads after adjustment; arms adjustable on the cross bar; means for securing the arms in position after adjustment; pins on the arms; and a flask, arranged to be located between the arms, having recesses in the side walls adapted to receive the pins so as to hold the flask to the arms.

5. The combination in a molding machine, of a frame; arms pivotally mounted on the frame; a flask located between the arms and having recesses in its side walls; and handled screw pins in the arms adapted to be projected into the recesses in the flask, when turned.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ABRAM C. MOTT.

Witnesses:
WM. E. SHUPE,
WM. A. BARR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."