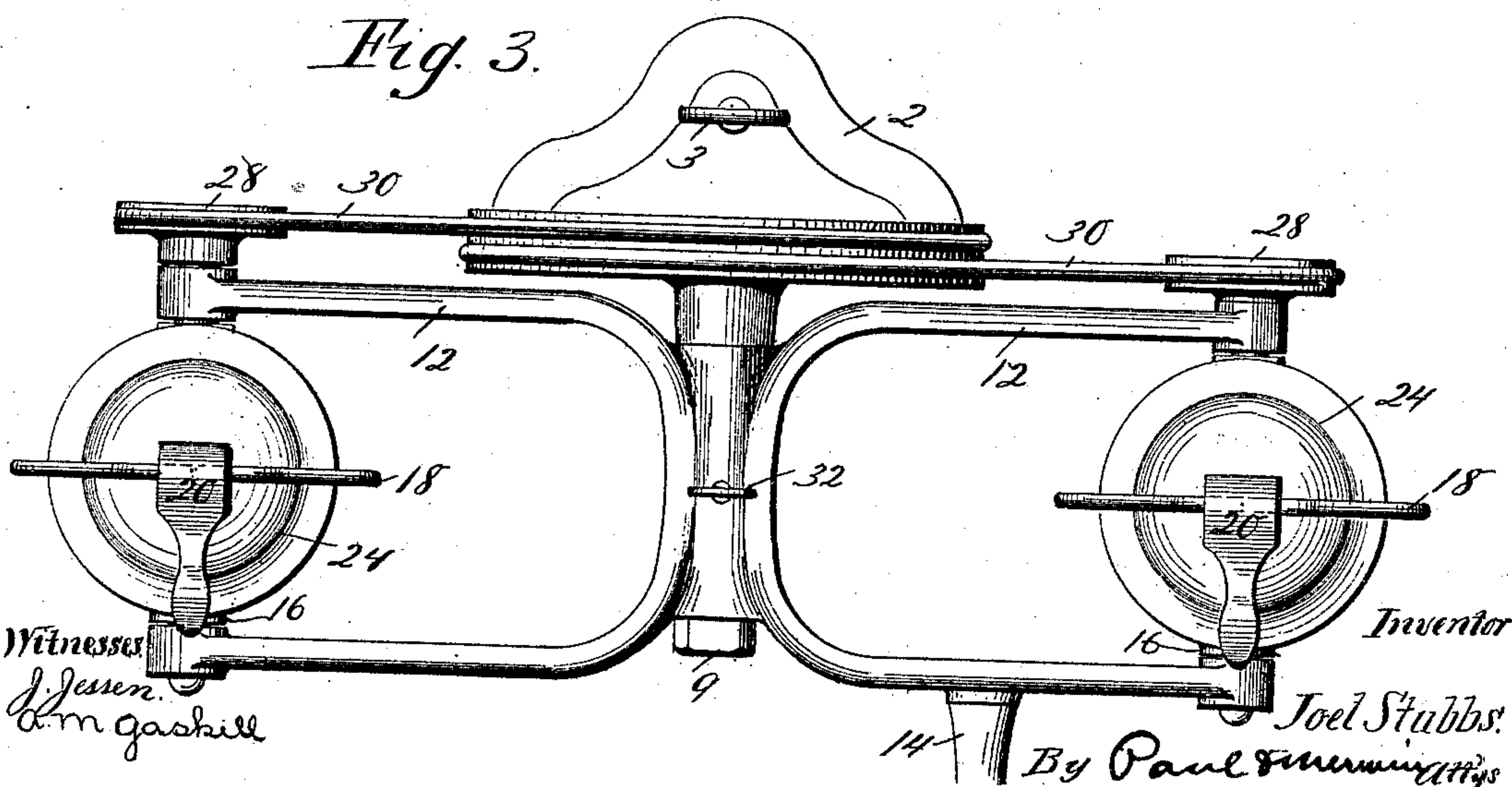
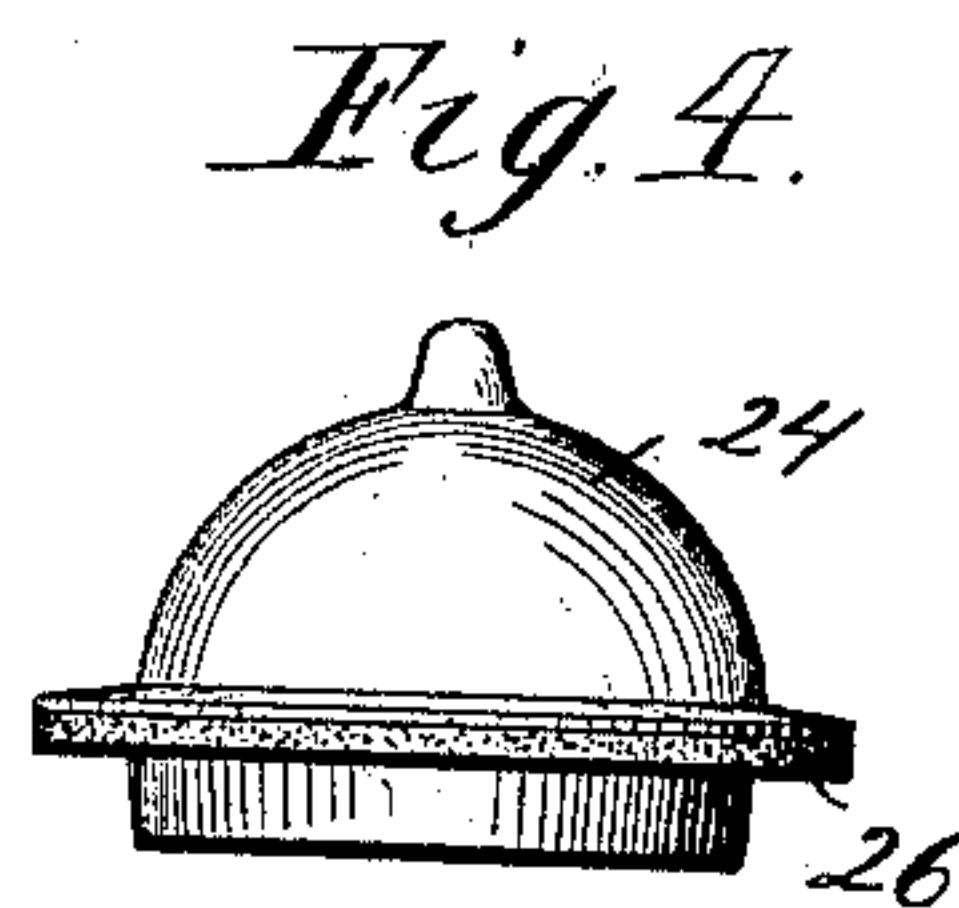
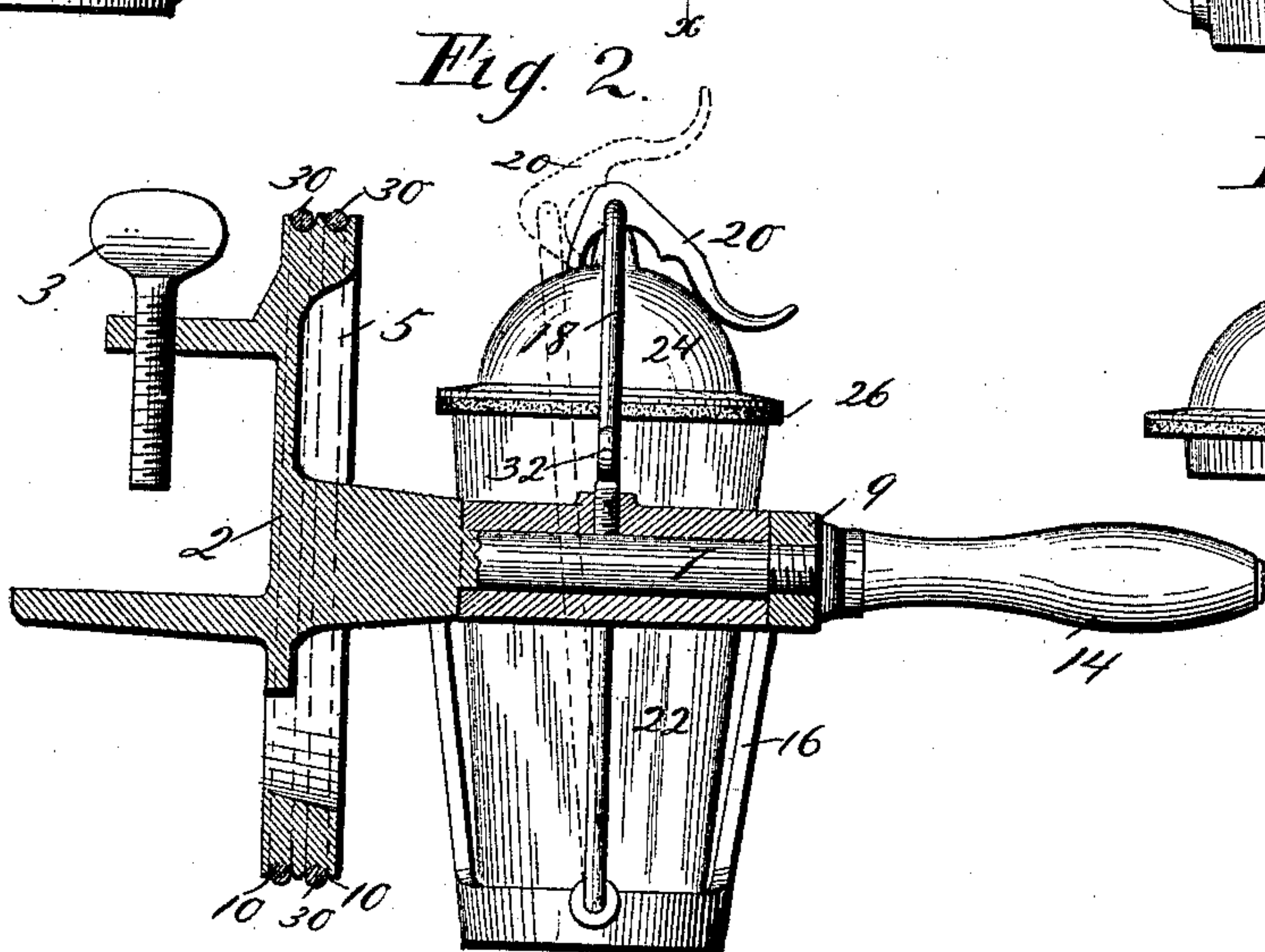
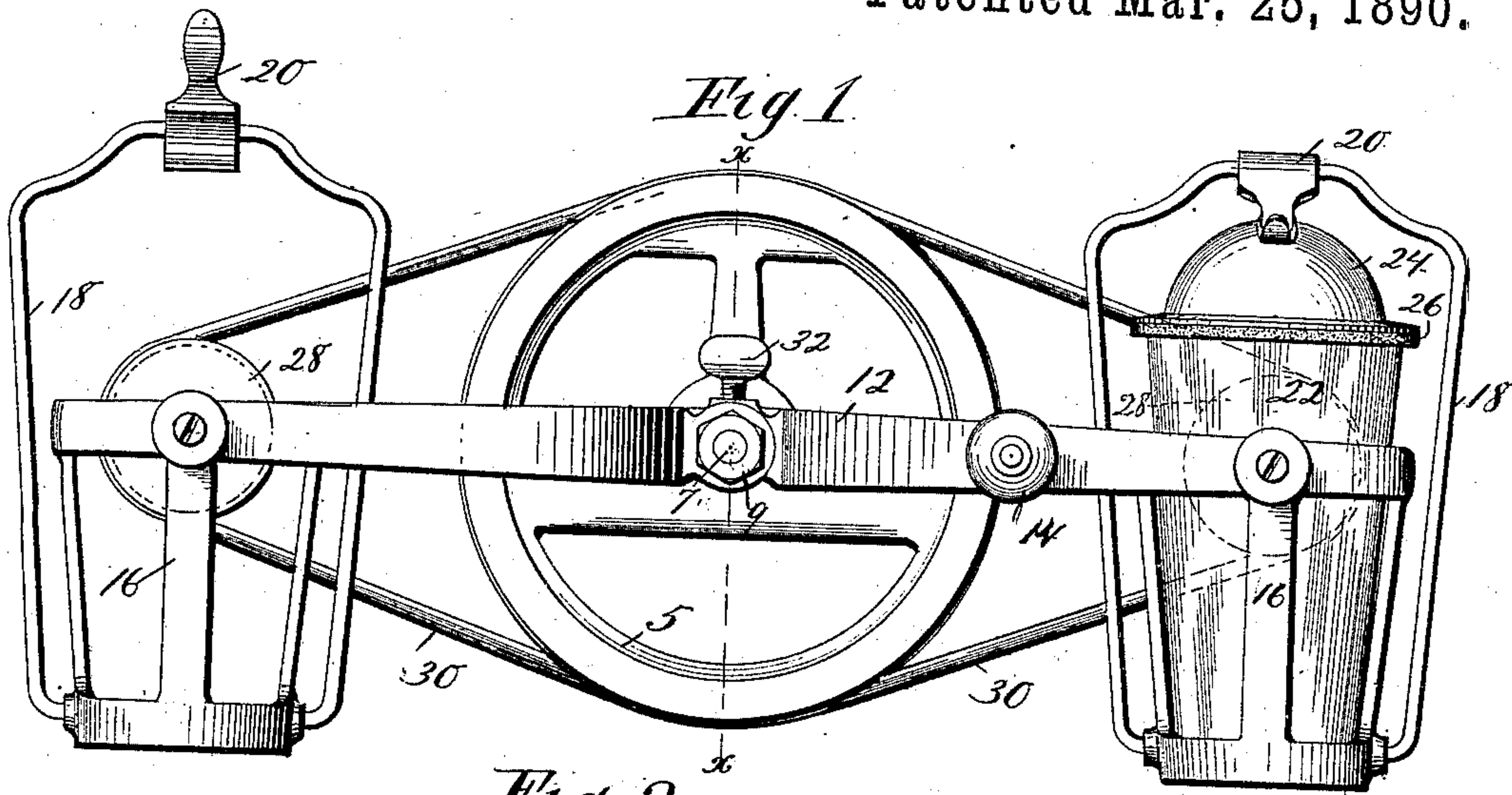


(No Model.)

J. STUBBS.
LIQUID SHAKE.

No. 424,438.

Patented Mar. 25, 1890.



Witnesses
J. Jensen.
A. M. Gashill

Inventor
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By Paul S. Munnings

UNITED STATES PATENT OFFICE.

JOEL STUBBS, OF LONG LAKE, ASSIGNOR OF THREE-FOURTHS TO HENRY
BALDREY AND J. MORGAN BENNETT, OF MINNEAPOLIS, MINNESOTA.

LIQUID-SHAKE.

SPECIFICATION forming part of Letters Patent No. 424,438, dated March 25, 1890.

Application filed December 20, 1889. Serial No. 334,437. (No model.)

To all whom it may concern:

Be it known that I, JOEL STUBBS, of Long Lake, in the county of Hennepin and State of Minnesota, have invented certain Improve-
5 ments in Liquid-Shakes, of which the following is a specification.

The object of this invention is to provide improved means for mixing and agitating liquids or semi-liquids; and the invention
10 consists, generally, in providing a rotary frame with means for supporting suitable liquid-holding receptacles and rotating each support and the receptacle carried thereby upon its own axis, while it partakes at the
15 same time of the rotary motion of the frame.

Other objects of the invention will appear from the following description, taken in connection with the accompanying drawings, in which—

20 Figure 1 is a side elevation of my improved device. Fig. 2 is a vertical section on line *x* *x* of Fig. 1. Fig. 3 is a plan view, and Fig. 4 is a detail, of the cap or cover.

In the drawings, 2 represents a suitable
25 frame, which is preferably provided with a clamp-screw 3 or other suitable means for securing it upon a shelf, table, counter, or other convenient means of support. A wheel 5 is secured to or formed integrally with the frame
30 2, and arranged concentric with the wheel 5 is a shaft or stud 7, having, preferably, a threaded end adapted to receive a nut 9. The frame 2, wheel 5, and the stud 7 are preferably formed integrally with one another, and
35 the wheel 5 is also preferably provided with one or more circumferential grooves 10. Journaled upon the stud 7 is a frame 12, that is adapted to rotate on said stud, being provided with a handle 14 or other means, by which
40 power may be applied for the purpose of rotating the frame. The frame 12 is provided with one or more rotary supports, and these supports are each adapted to carry a suitable liquid-holding receptacle. Each of these sup-
45 ports consists, preferably, of a cup-shaped frame 16, pivoted in the frame 12 and provided, preferably, with a swinging bail 18, having a locking-lever 20 arranged thereon. A receptacle 22 is provided that is adapted to
50 be held by the support 16. This receptacle

is provided with a suitable cover 24, having, preferably, a packing or gasket 26. The receptacle being placed in the support 16, the cover being in place, the bail 18 is swung into position over the receptacle and locked by
55 means of the lever 20. By this means the cover is locked in position, and the receptacle is held in position in the support 16. I also provide means by which as the frame 12 is rotated upon its axis each of the recepta-
60 cle-supports will be given an independent rotary motion upon its own axis. For this purpose I prefer to provide each of the supports 16 with a wheel 28, secured upon the pivot or axis of said support. A belt 30 passes around
65 each of the wheels 28 and around the stationary wheel 5. By this means, as the frame 12 is rotated upon its axis each of the receptacle-supports is given an independent rotary motion upon its own axis, and the receptacle,
70 being carried by said support, partakes of the same motion.

For the purpose of holding the frame 12 in a horizontal position when it is desired to remove or replace the receptacles, I prefer to
75 provide said frame with a thumb-screw 32, by means of which said frame may be locked or clamped upon the stud 7.

I do not wish to be confined to the use of the belts for rotating the receptacle-supports
80 upon their axes, as other equivalent devices may be used for this purpose.

I claim—

1. In a device of the class described, the combination, with a rotatable frame, of recep-
85 tacles pivotally supported upon said frame, and having a rotary motion upon their own axes as said frame is rotated, substantially as and for the purposes set forth.

2. The combination, with a stationary
90 wheel, of a frame mounted upon a support at the center of said wheel and adapted to rotate thereon, receptacles pivotally supported upon said frame, and means connecting the supports of said receptacles with said fixed wheel,
95 whereby as said frame is rotated upon its axis each of the said receptacles is given an independent rotary motion upon its own axis, substantially as described.

3. The combination, with the stationary
100

wheel 5, of the rotary frame mounted on a support at the center of said wheel, receptacle holders or supports pivoted in said frame and provided with wheels 28, and belts 30, 5 passing around said wheel 5 and around said wheels 28.

4. In a device of the class described, the combination, with a rotatable frame, of receptacles pivotally supported upon said frame 10 and having a rotary motion upon their own axes as said frame is rotated, and means for clamping said frame in a horizontal position when at rest, for the purposes set forth.

5. The combination, with the rotary frame, 15 of the pivoted receptacle-holders mounted in said frame, the receptacles, and the bails upon said holders extending above and be-

low the axis of rotation of said holders and adapted to hold the covers upon said receptacles, and the receptacles in the holders, 20 substantially as described.

6. In a device of the class described, the combination, with the receptacles provided with removable covers, of the pivoted receptacle-holders, and the bails pivoted to said 25 holders below the pivotal point of the holders and provided with the locking-levers, substantially as described.

In testimony whereof I have hereunto set my hand this 14th day of December, 1889.

JOEL STUBBS.

In presence of—

A. M. GASKILL,

A. C. PAUL.