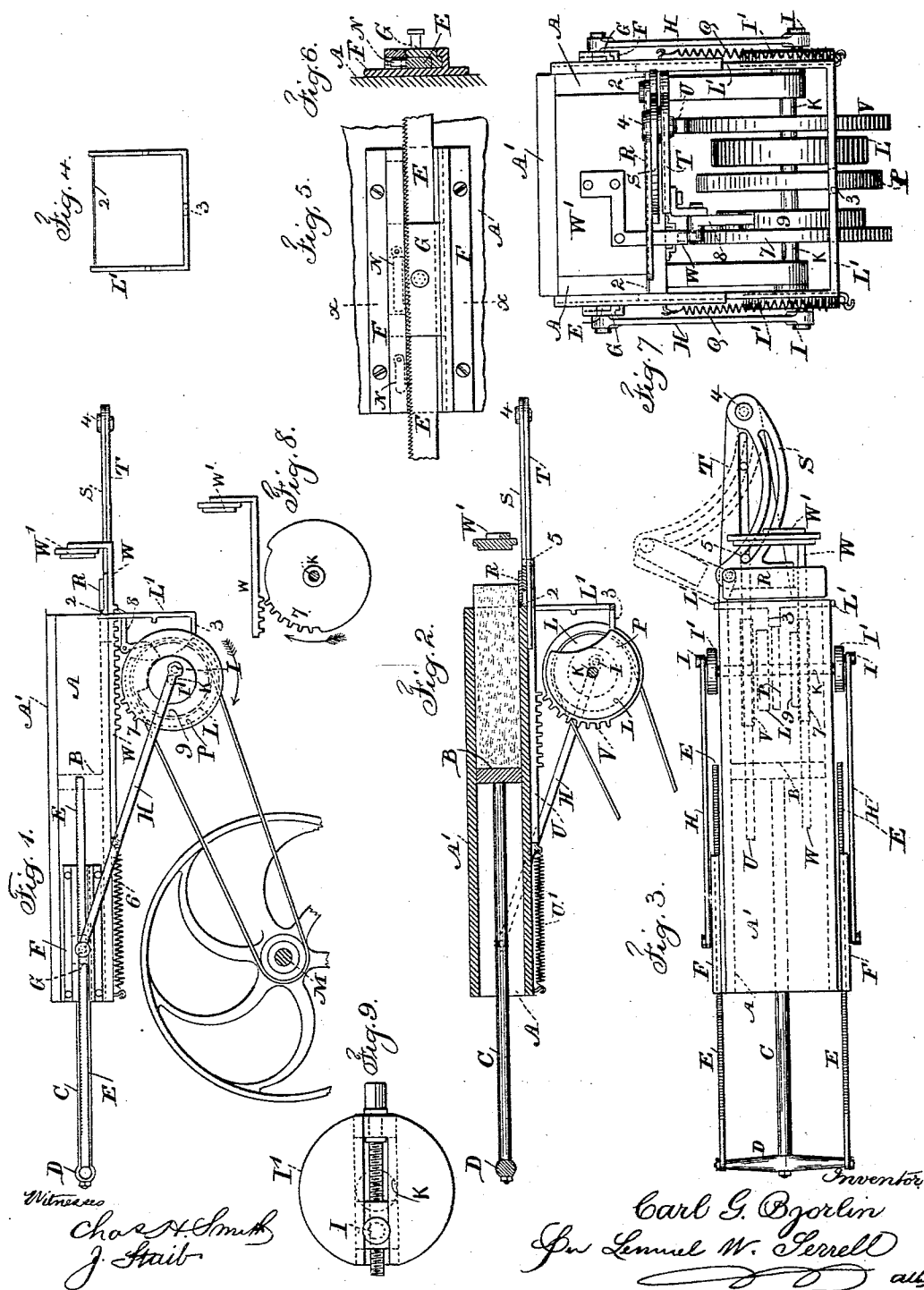


(No Model.)

C. G. BJORLIN.
BUTTER CUTTER.

No. 476,442.

Patented June 7, 1892.



Witnesses
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CARL G. BJORLIN, OF STOCKHOLM, SWEDEN, ASSIGNOR TO HIMSELF, AND
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BUTTER-CUTTER.

SPECIFICATION forming part of Letters Patent No. 476,442, dated June 7, 1892.

Application filed October 19, 1891. Serial No. 409,117. (No model.)

To all whom it may concern:

Be it known that I, CARL GEORG BJORLIN, a subject of the King of Sweden and Norway, residing at Stockholm, Sweden, have invented an Improvement in Butter-Cutters, of which the following is a specification.

The object of this invention is to compress and consolidate butter in a mold and to stamp and discharge the same progressively and cut off slices or cakes and deliver them rapidly and of uniform or nearly-uniform weight; and the invention relates to the combination of devices hereinafter set forth and claimed.

In the drawings, Figure 1 is a side view, Fig. 2 is a central longitudinal section, and Fig. 3 is a plan view, of my improved cutter. Fig. 4 is an elevation of the wire-cutter and frame. Fig. 5 is a detached elevation, in larger size, of the ratchet and power mechanism. Fig. 6 is a section at the line *xx* of Fig. 5. Fig. 7 is an end view, in larger size, of the apparatus. Fig. 8 is a detached view of a modification in the gear for the butter-stamp, and Fig. 9 is an elevation of the adjustable crank-pin and disk.

A rectangular box A is provided with a movable cover A', and this is supported upon any suitable frame-work, and into this the butter is to be introduced in any usual way, preferably by hand, after the cover A' has been raised.

Within the box A is a follower B, fitting the inside of the box, and from this one or more rods C extend to the cross-head D, and the ratchet-bars E are provided at the ends of the cross-head, and they extend through suitable supports at the sides of the box A. The slides F at opposite sides of the box A support the reciprocating pawl-carriers G, and these are provided with connecting-rods H to the adjustable crank-pins I upon disks I' on the cross-shaft K. This shaft is rotated by any suitable means. I have represented a wheel L and belt to a pulley and driving-shaft M, these parts being supported in suitable frame-work. The pawl-carriers G are provided with pawls N, which engage the ratchet-teeth upon the top edges of the ratchet-bars E, so that as the carriers G are reciprocated the pawls N engage the teeth upon the bars E and move them and the cross-head D,

rod C, and follower B along progressively, and the distance which the follower is moved by each rotation of the shaft K depends upon the position of the adjustable crank-pins I, and the teeth in the ratchet-bars E should be made with reference to the size of the box A, so that a given weight of butter will be projected from the end of the box A for each tooth that is taken up upon the ratchet-bars, so that the cakes of butter may be of a given weight, or approximately so.

A frame L' is fitted to slide vertically in suitable supports upon the main frame of the machine, and it carries across its upper end a wire 2, and the normal condition of this frame is depressed with the wire below the butter in the box A, and there is a projecting foot 3, which is below the cam P upon the shaft K, so that such frame L' is held down against the action of the springs Q, Fig. 7, by the cam P during the time that the butter is being projected at the end of the box A; but when the pawl-carriers G have commenced their return movement the end of the cam P passes clear of the foot 3, and the springs Q lift the frame L', and the wire 2 cuts off and separates the cake of butter, and then the cam P again acts upon the foot 3 and draws the frame L' down and holds it in its depressed position during the other operations. The butter thus projected and cut off as a cake may be removed in any suitable manner and it may be stamped or not. To remove this butter I have represented and prefer to employ a shelf R, which rests upon and is hinged at one end to the sector S, which is pivoted at 4 to a projecting arm or bar T from the frame of the machine, and this bar is slotted, and the sector S is provided with a curved slot, and there is a bar U, with a pin 5, passing through the slot in the arm T and in the sector S, and this bar U is drawn back by a spring U' and moved endwise by the action of the interrupted gear V on the shaft K, which comes into contact with teeth upon the under side of the bar U to give motion to the same and by the pin 5 to move the sector S and shelf R laterally and carry the cake of butter into the position indicated by dotted lines in Fig. 3, where it can be removed by hand or otherwise, as convenient.

Upon the under side of the box A and suitably supported is a slide-rack W, carrying at its end a vertical arm and stamp W', and there is a spring 6, tending to draw the slide W and stamp W' toward the butter, and the interrupted gear 7 upon the shaft K acts upon the teeth of the slide-rack W to move the same and the stamp away from the butter, and it is held in this position by a hinged arm 8, resting against a cam 9 during the time that the butter is being forced out from the box A, cut off, and delivered, after which the cam 9 separates from the hinged arm 8 and the spring 6 causes the slide-rack W and stamp to move rapidly up toward and against the end of the butter within the box A, and in so doing the stamp or imprint is put upon such butter, and this by preference occurs immediately before the butter is projected from the box. The interrupted gear immediately thereafter engages the teeth upon the slide-bar W and moves the same and the stamp back into the normal position and the hinged arm 8 drops down and rests against the cam to hold the parts in position after the interrupted gear 7 separates from the teeth of the slide W, and the parts remain in this position until the cam 9 again separates from the hinged arm 8 to allow the stamp to be brought up by the spring 6, as before described.

In Fig. 8 I have represented a gear for accomplishing the same object. When the teeth on the rack W engage the teeth upon the wheel 7, such rack is projected and held from coming back by the plain periphery of the wheel, and when the portion of the wheel where the teeth are cut away reaches the rack W its spring 6 draws it back rapidly to stamp the butter, and then it is immediately moved back out of the way by the action of the gear.

I claim as my invention—

1. The combination, with the box A for receiving the butter, a follower within the box, the rod, and cross-head, of ratchet-bars connected with the cross-head and supports for the same at the outer sides of the box, pawl-carriers and slides for the same and pawls upon the carriers for engaging the ratchet-bars, a cross-shaft and crank-pins moved by the same, and connecting-rods from the crank-

pins to the pawl-carriers for moving the same and the follower, substantially as set forth.

2. The combination, with the box for receiving butter and the follower within the box for ejecting the butter at one end, of a mechanism for moving the follower, a frame and guides at one end of the box and a wire for cutting the butter and mechanism for moving the frame and wire, and a shelf upon which the cake of butter is received, the sector connected with the shelf, and a pin, rack, and interrupted gear for moving the parts, substantially as set forth.

3. The combination, in a butter cutter and stamper, of the box for receiving the butter, a follower and means for moving the same to project the butter at one end of the box, a movable frame at one end of the box and a wire for cutting off the butter, a stamp, a slide-rack for supporting the same, an interrupted gear acting upon the rack for giving motion in one direction, and a spring for moving the parts in the other direction, substantially as set forth.

4. The combination, in a butter cutter and stamper, of a box for receiving the butter, a follower within the box for projecting the butter at one end, a rod and cross-head connected to the follower, ratchet-bars from the cross-head, pawl-carriers and pawls to act on the ratchet, connecting-rods and adjustable cranks for giving motion to the pawl-carriers and follower, a frame and wire at the end of the box for cutting off the butter, a cam for depressing and holding such frame, a spring for moving the frame and wire in cutting the butter, a shelf at one end of the box for receiving the cake of butter and slotted sector connected to the shelf, an interrupted gear, rack-bars, and pins for acting upon the sector and shelf, a stamp and a rack-bar carrying the stamp, an interrupted gear, and spring for moving such rack-bar and stamp, substantially as set forth.

Signed by me this 14th day of September, 1891.

C. G. BJORLIN.

Witnesses:

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