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K. WEIDLICH

1,454,199

AGITATOR

Filed Feb. 3, 1922

Fig. 1.

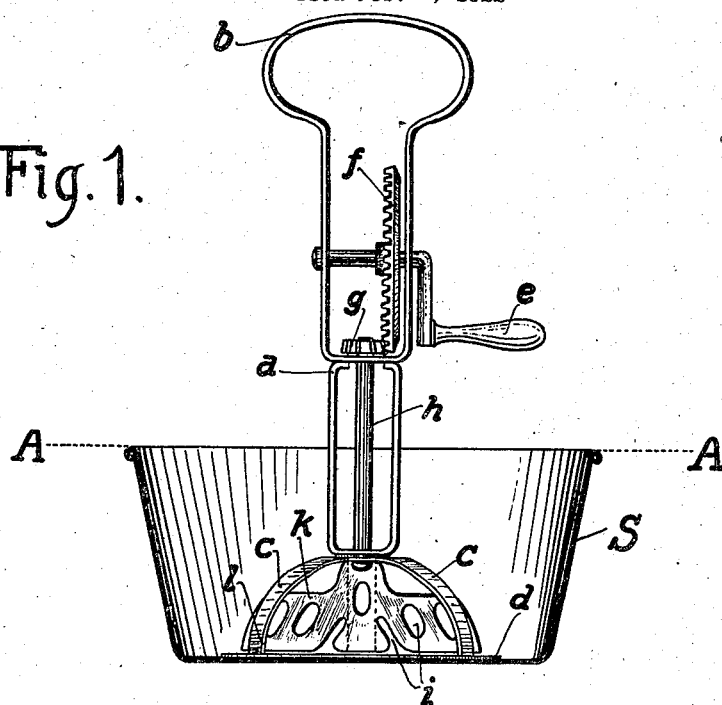
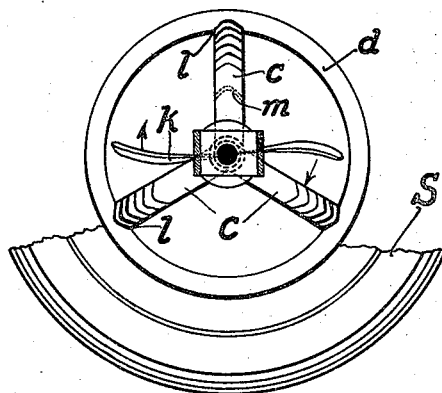


Fig. 2



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UNITED STATES PATENT OFFICE.

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AGITATOR.

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To all whom it may concern:

Be it known that I, KUNZ WEIDLICH, a citizen of Germany, residing at Nurnberg, Germany, have invented certain new and useful Improvements in Agitators (for which I have filed an application in Germany, on December 9, 1920), of which the following is a specification.

My invention relates to agitators, and more particularly to the kind provided with gearing. In the agitators at present in use the stirring blade is rotatably arranged between the feet of a stand which can be placed on the bottom of the receptacle containing the mass to be stirred. In these devices the shaft of the stirring blade is not only supported in a bearing at the centre or at the top end, but also in a further bearing arranged in a base plate or cross tie at the bottom of the stand. Owing to this arrangement the stirring vane rotates at some distance from the bottom of the vessel so that it is impossible to stir small quantities of a mass such as for instance a single egg yolk. I overcome this drawback by so arranging the stirring vane that it is freely supported between the feet of the stand so that the lower edge of the vane, which is preferably S-shaped, extends almost down to the bottom of the vessel.

In the drawings affixed to this specification and forming part thereof a device embodying my invention is illustrated diagrammatically by way of example. In the drawings—

Fig. 1 is an elevation, and

Fig. 2 a horizontal section on line A—A in Fig. 1.

Referring to the drawings, *a* is a frame preferably formed by sheet metal strips. A handle *b* is secured to the upper end of the frame and a plurality of feet *c*, for instance three, which may be curved and arranged radially, are secured to the lower end. The feet *c* are connected by a flat ring *d*. Motion is imparted to the shaft *h* of the stirring vane *k* by means of the well known bevel gear *f, g* provided with a crank *e*. The S-shaped convex stirring vane *k* is provided with openings *i*. The outer edges of the vane *k* extend in parallel with the inner edges of the feet *c* which, as shown in dotted lines at *m* (Fig. 2) may be V-shaped in cross section.

The vane is freely supported between the feet *c* and its edges move close to and past the edges *l* of the feet. This V-shaped cross section of the feet prevents the substance to be stirred from spurting up from the receptacle *S*, inasmuch as it is hurled outwards by centrifugal action and meeting no resistance has no tendency to spurt up. Experience has shown that spurting up occurs whenever a liquid or plastic substance encounters a solid resistance. Spurting up of the substance which may be hurled against the feet *c* is prevented by the V-shaped cross section of the feet, the radius of the curvature being smaller than that of the path of the stirring vane. The particles hurled against the edges *l* of the feet *c* are caught in the cavities formed in the feet and are deflected toward the shaft to be hurled once more outwards by the stirring vane. Thus the novel device not only exerts a hurling but also a beating action, and the masses treated therewith are therefore thoroughly stirred. It may be actuated by hand or by power and can be used for beating up or homogenizing thin fluid and viscous liquids or plastic masses, particularly for making mayonnaise or whisked eggs.

I wish to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

I claim:

1. In a device of the kind described in combination, a stand, a plurality of feet spaced apart at the lower end of said stand, a shaft extending vertically in said stand down to the feet and a stirring vane in the form of a vertically placed piece of sheet material freely supported at the lower end of said shaft with its bottom edge almost at a level with the lower ends of said feet.

2. In a device of the kind described in combination, a stand, a plurality of feet spaced apart at the lower end of said stand, a shaft extending vertically in said stand down to the feet and a stirring vane in the form of a vertically placed piece of sheet material freely supported at the lower end of said shaft with its bottom edge almost at a level with the lower ends of said feet, the feet having a V-shaped cross-section.

3. In a device of the kind described in combination, a stand, a plurality of feet spaced apart at the lower end of said stand, a shaft extending vertically in said stand
5 down to the feet and a stirring vane in the form of a vertically placed piece of sheet material freely supported at the lower end of said shaft with its bottom edge almost at a level with the lower ends of said feet, the feet having a V-shaped cross-section of 10 smaller radius than the circle of rotation of the stirring vane.

In testimony whereof I affix my signature.

KUNZ WEIDLICH.

Witnesses:

ANDREW GILCHRIST,
ALEXIS PHILIPPOFF.