

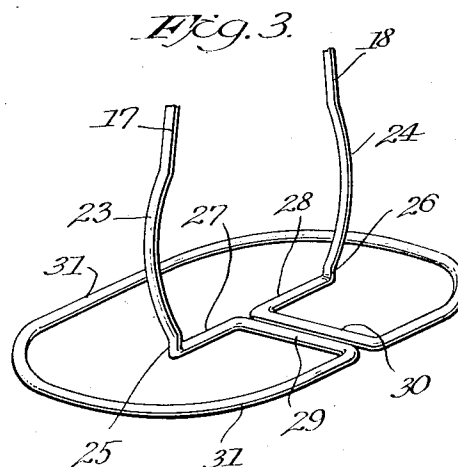
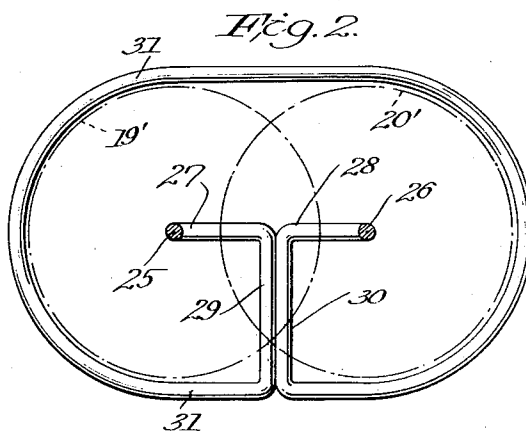
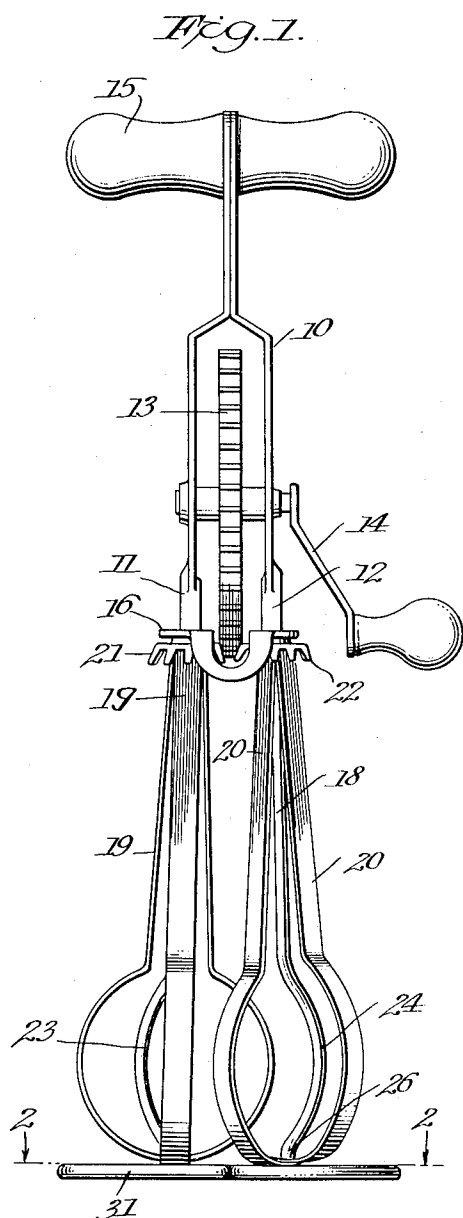
Oct. 31, 1933.

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1,933,439

BEATER

Original Filed May 15, 1930



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UNITED STATES PATENT OFFICE

1,933,439

BEATER

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Application May 15, 1930, Serial No. 452,733
Renewed March 23, 1933

11 Claims. (Cl. 259—131)

The present invention relates to improvements in beaters of that type generally known as egg beaters, and contemplates a structural addition to the usual type of such beater whereby the use of the same is much facilitated.

Generally speaking, the invention consists in the addition to the frame of such a beater of a foot portion, preferably integral, and in the form of a loop, the foot portion serving to sustain the beater in upright position, to reduce the force ordinarily required to hold the beater in operative position, and to provide a guard for the beater blades to prevent their interference with the side walls of the vessel in which the beater is operated.

I have illustrated a preferred embodiment of my invention in the accompanying drawing, in which

Figure 1 is an elevation of a beater embodying the improvement constituting the present invention,

Figure 2 is a section on line 2—2 of Figure 1, and

Figure 3 is a perspective of the lower portion of the beater frame.

Referring now to the drawing, reference numeral 10 designates a bifurcated frame terminating downwardly in two sockets 11 and 12 and having journaled on a transverse axis therein a gear 13 adapted to be rotated by a crank 14. A transverse handle 15 is secured to the upper end of frame 10 in the usual manner, and sockets 11 and 12 are joined by means of a yoke 16.

Secured in sockets 11 and 12 are the upper ends of legs 17 and 18 which provide upper and lower journal portions for beater blades 19 and 20 to the upper ends of which are fastened gears 21 and 22 meshing with gears 13 to be driven thereby.

At their lower ends, legs 17 and 18 are provided with divergently bowed portions 23 and 24, and immediately below these are the lower journal portions already referred to, designated at 25 and 26. Legs 17 and 18 form the side members of what may be termed a substantially U-shaped frame having a cross portion made up of sections 27 and 28. As here shown, sections 27 and 28 at their adjacent ends are rectangularly bent in a plane perpendicular to the plane of legs 17 and 18 and extend side by side as at 29 and 30, an integral loop-like foot section 31 joining sections 29 and 30 and surrounding the lower journal portions 25 and 26, as here shown, in substantially symmetrical relation thereto. It will be understood that while sections 29 and 30 and

loop 31 are shown as being integral with legs 17 and 18, this construction is not absolutely necessary, although preferable. Further, in the broad aspect of the invention, loop 31 need not be of the symmetrical form as shown but may be shaped in any appropriate manner.

It will be noted from Figure 2 that loop 31 is somewhat elongated and at its ends is in the form of semi-circles developed on radii substantially equal to the length of sections 29 and 30 about journal portions 25 and 26 as centers. Dotted circles 19' and 20', Figure 2, denote the maximum rotative path of blades 19 and 20, and it will be seen that the radii of the loop ends are greater than the radii of circles 19' and 20' so that the foot portion 31 forms an effective guard for the beaters. The vertical projection of the beaters lies within the area bounded by the loop-like foot portion.

To view the construction from another angle, legs 17 and 18 may be thought of as being the free ends of a looped wire, these ends lying in the same normally vertical plane to form upper and lower journal portions for the beater blades, each side of the loop being bent directly toward the other as at 27 and 28 immediately beneath the lower journal portions 25 and 26 and then rectangularly as at 29 and 30 for a distance in contact with each other, the closed end 31 of the loop surrounding the lower journal portions in symmetrically spaced relation and lying in a plane substantially perpendicular to the plane of the spaced ends 17 and 18.

It will be understood that the present invention relates only to the frame or frame portion just described and is not concerned with the upper frame 10 and its associated mechanism which may be of any preferred form. The frame or frame portion of the present invention is ordinarily made of heavy wire to provide a very rigid structure. Under some circumstances, as when a lighter frame wire is used so that the inherent rigidity of the frame is impaired, means, such as a drop of solder, may be used to prevent separation of sections 27 and 28.

It will be understood that the described embodiment of my invention is merely illustrative and that I do not limit myself except as determined in the following claims.

What I claim is:

1. A frame for a beater of the class described, said frame comprising a normally vertical substantially U-shaped section, said U-shaped section comprising a cross portion, and a loop-like foot section lying in a plane substantially per-

pendicular to the plane of the U-shaped section with its ends both secured to the cross portion of the latter.

2. A frame for a beater of the class described, said frame comprising a normally vertical substantially U-shaped section, said U-shaped section comprising a cross portion, and a loop-like foot section lying in a plane substantially perpendicular to the plane of the U-shaped section with its ends both secured to the cross portion of the latter, said cross portion lying substantially centrally of said foot section.

3. A frame for a beater of the class described, said frame comprising a piece of wire bent to form a pair of normally upright legs lying in the same plane and an integral elongated loop-like foot portion perpendicular to the plane of the legs, the ends of said foot portion being substantially semi-circular and developed about the lower ends of said legs as centers.

4. A frame for a beater of the class described, said frame comprising a piece of wire bent to form a pair of normally upright legs lying in the same plane and an integral foot portion in the form of a substantially closed loop perpendicular to the plane of the legs.

5. A frame for a beater of the class described, said frame comprising a piece of wire bent to form a pair of normally upright legs lying in the same plane and an integral foot portion in the form of a substantially closed loop perpendicular to the plane of the legs and symmetrical to the lower ends of said legs.

6. A frame for a beater of the class described, said frame comprising a piece of looped wire having its free ends extending alongside each other in spaced relation and in the same normally vertical plane to form upper and lower journal portions for a pair of beater blades, each side of the loop being bent directly toward the other immediately beneath the lower journal portions and then rectangularly to the plane of said spaced ends for a distance in contact with each other, the closed end of the loop surrounding in symmetrically spaced relation said lower journal portions and lying in a plane substantially perpendicular to that of said spaced ends.

7. A frame for a beater of the class described, said frame comprising a piece of looped wire having its free ends extending alongside each other in spaced relation and in the same normally vertical plane to form upper and lower journal portions for a pair of beater blades, each side of the loop being bent directly toward the other immediately beneath the lower journal portions and then rectangularly to the plane of said spaced ends for a distance in contact with each other, the closed end of the loop surrounding in symmetrically spaced relation said lower journal portions and lying in a plane substantially perpendicular to that of said spaced ends, said closed end of the loop having opposite end portions of

semi-circular form developed about said lower journal portions as centers.

8. A frame for a beater of the class described, said frame comprising a piece of looped wire having its free ends extending alongside each other in spaced relation and in the same normally vertical plane to form upper and lower journal portions for a pair of beater blades, each side of the loop being bent directly toward the other immediately beneath the lower journal portions and then rectangularly to the plane of said spaced ends for a distance in contact with each other, the closed end of the loop surrounding in symmetrically spaced relation said lower journal portions and lying in a plane substantially perpendicular to that of said spaced ends, said closed end of the loop having opposite end portions of semi-circular form developed about said lower journal portions as centers, and on radii substantially equal to the length of the rectangularly bent portions.

9. In a beater of the class described, a frame comprising a piece of wire bent to form a pair of normally upright legs lying in the same plane and an integral loop-like foot portion perpendicular to the plane of the legs and surrounding the latter in symmetrically spaced relation thereto, and beater blades journaled on said legs, all transverse dimensions of said foot portion being greater than the maximum transverse dimension of a beater blade.

10. In a beater of the class described, a frame comprising a normally vertical substantially U-shaped section and a loop-like foot portion lying in a plane substantially perpendicular to the plane of the U-shaped section and symmetrically disposed relation thereto with its ends both secured to the cross portion of the latter, and beater blades journaled on the legs of said U-shaped section, all transverse dimensions of said foot portion being greater than the maximum transverse dimension of a beater blade.

11. In a beater of the class described, a frame comprising a piece of looped wire having its free ends extending alongside each other in spaced relation and in the same normally vertical plane, a beater blade having upper and lower bearings engaging upper and lower journal portions of each of said free ends, each side of the loop being bent directly toward the other immediately beneath the lower journal portions and then rectangularly to the plane of said spaced ends for a distance in contact with each other, the closed end of the loop surrounding in symmetrically spaced relation said lower journal portions and lying in a plane substantially perpendicular to that of said spaced ends, said closed end of the loop having offset end portions of semi-circular form developed about said lower journal portions as centers and on radii greater than any transverse dimension of a beater blade.

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