A. BECKER.

MOLDER'S FLASK.

APPLICATION FILED JULY 19, 1909.

952,722.

Patented Mar. 22, 1910.

2 SHEETS—SHEET 1.

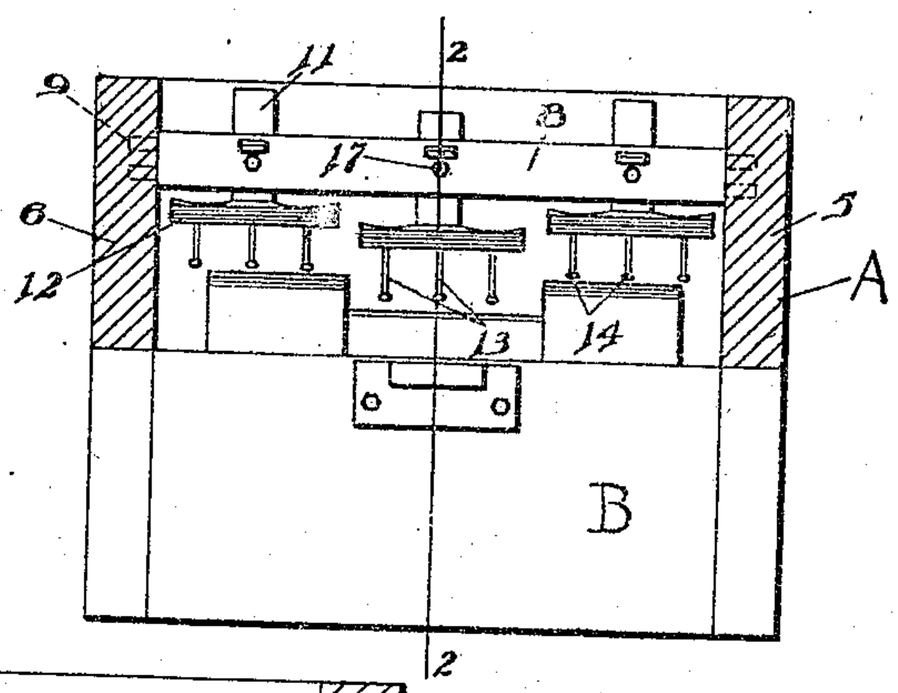
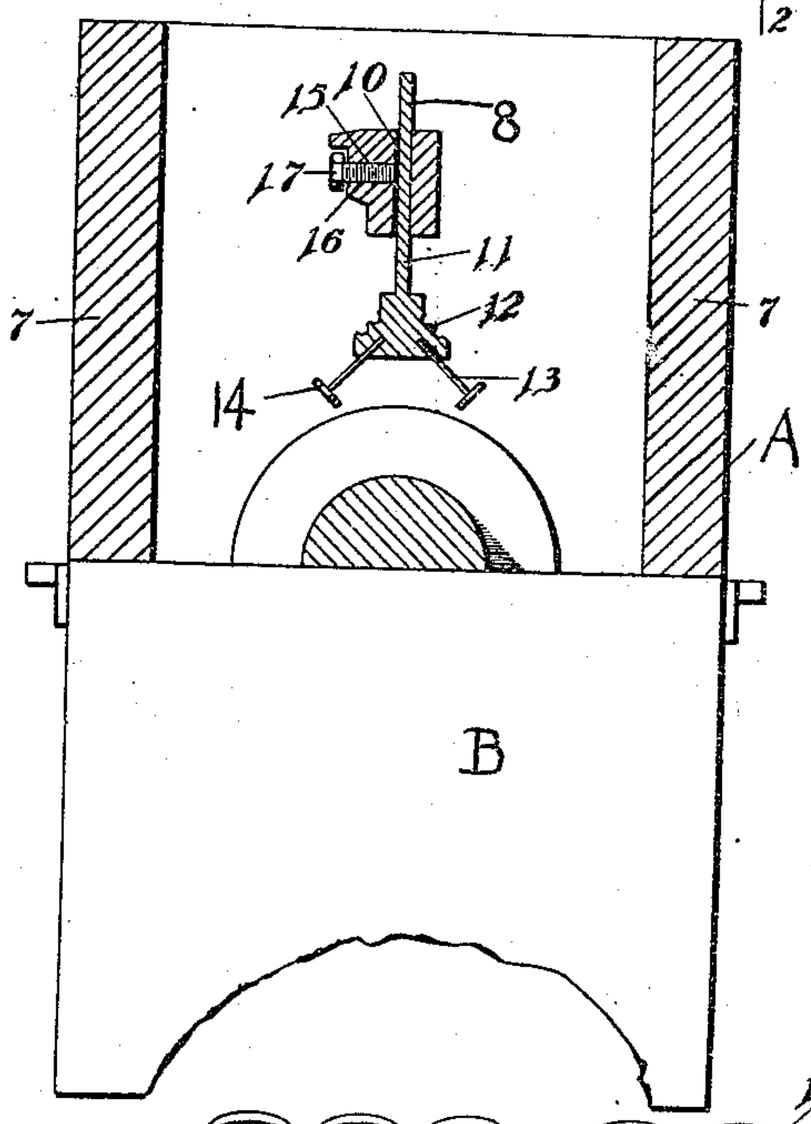


Fig. 1.

Fig. 2.



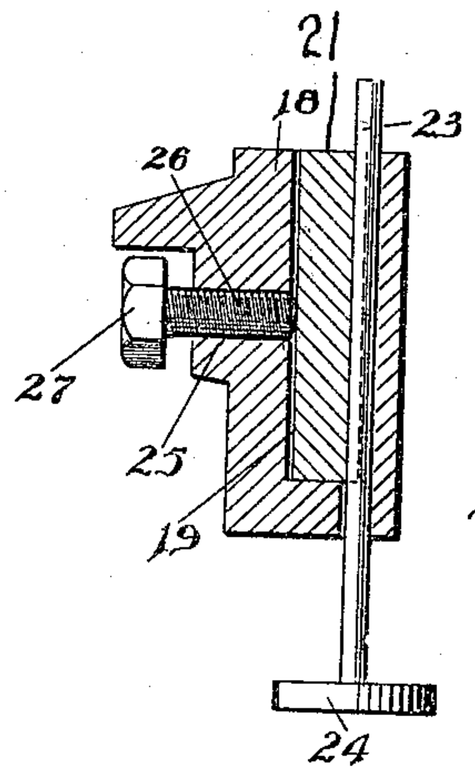


Fig. 6.

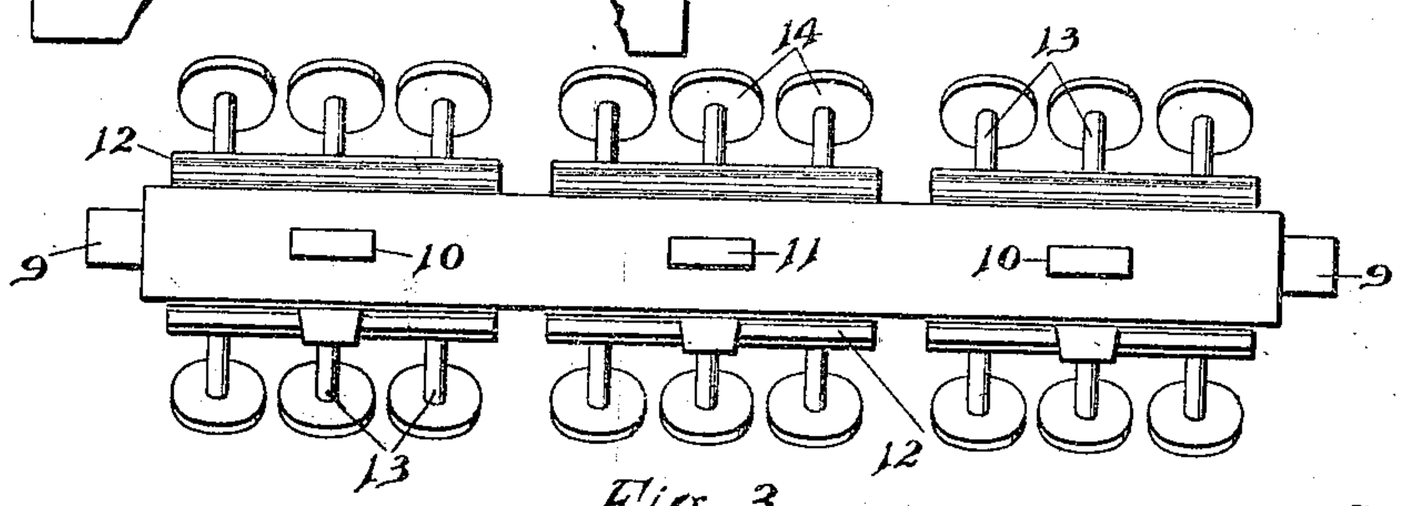


Fig. 3.

Witnesses

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2 SHEETS—SHEET 2.

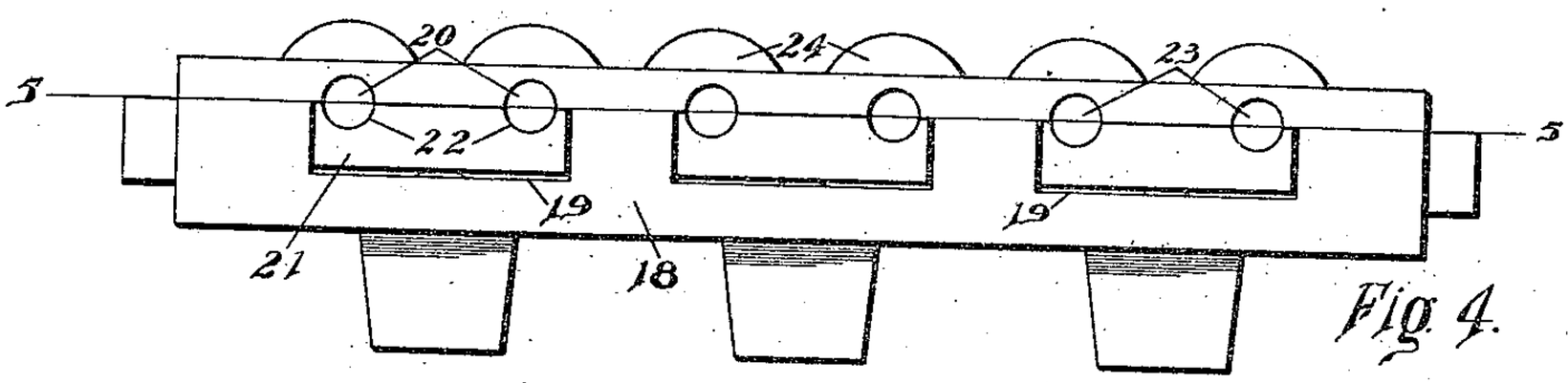

Fig. 4.

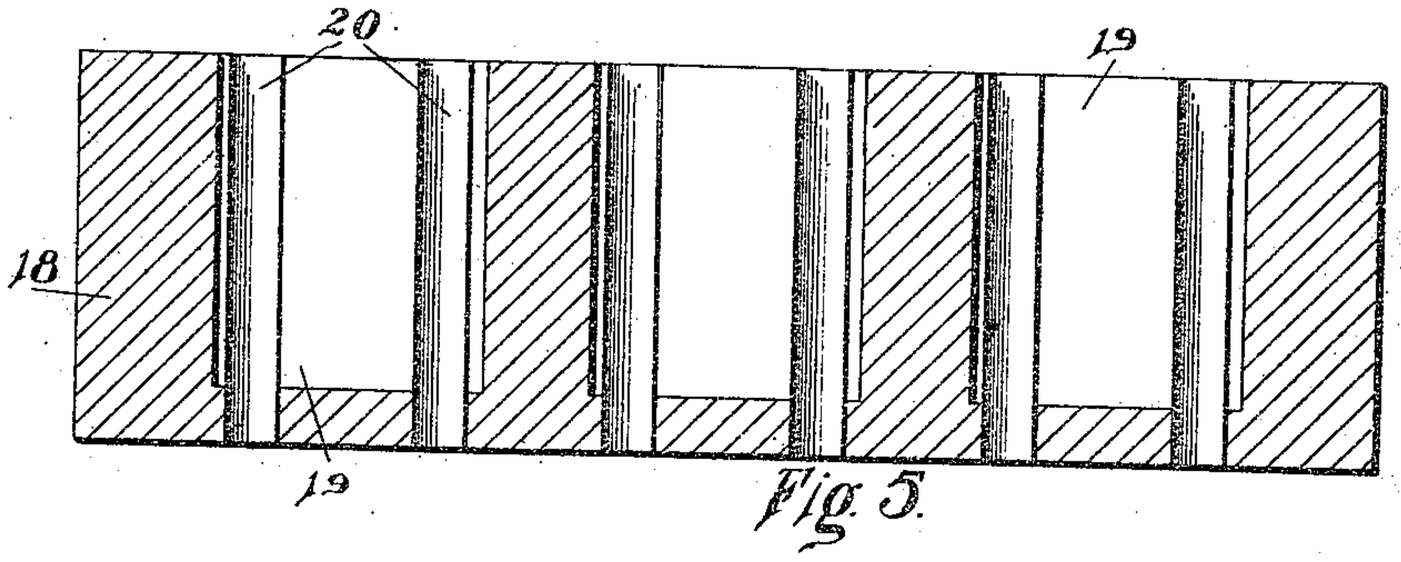

Fig. 5.

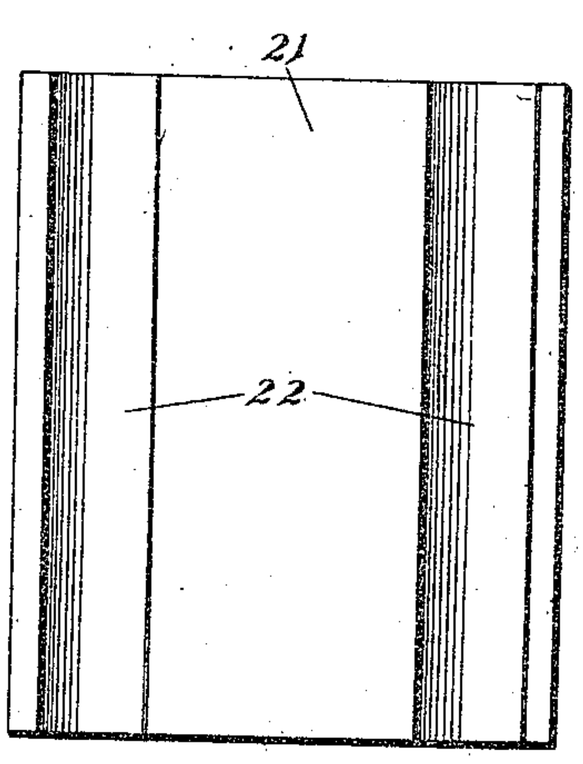

Fig. 7.

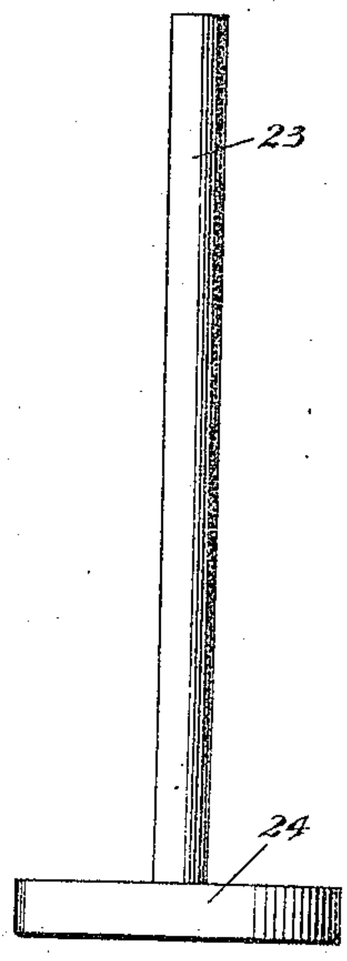

Fig. 8.

Witnesses

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ALVIN BECKER, OF BELLEVILLE, ILLINOIS.

MOLDER'S FLASK.

952,722. Specification of Letters Patent. Patented Mar. 22, 1910.

Application filed July 19, 1909. Serial No. 508,282.

To all whom it may concern:

Be it known that I, ALVIN BECKER, a citizen of the United States, residing at Belleville, in the county of St. Clair, State of Illinois, have invented certain new and useful Improvements in Molders' Flasks; and I do hereby 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.

This invention relates to improvements in the art of molding and has for its object the provision of an improved form of cope bar for holding the sand anchors.

Another object is the provision of a means for adjustably securing the sand anchors at various positions in the bar.

A further object is the provision of an improved form of sand anchor.

With these and other objects in view as will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings and more particularly pointed out in the appended claims, it being understood that various changes in the form, proportion, size and minor details of the device may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming part of the specification:—Figure 1 shows the drag or lower member of the molder's flask in side elevation and the cope in longitudinal section and provided with my improved cope bar and sand anchors, the bar and anchors being shown in side elevation. Fig. 2 shows the drag in end elevation and the cope, cope bar and sand anchors in vertical transverse section on the plane indicated by the line 2—2 of Fig. 1. Fig. 3 is a detailed plan of my improved cope bar and sand anchors. Fig. 4 is a similar view showing the modified form of the bar. Fig. 5 is a detailed vertical longitudinal sectional view of the same on the plane indicated by the line 5—5 of Fig. 4. Fig. 6 is a detailed vertical transverse sectional view of the modified form of the bar and showing one of the sand anchors in elevation. Fig. 7 is a detailed side elevation of the clamping member used in connection with the modified form of the bar. Fig. 8 is a detailed elevation of the modified form of sand anchors.

In the drawings the cope of a mold is shown at A and the drag at B in Figs. 1 and 2.

As shown in the drawings, the opposite ends of the cope are designated by the numerals 5 and 6 and the sides by the numeral 7. The construction about to be described is intended for use with the cope, or upper member of the flask which, after the sand has been packed therein about the pattern, must be turned and the pattern withdrawn and then turned again and placed in position on the drag or lower member. The bar which forms part of the subject-matter of the present invention in the present instance is designated by the numeral 8 and is of a length corresponding to the distance between the opposed inner faces of the end walls 5 and 6. In the present instance this bar is shown provided at its opposite ends with a pair of spaced tongues 9 which are to be secured in the end walls of the cope when the latter is of wood, but this construction will not be employed when the cope is metal; in the latter case screws or bolts will be employed in lieu of the tongues 9.

By referring now to Figs. 1 to 3 inclusive it will be seen that the bar is provided with three or more vertical openings designated by the numeral 10. These openings form guides for the reception of the shanks of the sand anchors. The sand anchors are all identical in structure so a description of one will be sufficient. By referring now to Figs. 1 to 3 inclusive it will be seen that each anchor consists of a shank portion 11 which is preferably formed of a single piece of sheet metal or the like and of a size to slidingly fit in the guide opening 10. What will subsequently be termed the lower end of the shank 11 is provided on its opposite sides with enlarged bosses or heads 12 and secured in the lower ends of the heads 12 are the sand supports 13. Each of these members is preferably formed of a cylindrical shank which is embedded and firmly secured in the boss and terminates at its opposite end in an enlarged flat head 14. As shown in the drawings these members are disposed at an acute angle to the shank 11 of the anchor; it is to be understood, however, that I am not to be limited to this specific disposition since it

will be understood that the supports may occupy any angle or extend vertical with respect to the shank 11.

By referring now to Figs. 1 to 3 inclusive it will be seen that the bar is formed with three or more laterally extending threaded openings 15 which are disposed in alinement with the central line of the bar and lead into the guide openings 10. The openings 15 receive the threaded shank of a set screw 16, the outer end of which is provided with a milled head 17, by means of which the screw is turned so as to lock the anchor within the guide openings 10 in any of its adjusted positions.

By referring now to Figs. 4 to 8 inclusive it will be seen that a modified form of bar is provided which is of a length corresponding to the length of the first-named bar. The modified form of bar is designated in general by the numeral 18 and is provided with a plurality of spaced vertical guide openings 19 disposed similar to the openings 10 in the first-named bar. The guide openings 19 are provided on one of their sides and adjacent their opposite ends with a pair of vertically extending and semi-circular shaped depressions 20 and slidingly fitted in the guide openings 19 is what will subsequently be termed a clamping block or member 21. This member is preferably formed of a single block of metal, the length of which corresponds to the width of the bar 18 and is provided on one of its faces and adjacent its opposite sides with a pair of vertically extending and semi-circular shaped depressions 22, which are coincident with the depressions 20 in the block. It might here be stated, that the thickness of the clamping blocks is considerably less than the width of the guide openings 19 so that when that face of the clamping block opposite the face in which the semi-circular depressions are formed bears on that side of the opening 19 remote from the depressions 20, the opening presented by the depressions will be considerably greater than when that side of the clamping block upon which the depressions are formed bears on that side of the bar in which the depressions 20 are formed.

The modified form of anchor shown in the drawings consists of an elongated shank portion 23 one end of which terminates in a flat head 24. The diameter of the shank portion 23 is considerably greater than the diameter of the opening presented by the depressions 20 and 22 when the clamping block bears on that side of the opening in which the depressions 20 are formed.

By referring now to Fig. 6 of the drawings it will be seen that the bar 18 is provided with a plurality of laterally extending threaded openings 25, which extend through that side of the block opposite to the side in which the depressions 20 are formed and threaded into these openings are set screws 26, the outer sides of which are provided with heads 27. Thus it can be seen when the shanks 23 of the anchors are placed within the openings they may be locked therein by turing the set screws 26, it being understood that the threaded terminals of the latter will bear on that face of the clamping blocks opposite to the face in which the depressions 22 are formed. If desired the depressions 20 and 22 at the opposite ends of the openings and blocks may be formed at an angle and extend in opposite directions which will, of course, permit the anchors to be disposed at an angle with respect to the block.

In the use of the device the shanks of the anchors are inserted into the guide openings with their lower ends disposed in the sand within the cope and as shown when adjusted to the proper height according to the pattern within the drag a slight tap with a hammer or the like on top of the shank is all that is necessary to adjust the anchors in their relative positions around the pattern in the drag. When the parts are in this position by turning the set screws they may be securely locked.

From the foregoing it will be seen that the anchors are so arranged within the bar and cope as to render the same capable of use with any shape of configuration of pattern within the limits of the capacity of the device. It will be further observed that with a construction of this kind that no adjustment of the bars is needed since it can be seen that the firm retention of the molded sand in the flask will be secured by the provision of the adjustable anchors after the pattern has been withdrawn.

Having thus described my invention what is claimed as new, is:—

1. In a molder's flask a supporting bar having an opening extending therethrough and a threaded opening communicating with the first-mentioned opening, a clamping screw in the said threaded opening and an anchor having a shank extending through and adjustable in the first-mentioned opening.

2. In a molder's flask, a supporting bar having an opening extending transversely through the same, in combination with a head having a shank extending through said opening and adjustable therein, said head being further provided with a plurality of sand anchors, and means to secure the said shank adjustably in the said opening of the said supporting bar.

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

ALVIN BECKER.

Witnesses:
EDWARD F. SCHOTT,
JOHN MANN.