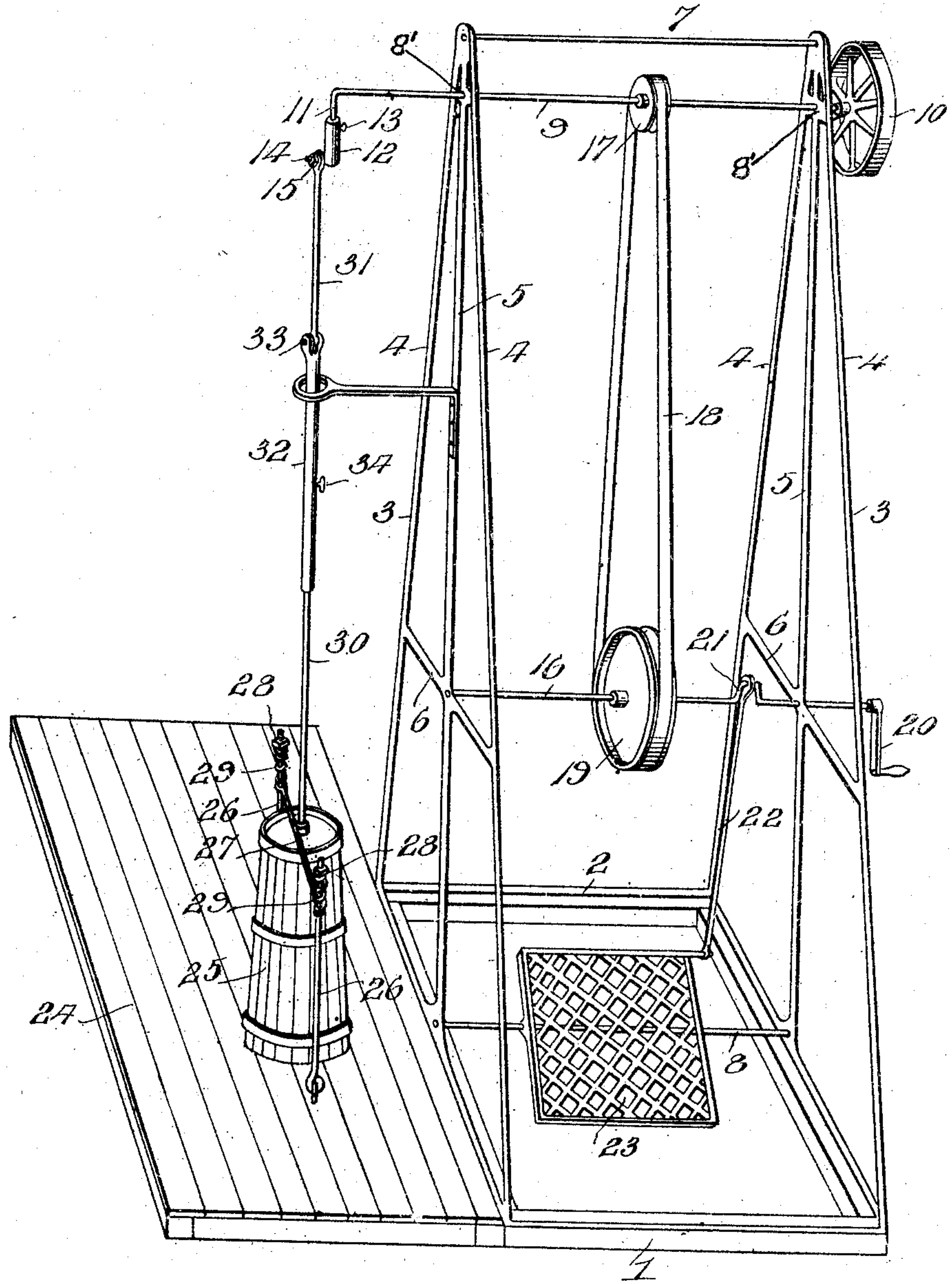


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H. A. HATFIELD.
MOTOR.

APPLICATION FILED JAN. 6, 1906.



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UNITED STATES PATENT OFFICE.

HENRY A. HATFIELD, OF CLARKSON, KENTUCKY.

MOTOR.

No. 874,191.

Specification of Letters Patent.

Patented Dec. 17, 1907.

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To all whom it may concern:

Be it known that I, HENRY A. HATFIELD, a citizen of the United States of America, residing at Clarkson, in the county of Grayson and State of Kentucky, have invented new and useful Improvements in Motors, of which the following is a specification.

This invention relates to motors designed especially for imparting reciprocatory motion to churn dashers, cutting devices and other elements which have reciprocatory action.

The accompanying drawing shows a perspective view of my improved motor as arranged for use for operating the dasher of a churn.

Referring to the drawing, the numeral 1 designates a suitable bed piece or platform, to which is secured a rectangular base 2, from the sides of which rise substantially triangular supporting standards 3, each composed of a pair of side rods or bars 4, an intermediate rod or bar 5, said bars being suitably connected at their lower ends to the base 2 and joined at their upper ends, and a cross bar 6 with bearings therein uniting and staying the bars at a suitable elevation above the base. The two standards are connected at their upper and lower ends by tie rods 7 and 8, which maintain them in fixed relation.

Mounted in bearings cross-bars 8' formed or provided upon the upper ends of the standards is a main drive shaft 9, which is extended at its ends beyond said standards and carries at one end a balance or fly wheel 10. The other end of the shaft is bent to form a crank 11 carrying a sliding sleeve 12 adjustably secured thereto by a set screw 13 and carrying a wrist pin 14 threaded for the reception of a nut 15. The shaft 9 may be driven through the medium of any preferred driving mechanism, but is shown in the present instance arranged for operation from a driving shaft 16 journaled in bearings formed at the intersection of the main bars of the standards with the cross bars 6. The shaft 9 carries a pulley 17 connected by a belt 18 with a pulley 19 on the shaft 16, and the latter is provided with an actuating crank 20, whereby it may be driven directly by hand power. The shaft 16 is further provided with a crank bend 21 operatively connected by a pitman or connecting rod 22 with a treadle 23 fulcrumed on the rod 8, whereby the operating mechanism may be

actuated by foot power, if desired, or by both hand and foot power through the medium of the said treadle and the crank 20. Arranged at one side of the base or platform 1 is a secondary platform 24, the forward portion of which may constitute an extension of said platform 1.

In the drawing I have shown the apparatus as arranged for use for operating the reciprocating dasher of a churn, from which it will be seen that the churn body 25 rests upon the platform 24, and is held with its lid firmly clamped in operative position by a clamping device composed of rods 26 hinged at their lower ends to the platform, and a transverse rod 27 provided with terminal eyes engaging the rods 26, which latter are threaded at their upper ends for the reception of nuts 28. The rods 26 engage and confine the churn body in place, while the rod 27 extends across and clamps the lid to said body. Arranged on the rods 26 above the ends of the rod 27 are coiled springs 29 which exert a yielding clamping pressure against the rod 27 and are held in position by the nuts 28, whereby the pressure of said springs may be varied to clamp the churn body and its lid with the desired degree of force.

The dasher rod 30 is operatively connected by a pitman with the crank of the shaft 9, said pitman being composed of two sections, namely, a rod 31 pivotally engaging the wrist pin 14 and confined thereon by the nut 15 and a sleeve section 32 jointed to the lower end of said rod, as shown at 33, and receiving the upper end of the dasher rod 30, to which it is secured by a set screw 34. By this construction the pitman is adapted for connection with long or short rods, and also through such construction and the construction of the parts 11, 12, and 13 the throw or action of the driving crank may be varied to vary the stroke of the pitman and dasher.

It will thus be seen that the invention provides a simple and effective construction of motor which may be employed for actuating churn dashers and other reciprocating devices and which is adjustable for connection with long or short operating rods and also to vary the stroke or extent of movement of the operated part as circumstances may require.

Having thus described the invention, what I claim is:

A motor comprising a base with standards rising from the opposite sides thereof, inter-

mediate bars likewise secured to the base and grouped at their upper ends with said standards, brace rods at the upper and lower ends of the standards, cross-bars with bearings
5 therein secured at suitable distances apart to the standards and said intermediate bars, drive shafts mounted respectively in the bearings of the cross-bars, a pulley on each of said shafts, a belt connecting said pulleys,

the upper shaft having a crank-arm, and 10 means for driving the lower shaft, substantially as specified.

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

HENRY A. HATFIELD.

Witnesses:

H. E. JAMES,

THOMAS JAMES.