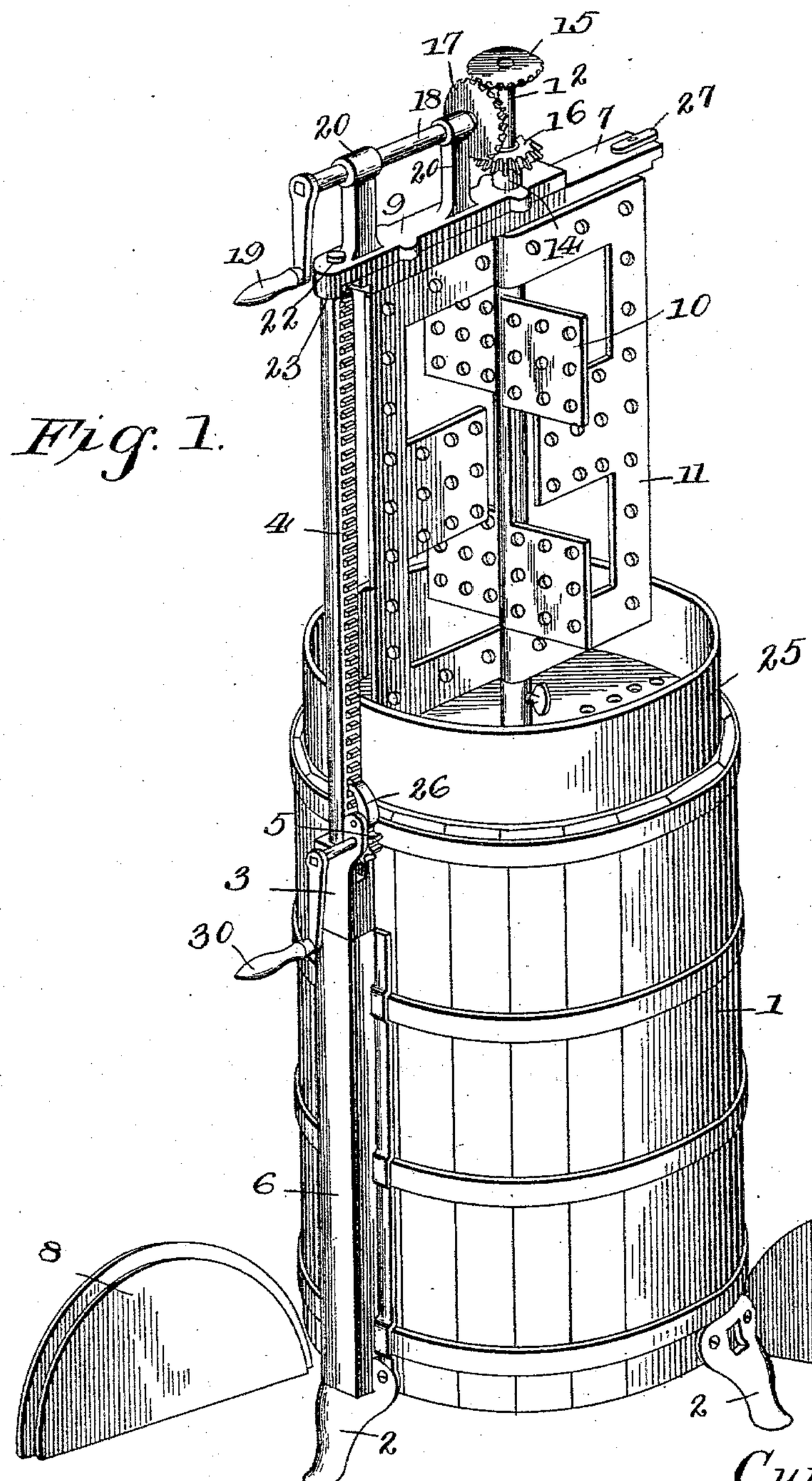
(No Model.) 2 Sheets—Sheet 1.

C. F. WIKOFF.

CHURN.

No. 552,946. Patented Jan. 14, 1896.

Fig. 1.



Witnesses

Chas. A. Ford.

F. F. Riley

Inventor

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(No Model.) 2 Sheets—Sheet 2.

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CHURN.

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Fig. 2.

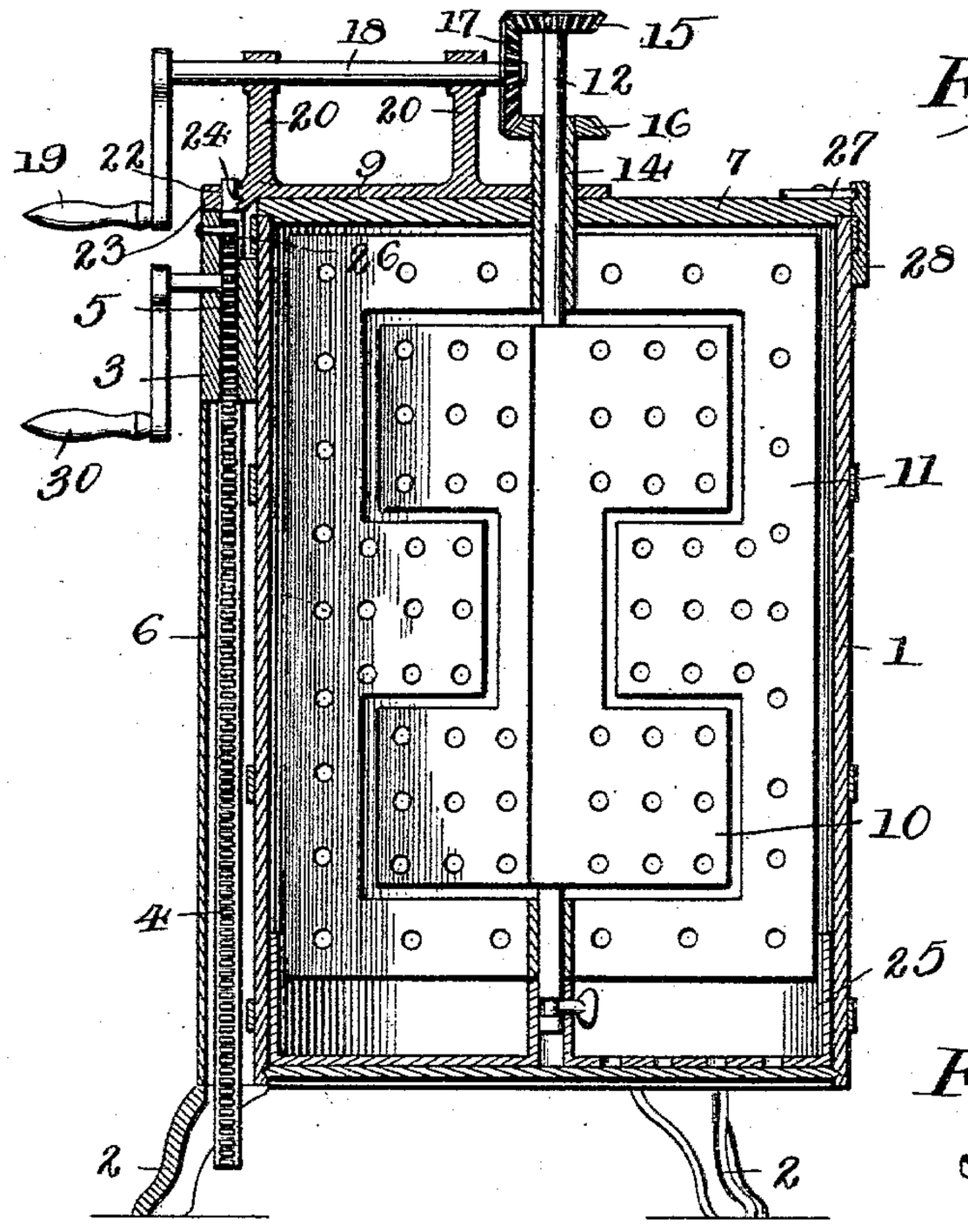


Fig. 4.

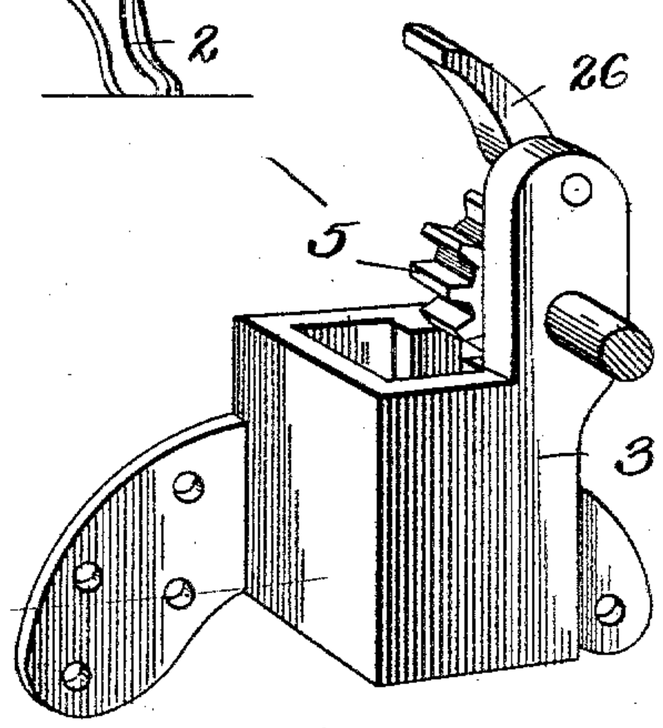


Fig. 3.

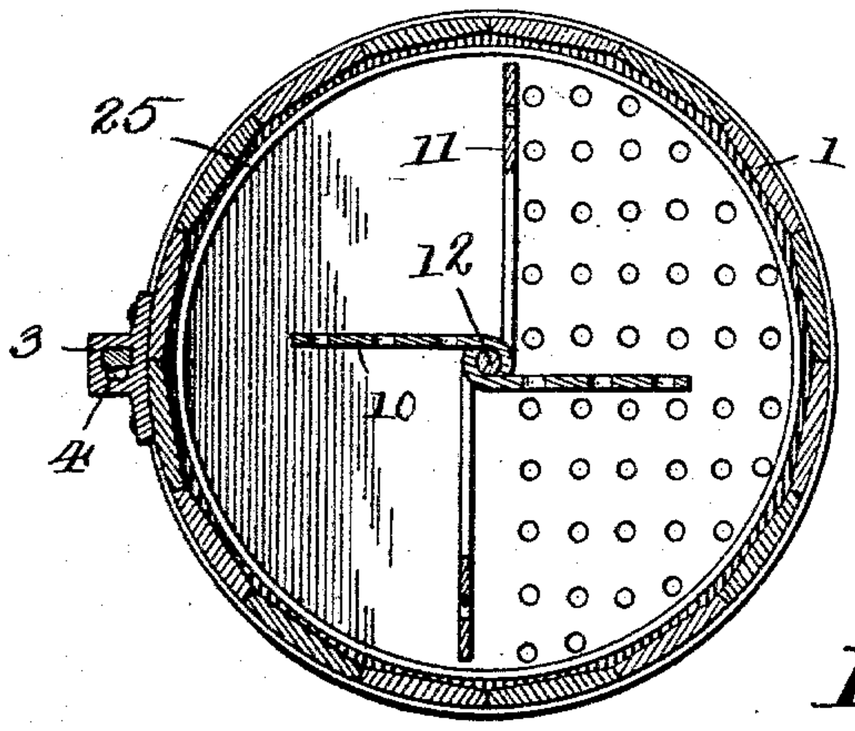
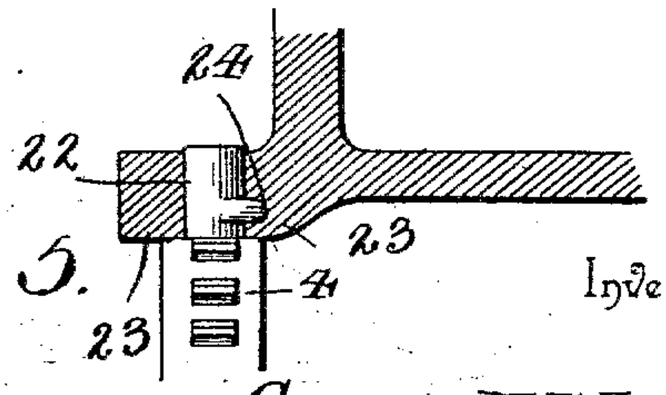


Fig. 5.



Witnesses

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J. F. J. Riley

Inventor

By his Attorneys,

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UNITED STATES PATENT OFFICE.

CYRUS FRANKLIN WIKOFF, OF WEST UNION, OHIO.

CHURN.

SPECIFICATION forming part of Letters Patent No. 552,946, dated January 14, 1896.

Application filed September 12, 1895. Serial No. 562,309. (No model.)

To all whom it may concern:

Be it known that I, CYRUS FRANKLIN WIKOFF, a citizen of the United States, residing at West Union, in the county of Adams and State of Ohio, have invented a new and useful Churn, of which the following is a specification.

The invention relates to improvements in churns.

The object of the present invention is to improve the construction of churns, and to enable the dasher and operating mechanism, after the operation of churning has been completed, to be elevated clear of the churn-body, and to carry with it the butter to effect a separation of the same from the liquid contents of the churn.

The invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a churn constructed in accordance with this invention, the operating mechanism being elevated. Fig. 2 is a vertical sectional view, the churn being in operative position. Fig. 3 is a horizontal sectional view. Fig. 4 is a detail perspective view of the casting which forms a guide for the rack-bar. Fig. 5 is a detail sectional view illustrating the manner of detachably pivoting the bracket to the upper end of the rack-bar.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a churn-body supported by legs 2, and having secured to it at its top an exteriorly-arranged guide 3, consisting of a casting and having a vertical opening or way receiving a vertically-movable rack-bar 4, provided with teeth and meshing with a pinion 5, mounted on the guide and adapted to raise and lower the rack-bar. The rack-bar extends the entire length of the churn-body and projects slightly below it when the parts of the churn are in operative position, in order to be of sufficient length to raise the dasher mechanism clear of the churn-body, as illustrated in Fig. 1 of the accompanying drawings, and it is arranged within a sheet-metal casing 6, which is secured to the outer face of the churn-body and which extends from the guide-casting to one of the legs, the latter being provided with an opening through which the rack-bar passes, the leg operating to conceal the lower end of the rack-bar when the dasher mechanism is lowered.

The cover of the churn-body consists of a central section 7 and two segmental side sections 8. The central section 7 is secured to a bracket 9, which is pivotally and detachably connected to the upper end of the rack-bar, and the central section has the dasher mechanism depending from it.

The dasher mechanism consists of reversely-rotating dashers 10 and 11. The dasher 10 is secured to and is carried by a dasher-shaft 12, and is provided with upper and lower oppositely-disposed perforated horizontal arms or blades, and has a central connecting portion or web. The other or outer dasher 11 is substantially rectangular and surrounds and rotates outside of the inner dasher 10, and is provided with central inwardly-extending blades, and is perforated similar to the dasher 10. The outer dasher is provided at its top and bottom with tubular portions or bearing-openings, and the upper tubular portion is formed by a sleeve 14, extended vertically above the central section of the cover.

Bevel gear wheels or pinions 15 and 16 are secured respectively to the upper end of the shaft and to the upper end of the sleeve, and are simultaneously engaged and reversely rotated by a bevel gear-wheel 17 of a horizontal shaft 18, which is provided at its outer end with a crank-handle 19.

The horizontal shaft is journaled in bearings 20 of the bracket or support 9, which is secured to the central section 7 of the cover. The outer end of the base of the bracket or support is provided with a circular opening 22, receiving the upper end of the rack-bar, which is rounded to form a pivot, and lugs 23 are arranged at opposite sides of the opening 22, and one of the lugs is recessed and adapted to engage a rib 24 of the rack-bar. By turning the bracket and the dasher mechanism, or partially rotating the same on the pivot of the rack-bar, the recessed lug is carried out of engagement with the rib or projection of the pivot and the entire dasher mechanism may be removed from the rack-bar.

When the dasher mechanism is elevated, a cylindrical or circular pan or receptacle 25, which is swiveled to the lower end of the dasher-shaft, is also located above the churn-body. This receptacle is detachably swiveled to the shaft and is provided with perforations, and is adapted to serve as a strainer to separate the butter from the liquid contents of the churn-body.

The rack-bar is maintained in an elevated position by a pivoted pawl or catch 26, mounted on the guide-casting and arranged to engage the teeth of the bar.

The central section 9 of the cover is recessed or rabbeted to fit the upper end of the churn-body, and it is provided at one end with a pivoted button 27, adapted to engage a recess or notched projection 28 of the churn-body. The segmental sections of the cover have their curved edges rabbeted, and their inner edges engage projections or lugs of the bearing bracket or support.

The pinion which meshes with the teeth of the rack-bar has a crank-handle 30 fixed to it to enable it to be readily rotated to raise and lower the dasher mechanism, and the catch which locks the rack-bar in its elevated position is automatic in operation, and may be either a gravity or spring actuated catch, as desired.

It will be seen that the mechanism for raising and lowering the dasher mechanism is simple and comparatively inexpensive in construction, that it is positive and reliable in operation, and that it will enable the dashers and the butter-receptacle to be readily elevated above the churn-body.

It will also be apparent that the bearing bracket or support is pivotally and detachably connected to the rack-bar, and that the dasher mechanism and butter-receptacle may be swung aside from the churn-body or entirely disconnected therefrom, and that the butter-receptacle may alone be removed, if desired.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. In a churn, the combination of a churn body, a vertically movable rack-bar guided on the churn body, a pinion meshing with the rack-bar and adapted to raise and lower the same, means for locking the rack-bar in an elevated position, a bearing bracket or support connected with and carried by the rack-bar, and dasher-mechanism depending from the bracket or support and adapted to be elevated clear of the churn body, substantially as and for the purpose described.

2. In a churn, the combination of a churn body, a vertically movable rack-bar mounted thereon, a pinion meshing with the rack-bar and adapted to raise and lower the same, a bearing bracket or support pivotally and detachably connected to the upper end of the rack-bar and arranged to swing horizontally, and dasher mechanism carried by the bracket or support, substantially as described.

3. In a churn, the combination of a churn body, a guide mounted thereon, a vertically movable rack-bar passing through the guide and provided at its upper end with a vertical pivot, a pinion meshing with the rack bar and provided with a crank-handle, a bearing bracket or support provided with an opening receiving the pivot, an automatically operating catch mounted on the guide and engaging the rack-bar, dasher mechanism depending from the bracket or support, and a cover comprising a central section secured to the bracket or support, and segmental side sections, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CYRUS FRANKLIN WIKOFF.

Witnesses:

HENRY DUNLAP,

JENNIE E. WIKOFF.