

(No Model.)

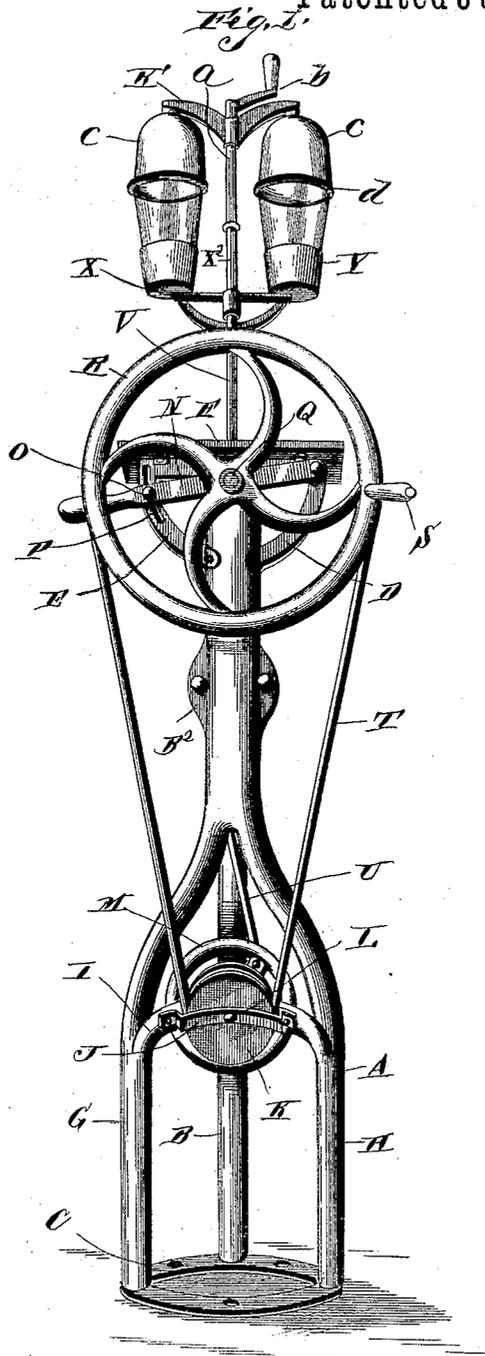
2 Sheets—Sheet 1.

F. H. SHEPHERD & J. W. MEYER.

MACHINE FOR MIXING BEVERAGES.

No. 405,683.

Patented June 18, 1889.



Witnesses  
*C. B. Taylor,*  
*R. K. Bishop.*

Inventors  
*Francis H. Shepherd,*  
*John W. Meyer,*  
By their Attorneys  
*C. Snowdon*

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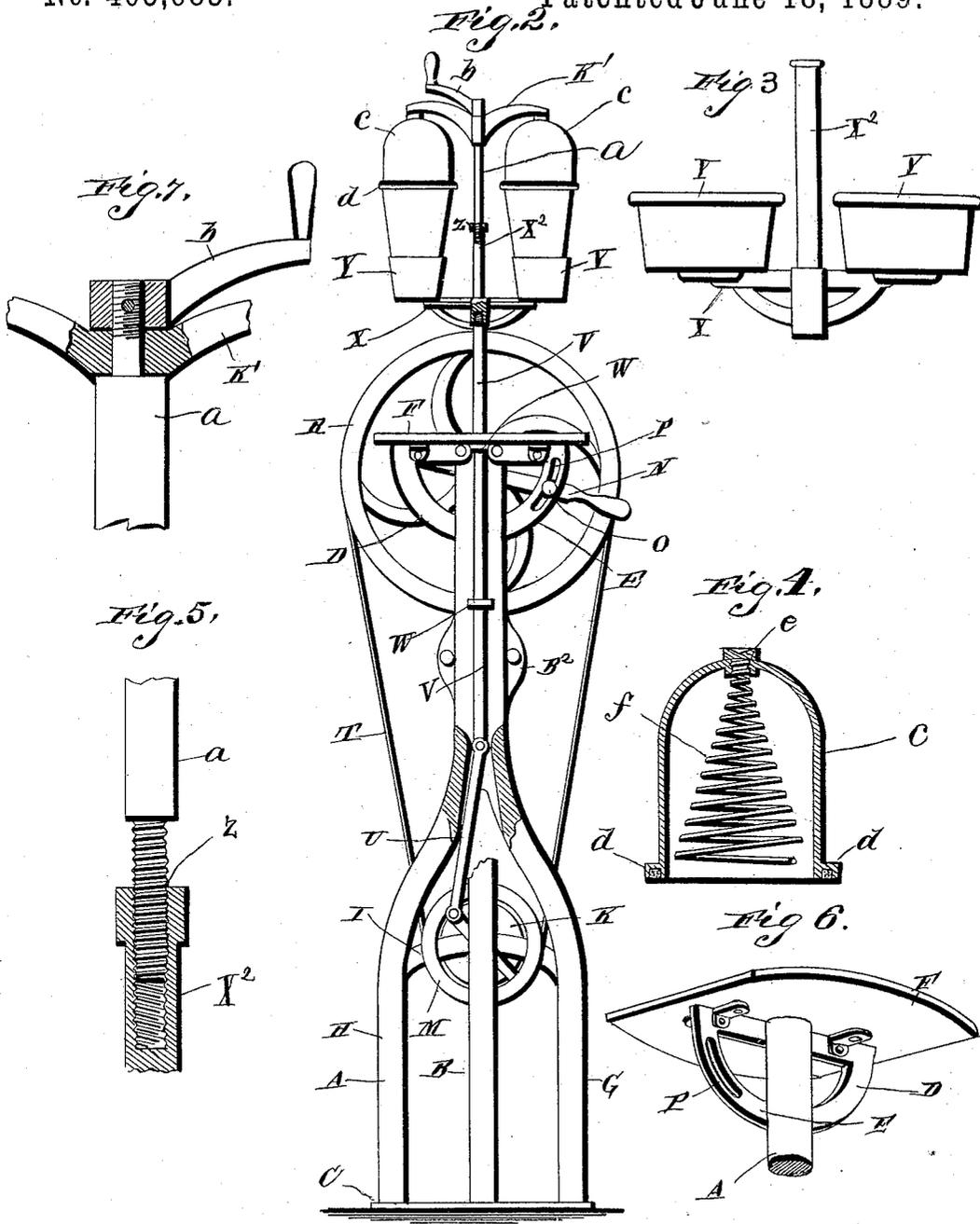
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# UNITED STATES PATENT OFFICE.

FRANCIS H. SHEPHERD AND JOHN W. MEYER, OF DAVENPORT, IOWA.

## MACHINE FOR MIXING BEVERAGES.

SPECIFICATION forming part of Letters Patent No. 405,683, dated June 18, 1889.

Application filed April 11, 1888. Serial No. 270,358. (No model.)

*To all whom it may concern:*

Be it known that we, FRANCIS H. SHEPHERD and JOHN W. MEYER, citizens of the United States, residing at Davenport, in the county of Scott and State of Iowa, have invented a new and useful Machine for Mixing Beverages or Fluids, of which the following is a specification.

Our invention relates to improvements in machines for mixing beverages—such as “milk-shakes,” “shaker-lemonades,” “mint-juleps,” &c.; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a machine embodying our invention. Fig. 2 is a side view of the same. Fig. 3 is an enlarged view of the tumbler-holding devices. Fig. 4 is a detail sectional view of one of the caps for the upper ends of the tumblers. Fig. 5 is a detail sectional view showing the extensible rod. Fig. 6 is a detail view of the shelf. Fig. 7 is a detail view showing the connection of the handle at the upper end of the turning-rod.

The frame of the machine is composed of two standards A B, having their feet or lower ends secured in a suitable base-plate C, as shown. When made in the small size, this base-plate may be attached to the counter; but in large sizes it is secured to the floor. The standard A is extended somewhat above the standard B, and the upper end of the said standard B is bolted or otherwise firmly secured to the standard A at the point B<sup>2</sup>, an open space being left between the two standards for the play of the pitman, hereinafter referred to.

To the upper end of the standard A are secured the brackets D E, which curve upward and outward from each side of the standard A. A shelf F is secured to said brackets D E by means of bolts passed through the upper portions of the said brackets and through lugs depending from the under side of the shelf, as will be readily understood. The lower portion of the standard A is bifurcated, as shown, forming the legs G H, which are connected at or near their upper ends by the cross-bar I. A hanger J is secured to this cross-bar I and projects outward therefrom sufficiently to accommodate a pulley K, which

is rigidly mounted on a shaft L, journaled in said hanger J and cross-bar I. The shaft L extends through and beyond the cross-bar I, and the crank-wheel M is secured on the extended end of the shaft.

N designates an arm or lever which is pivoted at one end to the bracket D, and projects past the said bracket and the bracket E in a plane parallel to the plane of the said brackets. Near its free end we secure in said arm or lever a laterally-projecting bolt O, which plays in a slot P in the bracket E, and is provided with a securing-nut, which is adapted to be turned up against the bracket to secure the said arm or lever in any desired position. At about the center of this arm N we secure a stub-shaft Q, on which the driving-wheel R is mounted, the said driving-wheel being provided with a handle S, by means of which it may be rotated and connected to the pulley K by a belt T, as shown. By this means the tension of the belt T may be adjusted as desired by adjusting the bolt O in the slot P. We wish it understood, however, that we lay no claim to this construction of belt-tightener, as it forms no part of our invention.

U designates a pitman, which has its lower end pivoted to the crank-wheel M, to one side of the center of said wheel, and its upper end pivotally connected to the lower end of a reciprocating rod V, which is mounted in guides W on the side of the standard A and extends vertically upward above the shelf F, as shown. The upper end of the reciprocating rod V is threaded to screw into the central tube X<sup>2</sup> of the cup-support X. The cups Y, which are adapted to receive the bottoms of the tumblers, are secured rigidly to the ends of the support X. The central tube X<sup>2</sup> of the cup-support X is extended vertically between the cups and has at its upper end an internally-threaded socket Z, which is engaged by the lower externally-threaded end of a rotating rod a, having a crank-handle b secured rigidly on its upper end. The upper end of the rod a is shouldered below the crank-handle, (see Fig. 7,) and the swiveled clamping-bar or cross-head K' is fitted between the shoulder of the rod a and the hub of the crank-handle. The ends of the cross-head are adapted to en-

gauge indentations formed in the top of the caps *c*, placed over the upper ends or tops of the tumblers. These caps are provided at their lower ends with the annular grooved flanges *d*, which receive the edges of the tumblers, and are provided with rubber packing, as shown, to prevent cracking or chipping of the glass.

In the tops of the caps *c* we form the internally-threaded recesses *e*, the threads of which are engaged by the coils at the upper end of the agitator *f*, consisting of a spirally-coiled wire nearly filling the cap. These caps may, if so desired, be formed integral with the cross-head or presser-bar; but we prefer the construction shown, in which the caps *c* and cross-head *K'* are separate, and the latter bears at its ends on the caps.

In practice the tumblers containing the fluid to be agitated or mixed are placed in the cups *Y*. The caps *c* are then placed over the tumblers and the turning-rod *a* is then rotated by means of its crank-handle *b*, so that by reason of its screw-threaded connection with the central tube *X*<sup>2</sup> it will be lowered until the cross-head *K'* comes into contact with the caps *c*, when the further rotation of said turning-rod and crank-handle will cause the cross-head to bind against the caps and thereby firmly clamp the tumblers in position. The driving-wheel is then rotated, when the tumblers will be reciprocated vertically, through the medium of the reciprocating rod, the crank-wheel and pitman, and the belt and pulley. The fluid in the tumblers is thus thoroughly agitated and caused to pass back and forth between the tumbler and the cap, while the spirally-coiled agitator vibrates freely therein, separating and beating the particles of the fluid, so as to effect a thorough agitation of the same. After the fluid has been thoroughly agitated the extension-rod is raised and the caps removed, when the tumblers may be placed on the shelf for service.

Our machine can be easily adapted for one tumbler or for more than two.

The machine is efficient and simple, and its advantages are thought to be obvious.

We wish it understood that we lay no claim to the cups *Y* or caps *c*, as they have been in use for years; but we do claim the simple manner in which we release the caps *c*. This releasing is done by the handle *b* and rod *a*,

with the threaded connection at the bottom of the latter. This threaded connection at the bottom is a great improvement over the top thumb-screw arrangements, as it enables the purchaser to use glasses of any required height or size. All other machines can only use glasses fitted expressly for them. The advantages of this over a dasher are obvious. The milk or liquid by the force of the agitation is thrown into the cap and returns to the glass along the sides of the cover. By coming in contact with the loose wires of the beater it is whipped into a froth, and the action is so successful that the froth is retained after the liquid is returned to the glass, thereby avoiding the necessity of adding chemicals to manufacture a froth in drinks.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination of the cup-support having the threaded central tube, the rotating rod having its lower end engaging the threads of said tube and provided with a rigidly-fastened crank-handle, and the cross-head mounted loosely on the rotating rod below the crank-handle, as set forth.

2. In a drink-mixer, the combination of the bifurcated standard *A*, the standard *B*, having its upper end secured at an intermediate point of the standard *A*, an open space being left between the standards *A* and *B*, the cross-bar *I*, near the lower end and connecting the legs of the standard *A*, the hanger secured to said cross-bar, the shaft *L*, mounted in said cross-bar and hanger, the pulley *K* on said shaft, the drive-wheel at the upper end of the standard *A*, the belt *T*, connecting said drive-wheel and pulley *K*, the crank-wheel on said shaft *L*, the guides *W* on the side of the standard *A*, the reciprocating rod *V*, working in said guides and carrying the glass-supporting devices on its upper end, and the pitman passing through the space between the standards *A* *B* and having its upper end connected to the reciprocating rod, as set forth.

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