(No Model.)

A. C. MITCHELL.

MIXER OR BEATER.

No. 519,584. Patented May 8, 1894.

Fig. 1

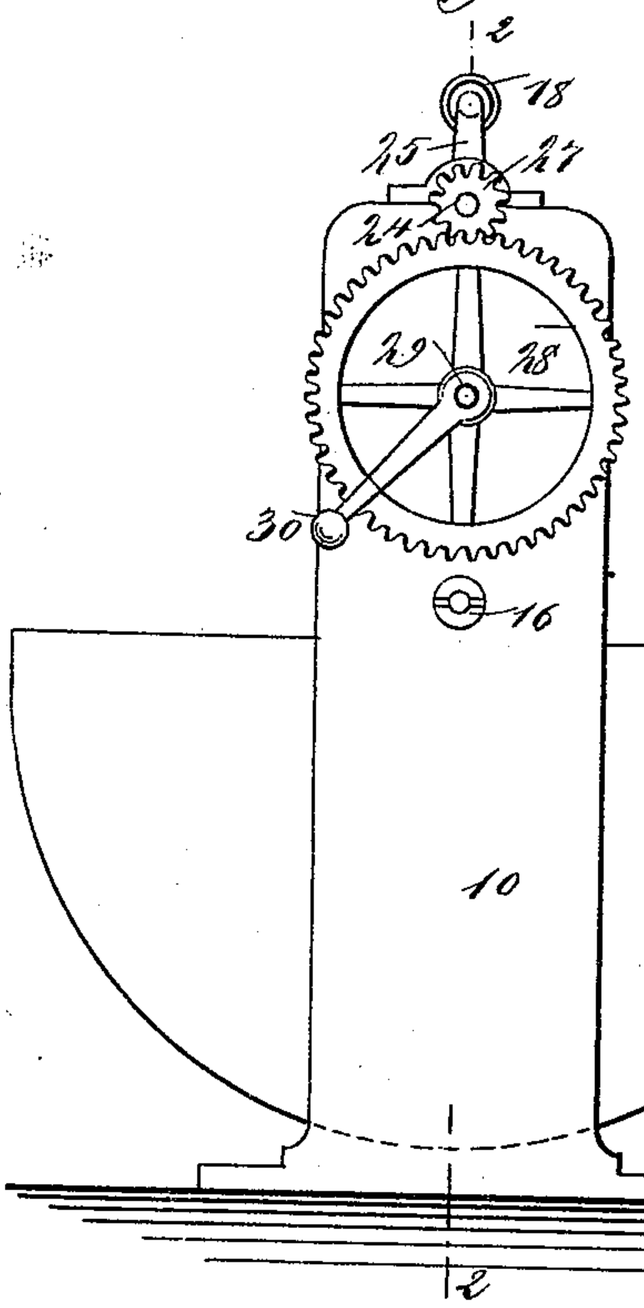


Fig. 2

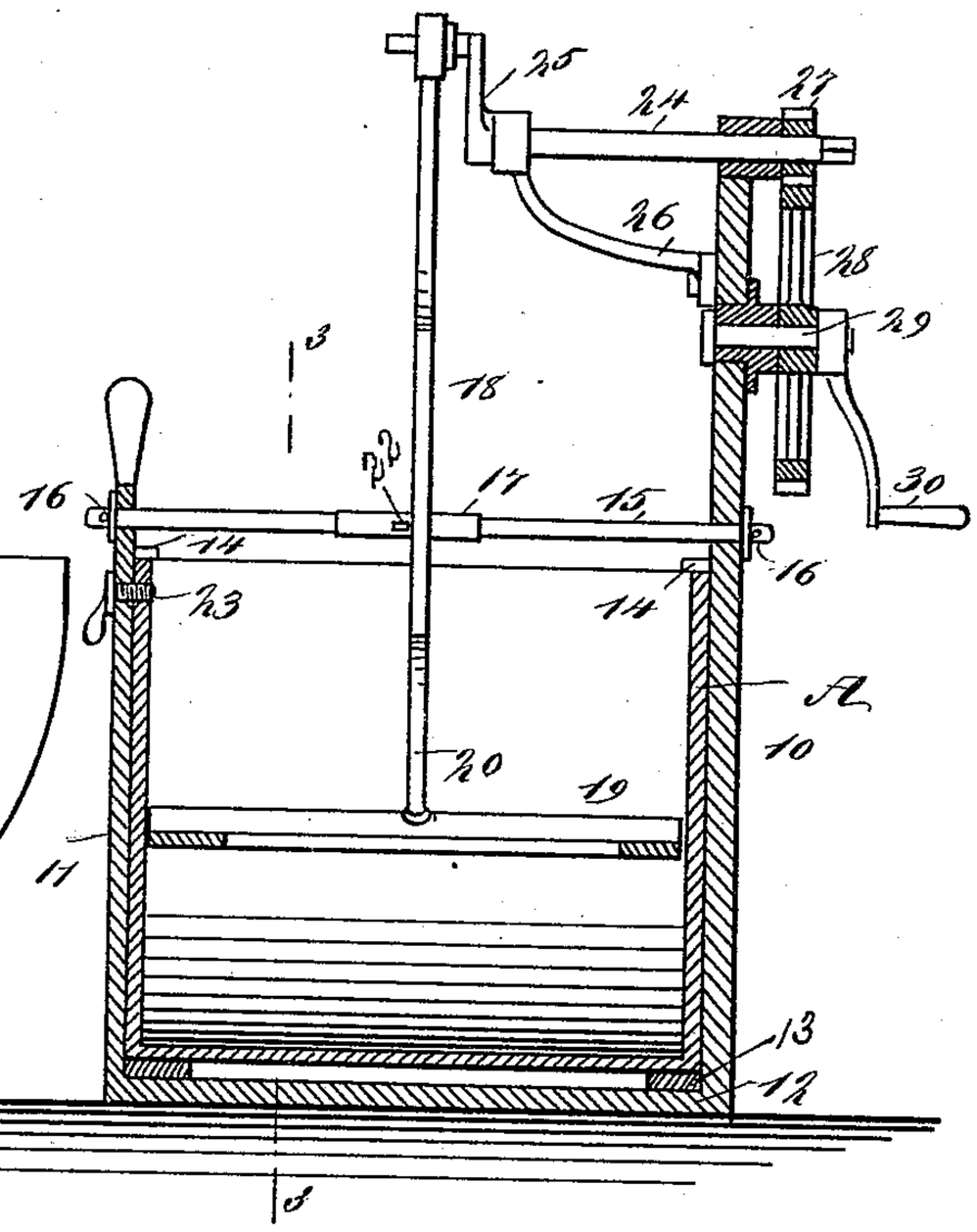


Fig. 4

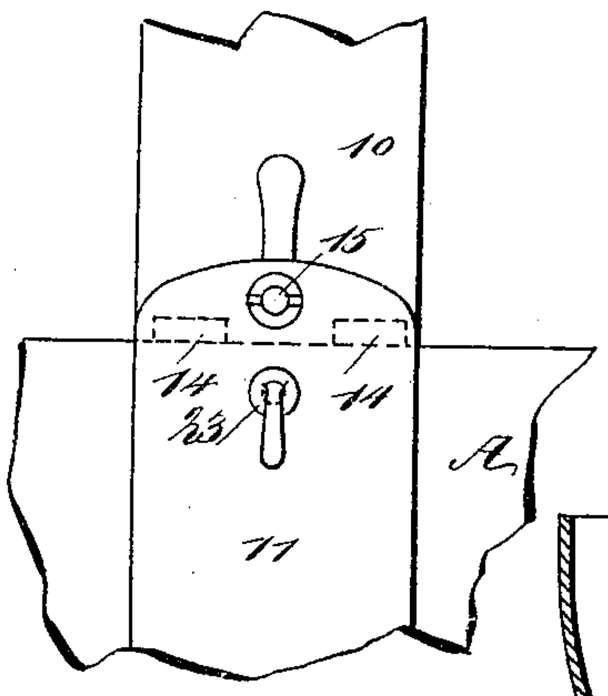


Fig. 3

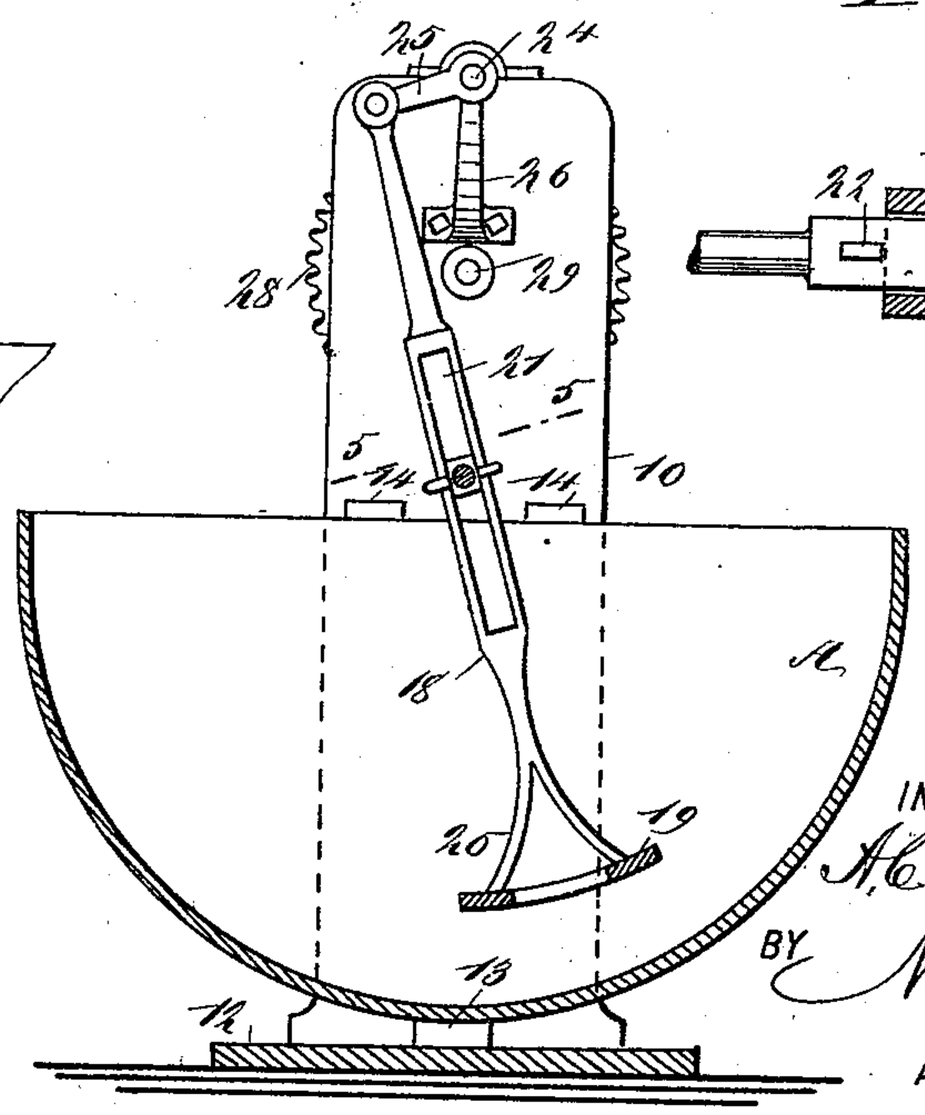
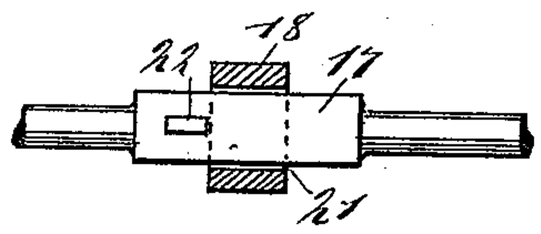


Fig. 5



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AROBINE C. MITCHELL, OF ENNIS, MONTANA.

MIXER OR BEATER.

SPECIFICATION forming part of Letters Patent No. 519,584, dated May 8, 1894.

Application filed August 4, 1893. Serial No. 482,390. (No model.)

To all whom it may concern:

Be it known that I, AROBINE C. MITCHELL, of Ennis, in the county of Madison and State of Montana, have invented certain new and useful Improvements in Mixers or Beaters, of which the following is a full, clear, and exact description.

My invention relates to a mixer or beater, and is more especially designed to be used on the materials or batter of which cake and the like are made, and the object of the invention is to improve upon the construction of the mixer or beater for which Letters Patent were granted to me December 29, 1891, No. 466,178, it being the prime object of the invention to provide a means whereby the speed may be increased or decreased, and whereby the basin may be more readily removed from the frame, and likewise to provide a bearing for the piston of the beater which will enable the piston to be operated with the least possible amount of friction, and to lessen the cost of manufacture.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claim.

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

Figure 1 is a side elevation of the improved mixer or beater. Fig. 2 is a vertical transverse section, taken practically on the line 2—2 of Fig. 1. Fig. 3 is a longitudinal vertical section taken essentially on the line 3—3 of Fig. 2. Fig. 4 is a partial side elevation, showing the manner in which the basin is attached to the frame of the machine; and Fig. 5 is a section taken practically on the line 5—5 of Fig. 3.

The frame of the machine consists practically of two uprights 10 and 11, one of which is longer than the other, and a base 12, connecting the uprights at their lower ends. Within this frame the basin, A, in which the material to be beaten is placed is located. The basin rests upon the base, or upon blocks 13, located on the base, and is held in proper position by means of lugs 14, projected from the inner faces of the uprights over the top side edges of the basin, as shown in Figs. 2 and 3. The blocks 13 provide space under the basin to permit a clamp to be introduced to fasten the basin to a shelf or table. A shaft 15, is journaled in both of the uprights, which shaft extends across the top central portion of the basin, as shown in Fig. 2, but is entirely independent of the basin. The shaft is capable of being shifted in its bearings, as it is provided at each end with a pin 16, and when a pin from one end is removed the shaft may be shifted in direction of the opposite end. The shaft is round in cross section, except at its central portion 17, which is squared, as shown best in Fig. 5. The said shaft is adapted to serve as a fulcrum for a piston 18, the piston having attached at its lower end the beater 19, of any approved construction. The beater usually extends practically from side to side of the basin, has free movement therein, being provided with one or more openings at its center, and the lower end of the piston is bifurcated, as shown at 20 in Fig. 3, in order that it may have a secure bearing and attachment to the beater. The central portion of the piston is provided with a longitudinal slot 21, and the said slot, which is rectangular in cross section, is adapted to fit over closely to the squared section 17 of the shaft. Thus when the upper end of the piston is rocked it will turn with the shaft, the shaft serving as its fulcrum, and the beater may be operated with a minimum of friction. The piston is prevented from moving in one direction on the square section of the shaft, by introducing into the shaft a key 22. The basin is held fixedly in the frame by means of a screw 23, screwed through a standard or upright of the frame, and through one side of the basin, as shown in Figs. 2 and 4, the said screw being provided with a handle whereby it may be readily manipulated. The piston is driven through the medium of a shaft 24, journaled in the upper end of the longer standard 10, the shaft being provided with a crank arm 25 at its inner end, and the upper end of the piston is passed over a wrist pin carried by the arm. The shaft is supported at its inner end by a bracket 26, and is squared at its outer end and near its outer end is provided with

a pinion 27, which pinion meshes with a gear 28, located upon a short shaft 29, said shaft being adapted to be revolved by a crank 30. When speed is to be obtained the crank is attached to the shaft 29, but when power is necessary the crank is placed upon the main shaft 24.

The machine is readily taken apart, that is to say, the basin may be readily removed, by unscrewing the screw 23 until it is free from the basin. One of the pins 16 is then taken out of the pivotal shaft 15, and the shaft is shifted until its round portion passes through the slot of the piston. The upper end of the piston is then sprung from its wrist pin, and the piston may be turned downward, in that manner raising the beater from the basin, leaving the basin free to be withdrawn from the frame. When removing the basin from the frame it is sometimes best not to remove the beater from the basin as above described, but after springing the piston from the wrist pin instead of turning the piston downward it should be slipped from the pivot shaft, thus freeing the beater from the frame whereupon the beater and basin may be removed from the frame together.

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

In a mixer or beater, the combination, with a frame comprising connected standards, a basin removably located within the frame, lugs projecting from the standards of the frame to an engagement with the basin, and a set screw carried by the standard and engaging with the basin, of a shaft capable of being shifted, journaled in the standards over the basin, said shaft being provided with a squared portion near its center, a beater located within the basin, a piston slotted to receive the squared portion of the shaft, said shaft serving as a pivot for the piston, the lower end of the piston being attached to the beater, a drive shaft, a removable connection between the piston and drive shaft, one end of the drive shaft being fitted to receive a crank, a pinion secured upon the drive shaft, a gear engaging with the pinion, and a removable crank by means of which the gear is operated, substantially as shown and described.

AROBINE C. MITCHELL.

Witnesses:
WILLIAM MITCHELL,
OLIVE SMITH.