

(No Model.)

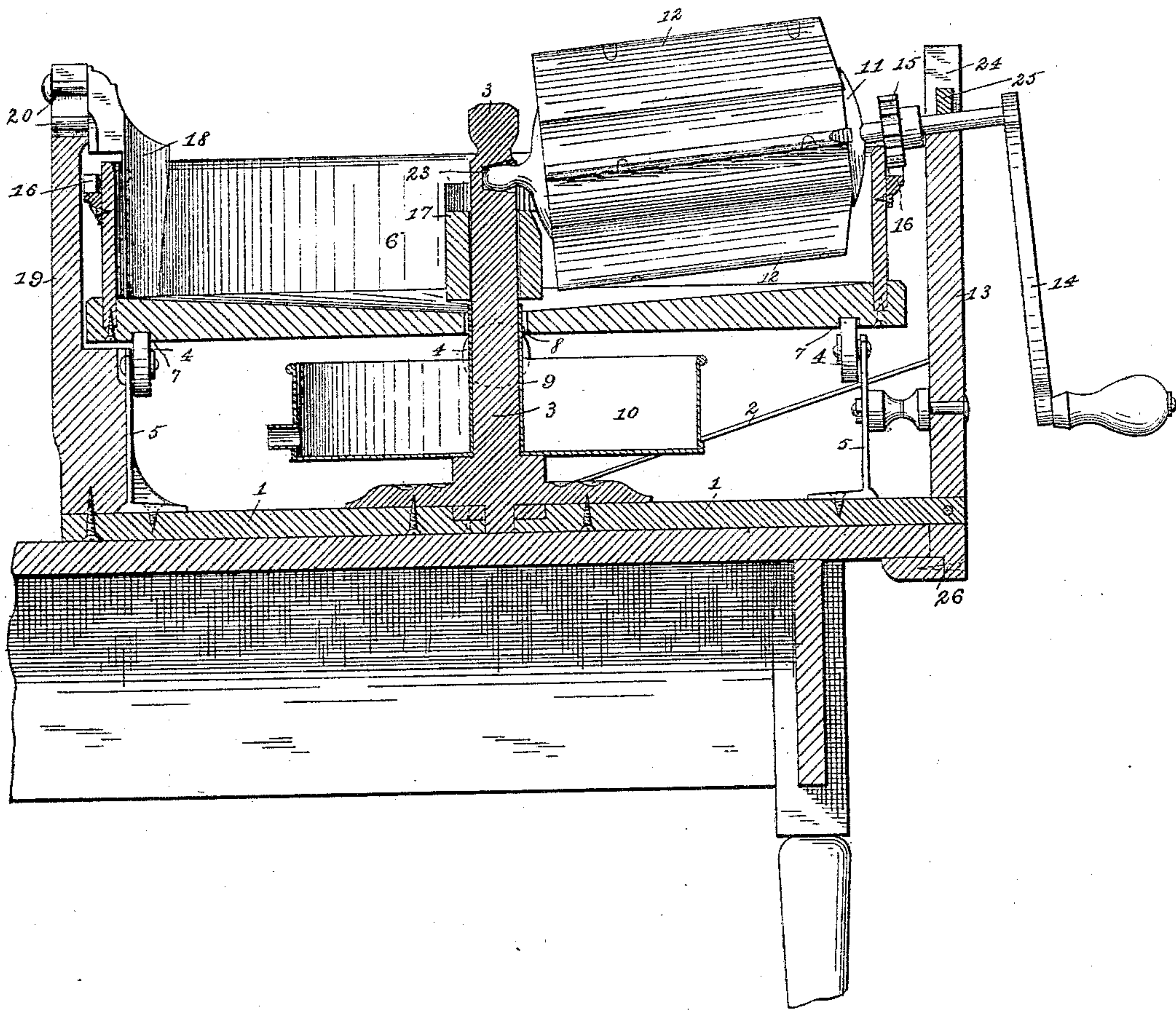
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B. B. BEERS.
BUTTER WORKER.

No. 359,954.

Patented Mar. 22, 1887.

Fig. 1.



Witnesses:
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C. E. Ruggles

Inventor:
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att'y.

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Fig. 2.

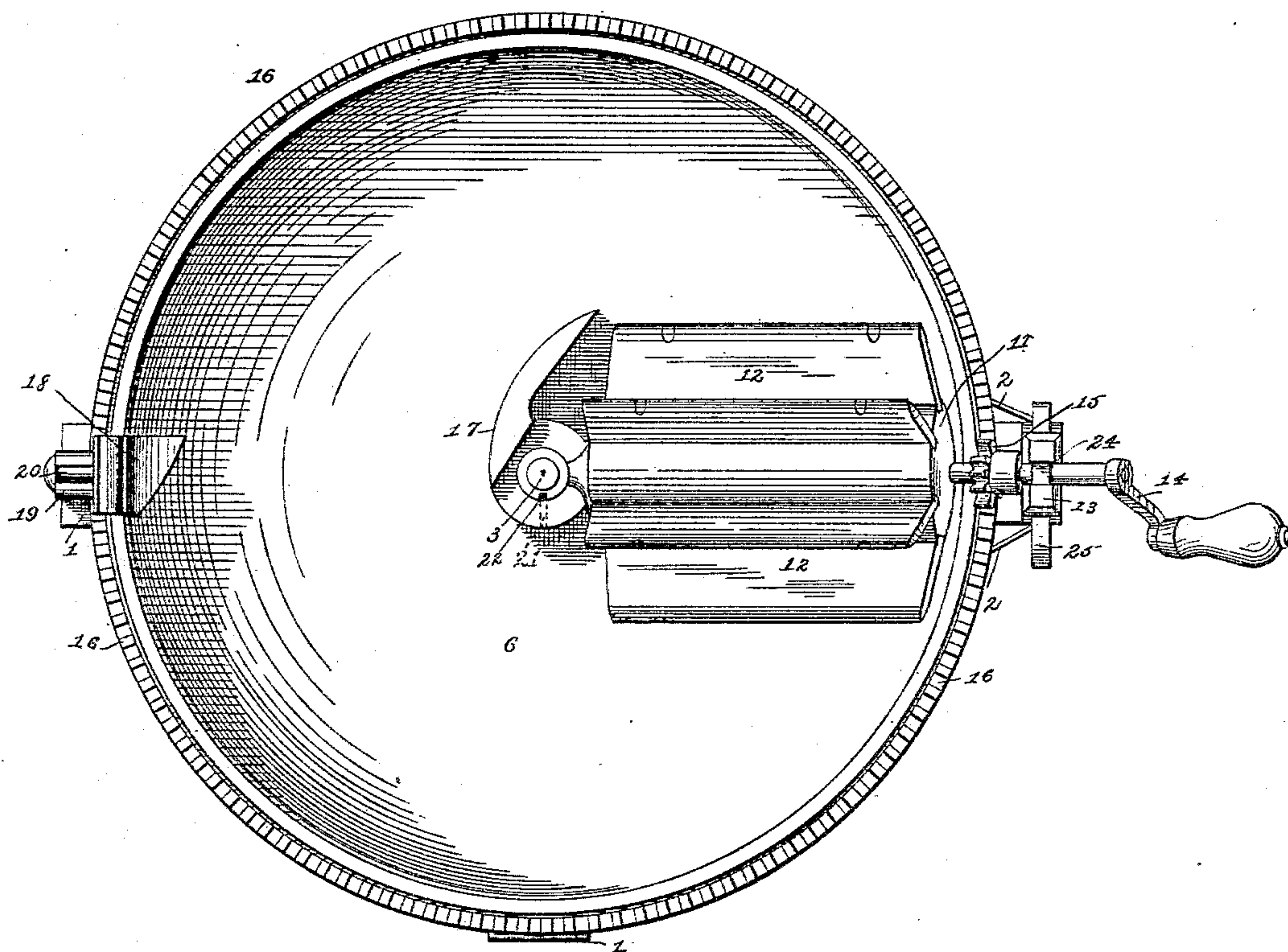
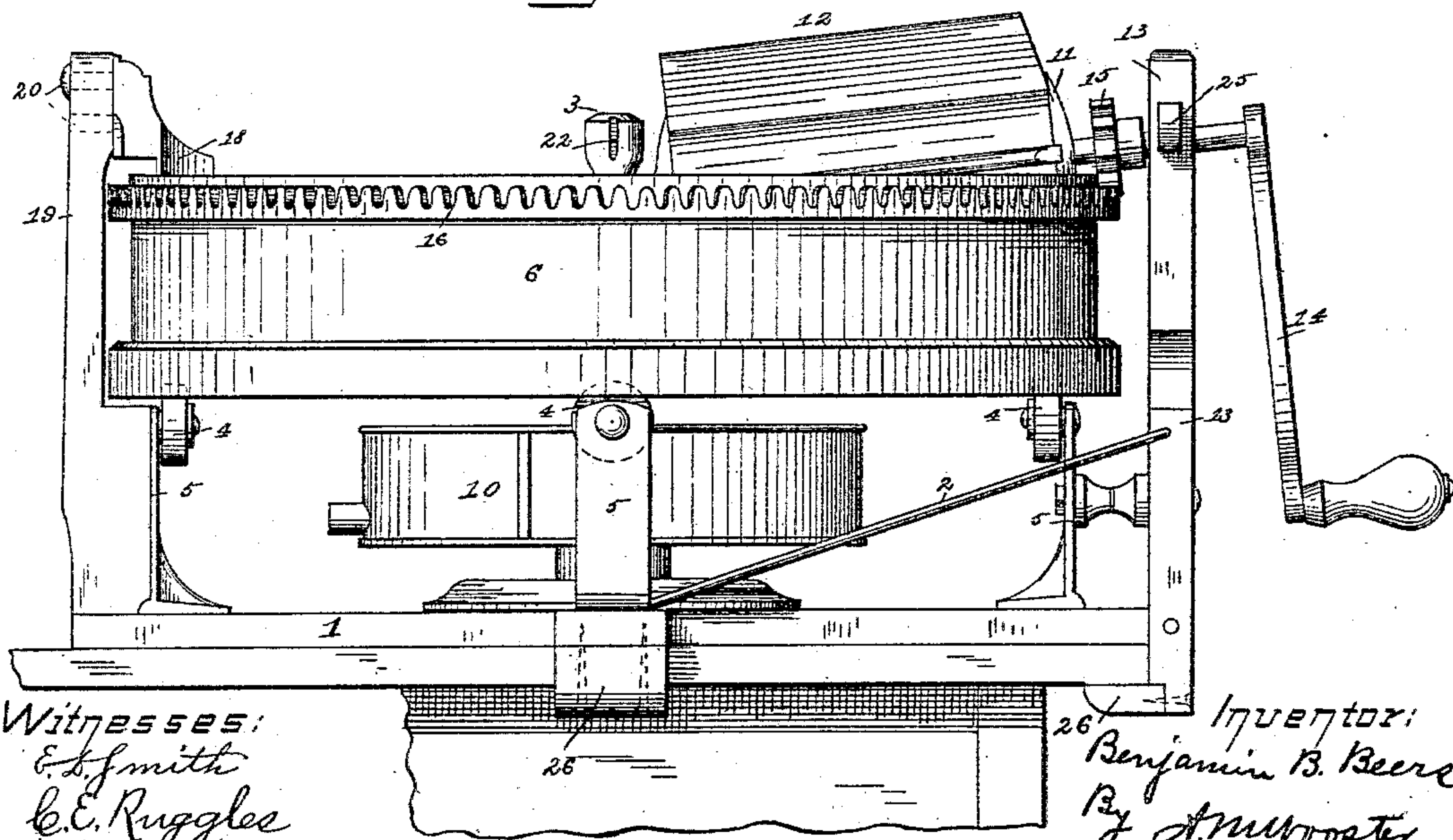


Fig. 3.



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UNITED STATES PATENT OFFICE.

BENJAMIN B. BEERS, OF BRANCHVILLE, CONNECTICUT, ASSIGNOR OF ONE-HALF TO NATHAN COUCH, OF SAME PLACE.

BUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 359,954, dated March 22, 1887.

Application filed September 1, 1886. Serial No. 212,369. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN B. BEERS, a citizen of the United States, residing at Branchville, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Butter-Workers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to simplify, strengthen, and cheapen the construction of this class of machines, and at the same time to greatly improve their mode of operation. With these ends in view I have devised the novel construction of which the following description, in connection with the accompanying drawings, is a specification, numbers being used to indicate the several parts of the machine.

Figure 1 is a central section of the device complete, showing the manner in which it is attached to the table; Fig. 2, a plan view, and Fig. 3 is a side elevation.

1 denotes the frame-work; 2, braces for holding the parts firmly together; 3, a central standard firmly secured in the frame-work; 4, carrying-rollers journaled on pins projecting from brackets 5, and 6 a circular trough or table which rests upon the carrying-rollers. Any number of carrying-rollers may be used, although in practice I have found four to be quite sufficient. I preferably provide the trough or table with a circular groove, 7, near its outer edge, in which the rollers rest. The bottom of the circular trough or table is preferably inclined toward the center, as clearly shown in Fig. 1, in order to permit the buttermilk to pass off as fast as it is worked out from the butter. At the center of the trough or table is an opening, 8, through which the central standard passes, and also a central sleeve, 9, which projects upward from the center of the receiving-tank 10. The sleeve passes over the standard and fits it closely, and projects up above the bottom of the trough, there being ample space between the sleeve and the edge of opening 8 to permit the buttermilk to run through. It will thus be seen that all of the escaping buttermilk must pass down outside of

the sleeve and into the tank. The tank is held firmly in position by the central standard, but is readily removable. The sleeve prevents any of the buttermilk from running down the standard, and thus smearing the whole machine. 11 is a roller having working-blades 12. The inner end of this roller is journaled in the central standard, and the outer end in a standard, 13. At the outer end of the roller-shaft is a crank, 14. Rotary motion is imparted to the trough by a pinion, 15, on the roller-shaft, which engages a circular rack, 16, upon the trough. In practice I preferably make the working-blades of even width from end to end, and so arrange the roller that the edges of the blade are substantially parallel with the inclined bottom of the trough, as is clearly shown in Fig. 1, it being of course necessary that the outer end of the roller should be journaled considerably higher than the inner end. As the mass of butter passes under the roller the working-blades press out the buttermilk, and of course spread out the mass in all directions.

As it is desirable that the position of the mass should be changed as much as possible during each revolution of the trough, so that the blades will not strike in the same place every time, I have provided a guard, 17, which is carried by the central shaft, and a guard, 18, carried by a standard, 19, diametrically opposite to standard 13. The action of these two guards is to pile up the mass of butter midway between the central standard and the outer edge of the trough, so that each time it passes under the roller the blades act in a different place. Both of these guards are made readily detachable, guard 18 being secured by pins 20, which engage a slot in the top of standard 19, and guard 17 being adapted to slip on over the central standard, a pin, 21, engaging a groove, 22, in the standard, so that the guard is prevented from turning.

One of the most valuable features of my improved machine is its cleanliness and the ease with which all of the parts may be removed in order to be washed. In use there is no spattering whatever, the butter coming in contact only with the roller, the trough, and the guards, and the construction being such that the buttermilk is all caught by the tank and does not run all over the machine. The roller is jour-

naled in the simplest manner possible. The inner end is engaged in an opening, 23, in the central standard, and the outer end of the shaft rests in a groove, 24, in standard 13, a cross-pin, 25, holding the shaft firmly in position in the groove.

In order to remove the roller, it is simply necessary to withdraw the pin and lift it out. Guard 18 is removed by simply lifting pins 20 out of the slot. As soon as the roller is removed guard 17 may be lifted off from the central standard, likewise the trough, and then the receiving-tank, which rests upon a projection or support at the bottom of the central standard.

Heretofore, so far as I am aware, butter-workers of this class have either been provided with legs or standards for supporting them, or else with clamping devices with which they have been secured to a table. I wholly do away with standards and clamping devices, and provide for holding the machine upon the table by means of two inwardly-turned clips, 26, which are placed at the outer ends of two of the cross pieces of the frame-work next to each other—that is, so that the clips will face inward at right angles to each other.

The device is simply placed on the corner of the table and pushed forward until the two clips engage the two angles of the table-edge, as clearly shown in Fig. 3. One of these clips is of course placed at the same side of the machine as the crank, so that when the machine is in use the action is to press the machine farther on the table, rather than to draw it off. I have found in practice that this simple means of holding the machine in place is as perfect in operation as could be desired.

It will of course be understood that the details of construction may be considerably varied without departing from the spirit of my invention.

I claim—

1. The central standard having groove 22, the rotating trough or table having a central opening, and the working-roller, in combination with the receiving-tank having a central sleeve adapted to pass over the standard and project through and above the bottom of the trough, and a detachable guard having a pin engaging the groove, whereby the butter is thrown away from the central opening.

2. The central standard having a groove, 22, and an opening, 23, in combination with trough 6, adapted to rotate about said standard, a roller having working-blades journaled in said standard and in a standard, 13, and a guard, 17, having a pin engaging groove 22, as described, and for the purpose set forth.

3. The combination, with the central standard having groove 22, standard 19, having a slot at its top, the rotating trough, and the worker, of a guard, 17, carried by the central standard and having a pin engaging groove 22, and a guard, 18, having pins 20, which engage the slot in standard 19, as and for the purpose set forth.

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

BENJAMIN B. BEERS.

Witnesses:

CHAS. L. COUCH,
L. L. VALDEN.