No. 845,595. PATENTED FEB. 26, 1907.

A. H. STUTLER.

CHURN OPERATING MECHANISM.

APPLICATION FILED SEPT. 7, 1906.

2 SHEETS—SHEET 1.

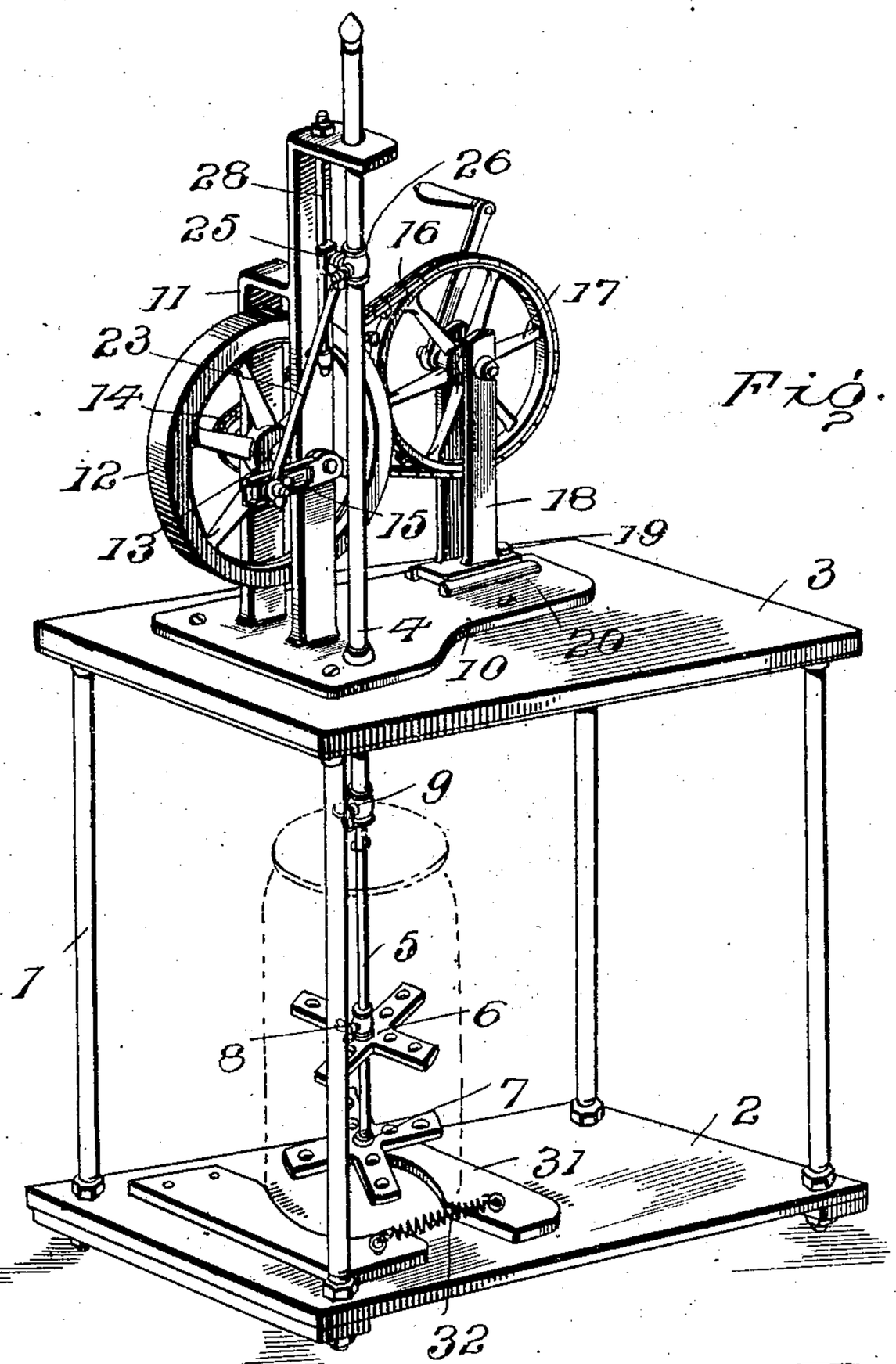


Fig. 1.

Fig. 2.

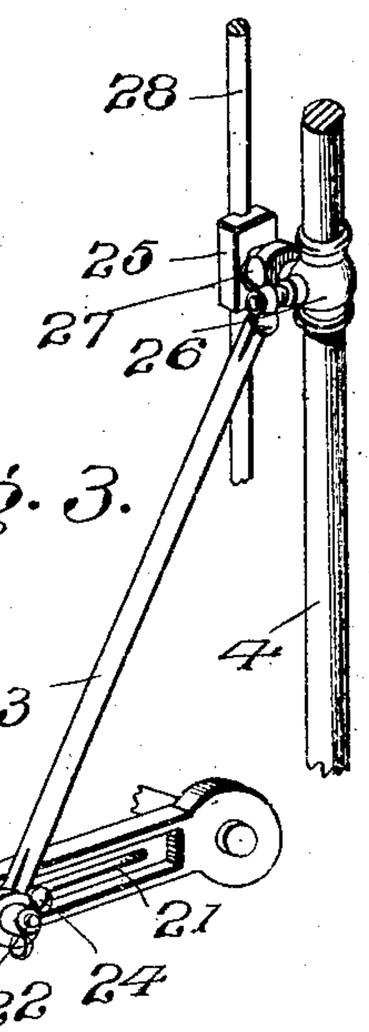
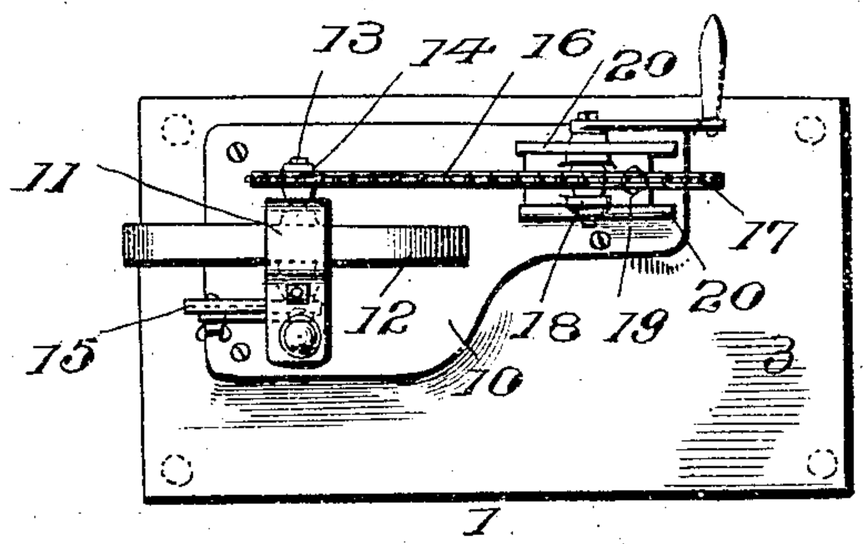


Fig. 3.



Witnesses

Inventor

A. H. Stutler.

By R. H. A. R. Lacey,

Attorneys

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2 SHEETS—SHEET 2.

Fig. 4.

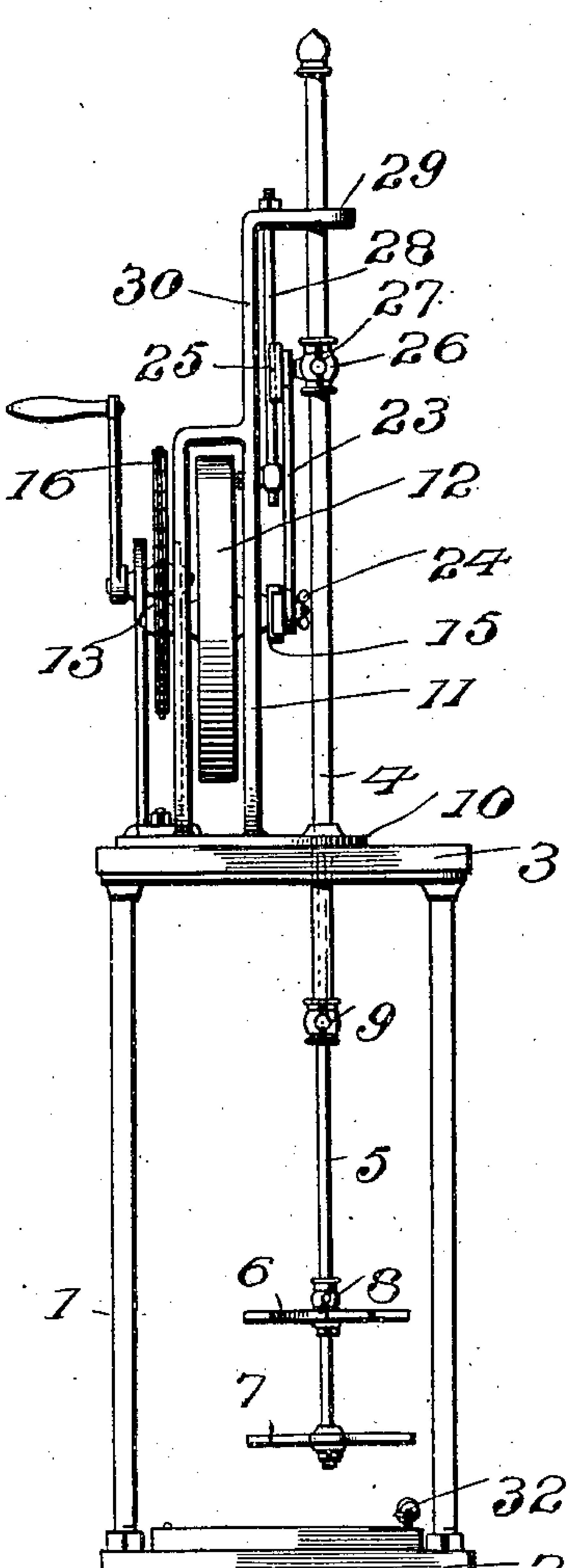
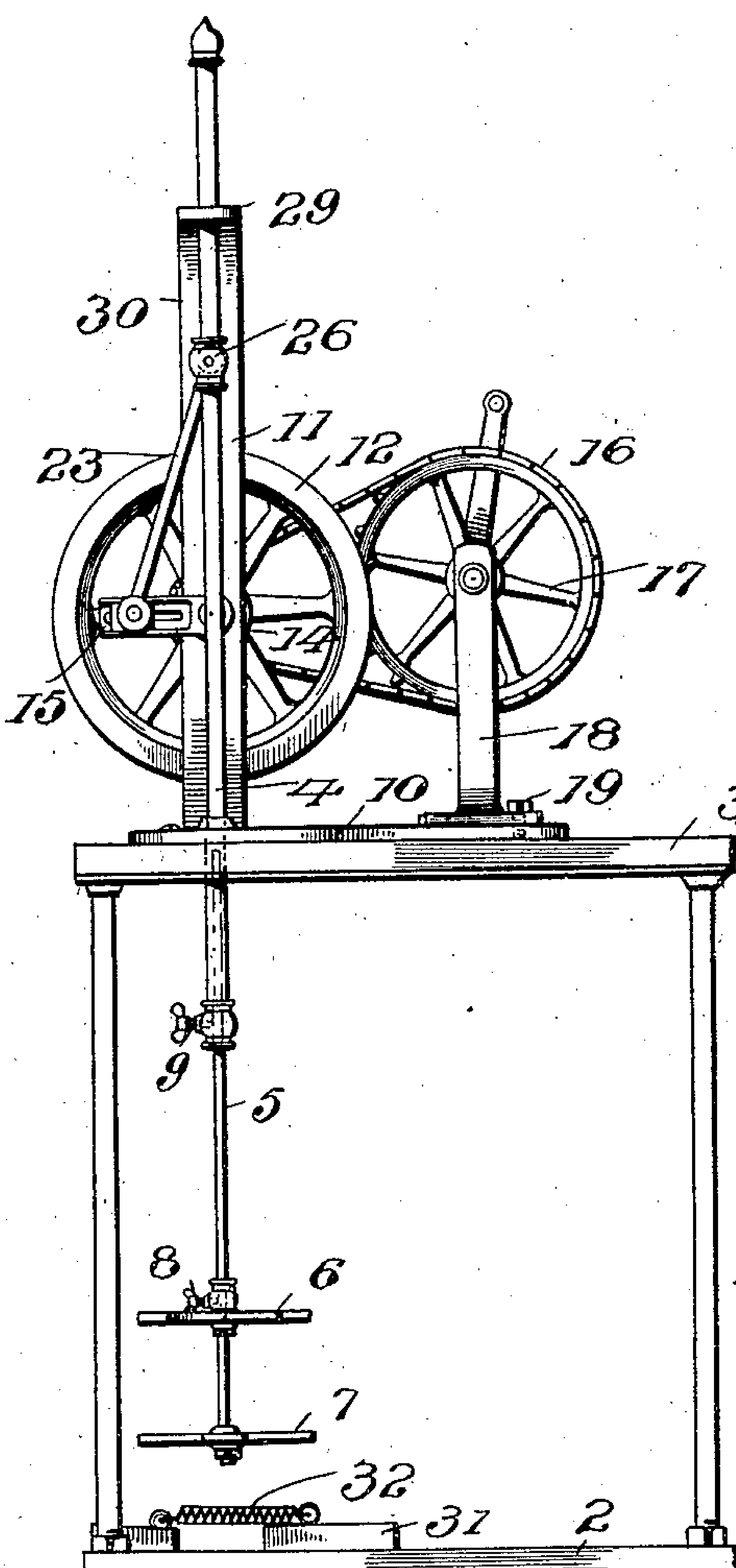


Fig. 5.



Witnesses

Inventor

A. H. Stutler.

By

Attorneys

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ABRAHAM H. STUTLER, OF WEST UNION, WEST VIRGINIA.

CHURN-OPERATING MECHANISM.

No. 845,595. Specification of Letters Patent. Patented Feb. 26, 1907.

Application filed September 7, 1906. Serial No. 333,700.

To all whom it may concern:

Be it known that I, ABRAHAM H. STUTLER, a citizen of the United States, residing at West Union, in the county of Doddridge and State of West Virginia, have invented certain new and useful Improvements in Churn-Operating Mechanisms, of which the following is a specification.

This invention relates to that type of churn-operating mechanisms including generally a supporting-stand, a vertically-movable dasher mechanism mounted on said stand, and operating mechanism for imparting vertically-reciprocatory movement to said dasher mechanism.

The invention embodies novel improvements the advantages and construction of which will appear more fully as the description proceeds.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view of a churn-operating mechanism embodying the invention. Fig. 2 is a top plan view. Fig. 3 is a detail broken view bringing out clearly the pitman connection between the dasher-rod and the crank-shaft. Fig. 4 is an end elevation of the mechanism. Fig. 5 is a side elevation.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Specifically describing the invention, the numeral 1 indicates the supporting-stand, upon the bottom 2 of which is supported the churn and in which the dasher mechanism is mounted. In addition to the bottom 2 the stand 1 comprehends a number of vertical supporting-bars, which carry the top 3 of the stand on which the operating mechanism is mounted.

The dasher mechanism includes a composite dasher-rod consisting of an upper section 4 and a lower section 5, which is telescopically mounted in the said section 4. The lower section 5 of the dasher-rod supports the dasher-heads 6 and 7, the dasher-head 6 being preferably adapted for adjustment vertically of the rod-section 5 for purposes which will be apparent to those versed in the art to which the invention appertains. A suitable sleeve and set-screw (shown at 8) are used to adjust the position of the head 6. The sections 4 and 5 of the dasher-rod are adjustable relatively to one another, the section 4 having a set-screw 9 at its lower end to engage the section 5 and hold the latter at a desired adjustment with reference to the former. Secured to the top 3 of the stand 1 is an operating mechanism which includes a base 10, having a standard 11 projecting upwardly therefrom, the lower portion of said standard being composed of spaced sides between which is mounted a fly-wheel 12. The fly-wheel 12 is carried by a crank-shaft 13, mounted in suitable bearings in the sides of the standard 11, a small sprocket-wheel 14 being secured to one end of the shaft 13, while at the opposite end of the shaft is provided the longitudinally-slotted crank 15. The sprocket-wheel 14 is connected by a sprocket-chain 16 or similar endless belt connection with a large sprocket-wheel 17, which is mounted in a small bracket-stand 18, secured to the base 10, which carries the operating mechanism. The lower end of the bracket-stand 18 is slotted to receive a fastening 19, by which said stand is secured to the base 10 in an adjustable manner, said lower end of the stand 18 being movable between spaced parallel ribs 20, formed inwardly with the top of the base 10.

The crank 15, as before mentioned, is longitudinally slotted, as shown at 21, to receive the removable wrist-pin 22, by which the pitman 23 is attached to said crank 15. The wrist-pin 22 is adjustable longitudinally of the slot 21, so as to admit of variance in the degree of movement of the pitman 23 under the actuation of the operating mechanism. The crank-pin 22 is held at the desired adjustment by a set-nut 24 of any suitable form. The pitman 23, which is attached at one end to the crank 15, has its other and upper end secured by a pin 25 to a sleeve 26, which is attached to the upper section 4 of the dasher-rod by a set-screw 27. The pin 25, attaching the upper end of the pitman 23 to the sleeve 26, is formed with a head which is grooved or provided with a guide-recess receiving a guide-rod 28. The guide-rod 28 is secured at its upper end to an arm 29, which extends laterally from an extension 30 at the upper portion of the standard 11. The lower extremity of the guide-rod 28 is attached to one of the sides of the standard 11, and the rod 28 is so arranged

that the head of the pin 25 will slide lengthwise thereof in the vertical movement of the dasher-rod. The arm 29, which is offstanding from the extension 30, not only forms a means for attaching the guide-rod 28 in the position above described, but is formed with a vertical opening through which the upper section of the dasher-rod moves, the member 29 therefor coöperating with the dasher-rod to direct the latter in its vertical reciprocal movement. The dasher-rod also passes through openings in the base 10 and top 3 of the stand 1.

It will be noted that the mounting of the dasher-rod in the bearings in the arm 29 and the top of the table will cause the rod to move vertically without any play or wabbling motion in the actual operation of the machine. Thus the dasher-rod virtually forms the means whereby the head of the pin 25 is held in coöperative position relative to the rod or guide 28 of the standard. Whenever it is desired to move the member 26 or have access to the parts for cleaning purposes, it will be seen that the head of the pin 25, not being firmly attached to the rod 28, permits of ready separation of the parts.

Applied to the bottom 2 of the stand 1 is a pivoted plate 31, which under the normal tension of a spring 32 is adapted to hold the churn disposed upon the bottom 2 in proper position and prevent accidental displacement of said churn. In placing the churn in position on the bottom 2 of the stand 1 the lower section 5 of the dasher-rod is removed from the section 4 and placed within the churn. The churn is then disposed upon the bottom 2 of the stand, after which the dasher-rod 5 is secured to the section 4 at the desired adjustment.

It is contemplated that the dasher-heads 6 and 7 may be of any conventional construction which will give the best results in the actual operation of churning.

The operation of the mechanism as above set forth is very simple and the parts are connected and arranged that they may be readily taken apart or put together, this being a feature of especial importance under actual conditions of service.

Having thus described the invention, what is claimed as new is—

In churn-operating mechanism, the combination of a stand, a standard extending upwardly therefrom and having an offstanding arm provided with a bearing, said standard having a vertical guide at one side thereof, a crank-shaft, a dasher-rod mounted for vertical movement in the bearing in the offstanding arm aforesaid and in a second bearing provided in the top of the stand, a sleeve secured to the dasher-rod, a pin extending from said sleeve, a pitman connecting the crank of the crank-shaft with the pin above mentioned, said pin being formed with a guide-head arranged to move longitudinally of the guide on the standard and held in coöperation with the latter by the dasher-rod.

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

ABRAHAM H. STUTLER. [L. S.]

Witnesses:

J. P. SUMMERS,

A. F. HANES.