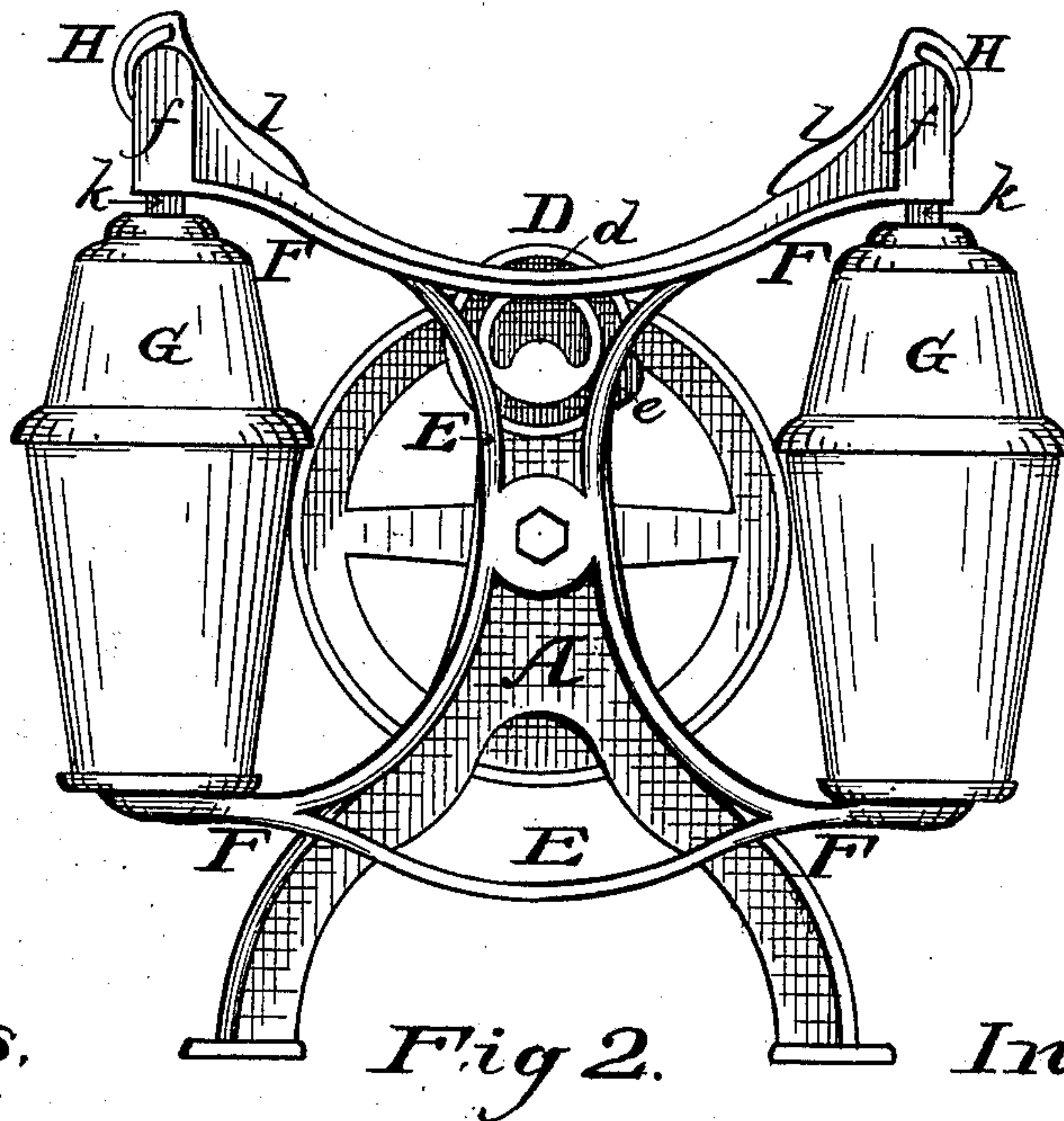
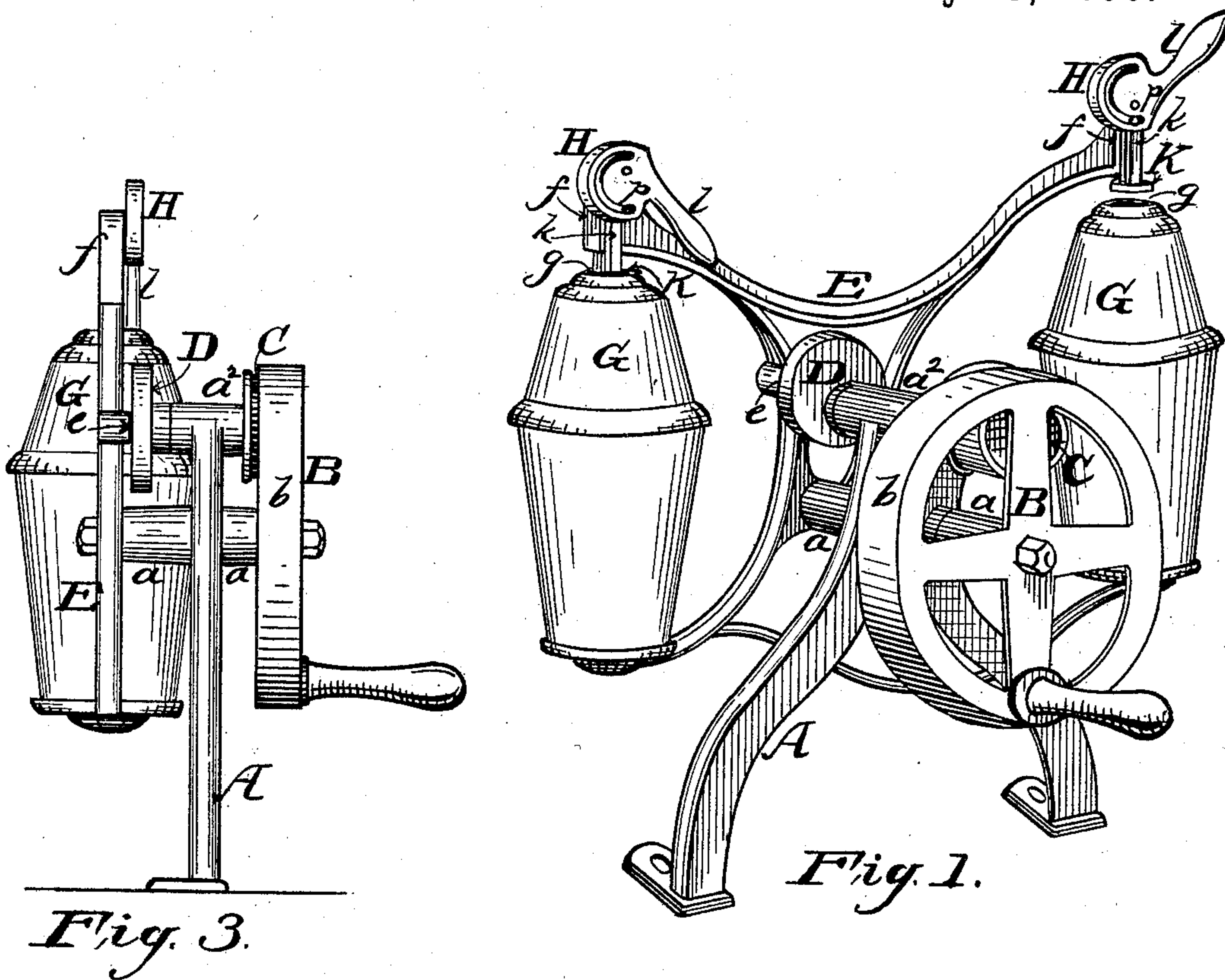


(No Model.)

S. T. JULL.
SHAKING APPARATUS.

No. 432,241.

Patented July 15, 1890.



Witness,

E. A. Tibbitts
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UNITED STATES PATENT OFFICE.

SAMUEL T. JULL, OF MEADVILLE, PENNSYLVANIA, ASSIGNOR OF ONE-HALF
TO FARNUM T. FISH, OF SAME PLACE.

SHAKING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 432,241, dated July 15, 1890.

Application filed July 6, 1889. Serial No. 316,679. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL T. JULL, a citizen of the United States, residing at Meadville, in the county of Crawford and State of Pennsylvania, have invented certain new and useful Improvements in Shaking Apparatus, of which the following is a specification.

This invention relates to a device for rapid shaking and mixing liquid beverages; and it consists in the peculiar construction and combination of parts, as hereinafter fully described, and pointed in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my new shaker. Fig. 2 is a side elevation of the same, and Fig. 3 is an end elevation.

A represents a suitable standard or support for the working parts of the apparatus, which may be secured onto a counter, a table, a shelf, or other convenient means for its support. To a stud *a* on said standard is journaled a hand driving-wheel B, having a suitable handle for operating the same. From this wheel is derived all the movements of the working parts. Said wheel has a broad annular flange *b*.

C is a pinion fixed on a short shaft set in a bearing *a* on the top of the standard. This pinion is provided with a friction-surface, which bears against a like friction-surface on the inside of the said flange or rim *b* of wheel B, by means of which the pinion is rotated. On the opposite end of said shaft is attached an eccentric-wheel D, and on a stud *a*² on the same side of the standard A is journaled an oscillating frame E, having a pin *e*, that rides in the circular groove *d* of the eccentric D, by which the oscillating motion is imparted to the frame. Said frame has arms F F for holding the glasses or tumblers to be shaken. The lower arms have flanged plates on which the glasses set, and the upper arms are provided with locking devices for securing the tumblers in place. The glasses are provided with covers G G, in the tops of which are made recesses *g g*.

K K are plates, which fit in the said recesses *g g*, having stems *k k* fitted to slide in grooves in the heads *f f* of the arms F F.

H H are half-eccentrics pivoted to the top ends of the heads *f f*, in the circular grooves of which pins *p p* on the stems *k k* play, and the said half-eccentrics are provided with levers *l l*, by which they are turned.

From the foregoing the operation of this device is as follows: The glasses to be shaken first have their covers placed on. They are then set upon the plates on the lower arms. Then the covers are secured upon the glasses, and the glasses secured and firmly held in place by turning the half-eccentrics with their levers, thereby forcing the plates K K down into the recesses *g g* of the covers G G. Now by turning the driving-wheel B by its handle a rapid oscillating motion is imparted to the frame E through the medium of the pinion C and eccentric-wheel D, giving to the glasses a rapid up-and-down shaking and thoroughly agitating and mixing their contents.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a shaking apparatus, the standard A, driving-wheel B, journaled thereto, pinion C, fixed on a shaft set in a bearing in the top of the standard, an eccentric-wheel D, fixed on opposite end of same shaft, an oscillating frame E, journaled to said standard opposite to the driving-wheel, and having a pin *e* playing in a groove of said eccentric-wheel D, whereby a rapid oscillating movement is imparted to said frame, all constructed to operate substantially as described.

2. The combination, with the oscillating frame E, having the heads *f f*, of the plates K K, having stems *k k* playing in grooves in said heads, and the cams H, having concentric groove in which a pin *p* on stem *k* plays, said cam pivoted to the head at one side of its center and provided with a lever *l*, whereby the plates K K are forced down onto the covers G G of the glasses, substantially as described.

SAMUEL T. JULL.

Witnesses:

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