C. E. TUCKER.

SLICING MACHINE.

APPLICATION FILED SEPT. 14, 1917.

1,265,833.

Patented May 14, 1918.

2 SHEETS—SHEET 1.

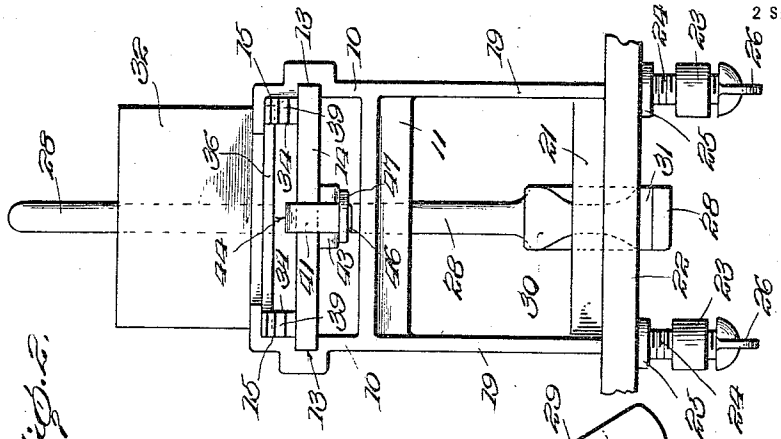


Fig. 2.

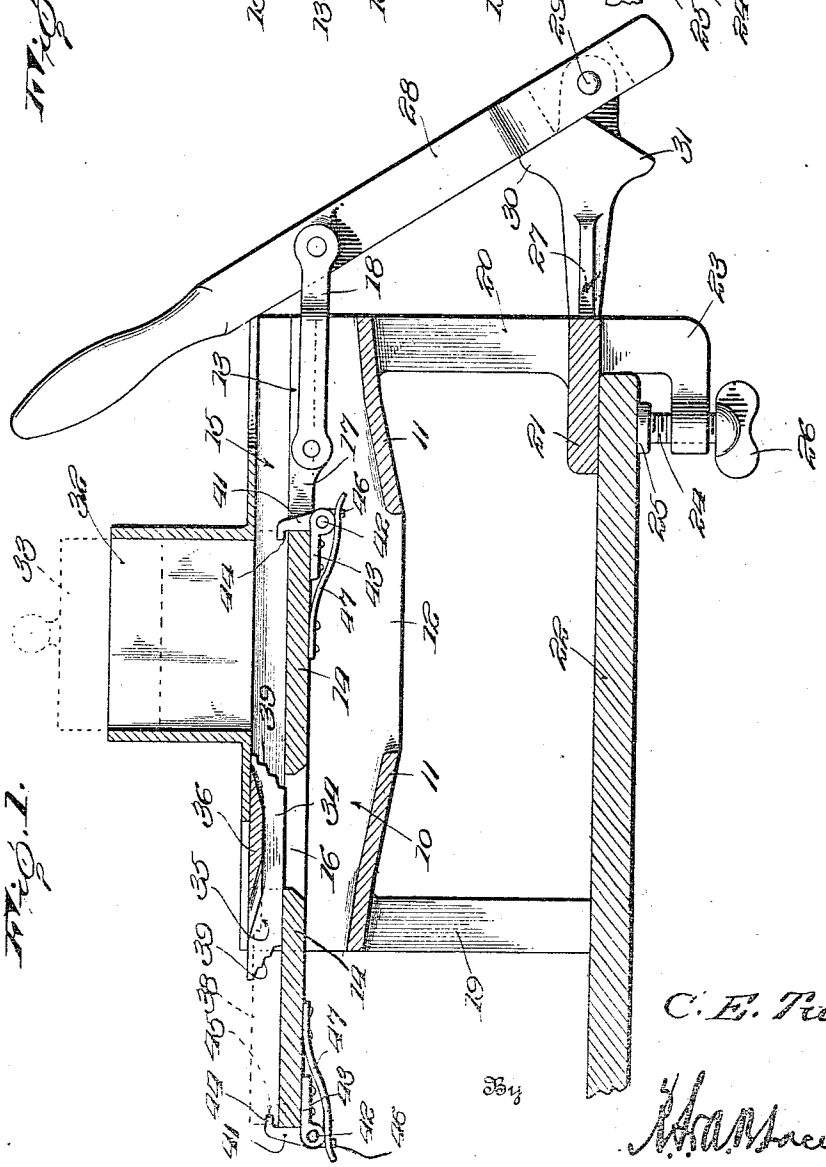


Fig. 1.

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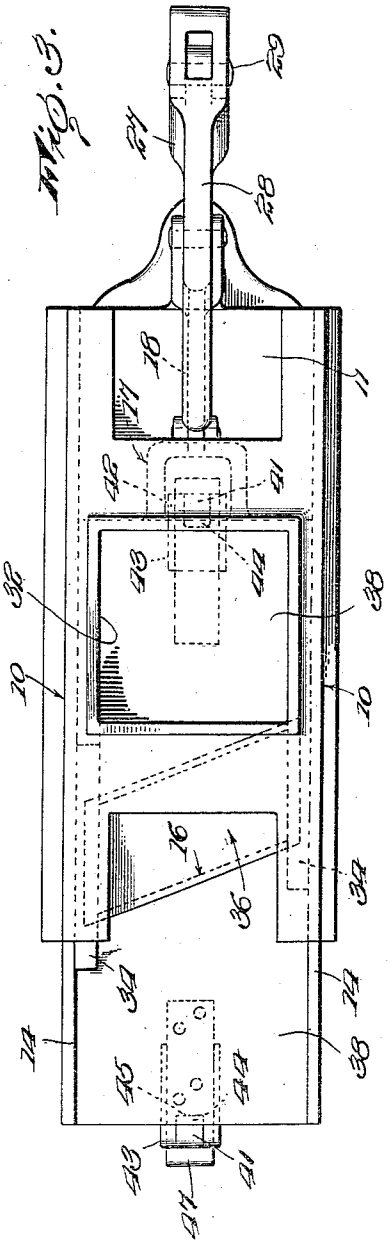


Fig. 5.

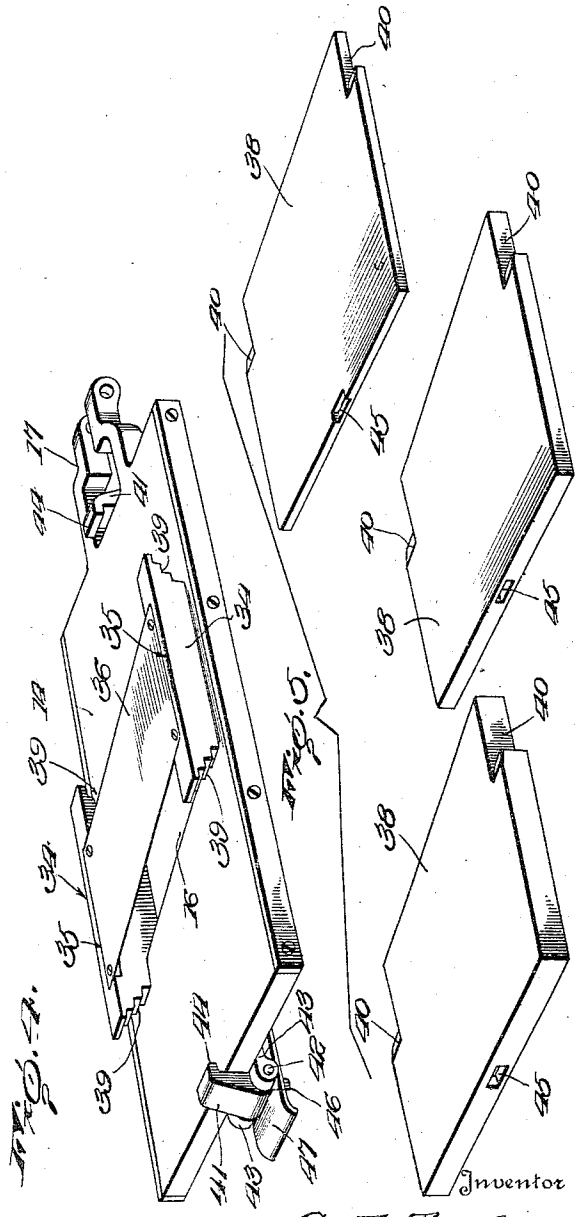


Fig. 4.

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UNITED STATES PATENT OFFICE.

CLARENCE E. TUCKER, OF HERNDON, VIRGINIA.

SLICING-MACHINE.

1,265,833. Specification of Letters Patent. Patented May 14, 1918.

Application filed September 14, 1917. Serial No. 191,446.

To all whom it may concern:

Be it known that I, CLARENCE E. TUCKER, a citizen of the United States, residing at Herndon, in the county of Fairfax and State of Virginia, have invented certain new and useful Improvements in Slicing-Machines, of which the following is a specification.

This invention relates to improvements in vegetable slicing machines and like devices, and has for one of its objects to simplify and improve the construction and increase the efficiency and utility of devices of this character.

Another object of the invention is to provide a simply constructed device including a reciprocating knife adapted to operate at both the forward and rearward stroke.

Another object of the invention is to provide a device of this character wherein novel provision is made for slicing material in various thicknesses.

Another object of the invention is to provide a device of this character adapted to be attached to a table or like support in convenient position for use, and which may be quickly detached for transportation or storage.

With these and other objects in view, the invention consists in certain novel features of construction, as hereinafter shown and described and then specifically pointed out in the claims; and in the drawings illustrative of the preferred embodiment of the invention—

Figure 1 is a longitudinal sectional elevation.

Fig. 2 is an end elevation.

Fig. 3 is a plan view.

Fig. 4 is a detached perpective view of the reciprocating member.

Fig. 5 represents perspective views of a plurality of the gage members.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The improved device comprises a casing or support including sides 10 in spaced relation, and a bottom 11. The bottom 11 extends the full length of the casing and is provided with a central relatively large opening 12 the end portions of the bottom preferably being inclined downwardly toward the opening, as illustrated in Fig. 1. Formed in the confronting faces of the sides 10 are longitudinal guide channels 13 in which a knife carrier 14 is slidably mounted. Supplemental channels 15 are also formed in the confronting faces of the sides 10 and communicate with the main guide channels. The carrier 14 is provided with a relatively large opening 16 intermediate its ends and provided with projections 17 at one end between which is pivoted one end of a connecting rod 18. The casing is supported at one end by legs 19 and at the opposite end by legs 20, the latter being coupled by a transverse web or bar 21 which is adapted to rest upon a support, for instance a table top, indicated conventionally at 22. Depending from the legs 20 are L-shaped bracket members 23 having threaded apertures to receive clamp bolts 24, the latter having swiveled feet 25 to bear against the underside of the table top 22 and winged heads 26 below the brackets 23 whereby the bolts may be readily turned home to clamp the device to the support 22.

Extending from the web 21 is a fulcrum arm 27 to the outer end of which a lever 28 is pivoted as at 29, the outer end of the connecting rod 18 being pivoted to said lever at an upper point of the same. It will be obvious that the carrier 14 may be reciprocated within the guides 13 by actuating the lever 28. The arm 27 is provided with upper and lower inclined stops 30—31 to limit the movement of the lever 28 and prevent it from being moved abnormally inwardly or outwardly, thereby preventing displacement of the carrier 14 in the operation of the same.

Rising from the main casing or support is a hopper or receptacle 32 for the vegetables to be sliced, said receptacle being open at top and bottom and thus communicating with the space between the sides 10 of the support. A follower 33 is preferably arranged to move vertically within the receptacle 32, to produce the requisite pressure upon the material being sliced. Rising from the carrier 14 at the ends of the opening 16 are ribs 34 disposed to operate in the supplemental channels 15, and each provided with a seat 35 to receive an end of the knife or blade 36 which is formed with oppositely arranged cutting edges, the ends of the blade conforming to the seats 35 in which they are secured in any suitable manner. The several parts are so proportioned and arranged that the upper edges of the ribs 34 and the upper face of the cutter 36 operate in proximity to the lower edges of the

receptacle 32, so that as the carrier 14 is moved backwardly and forwardly by actuating the lever 28 the blade severs the material which projects below the lower line of the receptacle. The cutting edges of the knife 36 extend obliquely across the carrier 14, as illustrated in Fig. 3, so that a shearing action is produced upon the material as it is severed. The channels 13 and 15, it will be noted by reference to Figs. 1 and 2, are located a considerable distance below the lower line of the receptacle 32, this space gaging the thickest slice of material to be severed, for instance a slice of bread, and by providing a plurality of gage plates of various thickness to be located upon the carrier 14, slices of different thickness may be severed.

Relatively thick gage members when disposed upon the carrier 14 at each side of the opening 16 will cause relatively thin slices of material to be severed, as is desirable when slicing dried or smoked beef, potatoes to produce Saratoga chips and the like, while other slices of any required thickness may be severed by providing gage plates of various thicknesses, as will be understood.

It will be noted that as the lever 28 is actuated the carrier 14, together with its cutting blade and gage members, will be moved backwardly and forwardly beneath the receptacle 32, severing a slice of the material at each forward stroke and another slice at the return stroke, the severed material falling through the opening 16 and thence through the opening 12 into a suitable receiver placed upon the support 22.

The gage members are substantially alike except as to thickness, and each is indicated as a whole by the character 38.

In the illustrated construction, a recess 39 is formed in each end of the blade holding ribs 34 with the inner ends of each recess in step-like form, one step for each gage plate, and each gage plate is provided with notches 40 to engage one pair of the steps.

The lower faces of the steps are preferably slightly inclined to the longitudinal plane of the carrier 14 and the portions of the notches which engage the steps are correspondingly inclined, so that a slight wedging action is produced to prevent the gage members from working loose.

At their inner ends, the gage plates conform to the adjacent edges of the opening 16 so that they coöperate with the cutting edges of the blade 36 and are held from lateral and inward displacement.

To hold the gage plates in position at their outer ends, I provide catch devices or hooks 41 which are pivoted at 42 in brackets 43 secured to the ends of the carrier 14. At its upper end each catch is provided with a projecting lip 44 to enter a corresponding socket 45 in the gage plate. Each of the catches 42 is also provided with a depending stop lug 46 adapted to engage in an aperture or seat in a holding spring 47 secured on the bottom of the carrier, the catch being thus locked in its upper position and in engagement with the gage plate which for the time being is located upon the carrier 14. The catch 41 when released from the spring 47 may be turned down out of the way, or with its lip 44 below the plane of the upper face of the carrier 14, so that it will not interfere with the insertion or removal of the gage member.

After the gage members are inserted and their notches 40 engaged with steps in the recesses 39 corresponding thereto, the catches 41 are moved upwardly against the resistance of the springs 47 until the stop lugs 46 pass into the apertures in the springs, whereupon the springs will automatically engage the shoulders of the catches and lock the latter in position with their lips 44 in the seats of the gage plates.

The catches 41, the notches 40 of the gage plates 38, and the steps in the recesses 39 thus coöperate to hold the gage plates in position so that they will not be displaced by the rapid vibratory movement of the carrier 14, while at the same time the gage plates may be quickly removed or changed as required.

Any required number of gage plates may be employed and of any desired thickness, to produce slices of corresponding varied thickness.

The improved device is simple in construction, will preferably be constructed wholly of metal, may be of any required size, and will be found efficient for slicing bread, smoked or dried beef, potatoes to produce Saratoga chips, vegetables, or fruits, and the like.

Having thus described the invention, what is claimed as new is:

1. In a device of the class described, a reciprocating member having an intermediate opening and upwardly directed supporting ribs, a cutter carried by said ribs and extending over said opening, a receptacle for the material to be sliced with which the cutter coöperates when the reciprocating member is operated, and a plurality of gage members of different thicknesses supported upon said reciprocating member one at a time whereby the thickness of the reciprocating member is controlled to produce slices of corresponding thickness.

2. In a device of the class described a support having guideways, a receptacle for the material to be sliced, a member movably engaging said guideways and having an intermediate opening, ribs extending upwardly from said movable member, a cutter engaging said ribs and extending over the opening of the movable member and coöperating

with the receptacle when the reciprocating member is operated, and a plurality of gage members of different thicknesses bearing one at a time upon the reciprocating member and coöperating with the cutter.

3. In a device of the class described, a reciprocating member having an intermediate opening and upwardly directed supporting ribs, a cutter carried by said ribs and extending over said opening, and a plurality of gage members of different thicknesses supported upon said reciprocating member one at a time whereby the thickness of the reciprocating member is controlled to produce slices of corresponding thickness.

4. In a device of the class described a support having guideways, a member movably engaging said guideways and having an intermediate opening, ribs extending upwardly from said movable member, a cutter engaging said ribs and extending over the opening of the movable member, and a plurality of gage members of different thicknesses bearing one at a time upon the reciprocating member and coöperating with the cutter.

5. In a device of the class described, a reciprocating member having an intermediate opening and upwardly directed supporting ribs, said ribs having recesses in the ends thereof, a cutter carried by said ribs and extending over said opening, a gage member supported upon said reciprocating member to increase its thickness and having notches to engage the recesses of said ribs whereby the thickness of the reciprocating member is controlled to produce slices of corresponding thickness, and a catch device operating to hold the outer end of the gage member locked to the reciprocating member.

6. In a device of the class described, a reciprocating member having an intermediate opening and upwardly directed supporting ribs, said ribs having recesses in their ends formed in steps at the inner ends thereof, a cutter carried by said ribs and extending over said opening, and a plurality of gage members of different thicknesses supported upon said reciprocating member and having notches to respectively engage the steps of said recesses, whereby the thickness of the reciprocating member is controlled to produce slices of corresponding thickness.

7. In a device of the class described, a reciprocating member having an intermediate opening and upwardly directed supporting ribs, said ribs having recesses in their ends formed in steps at the inner ends thereof, a cutter carried by said ribs and extending over said opening, a plurality of gage members of different thicknesses supported upon said reciprocating member and having notches to respectively engage the steps of said recesses, and catch devices operating to hold the outer ends of the gage members locked to the reciprocating member.

In testimony whereof I affix my signature.

CLARENCE E. TUCKER. [L. S.]

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."