

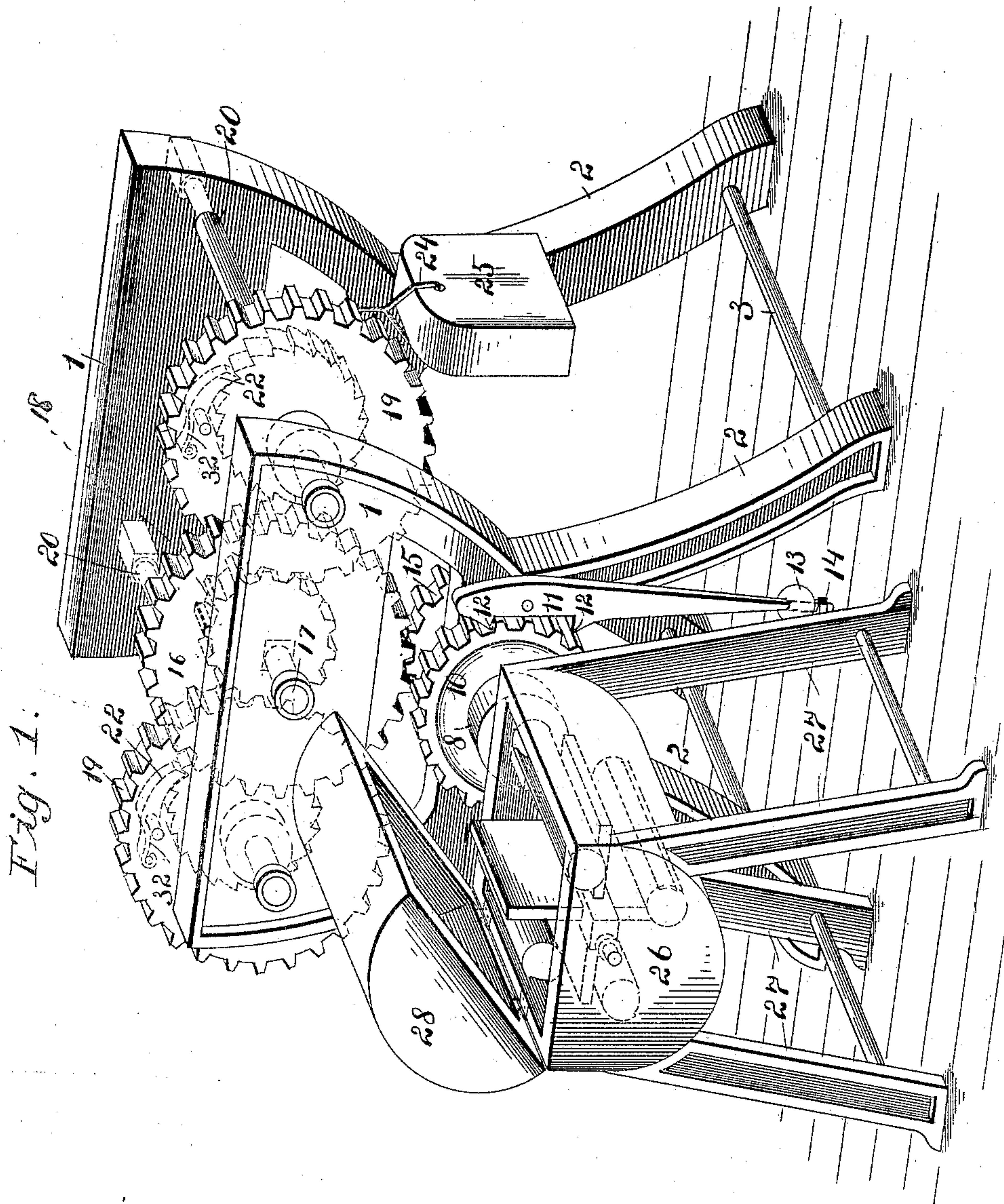
(No Model.)

B. J. CAMPBELL.  
CHURN MOTOR.

2 Sheets—Sheet 1.

No. 467,495.

Patented Jan. 26, 1892.



Witnesses:

*G. L. Shreve*  
*John L. Condon*

Inventor:

B. J. Campbell

By *Higdon & Higdon Attys.*

(No Model.)

2 Sheets—Sheet 2.

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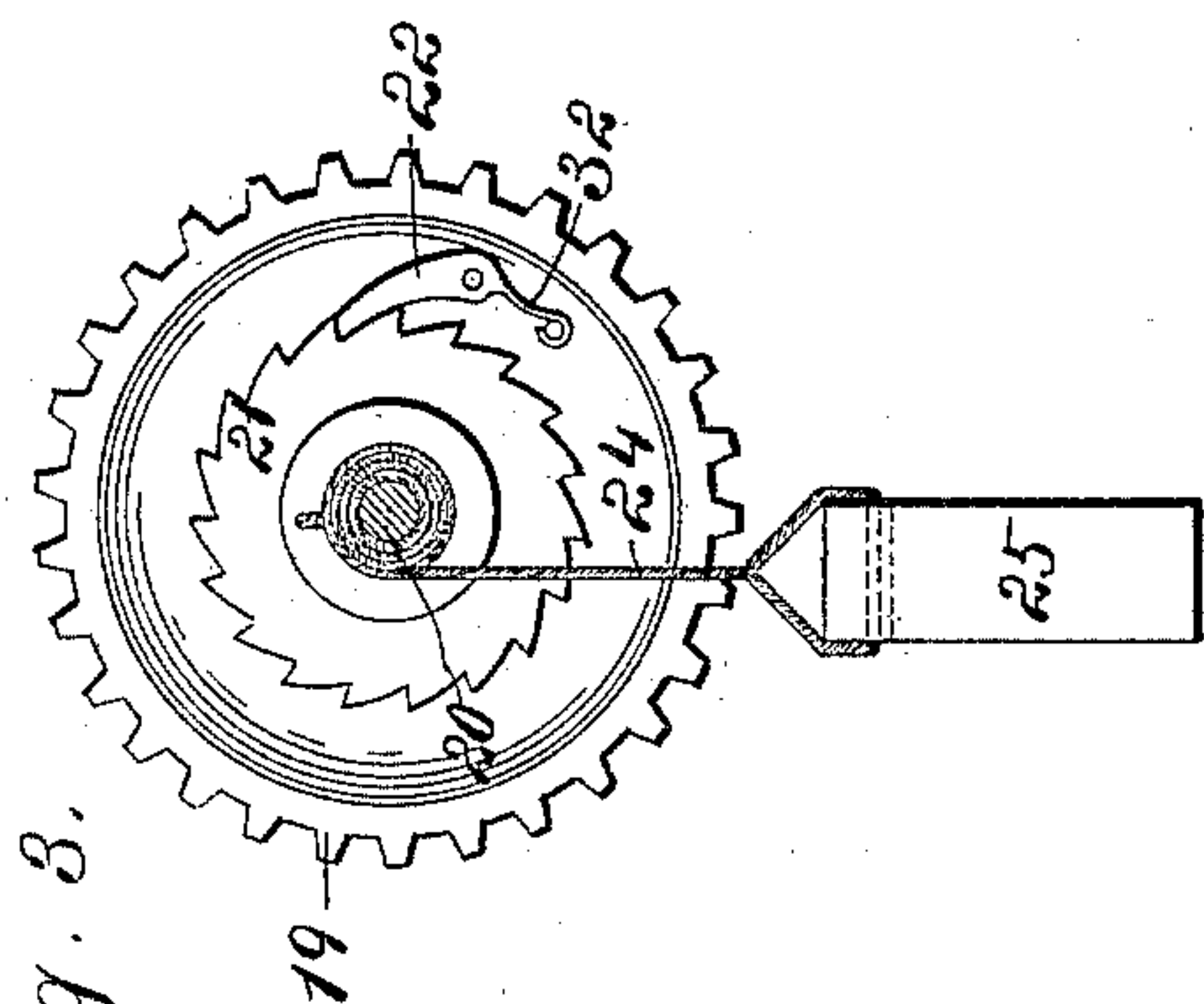


Fig. 3.

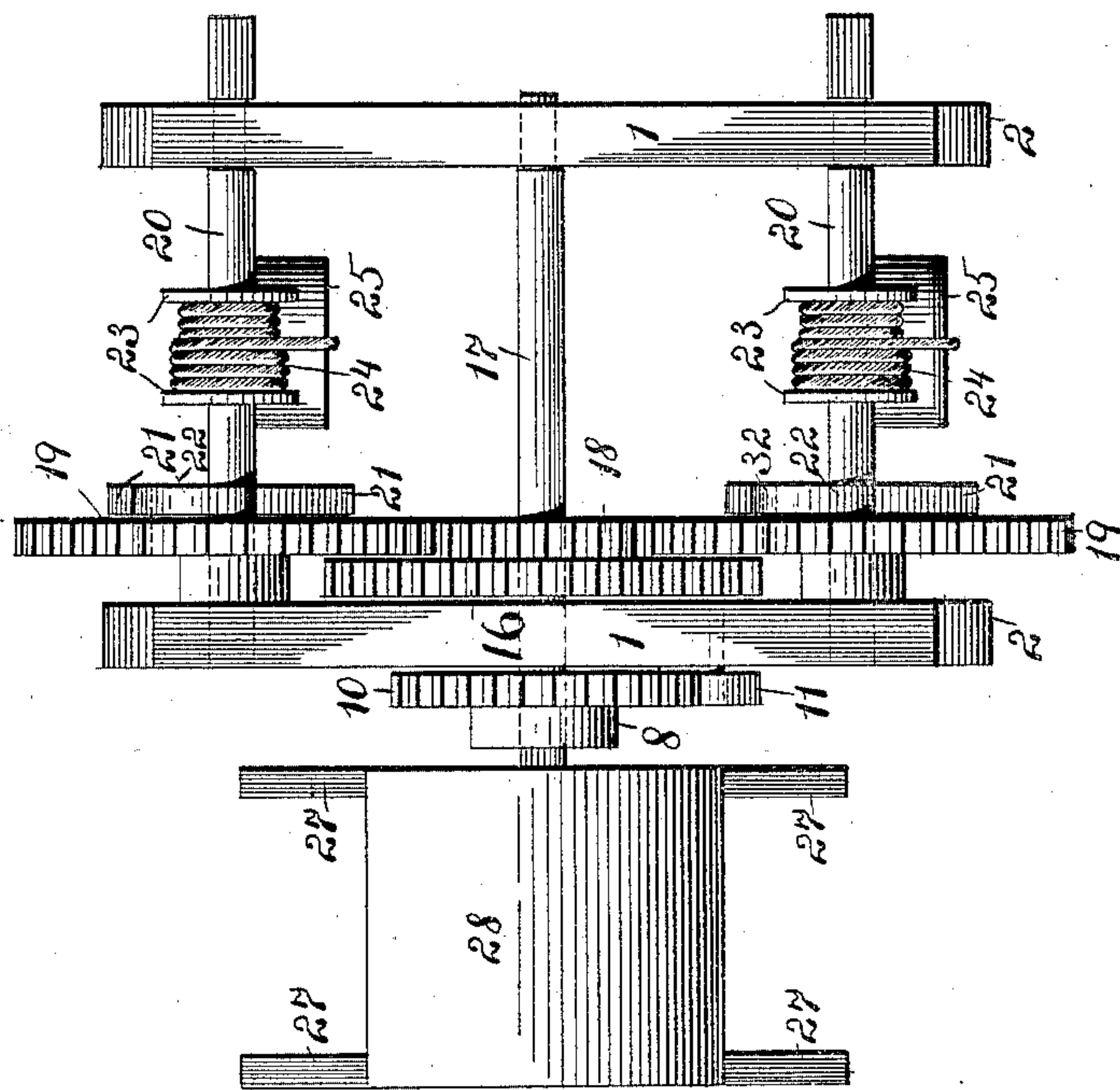


Fig. 2.

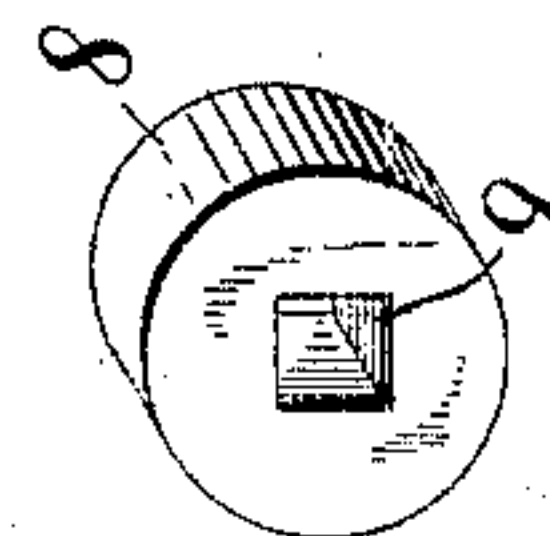


Fig. 4.

Witnesses:

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# UNITED STATES PATENT OFFICE.

BENJAMIN J. CAMPBELL, OF ALTOONA, KANSAS.

## CHURN-MOTOR.

SPECIFICATION forming part of Letters Patent No. 467,495, dated January 26, 1892.

Application filed May 9, 1891. Serial No. 392,151. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN J. CAMPBELL, of Altoona, Wilson county, Kansas, have invented certain new and useful Improvements in Churn-Motors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to motors for operating churns.

The objects of my invention are to produce a simple, durable, and inexpensive mechanism which shall develop the power necessary to operate a churn and which shall be constant and uniform in its action.

To the above purposes my invention consists in certain peculiar and novel features of construction and arrangement, as hereinafter described, and pointed out in the appended claim.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved motor and a churn in operative connection with the motor. Fig. 2 is a plan view of the same. Fig. 3 is a detached view of one of the winding-gearings of the motor. Fig. 4 is a detached perspective view of the socket-piece for receiving the dasher-shaft of a churn.

In the said drawings, 1 designates the two supporting frames or standards of the motor, each of said standards consisting of a solid upper portion and supports or legs 2 upon which said upper portions rest, and the said legs or supports being connected together by braces 3. In the lower parts of the upper portions of the standards is journaled a shaft, one end of which projects outward at one side of the machine and carries a socket-piece 8, in which is formed an angular socket 9 for receiving the dasher-shaft of a churn. Outside of the frame-work of the machine this shaft carries an escapement-wheel 10, which is engaged by a pendulum 11, the said pendulum being pivoted at its upper portion upon the outer side of the frame and having

two teeth or studs 12, which engage with the teeth of the escapement-wheel 10. At its lower end this pendulum carries a weight 13, which is set adjustably upon the pendulum and which is held in position thereon by a nut 14. Upon this shaft and just within one of the standards 1 is mounted a gear-pinion 15, which meshes with a gear-wheel 16, mounted upon a shaft 17. This shaft 17 is journaled at its ends in the upper parts of the standards 1 and carries a gear-pinion 18, which meshes with the two gear-wheels 19, which are mounted upon two winding shafts or arbors 20. These two shafts or arbors are journaled horizontally in the standards or frames 1, and upon each of said shafts is mounted a ratchet-gear 21, which is engaged by a pawl 22, which is pivoted upon the adjacent gear-wheel 19 and which is pressed upon by a spring 32. At its rear end each of these shafts is formed with a squared or angular portion to receive a suitable winding crank-arm, and each of said shafts also carries midway of its length a winding-drum 23, around which is coiled a rope, cord, or other suitable flexible connection 24, to the outer or free end of which is attached a weight 25. It will thus be seen that as the weights descend the power is applied to the shaft which carries the socket-piece 8 uniformly and strongly, so as to steadily rotate said shaft.

26 designates the churn-body, which is preferably of semi-cylindrical form, as shown, and which is supported upon four legs 27. The churn-body 26 is provided with a cover 28, which is of semi-cylindrical form also, the churn-body being thus of cylindrical or barrel-like form when in closed condition.

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

An improved churn-motor comprising a pair of winding shafts or arbors, gear-wheels mounted upon said shafts or arbors, pawls pivoted upon said gear-wheels, a weight attached to each of said shafts by a rope or cord connection wound upon the shaft or arbor, a third shaft intermediate the two first-mentioned shafts and carrying a gear-wheel

meshing with the gear-wheels of the said two shafts, a fourth shaft carrying a gear-wheel meshing with the gear-wheel of the intermediate shaft, a socket-piece upon one end of  
5 the fourth shaft, an escapement-wheel also mounted upon said shaft, and a pendulum pivoted upon the motor-frame and engaging the escapement-wheel and having a weight

attached adjustably to its lower end, substantially as set forth. 10

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

BENJAMIN J. CAMPBELL.

Witnesses:

IRA THURMAN,

A. M. RICHARDSON.