(No Model.)

A. JORGENSEN.

APPARATUS FOR MIXING LIQUIDS.

No. 439,010. Patented Oct. 21, 1890.

Fig. 1.

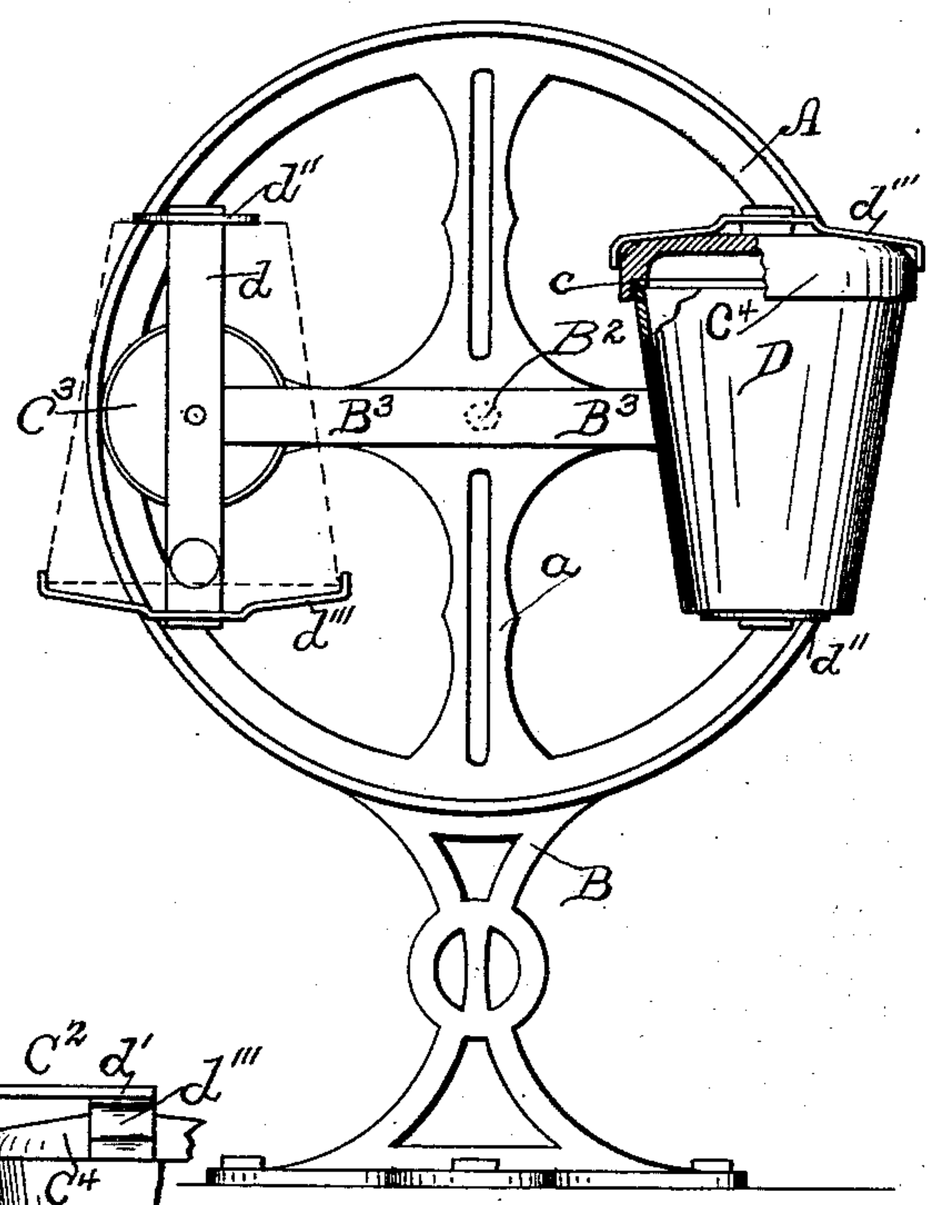


Fig. 2.

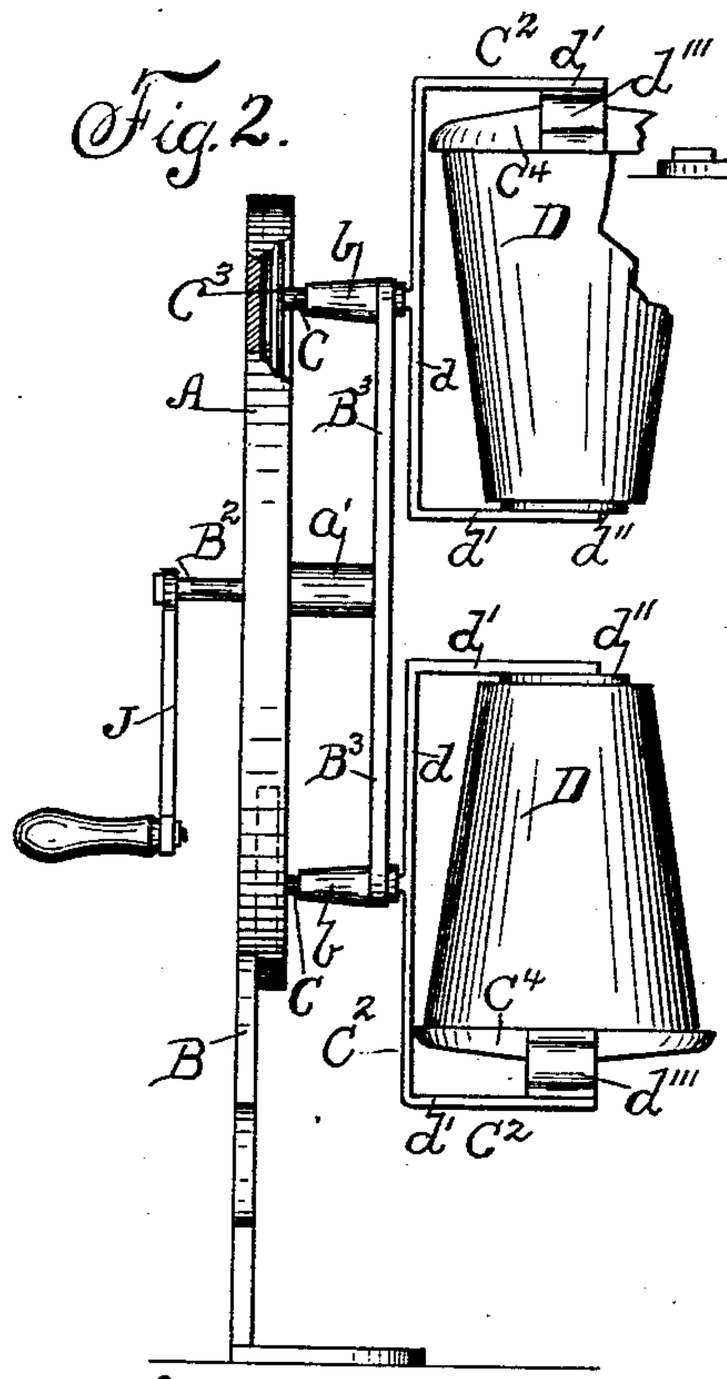
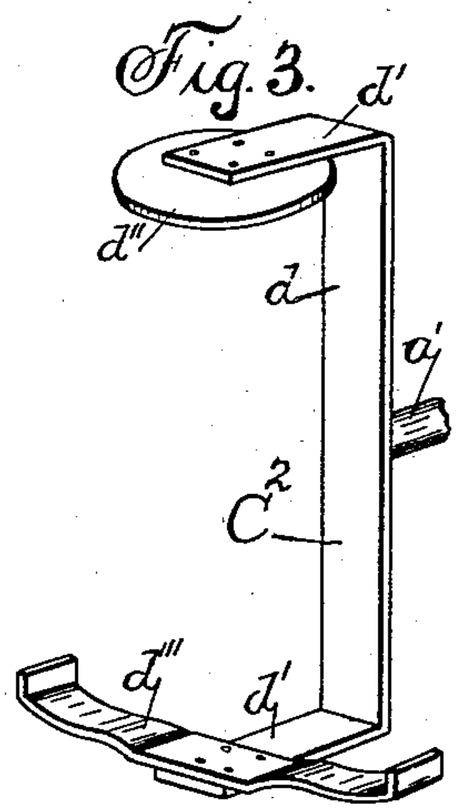


Fig. 3.



Witnesses:
M. P. Smith.
Chas. C. Burkley.

Inventor: Axel Jorgensen,
By Thomas G. Orwig, Attorney.

UNITED STATES PATENT OFFICE.

AXEL JORGENSEN, OF DES MOINES, IOWA, ASSIGNOR OF ONE-HALF TO O. E. PEARSON, OF SAME PLACE, AND C. G. HIPWELL, OF DAVENPORT, IOWA.

APPARATUS FOR MIXING LIQUIDS.

SPECIFICATION forming part of Letters Patent No. 439,010, dated October 21, 1890.

Application filed May 3, 1890. Serial No. 350,428. (No model.)

To all whom it may concern:

Be it known that I, AXEL JORGENSEN, a citizen of the United States of America, and a resident of Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Apparatus for Mixing Liquids, of which the following is a specification.

My invention relates to an apparatus for compounding or mixing liquids for the purpose of producing beverages or for other purposes, and has for its object the provision of means by which the liquid-containing vessels may be removably and securely held upon the apparatus, and in means by which a compound movement of the liquid-containing vessels is obtained by the exercise of a minimum of power on the part of the operator.

My invention consists in a circular frame which may be made of any desired circumference, which said frame is mounted upon a suitable standard, which latter may be secured to any desired object.

A rotary-actuated shaft located centrally relatively to the circular frame imparts its movement to arms radiating therefrom, the outer ends of said arms having journals within which are shafts, which latter are provided with friction-wheels at one end fixed to said shafts and carrying the frames at the other, to which are removably secured in manner hereinafter described the liquid-containing vessels.

My invention consists, further, in certain details of construction and arrangement of parts hereinafter more fully described, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation of my improved apparatus. Fig. 2 is a side view thereof, partly broken away. Fig. 3 is a detail perspective view of the liquid-containing-vessel holders.

A is a circular frame mounted upon and preferably forming a component part of the standard B, which latter may be secured to any desired article of furniture. The circular frame is formed with arms *a*, which radiate from a common central sleeve *a'* and extend to the rim of the frame. The sleeve *a'* forms a journal-box through which a horizontal shaft B^2 passes, on the outer end of which is formed the radial arms B^3. The remaining end of the horizontal shaft B^2 has fixed thereto the prime mover. The radial arms B^3 have formed with their upper ends sleeves *b b*, through which extend the shafts C, with which latter are formed at one of their ends the frames C^2, the remaining ends of the said shafts C having fixed thereto friction rollers or wheels C^3 of such diameter as that their peripheries impinge against the inner periphery of the circular rim of the frame A, a rubber ring or ring of other suitable material being, however, preferably placed on the wheels C^3.

The frames C^2, within which the liquid-containing vessels D are removably secured, (shown in detail in Fig. 3 in an inverted position,) consists of a piece *d* and extending arm-pieces *d'*, to one arm of which latter is secured a disk bottom plate *d''*, and to the other arm is secured the spring-strip *d'''*. I also provide a cap or cover C^4, having a shoulder *c*, and also a gasket *c'*, preferably of rubber, which is secured to the cap-piece by its elasticity in such a way that when the cap is upon the vessel the gasket will be between the shoulder of the cap and the rim of the vessel.

When it is desired to secure in place the vessels D, the cap or cover having the gasket *c'* is placed upon the rim of the vessel. The operator then seizes the vessel and cap and inserts them between the disk-plate and spring-strip against the pressure of the latter. It is now obvious that the spring-strip holds the vessel on its seat on the disk-plate and presses the gasket between the shoulder of the cap and the rim of the vessel, effecting a tight joint. The cap is so formed as to afford a space above the surface of the liquid in the vessel to permit of free mixture.

Motive power being applied to the shaft B^2, in the present instance a hand-lever J, the said shaft is rotated, causing the outer ends of the radial arms B^3 and their sleeves *b* to describe a circle, carrying the shafts C loosely within said sleeves *b* in the plane of the circle traversed by the ends of the radial arms B^3,

and at the same time the wheels C^3 travel upon the periphery or track of the rim of the frame A, and since said wheels are fixed to the shafts C the latter are rotated, thus causing the frame fixed to their other ends to rotate or describe a circle, carrying the vessels D, containing the liquid. It will thus be seen that a compound movement is imparted to the vessels D, consisting of the rotation in a circle of said vessels, the circumference of which is that of the rim of frame A, and in the plane of direction of said rim, and also a rotation about their own axis. The operator may thus by very slight exertion actuate the machine, and at the same time thoroughly and rapidly mix and compound the liquids in the vessels D.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an apparatus for mixing and compounding liquids, the combination, with a main shaft and means for actuating the same, of arms extending radially from said main shaft, a frame forming a circular track concentric with the main shaft, and friction rollers or wheels mounted on shafts held loosely in the radial arms approximately at their ends, said rollers traveling on said track, and frames fixed to the shafts of said friction-rollers, adapted to carry vessels, as and for the purposes stated.

2. An apparatus for mixing liquids, comprising a circular track having a supporting base or standard, a rotary shaft concentric with the circular track, arms projecting radially from the end of said shaft, rotating shafts extending through bearings in the ends of said arms and provided with friction-wheels on their ends to engage the circular track, and frames on their opposite ends carrying vessels and covers for the vessels, all combined to operate in the manner set forth, for the purposes stated.

3. The circular track A, having a standard B and shaft-bearing a', the rotating shaft B^2, having radial arms B^3, provided with shaft-bearings b on their ends, the shaft C, extending through said bearings b, provided with fixed frames C^2, friction-wheels C^3 on their opposite ends, disks d'' and clasps d''', fixed to the end portions of the frames C^2, and vessels D, held in frames C^2, arranged and combined to operate in the manner set forth, for the purposes stated.

AXEL JORGENSEN.

Witnesses:
CHARLES C. BULKLEY,
THOMAS G. ORWIG.

Correction in Letters Patent No. 439,010.

It is hereby certified that Letters Patent No. 439,010, granted October 21, 1890, for an improvement in "Apparatus for Mixing Liquids," was erroneously issued to the inventor, Axel Jorgensen, and O. E. Pearson and C. G. Hipwell, assignees, as joint owners of said invention; whereas the patent should have been granted to said *O. E. Pearson and C. G. Hipwell*, as owners of the entire interest as shown by the assignments of record in the Patent Office; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 25th day of November, A. D. 1890.

[SEAL.]

CYRUS BUSSEY,
Assistant Secretary of the Interior.

Countersigned:

C. E. MITCHELL,
Commissioner of Patents.