No. 692,479. Patented Feb. 4, 1902.

E. R. ROBERTS.

EGG BEATER.

(Application filed May 31, 1901.)

(No Model.)

Fig. 1.

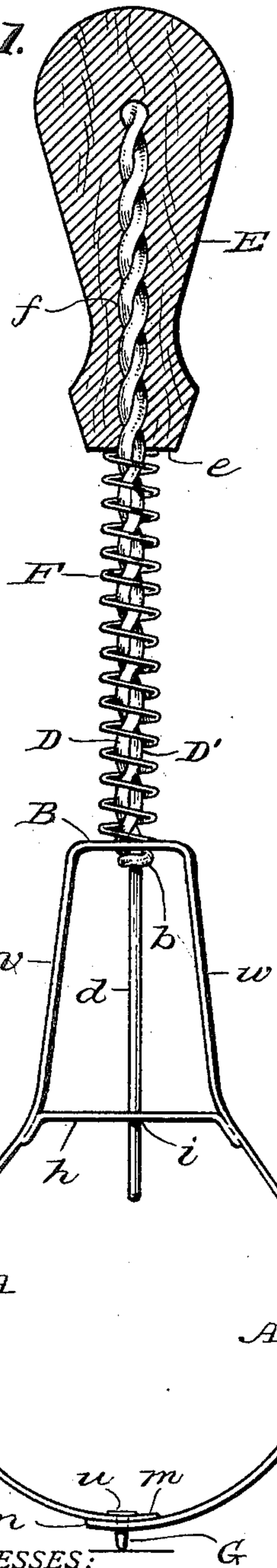


Fig. 2.

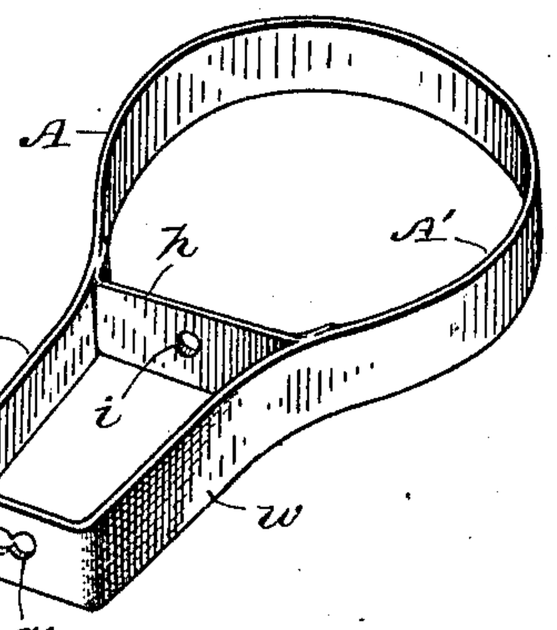


Fig. 3.

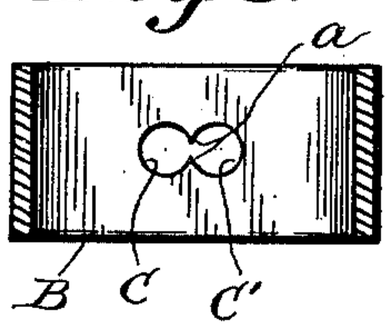


Fig. 4.

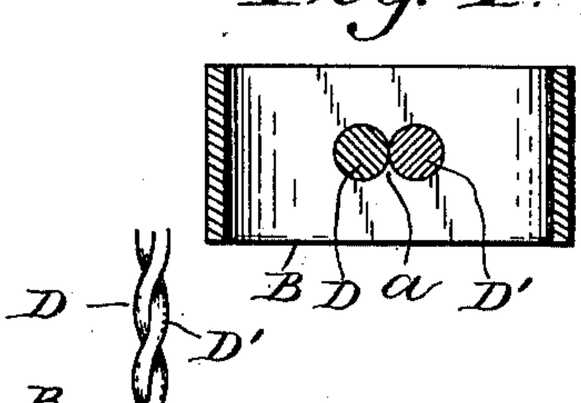
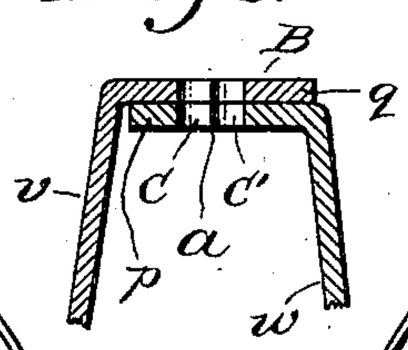


Fig. 5.

Fig. 6.



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EGG-BEATER.

SPECIFICATION forming part of Letters Patent No. 692,479, dated February 4, 1902.

Application filed May 31, 1901. Serial No. 62,518. (No model.)

To all whom it may concern:

Be it known that I, EMMETT R. ROBERTS, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Egg-Beaters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to a hand implement to be used in a bowl or similar vessel for beating eggs or for mixing various ingredients, the object of the invention being to provide an improved beater that may be operated by one hand, so that the other hand may be employed in holding the vessel either upon or off a table, a further object being to provide a durable beater that will not be liable to derangements, that may be easily cleaned after use, and that may be cheaply produced.

With these objects in view my invention consists in certain new and novel parts and in the combination and arrangement of parts embodied in the details of construction, as will be hereinafter particularly described, and pointed out in the claims.

Referring to the drawings, Figure 1 is a view in elevation of a beater constructed substantially in accordance with my invention, the handle being shown in central section; Fig. 2, a perspective view of the agitator or rotative portion of the device; Fig. 3, a horizontal transverse sectional view showing the plan of the head of the agitator or rotative portion detached from the actuator; Fig. 4, a view similar to Fig. 3, showing the actuator connected to the agitator; Fig. 5, a fragmentary view in elevation, showing modifications in the agitator and the actuator; and Fig. 6, a vertical transverse sectional view showing a modification in the construction of the agitator-head.

In the several figures of the drawings similar reference characters indicate like parts.

In construction I provide an agitator for beating or stirring the eggs or other substances, which is designed to be rotated first in one direction and then in the opposite direction alternately, and an actuator to be manipulated by hand for causing the rotative movement of the agitator, the actuator including a reversing-spring.

The agitator comprises beating-blades A A′ of any suitable form and number, which are connected at their lower ends and provided with a center point G, upon which the device operates, the upper portions of the blades forming arms *v w* of suitable design, at the upper ends of which they are connected to a head B, in which is an aperture performing the functions of a screw-nut, being oblong in plan.

The actuator comprises a bar having practically an oblong cross-sectional area and twisted about its axis, so as to, in effect, perform the functions of a screw in the aperture of the head B, so that in forcing the bar longitudinally through the aperture the head must rotate. The bar has a suitable handle, between which and the head B a reversing-spring is seated, and a suitable guide is provided for keeping the actuator-bar in alinement with the center point.

In the most simple forms the blades A A′ may be formed of either one or two curved strips of metal, comparatively narrow and thin, the ends of which may be joined either as at *m n* and soldered together, with a further reinforcement by a rivet *u*, which may also form the center point G, or the ends *p q* of the arms may be overlapped to form the head B of double thickness of metal when comprised of one piece. If comprised of two pieces, they may be joined at both places, as above described. The aperture in the head may be formed by punching or drilling two intersecting holes C C′ therethrough, preferably leaving projecting points *a* at the two longer sides of the oblong aperture thus formed. A guide-bar *h*, having a guide-aperture *i*, may be attached to two opposing beater-blades A A′, extending horizontally from one to the other, the stem *d* extending through the aperture *i* and movable longitudinally therein, or a guide-bar *j* may be employed in a vertical position and may be attached to the bottom of the agitator, preferably extending therethrough and forming the center point G, being suitably secured, as by

soldering, to the connecting metal part. In this case the stem *d* is provided with a collar *k*, encircling loosely the bar *j* and permitting the latter to work both longitudinally and rotatively therein. The actuator-bar is composed of a plurality of strands of wire, each of suitable diameter, so as to loosely fill a hole C or C′ in the head, the strands being twisted together, so as to practically form spiral ribs D D, one strand being straight a suitable distance from and above its lower end, so as to form the stem *d*, and the other strand being turned about the stem *d*, so as to form the collar *b* below the head B to act as a stop to the upward movement of the actuator-bar and also to prevent detachment of the head B from the actuator-bar. The upper end of the actuator-bar is provided with a handle E, preferably of wood, having a bore *f*, into which the agitator-bar end is inserted and secured. A spiral spring F extends about the actuator-bar loosely and is so seated against both the end *e* of the handle E and the head B that it may either rotate against the handle or the head B may rotate against the spring.

It should be understood that the head B is comparatively thin, so that the sides of the aperture therein need not exactly fit the angularity of the surfaces of the ribs D D′; but I may use metal for the head having a greater thickness, and then form a screw-thread by means of a tool in the aperture corresponding to the ribs or threads on the actuator-bar.

In practical use the implement is to be placed in a substantially vertical position, as in Fig. 1, the point G resting in a suitable vessel containing the substances to be beaten or mixed. The handle E is to be grasped by one hand of the operator and rapidly forced downwardly, when the spiral actuator-bar, impinging against the sides of the oblong aperture in the head B, will cause the beater-blades to rotate about their axis. Then releasing the pressure upon the handle E the actuator-bar will be forced upwardly by the tension of the reversing-spring F, causing a rotation of the beater-blades in the reverse direction, the operation to be repeated as often as may be necessary to attain the desired results, it being understood that the operator will manually prevent the rotation of the actuator-bar by means of the handle E, and consequently rotation of the agitator must take place. In relieving the handle from pressure the spring causes the point G to remain seated, and thereby pushes up the longitudinally-movable handle E and with it the actuator-bar.

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

1. In an egg-beater, the combination of the agitator-head having the oblong aperture therein, the beater-blades attached to said head, the spiral actuator-bar extending through said oblong aperture, the straight guide-stem projecting from the lower end of said bar, the stop member at the junction of said stem and said bar, the handle rigidly secured to said bar at the upper end thereof, the guide-bar extending between said blades and engaged by said guide-stem, and the spring seated against said handle and also against the upper side of said head at one side of said oblong aperture, substantially as set forth.

2. In an egg-beater, the combination of the vertically-movable handle having the bore extending longitudinally therein, the spiral actuator-bar having its upper end secured in said bore and having the guide-stem projecting from the lower end thereof, the agitator-head engaged by said bar, the beater-blades, the guide-bar extending between said blades and engaged by said stem, and the reversing-spring, substantially as set forth.

3. In an egg-beater, the combination of the agitator-head having the pair of circular intersecting apertures therein, the actuator-bar extending through said apertures, the beater-blades attached to said head, the guide-bar extending between said blades, the guide-stem projecting from the lower end of said actuator-bar and engaging said guide-bar, the actuator-bar handle, the reversing-spring, and the stop member formed of an integral part of said actuator-bar and situated at the junction of said actuator-bar and said guide-stem, substantially as set forth.

4. In an egg-beater, the combination with the agitator having the guide-bar secured thereto and also having the oblong aperture in the head thereof, of the actuator-bar and guide-stem combined and formed of a single piece of wire bent upon itself and having the lower end of one of the strands thereof extending as a straight guide-stem engaging said guide-bar, and having the lower end of the other one of the strands thereof bent about said stem as a stop member, the handle secured to said actuator-bar, and the reversing-spring, substantially as set forth.

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

EMMETT R. ROBERTS.

Witnesses:
HARRY D. PIERSON,
E. T. SILVIUS.