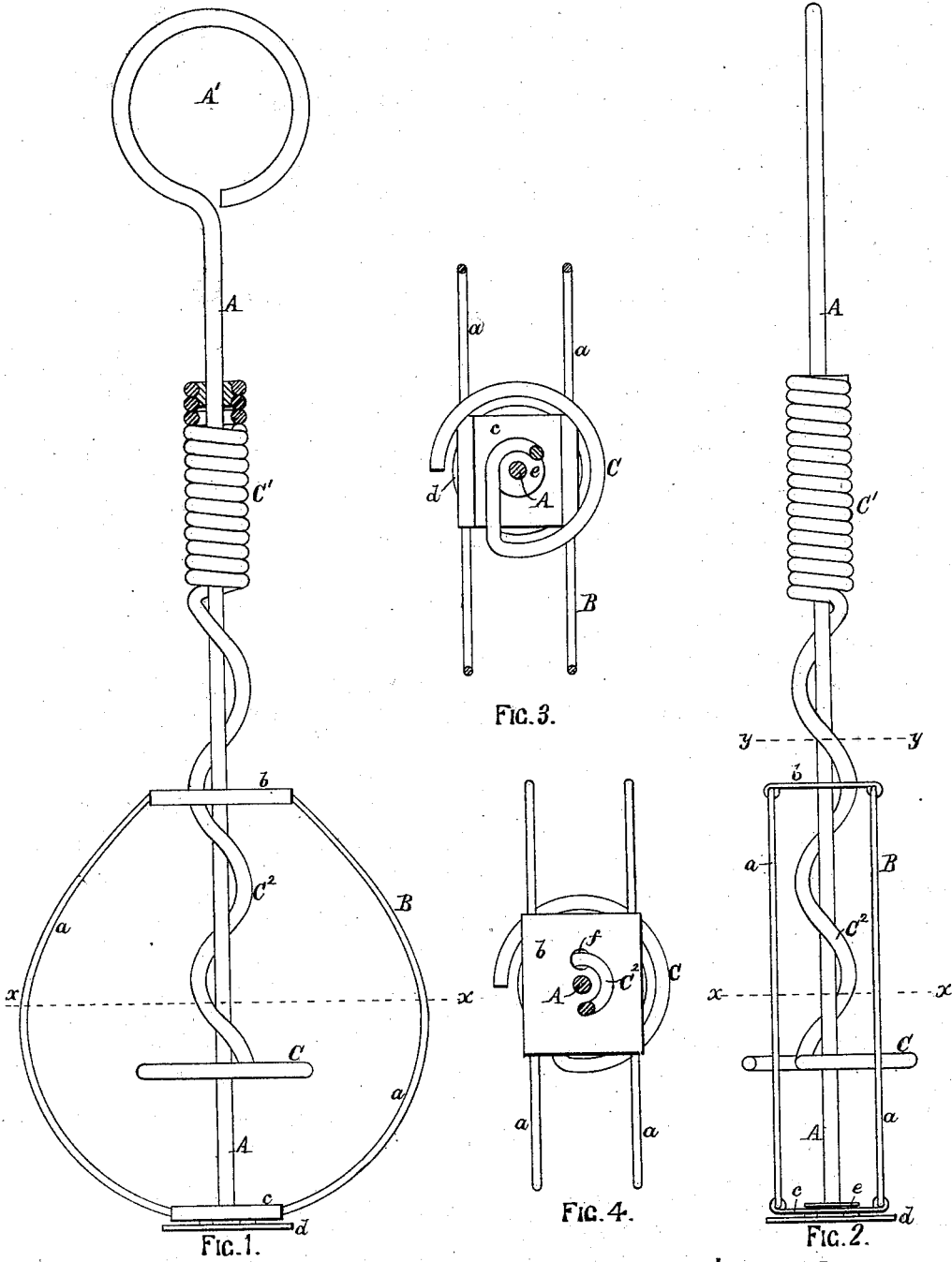


J. R. HUGHES.
Egg-Beater.

No. 203,153.

Patented April 30, 1878.



WITNESSES.
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JAMES R. HUGHES, OF SAUGUS, MASSACHUSETTS.

IMPROVEMENT IN EGG-BEATERS.

Specification forming part of Letters Patent No. **203,153**, dated April 30, 1878; application filed March 25, 1878.

To all whom it may concern:

Be it known that I, JAMES R. HUGHES, of Saugus, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Egg-Beaters, of which the following, taken in connection with the accompanying drawings, is a specification:

My invention relates to the construction and method of operating egg-beaters; and it consists in the combination of a vertically-reciprocating beater with a ring or curved beater adapted to rotate alternately in opposite directions in a path surrounding and inclosing said reciprocating beater, and moving in unison therewith.

My invention further consists in the combination of a ring or curved beater adapted to be rotated alternately in opposite directions about a stationary vertical axis upon which it is mounted; a second beater in the form of a wire scroll, hoop, or wheel, located within said rotating ring-beater, mounted upon the same fixed or stationary rod which forms the axis of said revolving beater, and adapted to be reciprocated thereon in a vertical direction, and so connected to said rotary ring-beater by means of a quick-pitch spiral or screw, that a reciprocation of said secondary beater on the central rod, without turning thereon, will cause the ring-beater to be rotated alternately in opposite directions in unison with such reciprocations.

My invention further consists in forming the reciprocating beater, the spiral for imparting rotary motion to the ring-beater, the bearing of said reciprocating beater upon the central supporting and guiding rod, and the handle for operating said reciprocating beater, all from one piece of wire, as will be hereinafter described.

My invention further consists in the combination of the vertically-reciprocating beater provided with a handle by which it may be operated, a spiral for imparting motion to the ring-beater, all made from one piece of wire, and a ring or curved beater mounted upon a central stationary rod or axis, and provided with a hole in its upper side eccentric to its axis, through which the spiral portion of said reciprocating beater traverses, thereby causing said ring-beater to be alternately revolved

in opposite directions as the reciprocating beater is moved up or down.

Figure 1 of the drawings is a side elevation of my improved beater, with a small portion cut in section. Fig. 2 is an elevation looking at right angles to Fig. 1. Fig. 3 is a horizontal section on line *x x*, and Fig. 4 is a similar section on line *y y*.

A is the central supporting-rod, provided at its upper end with the loop or eye A', by which it is held in an upright position in the operator's left hand, with its lower end resting on the bottom of the bowl or other dish in which the eggs are to be beaten. B is the ring-beater, made up of the curved wires *a a* and plates *b* and *c*, to the corners of which the wires *a a* are firmly secured to form a complete hoop, the plates *b* and *c* having formed therein holes for the passage of the rod A, around which the beater B may be revolved, it being prevented from moving lengthwise of said rod by the collars *d* and *e*, secured upon said rod, one above and the other below the plate *c*, as shown in Figs. 1 and 2, the collar *d* also serving to prevent the plate *c* from coming in contact with the bottom of the dish in which the egg is being beaten. C is a second beater, made in the form of a scroll bent around the central rod A in a horizontal plane, and connected to the cylindrical handle C', also surrounding said rod, and having a bearing thereon by means of the wire C² bent spirally around said rod, and passing through a hole, *f*, in the plate *b*, located eccentrically to the rod A, as shown in Fig. 4, said beater C, handle C', and spiral C² being made from a single piece of wire.

The operation of my improved beater is as follows: The operator holds the rod A in a vertical position, with its lower end resting on the bottom of the dish containing the eggs to be beaten, with the loop or eye A' in the left hand, and seizing the handle C' between the thumb and fingers of the right hand moves it up and down on the rod A, at the same time preventing it from rotating on said rod, and thereby causing the beater B to be alternately rotated in opposite directions about the rod A, the wires *a a* cutting and beating the egg in a circular path, while the beater C is being reciprocated vertically and beating that portion

of the egg lying within the path described by the wires *a a*.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination, in an egg-beater, of a ring or curved beater adapted to be rotated alternately in opposite directions about a vertical axis, and a secondary beater located and adapted to reciprocate vertically within the path described by the rotating beater, substantially as described.

2. The combination, in an egg-beater, of a central rod, a ring or curved beater mounted upon said rod in a plane parallel to the axis thereof, and adapted to be rotated in opposite directions alternately about said central rod, and a second beater located within the path described by said ring or curved beater, and mounted upon said central rod, and adapted to be reciprocated thereon, and connected, by means of a coarse-pitch rigid spiral, with said ring or curved beater, and adapted thereby to impart motion to said beater about said central rod at each reciprocation of said second beater, substantially as described.

3. The beater C, provided with the cylindrical handle C¹ and the quick-pitch spiral C², all made from one piece of wire bent and

shaped substantially as shown and described, for the purposes specified.

4. The combination, in an egg-beater, of the central supporting-rod A, the ring or curved beater B, the handle C¹, and the quick-pitch spiral C², all arranged and adapted to operate as set forth, to cause said ring or curved beater to rotate alternately in opposite directions about said central rod by reciprocating the handle C¹ and the spiral C² upon said rod, substantially as described.

5. The combination, in an egg-beater, of the central supporting-rod A, the ring or curved beater B mounted thereon, and adapted to be rotated alternately in opposite directions, and provided with a hole, *f*, eccentric to the rod A, and the beater C, provided with the handle C¹ and quick-pitch spiral C², made from one piece of wire, and connected with the beater B by the passage of the spiral C² through the hole *f*, all arranged and adapted to operate substantially as and for the purposes described.

Executed at Boston, Massachusetts, this 21st day of March, A. D. 1878.

JAMES R. HUGHES.

Witnesses:

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