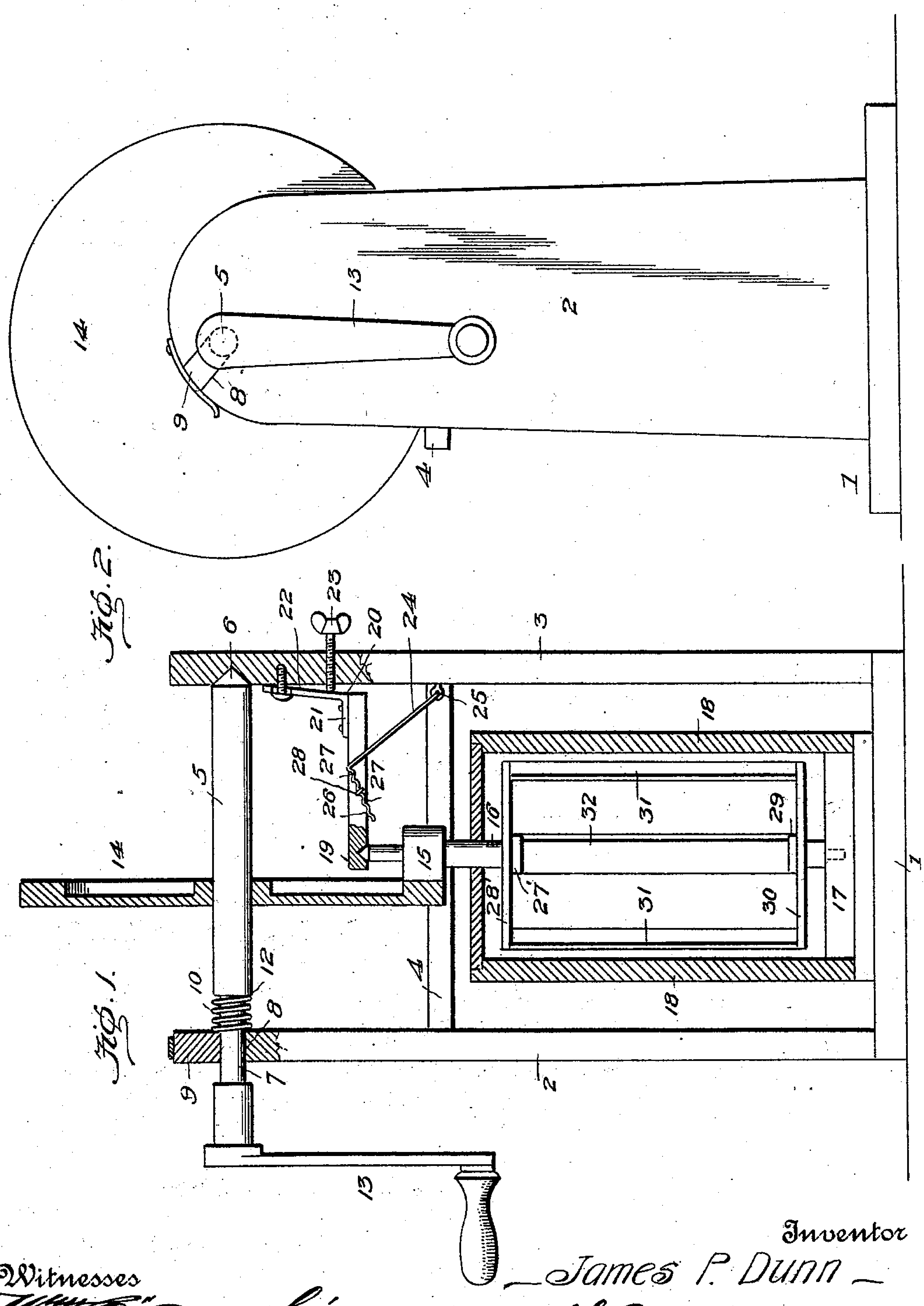
(No Model.)

J. P. DUNN.
CHURN.

No. 603,375. Patented May 3, 1898.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES POWEL DUNN, OF HADLEY, GEORGIA.

CHURN.

SPECIFICATION forming part of Letters Patent No. 603,375, dated May 3, 1898.

Application filed December 6, 1897. Serial No. 660,876. (No model.)

To all whom it may concern:

Be it known that I, JAMES POWEL DUNN, a citizen of the United States, residing at Hadley, in the county of Colquitt and State of Georgia, have invented certain new and useful Improvements in Churns; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a novel form of churn, and the object is to provide a simple, cheap, and practical device of this character for general farm and household use.

To this end the invention consists in the construction, combination, and arrangement of the device, as will be hereinafter more fully described, and particularly pointed out in the claims.

The accompanying drawings show my invention in the best form now known to me; but many changes in the details might be made within the skill of a good mechanic without departing from the spirit of my invention as set forth in the claims at the end of this specification.

The same reference characters indicate the same parts in both views.

Figure 1 is a vertical section of my improved churn. Fig. 2 is a side elevation.

1 represents the base, and 2 3 denote parallel standards arising therefrom and which are connected near their upper ends by a horizontal brace 4.

5 denotes a horizontal driving-shaft removably journaled in the upper ends of said standards, one end of said shaft being formed with a thrust-journal 6, which has a bearing in the standard 3, and near the free end of said shaft is formed an elongated cylindrical journal 7, which has a bearing in the diagonal slot 8, formed in the upper end of the standard 2, and is removably secured therein by the cap 9. The journal 7 is somewhat longer than the bearing in the standard 2, and it is encompassed by a loose coiled spring 10, one end of which bears against the journal-shoulder 12 and the other end against the face of the standard. The outer end of this shaft is provided with a crank-handle 13, and 14 denotes a friction-disk fixed to the shaft, so that its face will operatively contact with the cylindrical hub 15, fixed on the upper end of the vertical dasher-shaft 16. The lower end of the dasher-shaft is removably journaled in a shoe 17, fixed in the bottom of the churn vessel 18, and its upper end in the lower face of a bracket 19, adjustably pivoted or hinged to the inner face of the standard 3 at a right angle to the dasher-shaft 16 and horizontally parallel with the driving-shaft 5.

20 represents the hinge, the arm 21 of which is fixed to the upper face of the bracket 19, and its longer arm 22 is fixed at its upper end to the standard, so as to permit a limited amount of play to the lower end of the hinge-joint with reference to the standard. A thumb-screw 23 extends through the standard, and its inner end bears against the lower end of the hinge, so the bracket 19 may be adjusted horizontally, thereby carrying with it the upper end of the dasher-shaft, so as to insure the proper frictional contact between the hub 15 and the face of the driving-disk 14.

24 represents a hook pivoted in a screw-eye 25, fixed in the standard 3, and its spring-arm 26 is formed with a series of notches 27 to engage a staple 28, fixed in the side of the arm 19, so as to retain the upper end of the shaft 16 in its bearing in the bracket, the notches in the spring-arm 26 permitting the vertical adjustment of the free end of the bracket to compensate for wear. The dasher itself is also of peculiar construction and is rigidly fixed to the lower end of the dasher-shaft 16, and it consists of two arms 27 28, arranged at right angles to each other, and duplicate arms 29 30, similarly arranged above the first pair, the corresponding pairs being connected by vertical paddles 31 and 32, the paddles 31 being tangentially arranged with reference to the dasher-shaft, so as to throw the cream outwardly, and the paddles 32 reversely arranged, so as to force the contents of the churn against the outside paddles 31.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. The combination with the parallel standards 2 and 3, the driving-shaft 5 journaled therein, and the friction-disk 14 fixed on said shaft, of the dasher-shaft, the friction-hub fixed on said shaft so as to bear against the

face of the friction-disk and the bracket 19 hinged to the standard 3 and forming a bearing for the upper end of said dasher-shaft and means for longitudinally adjusting said bracket, as and for the purpose set forth.

2. The combination with the standards 2 and 3, the latter being formed with a conical thrust-bearing, the driving-shaft 5 journaled in said standards, its inner end being formed with a conical thrust-journal 6, the spring 10 encompassing said shaft between its shoulder 12 and the inner face of the standard 2, and the friction driving-disk 14 fixed to said shaft, the horizontal bracket 19 adjustably hinged to the inner face of the standard 3 and provided at its under face with a conical bearing, the dasher-shaft 16 provided at its upper end with a corresponding conical thrust-bearing, the hub 15 fixed to said dasher-shaft and the thumb-screw 23 adjustably secured in the standard 3 and adapted to adjust the dasher-shaft with reference to said driving-disk 14, substantially as shown and described.

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

JAMES POWEL DUNN.

Witnesses:

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