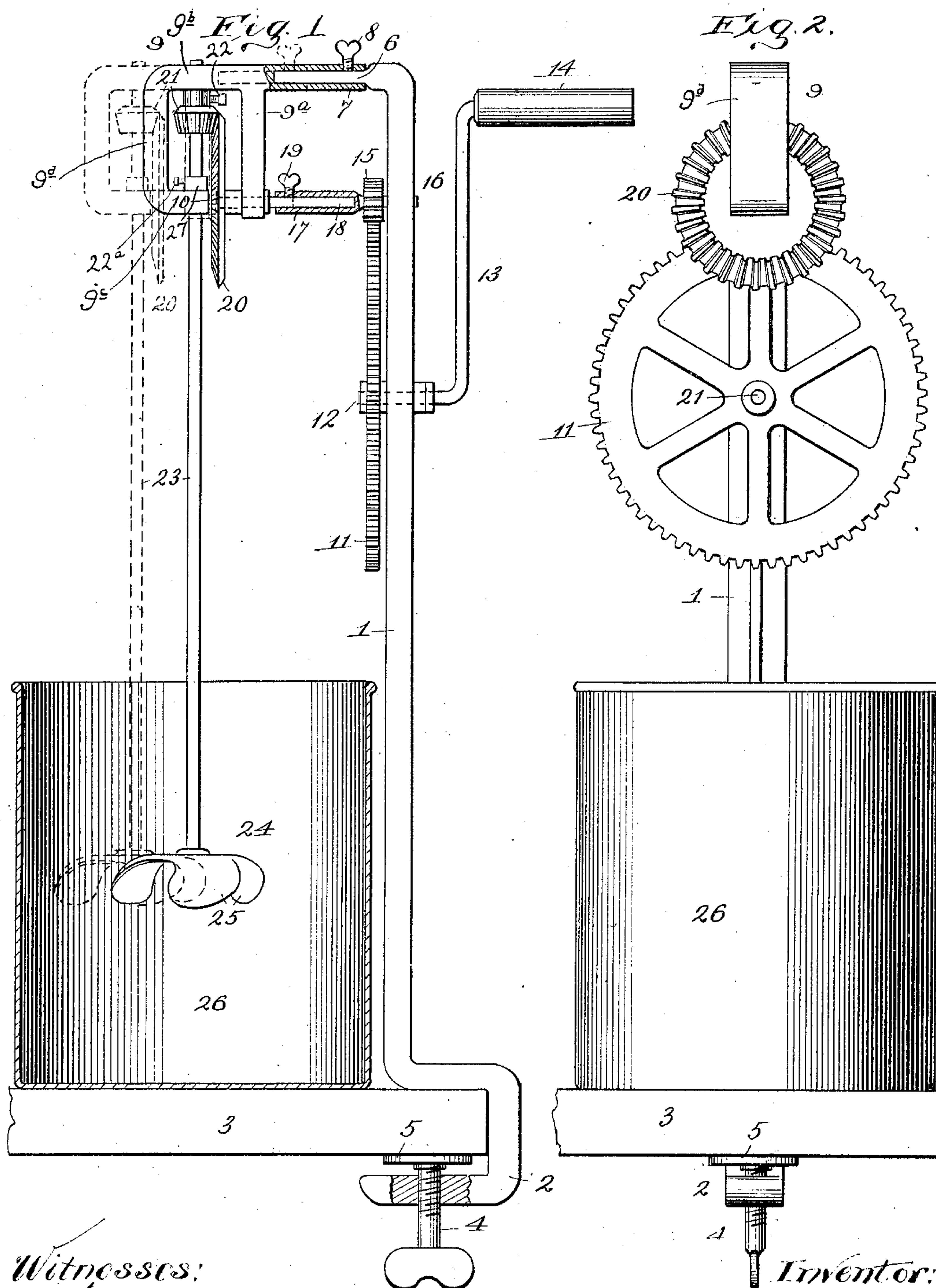


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J. F. SIMMONS.
CHURN DASHER OPERATING MECHANISM.

APPLICATION FILED JAN. 2, 1904.



Witnesses:
A. M. Arthur
J. Moore

Inventor:
John F. Simmons
By *F. G. Fischer* atty.

UNITED STATES PATENT OFFICE.

JOHN F. SIMMONS, OF DODGE CITY, KANSAS.

CHURN-DASHER-OPERATING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 789,763, dated May 16, 1905.

Application filed January 2, 1904. Serial No. 187,589.

To all whom it may concern:

Be it known that I, JOHN F. SIMMONS, a citizen of the United States, residing at Dodge City, in the county of Ford and State of Kansas, have invented certain new and useful Improvements in Churn-Dasher-Operating Mechanism, of which the following is a specification.

My invention relates to an improved churn-dasher-operating mechanism; and my object is to provide a mechanism of this character which may be adjusted to accommodate pails or cream-receptacles of different size.

The invention consists in a peculiarly-shaped dasher rigidly mounted upon a vertical shaft, an adjustable frame in which the upper portion of the dasher-shaft is journaled and whereby the dasher is adjusted laterally to accommodate pails of different diameter, and gearing arranged to rotate the dasher-shaft at a high rate of speed.

In order that the invention may be readily understood, reference will now be made to the accompanying drawings, in which—

Figure 1 represents a front elevation, partly in section, of the mechanism in an operative position. Fig. 2 is a side elevation of the same with the dasher and shaft removed.

In carrying out the invention I employ a standard 1, U-shaped at its lower portion 2 for engagement with the edge of a table or other support 3, to which it is reliably secured by a thumb-screw 4, having an enlarged swiveled head 5 for contact with the underside of support 3. The upper end of the standard is provided with a reduced right-angular extension 6, which is adjustably engaged by a sleeve 7, adapted to be locked at any point of adjustment by a thumb-screw 8, arranged near its inner end and adapted to contact with the right-angular portion 6.

9 is a rectangular frame comprising an upper horizontal member 9^b, formed integral with the outer end of the sleeve, the latter thus forming a projection of the frame, a lower horizontal member 9^c, having an opening 10 at its lower inner corner, and upright side members 9^a and 9^d, connecting the two horizontal members.

11 designates a master-wheel rigidly mount-

ed upon the inner end of a stub-shaft 12, journaled in standard 1 and provided with an integral crank 13, having a handle 14 at its opposite outturned end. Master-wheel 11 meshes with and drives a small pinion 15, rigidly mounted upon a horizontal shaft 16, formed integral at its inner end with a sleeve 17, in which one end of a shaft 18 is adjustably arranged. Sleeve 17 and shaft 18 thus form sections of a telescoping shaft connecting the master-wheel and the dasher-shaft. It is therefore possible to adjust the dasher-shaft without moving the master-wheel and crank-shaft. Moreover, the intermediate connection serves as a train to produce a high rate of speed at the dasher. Shaft 18 is locked at any point of adjustment in the sleeve by a thumb-screw 19 and journaled in the depending arm 9^a of frame 9. It is provided at its outer end with a large rigidly-mounted bevel gear-wheel 20, extending through opening 10 and intermeshing with a small bevel-gear 21, provided with a set-screw 22, whereby it is rigidly secured to the vertical dasher-shaft 23, journaled at its upper portion in both the horizontal members of frame 9. The lower end of shaft 23 is provided with a horizontal dasher 24, consisting of a plurality of curved blades 25.

As shown in Fig. 2, member 9^d forms a guard preventing the operator or others from coming in contact with the meshing gears on the dasher and telescopic shafts, which are located within the rectangle formed by the members of the frame. Member 9^d is also useful as a handle in adjusting the frame laterally on the standard.

In operation dasher 24 is adjusted laterally to the center of the pail or receptacle 26 by loosening thumb-screws 8 and 19 and shifting the rectangular frame 9 laterally to the desired position, where it is reliably locked by tightening said thumb-screws. The dasher and its shaft may be adjusted vertically by loosening set-screws 22 and 22^a, so the shaft may be shifted up or down without disturbing bevel-gear 21 and the supporting-collar 27. None of these operations, however, affect the master-gear and crank, which always occupy the same positions with reference to the

standard. It is to be noted that the master-gear always rotates in the same plane, but that the telescopic shaft can be adjusted without throwing the master-gear and small gear
5 15 out of mesh.

From the above description it is apparent that I have produced a churn-dasher-operating mechanism which is simple in construction, can be readily adjusted, and is thoroughly
10 effective for the purpose intended.

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

1. In a device of the character described,
15 the combination with a standard, a frame laterally slidable thereon, an upright dasher-shaft journaled in the frame, and a small gear on said shaft; of a horizontal telescopic shaft of which one section is mounted in the frame
20 and the other is mounted in said standard, a large gear at one end thereof meshing with the gear on the dasher-shaft, a small gear at the other end of the telescopic shaft, and a driving-wheel larger than all said gears mounted
25 ed on the standard and connected with the small gear on the telescopic shaft.

2. In a device of the character described, the combination with a standard, a frame laterally slidable thereon, an upright dasher-
30 shaft journaled in the frame, and a small gear on the shaft; of a horizontal shaft-section journaled in the frame, a large gear on the section meshing with the gear on the dasher-shaft, a second horizontal shaft-section journaled in
35 the standard, a small gear on said second section, said shaft-sections being slidably connected, and a driving-wheel larger than all said gears mounted on the standard to rotate in one
40 plane only, and meshing with the gear on the second shaft-section.

3. In a device of the character described, the combination with a standard having a right-angular extension at its upper end, a frame having a projection telescopically connected with the right-angular extension, an up-
45 right dasher-shaft journaled in the frame, and a small gear on the shaft; of a horizontal shaft-section journaled in the frame, a large gear on the shaft-section meshing with the gear on the dasher-shaft, a second horizontal shaft-section
50 journaled in the standard, a small gear on said second section, said shaft-sections being telescopically connected, and a driving-wheel larger than all said gears meshing with the gear on the second shaft-section and operat-
55 ing in one plane only.

4. In a device of the character described, the combination with a standard, a driving-wheel mounted on the standard, an upright dasher-shaft, a gear at the upper end thereof;
60 a horizontal telescopic shaft, and gears thereon meshing respectively with the driving-wheel and the gear on the dasher-shaft; of a rectangular frame comprising an upper horizontal member slidably mounted on the stand-
65 ard, a lower horizontal member, the dasher-shaft being journaled in both said members, an inner upright side member in which is journaled the telescopic shaft, and an outer upright side member connecting the two hori-
70 zontal members and constituting a shield, the meshing gears on the dasher and telescopic shaft being located within the rectangle formed by all said members.

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

JOHN F. SIMMONS.

Witnesses:

FRANCES WRIGHT,
CLARA PFAFF.