

No. 816,992.

PATENTED APR. 3, 1906.

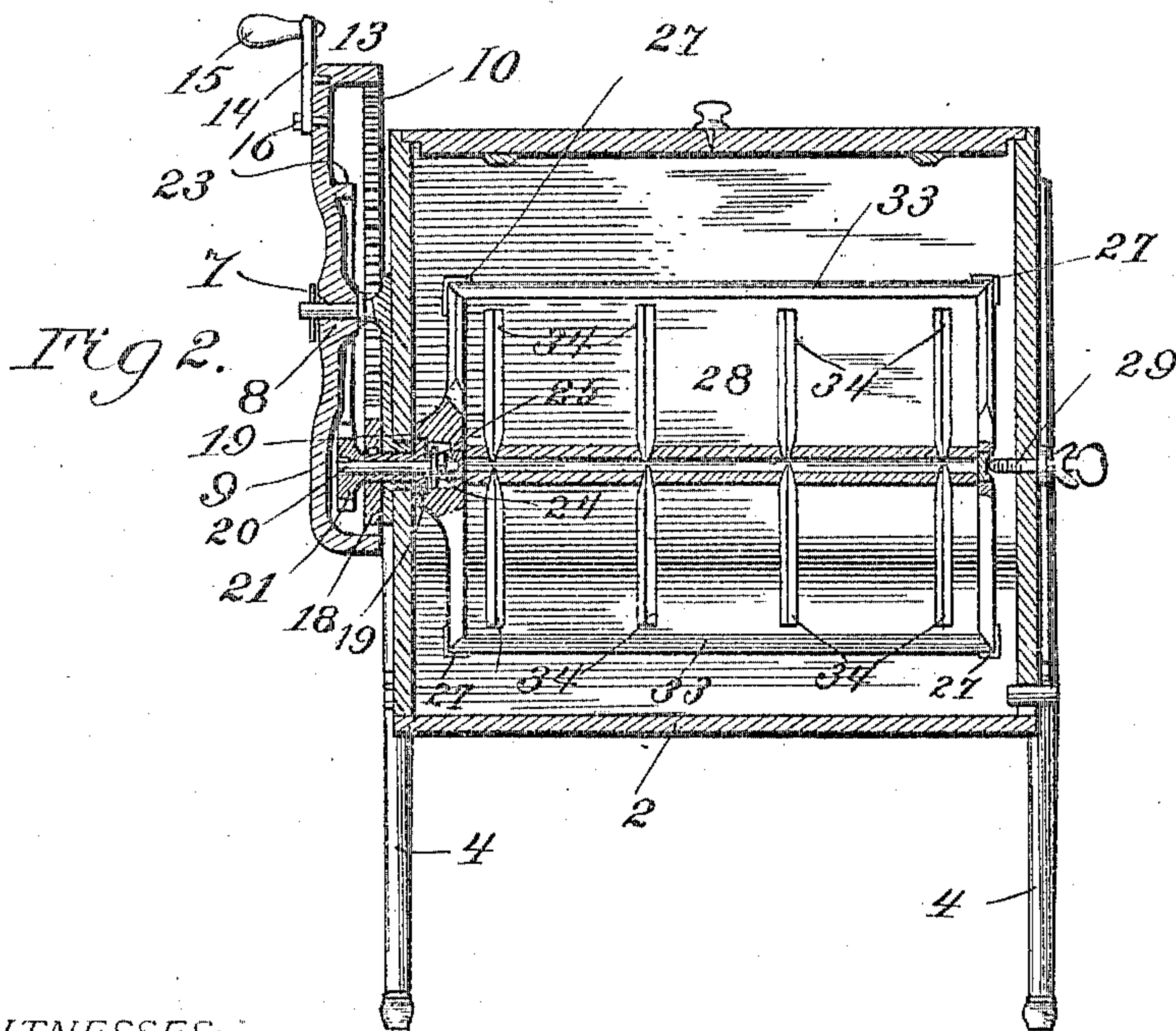
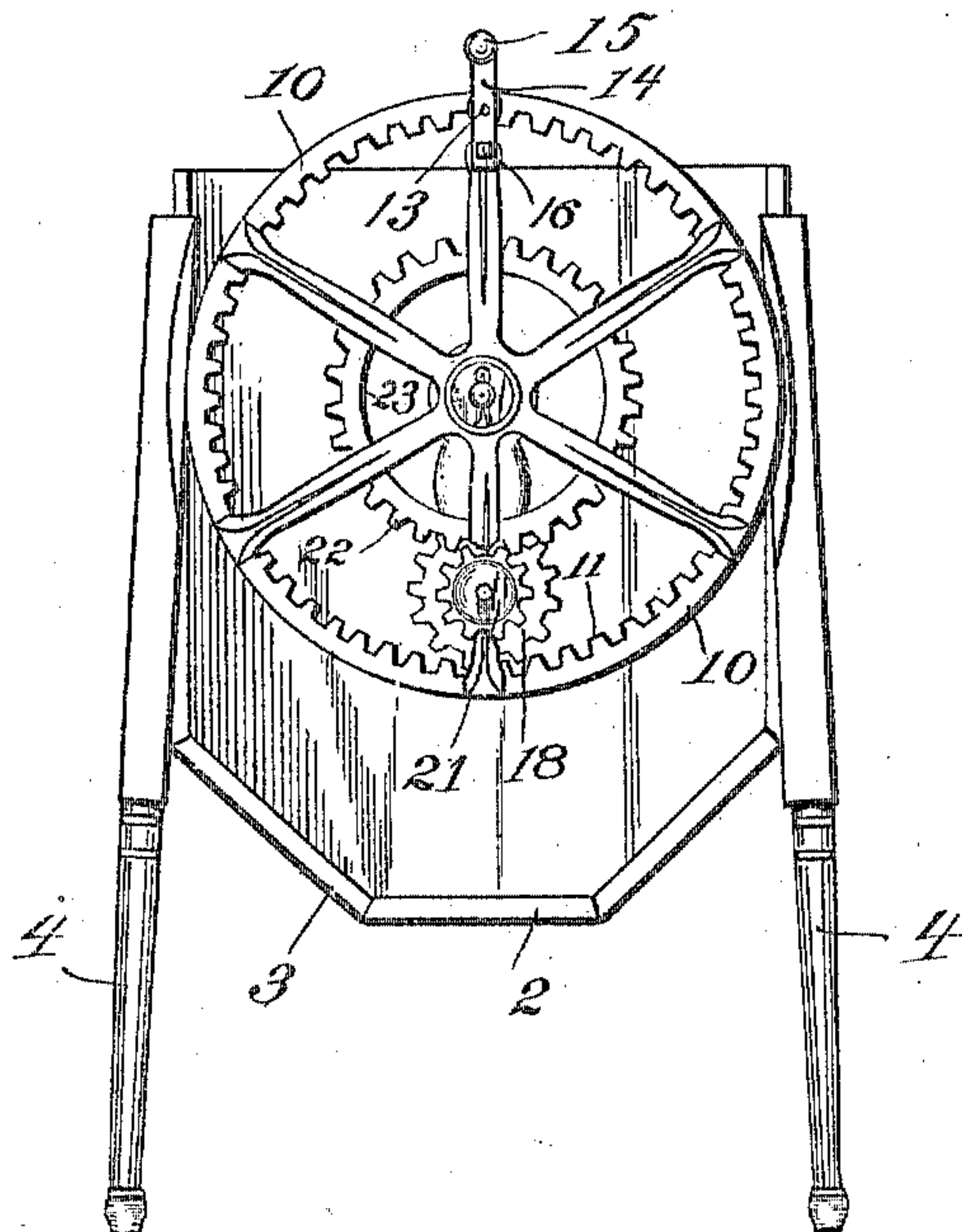
J. C. McVEY.

CHURN.

APPLICATION FILED JAN. 27, 1904.

2 SHEETS—SHEET 1.

Fig 1.



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2 SHEETS—SHEET 2.

Fig 3.

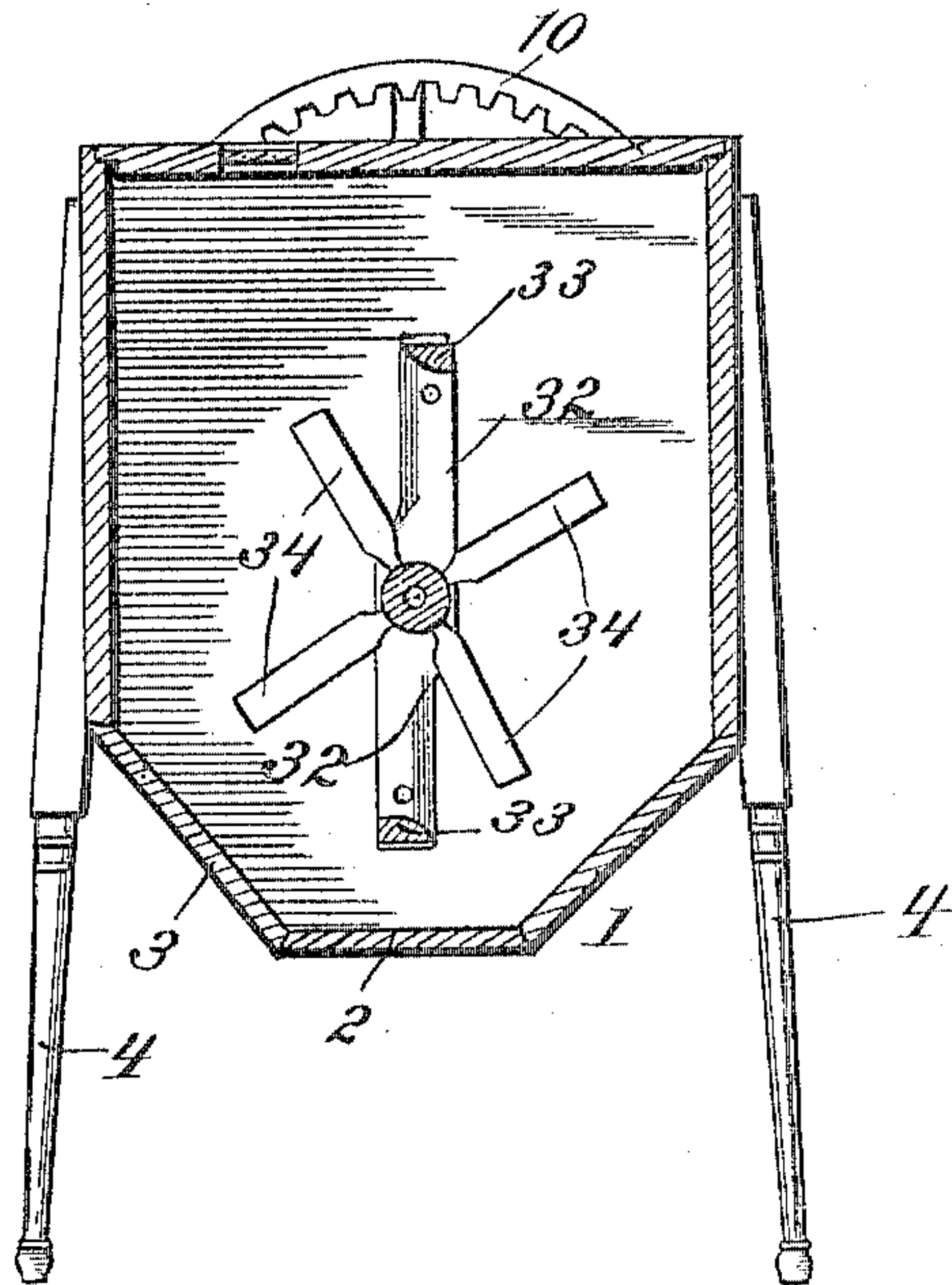


Fig 4.

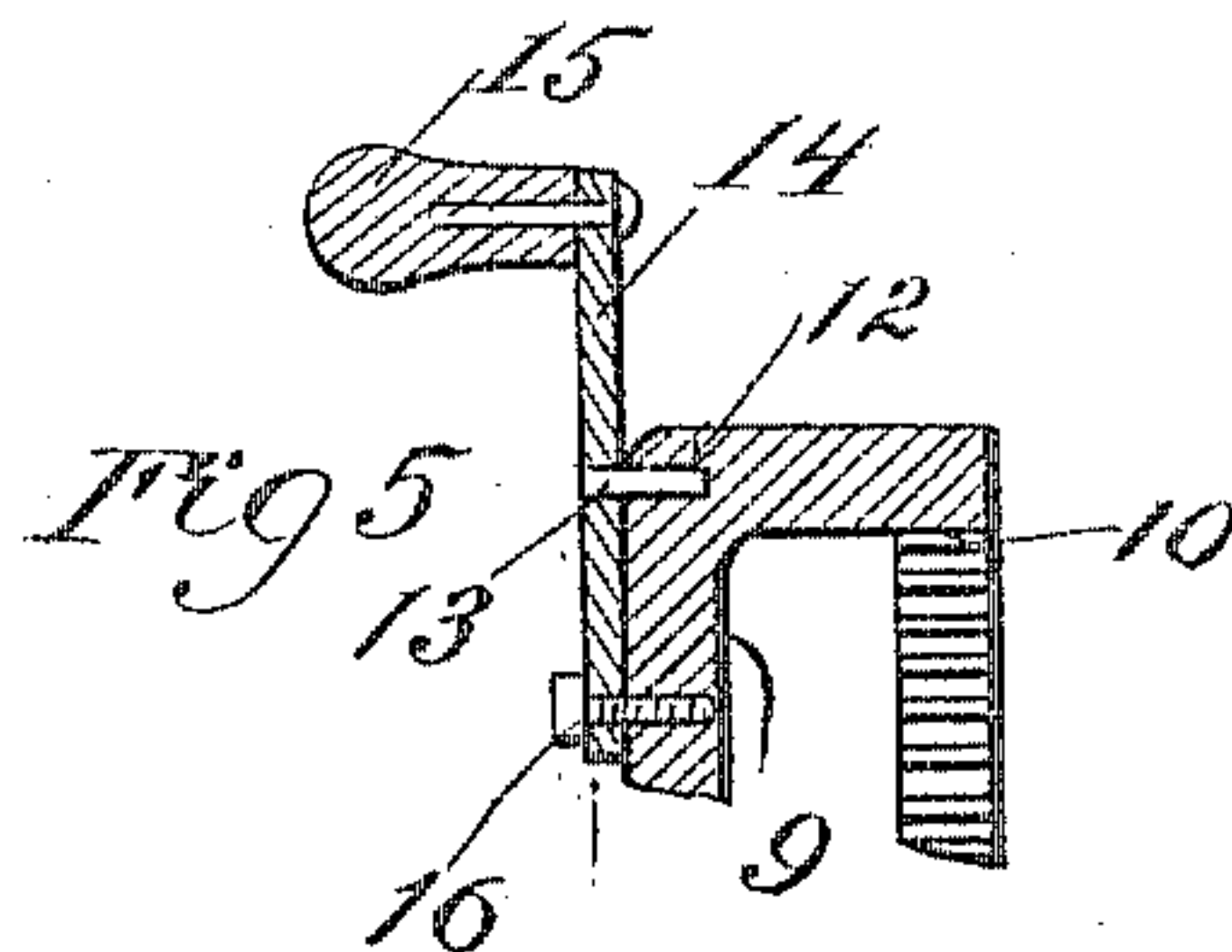
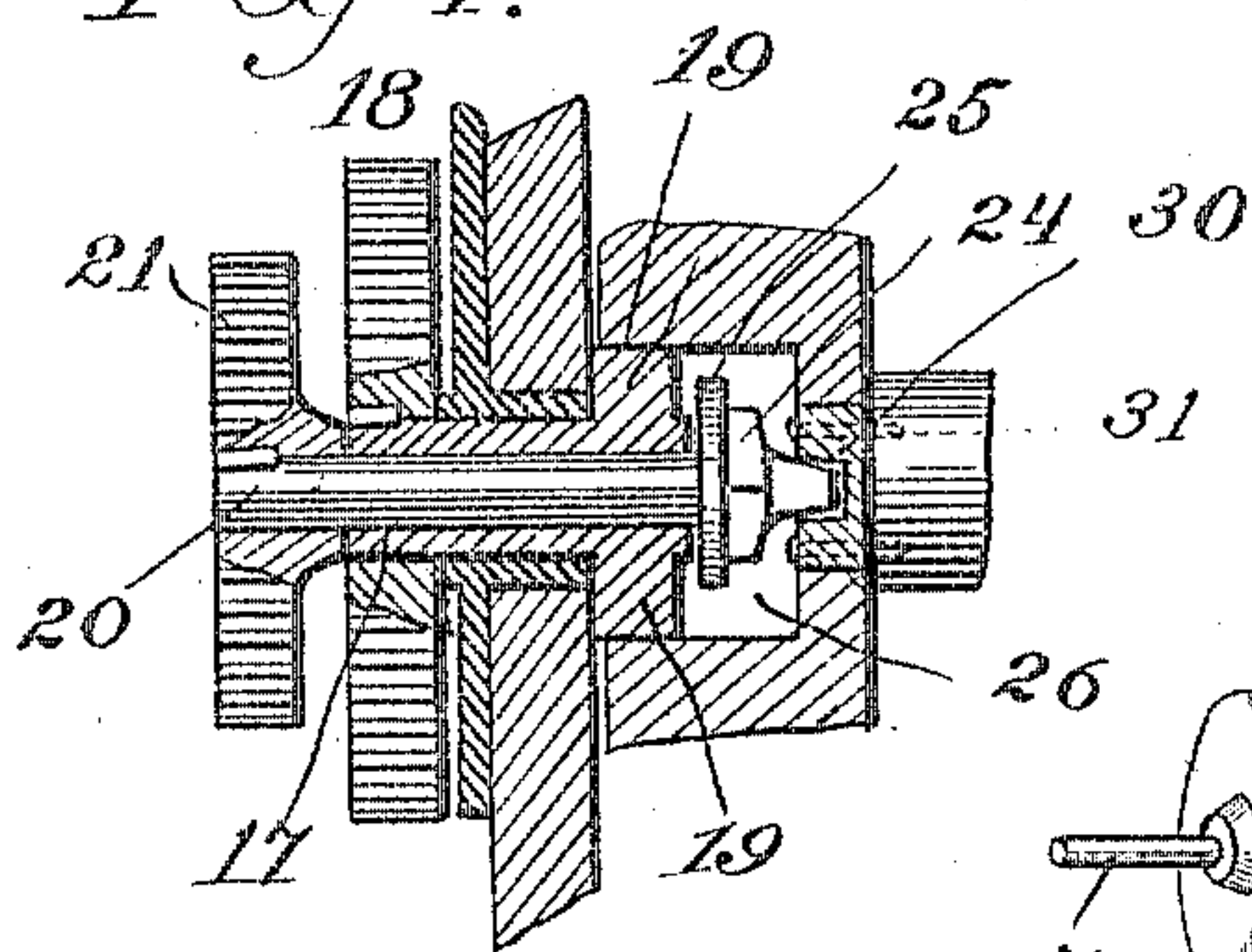
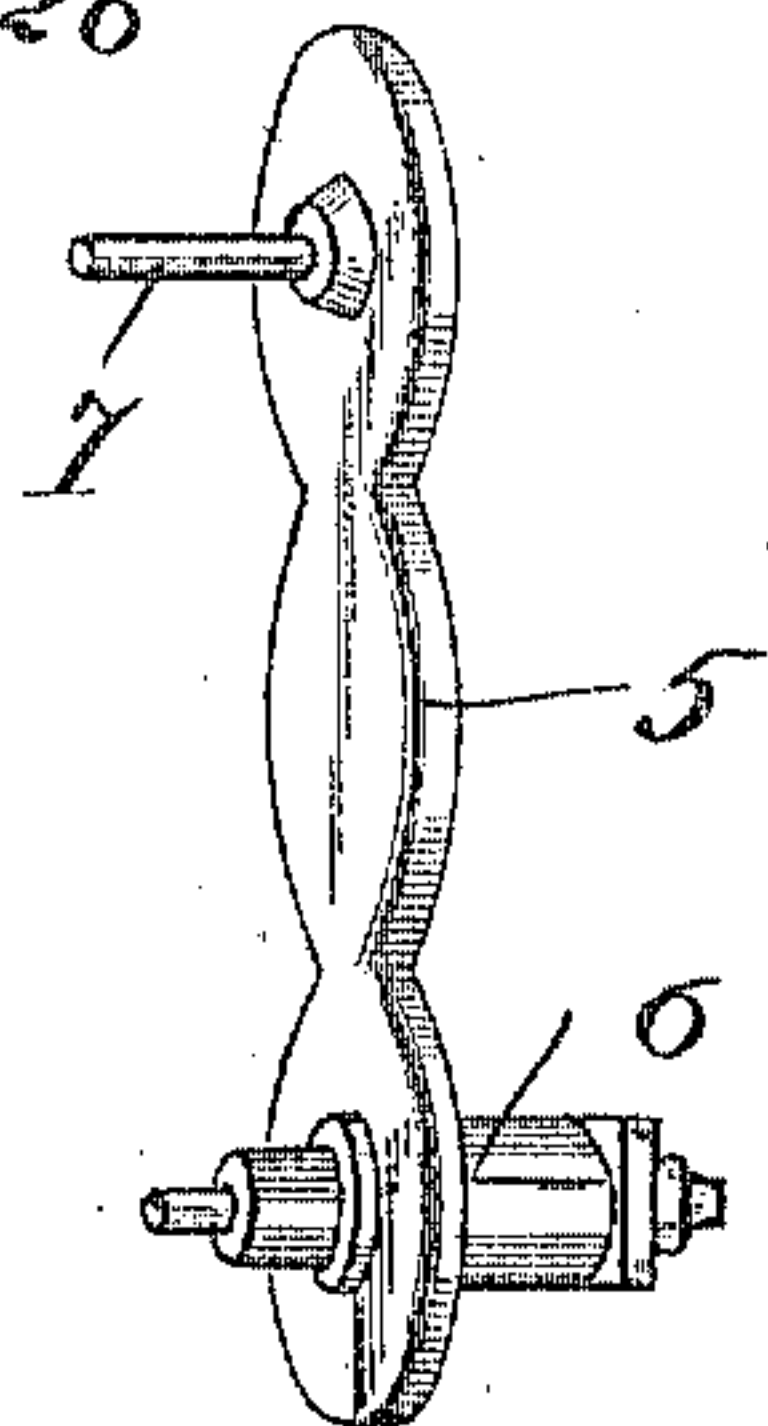


Fig 6.



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UNITED STATES PATENT OFFICE.

JOHN C. McVEY, OF KANSAS CITY, MISSOURI.

CHURN.

No. 816,992.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed January 27, 1904. Serial No. 190,800.

To all whom it may concern:

Be it known that I, JOHN C. McVEY, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented new and useful Improvements in Churns, of which the following is a specification.

This invention relates to churns.

The object of the invention is to improve the construction of such devices.

With the foregoing object in view the invention resides in the exact details of construction and in the precise combination of parts hereinafter described and specifically claimed.

Figure 1 is an end elevation of my improved churn. Fig. 2 is a central vertical longitudinal section therethrough. Fig. 3 is a vertical transverse section. Fig. 4 is an enlarged longitudinal section through the mechanism employed for transmitting rotary motion from the driving mechanism to the dasher. Fig. 5 is an enlarged section through a portion of one of the gears of the driving mechanism and showing the manner of connecting the crank thereto, and Fig. 6 is a perspective view of the supporting-plate of the driving mechanism.

Referring to the figures by numerals of reference, 1 is a receptacle having the bottom thereof preferably formed of a central horizontal portion 2 and inclined side portions 3, and this receptacle is supported by legs 4 and has a plate 5 secured to one end in any suitable manner. This plate is provided with a sleeve 6, which extends through one end of the receptacle 1. A stem 7 extends laterally from one end of the plate 5 and forms a bearing for a hub 8, from which extend arms 9, which are curved inward and formed integral with a ring 10, having teeth 11 upon its inner face. One of the arms 9 is recessed, as shown at 12, for the reception of a pin 13, which extends from a crank 14, provided with a handle 15. This pin is retained within the recess 12, preferably by means of a screw 16, which extends through crank 14 and into engagement with the arm 9.

Revolubly mounted within the sleeve 6 is a tubular stem 17, which is keyed or otherwise secured at its outer end to a gear 18, which meshes with the teeth 11 on ring 10. The inner end of the tubular stem 17 is formed integral with an angular head 19 for the purpose hereinafter more fully described. A rod 20 is revolubly mounted in stem 17 and has a

gear 21 keyed or otherwise secured to its outer end, and this gear meshes with teeth 22, formed upon a ring 23, which is integral with the arms 9, but in a plane removed from the ring 10. The inner end of rod 20 has a tapered angular head 24, which is preferably spaced from the stem 17 by a washer 25. This head, as well as head 19, is adapted to be seated within a recess 26, formed in one end of a rectangular frame 27, revolubly mounted within the receptacle 1. Head 19 fits snugly within said recess and is adapted to rotate the frame 27 therewith. The opposite end of the frame is supported by a shaft 28, which is revolubly mounted within the two ends of the frame and is supported at one end by a set-screw 29, and the other end is engaged by the head 24. Wear-plates 30 are detachably connected to the ends of shaft 28 and form bearings for the head 24 and the said screw 29. As shown by dotted lines in Fig. 4, these plates can be fastened in position by means of screws 31; but any other securing devices may be employed. The ends 32 of the frame 27 are beveled in opposite directions, as shown in Fig. 3, so that as the frame rotates the inclined inner faces of the ends 32 will be brought directly into contact with the liquid within the receptacle and will tend to throw it inwardly. The cross-bars 33 of the frame are also beveled so as to first present the inclined faces thereof to the liquid as the frame rotates, and thereby throw the liquid inward toward the center. Blades 34 extend from the shaft 28 and are inclined, so as to throw the contents of the receptacle laterally as the blades rotate.

To operate the churn herein described, the handle 15 is grasped and rotated so as to cause the two rings 10 and 23 to rotate in unison. The teeth on ring 10 will rotate the gear 18 in one direction, while the teeth on ring 23 will rotate the gear 21 in the opposite direction. As the heads 19 and 24 are connected to the gears 18 and 21, respectively, it will be understood that the parts engaged by these heads will rotate in opposite directions, thereby thoroughly agitating the contents of the receptacle. All of the parts of the churn can be readily detached and replaced, and by providing driving mechanism such as described a durable and effective device is produced.

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

In a churn, the combination of a recepta-

cle having a plate secured upon the exterior
of one of the end walls thereof, said plate be-
ing provided with an outwardly-projecting
integral stub-shaft and an inwardly-project-
5 ing sleeve extending through said wall, a tu-
bular stem revolubly mounted within the
sleeve and having a squared head at its inner
end, a rod revolubly mounted within the tu-
bular stem and having a rectangular head at
10 its inner end, a shaft journaled at one end
upon the casing and formed at its opposite
end with a socket receiving the head of the
rod, a dasher-frame revoluble on said shaft
and having a squared socket receiving the
15 squared end of the tubular stem, a small
gear-wheel upon the outer end of the rod, a
relatively larger gear-wheel upon the outer
end of the tubular stem and located between
said small gear-wheel and the plate and close
20 to the latter, and a drive-gear comprising a
hub mounted upon the stub-shaft and pro-
vided with radial arms having their outer
ends turned inward toward the receptacle, a

large toothed ring integral with the inbent
ends of the arms and meshing with the gear 25
on the tubular sleeve, a smaller toothed ring
integral with the arms and disposed thereon
between the hub and inturned ends, said
smaller ring being arranged in a plane out-
side the plane of the large toothed ring and 30
meshing with the gear on the rod, the arms
being curved outwardly beyond the small
toothed ring and their inbent outer ends to
form a space for the reception of the gear on
the rod, the construction being such that the 35
drive-gear incloses the associated shaft and
dasher-gears and mountings and lies in close
proximity to the wall of the casing, and a
crank fixed to one of the arms and its in-
turned portion, substantially as described. 40

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

JOHN C. McVEY.

Witnesses:

U. G. BROOKOVER,
LEE NORTH.