

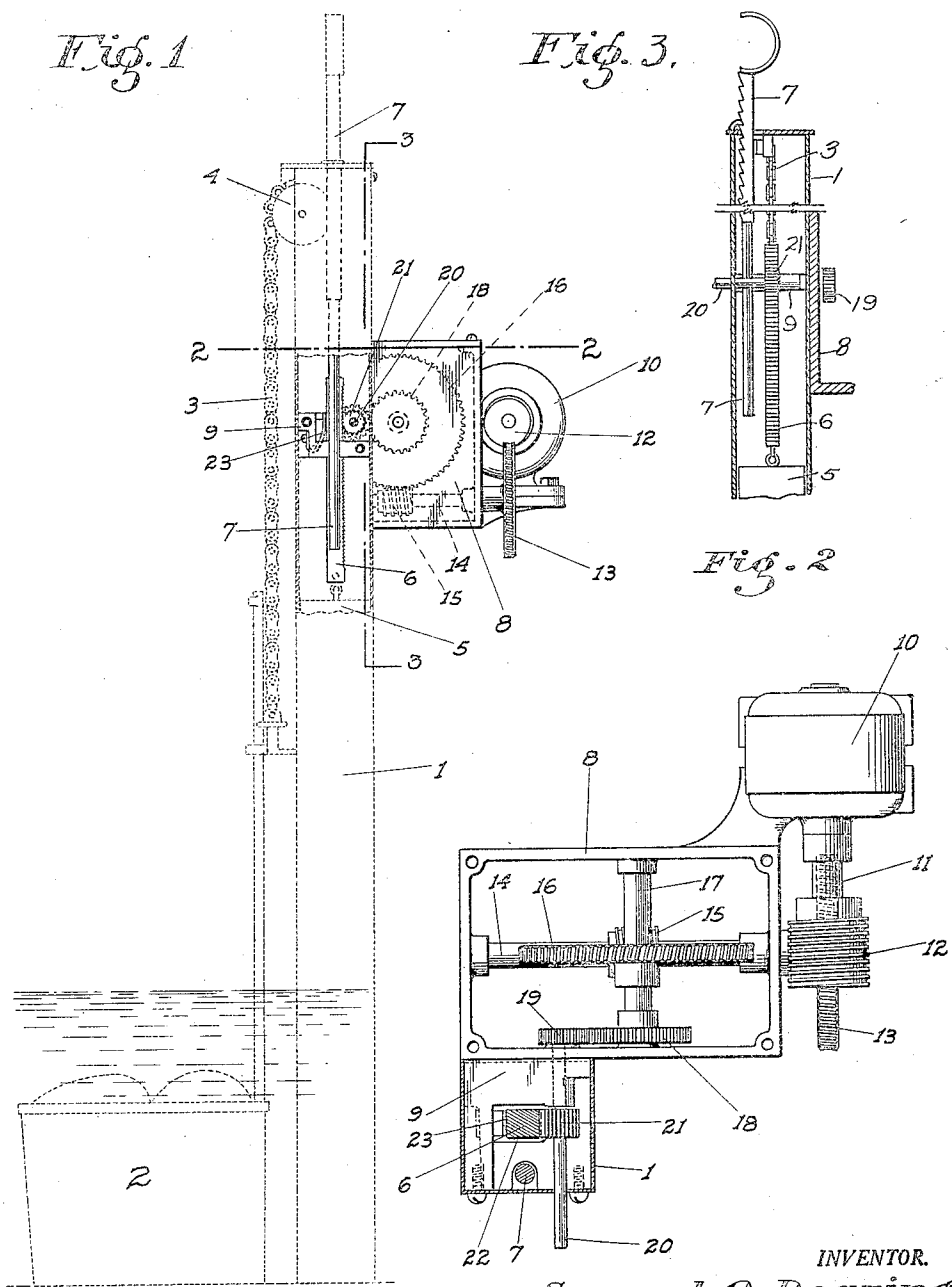
Aug. 26, 1924.

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1,506,113

OPERATING MECHANISM FOR EGG TIMERS

Filed May 8, 1923



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OPERATING MECHANISM FOR EGG TIMERS.

Application filed May 2, 1923. Serial No. 637,503.

To all whom it may concern:

Be it known that I, SAMUEL O. DEARING, a citizen of the United States, residing at Stockton, county of San Joaquin, State of California, have invented certain new and useful Improvements in Operating Mechanism for Egg Timers; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in egg-timing devices such as are widely used in restaurant and hotel kitchens and similar food cooking and serving establishments.

Such timers as are now in general use employ as fundamental elements a hollow standard, an egg receptacle arranged for vertical movement relative to the standard, an overbalancing weight in the standard connected to the receptacle and tending to raise the same with its load, and a clock-work or escapement mechanism actuated by the weight and operatively connected therewith to prevent its freedom of falling before predetermined and adjustable periods of operation of the escapement mechanism have elapsed.

From long observation and personal contact with these devices, I have found that this form of control or operating mechanism is unsatisfactory and so unreliable that the attendants or chefs have to watch the clock to make sure that the device is functioning properly, and that eggs, timed to remain in the water a certain length of time, are removed at the expiration of this time.

This inefficient operation is due to the fact that the egg receptacles are free to swing to one side or the other of the standards, as they are apt to do with the agitation of the water due to its boiling. This causes a binding of the means connecting the receptacle with the weight greater than the power of the latter to readily overcome, and as a result the escapement mechanism stops until the receptacle resumes its normal position.

If the weight is made heavy enough to avoid this stopping of the mechanism with the above conditions, the escapement mechanism will normally run away with itself.

It is therefore the principal object of my invention to eliminate the above named de-

fects by providing an operating mechanism to be attached to a standard timer, which will be positive in its action regardless of any temporary binding of the receptacle connecting or supporting means, and irrespective of the exact pull of the weight used, which assists or eases the operation of the mechanism without causing it to be speeded up beyond its normal and predetermined rate.

A further object is to provide a means for enabling a plurality of substantially aligned timers being all run from one operating mechanism, and, independently of each other.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purposes for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views.

Fig. 1 is a side outline of a standard timer, partly broken away, showing my improved operating mechanism installed in connection therewith.

Fig. 2 is a top plan view of said mechanism with the cover removed, and a section of the timer standard, taken on the line 2—2 of Fig. 1.

Fig. 3 is a fragmentary vertical section of the timer on the line 3—3 of Fig. 1.

Referring now more particularly to the characters of reference on the drawings, the numeral 1 denotes a hollow standard, preferably square in cross section, rigidly supported in an upright position in the usual manner.

Outside the standard is the egg receptacle 2 from which a chain 3 extends over a pulley 4 mounted on the standard at its upper end to a weight 5 slidable in the standard, a ratchet-toothed rack bar 6 being interposed between the weight and chain.

The usual adjustable time-set rod 7 is provided to prevent upward movement of the weight beyond a predetermined point.

My improved operating mechanism, installable in connection with the above named standard parts, comprises a casing positioned on the outside of the standard 1 and provided with a boss 9 on one side

adapted to be inserted into said standard through the usual opening provided therein, which is in vertical alinement with the normal position of the rackbar 6.

5 Supported by the casing at a suitable location on the outside thereof is a constant-speed electric motor 10 on whose shaft 11 is a worm 12 meshing with a worm wheel 13 whose shaft 14 is journaled in the casing 8 and carries a worm 15 meshing with a worm wheel 16 fixed on a shaft 17 journaled in the casing at right angles to the shaft 14, on which shaft 17 is a spur gear 18 meshing with a pinion 19 whose shaft 20 is journaled in the casing and boss 9 and extends through and beyond the standard 1, having a ratchet-toothed pinion 21 meshing with the rackbar 6, which projects up through a slot 22 provided in said boss, and is pressed toward the pinion by a spring 23 mounted on the boss.

By reason of the worm gearing interposed between the rack and motor, the latter never has any tendency to speed up and "run away" with itself regardless of the pull of the weight, or whether one or more racks, and as many weights are being operated at the same time.

The reduction-gearing employed is so proportioned that with a predetermined speed of rotation of the motor, say 120 R. P. M., the pinion 21 will only be rotated at a speed sufficient to cause the rackbar to travel past the pinion for its full extent in six minutes, which is the longest period for which the standard timers are designed to operate.

The manner in which the timer itself operates, and the functioning of the time-set or control rod 7, are already well known, and need no elaboration, since such devices have been on the market for many years.

It will be evident that my operating mechanism will function and time the cooking of the eggs efficiently under all conditions outside of the actual jamming of the receptacle or chain 3, which is extremely unlikely to occur, and on account of the worm gearing employed, the pull of the weight cannot cause the motor to be speeded up.

Also, by reason of the extended shaft 20, other timers, alined with the first one, and

having a pinion and shaft corresponding to the members 21 and 20, may be driven by the one motor, by merely coupling the various shafts 20 together in any suitable manner, and since the motor, which may be of very small size and consumes but little current, is intended to be operated continuously at least during the rush meal periods, any or all of the timers may be operated at one time without interfering with the others.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

1. An operating mechanism for egg-timers having a casing, a vertically moving rack bar therein and a pinion engaging the same, comprising a driven gear mechanism arranged as a unit and adapted to be detachably connected to the casing and to be operatively connected to the pinion.

2. An operating mechanism for egg-timers having a casing, a vertically moving rack bar therein and a pinion engaging the same, comprising an electric motor, and gearing between said motor and the pinion, said motor and gearing being arranged as a complete unit independent of the casing and pinion.

3. An operating mechanism for egg-timers having a casing, a vertically moving rack bar therein and a pinion engaging the same, comprising an electric motor, a reduction gearing mechanism driven by the motor and including a pinion to be operatively connected with the timer, and a common supporting means for said motor and gearing adapted to be mounted onto the side of the timer casing.

In testimony whereof I affix my signature.
SAMUEL O. DEARING.