(No Model.)

W. E. DAMON.

BRICK MACHINE.

No. 541,725. Patented June 25, 1895.

Fig. I

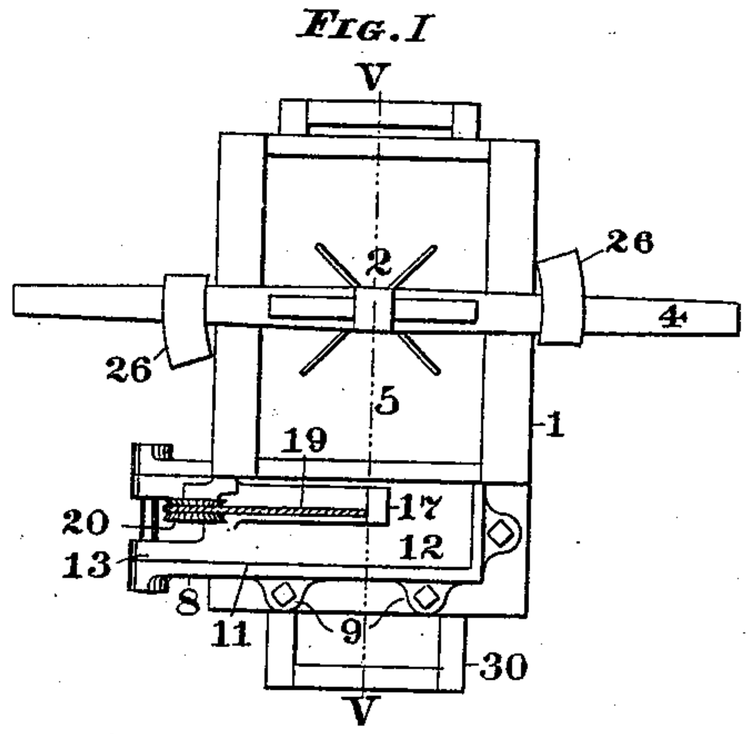


Fig. II.

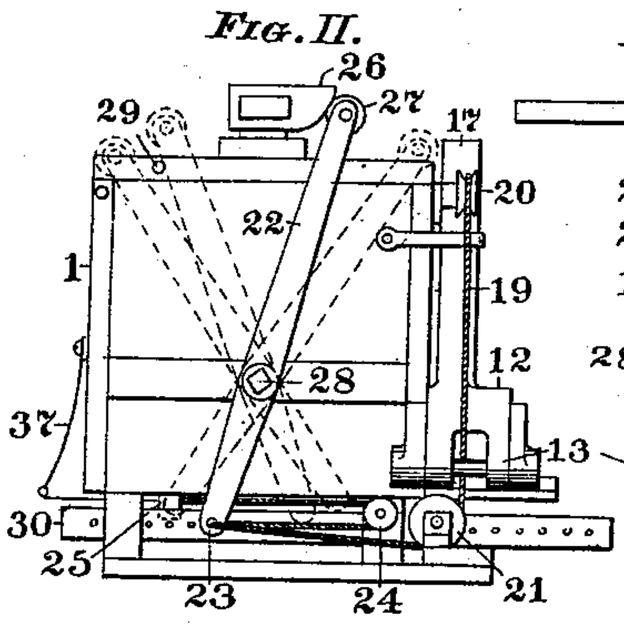


Fig. III.

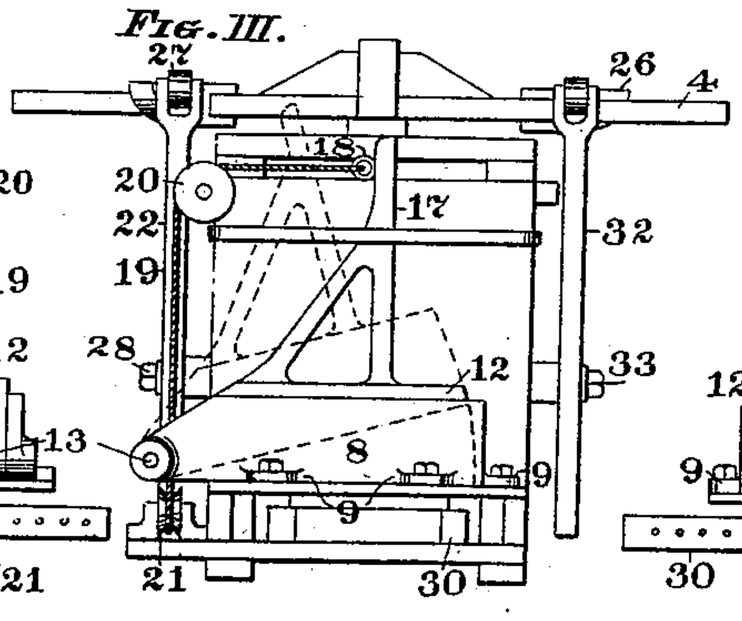


Fig. IV.

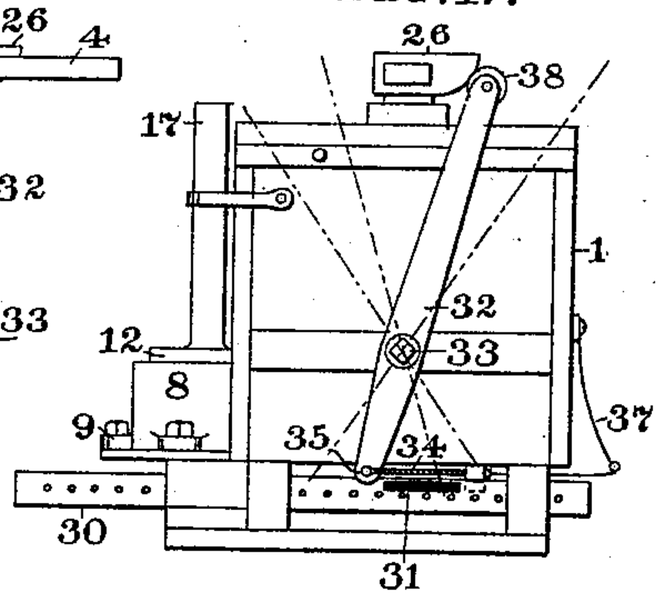


Fig. V.

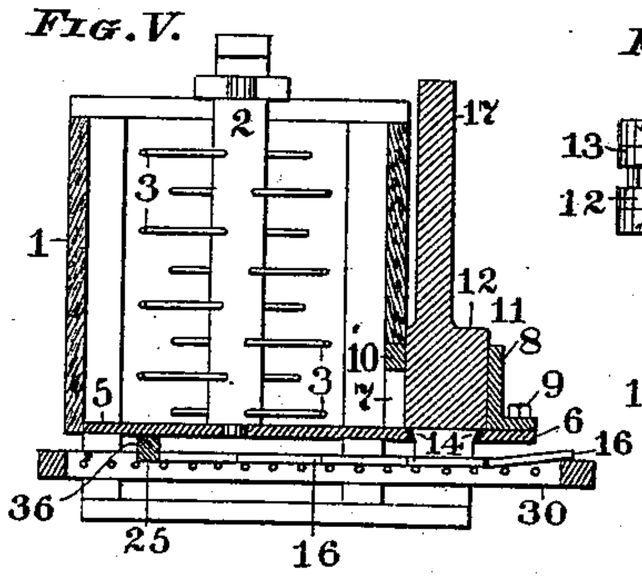


Fig. VI.

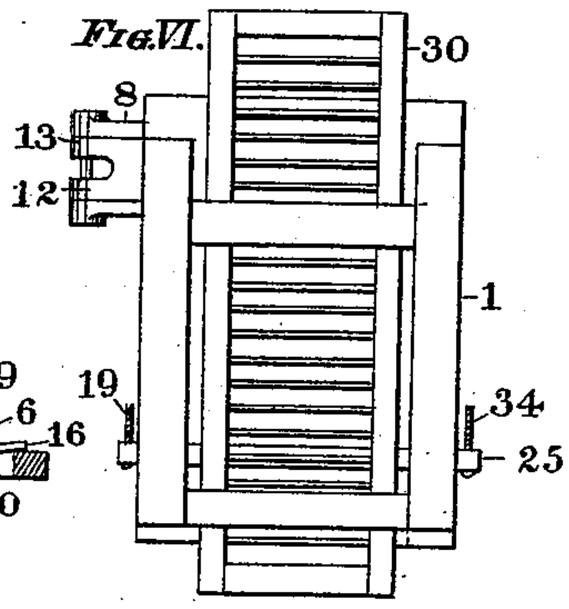


Fig. VII.

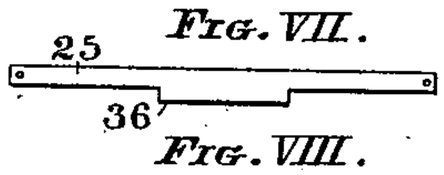
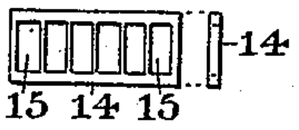


Fig. VIII.



Witnesses
Frank Van Vleck
S. Allen.

Inventor
W. E. Damon
By
Knight Bros.
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM E. DAMON, OF POMONA, CALIFORNIA.

BRICK-MACHINE.

SPECIFICATION forming part of Letters Patent No. 541,725, dated June 25, 1895.

Application filed July 17, 1894. Serial No. 517,808. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. DAMON, of Pomona, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Brick-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in brick machines, and my invention consists of certain features of novelty hereinafter described and pointed out in the claims.

Figure I is a top view. Fig. II is a side view showing the different positions the operating lever assumes. Fig. III is an end view. Fig. IV is a side view the reverse of that shown in Fig. II. Fig. V represents a vertical section taken on line V, V. Fig. I. Fig. VI is a bottom view. Fig. VII represents a side view of the bar which forces the molds forward. Fig. VIII represents a plan and end view of the dies.

Referring to the drawings:—1 represents the clay receiver in which the clay is thoroughly mixed and reduced to the proper consistency before being pressed into the molds.

I provide for mixing the clay an upright post 2, suitably journaled in the receiver, and having a series of radial arms 3.

The mixer is preferably actuated by means of a sweep 4, to which the animals for operating the same may be hitched.

5 represents the bottom of the receiver having a shelf 6 which extends beyond the wall of the receiver.

7 represents an aperture extending through the wall of the receiver through which the clay passes from the mixer on its way to the molds.

8 represents an elongated casting having one of its sides securely bolted to the shelf 6, at 9, and having its other side extending through the aperture 7, and being flush with the inner side of the receiver as shown at 10. The casting 8 is provided with an elongated aperture 11, in which a plunger or beater 12 operates, said beater being hinged at one of its ends at 13 to the casting 8, so that as it rises and falls it assumes a rocking movement. (See Fig. III.) As the beater is raised the plastic clay will pass through the aperture 7 into the aperture 11 in the casting 8 and extending over removable dies 14 set in the bottom plate 5 of the receiver, said dies having a series of openings 15 of the proper dimensions for the required size of brick. As the beater falls the clay is pressed through the dies and the bricks fall into the molds 16 which are supported directly beneath the dies.

The beater is provided on its upper side with a bracket 17, preferably having near its upper end a ring 18. To the ring 18 is preferably secured one end of a cable 19, said cable passing over a pulley secured to the side of the receiver under a pulley 21 journaled near the bottom of the receiver, through the lower end of a lever 22 at 23, thence around a pulley 24 and having its opposite end secured to one end of a bar 25 which feeds the molds.

26 represents cams on the sweep 4 which as the sweep revolves come in contact with an anti-friction roller 27 on the upper end of the lever 22, said lever being pivoted to the side of the receiver at 28, the cams causing said lever to rock forward (see Fig. III). the lower end of the lever traveling backward and causing the cable 19 to raise the beater, as shown in dotted lines Fig. III. As the cams pass out of contact with said lever the beater is permitted to fall and presses the bricks, the falling of the beater causing the lever 22 to rock backward into its normal position, as shown in central dotted lines Fig. II ready to be again actuated by the following cam.

29 represents pins which limit the backward movement of the operating levers when in their working position.

30 represents a rack suitably supported beneath the clay receiver and along which the molds 16 travel, the molds being placed on the rack through an aperture 31 in the frame of the same. 32 represent a lever similar to lever 22 and pivoted at 33 to the opposite side of the receiver.

34 represents a cable having one of its ends connected at 35 to the lower end of the lever 32 and its opposite end secured to one end of

the feed bar 25. The main portion of the feed bar 25 rests upon the side bars of the rack 30, and is provided with a shoulder 36 which extends down between said side bars and always remains at the rear of the last mold placed upon the rack.

37 represents a spring which serves to return the feed bar 25, and the lever 32 back to their normal position after said lever has been released by the cam on the sweep.

38 represents an anti-friction roller on the upper end of the lever 32 with which the cams on the sweep come in contact as the same revolves.

In operation, as the cams 26 come in contact with the anti-friction rollers 27, 38 the levers 22, 32, are rocked forward, the lever 22 with its connecting cable 19 raising the beater 12 upward and at the same time said levers and their connections force the feed bar 25 forward the width of one of the molds 16, thus forcing out from beneath the dies a mold full of bricks and placing an empty mold in its place ready for the next series of bricks which are formed by the beater as it drops after the lever 22 is released by the cam, the lever 22 being forced back into its normal position by the weight of the beater and the lever 32 and the feed bar 25 being returned to their normal position by means of the spring 37.

In order to first grind and mix the clay before forming the bricks I remove the pins 29 and press the levers 22, 32 backward as shown in dotted lines Figs. II and IV, which permits the cams to ride freely over the same without actuating them.

The beater not only serves to form the bricks, but also assists to work the clay into a proper consistency. The excess clay not passing through the dies at each drop of the beater is forced by the same back into the receiver and is thus thoroughly mixed and worked.

I do not confine myself to the cable shown for raising the beater as its equivalent, such for instance as a sprocket chain, might be used, without departing from the spirit of my invention.

I claim as my invention—

1. In a brick machine, the combination of a suitable clay receiver, a rocking beater hinged to the receiver, a lever pivoted to the receiver, means for rocking said lever, and a cable for connecting the beater with the lever, substantially as described and for the purpose set forth.

2. In a brick machine, the combination of a suitable clay receiver, a beater connected with the receiver, levers pivoted to the receiver, means for rocking said levers, a feed bar for feeding the molds, means for connecting said feed bar with the levers, and means for connecting one of said levers with the beater, substantially as described and for the purpose set forth.

3. In a brick machine, the combination of a clay receiver, a beater and dies for forming the brick, a pivoted lever for raising the beater, a sweep and cam for rocking said lever, a bar for feeding the molds, a cable having one of the ends connected with the beater, engaging suitable bearing pulleys and the lever, and having its opposite end secured to the feed bar, substantially as described and for the purpose set forth.

4. In a brick machine, the combination of a clay receiver, a beater and dies for forming the brick, pivoted levers for operating the beaters and feed bar, means for rocking the same, a feed bar 25 for feeding the molds, means for connecting the levers with said feed bar, and a spring for returning said feed bar and one of said levers to their normal position, substantially as described and for the purpose set forth.

WILLIAM E. DAMON.

Witnesses:
A. H. TUFTS,
E. P. CAMAN.