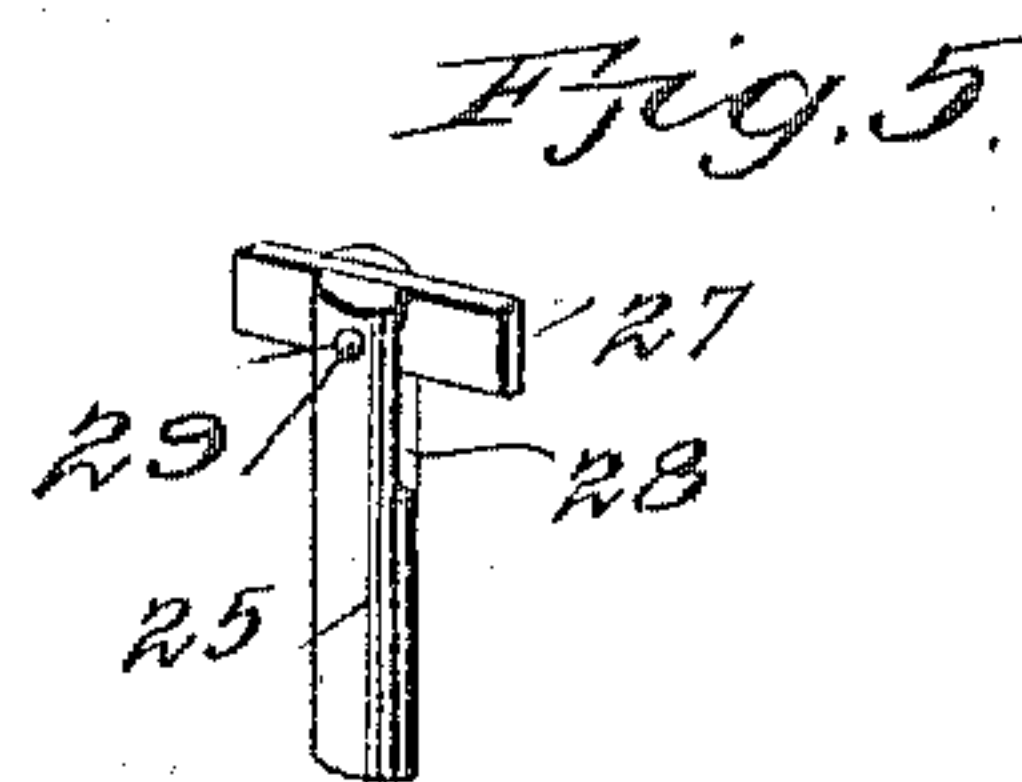
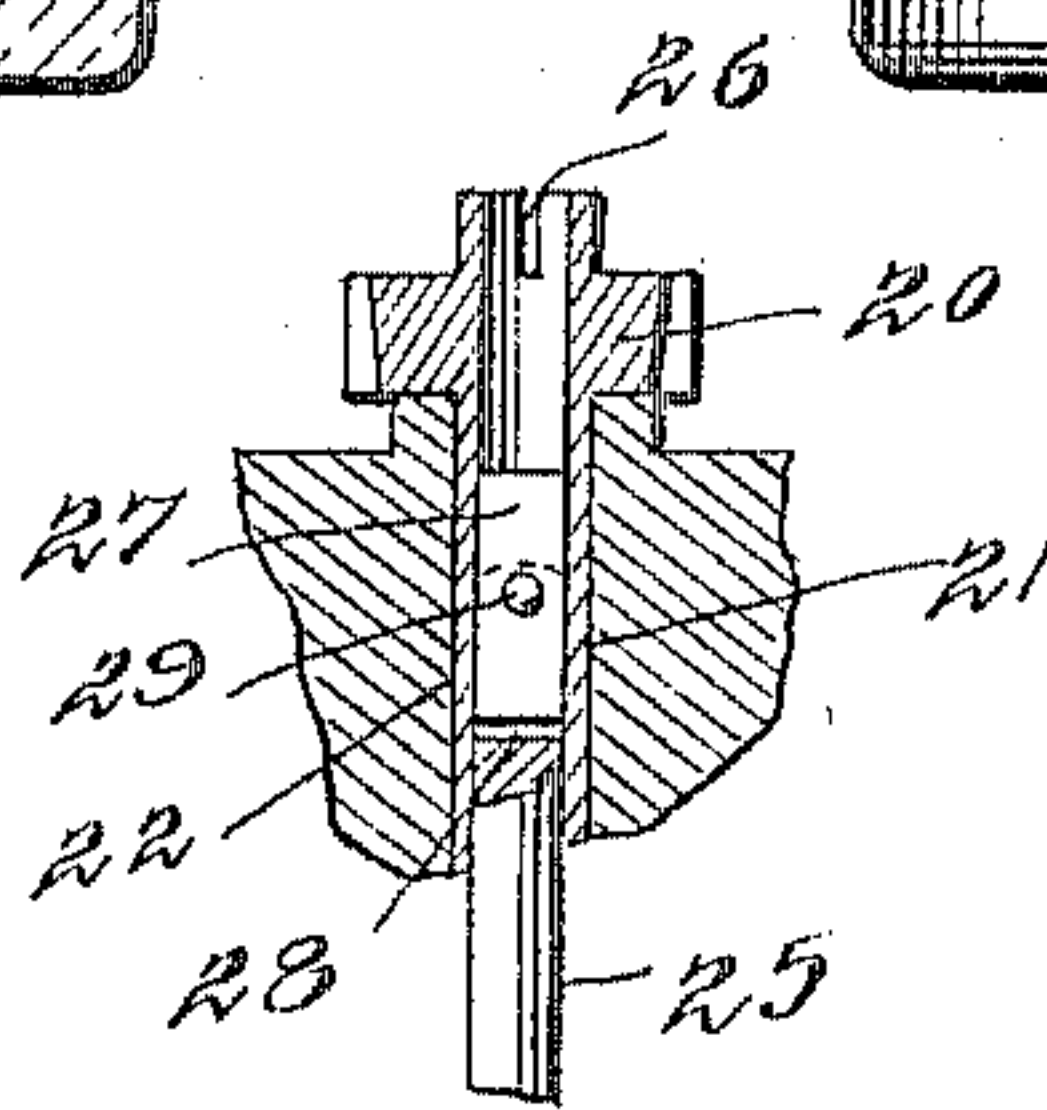
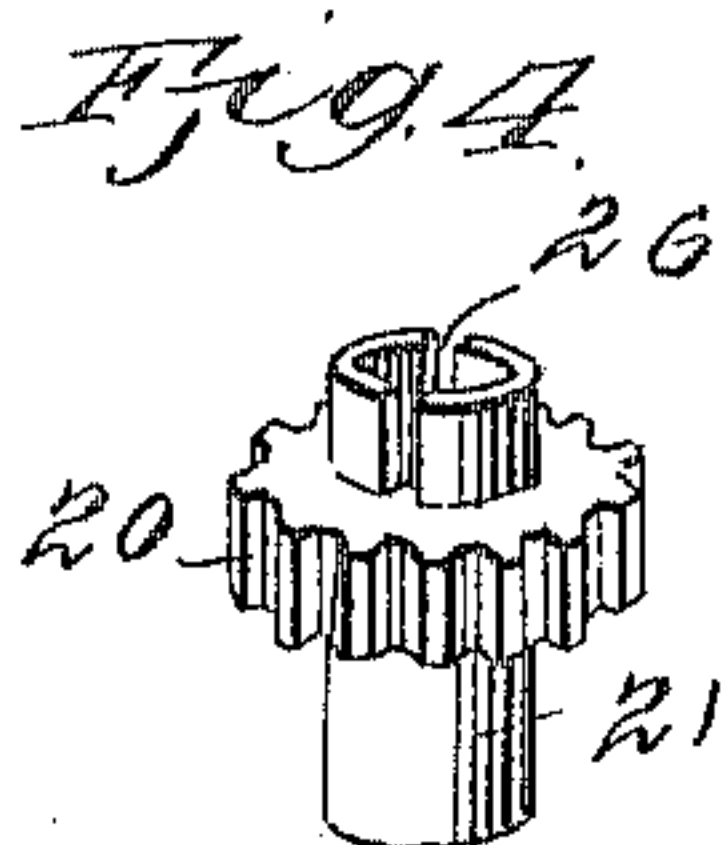
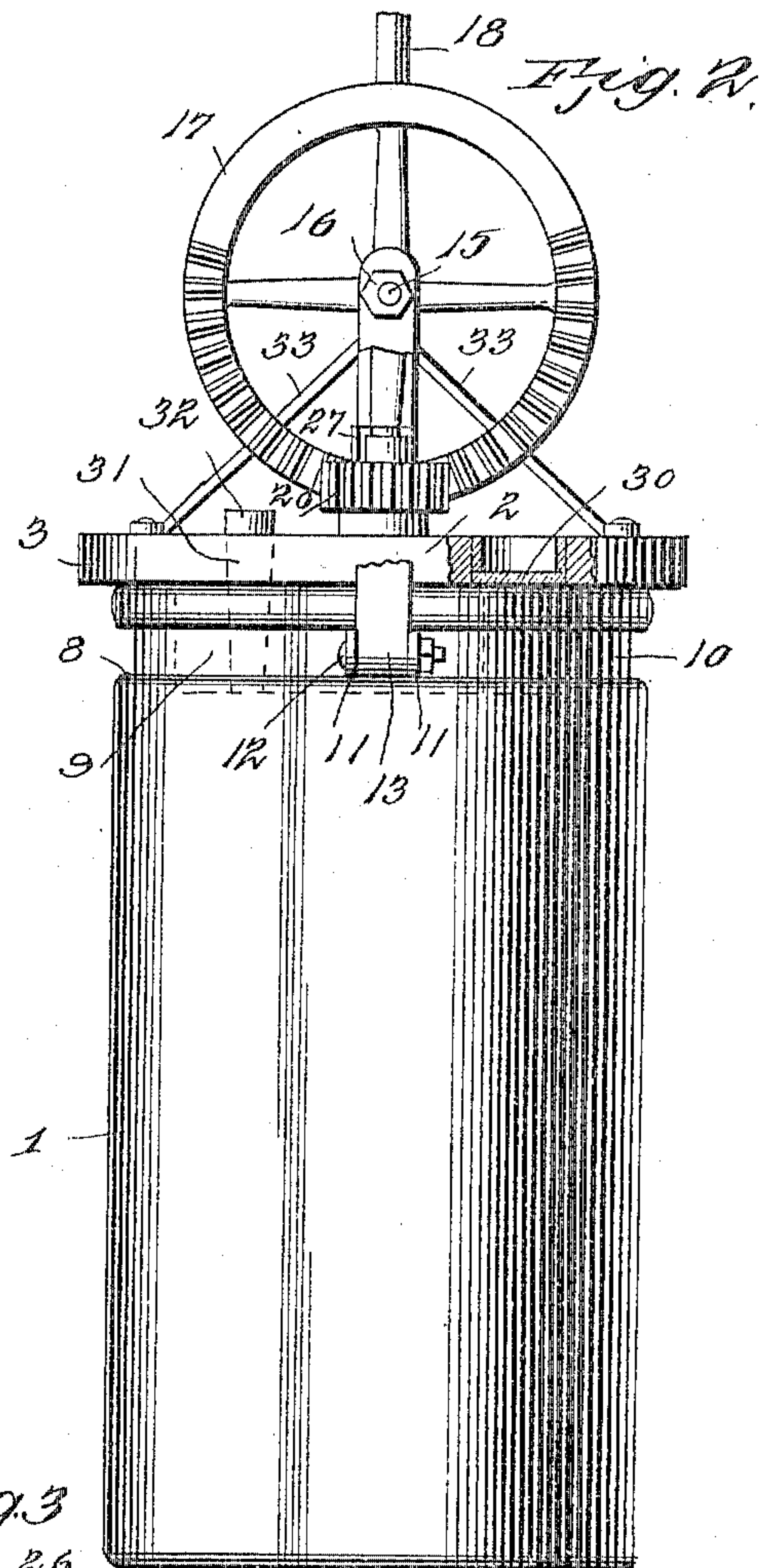
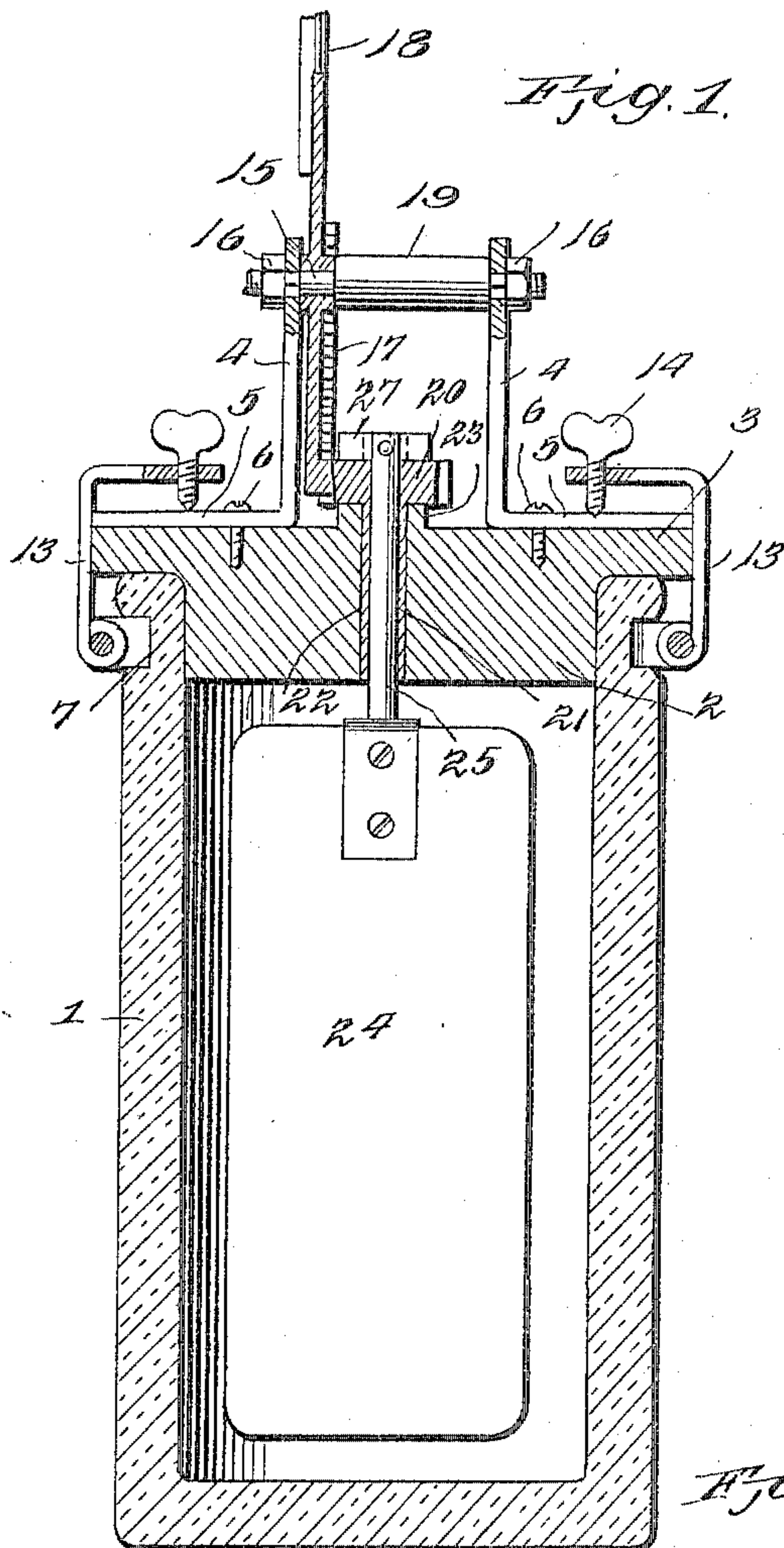


No. 817,049.

PATENTED APR. 3, 1906.

F. L. DECKER.  
CHURN.

APPLICATION FILED NOV. 4, 1905.



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# UNITED STATES PATENT OFFICE.

FRANK L. DECKER, OF SAND FORK, WEST VIRGINIA.

## CHURN.

No. 817,049.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed November 4, 1905. Serial No. 285,885.

*To all whom it may concern:*

Be it known that I, FRANK L. DECKER, a citizen of the United States of America, residing at Sand Fork, in the county of Gilmer and State of West Virginia, have invented new and useful Improvements in Churns, of which the following is a specification.

This invention relates to improvements in churns of the oscillating-dasher type.

10 The primary object of the invention is to provide a churn having an improved construction of dasher-drive gearing and means for mounting the same upon the churn-cover and the latter upon the churn-casing.

15 Another object of the invention is to provide a simple and effective detachable connection between the dasher and drive-gearing whereby the dasher may be conveniently removed for cleaning and withdrawn from 20 the churn-casing, so as to be out of the way when it is desired to remove the butter.

With these and other objects in view the invention consists of the novel construction and combination of parts hereinafter fully 25 described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a central vertical section of a churn embodying my invention. Fig. 2 is a side elevation of the same with portions 30 broken away to better show the construction. Fig. 3 is a detail section through the cover, the pinion, and journal, illustrating the operation in withdrawing the dasher-stem. Figs. 4 and 5 are detail perspective views, respectively, of the upper end of the journal and 35 the dasher-stem.

Referring now more particularly to the drawings, the numeral 1 designates a churn-casing, which is preferably cylindrical in 40 form and may be made of wood, glass, crockery, or any other suitable material. The mouth of this casing is adapted to be closed by a head or cover 2, provided with a laterally-extending annular flange 3 to rest upon 45 the upper edge of the casing. The head carries a supporting-frame for the drive-gearing, formed of a pair of parallel brackets 4, having outwardly-projecting horizontal arms 5, and secured to the cover by screws or other 50 suitable fastenings 6. The upper end of the casing is formed with an annular recess 7, within which fits an annular holding-band 8, said band being formed of two semicircular sections 9 and 10, having their meeting ends 55 bent laterally to form sets of lugs or ears 11. Extending through each of these sets of ears

is a pivot-bolt 12, to which is pivoted the lower end of an L-shaped clamping-bracket 13, the said bracket having its horizontal arm arranged to extend over the horizontal 60 arm 5 of the adjacent bracket 4 and provided with a clamping-screw 14 to engage the same. The vertical arms of the two brackets 13 are adapted to bear against the edge of the flange 3 when in clamping position, and the 65 parts 5 of the bearing-brackets 4 serve as wear-strips to sustain the impinging action of the screws 14 to thereby prevent mutilation of the cover. The clamping-brackets will securely hold the head or cover in applied 70 position and permit of its ready removal by simply relaxing the screws and swinging the brackets downward on their pivot-bolts 12.

The upper ends of the bearing-brackets 4 support a horizontal shaft or axle 15, which 75 may consist of a bolt extending therethrough and held in position by clamping-nuts 16. Loosely mounted to oscillate upon said shaft is a driving gear-wheel 17, having an operating-handle 18. The gear is arranged on the shaft 80 adjacent to one of the brackets 4 and is spaced from the adjacent bracket by a sleeve 19, loosely encompassing the shaft. The drive-gear 17 meshes with a pinion 20, formed or provided upon the upper end with a hollow 85 journal 21, formed in the cover, which latter is provided on its upper surface with a bearing-boss 23, on which the pinion 20 rests and turns.

The dasher 24, which may be of any pre- 90 ferred form and material, is provided with a shaft or stem 25, which extends upwardly through the journal 21 and gear 20 and is slidably mounted therein for ready application to and removal therefrom. As shown, 95 the journal 21 is provided above the pinion 20 with diametrically opposite slots 26 to receive a coupling-pin or key 27, carried by the stem 25. This pin coincides in width with the diameter of the stem and is centrally pivoted thereto within a slot 28, formed in said stem on a pivot-pin 29. The construction, therefore, is such that the pin may be swung outwardly from the slot 28 at right 100 angles to the stem and fitted within the notches 26 to connect the dasher for rotation with the journal 21 and pinion 20 and so that upon sliding the dasher upward the key may be swung into the slot 28 to lie wholly within the same, as shown in Fig. 3, thus permitting 105 the dasher to be slidably withdrawn from the journal. 110



In the operation of the device the cream to be churned is placed in the usual manner in the casing 1, the cover clamped firmly in position, and the handle 18 oscillated to impart a corresponding motion to the dasher. The cover may then be removed and the dasher detached for cleansing and the cover replaced until it is desired to withdraw the butter. If desired, after removal of the dasher the cover may be applied and connected with one of the clamping-brackets 13, which will form a hinge connection, which will permit the cover to be swung back for the removal of the butter when desired. The cover is provided with a sight-opening having a transparent panel 30, through which the interior of the casing may be viewed when the casing is made of opaque material to determine the progress of the churning operation from time to time. In the cover is also formed an opening 31, through which water may be introduced to facilitate the process of churning. This opening may be closed by a plug or other form of stopper 32.

It will be observed that the churn mechanism is simple of construction, may be manufactured at a low cost, and is adapted to be conveniently operated.

If desired, braces 33 may connect the standard 4, sustaining the greater part of the strain with the cover.

Having thus described the invention, what is claimed as new is—

1. A churn comprising a casing provided with an annular groove, a cover, bearing-

brackets carried by the cover and having outwardly-extending horizontal arms secured thereto, a dasher carried by the cover, gearing associated with said bearing-bracket for operating the dasher, a retaining-band occupying the recess in the casing and composed of sections having their adjacent ends outturned to form lugs, pivot members connecting said lugs, L-shaped bearing-brackets having their vertical arms pivotally engaging said pivot members and their horizontal arms arranged to overlie the horizontal arms of the brackets, and clamping-screws carried by said horizontal arms of the clamping-brackets to engage the arms of the bearing-brackets.

2. A churn comprising a casing, a cover therefor having a bearing-opening, a hollow journal extending through said bearing-opening and provided with a pinion and above the pinion with diametrically opposite slots, drive-gearing carried by the cover for actuating said pinion, a dasher having a stem extending upward through the journal and pinion and slotted at its upper end, and a key pivoted to fold within said slot and adapted when projected to engage the notches in the journal to lock the stem thereto.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK L. DECKER.

Witnesses:

J. M. RYMER,  
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