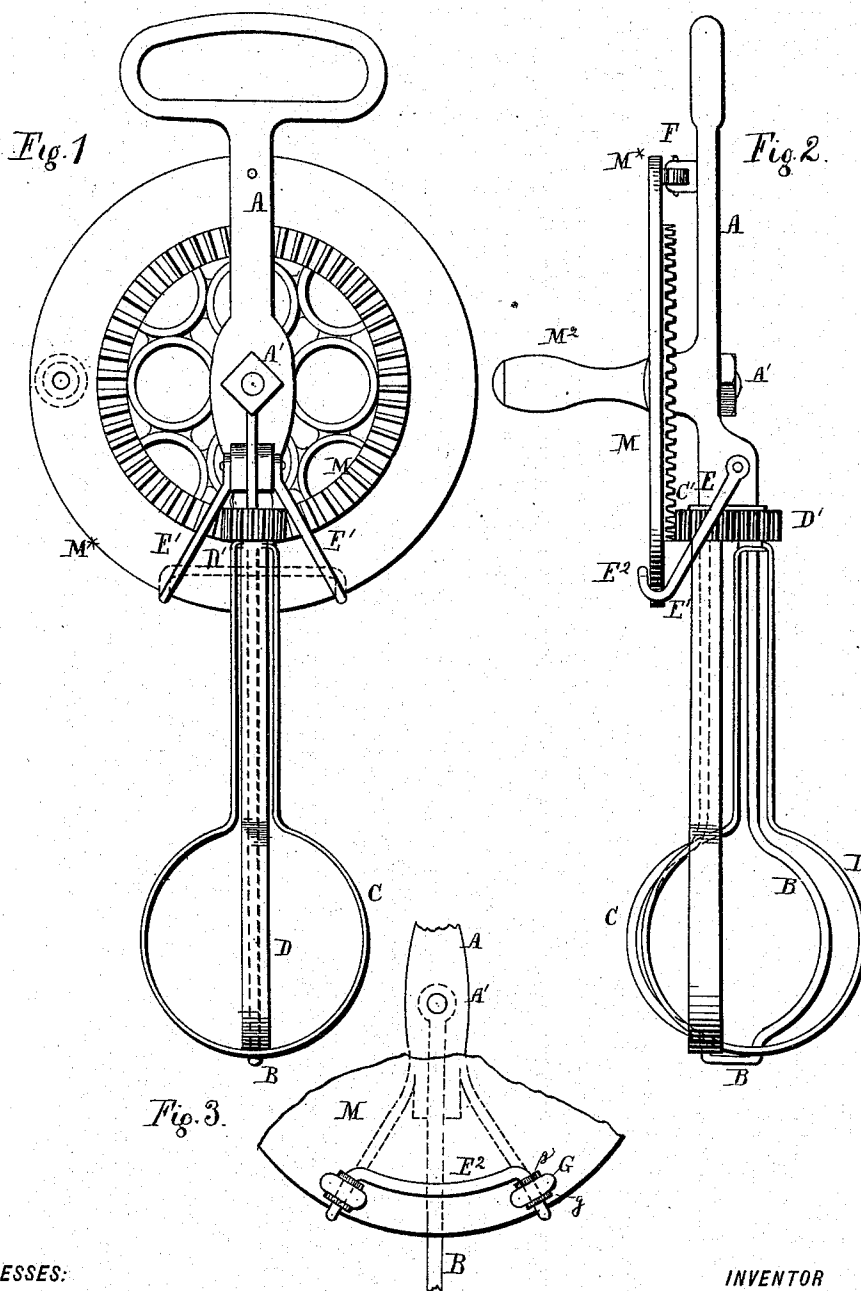


(No Model.)

H. W. MASON.
EGG BEATER.

No. 567,909.

Patented Sept. 15, 1896.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HERBERT W. MASON, OF GLENS FALLS, NEW YORK.

EGG-BEATER.

SPECIFICATION forming part of Letters Patent No. 567,909, dated September 15, 1896.

Application filed April 4, 1895. Serial No. 544,398. (No model.)

To all whom it may concern:

Be it known that I, HERBERT W. MASON, a citizen of the United States, residing at Glens Falls, Warren county, in the State of New York, have invented a certain new and useful Improvement in Egg-Beaters, of which the following is a specification.

My improvement applies to that class of egg-beaters in which a whipper is rapidly revolved by means of a pinion thereon engaged by a vertical gear-wheel turned by the operator. It avoids the liability of the gear-wheels to escape from engagement and slip by providing simple and efficient means of keeping them reliably engaged, and it attains this by means of a light wire hook so constructed and attached as to present a broad bearing on the front of the large gear-wheel. I construct that wheel with a plane rim outside of the gear on the inner or back face and arrange a roller to run on such plane surface to aid in keeping the wheel in its correct position.

I will describe the invention as applied to the egg-beater set forth in the patent by Ethan Hadley, dated May 6, 1873, No. 138,647, in which there are two revolving whippers geared directly together and having wings which intermesh. As in the ordinary construction of the beater generally known as the "Dover" egg-beater, the driving-wheel engages with one of the pinions which gear the two whippers together.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is an elevation presenting what I call the "back face." Fig. 2 is a corresponding edge view, and Fig. 3 is a front view of a portion showing a modification.

Similar letters of reference indicate like parts in all the figures where they appear.

A indicates a framing, which may be of malleable cast-iron or other suitable material, and A' is the ordinary stud thereon.

B is a slender extension downward conveniently formed of sufficiently stout wire, firmly fixed to frame A, and suitably bent to form a supporting-center for the lower end of each of the two beaters, and C and D are

such beaters, each having at its upper end a pinion C' D'. These pinions C' and D' are adapted to mesh as spur-gears and also to receive motion from a larger wheel M, which is carried to rotate on the stud A'. The wheel revolves in a plane at right angles to the motion of the whippers or beaters C D, and may be rotated by a hand-crank M², secured thereto. All these parts may be of the ordinary and long-approved construction, except that the wheel M is equipped with a smooth rim M* at its periphery, extending beyond its gearing and beyond the crank M².

E E' E² is a light and broad hook, shown made of wire and having two side arms E' E', connected by a cross-bar E², the ends E' E' entering transverse holes bored in the lower portion of the frame A and retained by clenching, while its broad bight extends forward under the bottom of the wheel M and a little upward and across in front of the wheel or its rim M*. This construction forms a spring-hook that holds the bottom of the wheel at its rim in two planes, so as to normally maintain proper contact of the intermeshing teeth, while there is enough elasticity in the wire to allow of a yielding and consequent lateral movement to prevent the parts from seriously binding even when the beater is new and stiff, and it retains its position and compels the wheels to remain well engaged with the nearest pinion C', and consequently driving both pinions C' D' and the attached whippers C D, even after the machine has been used so long that all the bearings are loose, the tendency of the hook E being to draw the teeth of the wheel M toward the pinion C.

F is an antifriction-wheel mounted on a pivot-wire set in a short stud in the front of the frame A, diametrically above the hook, and arranged to roll against the back face of the smooth rim M* and hold it in the desired position at the top. This, by holding the top of the wheel M forward, contributes still further to insure that that wheel is kept properly engaged with the pinion C' at the bottom however loose its bearing on the central stud A' may become through wear or other cause.

The invention adds but slightly to the weight or cost of the beater, and is peculiarly

adapted to mechanism of this class by allowing a large amount of looseness of parts without involving difficulty.

Modifications may be made if desired. The device can work without the roller F, causing the hook to serve alone relatively to the other parts. It will be observed that the width between the two points where the double hook bears on the wheel M is sufficient to guard the wheel against ever being skewed in its position. I can work with some success with the roller F alone without the hook. I prefer the whole together, as shown.

There may be rollers G carried by the hook to reduce the friction between the hook E E' E² and the front face of the wheel M. Fig. 3 shows such an arrangement with the form of the hook slightly modified and slight collars g to aid in holding the rollers in position.

I attach importance to the fact that the hook E E' E² is made of wire bent as shown, because this construction of hook adds but little to the weight or cost of the structure and provides elasticity, which is important in accommodating imperfections in the workmanship while the device is new.

I attach importance to the fact that the hook is double and affords a wide bearing by

this cross-bar E², because such form not only holds the wheels in gear but contributes to keep the wheel M in the true plane, preventing lateral oscillation.

I claim as my invention—

In an egg-beater the combination of a frame, whippers carried thereby, horizontally-positioned intermeshing pinions for turning the whippers and a wheel to rotate said pinions which is pivotally mounted on said frame in a vertical position and that is provided on its inner central face with gear-teeth, and a plane-surface extended rim, a roller supported by said frame to bear on the inner face of said rim at its upper turned portion, and a spring-hook also supported by said frame that is adapted to bear against and guide said rim in two planes at its bottom portion to hold the gear normally in proper contact and that will allow of yielding to overcome an extra strain imposed upon the gearing, substantially as described.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

HERBERT W. MASON.

Witnesses:

WM. MCECHRON,
S. EVA BARNES.