P. N. OIEN.

BUTTER CUTTING MACHINE.

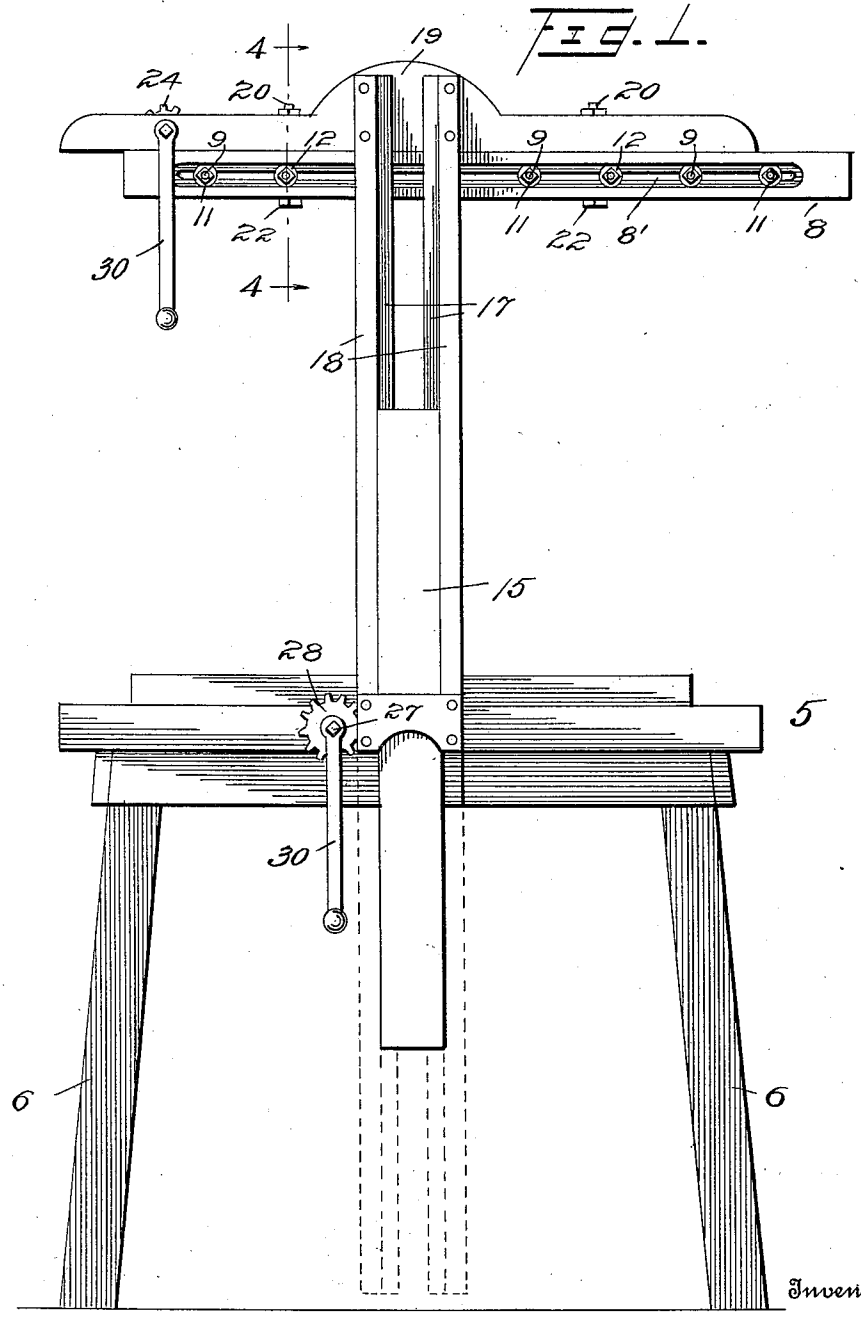
APPLICATION FILED JUNE 27, 1911.

1,007,598.

Patented Oct. 31, 1911.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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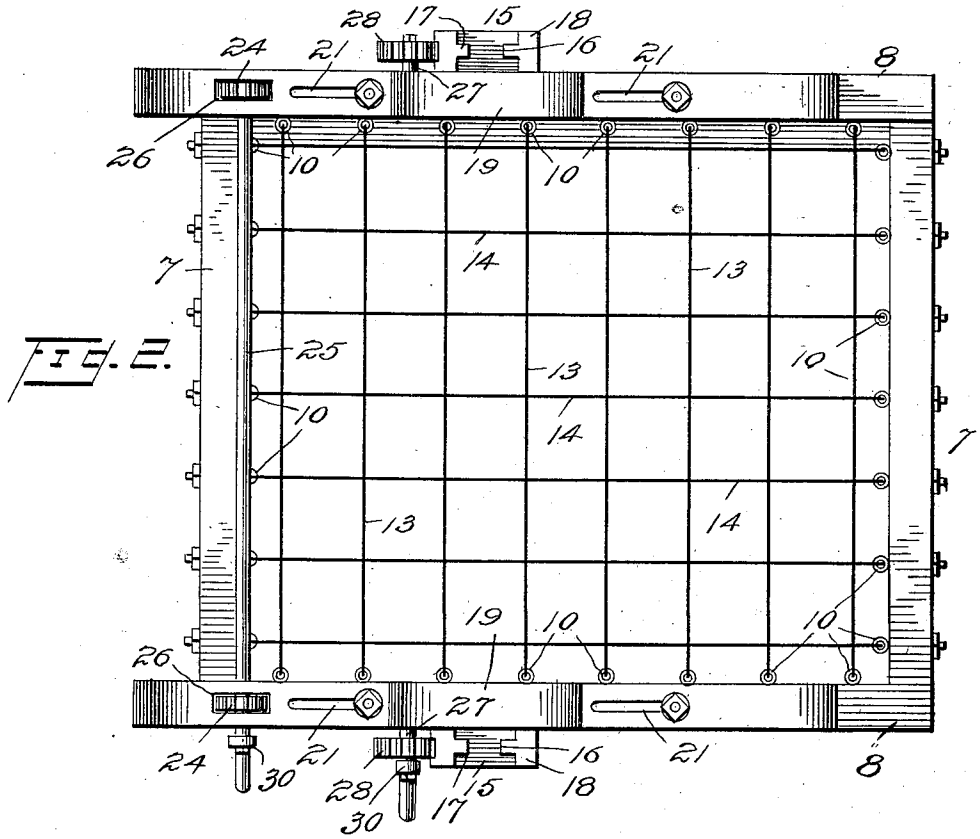
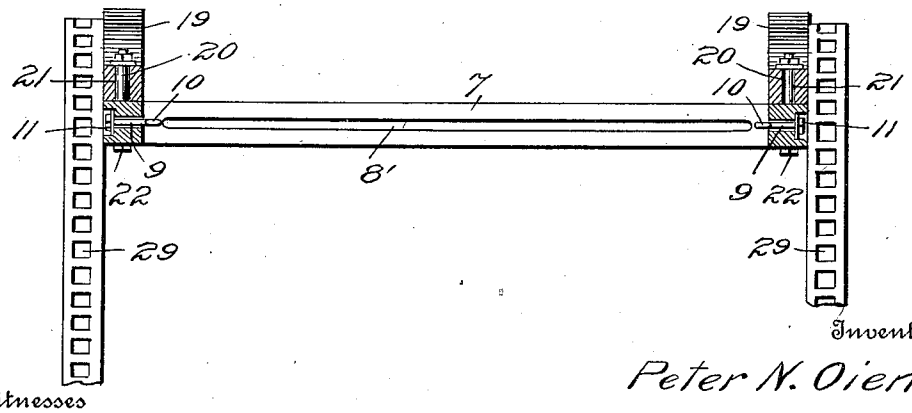


FIG. 2.

FIG. 4.



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3 SHEETS—SHEET 3.

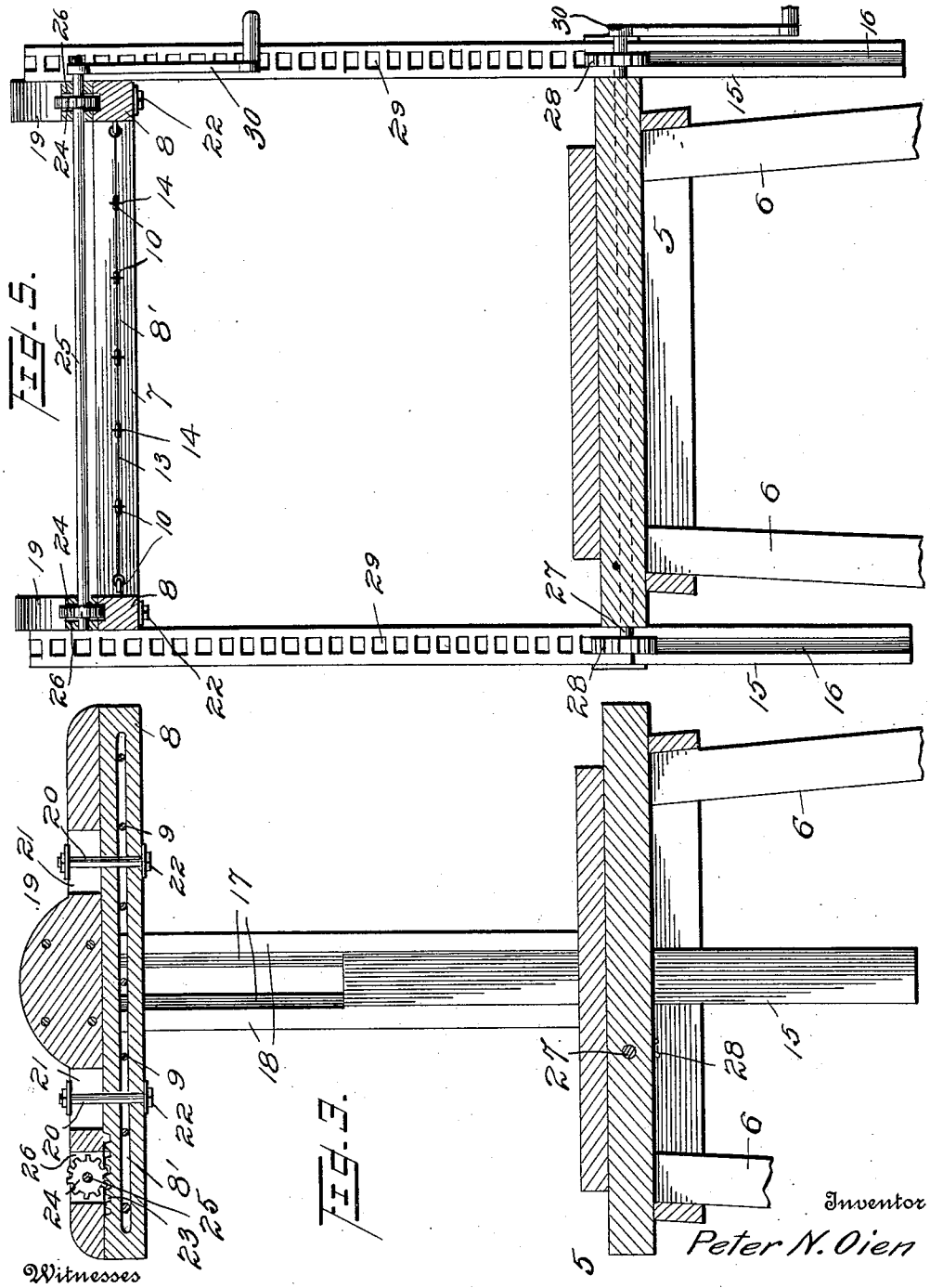

FIG. 5.

FIG. 3.

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UNITED STATES PATENT OFFICE.

PETER N. OIEN, OF EVERETT, WASHINGTON.

BUTTER-CUTTING MACHINE.

1,007,598. Specification of Letters Patent. Patented Oct. 31, 1911.

Application filed June 27, 1911. Serial No. 635,555.

To all whom it may concern:

Be it known that I, PETER N. OIEN, a citizen of the United States, residing at Everett, in the county of Snohomish and State of Washington, have invented new and useful Improvements in Butter-Cutting Machines, of which the following is a specification.

The invention relates to butter machines, and more particularly to the class of butter cutting machines.

The primary object of the invention is the provision of a machine of this character in which a block of material may be divided into equal proportions, so that each proportion will be in the form of a cube of a predetermined weight, thereby obviating the making of each cube by hand, as is usual.

Another object of the invention is the provision of a machine of this character in which the cutting frame may be horizontally adjusted relative to the platen or supporting base for the material, so that the latter may be cut into cubes, each of a predetermined proportion, thus enabling a plurality of cubes to be formed from the material in a single operation of the machine.

A further object of the invention is the provision of a machine of this character in which the cutting frame is movable vertically toward and away from the base, and also horizontally, thereby enabling the proper adjustment of the cutting frame, whereby material supported upon the base may be cut into a number of cubes in a single operation of the machine.

A still further object of the invention is the provision of a machine of this character which is simple in construction, thoroughly reliable and efficient in operation, and inexpensive in manufacture.

With these and other objects in view, the invention consists in the construction, combination and arrangement of parts, as will be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the claims hereunto appended.

In the drawings: Figure 1 is a side elevation of a machine constructed in accordance with the invention. Fig. 2 is a top plan view thereof. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a sectional view on the line 4—4 of Fig. 1. Fig. 5 is a vertical transverse sectional view through the machine.

Similar reference characters indicate corresponding parts throughout the several views of the drawings.

Referring to the drawings by numerals, the machine comprises a base 5, preferably of rectangular shape and may be formed of any suitable material, so as to provide a platen, the same being supported upon legs 6, depending from the under face thereof, at the corners of the base.

Arranged above and movable toward and away from the base is a cutting frame, comprising side and end bars 7 and 8, respectively, the same being connected together at the ends thereof in any well-known manner, so as to give rigidity to the frame. The side and end bars 7 and 8 are provided with elongated slots 8′ extending for a greater portion of the length thereof, and in which are arranged threaded bolt members 9, the inner ends of which are formed with eyes 10, while the outer ends thereof have adjustably connected thereto nuts 11, the same working against suitable washers 12 surrounding said bolt members 9, the washers resting against the outer faces of the said bars. Connected to the eyes 10 of the bolt members 9 are longitudinally and transversely disposed cutting wires 13 and 14, respectively, the same being drawn taut by the bolt members 9, when the nuts have been adjusted thereon, and on movement of the cutting frame toward the base or platen 5, the cutting wires will cut into and divide material supported upon said base or platen into independent cubes, in a single operation of the machine, as presently described.

Fixed to the side edges of the base or platen 5, medially thereof, and rising therefrom are vertical guide standards or uprights 15, the opposite edges of which are formed with longitudinal grooves 16, in which are slidably engaged opposed tongues 17 formed on the inner edges of spaced vertical rack bars 18 fixed at their upper ends to supporting heads 19 carrying the cutting frame, the racks being secured medially to the said heads.

Fixed in the heads 19, near opposite ends, are guide pins 20, the latter being passed through elongated slots 21 formed in the side bars 7 of the cutting frame, the said pins 20 being formed with heads 22, against

which the under faces of the side bars of the frame abut. Thus, in this manner, the frame will be held slidably connected to the said heads for horizontal adjustment laterally of the machine.

Formed on the upper faces of the side bars 7 of the cutting frame is a series of rack teeth 23 meshing with cog wheels 24 fixed to a rotatable shaft 25 journaled transversely in the heads 19, the latter being provided with suitable slots 26 receiving said wheels. Thus, it will be seen that upon rotating the shaft 25, the cog wheels 24 will be rotated, and by reason of the same meshing with the rack teeth 23, the cutting frame will be shifted in a horizontal plane laterally of the machine, thereby moving the cutting frame relative to the platen or base 5 thereof, for forming the desired sizes of cubes from the butter block upon the platen.

Journaled transversely in the base or platen 5, contiguous to the uprights or standards 15 thereon, is a rotatable shaft 27, on which are fixed cog wheels 28, the latter meshing with rack teeth 29 formed in the racks 18. Thus, it will be seen that upon turning the shaft 27, the said racks 18 will be raised or lowered upon the said uprights or standards 15 for moving the cutting frame toward and away from the base or platen 5, and when the said cutting frame is moved toward the said base or platen, and material is supported thereon, the latter will be cut and divided into a plurality of cubes or independent blocks by means of the cutting wires 13 and 14 severing such material placed upon the platen of the machine.

Each of the shafts 25 and 27 is formed with a crank handle 30 which permits the rotation thereof for the adjustment of the cutting frame.

In the operation of the machine, material, such as a block of butter, is placed upon the base or platen 5, it being understood of course that the cutting frame is elevated therefrom and the same has been adjusted laterally the required degree, and now upon the turning of the shaft 27, the cutting frame will be lowered toward the base or platen 5, so that the cutting wires 13 and 14 will cut vertically through the butter block, and on the lateral shifting of the frame, the said butter block will be cut into a plurality of cubes of equal proportions, each possessing a predetermined weight. The cubes are cut in this manner, in a single operation of the machine. By reason of the mounting of the bolts 9 in the slots 8′, the said cutting wires 13 and 14 may be adjusted relative to each other, as will be obvious.

What is claimed is:

1. In a machine of the class described, a base, vertically disposed guide uprights rising from said base, a frame vertically adjustable on the said uprights and having crossed cutting wires, and means for permitting horizontal adjustment of the frame laterally with respect to the base.

2. A machine of the class described, comprising a base, vertical uprights rising from said base, a frame having racks slidably engaging said uprights, means engaging said racks for vertically adjusting said frame, heads carried by the racks and connected with the frame, whereby the latter may be moved horizontally laterally with respect to the base, and means mounted in the heads and acting upon the frame to horizontally adjust the same.

3. In a machine of the class described, a base, a frame disposed above the base for vertical and lateral adjustment and having cutting wires arranged therein, and means for adjusting the frame laterally and vertically with respect to the base.

4. In a machine of the class described, a base, a frame disposed above the base for vertical and lateral adjustment and having cutting wires arranged therein, means for adjusting the frame laterally and vertically with respect to the base, and means adjustably connecting the cutting wires in the frame.

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

PETER N. OIEN.

Witnesses:
THOMAS W. COBB,
D. A. THORNBURG.