J. L. HARR.

BEATING AND MIXING MACHINE.

APPLICATION FILED JUNE 16, 1913.

1,090,148. Patented Mar. 17, 1914.

Fig. 1

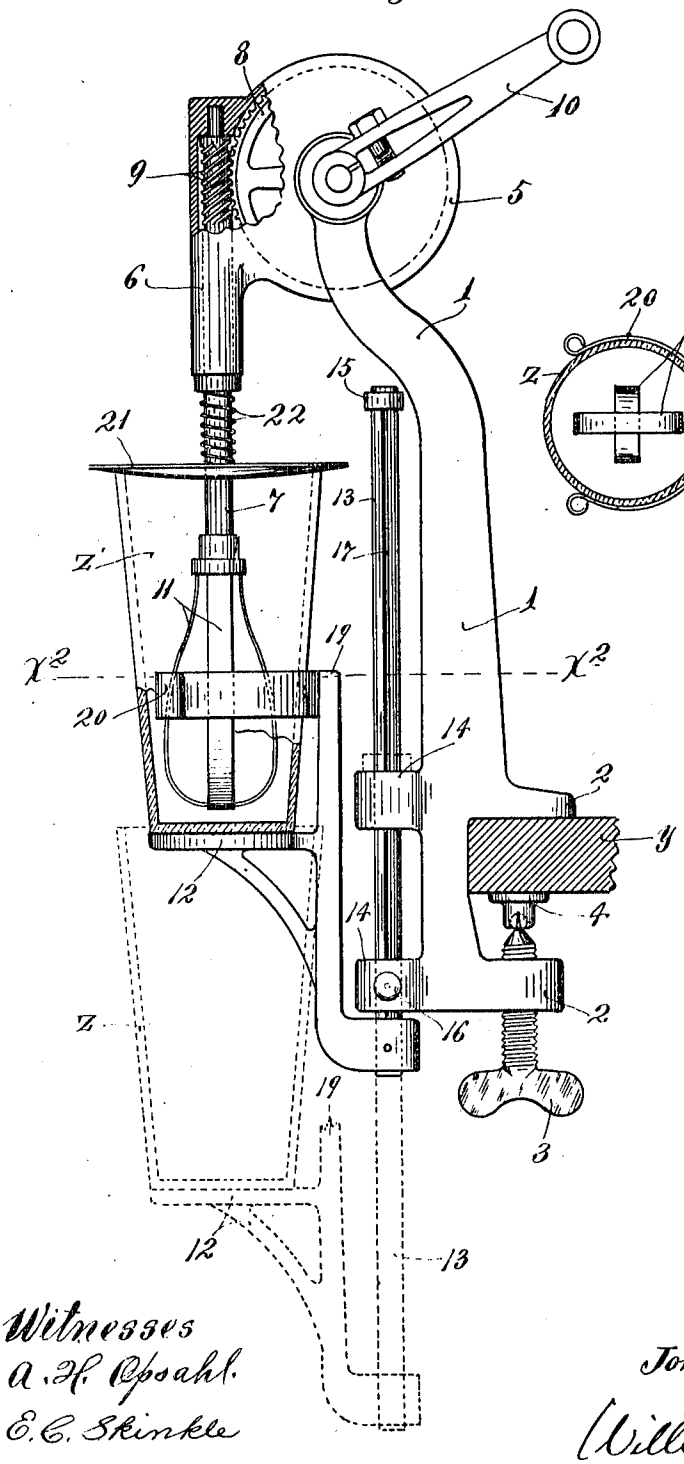


Fig. 2

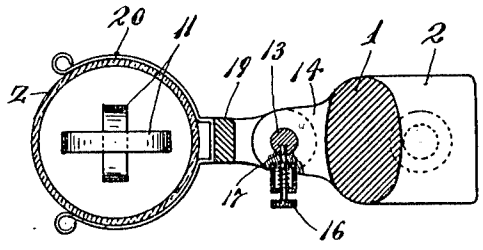
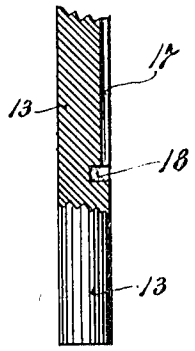


Fig. 3



Witnesses
A. H. Opahl.
E. C. Skinkle

Inventor.
John L. Harr.
By his Attorneys
Williamson & Merchant

UNITED STATES PATENT OFFICE.

JOHN L. HARR, OF NORA SPRINGS, IOWA.

BEATING AND MIXING MACHINE.

1,090,148. Specification of Letters Patent. Patented Mar. 17, 1914.

Application filed June 16, 1913. Serial No. 773,804.

To all whom it may concern:

Be it known that I, JOHN L. HARR, a citizen of the United States, residing at Nora Springs, in the county of Floyd and State of Iowa, have invented certain new and useful Improvements in Beating and Mixing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide an improved mixing and beating machine especially adapted for use in mixing drinks and, to this end, generally stated, it consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings: Figure 1 is a side elevation of the improved device, some parts being broken away, some of the exposed parts being shown in section, and some parts being shown in different positions by means of dotted lines; Fig. 2 is a transverse section, taken on the line x^2 x^2 of Fig. 1; and Fig. 3 is a detail view in vertical section, showing a portion of the plunger of the glass supporting bracket.

The numeral 1 indicates a pedestal having, at its lower end portion, a pair of vertically spaced, laterally projecting lugs 2 arranged to embrace a table top Y. A clamping screw 3 has screw threaded engagement with the lower lug 2, and is provided with a swivel head 4, between which and the upper lug 2 the table top Y is clamped. Secured to the upper end of the pedestal 1 is an annular gear casing 5 having a peripheral extension 6 in which the upper end of an upright shaft 7 is journaled. A multiplying drive is provided for rotating the shaft 7 and comprises a worm wheel 8 journaled in the gear casing 5 and a worm 9 meshing therewith. This worm 9 is keyed to the upper end of the shaft 7 within the gear casing extension 6. To one of the projecting trunnions of the worm wheel 8 is secured a hand crank 10 provided for driving said worm wheel 8. To the lower end of the shaft 7 is secured a beater comprising a pair of depending U-shaped beater blades 11, extending at right angles to each other and having different transverse spread, so that the said beater blades will travel in different circles, under the rotation of the shaft 7, for the purpose of increasing the efficiency of the beater.

Located directly under the shaft 7 is a glass supporting bracket 12 secured to the lower end of a vertically movable plunger 13, slidably mounted in a pair of vertically spaced bearing lugs 14 on the pedestal 1. To the upper end of the plunger 13 is secured a collar 15 engageable with the upper lug 14, for limiting the downward sliding movement of the said plunger, to support the bracket 12 in its lowermost position. A spring pressed lock pin 16, mounted in the lower bearing lug 14, works in a longitudinally extended groove 17 formed in the plunger 13. At the lower end of the groove 17 is formed a depression 18, deeper than the groove 17, for receiving the lock pin 16 and thereby locking the glass supporting bracket 12 in its uppermost position. The vertical member of the glass supporting bracket 12 is extended upward, to afford a support 19 for a horizontally extended C-shaped spring clamp 20, arranged to embrace and yieldingly hold a glass Z on the supporting bracket 12. Mounted for vertical sliding movement on the shaft 7 is a horizontally extended disk-like cover 21. A coiled spring 22 on the shaft 7 is compressed between the gear casing extension 6 and the cover 21 and yieldingly presses the said cover onto the glass Z, when the same is in its uppermost position, as shown by full lines in the drawings.

The operation of the device may be briefly stated as follows: When the bracket 12 is in its lowermost position, as indicated by dotted lines in Fig. 1, the glass Z may be applied thereto or removed therefrom, at will, by springing the clamp 20. The lock pin 16 working in the groove 17 of the plunger 13 holds the bracket 12 against lateral swinging movement. When the bracket 12 is moved upward, the glass Z is carried into a position to receive the beater 11. At the limit of this upward movement of the bracket 12, the spring pressed lock pin 16 automatically enters the depression 18 and thereby locks said bracket in its uppermost position. During the upward movement of the bracket 12, the upper edge of the glass Z engages the cover 21, which normally rests on the connection between the beater 11 and the shaft 7, and lifts the same

against the tension of the spring 22. The spring 22 yieldingly holds the cover 21 in tight engagement with the upper edge of the glass Z and thereby prevents the contents of the glass from spilling, under the action of the beater 11 working therein. As the blades of the beater 11 are arranged to travel in different circles, the contents of the glass Z will be thoroughly and quickly mixed.

The term "glass" is herein used in a broad sense, to cover any kind of a receptacle.

The above described device has, in actual practice, been found highly efficient for the purpose had in view.

What I claim is:

1. The combination with a pedestal, of a shaft journaled in bearings carried by said pedestal, means for driving said shaft, a beater on said shaft, a glass supporting bracket mounted on said pedestal, for movement toward and from said beater, means for locking said supporting bracket in such a position that said beater extends within a glass carried by said supporting bracket, and a yieldingly closed cover for said glass mounted on said shaft.

2. The combination with a pedestal, of a shaft journaled in bearings carried by said pedestal, means for driving said shaft, a beater on said shaft, a glass supporting bracket having a vertically movable plunger mounted in bearings on said pedestal, means for locking said plunger in such a position that said beater extends within a glass carried by said supporting bracket, and a yieldingly closed cover for said glass mounted on said shaft.

3. The combination with a pedestal, of a gear casing secured to said pedestal, a shaft journaled in bearings on said gear casing, means for driving said shaft including a worm and worm wheel mounted in said gear casing, a beater on said shaft, a glass supporting bracket having a vertically movable plunger mounted in bearings on said pedestal, means for holding said plunger against rotation and for locking the same in such a position that said beater extends within a glass on said supporting bracket, and a yieldingly closed cover for said glass mounted on said shaft.

4. The combination with a pedestal, of a gear casing mounted on said pedestal, a shaft journaled in bearings on said gear casing, means for driving said shaft including a worm and worm wheel mounted in said gear casing, a beater on said shaft, a glass supporting bracket having a vertically movable plunger mounted in bearings on said pedestal, means for locking said plunger in such a position that said beater extends within a glass carried by said supporting bracket, a spring clamp for holding said glass in position on said supporting bracket, and a yieldingly closed cover for said glass mounted on said shaft.

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

JOHN L. HARR.

Witnesses:

A. L. HEINRICH,

E. WAYNE HARR.