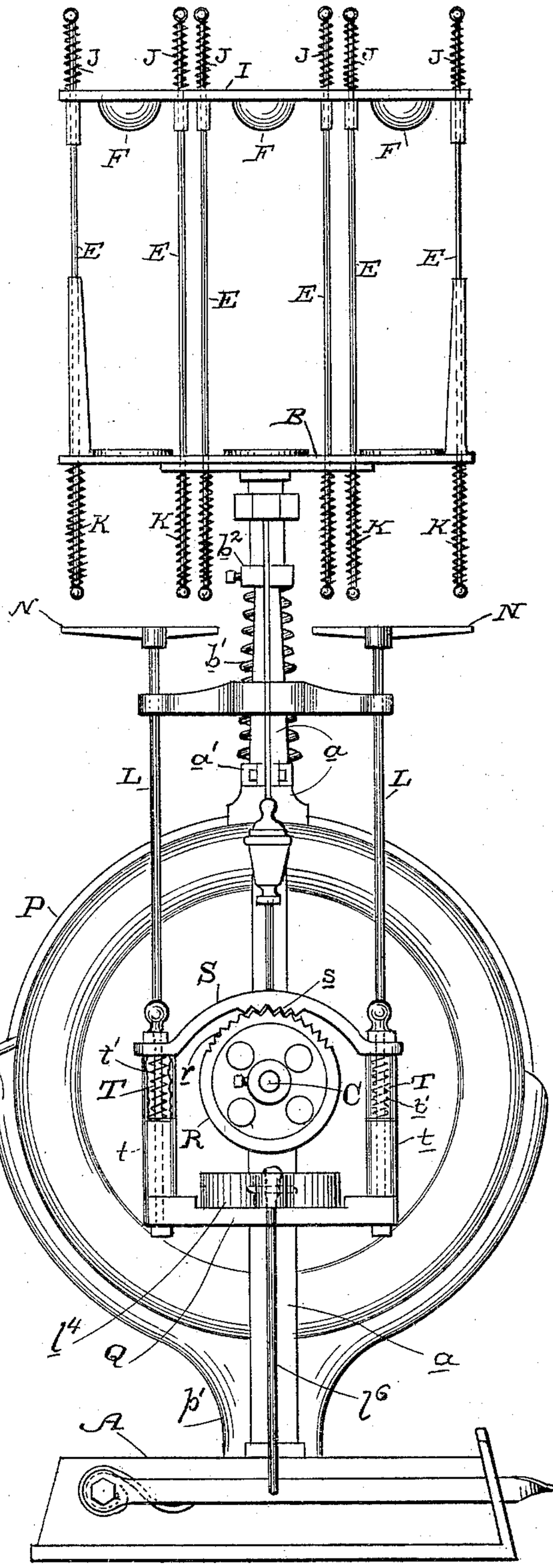
(No Model.) 3 Sheets—Sheet 1.

R. D. SCHROEDER.

DRINK MIXER.

No. 473,643. Patented Apr. 26, 1892.

Fig 1



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[illegible] Dexter

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(No Model.) 3 Sheets—Sheet 2.

R. D. SCHROEDER.

DRINK MIXER.

No. 473,643. Patented Apr. 26, 1892.

Fig. 2

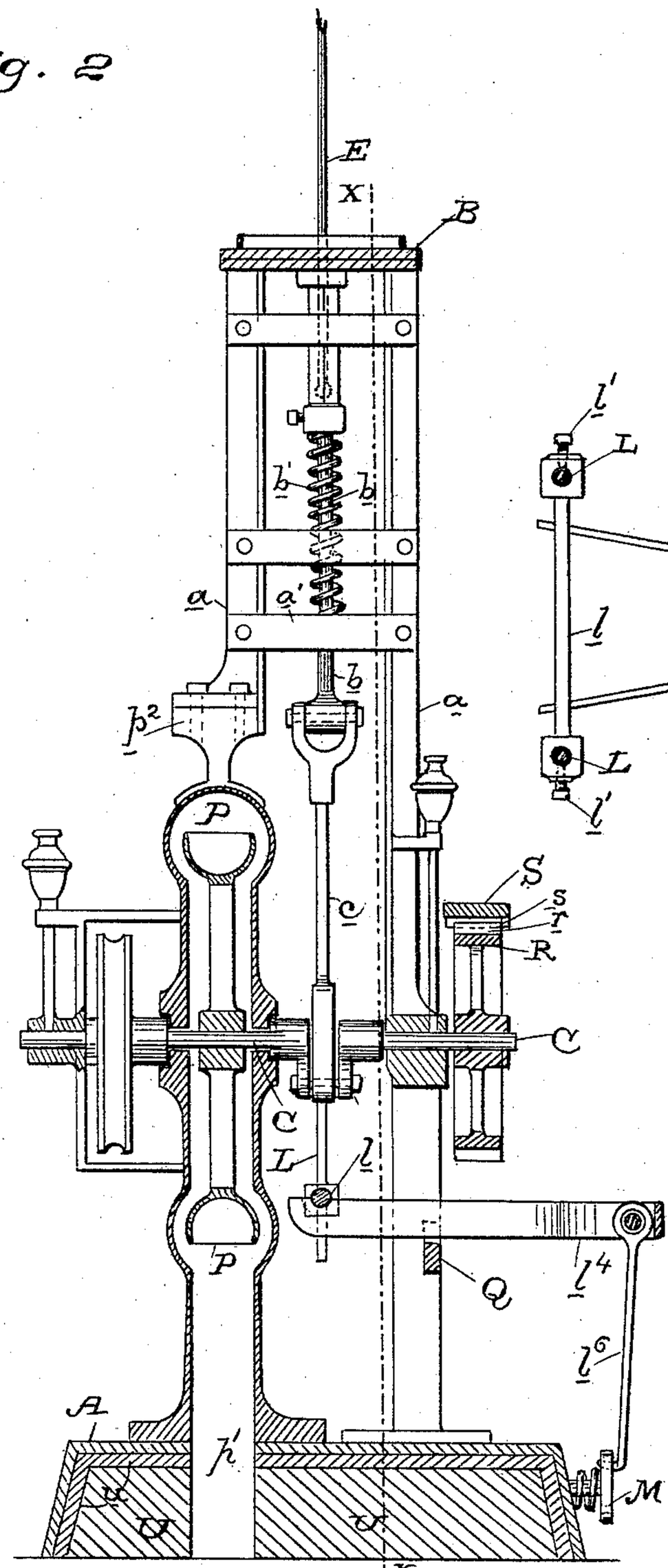
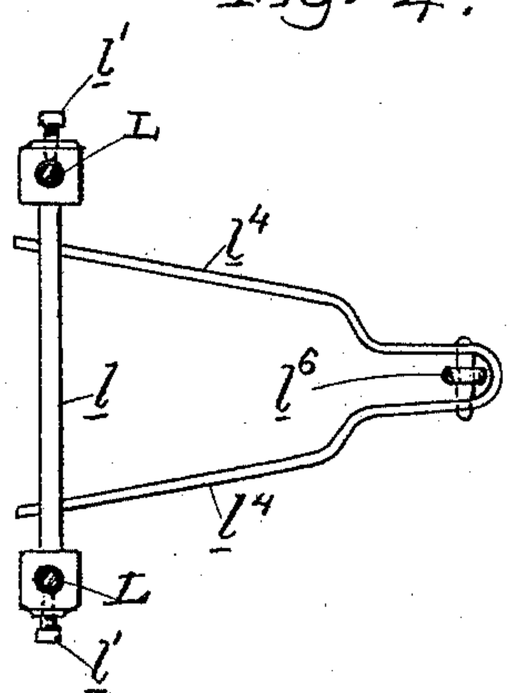


Fig. 4.



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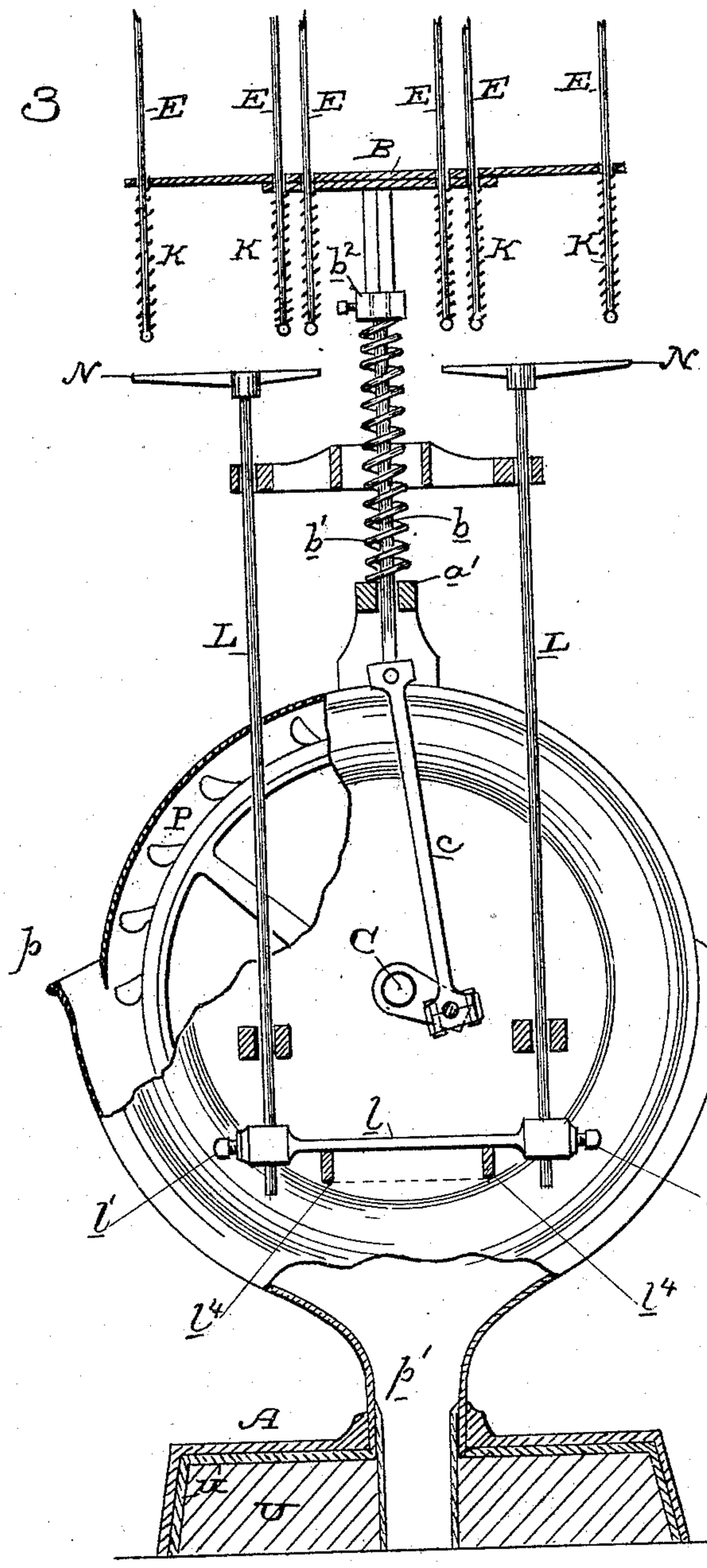
(No Model.) 3 Sheets—Sheet 3.

R. D. SCHROEDER.

DRINK MIXER.

No. 473,643. Patented Apr. 26, 1892.

Fig. 3



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UNITED STATES PATENT OFFICE.

RICHARD D. SCHROEDER, OF SAN FRANCISCO, CALIFORNIA.

DRINK-MIXER.

SPECIFICATION forming part of Letters Patent No. 473,643, dated April 26, 1892.

Application filed December 7, 1891. Serial No. 414,337. (No model.)

To all whom it may concern:

Be it known that I, RICHARD D. SCHROEDER, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Machines for Shaking Liquids; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the general class of machines for shaking liquids, and especially to that machine of this class patented by me August 18, 1891, No. 457,938.

My invention consists in certain improvements upon said machine, which I shall hereinafter fully describe, and specifically point out in the claims.

The general object of my invention is to simplify the general construction of the machine.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a front elevation of my machine. Fig. 2 is a vertical transverse section of same. Fig. 3 is a section on line $x\,x$ of Fig. 2. Fig. 4 is a plan of lever l^4 and connections.

A is the base of my machine, from which rises a standard, (represented generally by a.) In the top of this is mounted and adapted to be reciprocated vertically the stem b, which carries on its top the shaking platform B, adapted to receive the shaker. Through this platform pass the vertically-movable rods E, upon the upper ends of which is carried the series of holders F for the tumblers, said holders being equalized by the cross-bar I. Upon the upper ends of the rods are the springs J, and on their lower ends are the springs K.

The parts are substantially the same as in my previous patent and are similarly lettered. The operation is also the same, and may be briefly described as follows:

The shakers are placed upon the platform B in an upright position. The tumblers are inverted and their bottoms fitted to the holders F, the rods E being raised so that the holders will be lifted high enough to permit the tumblers to be brought into line over the shakers. Then the rods E are relieved and the holders press the tumblers down into the shakers. A rapid reciprocating motion is then imparted to the shaking platform, whereby the liquid is violently shaken within the shaker and tumbler.

In my former patent I employed a crank-shaft mounted in the main standard of the machine, and I connected said crank-shaft with the stem b of the shaking platform by a pitman. The crank-shaft was driven by means of a pulley upon its end which received a driving-belt from any suitable source of power. In my present case I embody the motor as a part of the machine and make the connection of the shaking-platform stem direct with a crank-shaft of the motor.

P represents my motor. It consists of a small water-wheel inclosed in a casing. It receives its water at p and discharges it through the base A by means of the neck p' of the casing. The motor is supported from the base by this neck p', and is further supported on top by a connection at p^2 with one arm of the standard a of the machine. The motor-wheel has a central crank-shaft C, with the crank of which the pitman c is connected, the upper end of said pitman being connected with the stem b of the shaking platform. Thus the connection between the stem of the shaking platform and the motor is made directly by means of the pitman and crank-shaft, doing away with a belt-pulley and belt from a separate motor. Upon the upper end of the stem b of the shaking platform is fitted a counterbalance-spring b', one end of which bears on a cross-piece a' of the standard a and the other end against an adjustable collar b^2 on the stem. The spring may thus have its tension regulated. Its object is to take up any lost motion in the connections, and in this location is out of the way and yet convenient of access for proper adjustment.

The means for raising the rods E in order to permit the holders F to receive the tumblers are simpler and more practical than in my previous patent. They consist of the straight bars or arms N, lying directly under the lower ends of the rods E. These arms are carried upon vertical downwardly-extending rods L, guided by suitable bearings, as shown, and having their lower ends connected by a cross-bar l. This cross-bar is adjustable vertically on the rods and is set where adjusted by means of set-screws l'.

M is a foot-lever pivoted to the base A and

connected by a rod l^6 with a swinging bail-lever l^4, pivotally resting upon a cross-bar Q and having its inner ends bearing under the cross-bar l of the rods L. Now by pressing down this lever the rods L are raised and their arms or bars N, bearing under the rods E, raise said rods. The vertical adjustment of cross-bar l provides for regulating the movement of rods L, as desired.

The holding and braking mechanism for the machine is as follows: Upon the end of the shaft C of the water-wheel is a brake-wheel R, a portion of whose face is preferably toothed or corrugated, as shown at r. Above this wheel is mounted a brake-shoe S, having similar corrugations or teeth s to those on the wheel R. This brake-shoe is carried upon vertical posts T, which extend downwardly through bearings t and carry on their lower ends the cross-bar Q, on which the bail-lever l^4 is pivoted. Springs t' hold the posts up so that normally the brake-shoe is out of engagement with the wheel R. When the lever M is pressed down, the bail-lever l^4 at the same time that it lifts the holders F above, as heretofore described, presses down on the cross-bar Q, and thus brings the brake-shoe S down to its engagement with the wheel R and stops the machine while the tumblers are being fitted.

This machine has such a violent motion that it jars the support on which it is placed and the whole flooring. In order to prevent this I have the following construction: The base A is made of a heavy casting and is hollow. This base is fitted over a solid block of suitable material, such as Portland cement, (represented by U.) Between the adjacent surfaces of the block and the base I place a layer of felt u or other like cushion. This relieves the jar to the flooring and renders it possible to use the machine in any place.

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

1. In a machine for shaking liquids, the combination of the standard, the shaking platform having a stem mounted on the standard, the tumbler-holders upon each side of the standard, having depending rods, means for actuating the rods, a counterbalance-spring on said stem, and a collar adjustably secured to the stem and bearing upon the spring, substantially as herein described.

2. In a machine for shaking liquids, the combination of the shaking platform, the tumbler-holders, the vertically-movable rods carrying said holders, and the means for raising said rods to lift the holders and receive the tumblers, consisting of the arms or bars N under said rods, the vertically-movable rods L, carrying said arms or bars, the pivoted bail-lever l^4 for raising said rods, and the foot-lever M and connection with the bail-lever, substantially as herein described.

3. In a machine for shaking liquids, the combination of the shaking platform, the tumbler-holders, the vertically-movable rods carrying said holders, and the means for raising said rods to lift the holders and receive the tumblers, consisting of the arms or bars N under said rods, the vertically-movable rods L, carrying said arms or bars, the adjustable cross-bar connecting the lower ends of rods L, the pivoted bail-lever bearing under said cross-bar, and the foot-lever and connection with the bail-lever, substantially as herein described.

4. In a machine for shaking liquids, the shaking platform with its stem and the motor crank-shaft connected with the stem, in combination with the holding and braking mechanism, consisting of the brake-wheel on the crank-shaft, the brake-shoe adapted to operate upon said wheel, the spring-controlled posts supporting said brake-shoe, the cross-bar of the posts, the foot-lever, and connections between said foot-lever and said cross-bar for pulling the posts and brake-shoe down, substantially as herein described.

5. In a machine for shaking liquids, the combination of the vertically-movable rods L with their arms or bars N for lifting the holders of the machine, the brake-wheel of the motor-shaft, and vertically-movable spring-controlled brake-shoe operating on said wheel, the pivoted bail-lever, connections therefrom for lifting the rods L and pulling down the brake-shoe, and the foot-lever and connection for operating the bail-lever, substantially as herein described.

In witness whereof I have hereunto set my hand.

RICHARD D. SCHROEDER.

Witnesses:
L. MEININGER,
R. MOHR.