Nov. 17, 1936. F. BEAUCHAMP 2,061,497

AUXILIARY STRIKE FOR BRICK MACHINES

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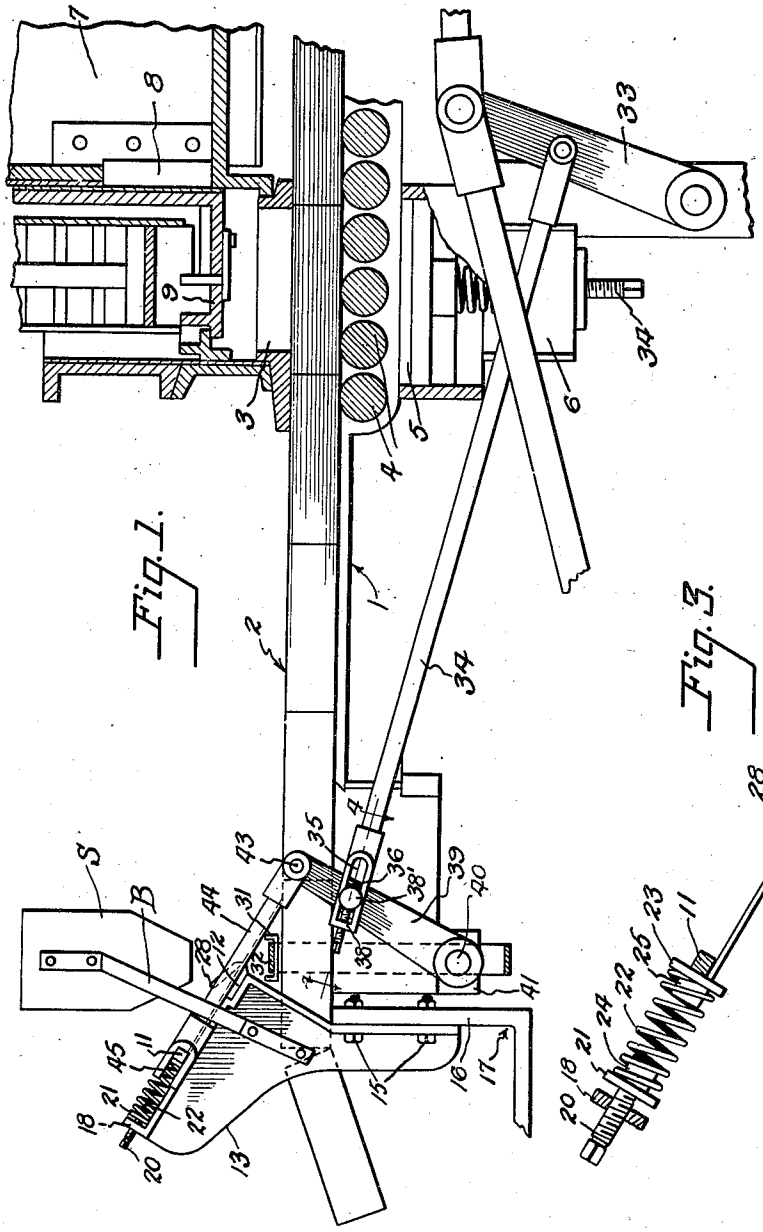


Fig. 1.

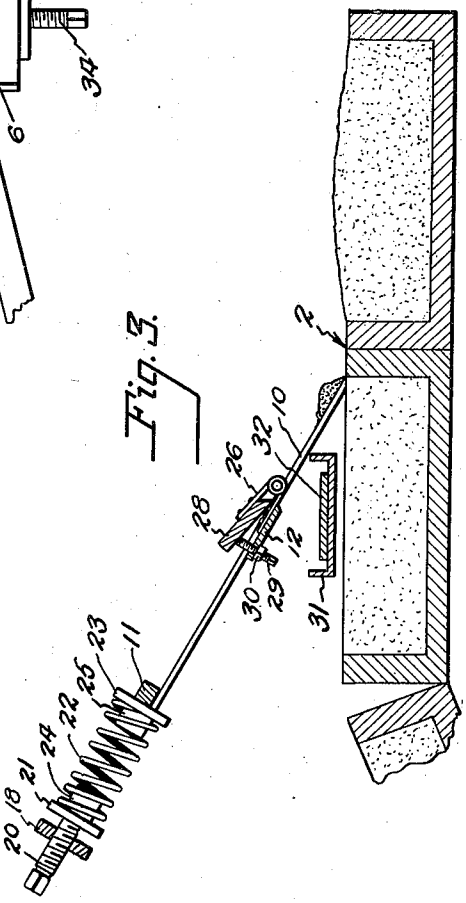


Fig. 3.

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Fig. 2.

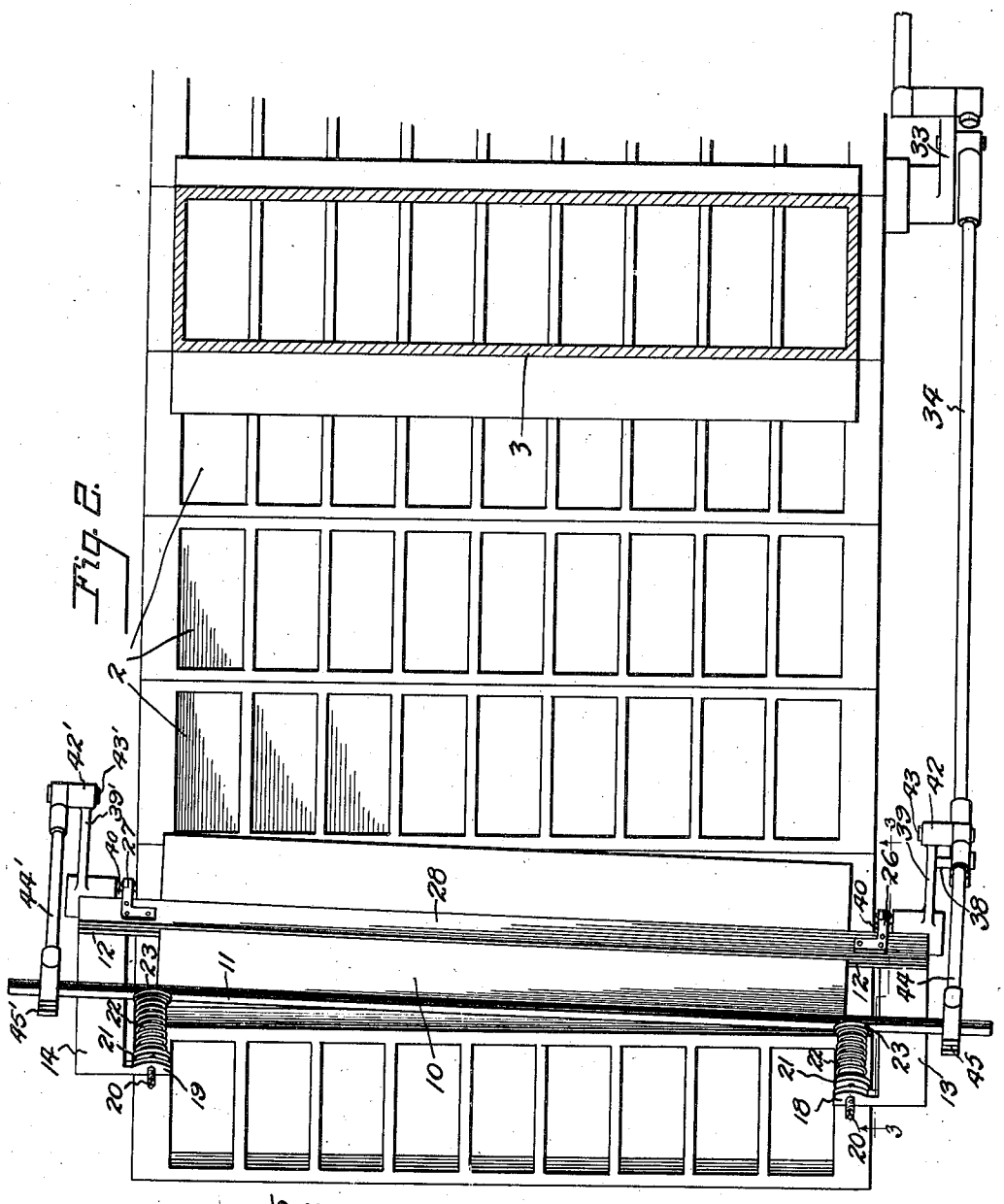
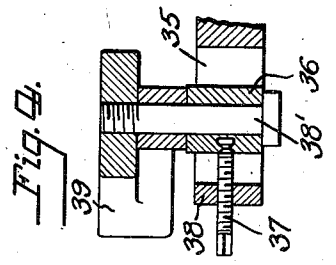


Fig. 4.



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2,061,497

AUXILIARY STRIKE FOR BRICK MACHINES

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5 Claims. (Cl. 25—104)

The invention forming the subject matter of this application is in the nature of a striking attachment designed to be applied to automatic brick machines of the type disclosed in United States Patents Nos. 1,341,798, 1,454,165, and 1,779,136.

In the automatic brick machines disclosed in the patents aforesaid, a series of molds are fed intermittently below a die above which a plunger operates to press through the die and into the molds, the clay extruded from a pug mill into the path of movement of the plunger above said die. In the operation of these machines, it has been found that when the pressure of the die is released, the clay in the molds expands slightly and forms an objectionable arcuate cap on the upper surfaces of the bricks.

The object of the present invention is to provide a device which can be readily attached to the automatic brick machines of the type referred to, for the purpose of removing the excess material from the top of the molds during the movement thereof from the press toward the dumping mechanism of the brick machine.

Other objects of the invention will become apparent as the detailed description thereof proceeds.

In the drawings:

Figure 1 is a fragmentary side elevation showing the attachment as applied to an automatic brick machine of the type above referred to;

Figure 2 is a plan view of the mechanism shown in Figure 1;

Figure 3 is a vertical transverse section taken on the line 3—3 of Figure 2; and

Figure 4 is a fragmentary detailed section taken on the line 4—4 of Figure 1.

As shown in the drawings, the reference numeral 1 designates a horizontal runway forming part of the horizontal framework of the machine and along which the molds 2 are moved intermittently by the mechanism of an automatic brick machine, to which this invention is to be applied. This mechanism forms no part of the present invention, and is therefore not illustrated in detail herein. In the operation of the brick machine, the molds 2 are fed intermittently so that each mold in turn becomes located during a rest period below a die 3, and is supported upon rollers 4 resting upon a platform 5, yieldingly supported on a cross bar 6 forming part of the framework of the machine. Clay is extruded from a pug mill 7, through an aperture 8 into a passageway vertically above the die 3, during such intervals as the presser plate 9 is raised above the aperture 8 to permit extrusion of the clay into said passageway.

During the period of rest of each mold on the platform 5, the presser plate forces the extruded clay into the mold. As the presser plate is withdrawn above the aperture 8, the molds move as to bring the next succeeding mold into position below the die 3. During this period of movement the present invention comes into operation to cut off the cap of clay formed on the top of the molds by release of pressure from the clay in each mold.

The invention comprises a steel plate 10 sharpened to a knife edge and extending clear across the molds to strike off caps formed on each mold by release of pressure on the material therein. The plate 10 is suitably secured to a bar 11, and is slidably supported by a cross bar 12 having its opposite ends fixed to brackets 13 and 14 suitably secured as by bolts 15 to the vertical flange 16 of a transverse angle iron 17 forming part of the framework of the machine.

The brackets 13 and 14 are provided with inwardly directed lugs 18 and 19, respectively. Each of the lugs 18 and 19 is provided with a screwthreaded aperture, through which extends a machine screw 20 bearing against a washer plate 21 receiving one end of a compression spring 22 having its other end suitably secured to a washer plate 23 fixed to the upper edge of a cross bar 11. Studs 24 and 25 extending from these washer plates prevent buckling of the spring.

The cross bar 12 has hinges 26 and 27 secured to its opposite ends; and these hinges in turn, are secured to a striker plate 28 sharpened to a knife edge at its lower edge to contact with the upper face of the knife blade 10 for the purpose of striking off excess clay which may have been removed from the top of the molds during their movement from the press to the dumping mechanism. The plate 28 may be adjusted to accommodate various thicknesses of knife blades 10, by means of set screws 29 suitably screwthreaded into the opposite ends of the cross bar 12 for this purpose, and locked in adjusted position by the lock nuts 30. A trough 31 provided with a conveyor belt 32 is arranged below the cross bar 12 and striker plate 28 to receive the excess material removed from the top of the mold, and may be used to return the excess clay to the pug mill, or to any other location where this material can be used.

Obviously, it will be necessary to remove excess material from the knife blade 10 at intervals, otherwise, the machine would become clogged beyond possibility of operation. It will be evident from the drawings, that the normal position

of the knife blade 10 is in contact with the upper ends of the mold, since the springs 22 would keep this knife blade in such position. To remove the material from the knife blades, and transfer it into the trough 31, the rocker arm 33 of the brick machine has pivotally secured thereto, one end of a pitman 34, the other end of which is provided with a slot 35 in which is adjustably mounted a bearing 36. The bearing 36 may be secured in position in the slot 35 by means of a set screw 37, screwthreaded through the outer end 38 of the pitman 34 and swiveled at its inner end to the bearing 36. This adjustment is designed to take care of the differences in throw of the rocker arms 33 of different sized automatic brick machines.

A pivot pin 38' extends through the bearing 36 and is secured at one end to a link 39 between the ends of said link 39. The link 39 is pivoted at its lower end to a pin 40 extending laterally outward from a part 41 of the framework of the automatic brick machine. The other end of a link 39 is provided with a boss 42 having a pivot pin 43 extending therethrough to receive the lower end of a pusher rod 44. The upper end of the rod 44 is bifurcated to form a slot 45 in which one end of the rod 11 is slidably mounted.

The mechanism just described is duplicated on the other side of the brick machine, and the corresponding elements thereof are designated by the same reference numerals primed. It will be observed that the plate 10 extends somewhat angularly across the molds 2, so as to secure a slicing effect on the caps of clay which protrude above the top of said molds.

A sander S may be suitably supported on brackets B to extend across the machine directly over the wiper mechanism; and may be operated to drop sand on the blade 10 during its passage from the wiper mechanism toward the molds. The sanding operation may be performed manually, or can be effected in timed relation to the movements of the wiper blade by any mechanism connected to the operative parts of the machine.

While I have shown this invention as applied to an automatic brick machine, it must be understood that the invention is not limited to such use, but may be used in any other machine or machines where striking operations are necessary or desirable.

What I claim is:

1. The combination of a brick machine having means for intermittently moving molds in one direction to and from a predetermined location, in which they may be filled under pressure with material in a plastic condition, with a support extending across the path of movement of said molds, a striker blade slidably mounted on said support, means on said support for normally holding said blade with its lower edge in yielding striking contact with the top edges of said molds, means for moving said blade toward and from the striking contact while the molds are in rest position, and means fixed to said support for removing material from said blade during its movement from said striking contact.

2. The combination of a brick machine having means for intermittently moving molds in one direction to and from a predetermined location, in which they may be filled under pressure with material in a plastic condition, with a support extending across the path of movement of said mold, a striker blade slidable on said support into and out of striking contact with the top edges of said mold, yielding means for moving said blade toward the said top edges, means operable only during the rest period, of said mold for moving said blade out of striking contact with the top edges thereof, and means for scraping material from said blade during the last named movement thereof.

3. The combination of a brick machine having means for intermittently moving molds in one direction to and from a predetermined location, in which they may be filled under pressure with material in a plastic condition, with a support extending across the path of movement of said mold, a striker blade slidable on said support into and out of striking contact with the top edges of said mold, yielding means for moving said blade toward the said top edges, means operable only during the rest period of said mold for moving said blade out of striking contact with the top edges thereof, and a scraper blade extending along said support and contacting with the upper face of said striker blade to remove material therefrom during the movement of said striker blade away from contact position with the top edges of said mold.

4. The combination of a brick machine having means for intermittently moving molds in one direction to and from a predetermined location, in which they may be filled under pressure with material in a plastic condition, with a support extending across the path of movement of said mold, a striker blade slidable on said support into and out of striking contact with the top edges of said mold, yielding means for moving said blade toward the said top edges, means operable only during the rest period of said mold for moving said blade out of striking contact with the top edges thereof, a scraper blade extending along said support and contacting with the upper face of said striker blade to remove material therefrom during the movement of said striker blade away from contact position with the top edges of said mold, and means for adjusting the angular position of said scraper blade relative to the upper face of said striker blade.

5. The combination of a brick machine having means for intermittently moving molds in one direction to and from a predetermined location, in which they may be filled under pressure with material in a plastic condition, with a support extending across the path of movement of said mold, a striker blade slidable on said support into and out of striking contact with the top edges of said mold, yielding means for moving said blade toward the said top edges, means operable only during the rest period of said mold for moving said blade out of striking contact with the top edges thereof, a scraper blade extending along said support and contacting with the upper face of said striker blade to remove material therefrom during the movement of said striker blade away from contact position with the top edges of said mold, means for adjusting the angular position of said scraper blade relative to the upper face of said striker blade, and means for sanding the upper face of said striker blade during the movement thereof to striking contact with said mold.

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