(No Model.) 2 Sheets—Sheet 1.

J. S. CARTER & I. C. WIGHTMAN.

BUTTER WORKER.

No. 356,924. Patented Feb. 1, 1887.

Fig. 1.

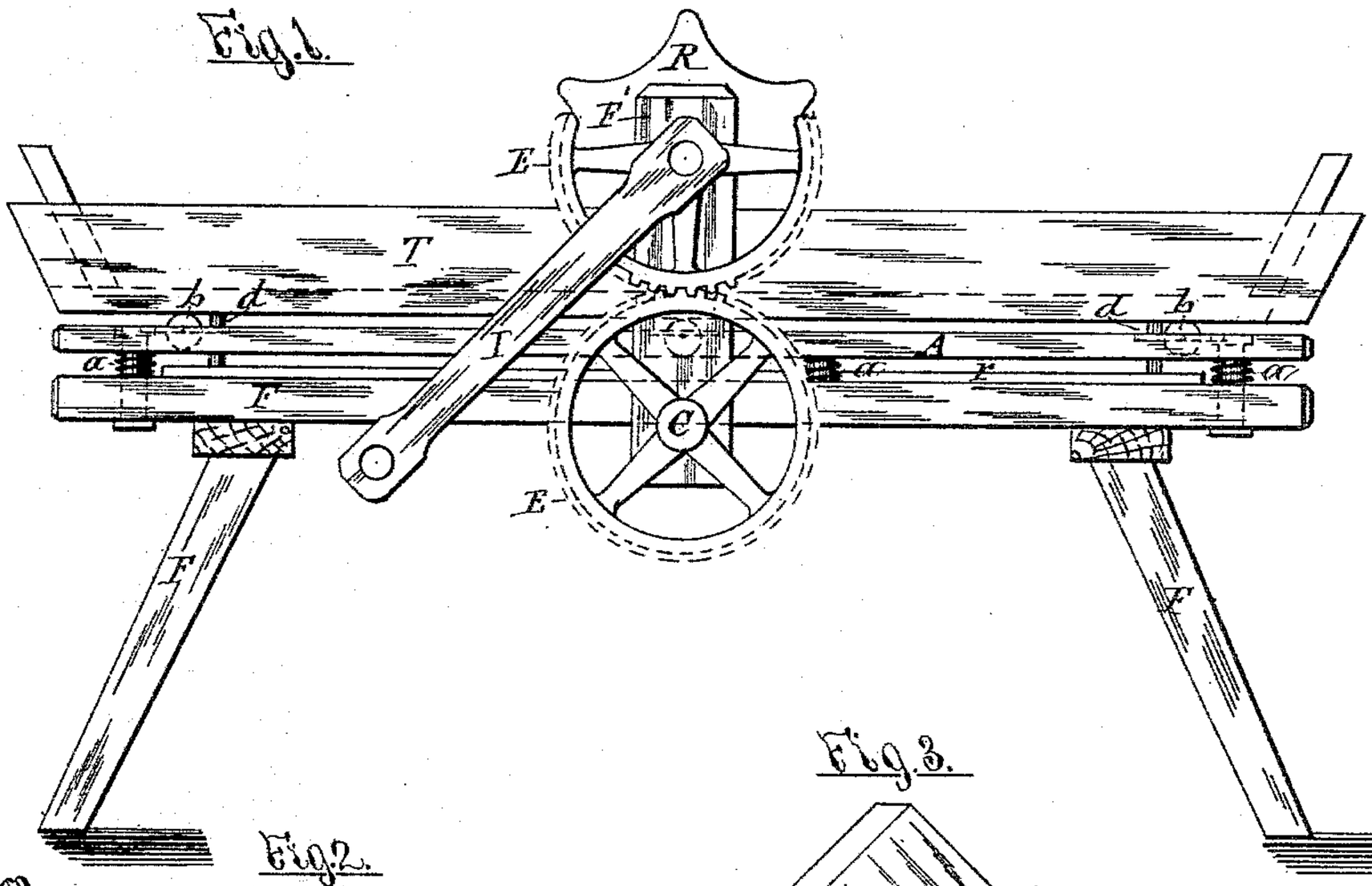


Fig. 2.

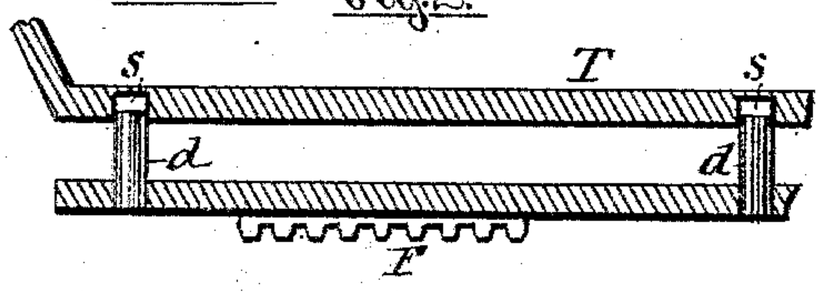
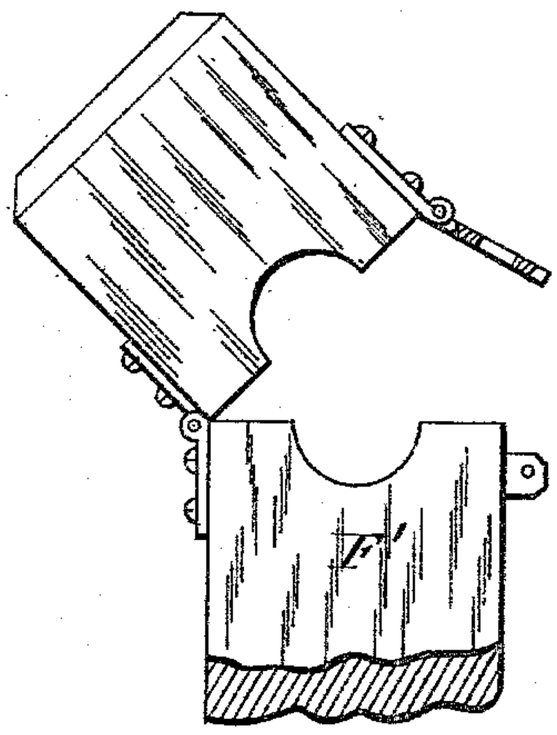


Fig. 3.



Witnesses.

E. Bendixon

F. H. Gibbs

Inventor.

John S. Carter

Ira C. Wightman

per Bundy, Laacs & Hay

Attys

(No Model.) 2 Sheets—Sheet 2.

J. S. CARTER & I. C. WIGHTMAN.

BUTTER WORKER.

No. 356,924. Patented Feb. 1, 1887.

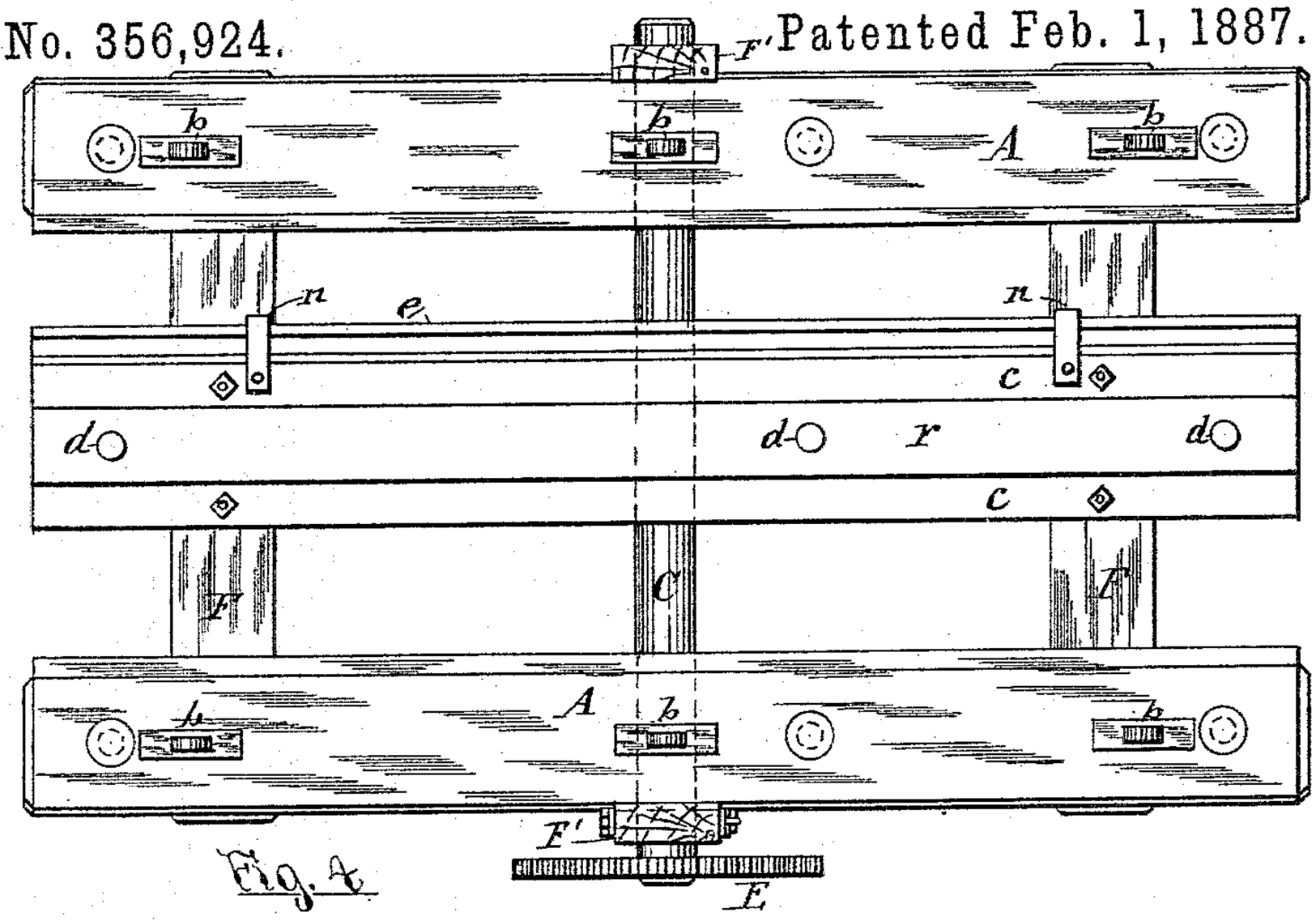


Fig. 4.

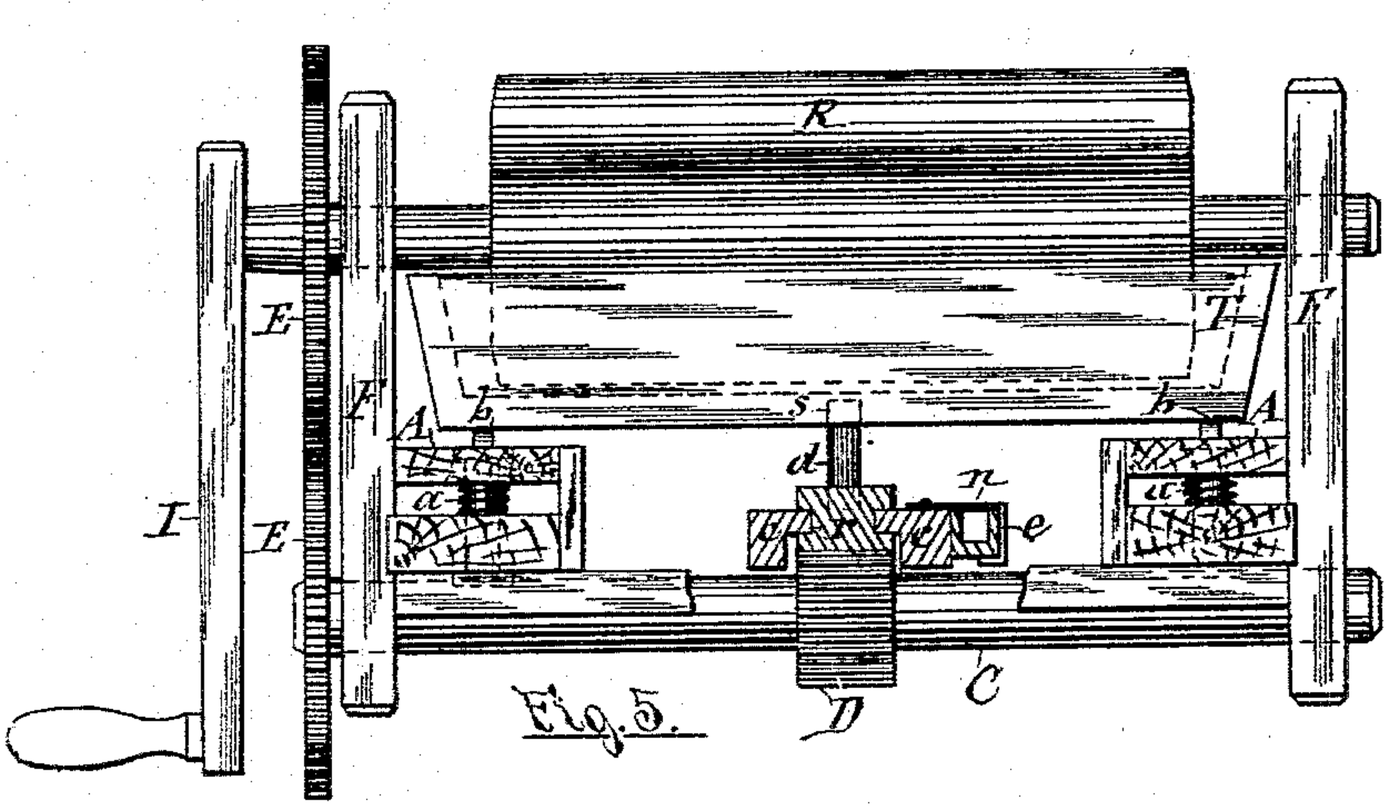


Fig. 5.

Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN S. CARTER, OF SYRACUSE, AND IRA C. WIGHTMAN, OF NORWICH, N. Y.

BUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 356,924, dated February 1, 1887.

Application filed January 18, 1886. Serial No. 188,854. (No model.)

To all whom it may concern:

Be it known that we, JOHN S. CARTER and IRA C. WIGHTMAN, of Syracuse, in the county of Onondaga, in the State of New York, and Norwich, Chenango county, New York, have invented new and useful Improvements in Butter-Workers, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of butter-workers in which the butter-tray is reciprocated under a grooved or corrugated roller, which works the butter placed in the aforesaid tray.

The invention consists in an improved construction and combination of parts, as hereinafter more fully explained, and specifically set forth in the claim.

In the annexed drawings, Figure 1 is a side elevation of our improved butter-worker. Fig. 2 is a longitudinal vertical section of a portion of the tray and its connection with the rack. Fig. 3 is an enlarged detail view of the detachable connection of the kneading-roller with the supporting-frame. Fig. 4 is a top plan view taken below the tray, and Fig. 5 is an end view, with a portion of the frame broken away to show the pinion and its connection with the rack and tray.

Similar letters of reference indicate corresponding parts.

F represents the main supporting-frame of the butter-worker. Upon the said frame we mount a supplemental frame, A, which we support so that it will yield vertically by means of springs *a a*, interposed between the two frames F A. On the supplemental frame A we journal a number of rollers, *b b*, which project with their peripheries above the said frame, and on said rollers we mount the tray T, which is thus allowed to freely move longitudinally back and forth on the supplemental frame A.

On the usual posts, F′, secured to the frame F, at opposite sides of the tray, is journaled the kneading-roller R, which we prefer to corrugate longitudinally, but do not limit ourselves to such form. The roller R is made removable from the aforesaid posts by dividing one of the latter transversely at the center of the journal-bearing and hinging the top portion of the post to the fixed portion thereof at one of the side edges of the joint, so as to allow the top portion to be swung to one side, as represented in Fig. 3 of the drawings.

C is a counter-shaft arranged parallel with the kneading-roller R, underneath the supplemental frame A, and journaled on the aforesaid posts F′ F′. On one and the same ends of the shaft of the roller R and the counter-shaft C are attached gear-wheels E E, which mesh in each other, and thus transmit motion from the roller-shaft to the counter-shaft, the roller-shaft being rotated by means of a crank, I, attached to said shaft. On the counter-shaft C is fastened a pinion, D, which meshes in a rack, *r*, arranged parallel with the tray T, and sliding in guides *c c*, secured to the main frame F. From the top of the said rack project lugs or pins *d*, which partly and loosely enter sockets *s s* in the under side of the tray and allow the tray to vibrate vertically without losing their hold thereon. *e* denotes the trough for collecting the liquid expelled from the butter during the operation of the kneading-roller R, the tray T being provided at its bottom with a discharge-opening directly over the aforesaid trough.

In order to obtain access to the trough *e* for cleaning the same without removing the tray, we support said trough removably on brackets *n*, secured either to one of the guides *c*, as shown, or to the frame F.

In operating our improved butter-worker, the tray T yields and becomes depressed in case an undue bulk of butter is carried under the roller R, thus preventing a scraping action of the roller on the butter, and instead of said action, a most effective kneading action on the butter is produced, which latter action has been found necessary to thoroughly work the butter and expel the liquid therefrom.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In combination with the main frame F and the kneading-roller R, journaled thereon, the supplemental frame A, supported on springs *a a*, rollers *b b*, journaled on the frame A, the tray T, mounted on said rollers, and provided

with sockets *s*, the shaft C, the pinion D, gears E E, guides *c c*, the rack *r*, sliding on said guides, and lugs or pins *d d*, attached to the rack and entering the sockets *s* of the tray, all constructed and combined to operate substantially as described and shown.

In testimony whereof we have hereunto signed our names and affixed our seals, in the presence of two attesting witnesses, at Syracuse, New York, and Norwich, New York, in the counties of Onondaga and Chenango, in the State of New York, this 24th day of December, 1885.

JOHN S. CARTER. [L. S.]
IRA C. WIGHTMAN. [L. S.]

Witnesses for John S. Carter:
FREDERICK H. GIBBS,
E. C. CANNON.
Witnesses for Ira C. Wightman:
W. B. LEACH,
J. S. WOOD.