June 17, 1930. C. ANDREWS, JR 1,764,597

BEATER

Filed March 9, 1928

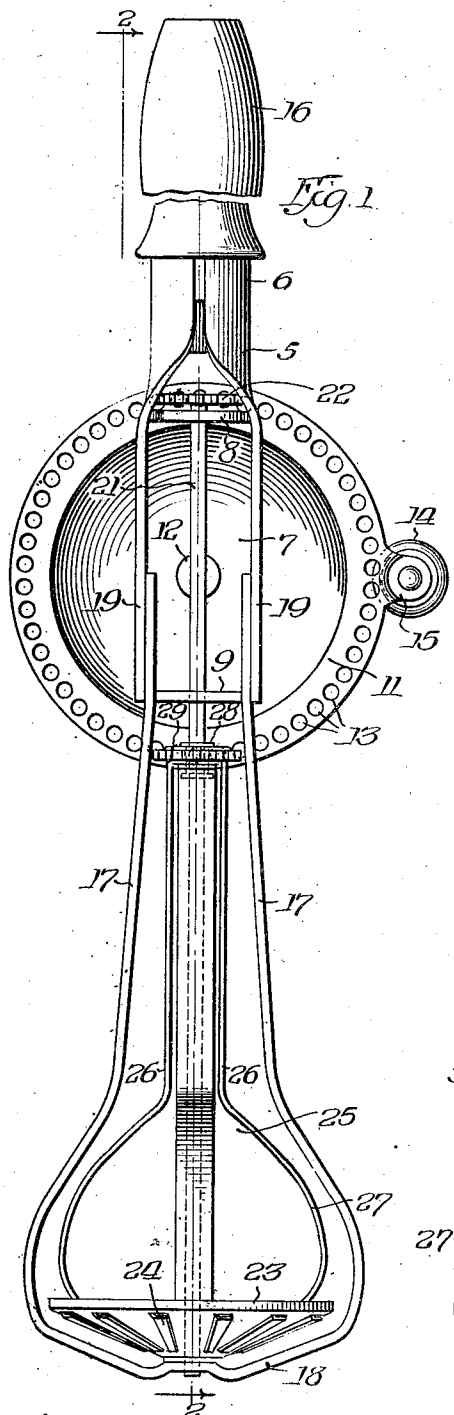


Fig. 1

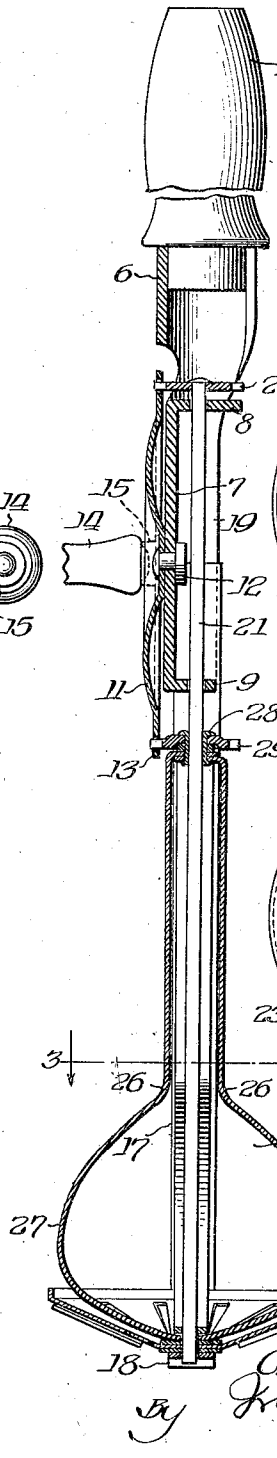


Fig. 2

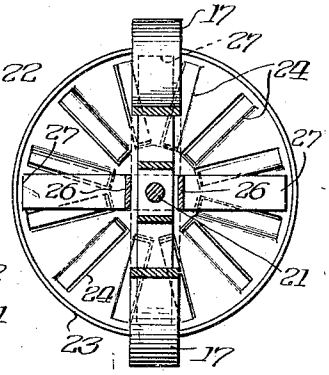


Fig. 3

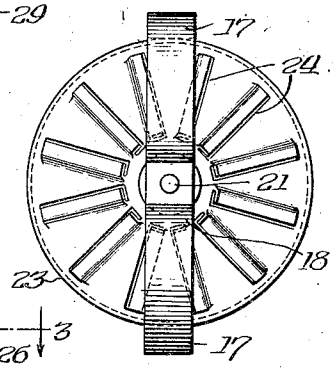


Fig. 4

Witness:
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UNITED STATES PATENT OFFICE

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BEATER

Application filed March 9, 1928. Serial No. 260,317.

This invention relates to devices for aerating eggs, cream, batter and other materials.

Devices of this type have been used heretofore but they have usually been provided with a single rotary member for agitating the material or a pair of oppositely rotatable similar members. In the later case the members did not cooperate so that one supplemented the other whereby the first delivered the material to the second and the second beat the air into the material.

It is accordingly the primary object of this invention to provide a beater of the above type having two rotatable members, one of which delivers the material to the other and the other beats air into the material delivered thereto, the two members cooperating together in an efficient manner.

It is another object of this invention to provide a simple beater which may be economically manufactured and conveniently operated.

It is a further object of this invention to provide a beater having an agitator for throwing the material upwardly and a dasher for receiving the material and cooperating with the agitator for aerating such material.

Other and further objects of this invention will be apparent as the same becomes better understood from an examination of the specification and claims in connection with the accompanying drawings, wherein:

Fig. 1 is an elevational view of a beater embodying this invention.

Fig. 2 is a section taken at the line 2—2 of Fig. 1.

Fig. 3 is a section taken at the line 3—3 of Fig. 2.

Fig. 4 is a bottom plan view of the beater.

Referring to the drawings more particularly, numeral 5 represents a frame formed by striking a flat sheet of metal to provide an upper cylindrical section 6 and a lower box-like section 7 in alignment therewith. One of the longitudinal sides of section 7 is left open. The upper and lower sides are formed with lugs 8 and 9 respectively struck from the plate of which the frame is formed. The driving wheel 11 is mounted on a pin 12 journaled centrally in the frame section 7. The wheel 11 is provided with circumferential apertures 13 for driving spur gears connected to the respective operating parts as will be hereinafter explained. A suitable handle 14 is provided on a peripheral extension 15 of the wheel 11 for manually operating the same.

A handle 16 is fitted in the upper end of the section 6 of the frame 5 for manually supporting the beater with one hand while rotating the wheel 11 by means of the handle 14 with the other hand.

A strip 17 is bent intermediate of its ends to form a bight 18 and said ends are secured by spot-welding or other suitable means to the inner side of the longitudinal walls 19 of the frame section 7 whereby said strip acts as an extension of the frame. A spindle 21 is journaled in the lugs 8 and 9 and also in the strip 17 at the end of the bight 18. A spur gear 22 is rigidly secured at the upper end of the spindle 21 above the lug 8 and is adapted to mesh in the apertures 13 of the driving wheel 11 whereby the spindle may be driven as said wheel is rotated. A cup shaped agitator 23 is mounted on the lower end of the spindle 21 within the bight 18 with its open end upward and is adapted to rest on the strip 17 at the end of said bight to take up the downward thrust. The agitator 23 is of sheet metal and is provided with downwardly struck angularly spaced blades 24 which, although they extend radially on the agitator, are designed to direct material upwardly and axially thereof.

Above the agitator 23 there is mounted a dasher generally designated as 25 and formed of a pair of strips 26 each of which is bent intermediate of its ends to form bights 27 and said ends brought together beneath a spur gear 29 by a flanged bushing 28 therefor. The gear 29 meshes with the apertures 13 in the same manner as the gear 22 but at a diametrically opposed position with respect thereto whereby the dasher is driven oppositely to the agitator.

These bights 27 form four angularly spaced blades, the broad surfaces of which are in the plane of rotation so that the nar-

row edge acts to cut the material delivered upwardly by the agitator 23. These blades extend into the upper or open end of the agitator in close proximity to the blades thereof whereby said agitator may more efficiently cooperate with the dasher.

By means of the foregoing arrangement providing for cooperation between the agitator 23 and dasher 27, a great efficiency is obtained in aerating eggs, cream, batter and other materials much less time being necessary without any greater effort on the part of the operator than obtained in the use of former beaters.

It will also be apparent that the aforedescribed beater is simple and economical of manufacture and convenient of operation.

The operation of the beater and other advantages thereof will be apparent without further description.

I am aware that many details may be varied without departing from the principles of this invention and I therefore do not wish to be limited to the details described.

I claim:

1. In a device of the class described, a frame, a rotatable member carried thereby and having means thereon for directing the material to be beaten in an axial direction and a second rotatable member carried by said frame and being provided with blades having their broad faces substantially in the plane of rotation, said second member being arranged to revolve in close proximity to said first rotatable member to receive the material delivered by said first mentioned rotatable member and disperse the material laterally to aerate the same.

2. In a device of the class described, the combination of a frame, a cup-shaped agitator rotatably carried thereby, said agitator having means thereon to direct a fluid axially thereof and a dasher rotatably carried by the frame and extending into the open end of said agitator, said dasher having portions thereof arranged to receive the fluid from said agitator and direct the fluid toward said agitator to aerate the fluid.

In witness of the foregoing I affix my signature.

CHARLES ANDREWS, JR.