April 24, 1928. 1,667,296

S. B. STINE

MOLDING MACHINE

Filed Aug. 11, 1927 2 Sheets-Sheet 1

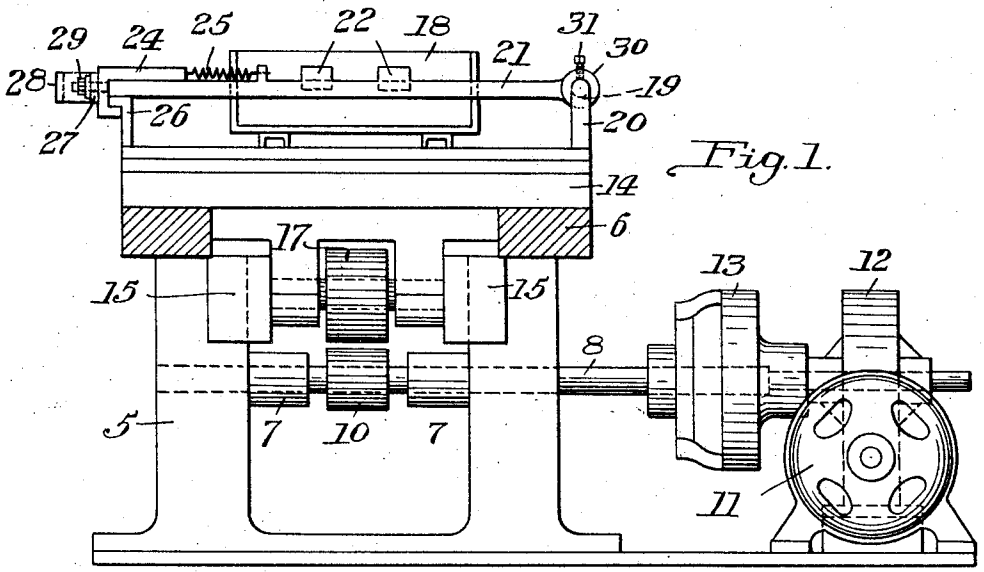


Fig. 1.

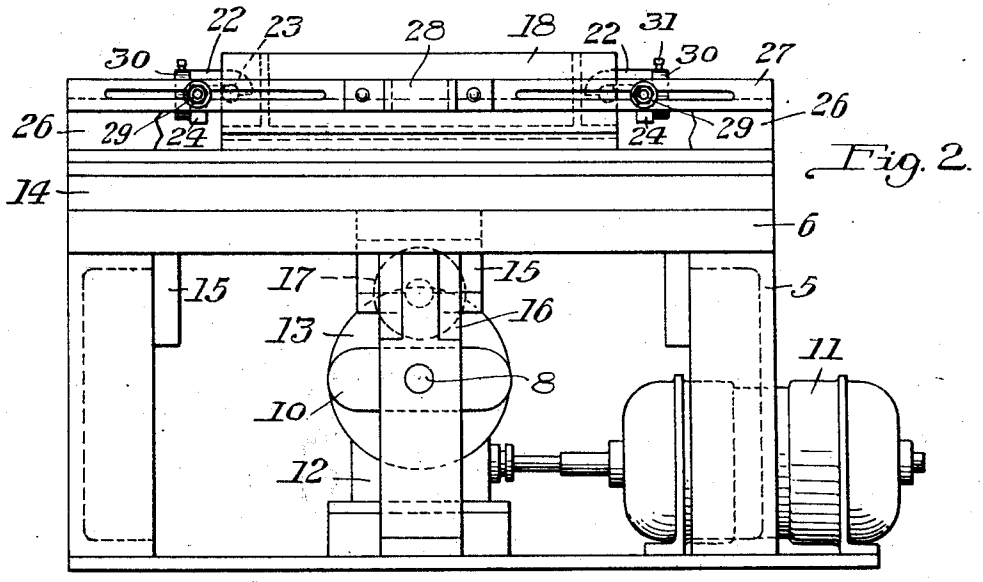


Fig. 2.

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Fig 3

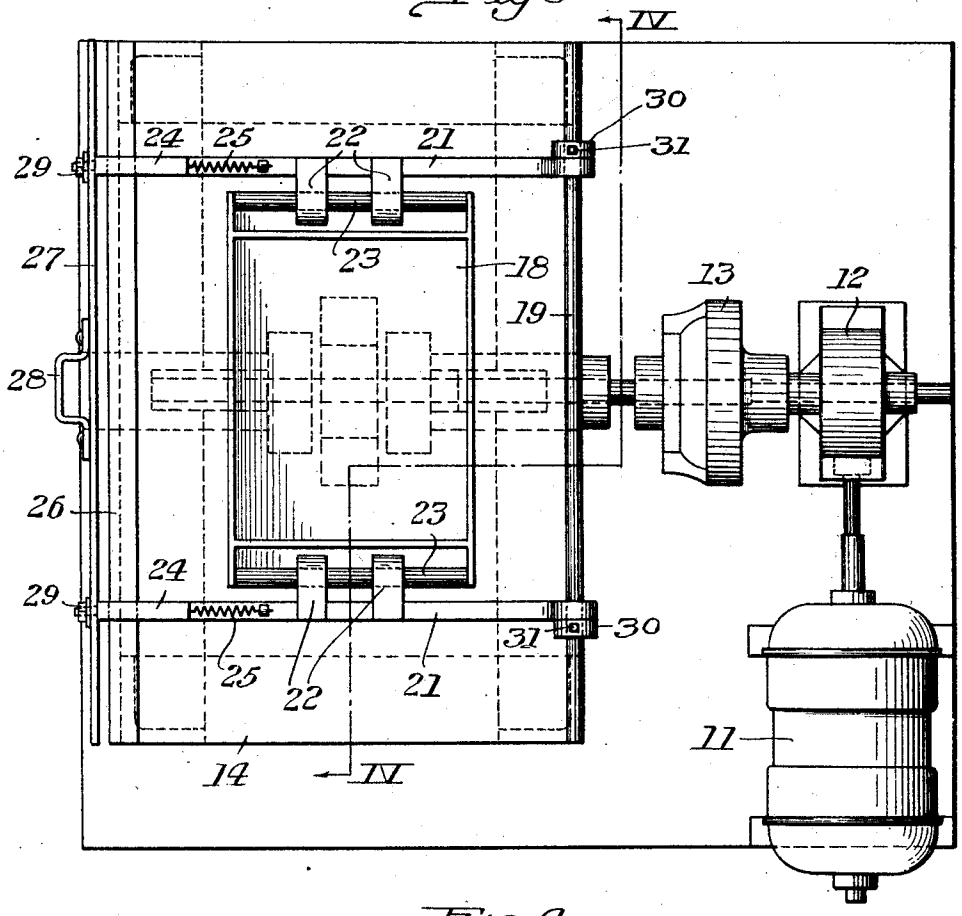
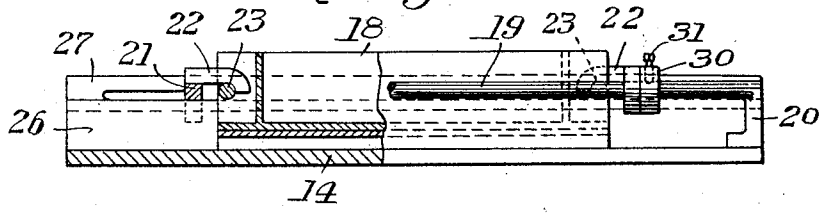


Fig. 4.



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UNITED STATES PATENT OFFICE.

SAMUEL BLAINE STINE, OF OSCEOLA MILLS, PENNSYLVANIA.

MOLDING MACHINE.

Application filed August 11, 1927. Serial No. 212,315.

My invention relates to molding machines, and more particularly to those of the jolt ramming or jarring type, and is adapted for use more especially in connection with the compacting of shale, clay, silica, or the like, in the formation of bricks, hollow tile, etc., and the jolt ramming of sand about patterns, etc.

One object of my invention is to provide molding apparatus wherein a more efficient jarring or ramming action is secured, by means of an improved cam or eccentric mechanism.

Another object of my invention is to provide an improved means for holding the molding box or the like in position upon a mold table.

Still another object of my invention is to simplify and improve generally the structure and operation of molding apparatus.

One form which my invention may take is shown in the accompanying drawings wherein Figure 1 is an end elevation view, partially in section; Fig. 2 is a side elevation view of the apparatus of Fig. 1; Fig. 3 is a plan view of the apparatus, and Fig. 4 is a view taken on the line IV—IV of Fig. 3.

The apparatus as shown includes a frame work 5 for supporting an anvil or impact surface 6 and containing bearings 7 for a shaft 8. A cam 10 of generally elliptical form is secured to the shaft 8. The shaft 8 is driven from a motor 11, through suitable reduction gearing 12, a clutch 13 being provided intermediate the gearing 12 and the shaft 8, which may be operated by a hand or foot lever (not shown) in any well-known manner, to control driving connection between the motor and the shaft.

A mold table 14 is disposed above the anvil 6 and is provided with downwardly extending guide lugs 15 that coact with complementally formed lugs 16 on the frame-work 5, so that the table will be held centralized with respect to the anvil during a jolting operation.

A roller 17 is journaled in a downwardly extending projection of the table 14, in position to be engaged by the cam 10 during rotation of such cam. The rotative movement of the cam 10 will result in the table 14 being elevated twice during each revolution of the shaft 8, the table falling or impacting upon the anvil 6 each time that one of the two elevated portions of the cam passes from beneath the roller. By reference to Figs. 1 and 2, it will be seen that the cam is out of contact with the roller 17 when the table is at rest upon the anvil. It will be understood that cams of other forms such as those well-known in the art, which cause only one impact during each revolution, may be substituted for the cam 10.

The table 14 serves as a support for the mold box or a flask 18 that may contain plastic clay for the formation of bricks, or it may be used in various other ways, as above indicated. In order to maintain the mold box 18 securely in position during the jarring operation, I provide a bar 19 that is secured to the table 14 by means of upstanding lugs 20. Hanger bars 21 are pivotally connected at their rear ends to the bar 19 and are each provided with holding lugs 22 that are shown as overlying handles 23 of the mold box 18. It will be understood that the lugs could overlie the edge of the box itself if desired.

On the forward ends of the hangers 21, I mount latches 24 that are slidable longitudinally of the hangers, and are normally held in latching position by means of tension springs 25. The latches 24 have their outer ends turned in to extend beneath a flange 26 that extends along the front edge of the mold table 14, so that when the latches are in the position shown in Fig. 1, the mold box will be firmly held upon the table. After completion of the jolting operation, the top surface of the brick or other article in the mold is smoothed by passing a suitable tool such as a paddle or trowel over the same. It has been found that bricks, tiles, etc., molded by the jarring method are superior, in some respects, to those made by other methods, since the plastic clay from which such articles are formed is compacted quite firmly and uniformly within the mold and all corners of the mold are completely filled.

In order to disengage the latches 24 and swing the hangers 21 upward and backward, to release the mold box 18, I provide a handle bar 27 that is provided with a handle 28. The bar 27 is connected by means of nuts 29 to pin like extensions of the latches 24 so that when the handle 28 is pulled outwardly against the tension of the springs 25 the latches 24 will be disengaged from the flange 26 and the hangers can be swung to release the mold box, as above explained.

In order to render the hanger bars 21 and their holding-down lugs 22 adjustable to

mold boxes of different length, I provide collars 30 that are adjustable longitudinally of the bar 19 and which are provided with set screws 31 to hold them in desired adjusted positions. The handle bar 27 is provided with slots, as shown more clearly in Fig. 2, through which the pin-like extensions of the latches 24 extend, so that as the rear ends of the hanger 21 are moved longitudinally of the bar 19, the forward ends thereof can also move, longitudinally of the bar 27.

I claim as my invention:—

1. Molding apparatus comprising a mold table, means for vibrating the same, hanger bars for holding a mold box upon the table, and means for adjusting said hanger bars in a horizontally transverse direction, for adapting them to mold boxes of various dimensions.

2. Molding apparatus comprising a mold table, means for vibrating the same, hanger bars extending across the table, for holding a mold box upon the table, means for pivotally connecting said bars at their rear ends to the table, and latching devices carried by the front ends of the bars for detachably connecting said ends to the table.

3. Molding apparatus comprising a mold table, means for vibrating the same, hanger bars for holding a mold box upon the table, means for pivotally connecting said bars at their rear ends to the table, latching devices carried by the front ends of the bars, for detachably connecting said ends to the table, and a common actuating means for said latching device.

4. Molding apparatus comprising a mold table, means for vibrating the same, hanger bars for holding a mold box upon the table, means for pivotally connecting said bars at their rear ends to the table, latching devices carried by the front ends of the bars, for detachably connecting said ends to the table, and means for adjusting said bars in a direction axially of their pivots.

5. Molding apparatus comprising a mold table, means for vibrating said table, a hanger bar for holding the mold box upon said table, means for pivotally supporting said bar at its one end adjacent to one edge of the table, and a latching device for detachably connecting the other end of the hanger bar to the opposite edge of the table.

6. Molding apparatus comprising a mold table, means for vibrating said table, a hanger bar for holding the mold box upon said table, means for pivotally supporting said bar at its one end, a latching device for detachably connecting the other end of the hanger bar to the table, a spring for normally holding said device in latching position, and a handle for moving said latching device to released position and for swinging the bar about its pivot to release the mold box.

In testimony whereof I, the said SAMUEL BLAINE STINE, have hereunto set my hand.

SAMUEL BLAINE STINE.