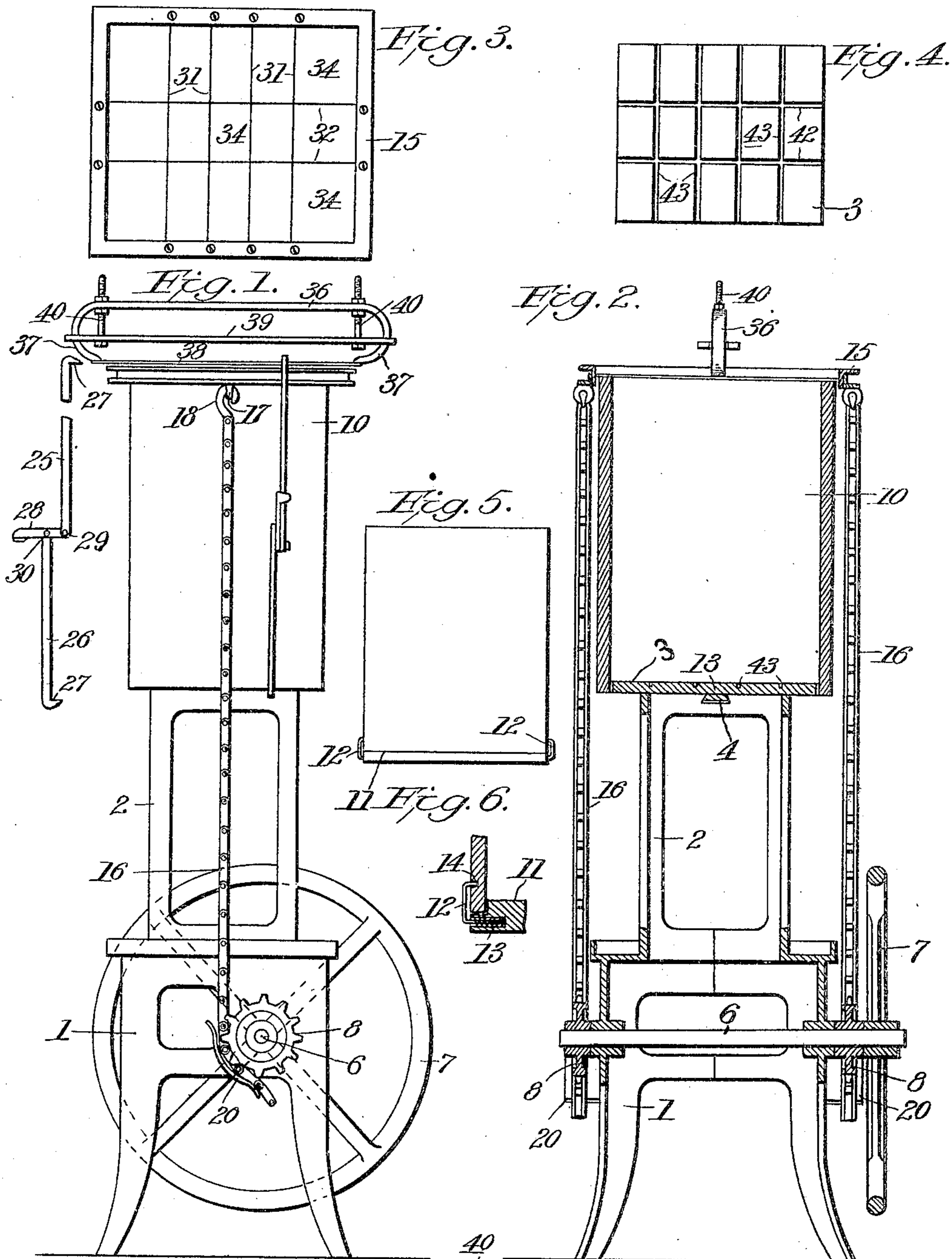


No. 804,219.

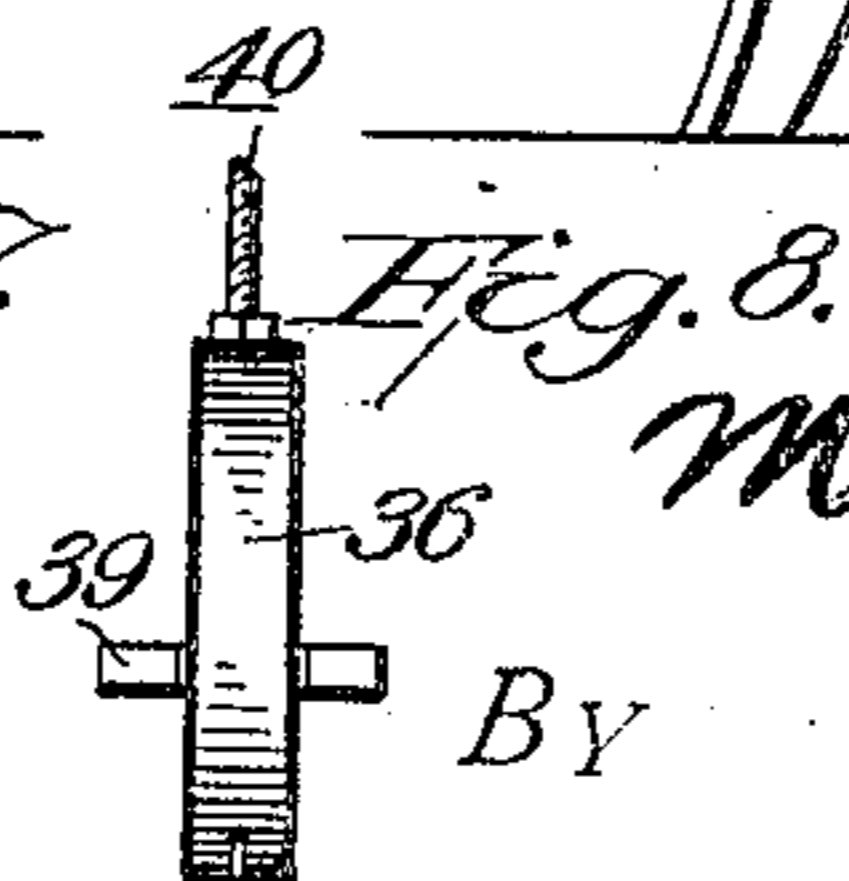
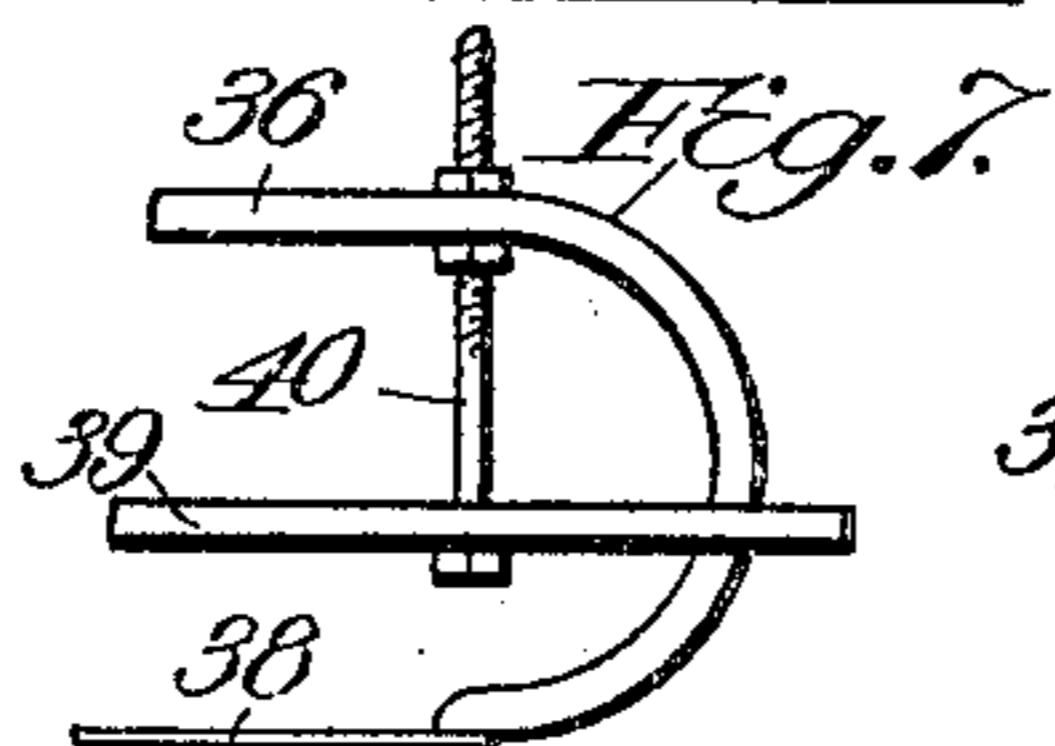
PATENTED NOV. 14, 1905.

M. C. GEHL.
BUTTER CUTTING MACHINE.
APPLICATION FILED JUNE 5, 1905.



WITNESSES:

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MATHIAS C. GEHL, OF MILWAUKEE, WISCONSIN.

BUTTER-CUTTING MACHINE.

No. 804,219.

Specification of Letters Patent

Patented Nov. 14, 1905.

Application filed June 5, 1905. Serial No. 263,713.

To all whom it may concern:

Be it known that I, MATHIAS C. GEHL, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Butter-Cutting Machines, of which the following is a specification.

My invention relates to improvements in butter-cutting machines, and pertains especially to that class of such machines in which the butter is cut while being removed from a box in which it has been previously packed.

The object of my invention is to provide means whereby the mass of butter may be supported upon a stationary platform and the box withdrawn to uncover the butter during the cutting operation, the mass of butter being less affected by the friction of the box or the pressure of the cutting devices than in cases where the butter is forced out of the box by a movable plunger, and the machine being also simplified and given greater stability and durability.

In the following description reference is had to the accompanying drawings, in which—

Figure 1 is an elevation of my invention. Fig. 2 is a vertical sectional view of the same drawn to a plane cutting the axis of the driving-shaft. Fig. 3 is a plan view of the butter-containing frame enlarged. Fig. 4 is a plan view of the table or platform on which the butter rests while being cut. Fig. 5 is a side view of the butter-containing box with a removable bottom attached. Fig. 6 is a detail view illustrating means for attaching the removable bottom to the butter-containing box. Fig. 7 is an enlarged detail view of one end of the auxiliary cutter for dividing the butter horizontally. Fig. 8 is an end view of the same.

Like parts are identified by the same reference characters throughout the several views.

1 is a frame provided with an upwardly-projecting standard 2, with which a removable table or platform 3 is adapted to be connected, the platform being preferably provided with a dovetailed member 4, adapted to slide in a corresponding groove in the upper end of the standard. A driving-shaft 6 is mounted in suitable bearings in the frame 1 and is provided with a hand-wheel 7 and sprocket-wheels 8, the latter being located near each end of the shaft at the sides of the frame.

The butter is packed in a box 10 preparatory to being cut. The box is provided with a removable bottom 11, which is secured in position by hook-shaped latches 12 near the respective corners. These latches are fitted to suitable sockets in the bottom and are secured therein by springs 13, each connected with one end of a latch and with the bottom of the box. The other end of the latch is adapted to engage in a socket in the side of the box, as best shown at 14 in Fig. 6. The bottoms 11 are adjusted to the boxes before filling the latter with butter. When the butter is to be cut, the bottoms are removed and the filled box placed upon the table 3 in the position in which it is shown in Fig. 2, a covering of parchment or other material having been used in the bottom 11 to prevent the butter from sticking to the bottom. When the box is in the position in which it is shown in Fig. 2, a frame 15 is adjusted over the open upper end of the box and connected by chains 16 on each side with the sprocket-wheels 8, the frame being provided with eyes 17, adapted to receive hooks 18, connected with the chain. A guide 20 on the frame prevents the chain from slipping from the teeth of the sprocket-wheels. The frame is also preferably clamped to the box 10 by means of the clamping members 25 and 26, which are provided with hooks 27 on their upper ends and are connected at their inner ends by clamping-lever 28, which is pivotally attached to the members 25 and 26 at 29 and 30, respectively, whereby as the lever 28 is swung upwardly the hooks 27 are drawn toward each other. Any desired number of these clamping members may be employed to prevent the frame 15 from buckling or springing.

The frame 15 is provided with a series of wires 31 and 32, connecting side bars of the frame and forming rectangular spaces 34 of any desired size. When the frame is in position on the box 10, these wires cross the mass of butter in the box, and by turning the hand-wheel 7 to draw the frame 15 and box 10 downwardly these wires will be drawn vertically through the butter to separate the latter into blocks. Where it is desired to also separate the butter horizontally, the frame 15 is drawn downwardly to the required distance, and a suitable tool is then drawn across the upper surface of the frame to cut off the projecting mass of butter which has already been separated vertically by the wires 31 and 32.

The tool thus employed preferably comprises a yoke-shaped frame 36, between the end arms 37 of which a wire 38 is stretched. A gage-plate 39 is slotted at each end to receive the end arms of the yoke and is adjusted thereon by means of bolts 40. This gage-plate 39 rests on top of the butter and assists in holding the cutting-tool in its proper position, so that the wire 38 can be drawn in a true horizontal plane across the projecting mass of butter and the latter cut into blocks of predetermined size.

Referring to Figs. 2 and 4, it will be observed that the table 3 is provided with a series of channels 42 and 43. These channels are adapted to receive the wires 31 and 32, respectively, when the frame 15 has been drawn downwardly to the table and the mass of butter completely separated.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a frame provided with a standard; a table mounted on said standard; a shaft mounted in the frame; and a butter-cutting frame provided with suitable crossed wires for separating the butter; together with open-ended boxes for containing the butter; and detachable flexible connections for communicating motion from said shaft to the butter-cutting frame; said table being adapted to enter the open-ended box.

2. The combination of a main frame; a table connected therewith; an open-ended box adapted to receive the table; a movable frame adapted to be adjusted to one end of the box, and provided with butter-cutting wires extending from one side of the butter-cutting frame to the other; winding mechanism on the main frame, and connections between said winding mechanism and the butter-cutting frame.

3. In a device of the described class; an auxiliary cutting device for separating the butter along longitudinal planes, comprising a frame; a gage-plate adjustably connected therewith; and a wire extending transversely from one side of the frame to the other below the gage-plate.

4. In a device of the described class; an auxiliary cutting device for separating the butter along longitudinal planes, comprising a frame; a gage-plate adjustably connected therewith; and a wire extending transversely from one side of the frame to the other below the gage-plate; together with means for adjusting the gage-plate vertically on said frame.

5. In a device of the described class; an open-ended box; a removable bottom for said box; and spring-latches connected with the bottom and adapted to engage suitable notches in the sides of the box.

6. In a device of the described class; the combination of a frame; a table carried thereby; a box in which said table is adapted to enter; means for forcing said box longitudinally over said table; and a butter-cutting frame provided with cross-wires adapted to separate the butter as the box is withdrawn therefrom; said frame being arranged to move with the box.

7. In a device of the described class; the combination of a frame; a table carried thereby; a box in which said table is adapted to enter; means for forcing said box longitudinally over said table; and a butter-cutting frame provided with cross-wires adapted to separate the butter as the box is withdrawn therefrom; said frame being arranged to move with the box; and said table being provided with cross-channels adapted to receive the butter-cutting wires when the butter is completely separated.

8. The combination of an open-ended box; a frame adjustable thereto and provided with suitable cross-wires; and a clamping device comprising hook-shaped members adapted to engage the frame and box respectively; and a connecting-lever pivoted to the respective members at different points, and adapted, when swung, to cause said members to approach each other.

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

MATHIAS C. GEHL.

Witnesses:

AUGUST J. LANGHOLFF,
PETER KIRCHEN.