Sept. 1, 1925.

1,551,869

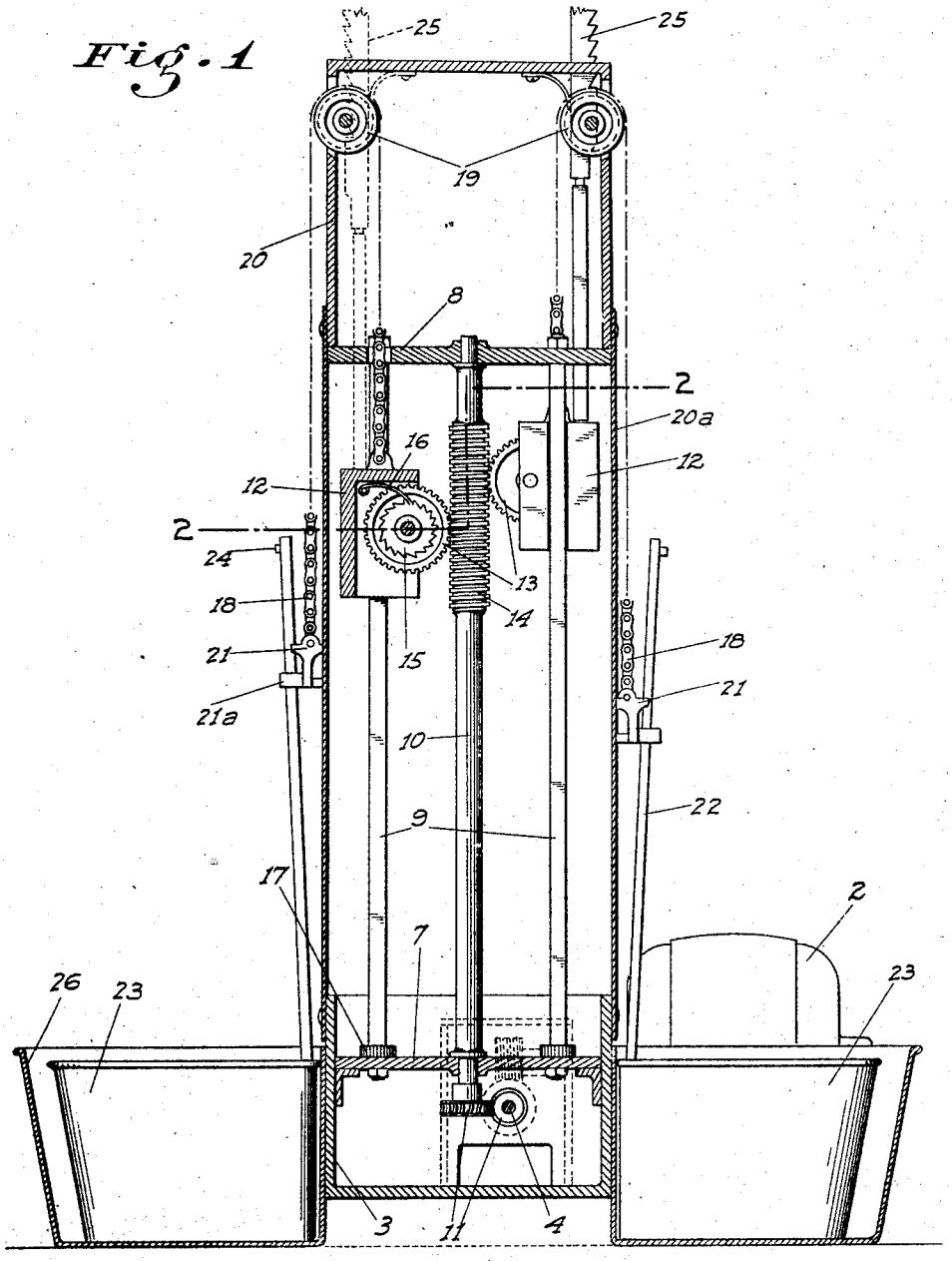
S. O. DEARING

MULTIPLE UNIT EGG TIMER

Filed Aug. 25. 1924

2 Sheets-Sheet 1

Fig. 1



INVENTOR

Samuel O. Dearing

BY Benj. F. Webster

ATTORNEY

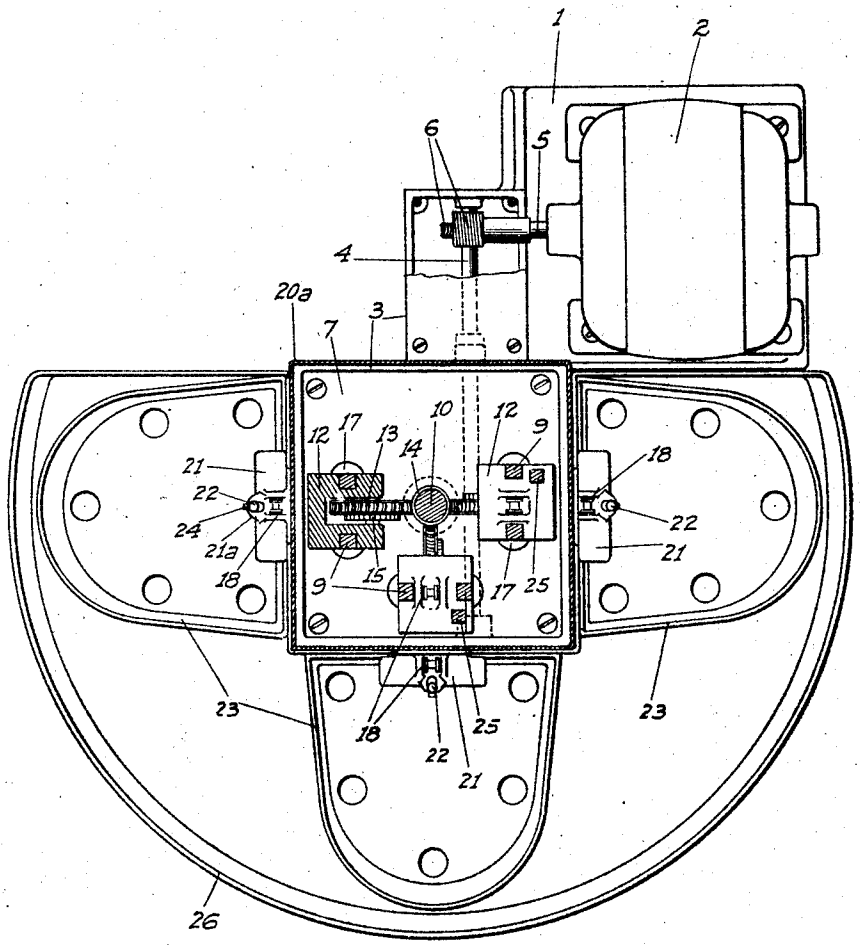
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Fig. 2



INVENTOR

Samuel O. Dearing

BY

ATTORNEY

Patented Sept. 1, 1925. 1,551,869

UNITED STATES PATENT OFFICE.

SAMUEL O. DEARING, OF STOCKTON, CALIFORNIA, ASSIGNOR OF ONE-EIGHTH TO ALBERT L. BARNES, ONE-EIGHTH TO JOHN F. WILLSON, ONE-SIXTEENTH TO ALEXANDER M. HISLOP, AND ONE-SIXTEENTH TO HENRY M. CASSILIS, ALL OF STOCKTON, CALIFORNIA, AND ONE-EIGHTH TO LEO H. McCLELLAN, OF DETROIT, MICHIGAN.

MULTIPLE-UNIT EGG TIMER.

Application filed August 25, 1924. Serial No. 733,959.

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 Multiple-Unit 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 characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in devices for timing the boiling of eggs, such as are commonly used in restaurant and hotel kitchens and the like.

The principal object of my invention is to provide a device of this character so constructed that a plurality of egg receptacles, and their corresponding mechanisms may be grouped about a common base, to be operated simultaneously or independently of each other, and whose operation is controlled by a single driving mechanism.

This enables a considerable number of egg orders being taken care of simultaneously, and without the boiling of one set of eggs interfering with that of the others, while necessitating a minimum of space in the kitchen for the entire apparatus.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose 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 persual of the following specification and claims.

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

Fig. 1 is a sectional elevation of my improved timer.

Fig. 2 is a cross section on the line 2—2 of Fig. 1.

Referring now more particularly to the characters of reference on the drawings, the numeral 1 denotes a base plate on which is mounted an electric motor 2 or other source of power. Mounted on the base to one side of the motor is a casing 3 in which is journaled a horizontal shaft 4 disposed at right angles to the axis of the motor and driven from the shaft 5 of the latter by worm gearing 6 or the like.

Removably mounted in the casing 3 above the shaft 4 is a plate 7, while above the casing and parallel to said plate is another plate 8. These plates are connected together to form a rigid unit by a plurality of pairs of vertical rods 9.

Journaled in and extending between the plates 7 and 8 in central relation relative to the pairs of rods is a shaft 10 whose lower end extends below the plate 7 and is there connected in driving relation with the shaft 4 by worm gearing 11 or the like. The housing 3, below the plate 7, is oil tight so that a supply of oil may be maintained about the shafts and gearing.

The rods 9 not only serve to connect the plates 7 and 8 together, but form guides for weight blocks 12, one of which is arranged in connection with each pair of rods. Each block carries a gear 13 therein disposed in a vertical plane and adapted to mesh with an enlarged screw-threaded or worm portion 14 formed with the shaft 10. Associated with each gear 14 is a ratchet wheel 15 engaged by a spring pawl 16, arranged so that while the gear can freely rotate when the weight is being moved upwardly and is in engagement with the worm 14, it cannot rotate when said weight tends to move down. It will therefore be seen that the weight will be held immovable against downward movement when once the gear is in mesh with the worm, unless the latter is rotating. The thread of the worm is so disposed relative to the rotation of the shaft 10, which is only in one direction, that with such rotation the gear 13, and consequently the block 12, will be lowered until the gear clears the worm. The block will then of course drop to the plate 7 of its own weight, rubber or similar bumpers 17 being placed about the rods 9 on the plate to absorb the shock of the dropping weights.

Each block is entirely independent of the others, and it will be evident that one or all of them may be engaged with the worm 14 at the same time, and at different heights thereon.

To each weight is connected a chain 18

which passes over a pulley 19 journaled in a cap 20 over and supported from the plate 8. A tubular member 20ª is attached to and depends from the cap to and about the casing 3, concealing the mechanism between the plates 7 and 8. The pulley 19 projects through a slot in the side of the plate so that the chain will then depend on the outside of the cap. To the outside and lower end of the chain is attached a cross bar 21 having an eye 21ª through which the usual rod 22 of an ordinary egg-timer cooking receptacle 23 freely passes, said rod having however a cross pin 24 above the eye 21ª incapable of passing through the latter.

Calibrated timing rods 25 of standard character are slidably mounted in the cap 20 and plate 8 for vertical adjustment relative thereto, their lower ends being above corresponding ones of the blocks 12 and being adapted to abut thereagainst.

A single water tank 26 for all the egg receptacles, is disposed about the casing 3 on three sides thereof. I have here shown and described a device comprising three timing units, but it will be evident that by enlarging the central member and various other parts, a larger number of units may be provided to be all operated from the common shaft 10.

To operate any of the timing units when the container 23 thereof is in its normal position out of the tank and the weight is resting on the pads 17, the corresponding calibrated rod 25 is adjusted to indicate the number of minutes which it is desired to boil the eggs. The cross-bar 21 is then pulled down so that the container 23 with the eggs therein, rests on the bottom of the tank 26, and until the weight 12 of said container abuts against the lower end of the rod 25. As previously described, the gear 13 of said weight is then engaged with the worm 14 of the shaft 10 partway up said worm, and the pitch of the worm and speed of the shaft are so related that it will take as many minutes to cause said gear to be lowered clear of the worm as is designated on the calibrated rod 25 at whatever position the latter may be set. As soon as the weight clears the worm, it is of course free to drop of its own weight, and in doing so, instantly causes an upward movement of the container 23 out of the tank to take place, as will be evident.

It will also be evident that since all the weights and their connected parts are entirely independent of each other, they may all be set in operation at different times without interfering with the functioning of each other.

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 egg timer comprising a plurality of independent timing units grouped about a common axis, each unit including an egg container and a weight tending to act against the weight of the container, a driven worm mounted concentric with said axis, and means associated with the units and independently engageable with the worm for preventing the weights from dropping by gravity until after predetermined periods of time have elapsed.

2. An egg timer comprising a plurality of independent timing units grouped about a common axis, each unit including an egg container and a means tending to raise the same, a driven member mounted concentric with said axis, and means associated with the units and independently engageable with the driven member for preventing the first named from acting to raise the respective containers until after predetermined periods have elapsed.

3. An egg timer comprising a vertical driven shaft, a worm thereon, a plurality of weights slidably mounted for vertical movement parallel to the shaft and grouped thereabout in equally spaced relation thereto, a plurality of egg containers corresponding to the weights, means connecting the weights and containers in a manner to cause the latter to be moved upwardly when the weights drop, gears associated with the weights and engageable with the worm, means whereby when the weights are raised the gears may freely rotate and move up the worm but cannot rotate to travel down the worm, and independent and adjustable means engageable with the individual weights for controlling the height to which they may be raised.

4. An egg timer comprising a plurality of independent timing units grouped about a common axis, each unit including an egg container and a means tending to raise the same, gears independently associated with the different containers, means preventing rotation of the gears in other than one direction, and a common driven worm with which said gears are adapted to be independently engaged.

5. An egg timer comprising a supporting structure, a vertical and driven shaft journaled therein, a worm on said shaft intermediate its ends, a pulley mounted in said structure and projecting outwardly of the

same, a flexible element supported by the pulley and depending downwardly from opposite sides thereof, an egg container depending from the lower and outer end of said element, a weight connected to the opposite end of said element, a gear mounted in connection with the weight and engageable with the worm only when the container is in a predetermined position, and means whereby when the weight is raised the gear will engage and freely travel up the worm, the rotation of the latter causing said weight to be lowered down the worm until the gear is clear of the same.

6. An egg timer comprising a supporting structure, a vertical and driven shaft journaled therein, a worm on said shaft intermediate its ends, a pulley mounted in said structure and projecting outwardly of the same, a flexible element supported by the pulley and depending downwardly from opposite sides thereof, an egg container depending from the lower and outer end of said element, a gear mounted in connection with the weight and engageable with the worm only when the container is in a predetermined position, and means necessitating the rotation of the worm to enable the gear to clear the lower end of the worm and the weight to then drop by gravity.

In testimony whereof I affix my signature.

SAMUEL O. DEARING.