No. 799,493. PATENTED SEPT. 12, 1905.

J. PFEIFFER.

MOLD FOR ARTIFICIAL STONE.

APPLICATION FILED APR. 28, 1905.

Fig. 1

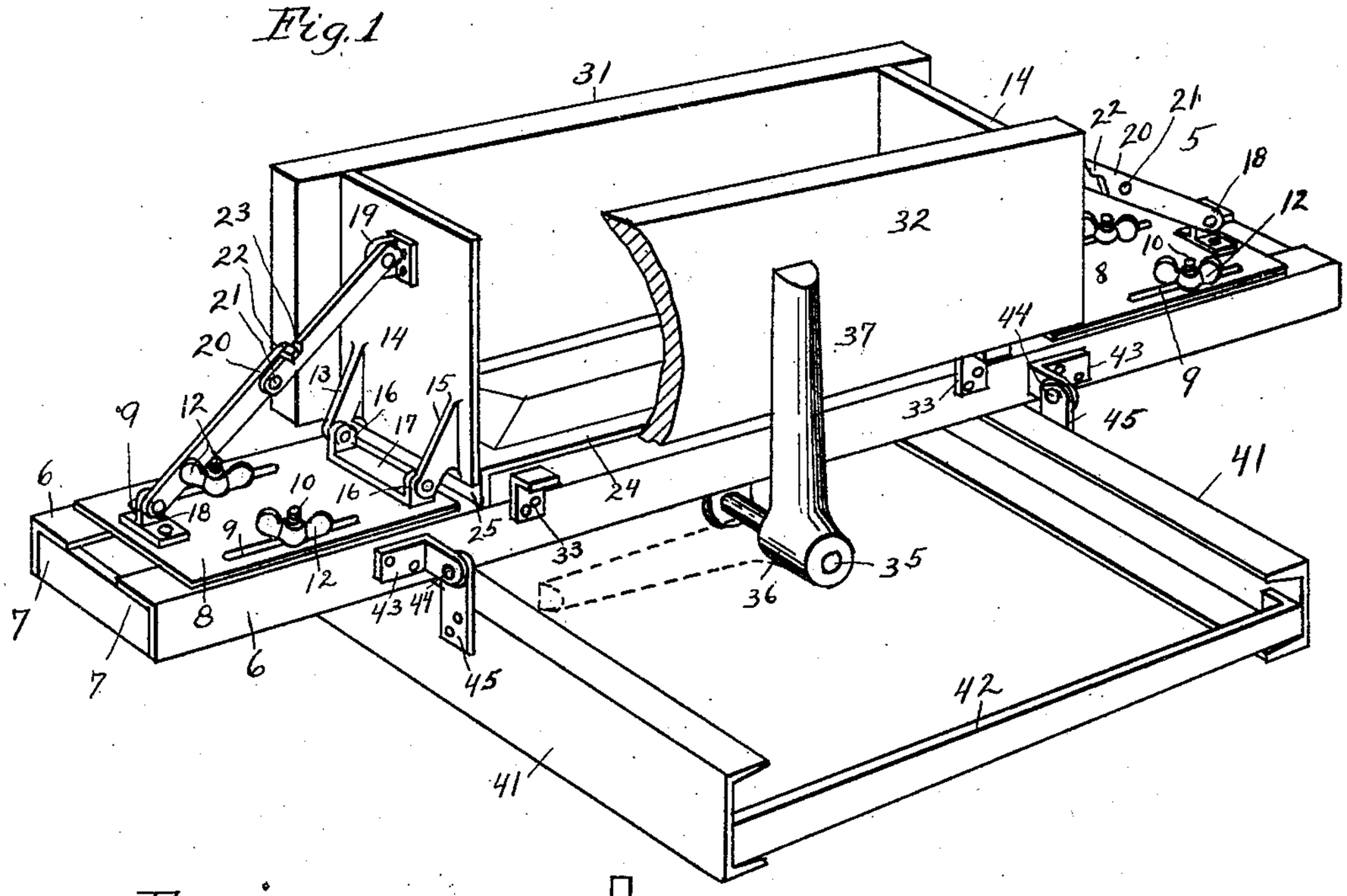


Fig. 3.

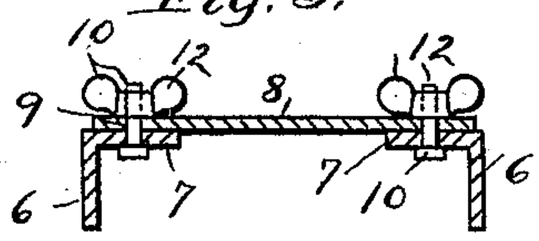


Fig. 4

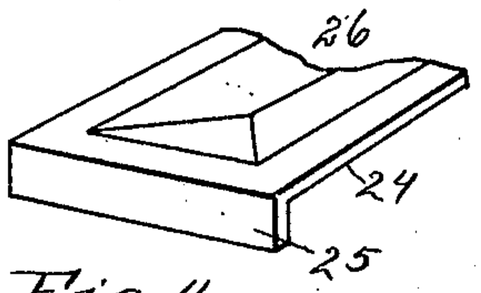
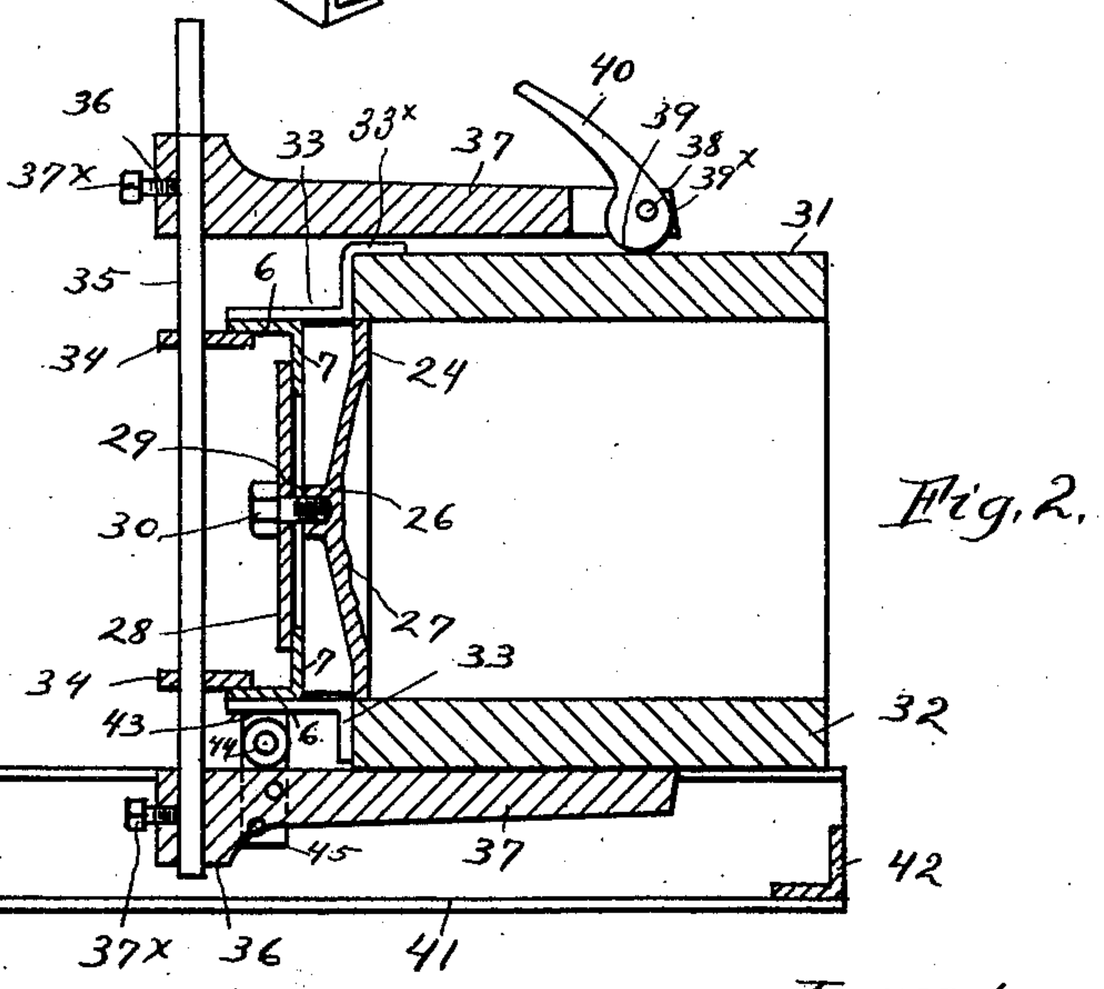


Fig. 2.



Witnesses

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MOLD FOR ARTIFICIAL STONE.

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Application filed April 28, 1905. Serial No. 257,896.

To all whom it may concern:

Be it known that I, JOHN PFEIFFER, a citizen of the United States of America, residing at Excelsior Springs, in the county of Clay and State of Missouri, have invented certain new and useful Improvements in Molds for Artificial Stone; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

The invention has for its object, first, an enlargement or reduction in the size of the mold as the exigencies may require; second, to secure separate sides to the base-frame and resist the pressure of the material outwardly upon the removable sides; third, to remove the artificial-stone block without injury to the surfaces.

The invention consists in the novel construction and combination of parts, such as will be first fully described and then specifically pointed out in the claims.

In the drawings, Figure 1 is a view in perspective of the improved mold in position for receiving the material shown hinged to a supporting base or frame, one of the sides to the mold being partially broken away showing the die at the bottom of the mold-box. Fig. 2 is a transverse sectional view of the mold as seen in Fig. 1 turned upon its side and showing the die. Fig. 3 is a transverse sectional view taken through the bottom angle-bars, showing the adjusting devices and plate for the ends of the mold. Fig. 4 is a detail view in perspective of one end of the bottom or die-plate.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

Referring to the drawings, 5 indicates the base-frame which forms the support for the mold and also the bottom of the mold-box, and consists of parallel angle-bars 6 6 of the requisite length. Near the respective ends of the frame 5 and upon the upper surface of the horizontal portions 7 7 of bars 6 6, which extend inwardly and toward each other, are the adjustable plates 8 8. The plates 8 8 are short in length and provided with longitudinal slots 9 9, the slots being adjacent to the surfaces of the portions 7 7 of the bars 6 6. Secured to the said portions 7 7 are the screw-threaded bolts 10, which pass upwardly through the slots 9 9 in the plates 8 8, and upon said bolts are the adjusting thumb-nuts 12.

14 14 indicate the ends of the box or mold, which are of the same width as the frame 5. Upon the outer surface and near the lower portions of the ends 14 14 are parallel outwardly and downwardly extended lugs 15, and upon the upper surface and near the inner ends of the plates 8 8 are upwardly-extended lugs 16 16, through which lugs and the lugs 15 15 extends a pintle 17, which forms hinges for the ends of the bar or mold. Upon the upper surface and near the outer portions of the ends of the separate plates 8 8 are secured the lugs 18, and upon the outer surface of the ends 14 of the mold near the upper portion of said ends are the lugs 19.

20 indicates sectional toggle-jointed locking-bars, pivoted together at 21, the lower portion of which bars are connected with the lugs 18 on plates 8 and the upper ends with the lugs 19 on the ends 14 of the box or mold. The upper ends of the lower hinged portions of the toggle-jointed bars extend a short distance upwardly from the pivot 21 upon the outer surface of the upper hinged bars and a slight projection 22 bent inwardly. In the upper edge of the upper bars are notches 23, within which the projections 22 extend and form a stop, thus holding the bars in line with each other.

The lower portion of the ends 14 of the box or mold are shown as terminating a short distance above the upper surface of the portions 7 7 of the single bars, and between the lower portions of the said ends is arranged the bottom die or former plate 24, which is of the required length for the formation of the block of artificial stone. This plate is of the same width as the frame 5, a portion 25 of each end of the plate being bent at right angles and extended downwardly upon the upper surface of the portions 7 7 of the angle-bars 6 6. A portion of the plate 24 a short distance inwardly from the ends and also from the outer longitudinal edges is nearly flat, and from said points the inner portion of the plate is depressed, as at 26, so as to form the die, the surfaces of which are roughened, so as to impart to the surface of the artificial stone a projected roughened or cut surface, as seen in Fig. 2. On the under surface of plate 25, at a point intermediate its ends, is a downwardly-extended internally-screw-threaded lug 27.

For the purpose of holding the die-plate

24 in a fixed position a separate removable plate 28 of suitable length is placed on the under surface of the portions 7 7 of the angle-bars 6 6, the longitudinal edges of the plate extending from the under surface of one plate 7 to the under surface of the other plate 7.

Through the plate 28 extends a screw-bolt 29, the inner end of the bolt extending within the internally-screw-threaded lug 27 on the under side of the die-plate 24. Upon the other end of the screw-bolt is a nut 30, which bears upon the lower surface of the plate 28.

31 and 32 are the respective opposite longitudinal sides to the box or mold and are of any desired length, the side 32 forming the pallet upon which the completed block is removed.

With the outer surfaces of the vertical portions of the angle-bars 6 6 are outwardly-extended brackets 33, the upper horizontal surface of the bracket being upon a line horizontally with the upper surface of the die-plate 24. Upon these brackets are placed the lower longitudinal surfaces of the removable sides 31 and 32, the upper longitudinal surfaces of the sides being in the same plane as the upper surface of the adjustable ends 14. A portion of the outwardly-extended ends of the brackets 33, supporting the side 31, are extended a short distance upwardly on the outer surface of the side 31, as at $33^{\times}$.

Upon the inner surfaces of the angle-bars 6 6, at points about equidistant from the ends of said bars, are secured the upper ends of shaft-hangers 34, in which is supported a rock-shaft 35. Upon the ends of the shaft are hubs 36, from which extend the arms 37, which arms extend upwardly on the outer surfaces of the sides 31 32 of the mold. In one side of the said hubs 36 are the adjusting-screws $37^{\times}$, which bind on the shaft 35. In the upper end of the arm 37 adjacent to the side 31 of the box or mold is a slot 38, in which is a clamp consisting of an eccentric 39, which is pivoted at $39^{\times}$ in the slot and bears against the outer surface of the side 31 of the mold, the position of the arm 37 on the shaft 34 being such as to leave a slight space between the arm and the side 31. With the eccentric is connected an outwardly-extended operating-arm 40.

The bottom or frame 5 of the mold is conveniently supported upon and hinged to a frame extending transversely to and beneath the lower surfaces of the angle-bars 6 6. This frame is composed of the channel-beams 41 41, with the ends of which are connected transverse beams 42.

Upon the outer surfaces of the beams 41 are perforate plates 45, which extend upwardly a short distance and are adjacent to the side angle-bar of frame 5, supporting the side 32 of the box. Upon the outer surface of the said angle-bar is secured a bracket 43, the outer ends of which are pivotally connected by pivots 44 with the upper ends of the plates 45 and form hinges referred to.

In the making of artificial-stone blocks the material is introduced within the box or mold and tamped to give the material solidity. When the block has become sufficiently tamped, the box or mold is turned upon its hinges or guides 43 45, the side 32 resting upon the upper surface of the channel-beams 41. The arm 40 is raised to release the pressure on the side 31 of the mold and the arms 37 moved away from the sides, as seen in dotted lines, Fig. 1, and side 31 removed. The toggle-jointed locking-bars 20 are drawn from their pivotal points 21 outwardly, releasing the ends 14 from the ends of the block, leaving the block of stone upon the side 32, which forms a pallet and upon which the stone is removed and another side substituted and the arms moved into position and clamped by the clamps 39. The mold is then turned back upon its hinges to its former position to receive the material for the formation of another block.

In order to manipulate the mold for making the length of block desired, the sides are first removed and adjusting-screws 12, securing plate 8 in position, are loosened and the plate, with the ends 14, moved either toward each other or farther apart, as desired, a die-plate 24 of the proper length being first placed in position and secured by the screw 29 and nut 30 to the plate 28. The sectional toggle-jointed locking-bars 20 are then forced downwardly until the projection 22 enters the notch 23, the sides 31 32 are clamped in position, and the mold ready for further use. The facilities of the mold are such as to enable the formation of a block of any desired length. Should an increased or decreased width be desired of the mold, similar plates 8 and ends 14 of greater or less width may be employed.

The release of the block of artificial material from the mold is effected without injury to the block, which obviously is of great advantage and an important feature of the invention.

In my invention sectional locking-bars for the ends carried by the adjustable plates 8 enable a block to be made short in length, which is very essential, by simply adjusting the position of plates 8 between the sides, the ends being hinged to the plates or not, as preferred, the sectional locking-bars affording a hinged support for the ends when they are in an inclined position.

Such modifications may be employed as are within the scope of the invention.

Having fully described my invention, what I now claim as new, and desire to secure by Letters Patent, is—

1. A mold comprising a bottom and separate transverse plates adjustably connected with said bottom, separable sides to the mold,

means for supporting said sides in an upright position, outwardly-inclinable ends to said mold upon said adjustable plates, said plates and ends being movable longitudinally upon said bottom between said sides of the mold and sectional locking-bars pivoted to the ends of the mold and the said adjustable supporting-plates.

2. A mold comprising a bottom and separate transverse plates adjustably connected with said bottom, separable sides to the mold and outwardly-inclinable ends upon said adjustable plates, said plates and ends being movable longitudinally upon said bottom between said sides, clamping devices acting to clamp said sides to the ends, and sectional locking-bars pivotally connected with said ends and said adjustable plates.

3. The combination in a mold of a base-frame consisting of longitudinally-extended bars; transverse plates adjustably connected with the ends of said bars, a removable bottom and downward extensions at each end supported by said longitudinal bars, a transverse plate upon the lower surface of said bars and a screw-bolt acting to draw downwardly upon said bottom.

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