

No. 885,257.

PATENTED APR. 21, 1908.

W. J. JONES.
LEVER POWER CHURN.
APPLICATION FILED APR. 4, 1907.

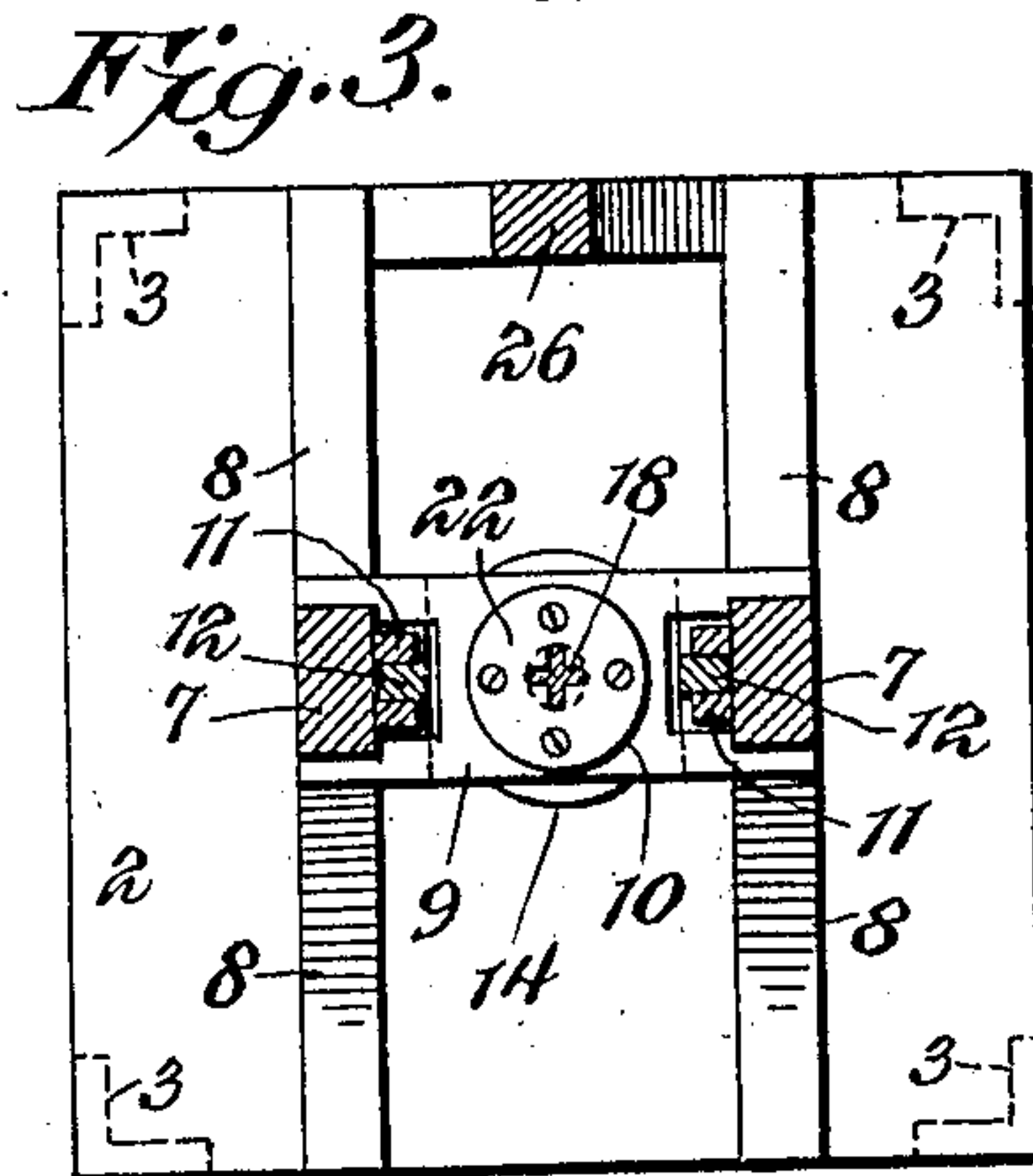
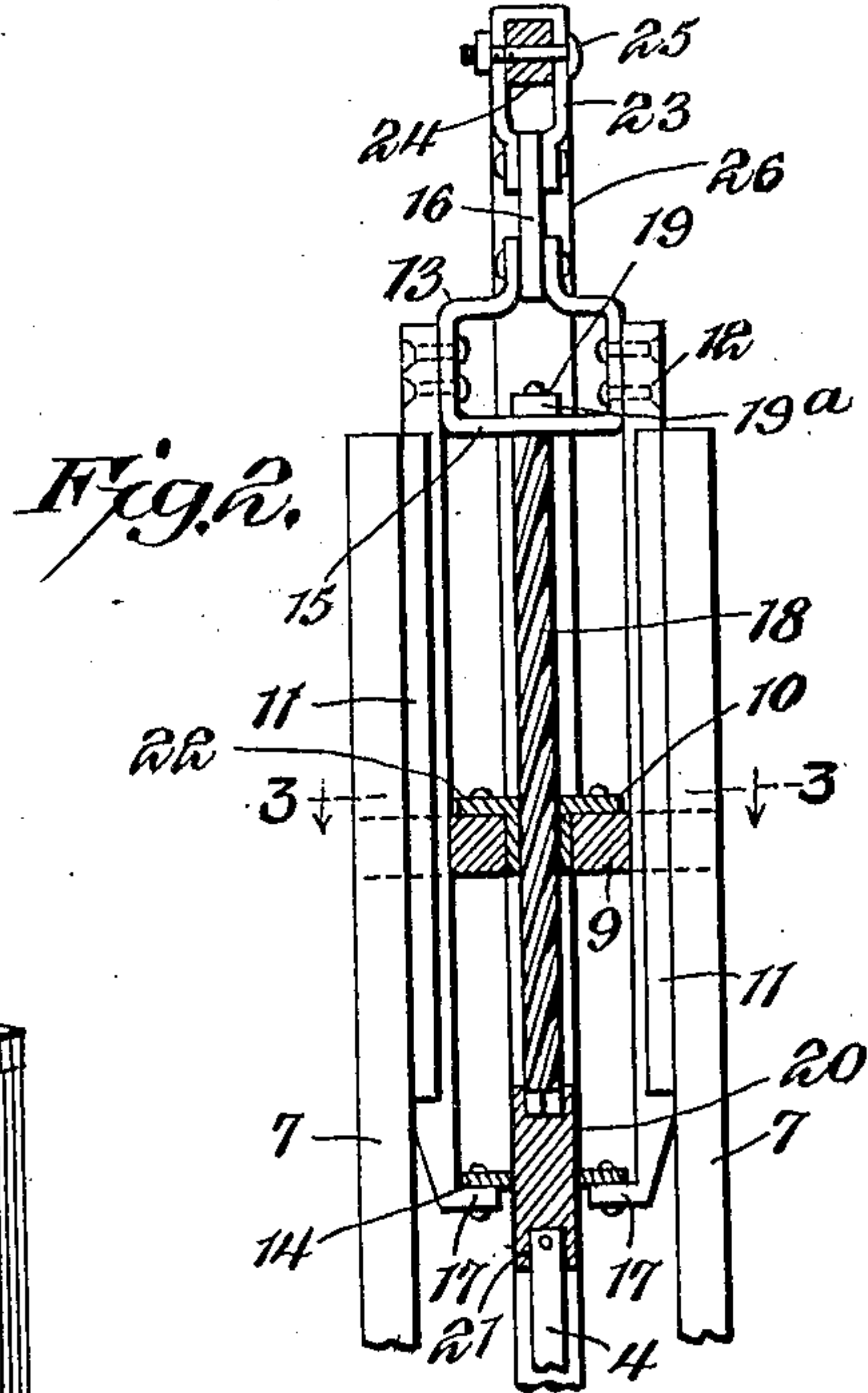
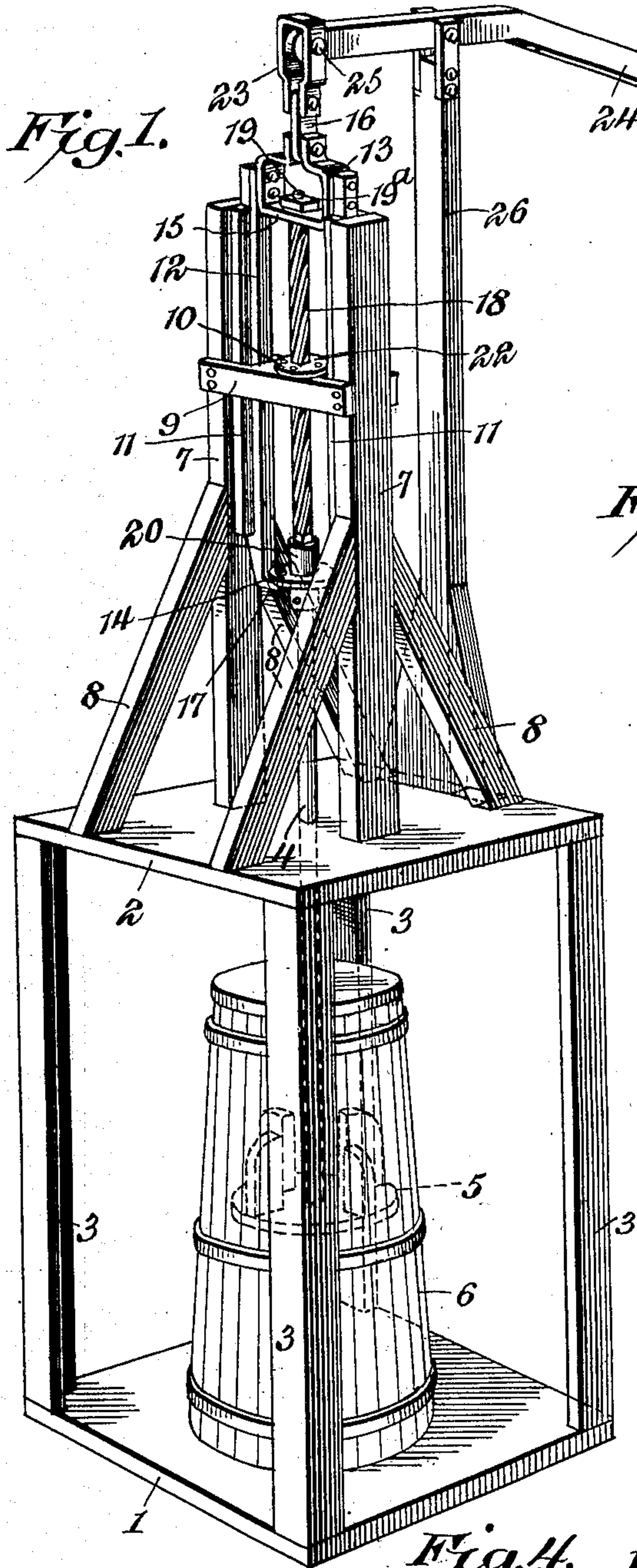


Fig. 4.

William J. Jones, Inventor,

Witnesses

Howard D. Orr.

H. J. Riley.

By

E. J. Siggers
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM J. JONES, OF MARTINSVILLE, VIRGINIA.

LEVER-POWER CHURN.

No. 885,257.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed April 4, 1907. Serial No. 366,264.

To all whom it may concern:

Be it known that I, WILLIAM J. JONES, a citizen of the United States, residing at Martinsville, in the county of Henry and State of Virginia, have invented the Lever-Power Churn.

The invention relates to improvements in churns.

The object of the present invention is to improve the construction of churns, and to provide a simple and comparatively inexpensive one capable of easy operation and of enabling butter to be rapidly produced.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a perspective view of a churn, constructed in accordance with this invention. Fig. 2 is a vertical sectional view of the upper portion of the churn. Fig. 3 is a horizontal sectional view on the line 3—3 of Fig. 2. Fig. 4 is a detail view of the nut.

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

The supporting frame of the churn is composed of a lower churn body-receiving portion and an upper guiding portion. The lower churn body-receiving portion is provided with a horizontal base 1 and a correspondingly shaped top 2, which is supported by corner posts 3. The top 2 of the lower portion of the frame is provided with a central opening through which passes a stem 4 of a dasher 5. The dasher 5, which may be of any preferred construction, operates within a churn body 6, arranged upon the base 1 of the frame.

The upper guiding portion of the frame is composed of spaced uprights 7 and inclined braces 8, located in advance and in rear of the uprights and secured to the same at points between the ends thereof. The inclined braces 8 are mounted on the top 2 of the lower portion of the frame, and the uprights are connected by a cross piece 9, located at a point between the top and bottom

of the guide portion of the frame and forming a support for a nut 10. The transverse bar or support is bifurcated at its ends to receive the uprights, as clearly illustrated in Fig. 3 of the drawing.

The uprights are provided at their inner faces with vertical guides 11, consisting of spaced strips or flanges suitably secured to the inner faces of the uprights and forming guiding grooves for the reception of a vertically reciprocating slide or frame 12. The vertical reciprocating slide or frame is composed of spaced sides, connected at their upper ends by a substantially rectangular yoke 13, and at their lower ends by a bearing 14. The yoke 13 is composed of a horizontal bottom portion 15 and spaced sides having parallel lower portions to which the upper ends of the sides of the reciprocating frame are secured by suitable fastening devices. The upper portions of the sides of the yoke are bent inwardly, and their upper terminals are pivoted to the lower end of a link 16. The lower ends of the sides of the reciprocating frame are provided with inwardly extending horizontal lugs 17 to which the lower bearing 14 is secured.

The reciprocating frame carries a screw shaft 18, provided with spiral ribs or flanges and having upper and lower journals or gudgeons 19 and 20. The upper journal or gudgeon is reduced and is arranged in a bearing opening of the bottom 15 of the yoke, and is secured to the same by a nut 19^a, or other suitable means, whereby the screw shaft is supported by the yoke. The lower journal of the screw shaft is arranged in the bearing 14 and is provided at its lower end with a suitable socket 21 in which the upper end of the stem 4 of the dasher is secured. The screw shaft passes through the nut 10, which is provided with spiral grooves corresponding with the ribs or flanges of the screw shaft, whereby when the frame 12 is reciprocated the screw shaft will be reversely rotated. By this construction, the dasher is vertically reciprocated and is reversely rotated and is thereby enabled to rapidly effect the production of butter. The screw 10 is in the form of a sleeve and is provided at the top with an annular attaching flange 22, which is secured by screws, or other suitable fastening devices to the support 9.

The link 16 is pivoted to a cuff 23, which is arranged on one end of an operating lever 24. The cuff 23 is secured to the lever by a pin

25, or other suitable fastening device, and its sides are spaced apart at the bottom to receive the upper end of the link. The lever is fulcrumed at an intermediate point on a post 5 26 and is equipped with a suitable clamp or handle 27. The post 26 is mounted upon the top 2 of the lower portion of the churn, and is arranged in rear of the guiding portion of the frame. The link connection between the lever and the slide or frame 12 enables the latter to be freely reciprocated by the operating lever.

I claim:—

15 In a churn, the combination of vertical guides, a horizontally disposed fixed nut arranged between the guides at a point inter-

mediate of the ends thereof and supported by the same, an upper yoke, slidable parallel bars secured at their upper ends to the sides of the yoke and movable in the guides, a 20 lower bearing secured to the lower ends of the bars and spacing the same, a screw swiveled at its upper end in the yoke and journaled at its lower end in the said bearing and passing through the intermediate nut, a hand lever 25 connected with the yoke, and a dasher connected with the lower end of the screw.

WILLIAM J. JONES.

Witnesses:

ALONZO T. JONES,
C. W. DAVIS.