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MIXING DEVICE

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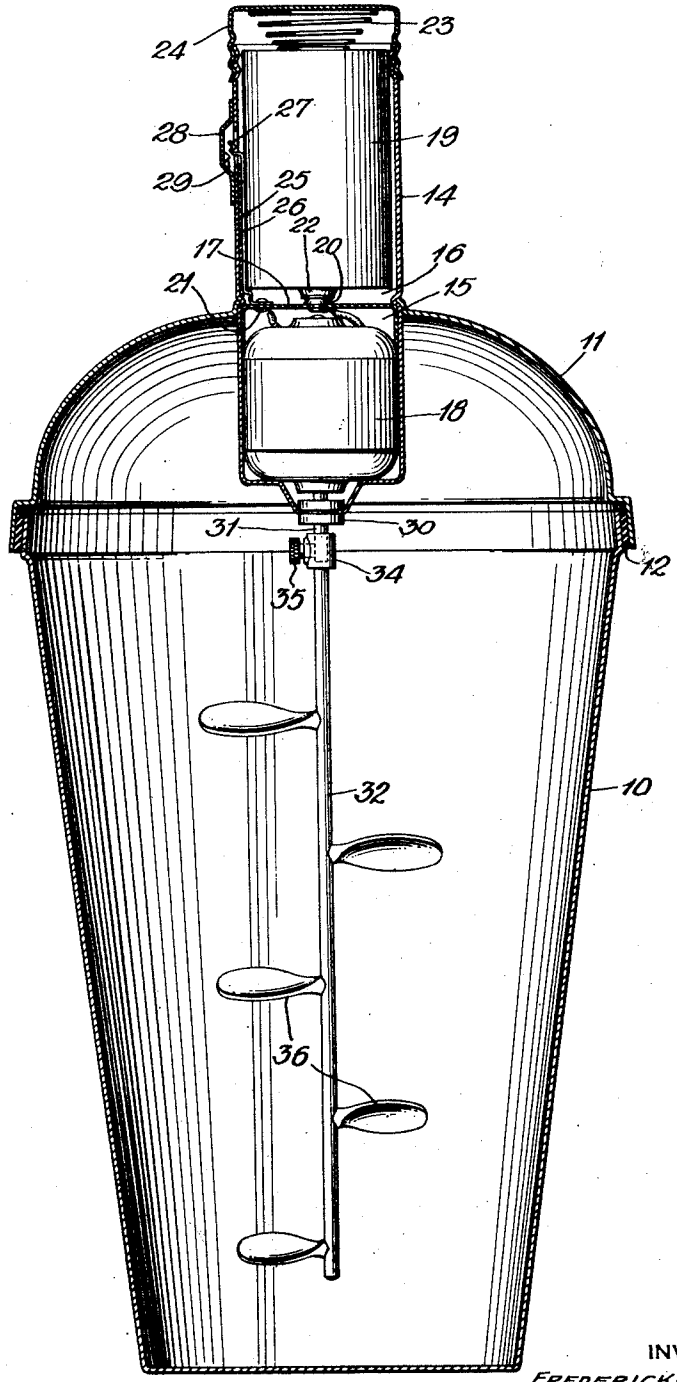

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MIXING DEVICE

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2 Claims. (Cl. 259—122)

The present invention relates to mixing devices such as cocktail shakers, malted milk mixers, etc., and has for an object to provide an improved device of this character equipped with power means for operating the same.

I am aware that it is not new to provide a mixer with a power driven agitator but heretofore the agitators have been driven by energy supplied from an external source and it is an object of the present invention to provide a self-contained power driven mixer adapted to use an energy storing element which is removable and replaceable with another when its energy has been exhausted.

A more specific object of the invention is to provide a mixing device with a motor and battery installed therein, together with means for detachably securing an agitator to the motor, the battery being removable and replaceable with a fresh one whenever necessary and the agitator being removable for cleaning purposes whenever desired or to be replaced with an agitator of different form.

A further object of the invention is to provide a device of the character described above in which the motor and battery are enclosed in a separate casing so that they are protected from contact with the contents of the mixer receptacle.

Other objects and advantages of my invention will appear in the following description of a preferred embodiment and thereafter the novelty and scope of the invention will be pointed out in the claims.

The accompanying drawing is a view in vertical section through a mixer embodying my invention.

A receptacle is shown at 10 which is in the form of a cup and it is provided with a domed cap 11 which closes the top of the receptacle with a close fit. To this end a gasket 12 may be supplied either on the rim of the receptacle 10 or within the rim of the cap 11 to prevent leakage when the agitator is operated.

The power plant for operating the agitator is contained in a tubular casing 14 which projects through the cap 11. This casing is divided into two chambers 15 and 16 by means of a diaphragm 17. The lower chamber 15 contains a motor 18 and the upper chambers 16 a dry battery 19. The diaphragm 17 is made of electrical insulation and bears a contact button 20 which constitutes one terminal of the motor 18. The other terminal of the motor is connected to a rivet 21 in the diaphragm 17. The battery is provided with a contact piece 22 forming one pole thereof which is normally pressed against the button 20 by a spring 23 within a cap 24 screwed to the top of the casing 14. The spring 23 contacts with the opposite pole of the battery thereby grounding the battery to the casing 14. A lead 25 which is insulated from the casing 14 by insulation material 26 runs from the rivet 21 to an opening in the side of the casing where it terminates in a spring contact member 27. Mounted to slide on the side of the casing 14 is a switch button 28 provided with a contact member 29 which engages and grounds the member 27 when the button is slid upwardly, thereby completing the circuit to the motor 18.

The bottom of the casing 14 is fitted with a bearing 30 through which passes the armature shaft 31 of the motor 18. An agitator 32 is provided at its upper end with a sleeve portion 34 which may be fitted on the end of the shaft 31 and be secured thereto by a set screw 35. The agitator is provided with blades 36 which may be of any suitable form.

In operation, the ingredients to be mixed are placed in the receptacle 10 and after a suitable agitator 32 has been secured to the shaft 31 the cap 11 is fitted upon the top of the receptacle, the operator then slides the button 28 upwardly to close the circuit of the motor 18 and thereby cause the agitator to rotate and mix the ingredients in the receptacle 10.

It will be observed that I have provided a very simple structure in which the motor that drives the agitator is protected from contact with the ingredients of the receptacle. The device is self-contained and the mixing operation entails no physical effort. Since the motor is driven by a battery it is not necessary to connect the device with an electric service line and the mixer may, therefore, be used in any locality regardless of the presence or absence of electric power lines. The battery 19 is removable and replaceable with another at any time. The device is completely sanitary because the motor is completely housed within the casing 14 and the agitator may be removed for cleaning purposes whenever desired.

While I have described a preferred embodiment I wish it to be understood that this is to be taken as illustrative and not limitative of my invention and that I reserve the right to make various changes in form, construction and arrangement of parts without departing from the spirit and scope of the invention as set forth in the following claims.

I claim:

1. A device of the character described com-

prising a receptacle provided with a removable domed cover, a power plant, a casing formed in the cover and adapted to receive said power plant and to isolate the power plant from the contents of the receptacle, an agitator for agitating the contents of the receptacle, and a coupling for operatively connecting the agitator to the power plant, said power plant comprising a motor element, a removable energy supplying element, and manually controllable means for operatively connecting said motor and said element, the motor being disposed within the bounds of the cover dome.

2. A device of the character described comprising a receptacle provided with a removable dome-shaped cover, a tubular casing projecting through the cover, said casing having an outwardly projecting portion adapted to serve as a handle for the cover and an inwardly projecting portion within the bounds of the cover dome, a motor mounted in the latter portion of the casing, an electric battery removably mounted in the handle portion of the casing, manual control means for operatively connecting the motor and battery, and an agitator arranged to be driven by the motor and depending within the receptacle when the cover is applied to the receptacle.

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