

(No Model.)

W. K. EATON.

MACHINE FOR MAKING POPCORN CAKES.

No. 591,461.

Patented Oct. 12. 1897.

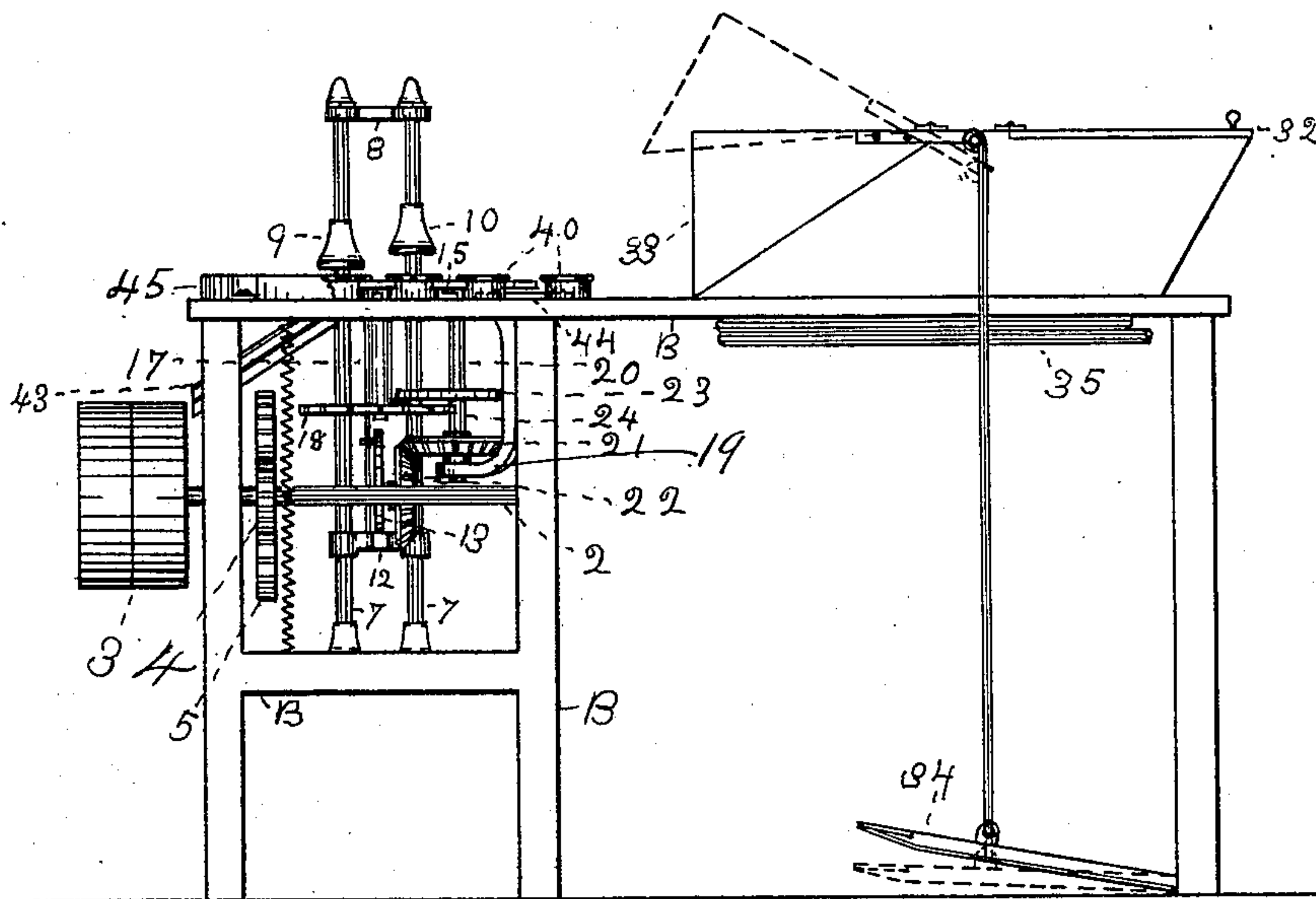


FIG. 7

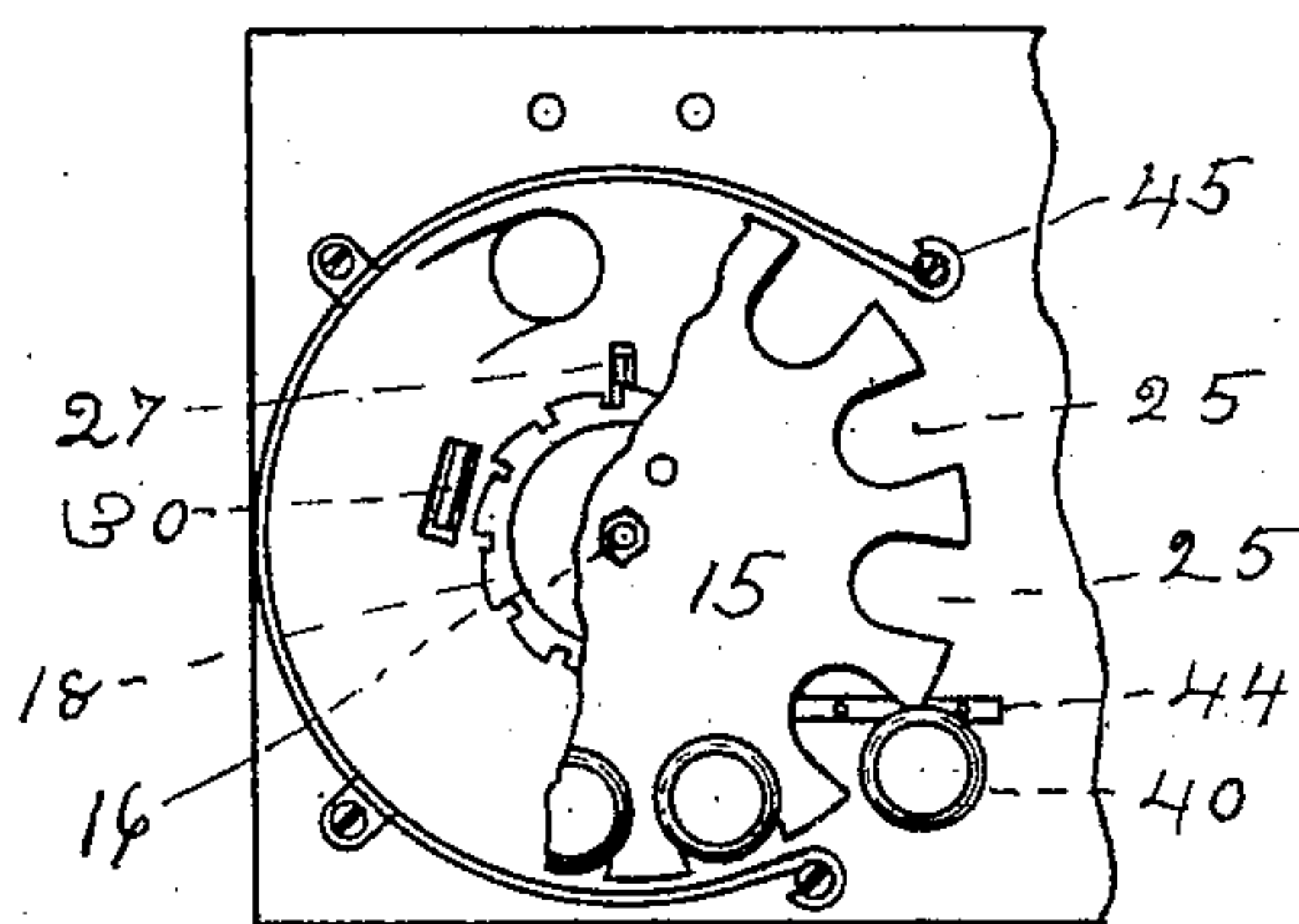


FIG. 2

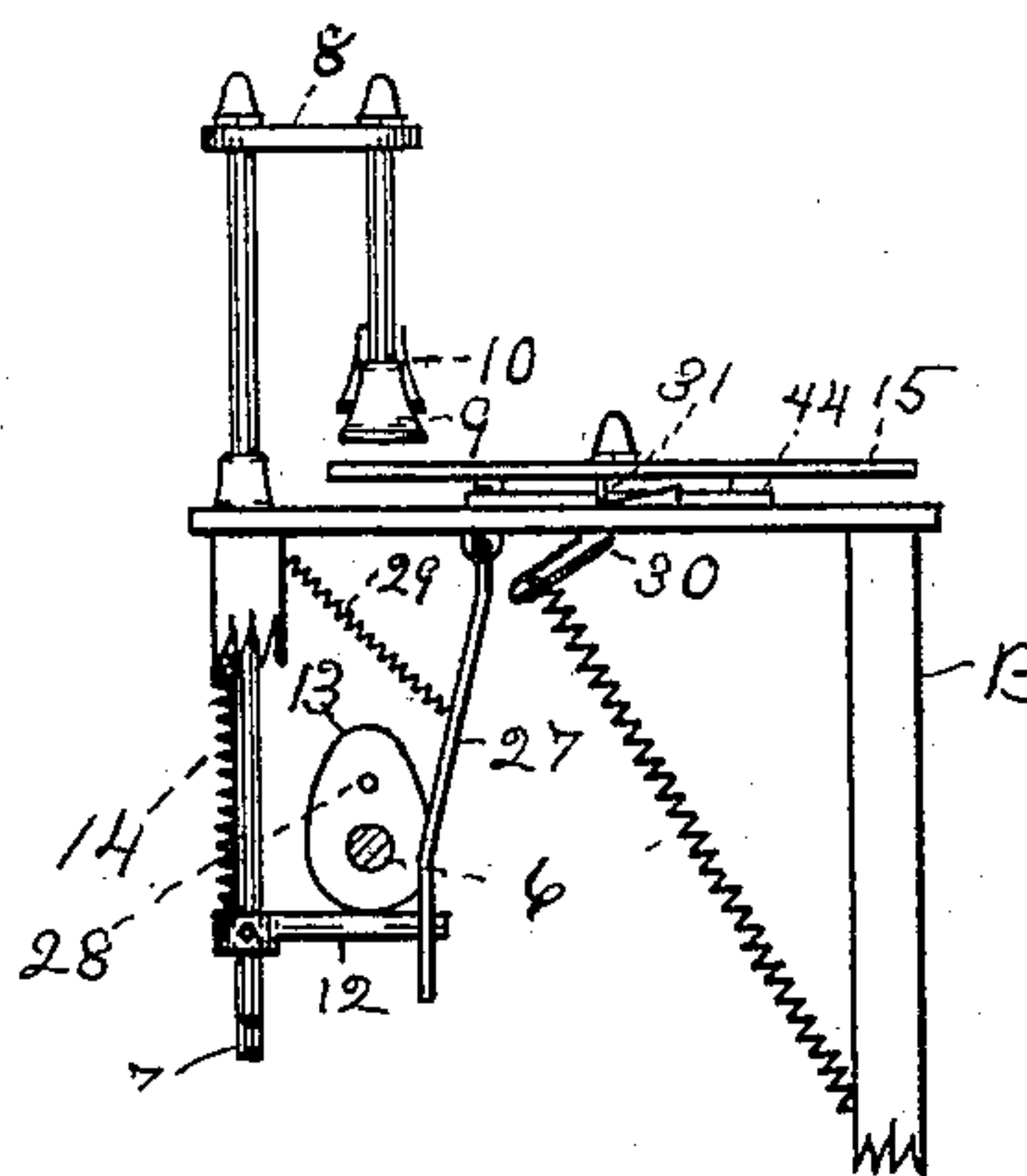


FIG. 3

WITNESSES.

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WILBER K. EATON, OF LYNN, MASSACHUSETTS.

MACHINE FOR MAKING POPCORN CAKES.

SPECIFICATION forming part of Letters Patent No. 591,461, dated October 12, 1897.

Application filed April 28, 1897. Serial No. 634,241. (No model.)

To all whom it may concern:

Be it known that I, WILBER K. EATON, of Lynn, in the county of Essex and Commonwealth of Massachusetts, have invented certain Improvements in Machines for Making Popcorn Cakes and the Like, of which the following, read in connection with the accompanying drawings, is a specification.

This invention relates to mechanism having for its purpose to facilitate the operation of making cakes of popcorn and the like.

In the drawings, Figure 1 is a front elevation of the machine embodying this invention. Fig. 2 is a plan, and Fig. 3 is a side elevation, respectively, showing parts of the machine more fully described hereinafter.

The machine comprises a framework designated by the letter B. Journaled in the frame B is a shaft 2, having fixed and loose power-receiving pulleys 3, wherethrough motion is imparted for revolving the shaft. Said shaft carries a gear 4, in mesh with a larger gear 5, wherethrough motion is imparted for turning the gear 5, and consequently revolving the shaft 6, on which said gear is fixed. Shaft 6, it will be understood, is the main driving-shaft of the machine, and is journaled in the frame B rearwardly of and in substantially longitudinal plane with the shaft 2.

In the frame B are standards 7 7, on which is a cross-head 8, having depended therefrom the plunger-heads 9 10. Below the frame-table on the standards 7 is a cross-bar having projected forwardly therefrom a tongue-piece 12 for engagement with the cam 13 on shaft 6, the combination operating for depressing the plungers 9 10 once at every revolution of the cam 13. The standards are reversed, and consequently the plungers are lifted, when the cam permits it, by a spring 14, which to that end has one end attached to the bar 12 and the other end on frame B.

Above the frame-table and beneath the plungers 9 10 is located the platen 15, having fixed connection with a shaft 16. Shaft 16 is supported to permit rotation in a journal sleeve or hanger 17 and carries on its bottom end a ratchet-plate 18. Supported, one end in the frame-table and one end in the hanger 19, is a shaft 20, on which is a gear 21, in mesh with gear 22 on shaft 6, and also a plate 23, carrying pin 24 to engage the ratchet projections of plate 18.

It will be understood that by each revolution of plate 23 the pin 24 is made to engage with a ratchet-tooth on plate 18, and the plate 18 is thereby moved around until the pin 24 escapes from said connection, the result being to give a step-by-step or intermittent movement to the platen 15. The platen 15 has recess formations 25 deposited therein with due regard for the plungers 9 10, so as to be carried successively into alinement with said plungers by the movement of the platen, and the stopping of the platen is made to take place and continue for the plungers to come down into the plane of the recess placed therebeneath, respectively.

In order to secure the platen against movement in the stopped position, a locking device is employed, which comprises the pivoted bar 27, arranged for connection with a pin 28 on cam 13, whereby the bar is held in a ratchet-notch on plate 18 during the time of the required stop and withdrawn, when permitted, by the cam and normally held out of said engagement by the spring 29.

To insure stopping of the platen as required during rapid operation of the machine, a spring-actuated brake-lever 30 is employed, having its cam-face upwardly-pressed for engagement preliminary to the stopping operation with some one of a series of pins 31 on the bottom face of the platen, the result being to stop the platen from being displaced by the force of its revolving movement or momentum after escaping the pin 24.

The corn material, it will be understood, is preferably worked in a superheated temperature, and to that end is provided an oven contrivance having the inlet-door 32 and the flap-door 33, connected with which is a treadle-lever device 34 for lifting the door, as shown. Beneath the oven is a coil of pipe 35, adapted for steam, hot-water, or other convenient heating medium. Instead of this, however, other means of artificial heating devices may be employed. This oven device is arranged to open directly toward the platen, and between it and the platen is a portion of the frame-table adapted for supporting the material while mixing and for uses in operation of the machine.

It will now be understood that the corn material, having been suitably prepared and properly heated in the oven device, if super-

ficial heat is desired, is taken in small quantities and put into shapes or forming devices 40 by hand, which are then placed, respectively, in the sockets or recesses 25 of platen 5 15. As shown in the present instance, said devices consist of circular rings open at the top and bottom and having top flanges to prevent passage through the platen-openings. Instead of rings the shapes may be of heart 10 form or any desired contour. The platen having reached the proper position in the machine's operations is stopped and the presser-plunger 9 is moved against the material in the forming device for pressing it into cakes, 15 and again the platen is stopped, with the shape or forming device in position for receiving the plunger 10, whereby the cake is pressed through the forming device and therefrom drops through an opening in the frame-table 20 into a chute or conductor 43 and thereby is conducted to the delivering-point. When the platen moves farther around, the exhausted shape or forming device is made to engage the fixed cam-plate 44, and is thereby ousted 25 from the platen onto the frame-table for refilling as and when desired. Except at the receiving and delivering space the formers are held in place by a guard 45, suitably arranged for that purpose about the platen, as shown. 30

The machine permits rapid operation, and with the heating devices cakes may be rapidly served while in a superheated condition.

I claim—

35 1. In a machine for making popcorn cakes and the like, the combination of forming devices for holding the material and a platen or support for said devices, with a plunger for pressing into cakes the material in said 40 forming devices, and means for changing the relative positions of the platen or support and the plunger member, for presenting the forming devices and completing the pressing operations one after another, and means for 45 automatically removing the forming devices from the platen or support, substantially as described.

2. In a machine for making popcorn cakes and the like the combination of forming de-

vices for holding the material and a platen 50 or support for said devices with a plunger for pressing into cakes the material in said forming devices and a plunger for discharging the cakes from the forming devices and means for shifting the relative positions of 55 the platen or support and the pressing and the discharging plungers for presenting the forming devices and completing the pressing and discharging operations, and means for automatically removing the forming de- 60 vices from the platen or support.

3. A machine for making popcorn cakes and the like, comprising forming devices for holding the material, and a movable platen 65 for holding the forming devices, combined with a plunger for pressing into cakes the material in said devices, and means for separately discharging the cakes from the forming devices, and means for discharging the forming devices from the platen, substan- 70 tially as described.

4. In a machine for making popcorn cakes and the like the combination of a movable platen, and forming devices carried by the platen, with a plunger and means for moving 75 the plunger into the path or plane of the platen, for pressing into cakes the material in said forming devices, and a second plunger and means for moving it to discharge the cakes, substantially as described. 80

5. In a machine for making popcorn cakes and the like the combination of a movable platen, and forming devices carried by the platen, with a plunger and means for moving 85 the plunger into the path or plane of the platen for pressing into cakes the material in said forming devices and a second plunger and means for moving it to discharge the cakes, and means for automatically locking the platen against movement during the press- 90 ing and discharging operations, substantially as described.

Signed at Lynn this 10th day of April, A. D. 1897.

WILBER K. EATON.

Witnesses:

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 C. B. TUTTLE.