

(No Model.)

F. W. HUDSON.

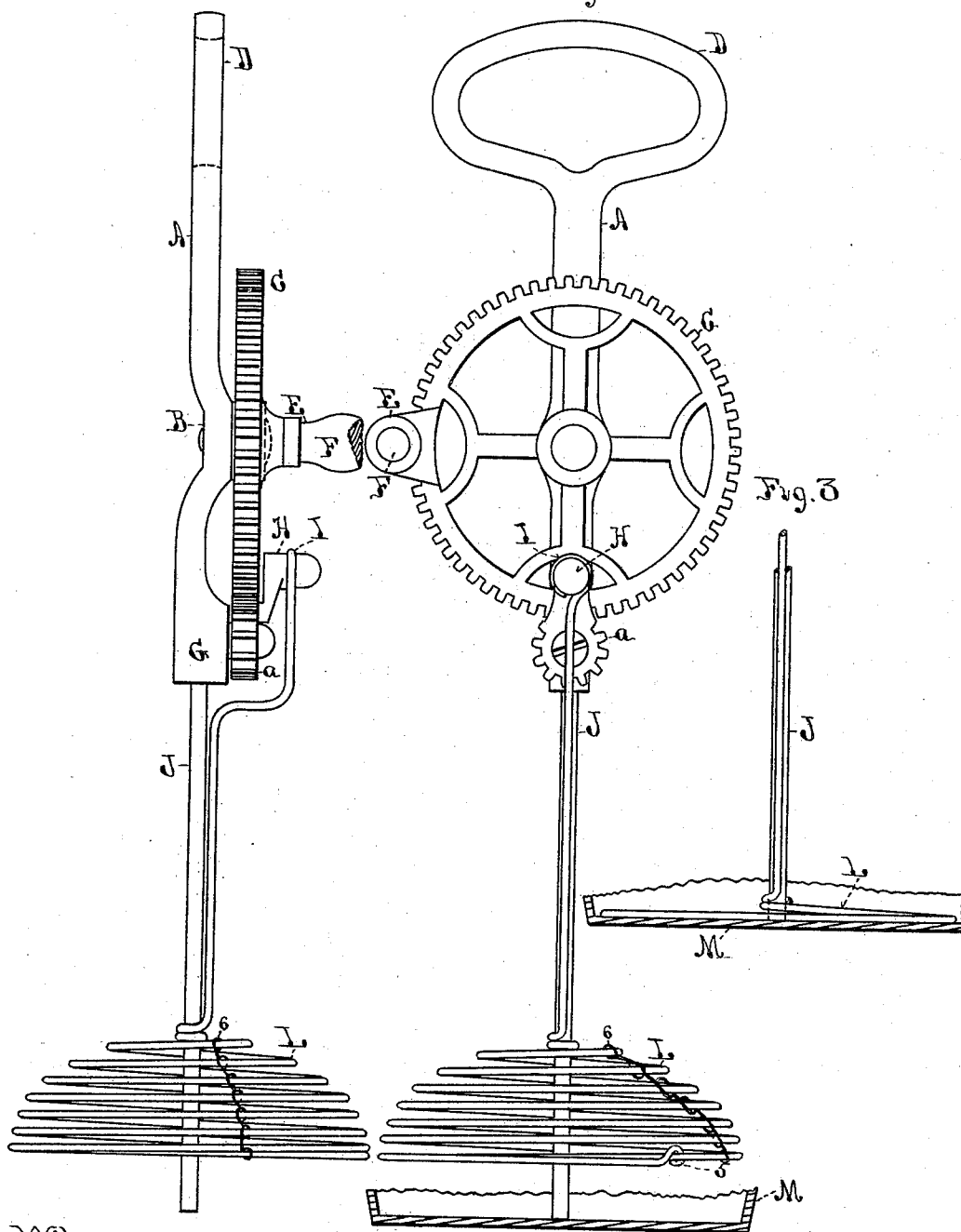
EGG BEATER.

No. 398,258.

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Fig. 2

Fig. 1



Witnesses.
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EGG-BEATER.

SPECIFICATION forming part of Letters Patent No. 398,258, dated February 19, 1889.

Application filed November 28, 1887. Serial No. 256,350. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. HUDSON, of Leominster, in the county of Worcester and State of Massachusetts, have invented a certain new and useful Improvement in Egg-Beaters, of which the following is a specification.

This invention relates to egg-beaters; and it consists, essentially, of a beater composed of a helically or conically coiled spring which is mounted upon a rod attached to the frame or hand-grasp of the article, and of suitable mechanism mounted upon the framing, whereby said spring-beater can be readily and rapidly operated, substantially as hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of my improved beater, showing the face of the gear-wheels with the crank raised to the highest point and a portion of the dish beneath in section which holds the eggs. Fig. 2 is a side elevation of the beater, showing the edge of the gear-wheels. Fig. 3 is a side elevation of the lower part of Fig. 1 when the crank is revolved to its lowest point, showing its effect upon the wire-coil dasher.

M is the dish in which the eggs to be beaten are contained.

A represents the frame, which at or about its center is curved to form a boss, B, to which the drive-wheel C is connected.

D represents the hand-grasp.

E is a lug or arm extending from wheel C, to which the handle F is attached.

G is the bottom of the frame, which is thickened so as to extend outward into line with the boss B. On this enlargement the pinion or gear-wheel *a* is pivotally mounted, so as to gear with the drive-wheel. Extending from the outer face of this gear-wheel *a* is a crank-arm, H, having a circumferential groove, I, formed therein, within and to which the upper end of the wire forming the beater or dasher is connected.

J represents a rod, which at its upper end is connected to the bottom of the frame A either by solder, screw-threads, or other suitable means.

L is the spring beater-dasher, which consists of a single strand of wire helically or conically

coiled, with the coils gradually tapering from bottom to top, the wire at the apex of the spring beater-dasher being loosely coiled around the rod J, and from thence extending upward in a straight line somewhat closely to said rod for a short distance, and then being bent outwardly and upwardly, and connected at its upper end to the arm H, extending from the gear-wheel. By thus extending the upper portion of the wire forming the spring beater-dasher and bending the lower end of the rod at right angles the spring is adapted to freely turn or swing and adapt itself to any reasonable angle at which the beater may be held, and a firm support is afforded the beater at its lower end, and the parts will not become bent or distorted in shape in use.

The rod J extends downward a sufficient distance to be beyond the limit of motion of the upper part of the conically-coiled-spring beater-dasher, which is coiled around the wire J and guides its vertical motion, as described; but when the dasher is moved up and down upon the rod J the lower end of its coil strikes upon the surface of the dish M, containing the eggs, and arrests the downward movement of the outer and lower end of the spring-coil, while the continued motion of the inner and upper end of the coil downward as it is driven by the crank forces the successive turns of the coil through each other and beats up the egg very effectively. The last coil of the spring-beater at its lower end is fastened at its free end to the next coil above it, as shown at 5, to form a continuous hoop or ring at the lower end of the coil and give it a neat finish. It will thus be seen that the reciprocation of the spring-beater up and down around rod J reciprocates the turns of its coil continually through itself, and that the guide-rod J keeps the coils from sagging or rubbing against those outside of them as they move past the latter up and down.

To insure greater certainty in keeping the coils apart, I have bridged the spaces between them transversely with cross-wires 6 6, so loosely wound around them as to allow of the necessary play in reciprocating the turns of the spring-coils past each other, and yet serve as struts to keep one turn from sagging against

the other. These struts may, however, be omitted, if desired, as they are not essential, although preferable.

It will be observed that the important feature of my improvement is the guiding up and down of the helical-coil beater-dasher upon the guide-rod J while its coils are vibrated through each other, and that the mechanism employed to reciprocate it up and down may be varied in construction so long as this feature is retained.

What I claim as new and of my invention is—

1. An egg-beater consisting of a supporting-frame, the depending guide-rod J, connected thereto, the dasher mounted axially upon said guide-rod, composed of a helical coil of wire, and the pitman-rod attached to one end thereof, and adapted to reciprocate it thereon and cause its inner coils successively and respectively to pass to and fro through its outer coils by its reciprocation, substantially as described.

2. An egg-beater consisting of a supporting-frame, the depending guide-rod J, connected thereto, the dasher mounted axially upon said guide-rod, composed of a helical coil and the cross-struts 6 6, and the pitman-rod attached to one end of said coil, and adapted to reciprocate it upon said guide-rod and cause its inner coils successively and respectively to

pass to and fro through its outer coils by its reciprocation, substantially as described.

3. An egg-beater consisting of a supporting-frame, the depending guide-rod J, connected thereto, the dasher mounted axially upon said guide-rod, composed of a helical coil of wire, and the pitman-rod attached to one end thereof, and adapted to reciprocate it thereon and cause its inner coils successively and respectively to pass to and fro through its outer coils by its reciprocation, and operative mechanism connected to said pitman-rod, adapted to reciprocate the same, substantially as described.

4. An egg-beater consisting of a supporting-frame, the depending guide-rod J, connected thereto, the dasher mounted axially upon said guide-rod, composed of a helical coil of wire, and the pitman-rod attached to one end thereof, and adapted to reciprocate it thereon and cause its inner coils successively and respectively to pass to and fro through its outer coils by its reciprocation, and the gear-wheels C a, the latter carrying crank-arm H, connected to said pitman-rod and adapted to reciprocate the same, substantially as described.

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Witnesses:

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