(No Model.)

W. JOHNSON.

EGG BEATER.

No. 292,821. Patented Feb. 5, 1884.

FIG. 1.

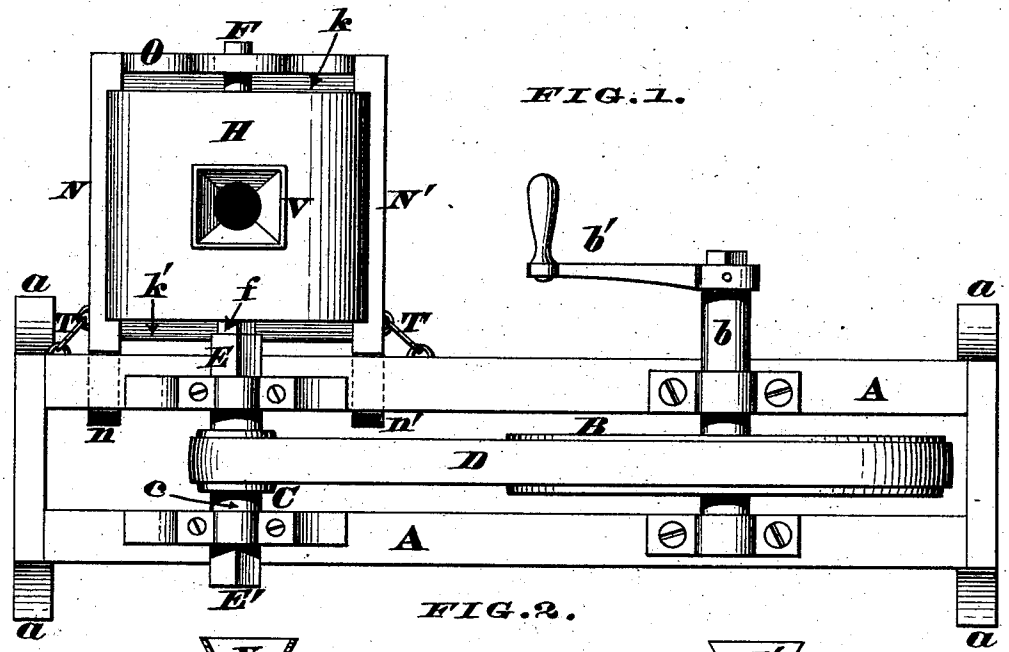


FIG. 2.

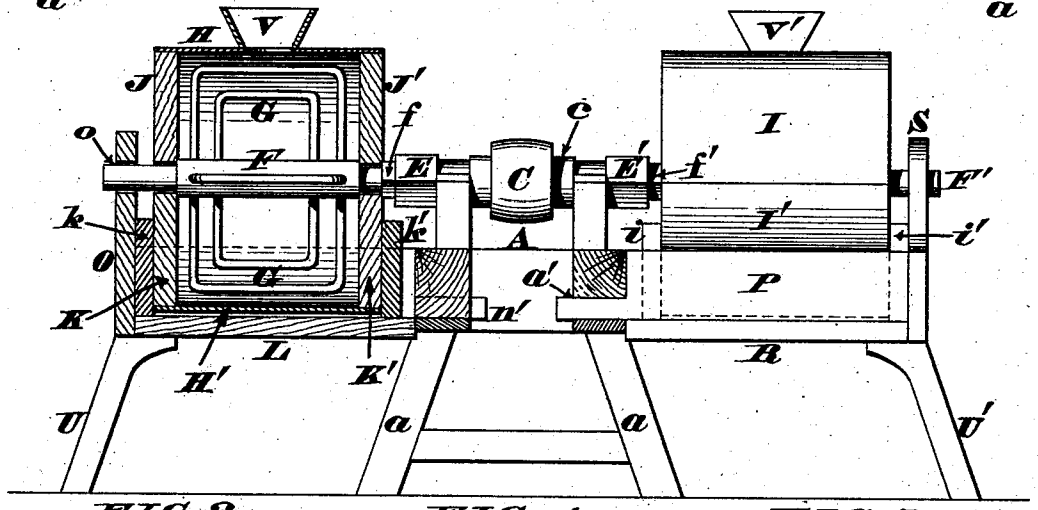


FIG. 3.

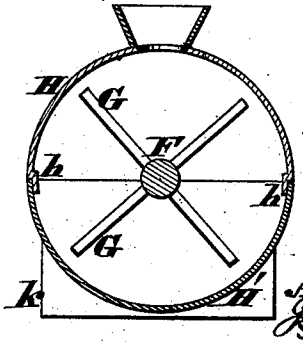


FIG. 4.

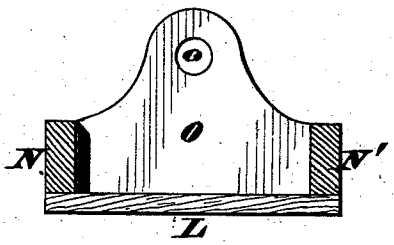
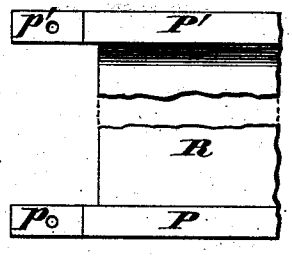


FIG. 5.



Attest:
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S. S. Carpenter

Inventor:
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By James W. Laymon
Atty.

UNITED STATES PATENT OFFICE.

WILLIS JOHNSON, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO JACOB SHAW, OF SAME PLACE.

EGG-BEATER.

SPECIFICATION forming part of Letters Patent No. 292,821, dated February 5, 1884.

Application filed July 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIS JOHNSON, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Egg-Beaters, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of my invention is to provide a machine wherewith eggs, batter, and other similar ingredients used by bakers, confectioners, &c., can be beaten or mixed in the most intimate and expeditious manner. The machine consists, essentially, of a main frame within which is journaled a driving-wheel and a pinion or pulley, the horizontal shaft of the latter having at its opposite ends clutches or sockets, with which are engaged square or other non-circular arbors at the inner extremities of a pair of beater-shafts. These shafts, which are armed with suitable blades, beaters, or stirrers, are journaled in cylinders that occupy detachable trays or racks applied to the opposite sides of the main frame, hooks and staples or other convenient devices being employed for retaining said racks in their proper places. As a result of this construction, either one or both of the cylinders can be readily applied to the racks, and the latter be coupled to the machine, so as to insure a very rapid revolution of the beater-shafts, as soon as power is applied to the driving-wheel, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a plan of the more simple form of my machine. Fig. 2 is a transverse section of a more complex form of the same, taken in the plane of the pulley-shaft, one of the detachable racks and its accessories being shown in elevation. Fig. 3 is a transverse section of one of the cylinders detached from its rack. Fig. 4 is a transverse section of said rack. Fig. 5 is a plan of a portion of the other detachable rack.

The main frame A is supported on legs or feet *a*, and has journaled in it two shafts, *b c*, which carry, respectively, the driving-wheel B and pinion or pulley C, power being transmitted from said wheel B to pulley C by means of band D. Shaft *b* may be operated either with a crank, *b'*, or otherwise. The other shaft, *c*, terminates with clutches or sockets E E', wherewith are engaged the arbors *f f'* of beater-shafts F F', said shafts being armed with any suitable form of blades, dashers, paddles, or other stirrers, G. (Seen in Figs. 2 and 3.) These shafts are housed, respectively, in cylinders H H' and I I', which receptacles being precisely alike, a description of one will answer for both.

By referring to the sectioned portion of Fig. 2 it will be seen that the cylindrical shells H H', which are preferably made of sheet metal, are secured to semi-cylindrical heads J J' and K K', while reference to Fig. 3 shows that the upper shell, H, has a flange, *h*, that fits snugly within the lower shell, H', and thereby prevents accidental escape of the contents of said receptacle. The heads K K' are supported on bearers *k k'*. *i i'* are similar bearers for the other cylinder, I I'. The bearers *k k'* rest on the bottom board, L, while their ends abut against the side beams, N N', of a detachable tray or rack, said beams being tenoned at *n n'* to enter mortises or sockets *a'* in the main frame, as more clearly seen in Fig. 2. The inner end of this detachable rack is open; but its outer end is closed with a board, O, pierced at *o*, to serve as one of the journal-bearings for the beater-shaft F.

P P' are the side beams, R the bottom, and S the end, piece of the detachable rack that supports the other receptacle or cylinder, I I', which beams, as seen in Fig. 5, are perforated at *p p'*, to admit pins that secure this rack to the main frame A; or this result may be accomplished with any other convenient retaining devices—such, for example, as hooks and staples, (seen at T in Fig. 1.)

U U' are legs or feet of the detachable racks.

V V' are the cylinder-hoppers.

If it is desired to beat up but a limited quantity of eggs, batter, or other ingredients, the lower member, H' K K' *k k'*, of one of the cylinders is fitted in the rack N N' O, and the latter is then applied to the main frame A and properly secured thereto. Shaft F is then inserted in the bearing *o* and engaged with the socket or clutch E, after which act the upper half, H J J', is applied to the lower half of the cylinder, as seen in Figs. 2 and 3. The cylinder is now charged with the ingredients through the hopper V, and shaft *b* being set in motion

a very rapid rotation of pulley C is effected. Owing to the clutch-coupling E, this rapid rotation of pulley C is transmitted to the shaft F and its attachments G, the result being to cause a thorough beating or mixing of the eggs or other ingredients contained within the cylinder H H'. As soon as the operation is finished, the rack N N' is disengaged from the frame A, the cylinder is lifted out of said rack, and then emptied of its contents. When it is desired to beat up a large quantity of stuff, the other tray, P P' R S, and cylinder I I', with its shaft F', are applied to the opposite side of the frame A, as seen in Fig. 2, so as to double the capacity of the machine.

With this double-acting machine one kind of batter can be mixed in the cylinder H H' while another kind of stuff is being beaten up in the other receptacle, I I'. It is also apparent that with this double-acting machine one of the cylinders may be kept in operation while the other receptacle is either being cleaned or charged. Finally, it is apparent that the wheel B, pulley C, and band D may be omitted and the desired speed of shaft *c* be obtained by a system of gear-wheels journaled in the frame A.

I claim as my invention—

1. The combination, in an egg-beater, of frame A, shafts *b c*, power-transmitters B C D, clutch E, and detachable rack N N' L, which latter carries the cylinder H H' J J' K K', having journaled within it the beater-shaft F G, as set forth.

2. The combination, in an egg-beater, of frame A, shafts *b c*, power-transmitters B C D, clutches E E', detachable racks N N' L P P' L, and cylinders H H' J J' K K' I I', said cylinders having journaled in them, respectively, the beater-shafts F F, for the purpose specified.

3. A mixing-machine consisting of the shells H H' *h*, attached to the semicircular heads J J' K K', and having journaled in it the beater-shaft F G, as herein described.

4. The combination of detachable tray N *n* N' *n'* L O *o* and cylinder H H' J J' K K' *k k'*, the latter having journaled within it the beater-shaft F G, for the purpose stated.

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

WILLIS JOHNSON.

Witnesses:

JAMES H. LAYMAN,

S. S. CARPENTER.