(No Model.)

W. R. KAHLENBERG.

LIQUID MIXER.

No. 419,200. Patented Jan. 14, 1890.

Fig. 2.

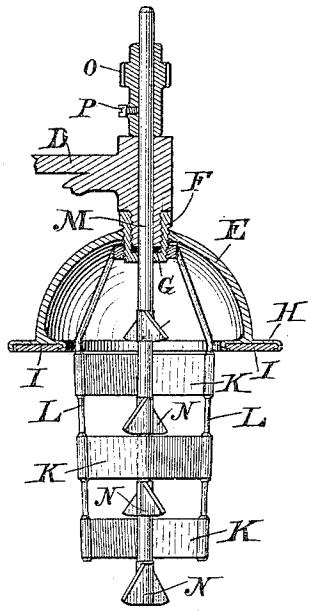
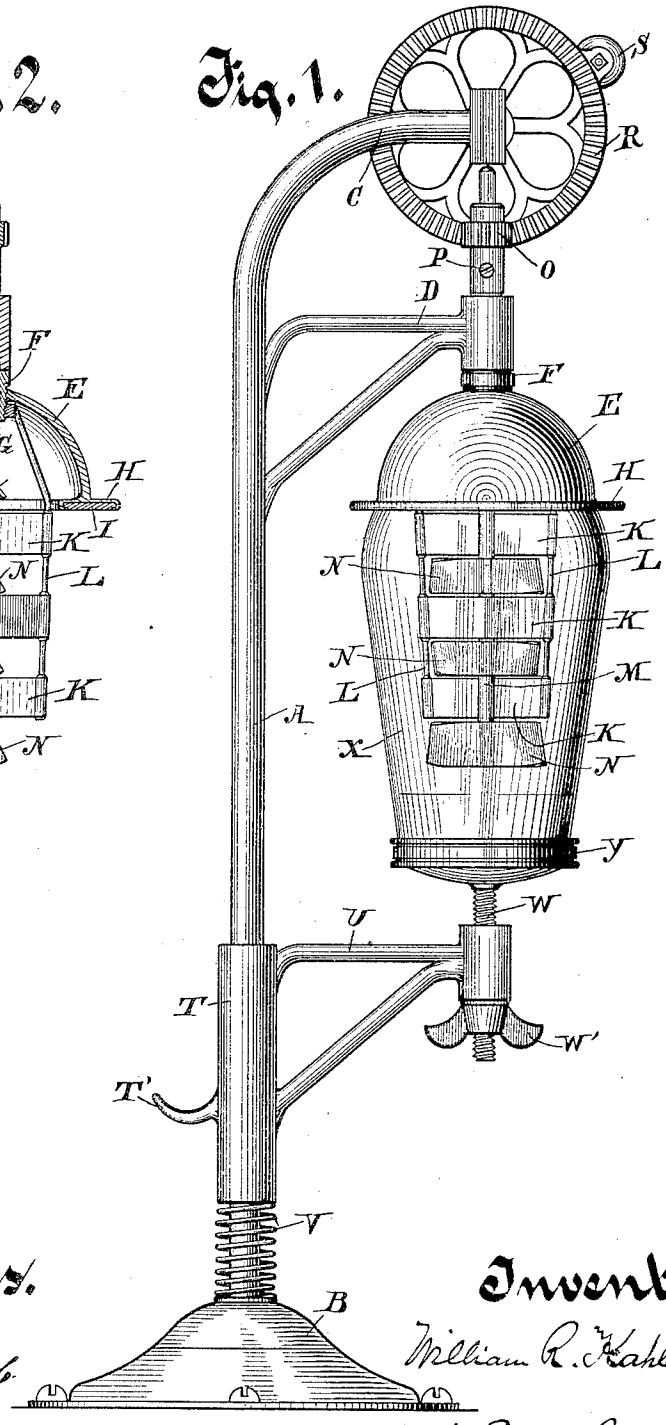


Fig. 1.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM R. KAHLENBERG, OF TWO RIVERS, WISCONSIN.

LIQUID-MIXER.

SPECIFICATION forming part of Letters Patent No. 419,200, dated January 14, 1890.

Application filed September 4, 1889. Serial No. 322,954. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. KAHLENBERG, of Two Rivers, in the county of Manitowoc and State of Wisconsin, have invented new and useful Improvements in Liquid-Mixers; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My improved mixer is especially adapted for mixing such drinks as lemonade, milk-shake, &c.

In the drawings, Figure 1 is an elevation of the complete device. Fig. 2 is a central vertical section of the principal part of the device, being that part of the mechanism which is directly involved in the mixing process.

A is a standard supported rigidly in the base B, which base is preferably secured to a table or bar or other convenient permanent structure, though the base may be made sufficiently large and heavy to support the mechanism firmly without being secured to a permanent structure. The top of the standard A is turned over, forming an overhanging arm C, and the standard is also provided with a rigid arm D, projecting therefrom immediately below and coextensive with the overhanging arm C. A cap E is attached centrally to the arm D by a screw-threaded bushing F, secured rigidly and water-tight to the cap, which bushing turns on the arm D, whereby the cap E is suspended from the arm D. A ring-packing G is inserted in the bushing F, whereby the joint between the arm and the cap is made water-tight. The edge of the cap E terminates in a horizontally-projecting flange H, on the lower face of which is secured a rubber ring I, adapted to receive the top of a tumbler or other vessel against it and form a water-tight joint therewith. Several bars or plates K K K at a distance apart are secured together and supported rigidly in position by the small rods L L, which rods at their upper ends are fixedly attached to a ring or nut which turns by a screw-thread on the bushing F. These bars K K K are of such length and are so located with reference to each other and to the cap E as to enter and occupy a position within a tumbler or other similar vessel when the tumbler has its top edge against the rubber ring I. The plates K K, secured together and held in position by the rods L L, form a slotted wall or fixed slotted partition in the liquid in which it is inserted. A vertical spindle M passes through the arm D and bushing F and through central bearings therefor in the bars K K, and is provided with laterally-extending wings N N, one of which in the construction shown in the drawings is above the top bars K, another is below the lower bar K, and others are in the slots between the bars. These wings are preferably so curved and twisted that as the spindle is rotated in one direction the water will, by the action of one pair of wings, be thrown upwardly and by the next succeeding pair of wings will be thrown downwardly, the other wings being alternately curved and twisted reversely in the screw form just described.

The spindle M is provided with a pinion O, which is secured to the spindle adjustably by means of the set-screw P, turning through the hub of the pinion against the spindle. A crown cog-wheel R, journaled on the overhanging arm C, meshes with the pinion O, and is provided with a crank-pin or handle S, whereby it may be rotated.

The spindle M is supported in position, preferably, by the hub of the pinion O, resting on the arm D. A sleeve T, having free movement on the standard A, is provided with an arm U and is supported yieldingly above the base B by the coiled spring V around the standard A between the lower end of the sleeve and the base B. A small disk Y is supported adjustably on the arm U by means of the screw-threaded leg W, rigid to the disk, which turns by its screw-thread into the arm U and is locked in position by the thumb-nut W′. The disk Y is of such size as to receive and support properly thereon a tumbler X or other receptacle for containing the liquid to be mixed. The flange H is of such width and the face of the rubber packing I is of such extent as to be adapted to receive thereagainst vessels which vary in size, and the disk Y is of sufficiently large size to support vessels of different diameters, and the disk may be adjusted up or down by means of the screw-

threaded leg W, whereby the device can be readily adapted to receive liquid-holding vessels of different sizes. A small outwardly-curved arm T′, integral with the sleeve T, is adapted as a rest for the fingers of the hand, while the thumb rests on the arm U, whereby the arm U and sleeve T may be pressed down and swung around to or from beneath the tumbler X in securing the tumbler in the device or removing it therefrom.

It will be understood that in using the device when the liquid has been put in the tumbler the tumbler is placed around the plates K K and up against the flange H. The disk Y is then swung underneath the tumbler and is held up to it, holding the tumbler up against the cover by the action of the spring V, and then the wings N N are revolved by rotating the wheel R.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a liquid-mixer, the combination, with a fixed standard A, rigid arms C and D, and movable sleeve T, carrying rigid arm U and disk Y, of a cap E, secured removably to arm D, bars K K, secured by rods L L removably to the arm D, spindle M, carrying wings N N, and gear R O, for rotating the spindle, substantially as described.

2. In a liquid-mixer, a fixed standard A, having a rigid arm D, and a cap E, suspended removably on the arm D by a bushing F, in combination with a revoluble spindle M, passing through the cap, bushing, and arm D, and a packing G around the spindle within the bushing, whereby a water-tight joint is formed around the spindle, substantially as described.

3. In a liquid-mixer, a standard A, having an arm D, a cap E, secured removably to the arm D, rods L L, carrying bars K K and removably secured to the arm D, and a revoluble spindle M, carrying wings N N, in combination with an arm U, rigid on a sleeve movable on standard A, and a receptacle X, supported on the arm U and held up against the cap E around the bars K K and wings N N, substantially as described.

4. In a liquid-mixer, a standard A, having a rigid arm D, a cap E, secured on arm D, and bars K K, secured by rods L L to the arm D, in combination with a revoluble spindle M, wings N N, affixed to and projecting laterally from the spindle M at a distance apart and alternating with the bars K K, one wing being curved and twisted in one direction and the next wing being curved and twisted in the reverse direction, and a receptacle X, held removably against the edge of cap E about the bars K K and wings N N, substantially as described.

5. In a liquid-mixer, a standard A, a movable sleeve T thereon, an arm U, and a spring V, in combination with a disk Y, provided with a screw-threaded leg W and a thumb-nut W′, substantially as described.

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

WILLIAM R. KAHLENBERG.

Witnesses:
ERNST SPRENGER,
E. RIDGWAY.