May 8, 1923. 1,454,223

R. W. POOR

MOTOR DRIVEN MIXER AND THE LIKE

Filed July 7, 1921

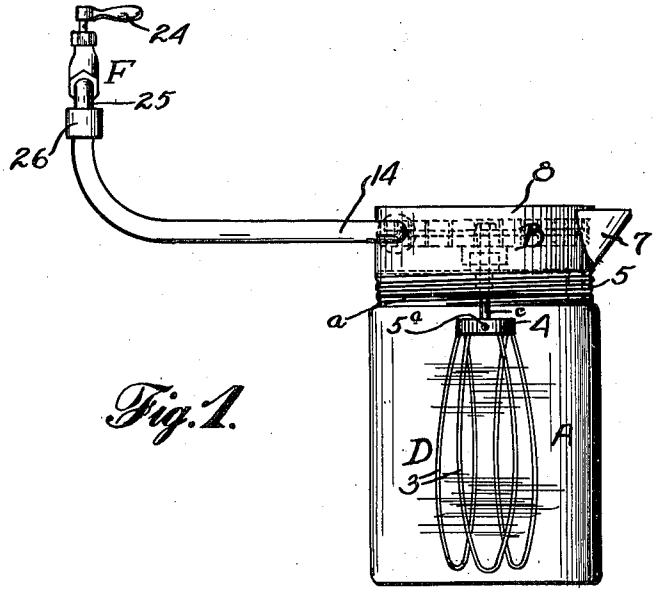

Fig. 1.

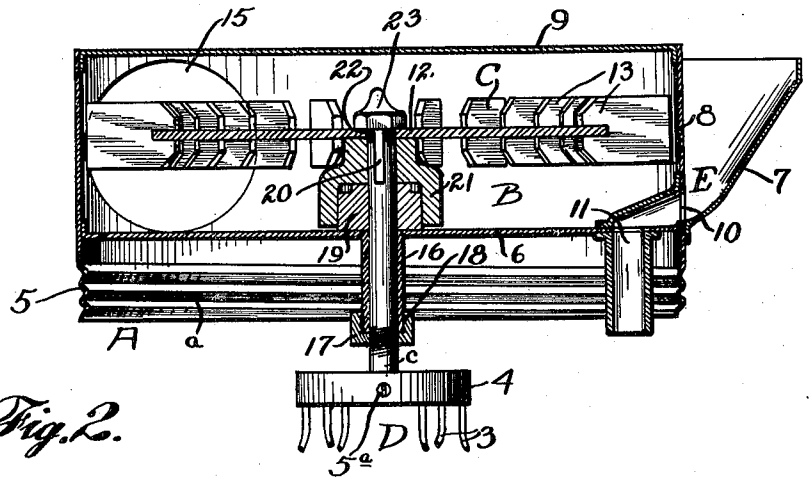

Fig. 2.

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Roy W. Poor;
BY
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UNITED STATES PATENT OFFICE.

ROY W. POOR, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-FOURTH TO JOSEPH J. MATHE, OF LOS ANGELES, CALIFORNIA.

MOTOR-DRIVEN MIXER AND THE LIKE.

Application filed July 7, 1921. Serial No. 482,994.

To all whom it may concern:

Be it known that I, ROY W. POOR, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Motor-Driven Mixers and the like, of which the following is a specification.

This invention relates to motor driven mixers and the like, and more particularly to mixers for domestic and culinary purposes, such as for stirring, mixing and commingling salad dressings, pastes and the like, and for beating or whipping eggs, cream and other culinary mixtures, or agitating the same or any other substance. The invention has for its object to provide an improved device of this character which may be readily operated by power readily available in dwelling houses and apartments, more particularly the power to be derived from water flowing from a tap or faucet, and which device may be readily put into position of use or service or removed therefrom, and which will be generally superior in simplicity and inexpensiveness, taken in conjunction with durability, convenience, positiveness and speed in use, convenience in assembling or disconnecting of parts for charging or emptying or for cleaning or repair, compactness in form, and general efficiency, economy in use, and serviceability.

With the above and other objects in view, the invention consists in the novel and useful provision, formation, combination, association, relative arrangement, mode of operation and application of parts, members and features, all as hereinafter described, shown in the drawing, and finally pointed out in claims.

In the drawing:

Figure 1 is a side elevation of a motor driven mixer, stirrer, or agitator, embodying the invention, and applied in position for service; and,

Figure 2 is an enlarged detail fragmentary central vertical sectional view of the same, parts being in elevation.

Corresponding parts in both figures are designated by the same reference characters.

Referring with particularity to the drawing, there is shown therein my improved motor driven mixer, particularly useful for domestic purposes (although it will be understood that the invention in suitably and readily suggested forms may be used for industrial purposes or in restaurants or hotels or otherwise), such mixer or beater or stirrer comprising a jar or receptacle A, indicated in the drawing as a "Mason" jar or the like, having the usual exteriorly threaded neck or orifice portion *a*, to which orifice portion is applied a cap or head member B in conjunction with which is mounted a motor element C, such motor element being applied to or coupled with a mixer, stirrer or agitator shaft *c* at the lower end of which is mounted a mixer, stirrer or agitator D shown as comprising a plurality of looped wires 3 secured at the looped ends to a disc or head 4 suitably attached to the shaft *c*, as by a set screw 5^a, and adapted to be received in operative position within the jar or container A. Such head or cap B is provided with a threaded flange 5 adapted to be applied to the threads *a* of the jar A, to close or seal up such jar or receptacle and its contents, the cap or head B having a base member or plate 6 extending across the mouth of the receptacle when the cap or head is in place. The head or cap B is provided with means E through which communication may be had with the interior of the jar or receptacle A so that ingredients or materials may be introduced to such jar or receptacle during the stirring, mixing or agitating operation, in sequence, or as desired, and through which, as may be found convenient or desirable, fluid contents or semi-fluid contents of the container may be decanted without removing the cap or head B. Such means E may comprise a spout 7 provided at one side of an upstanding annular wall 8 of the head, which wall, with the base plate 6 and a top wall 9, comprise the cap or head. The spout 7 communicates, by an opening 10, in such annular wall 8, with a tubular conduit 11 angled at the top within the cap B and depending below the base wall 6 thereof within the jar or receptacle A. Mounted upon the shaft *c*, detachably, is the motor element C, the same in the form shown in the drawing comprising a disc or wheel 12 provided with a plurality of peripherally or radially disposed blades or buckets 13, the latter being arranged in a circular series within the circular head B, in position to be impinged upon by a stream of water entering into such casing or head B at one side, as through a

flexible tube 14, the partially spent or discharged water passing out of said head or casing through a discharge opening 15, the inlet pipe 14 and discharge opening 15 being arranged in a chord of the circle described by the annular wall 8, at one side of the center of said casing or head. The shaft *c* operates in a sleeve bearing 16 depending from the base plate 6, a cup 17 being detachably applied to such shaft, as by threads 18, beneath said sleeve bearing, and a thrust bearing 19 being loosely applied to the shaft *c* above the bottom member 6, an inverted cup 21 being detachably applied to the shaft *c* between the thrust bearing 19 and the disc 12, the disc 12 and cup 21 being held fast to the shaft *c* by a key 20, and the entire assemblage of the shaft group of elements recited being conserved, by a nut 23 applied to threads 22 at the upper end of the shaft *c*.

In Figure 1 the device is shown as connected, for service, with a faucet F, such as a sink or lavatory faucet for delivering water for domestic purposes, and having the usual handle member 24 and spout 25, over which spout the flexible tubing 14 is passed, at one end thereof, which end portion is provided with a slip-joint coupling 26.

When the water is turned on at the faucet F, the stream thereof will be projected against the buckets 13 and cause rotation thereof and of the shaft *c*, the waste water passing out through the discharge opening 15 into the sink or lavatory or tub or otherwise disposed of. The buckets 13 and disc 12 as they rotate will turn the shaft *c* and in turn operate the beater or stirrer or mixer or agitator wires 3, so that ingredients or materials in the container A will be suitably acted upon, whether they be the ingredients of a salad dressing, an egg or egg mixture, or whatever the fluid or semi-fluid contents may be. Further ingredients may be added from time to time by pouring the same through the spout 7 and down through the conduit or tube 11 and into the container. Thus, in making salad dressing, oil, vinegar and other ingredients may be successively introduced at the proper stages of the mixing, beating, whipping or agitating action. The cups 17 and 21 will serve effectively to prevent escape of the contents by leakage upwardly of the shaft *c*. The head or cap B will readily be detached from the receptacle A, by the threads *a* and 5 so that the receptacle A may be filled, or its contents decanted or discharged, and so that the beater or agitator D and the interior of the receptacle A may be cleaned.

By employing a number of receptacles A, the same may be utilized for the agitating or stirring of their contents, successively, being successively prepared to that end, while the next preceding receptacle in each instance is in use in conjunction with the head B and attendant features. In this way exceedingly speedy operation for the stirring, mixing, beating or agitating of many successive batches or charges of material may be carried on conveniently and effectively.

The device is extremely simple in construction and not likely to get out of repair or order, and its use may be carried on conveniently and effectively for long periods of time at low cost. It will be readily understood that the particular disposition or arrangement or nature of the motor C is not of the essence of the invention, and that many variations and changes and modifications may be made, in departure from the particular construction and showing of the drawing and foregoing description, without departing from the true spirit of the invention.

Having thus disclosed my invention, I claim and desire to secure by Letters Patent:

1. A device of the class described including a receptacle, and a detachable cover unit therefor, said cover unit comprising a chamber, a motor element mounted within the chamber, a beater element adapted to be arranged within the receptacle and operated by said motor element, and means extending through a part of said chamber and establishing communication between the interior of the receptacle and the outside.

2. A device of the class described including a receptacle, and a detachable cover unit therefor, said cover unit comprising a chamber, a motor element mounted within the chamber, a beater element adapted to be arranged within the receptacle and operated by said motor element, and a conduit extending through a portion of said chamber and establishing communication between the outside of the cover and the interior of the receptacle.

3. A device of the class described including a receptacle, and a detachable cover unit therefor, said cover unit comprising a chamber, a motor element mounted within the chamber, a beater element adapted to be arranged within the receptacle and operated by said motor element, a conduit comprising a funnel on the exterior of the cover unit and an interior tubular portion in communication therewith, said tubular portion passing through a portion of said chamber of the cover unit.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

ROY W. POOR.

Witnesses:
J. J. MATHE,
J. C. BROWN.