(No Model.)

D. A. WILKINSON.

EGG BEATER.

No. 454,194. Patented June 16, 1891.

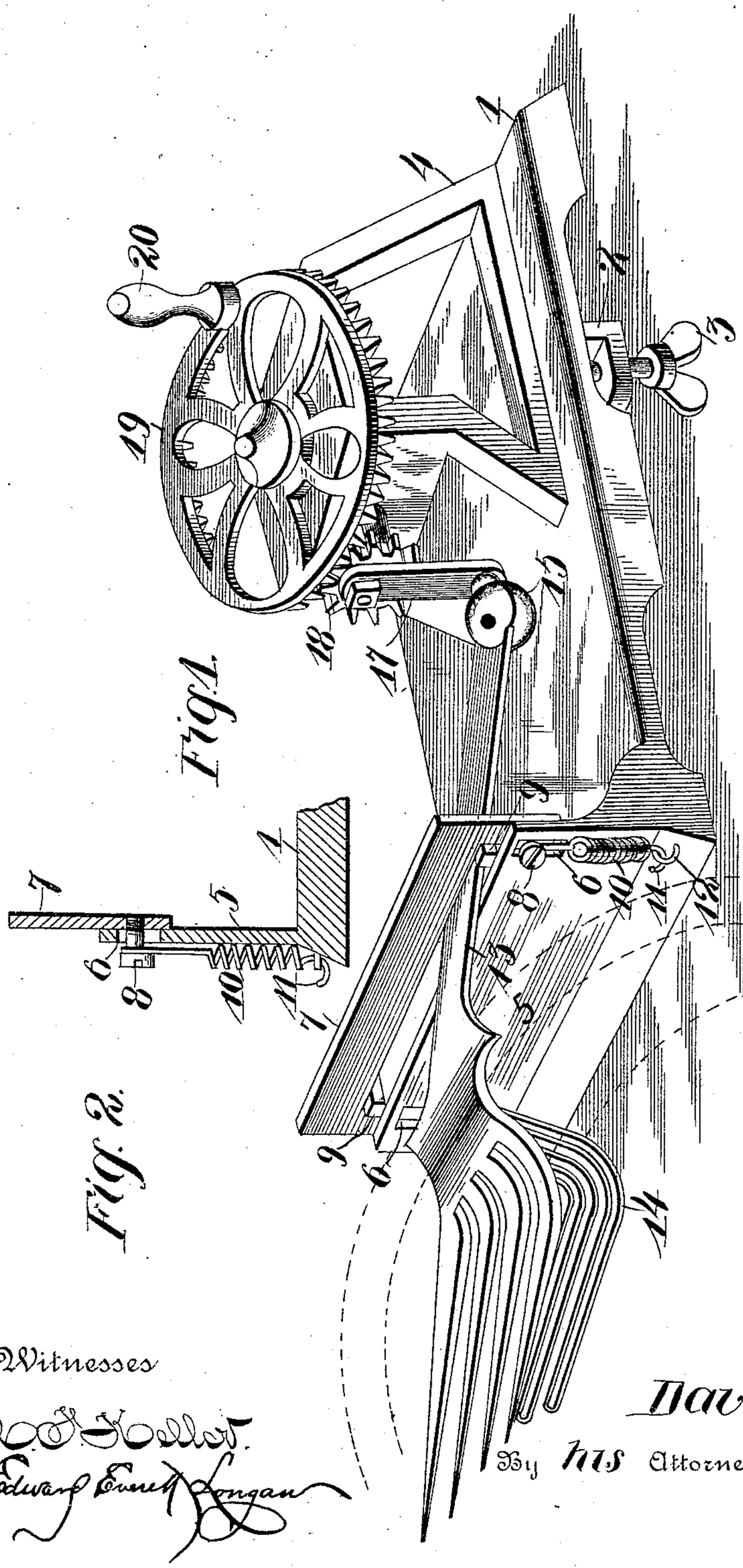

Fig. 1.

Fig. 2.

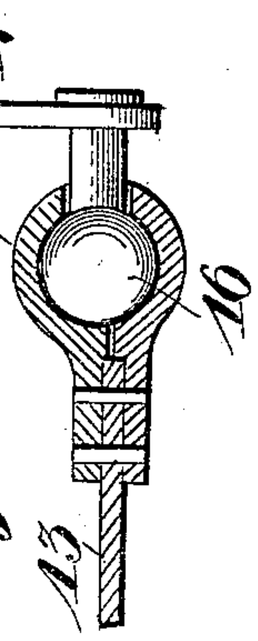

Fig. 3.

Witnesses

L. L. Keller.

Edward Ernest Longan

Inventor

David A. Wilkinson

By his Attorneys. Higdon & Higdon

UNITED STATES PATENT OFFICE.

DAVID A. WILKINSON, OF ST. LOUIS, MISSOURI.

EGG-BEATER.

SPECIFICATION forming part of Letters Patent No. 454,194, dated June 16, 1891.

Application filed February 28, 1891. Serial No. 383,192. (No model.)

To all whom it may concern:

Be it known that I, DAVID A. WILKINSON, of the city of St. Louis, and State of Missouri, have invented certain new and useful Improvements in Egg-Beaters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in egg-beaters; and it consists in the novel arrangement and combination of parts, as will be more fully hereinafter described, and designated in the claims.

In the drawings, Figure 1 is a perspective view of my complete invention, showing its location relative to a plate or dish, which is shown in dotted lines. Fig. 2 is a vertical section of the guiding and supporting mechanism for the agitating or mixing device; and Fig. 3 is a sectional view of the ball-and-socket joint, showing the latter as secured to the agitating or mixing device with parts broken away.

It is well known and amply illustrated and proved in the culinary arts that the best motion for the agitating and beating of eggs is the natural motion or movement imparted and effected by the hand of the cook. In pursuance of this fact I desire to achieve as the object of my invention a motion or movement as nearly resembling and having the same effect as the motion imparted by the hand in beating as mechanical ingenuity and skill can approach.

I am aware that beaters have been conceived and patented, but none of them embody such operative mechanism that would give to the beating and agitating device a motion similar to the natural motion and movement imparted by the hand of the cook.

Referring to the drawings, 1 indicates a base-plate on which the operative mechanism of my device is properly and mechanically located and secured for the purposes designed. Said plate may be constructed of any suitable material and finished with any decorative appearance as the taste of the manufacturer may suggest.

2 indicates a hook, which is properly secured to said base-plate or formed integrally therewith. Said hook is adapted to pass over the edge of a table or any support upon which it may be desired to plate the base-plate 1. Said hook is provided with a screw-threaded perforation, through which a thumb-screw 3 is adapted to pass, the function of which is to firmly secure the base-plate to the support upon which it may be placed, and requires no further illustration or amplification.

4 indicates a frame-work upon which the gearing mechanism of my device is properly mounted, as will be hereinafter more specifically described. Said frame-work is preferably cast integrally with the base-plate 1, but may be made separately and then secured in any suitable and mechanical manner.

5 indicates a supporting-plate for the agitating and mixing device. Said plate is preferably cast integrally with the base-plate 1, but may be formed separately and then secured in any suitable and mechanical manner. Said plate 5 is provided with vertically-elongated slots 6 for the purposes hereinafter set forth.

7 indicates an approximately-clevis-shaped plate, which is adapted to be secured to plate 5 by means of screws or rivets 8, which screws or rivets are firmly secured to the plate 7, and the stems of the same are adapted to freely move upwardly and downwardly, if desired, in the vertically-elongated slots 6. It is apparent from the construction just described that a vertically-yielding support and guide is provided for the beating and agitating device.

9 indicates small pieces of rubber or any soft material, which is located between said plates 7 and 5, the object of which is to deaden the noise that will necessarily arise from the operation of my invention.

10 indicates spiral springs, one of the ends of which terminates in hooks 11, which hooks are adapted to pass through small staples 12, the latter being secured to base-plate 1. The other ends of said springs are firmly secured to screws 8, as can be readily perceived by inspecting Fig. 1. These springs will permit plate 7 to move upwardly and downwardly in a vertical direction, as hereinbefore stated.

13 indicates the agitating or mixing device itself. Said device may be constructed of any suitable material and made in any suitable

form as adapted for the purposes designed; but I desire to construct the same as shown in the drawings—that is, of the shape of an ordinary four-pronged fork. Secured to the lower surface of said agitating or mixing device 13 is a cluster of looped wires 14, which should be of a delicate structure, so as to give and conform themselves to the surface of the plate or dish, thereby effectively beating or striking the eggs or substance which lies on the surface of the plate, or the egg or substance which the main beating or agitating device 13 would not come in contact with. The normal position of the main agitating or mixing device 13 is between plate 5 and 7, and by the clevis-shaped form of plate 7 said device is free to move in a lateral or horizontal direction between said plates.

15 indicates an ordinary socket, which is secured or may be secured to the end of the agitating device 13 in any suitable and mechanical manner, preferably, however, as shown in the drawings. In said socket a corresponding ball 16, secured to a crank 17, is located, thereby forming an ordinary ball-and-socket joint between the agitating device 13 and the crank 17. Crank 17 is rigidly secured to a pinion gear-wheel 18, the same being mounted in suitable bearings on the frame-work 4. Said pinion is adapted to mesh with a motor gear-wheel 19, the same being mounted in any suitable and mechanical manner on frame-work 4, as shown in Fig. 1. In place of using this system of gearing—that is, using a horizontal motor-wheel 19—I may use bevel gear-wheels and locate the motor-wheel so that the same may be revolved in a vertical direction without departing from the true nature of my invention.

Having fully described the mechanical parts and substantially the manner in which they are constructed and put together in operative mechanism, I will now proceed to describe the *modus operandi* of the same. Of course the first step is to locate the device in a proper and suitable relation relative to the dish in which the egg to be beaten is placed. Ordinary judgment will suggest this. By the revolution of the motor-wheel 19, which is effected by means of a handle 20, the socketed end of the agitating or mixing device 13 will of course be carried in a circular motion, or will describe practically a circle; but as said device is free to move in a lateral or horizontal direction, as hereinbefore stated, the other end of said agitating or mixing device will move in an elliptical motion, or necessarily describe an ellipse which approaches the natural movement of the hand of the cook when beating eggs. By the said device being normally located below the vertically-yielding plate 7, should the agitating or beating device 13 strike the dish it will only make a yielding stroke, or the stroke will be lessened, of course consequent from the agitating or mixing device being free to give or yield. By a continued revolution of the motor-wheel 19 the agitating or beating device 13 will be successively carried in an elliptical motion through the egg, and will readily and effectively beat the same, as experience has proved.

Having fully described my invention, what I claim is—

1. An egg-beater consisting of an agitator or mixing device, such as 13, a cluster of looped wires, such as 14, secured to the under surface of the same, the said wires being of lighter structure than the device 14 and forming a yielding mixer, and operative mechanism for giving said device an elliptical motion, substantially as set forth.

2. An egg-beater consisting of a base-plate 1, supporting-plate 5 for the agitating or mixing device, an approximately-clevis-shaped plate 7, yieldingly secured to plate 5 through the agency of springs 10, an agitating or mixing device normally located between said plates 5 and 7, and operative mechanism for giving said device an elliptical motion through the substance to be beaten or mixed, substantially as set forth.

3. An egg-beater consisting of a base-plate 1, frame-work 4, plate 5, and hook 2, secured to or formed integrally with said plate, an approximately-clevis-shaped plate 7, yieldingly secured to plate 5 through the agency of screws 8, staples 11, and spiral springs 10, an agitating or mixing device 13, provided on its under surface with a cluster of looped wires 14, an ordinary socket 15, secured or adapted to be secured to the blunt end of said device, crank 17, carrying a ball adapted to fit and move in said socket, said crank being rigidly secured to geared pinion 18, and motor gear-wheel 19, provided with a handle 20 for giving said bevel gear-wheel 18 a rotary motion, and consequently operating said agitating or mixing device 13, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID A. WILKINSON.

Witnesses:
E. E. LONGAN,
C. F. KELLER.