

No. 661,613.

Patented Nov. 13, 1900.

T. M. LATTIMORE.
CHURN POWER.

(Application filed Feb. 1, 1900.)

(No Model.)

2 Sheets—Sheet 1.

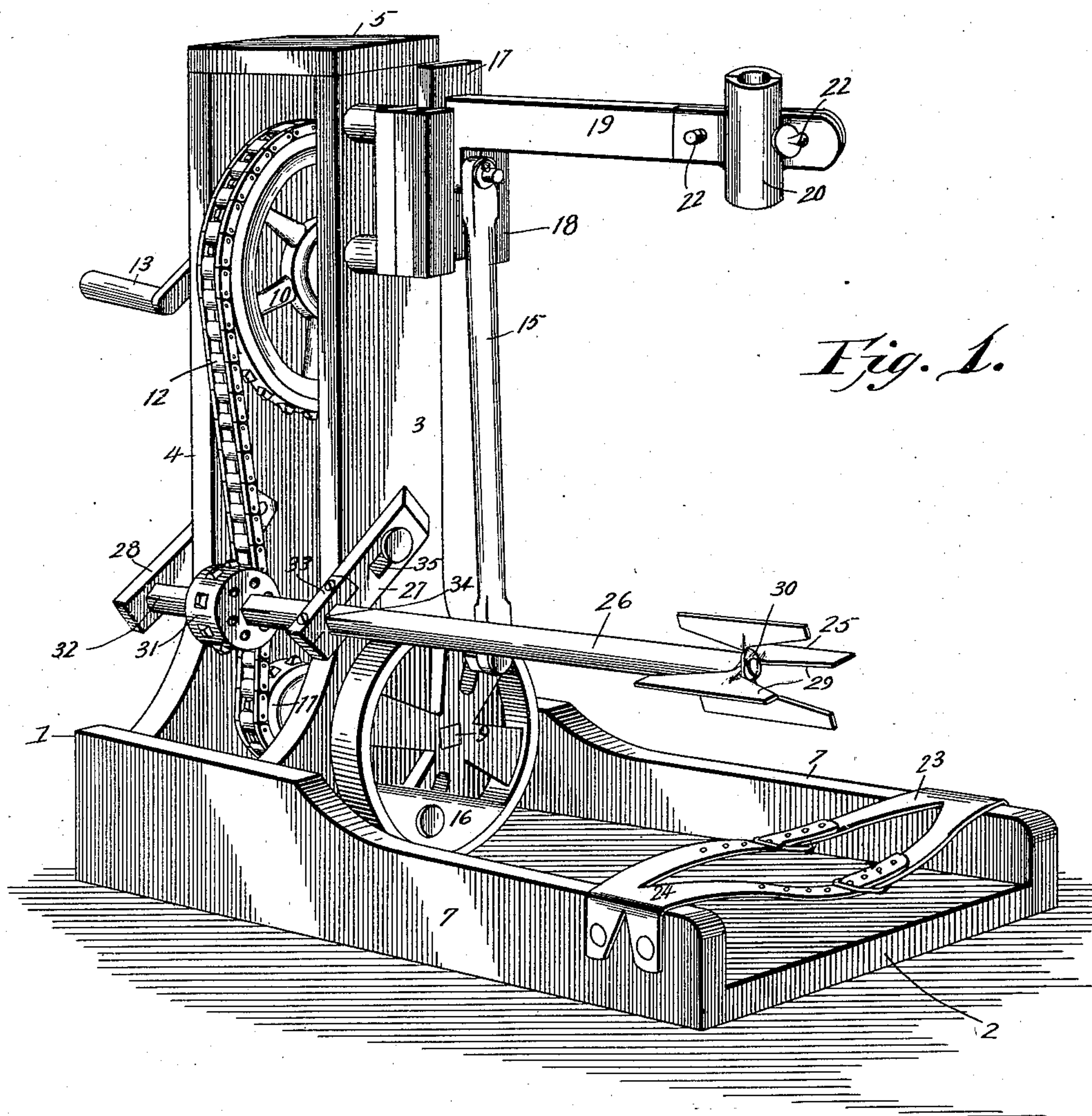


Fig. 1.

Witnesses

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Fig. 3.

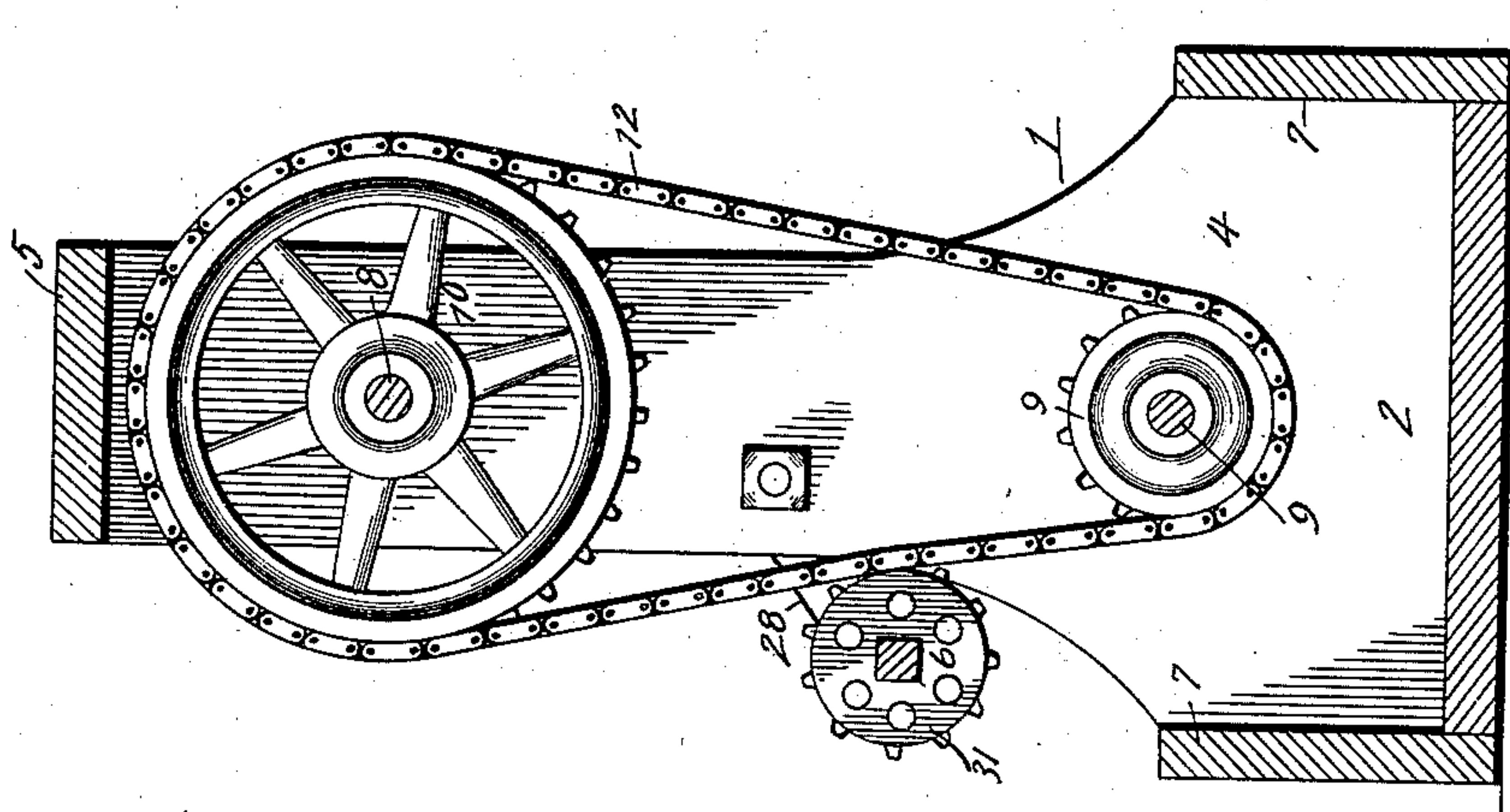
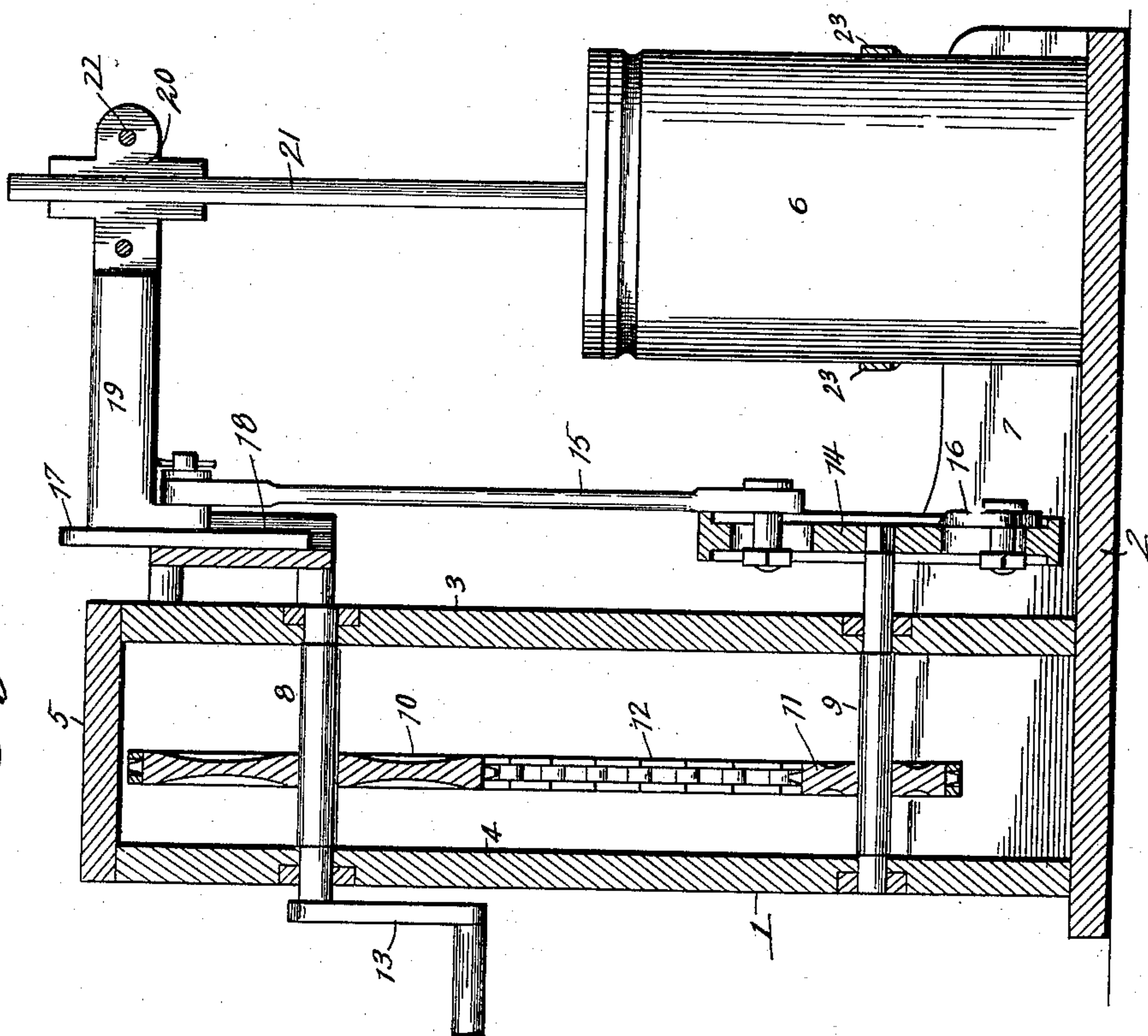


Fig. 2.



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UNITED STATES PATENT OFFICE.

THOMAS M. LATTIMORE, OF PALMER, INDIAN TERRITORY.

CHURN-POWER.

SPECIFICATION forming part of Letters Patent No. 661,613, dated November 13, 1900.

Application filed February 1, 1900. Serial No. 3,609. (No model.)

To all whom it may concern:

Be it known that I, THOMAS M. LATTIMORE, a citizen of the United States, residing at Palmer, in the Chickasaw Nation, Indian Territory, have invented a new and useful Churn-Power, of which the following is a specification.

The invention relates to improvements in churn-powers.

10 One object of the present invention is to improve the construction of churn-powers and to provide a simple and comparatively inexpensive one capable of enabling butter to be rapidly produced and adapted to operate a fan for excluding flies from the churn.

15 A further object of the invention is to enable the fan mechanism to be operated by the gearing for transmitting motion to the churn-dasher and to serve as a belt-tightener for the same.

20 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

25 In the drawings, Figure 1 is a perspective view of a churn-power constructed in accordance with this invention. Fig. 2 is a longitudinal section. Fig. 3 is a transverse section.

30 Like numerals of reference designate corresponding parts in all the figures of the drawings.

35 1 designates a supporting-frame having a base 2 and provided at one end thereof with an upright portion consisting of a pair of uprights or standards 3 and 4, disposed transversely of the base and connected at their upper ends by a horizontal top piece 5. The base, which is adapted to receive a churn-body 6, is provided with side pieces 7, which connect the standards or uprights 3 and 4 at the bottom thereof. The standards or uprights are provided with upper and lower bearings for the reception of upper and lower shafts 8 and 9, which are connected by sprocket-gearing consisting of an upper sprocket-wheel 10, a lower sprocket-pinion 11, and a sprocket-chain 12. The upper shaft 8 is provided at its outer end with a crank-handle 13, by means of which the churn-power

is operated; but any other suitable means may be provided, if desired.

The lower shaft has its inner end extended beyond the inner upright or standard and carries a crank or fly wheel 14, having the lower end of a pitman 15 eccentrically connected with it and provided with a weight 16, located diametrically opposite the point of attachment of the pitman. The pitman and the weight are preferably adjustably mounted on the wheel 14 by means of radial slots and bolts or other suitable fastening devices, and the upper end of the pitman is pivotally connected to a vertically-reciprocating head 17, mounted in suitable ways of a vertical guide 18. The vertical guide 18 consists of a plate offset from the adjacent upright or standard by blocks and provided with side grooves formed by inwardly-extending overhanging flanges. The vertically-reciprocating head is provided with a horizontal arm 19, extending outward over the churn-body and provided at its outer end with a clamp 20, adapted to engage a dasher-rod 21. The clamp, which is provided with a tubular portion, consists of two sections connected by screws 22 or other suitable fastening devices, and one of the said sections is removable, the other section being preferably formed integral with the arm 19.

The churn-body, which may be of any desired construction, is detachably secured to the supporting-frame by means of a fastening device consisting of straps 23 and 24, arranged in pairs and secured at their outer ends to the side bars of the base and adjustably connected at their inner ends. The members of each pair of straps are preferably formed integral with each other. The straps 23 are provided at their inner ends with buckles, and the straps 24 have perforations to be engaged by the tongues of the buckles. The straps form substantially a belt or band for encircling the churn-body, and they connect the same with the side bars or pieces of the base of a frame.

The churn is provided with a fan 25, consisting of blades mounted on a horizontal shaft 26, which is journaled in suitable bearings of adjustable bars or arms 27 and 28. The blades 29 of the fan 25 are arranged in

pairs; the members of each pair being formed integral with each other and connected by a transverse portion 30, extending across the adjacent ends of the shaft 26 and secured to the same by a suitable fastening device. The inner or rear portion of the shaft 26 is square and receives a sprocket-wheel 31, which may be arranged at either side of the adjacent flight of the sprocket-chain, and by adjusting the arms or bars, as hereinafter described, the chain or belt may be tightened and maintained at the proper tension.

The end 32 of the shaft 26 is reduced and rounded to fit in a bearing of the arm 28, and the other arm or bar 27 is provided with a sectional bearing 33 to receive an intermediate reduced portion 34 of the shaft. The inner ends of the arms or bars 27 and 28 are provided with longitudinal slots 35 and are arranged on the outer faces of the uprights or standards, and they are secured at the desired adjustment by bolts or other suitable fastening devices passing through the said uprights or standards and arranged in the slots, nuts being preferably located at the inner faces of the uprights or standards. The sectional bearing of the arm or bar 27 is provided with a removable block or portion secured to the said arm or bar by means of fastening devices located at opposite sides of the shaft 26.

It will be seen that the churn-power is adapted to operate a fan which consumes but a small portion of the power and which may be conveniently employed for adjusting the chain or belt to maintain the same at the proper tension.

What is claimed is—

1. In a churn-power, the combination of a supporting-frame having a base and provided with an upright portion, the upper and lower horizontal shafts 8 and 9 located above the base and journaled in the upright portion of the frame, wheels mounted on the shafts 8 and 9, an approximately vertical chain or belt connecting the wheels, means for transmitting motion from one of the shafts to a churn-dasher, the horizontal shaft located at one side of the upright portion of the frame and extending longitudinally of the base and designed to carry a fan and provided with a

wheel engaging one of the flights of the chain or belt, and adjustable bearings extending laterally from the upright portion of the frame and adapted to be moved inward and outward to tighten the belt or chain and to position the fan, substantially as described.

2. In a churn-power, the combination of a supporting-frame, the upper and lower horizontal shafts 8 and 9 journaled on the supporting-frame, wheels mounted on the said shafts 8 and 9, an approximately vertical chain or belt connecting the wheels; means for transmitting motion from one of said shafts to a churn-dasher, a pair of arms extending laterally from one side of the frame and capable of adjustment to move them inward and outward, and the horizontal shaft 26 mounted on the said arms at one side of the frame and provided with a wheel engaging one flight of the chain or belt, said shaft 26 being adapted to tighten the chain or belt and to carry a fan and operate the same adjacent to the churn-body, substantially as described.

3. In a churn-power, the combination of a supporting-frame provided at one end with a pair of uprights spaced apart, the upper and lower horizontal shafts 8 and 9 journaled on the uprights, the wheels mounted on the horizontal shafts and arranged between the uprights, a belt or chain connecting the wheels, a pair of arms adjustably secured to the uprights and extending laterally from one side of the frame, means for communicating motion from one of the said shafts to a dasher-rod, and the horizontal shaft 26 located at one side of the frame and journaled in suitable bearings of the laterally-extending arms and provided with a wheel engaging one of the flights of the chain or belt, said shaft 26 serving as a belt-tightener and being adapted to operate a fan adjacent to the churn-body, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

THOMAS M. LATTIMORE.

Witnesses:

J. T. MASTERSON,

W. G. CHAPMAN.