(No Model.)

G. D. DUDLEY.

EGG BEATER.

No. 386,424. Patented July 17, 1888.

Fig. 1.

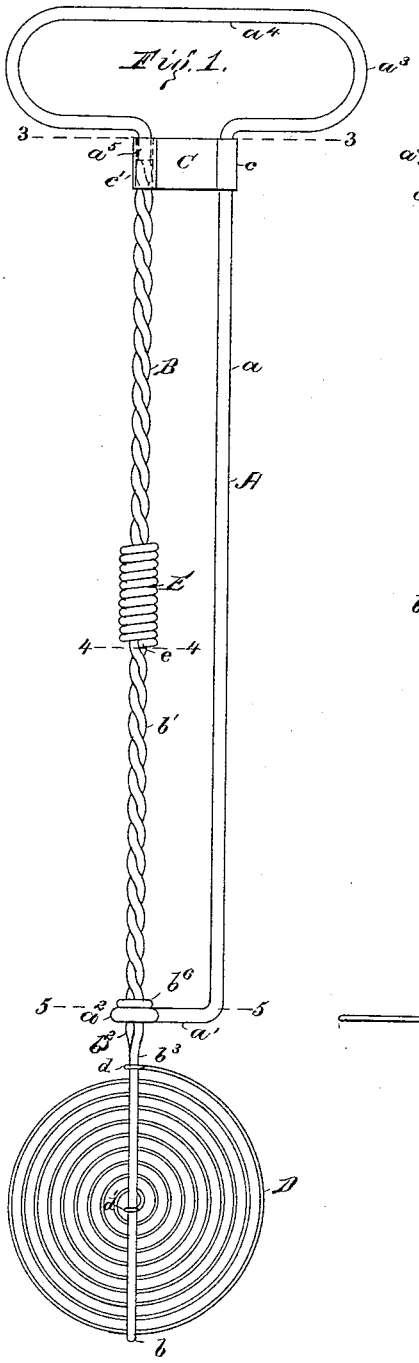


Fig. 3.

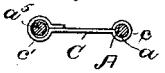


Fig. 4.

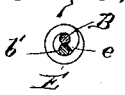


Fig. 5.

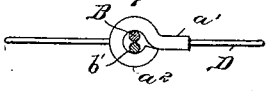
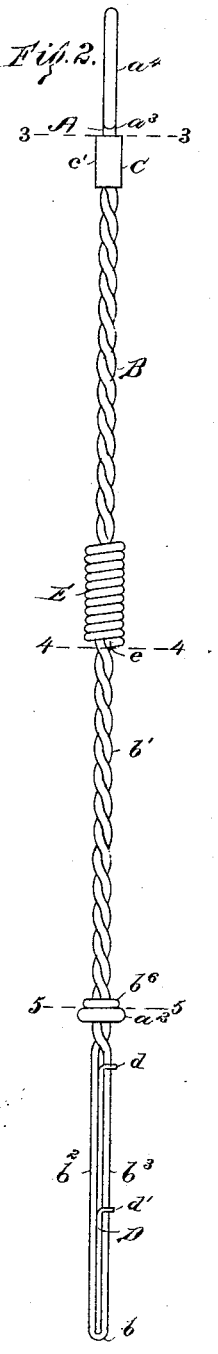


Fig. 2.



Witnesses—
Kirkley Hyde.
Thomas F. Maguire

Inventor—
George D. Dudley,
By Albert M. Moore,
His Attorney.

UNITED STATES PATENT OFFICE.

GEORGE D. DUDLEY, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO WOODS, SHERWOOD & CO., OF SAME PLACE.

EGG-BEATER.

SPECIFICATION forming part of Letters Patent No. 386,424, dated July 17, 1888.

Application filed February 20, 1888. Serial No. 264,598. (No model.)

To all whom it may concern:

Be it known that I, GEORGE D. DUDLEY, a citizen of the United States, residing at Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a certain new and useful Improvement in Egg-Beaters, of which the following is a specification.

My invention relates to egg-beaters; and it consists in the novel construction, arrangement, and combinations hereinafter described and claimed.

In the accompanying drawings, Figures 1 and 2 are elevations of my improved egg-beater, Fig. 2 showing the side which is at the left in Fig. 1; Fig. 3, a plan of the socket-piece and a horizontal section of the frame on the line 3 3 in Figs. 1 and 2; Fig. 4, a plan of the bottom of the sliding sleeve or nut and a section of the spindle on the line 4 4 in Figs. 1 and 2; Fig. 5, a horizontal section of the line 5 5 in Figs. 1 and 2.

A is the frame, consisting of a stout wire, the main portion a of which is straight and, when in use, vertical, the lower portion, a', of which is horizontal and at its free end bent into a circle, a^2, to embrace the spindle and form the step or lower bearing for said spindle, and the upper portion, a^3, of which is bent into a vertical loop, a^4, to serve as a handle for the egg-beater, the upper end portion of the frame-wire being bent down, as shown in dotted lines in Fig. 1 at a^5, for a short distance parallel with the vertical portion a of the frame A.

The socket-piece C consists of a strip of sheet metal, preferably tin-plate, one end portion, c, of which is wrapped closely about the vertical portion a of the frame A, just below the handle, and the other end portion, c', of which is bent into a vertical tube or socket large enough to receive the upper end of the spindle B and to allow said spindle to turn therein freely. The spindle B is prevented from rising in said socket by the upper vertical end, a^5, of the frame-wire entering the top of the socket c' for a distance of about half the length of said socket, more or less, as shown in dotted lines in Fig. 1.

The socket-piece C and the frame A may be firmly united to each other by tinning them together—that is, by dipping them in a bath of melted tin in a well-known manner. The internal diameter of the socket c' is greater than the diameter of the frame-wire, and it is therefore desirable to leave the end a^5 of said frame-wire slightly farther from the vertical portion a of the frame when forming the frame than the length of the socket-piece, so that when said end a^5 is introduced into the top of the socket it will spring away from said vertical portion and press outwardly against the inside of the socket, and thereby hold the socket-piece in position while being tinned.

The spindle B is formed of a single wire doubled at the lower end, b, of the spindle, said spindle-wire having its strands twisted together at b' for a distance from the upper end of said spindle as great as the distance between the end a^5 of the frame-wire and the step a^2 to form a spirally-grooved rod or screw of long pitch. The spindle B extends for a considerable distance below the step a^2, its strands being merely doubled below said step.

The agitator D, or "flier," as it is called, is a wire arranged, as shown, between the untwisted strands b^2 b^3 of the spindle-wire below the step a^2, the ends d d' of the agitator-wire being looped around one or both of said strands b^2 b^3. The agitator and the spindle may be further united to each other by tinning them together in the manner above indicated with reference to the frame and socket-piece.

The nut or sleeve E, which surrounds the screw-threaded portion b' of the spindle B, is simply a cylindrical spiral coil of wire having one end, e, of said wire bent inward to enter the groove or screw-thread of the spindle. Sliding the nut E quickly up and down on the spindle will cause the spindle and agitator to revolve with great rapidity. The spindle, after being placed in its proper position in the frame, is prevented from dropping out of the frame by a ring or projection, b^6, secured in any convenient manner, as by soldering or pinching into the surface of the spindle above the step a^2, so as to prevent said ring or projection from rising on said spindle.

The egg-beater above described is very in-

expensive to construct, presents a very large agitating-surface, and is easily cleaned, as the only part which enters the egg or other thing to be mixed or stirred is the agitator, the latter being placed below the frame.

I claim as my invention—

1. The combination of the frame, the spindle supported and rotating freely in said frame and extending below said frame, and the agitator consisting of a flat spiral of wire secured to said spindle below said frame, as and for the purpose specified.

2. The combination of the frame, the spindle supported and rotating in said frame and extending below said frame, said spindle consisting of a wire doubled throughout its length and twisted within said frame, and an agitator consisting of a flat spiral of wire secured between the untwisted strands of said spindle below said frame, as and for the purpose specified.

3. The combination of the frame provided with a step, the socket secured to said frame, the spindle turning in said socket and step, and a ring or projection on said spindle to prevent said spindle from dropping out of said frame, as and for the purpose specified.

4. The combination of the wire frame, provided with a handle and with a step at its lower end and with an intermediate vertical portion, a socket-piece attached to said vertical portion and provided with a cylindrical socket, the upper end of which receives the upper end of the frame-wire, a spindle turning in said socket and step, and above said step being formed of twisted wires or strands of wire and having a uniform diameter, as and for the purpose specified.

In witness whereof I have signed this specification, in the presence of two attesting witnesses, this 13th day of February, A. D. 1888.

GEO. D. DUDLEY.

Witnesses:
ALBERT M. MOORE,
GERTRUDE M. DAY.