

No. 646,805.

H. CLAYTON.  
EGG TIMER.

Patented Apr. 3, 1900.

(Application filed May 16, 1899.)

(No Model.)

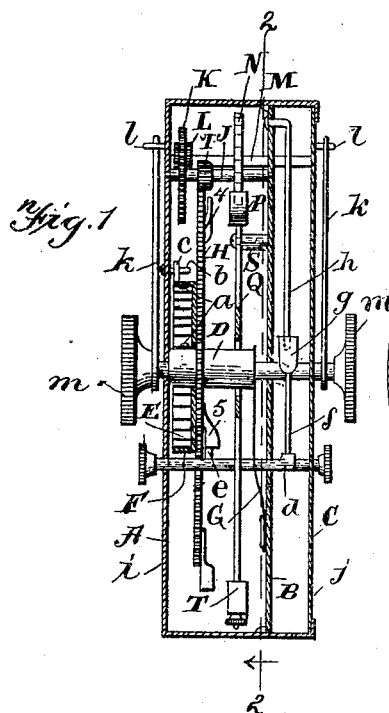


Fig. 3.

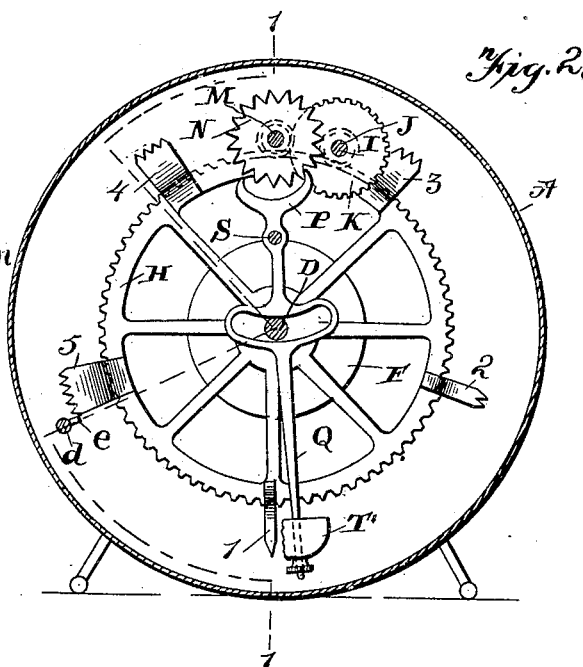


Fig. 4.

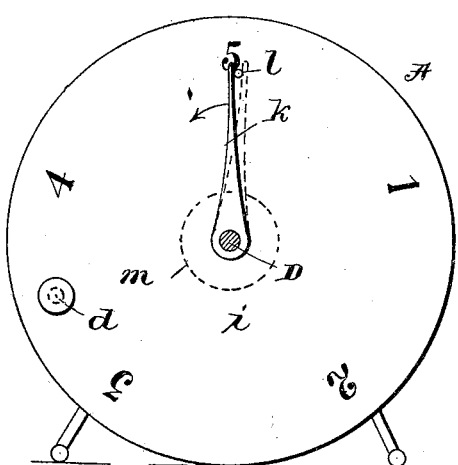
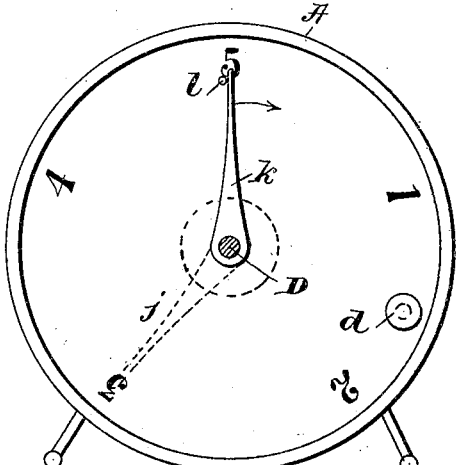
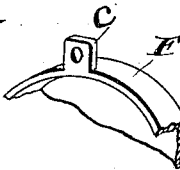


Fig. 5.



Witnesses  
Geo. C. Truch.  
Chas. R. Wright Jr.



Inventor  
Herbert Clayton,  
by A. S. Pattison,  
Attorney

# UNITED STATES PATENT OFFICE.

HERBERT CLAYTON, OF NEW YORK, N. Y.

## EGG-TIMER.

SPECIFICATION forming part of Letters Patent No. 646,805, dated April 3, 1900.

Application filed May 16, 1899. Serial No. 717,075. (No model.)

*To all whom it may concern:*

Be it known that I, HERBERT CLAYTON, a citizen of the United States, residing at New York, (Brooklyn,) in the county of Kings and State of New York, have invented new and useful Improvements in Egg-Timers, of which the following is a specification.

My invention relates to improvements in egg-timers; and it consists in the arrangement and construction of parts, which will be fully described hereinafter and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional view taken on line 1 1 of Fig. 2. Fig. 2 is a sectional view taken on line 2 2 of Fig. 1. Fig. 3 is a view looking at the left-hand side of Fig. 1. Fig. 4 is a similar view looking at the right-hand side of Fig. 1. Fig. 5 is a perspective view of a portion of the spring-barrel, showing the perforated ear.

Referring now to the drawings, A is a case which is preferably made round, similar to a circular clock-case, though it may be made of other contours without affecting my invention. Situated within this case is a plate B, and closing the open end of the case is a plate or dial C. Passing through the center of the case and the plates B and C is a central driving and hand shaft D. This shaft D carries at its left-hand end a spring E, which is situated in a box or barrel F, the said box having an opening to receive the shaft D. One end of this spring E is connected with the shaft D, and the other end is connected with the case or barrel F, both of said connections being through the medium of openings in the ends of the spring, which receive studs *a*, projecting, respectively, from the shaft and the case and which is the usual manner of connecting the ends of a spring, as is well understood. This barrel F is held against rotation through the medium of a pin or screw *b*, which screws into the side of the case A and is provided with a smooth portion passing through a perforated ear *c*, projecting from the spring-barrel F. The shaft D has an endwise movement for a purpose to be explained hereinafter, and the shaft is normally held in the position shown in Fig. 1 through the medium of a spring G of any suitable form. Secured rigidly to this shaft D is a large gear-wheel H, which meshes with

a pinion I, carried by a shaft J, the said shaft J carrying a gear K, which in turn meshes with a pinion L upon a shaft M. This shaft M carries an escape-wheel N, adapted to engage the verge P of a pendulum Q. This pendulum Q is pivoted at the point S to the plate B and carries at its lower end an adjustable pendulum-bob T. This pendulum-lever Q is provided with a curved slot V, through which the shaft D passes and which permits the pendulum to vibrate without its interference from said shaft, as will be clearly understood.

Passing through the case A and plates B and C is a rock-shaft *d*, which carries a small lateral projection *e*, with which the striking-segments 1, 2, 3, 4, and 5 engage for the purpose of rocking the shaft *d* and striking a bell or gong. This striking operation is effected through the medium of a hammer-arm *f*, carried by the shaft *d* and carrying at its outer end a hammer *g*, which is adapted to strike a sounding wire or bell *h*. These striking-segments 1, 2, 3, 4, and 5 project slightly to one side of the gear-wheel H, to which they are attached, as shown in Fig. 1, and as the gear-wheel is revolved by the driving-shaft D and its propelling-spring E these segments engage the projection *e* of the rock-shaft *d* and rock it slightly for causing the hammer *g* to strike the gong or bell *h* once for each tooth of the striking-segments as they engage the projection *e* of the shaft *d*.

Secured to the left-hand side of the case A is a dial *i*, and attached to the outer side of the plate C is a dial *j*, each of said dials provided with the numerals "1" to "5" and dividing the dials into five equal spaces, as clearly illustrated in Figs. 3 and 4.

Attached to each projecting end of the drive-shaft D is a hand or pointer *k*, and projecting from opposite sides of the case A are the stop-pins *l* in the path traveled by the hand or pointer *k*, and thus preventing the shaft D from revolving beyond the said stop-pins *l*.

The strength of the spring E, the gearing, and the escapement mechanism is so arranged that the shaft D will make one revolution in five minutes time, and by this arrangement the numerals upon the dials each indicate one minute.

In operation the pointer *k* of Fig. 3 is car-

ried in the direction indicated by arrow to the position shown in dotted lines, which is to the opposite side of the stop-pins *l*. This movement of the hand, and consequently the drive-shaft *D*, winds up the spring *E*, and when the hand or shaft is released then the mechanism begins to operate and the hand will travel back to its original position, when it is stopped by engagement with the stop-pins *l*, and during its passage five minutes are consumed, each numeral upon the face or faces of the dials indicating one minute of this time.

Each end of the shaft *D* is provided with a finger-knob *m*, by means of which the shaft *D* can be moved endwise and also revolved. The purpose in constructing the shaft *D* so that it can be moved endwise against the pressure of the spring *E* is to carry the gear *H* out of engagement with the pinion *I*, whereby the shaft and the gear can be quickly revolved independent of the escape mechanism, and when it is released the shaft *D* is returned to its original position, and consequently the gear *H* in engagement with the pinion *I*.

For the purpose of facilitating the engagement of the gear *H* with the pinion *I* the pinion has one side of its teeth tapered, forming, approximately, a wedge-shaped pinion, as illustrated in Fig. 1.

The rock-shaft *d* has an endwise movement, as well as a rocking movement, for the purpose of carrying its projection *e* out of the line of travel of the striking-segments 1, 2, 3, and 4. The striking-segments 1, 2, 3, and 4 are made thin, as illustrated in Fig. 1, while the striking-segment 5 is made thick, as shown in Fig. 1, which will thereby at all times engage the projection *e*—that is to say, when the shaft *d* is moved endwise to carry the projection *e* out of the line of travel of the thin striking-segments 1, 2, 3, and 4 it will still be in the line of travel of the thick striking-segment 5, and owing to this construction the striking-segment 5 will always strike the projection *e* no matter what may be the endwise position of the rock-shaft *d*. The function and purpose of having this shaft *d* endwise movable will be presently explained.

The operation of the invention is as follows: For instance, should it be desired to cook a batch of eggs to various degrees the eggs will be placed in the boiling water and the hand *k* at the left-hand side of the case *A* turned to the position shown in dotted lines. Those eggs which are to be cooked one minute will be removed when the alarm has sounded "1," those which are to be cooked two minutes will be removed when the alarm sounds "2," and so on to the five-minute limit, at which time those eggs which it is desired to cook thoroughly may be removed. If it is desired to use the instrument for cooking one or more eggs to an equal degree, the opposite or right-hand side of the case may be used and in which event the rock-shaft *d* can be pushed

endwise to carry the projection *e* out of engagement with the striking-segments 1, 2, 3, and 4. The hand *k*, Fig. 4, and at the right-hand side of the case *A*, Fig. 1, will be moved to the position shown in dotted lines, Fig. 4, and the egg placed in the boiling water. Should it be desired to cook the egg three minutes, the hand *k* will be carried to the numeral "3" and released, and then when the gong has struck "5" it will be a notice to the cook that the eggs are ready to be removed. This side of the device can also be used to cook the eggs any length of time from one to five minutes, as may be desired, and in which event the gong will strike only when the period at which it is desired to cook the egg has expired, and this period is regulated by the distance that the hand is carried around in its revolution, which is a different operation from that at the left-hand side of the case *A*. At the left-hand side of the case *A*, as before explained, the hand will always be given a complete revolution to the position shown in dotted lines, Fig. 3, and then released and the eggs removed when the gong has sounded the number of minutes it is desired that they should be cooked, while at the opposite side of the case the hand *k* will be carried to that figure upon the dial representing the number of minutes it is desired to cook the egg and then released, and the gong will only sound when the time has expired, as the other intermediate striking-segments will be out of line with the projection *e* of the rock-shaft *d* by the endwise movement thereof before explained.

While I have described this invention as being especially adapted for use in cooking eggs, it will be readily understood that it will be useful in the kitchen for other purposes. For instance, it is frequently desired to cook a certain ingredient in making a compound a specified length of time before some other ingredient is added thereto, and in this event the device can serve the purpose of notifying the cook when that time-limit has expired. By an arrangement of this kind the cook after the eggs or other ingredients have been placed for cooking can go about attending to other matters and the device will automatically inform him when the limit of time has expired by the sounding of the gong or bell.

By providing the instrument with two dials and two hands it can be used, as before explained, for cooking a number of eggs to various degrees, and at each degree an alarm will be sounded to the cook notifying him when to remove those eggs that are to be cooked the number of minutes sounded by the gong, while the other side of the instrument can be used to cook the eggs or other substance a specified time, and in which event the hand will be moved to that period or time it is desired the eggs or substance to be cooked and then released, and there will be no gong sounded to detract the attention of the cook until the limit of the time has expired, as

the other intermediate striking-segments will be out of line of the position of the projection *e*.

Preferably the notches upon the striking-segments will represent about one second of time, so that in the striking or sounding of the gong they will sound once each second to correspond with the number of notches or projections upon the striking-segments, though this may be varied without departing from the invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A timing device comprising a case having a dial, a drive-shaft carrying a gear, a hand or pointer fast to said shaft and by which the shaft is rotated when setting the pointer, a gong mechanism, and projections carried by the gear for operating the gong mechanism, said projections situated at points corresponding with the figures upon the dial, substantially as described.

2. A time mechanism comprising a case having a dial, a drive-shaft carrying a gear, a hand or pointer fast to said shaft and by which the shaft is rotated when setting the pointer, an escape mechanism driven by the gear, a rock-shaft, a striking-hammer carried by the rock-shaft, the rock-shaft having a projection, the drive-shaft carrying a plurality of striking-segments provided respectively with projections corresponding respectively with the figures represented upon the dial, substantially as described.

3. A time mechanism comprising a case having a dial, a drive-shaft carrying a gear, an escapement mechanism driven by the gear, a pointer or hand, the rock-shaft, a striking-hammer carried by the rock-shaft, a projection carried by the rock-shaft, and a plurality of striking-segments carried by the gear, one of said segments being wider than the other, and the rock-shaft having an endwise movement for carrying its projection out of the path of travel of the thin striking-segments, substantially as described.

4. A time mechanism comprising a case having a dial, an escapement mechanism in-

cluding a gear-wheel, an endwise-moving shaft carrying a gear-wheel adapted to be moved in and out of engagement with the escapement gear-wheel, a driving-spring connected with the endwise-moving shaft, whereby the drive-shaft gear can be thrown out of engagement with the escapement-gear and the drive-spring wound up independent of the escapement mechanism, substantially as and for the purpose described.

5. A timing mechanism comprising a case having a dial at each side, a drive-shaft having both ends projecting through the case and carrying parallel projecting hands, a gear carried by the shaft, an escape mechanism, a striking rock-shaft carrying a striking-hammer, a projection carried by the rock-shaft, the rock-shaft having an endwise movement for the purpose described.

6. A time mechanism comprising a case having a dial, a drive-shaft carrying a gear, an escape mechanism driven by the gear, the drive-shaft having an endwise movement, a spring holding the shaft normally in one position and the gear normally in engagement with the escape mechanism, whereby the gear can be carried against the tension of the spring out of engagement with the escape mechanism, substantially as and for the purpose described.

7. A time mechanism comprising a case having a dial, an endwise-moving drive-shaft carrying a gear and a pointer or hand, an escape mechanism driven by the gear, a spring-barrel surrounding the drive-shaft, a spring situated within the box with one end connected with the box and the other to the shaft, the spring-box having a projecting perforated ear, and a pin passing loosely through the said ear, whereby when the shaft is moved endwise the spring and its box are correspondingly moved, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HERBERT CLAYTON.

Witnesses:

CHAS. R. WRIGHT, Jr.,

GEO. E. FRECH.