

No. 673,198.

Patented Apr. 30, 1901.

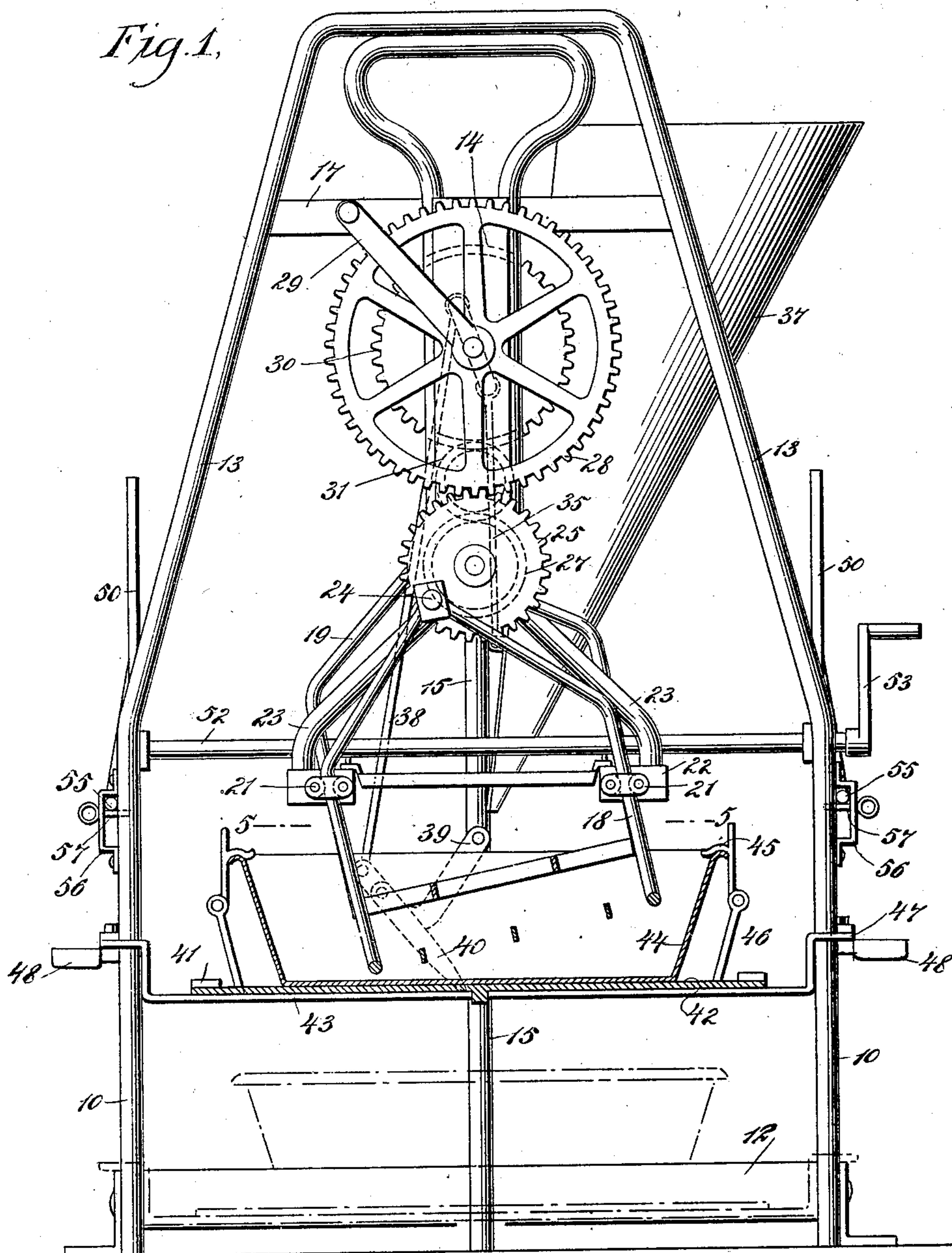
S. H. COOMBS.

BATTER MIXER.

(Application filed Sept. 1, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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Fig. 2.

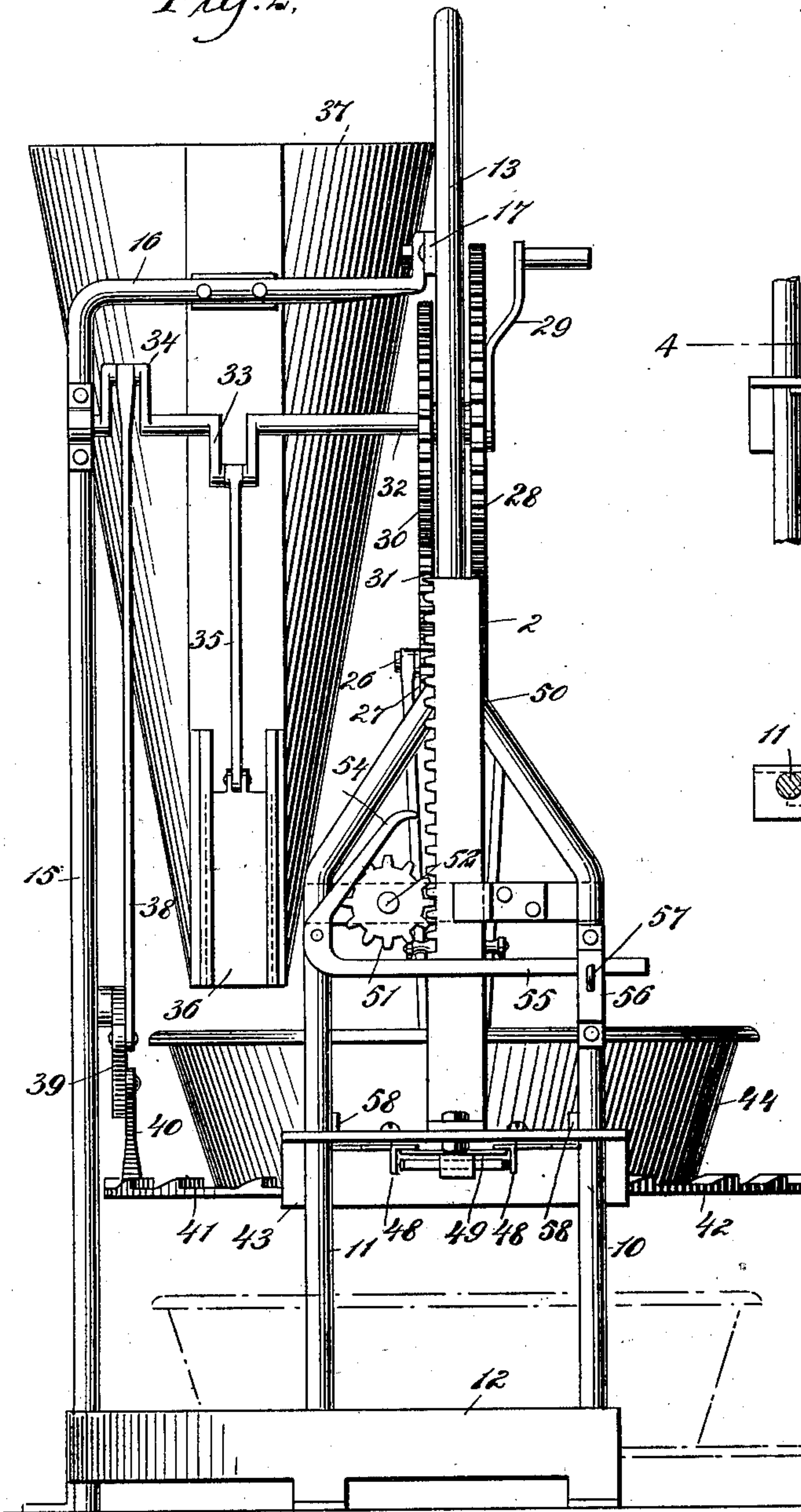


Fig. 3.

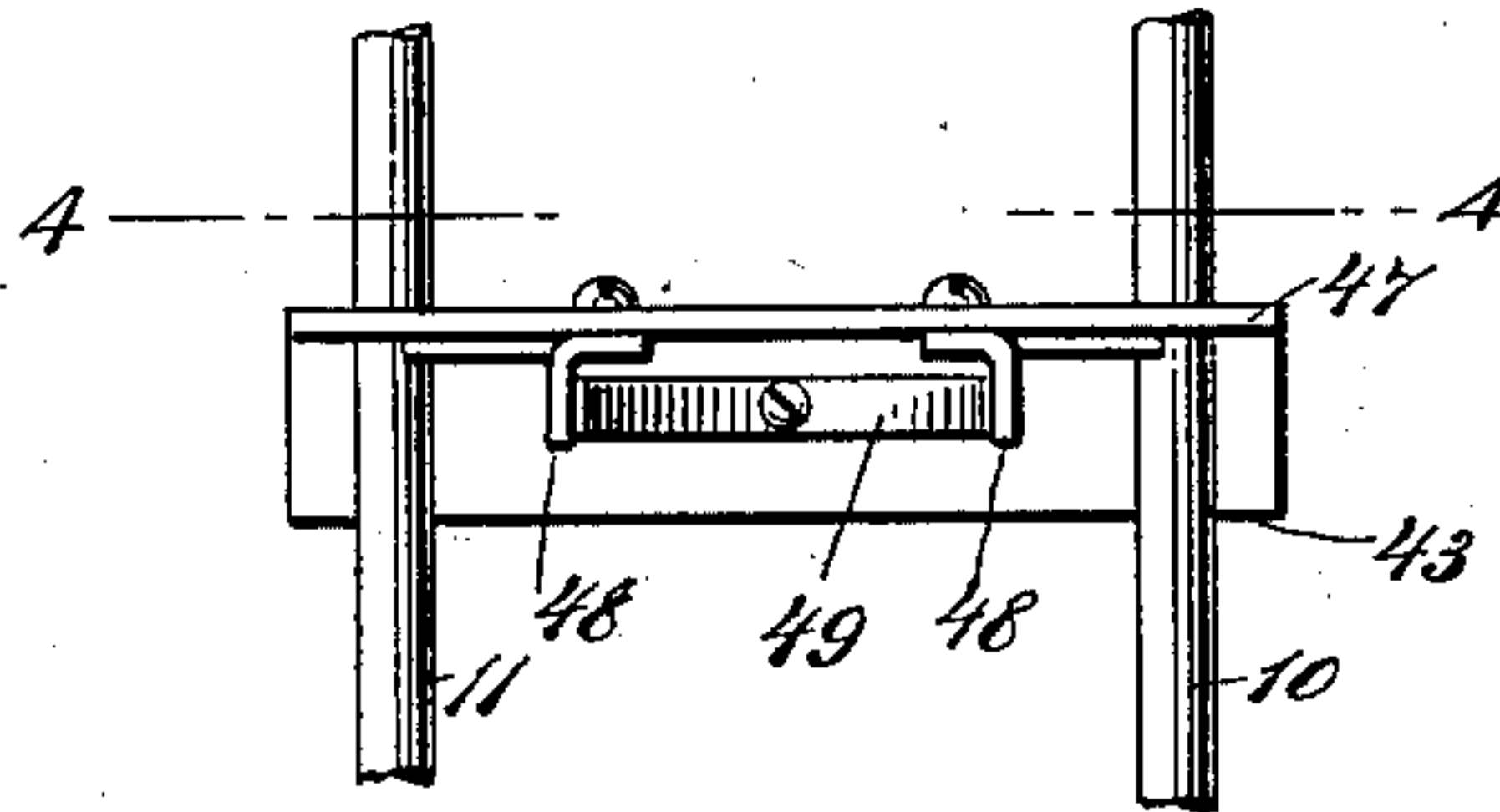


Fig. 4.

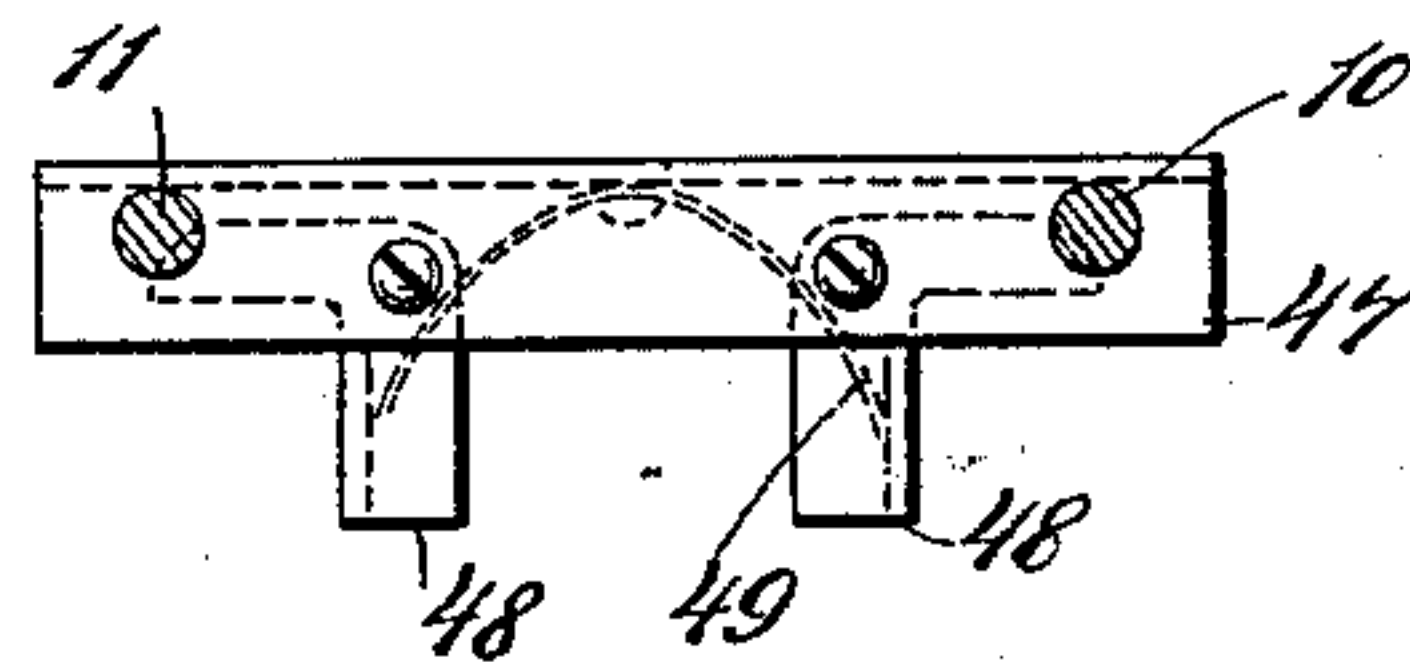
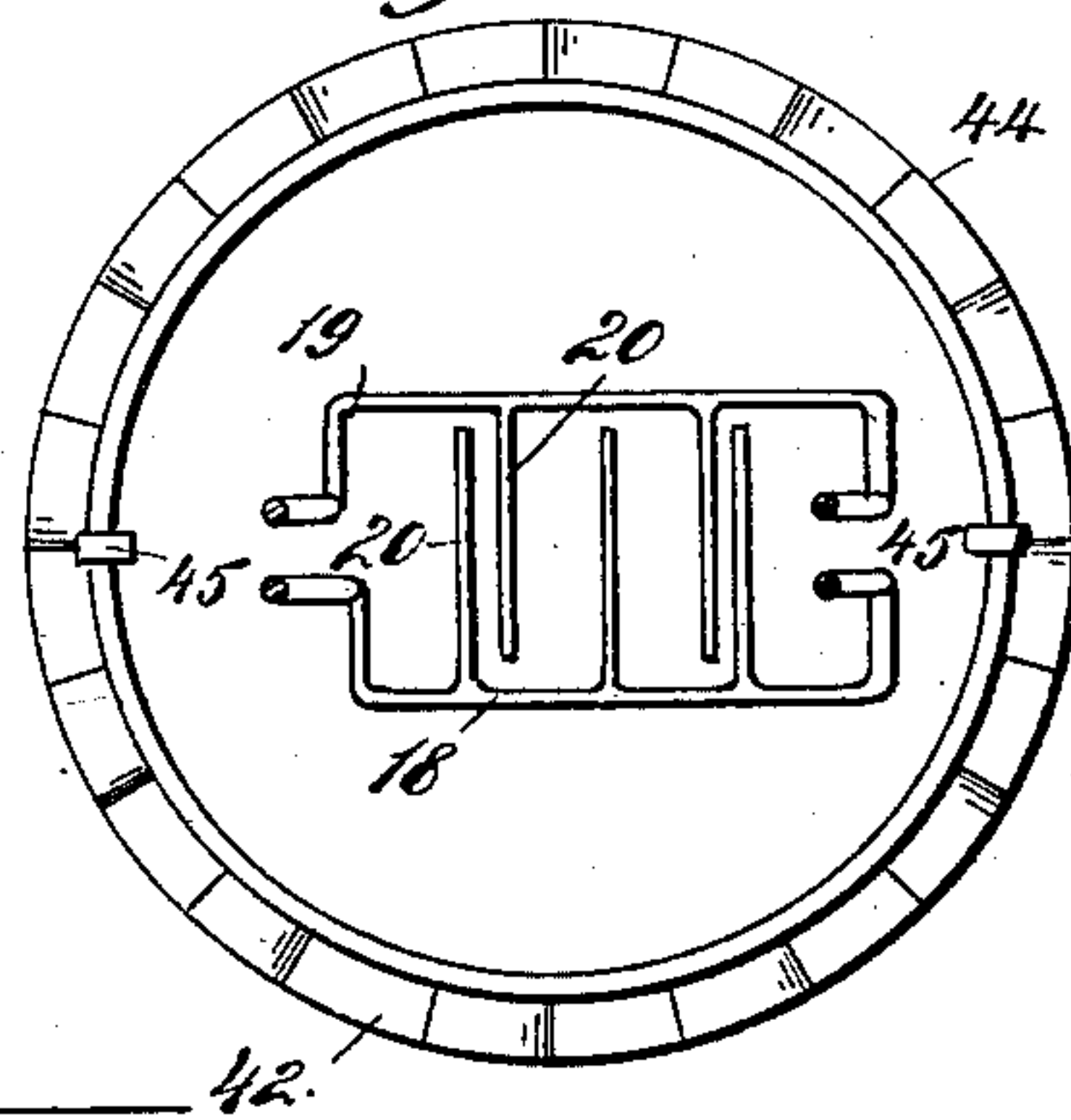


Fig. 5.



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UNITED STATES PATENT OFFICE.

STEPHEN H. COOMBS, OF HELENA, MONTANA.

BATTER-MIXER.

SPECIFICATION forming part of Letters Patent No. 673,198, dated April 30, 1901.

Application filed September 1, 1900. Serial No. 28,769. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN H. COOMBS, a citizen of the United States, and a resident of Helena, in the county of Lewis and Clarke and State of Montana, have invented certain new and useful Improvements in Batter-Mixers, of which the following is a full, clear, and exact description.

This invention relates to improvements in machines for mixing batter or the like; and the object is to provide a machine of this character adapted for household use as well as for use in bakeries, hotels, restaurants, and the like and with which the ingredients of the batter may be quickly and thoroughly mixed.

I will describe a batter-mixer embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a partial front elevation and partial section of a batter-mixer embodying my invention. Fig. 2 is a side elevation. Fig. 3 is a side view showing a table-holding device employed. Fig. 4 is a plan view, parts being in section, on the line 4 4 in Fig. 3; and Fig. 5 is a section on the line 5 5 in Fig. 1.

The frame of the machine comprises side standards 10 and 11, extended upward from a base 12, and from these side standards uprights 13 project and are connected at the top, and connected to the uprights 13 is a block 14. Extended upward from the rear portion of the base 12 is an upright 15, having at its upper end a portion 16, extended toward the front of the machine and connected to a cross-bar 17, attached to the uprights 13. While I have particularly described the construction of frame here shown, it is to be understood that the form thereof may be considerably varied or modified without departing from the spirit of my invention.

The mixing or stirring devices consist of yokes 18 and 19, having at their lower ends transverse fingers 20, and the vertical portions of these yokes are movable between guide-rollers 21, attached to blocks 22, secured to the lower end of divergent arms 23, depending from the block 14. These mixing

devices are intended to have both a vertical and a sidewise movement and move longitudinally in opposite directions. The upper portion of the yoke 18 is connected to a crank-pin 24 on a pinion 25, while the upper portion of the yoke 19 is attached to a crank-pin 26 on a pinion 27. The pinion 25 meshes with a driving-gear 28, having a crank-handle 29, and on the shaft of this gear-wheel 28 and having a bearing in the block 14 is a driving-gear 30, engaging with a pinion 31, which meshes with the pinion 27. By this arrangement of gearing the mixing devices are moved in opposite directions one relatively to the other.

The shaft 32 of the driving-gears 28 and 30 has cranks 33 and 34, and from the crank 33 a rod 35 extends to a connection with a valve or sliding bar 36, which controls the outlet of a hopper 37. From the crank 34 a rod 38 extends to a connection with an angle-lever 39, having one of its members pivotally connected to the upright 15, and carried by the other member and to which the rod 38 is attached is a pawl 40, adapted to engage with the teeth 41 of a ratchet-wheel 42, mounted to rotate on a table or platform 43. At its center this ratchet-wheel 42 has a lug which extends into an opening in the table or platform 43, as plainly indicated in Fig. 1.

Removably supported on the top of the wheel 42 is a receiving-pan 44. The pan is held in place on the wheel by means of hook-latches 45 engaging over the top of the pan, said hook-latches being pivoted to posts 46, attached to the ratchet-wheel. The table or platform carrying the ratchet-wheel and pan is movable vertically on the frame portions 10 and 11. As here shown, this table or platform has outwardly-projecting flanges 47, having openings through which said frame-uprights pass. As a means for holding the table or platform as adjusted I may employ gripping devices, here shown in the form of angle-levers 48, pivoted to the under side of the flanges 47, and between the outwardly-extended members of these angle-levers or clutches a spring 49 is arranged. These springs 49 serve to press the inner ends of said angle-levers or clutches against the frame portions 10 and 11. When it is desired to lower the table or platform, the outwardly-extended

members of the clutching devices or angle-levers are pressed together, so as to release the devices from said frame members.

In large machines I intend to employ a mechanical means for raising and lowering the table or platform. This means, however, will not be required in small machines. The raising and lowering device consists of racks 50, extended upward from the ends of the table or platform and engaged by pinions 51 on a shaft 52, which has a crank-handle 53 at one end. As a further means for holding the table or platform in its elevated position, and especially on large machines, I may employ locking-levers, each having a section 54 for engaging with the teeth of the racks and having a handle portion 55, extended through a loop 56, attached to the frame member 10, the said locking-lever being pivoted to the frame member 11. The end 54 of the locking-lever may be held out of engagement with the rack by raising the handle and passing a pin 57 through the same. When the ends 54, however, are in engagement with the racks for supporting the table, the said pin should be placed above the handle when it is moved downward.

In operation the ingredients of the batter are to be placed in the hopper 37. Then the table or platform carrying the pan is to be moved upward until it reaches a position where the pawl 40 can reach the teeth 41 of the ratchet-wheel 42. This upward movement may be determined or limited by stop-blocks 58 on the frame. Upon rotating the shaft 32 the mixing devices will be operated as before described and the valve 36 will be alternately moved to its closing and opening position, thus permitting the material to discharge in small quantities from the hopper into the pan. While the mixer is thus operating the angle-lever 39 will be rocked, causing the pawl 40 to successively engage the teeth 41 and impart a step-by-step rotary motion to the ratchet-wheel 42. After the batter shall have been thoroughly mixed the table or platform is to be lowered and the pan removed.

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

1. A machine for mixing batter or the like, comprising a frame, a stirrer or mixer supported in said frame, means for causing movements of said stirrer or mixer, a support for

a pan, and means for causing a step-by-step rotary motion of said support, substantially as specified.

2. A machine for mixing batter or the like, comprising a frame, a stirrer supported in said frame, a support for a pan mounted to rotate in the frame, means for causing movements of the stirrer and also for rotating said support, a hopper, a valve for controlling the outlet of said hopper, and means for alternately opening and closing said valve, substantially as specified.

3. In a machine for mixing batter or the like, a frame, a pair of mixing devices supported in said frame, means for causing a vertical and swinging motion of said mixing devices, a table adjustable vertically in the frame, a ratchet-wheel mounted to rotate on said table and adapted to support a pan, and a pawl engaging with said ratchet-wheel and operated from a crank-shaft of the machine, substantially as specified.

4. A machine for mixing batter or the like, comprising a frame, mixing devices operating in said frame, a table adjustable on the frame, and spring-pressed angle-levers pivoted to the table and adapted to engage with the frame to hold the table as adjusted, substantially as specified.

5. A machine for mixing batter or the like, comprising a frame, standards mounted in said frame, a table or platform for supporting a pan, said table or platform being movable vertically in the frame, racks extended from said table or platform, pinions engaging with said racks, and a shaft on which said pinions are mounted, substantially as specified.

6. In a machine for mixing batter or the like, a frame, standards mounted in the frame, a table or platform supported by the frame, a ratchet-wheel mounted to rotate on said table or platform, latch-hooks mounted to swing relatively to said ratchet-wheel and adapted to engage with a pan supported on the ratchet-wheel, and means for imparting rotary motion to the ratchet-wheel, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

STEPHEN H. COOMBS.

Witnesses:

JNO. M. RITTER,
C. R. FERGUSON.