W. C. KNAPP.

SLICING MACHINE.

APPLICATION FILED SEPT. 11, 1919.

1,380,393.

Patented June 7, 1921.

3 SHEETS—SHEET 1.

Fig. 1

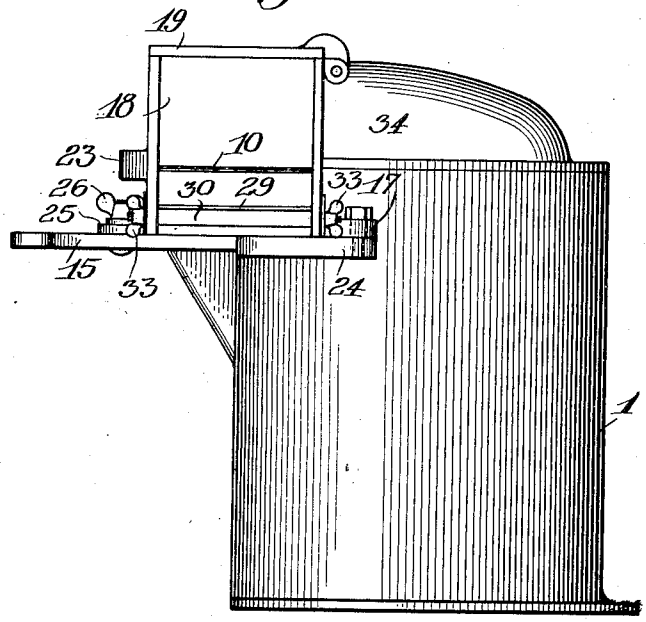
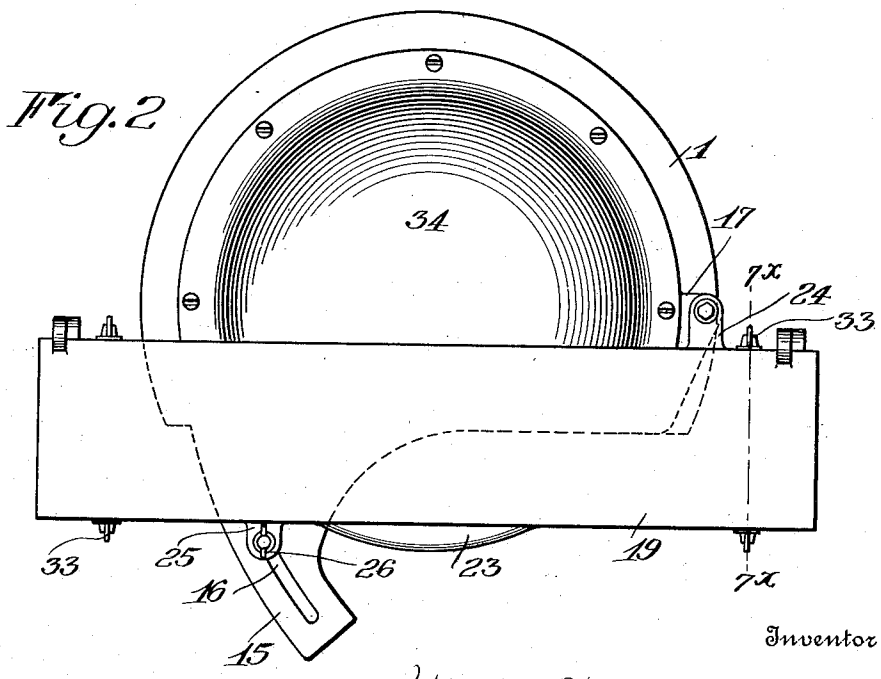


Fig. 2



Inventor.

Walter Chandler Knapp

By Nelson A. Hallauer

His Attorney

W. C. KNAPP.

SLICING MACHINE.

APPLICATION FILED SEPT. 11, 1919.

1,380,393. Patented June 7, 1921.

3 SHEETS—SHEET 2.

Fig. 3

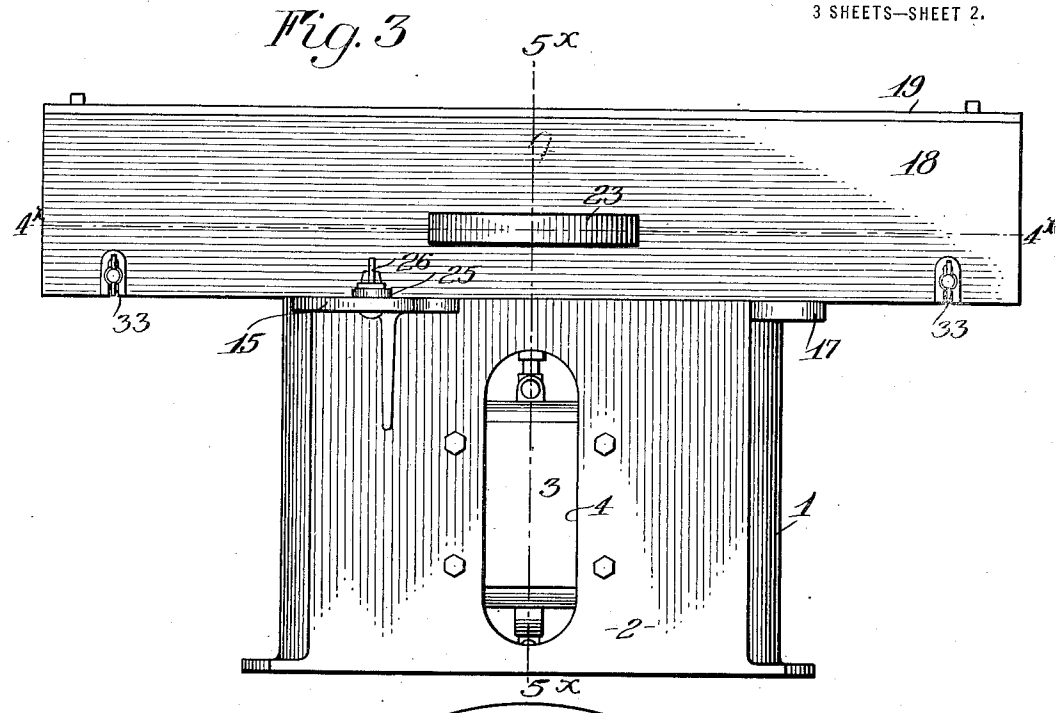
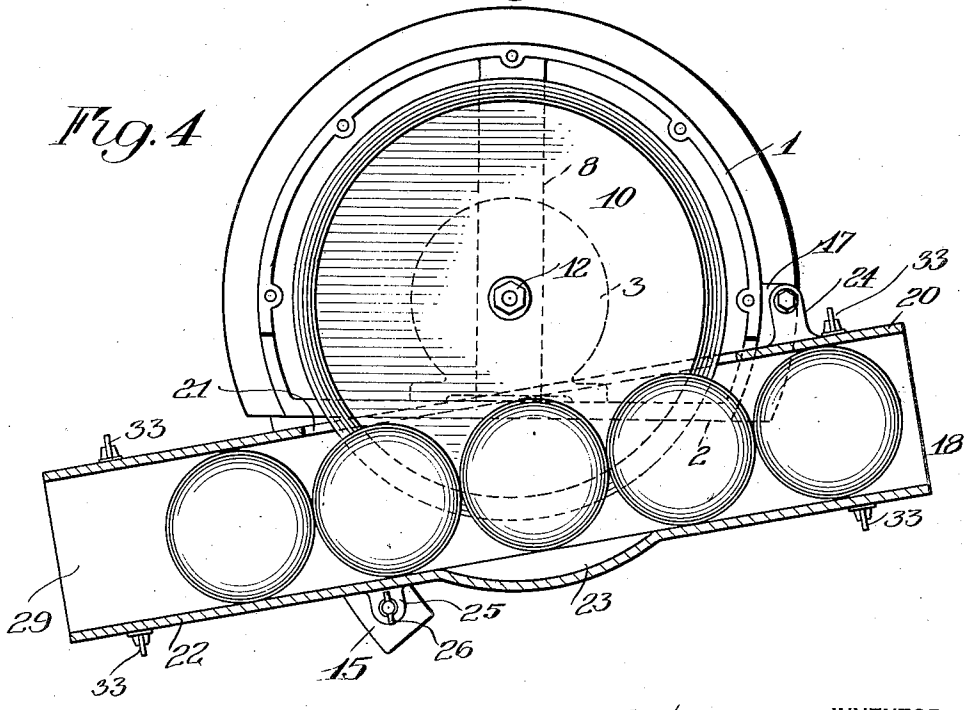


Fig. 4



Walter Chandler Knapp INVENTOR

BY

Nelson A. Wallauer

his ATTORNEY

W. C. KNAPP.

SLICING MACHINE.

APPLICATION FILED SEPT. 11, 1919.

1,380,393.

Patented June 7, 1921.

3 SHEETS—SHEET 3.

Fig. 5

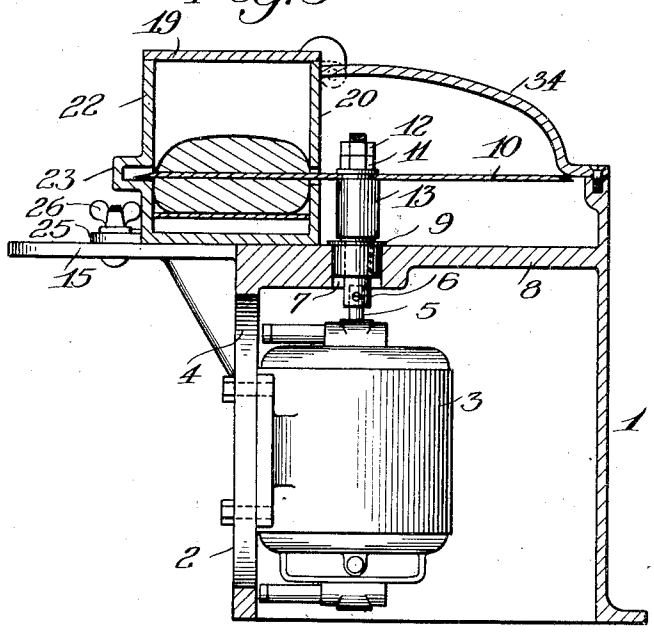


Fig. 6

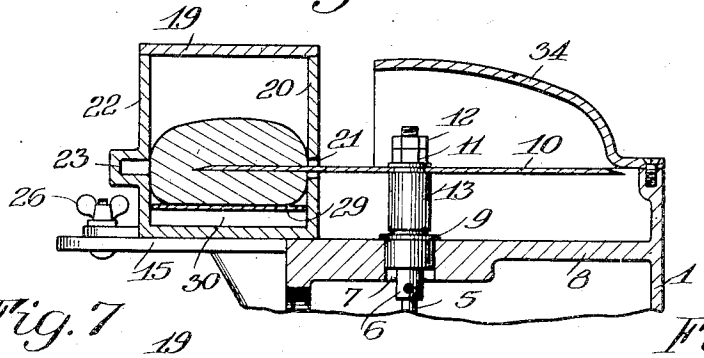


Fig. 7

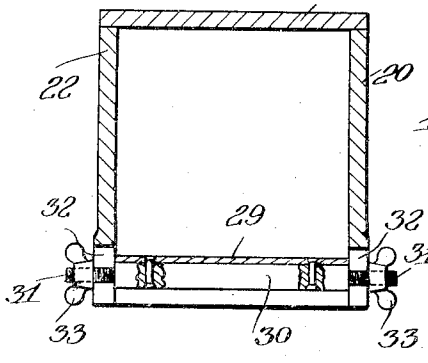
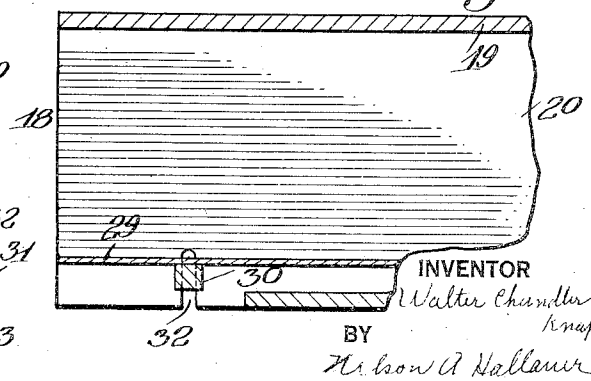


Fig. 8



INVENTOR

Walter Chandler Knapp

BY

Wilson A Hallauer

his ATTORNEY

UNITED STATES PATENT OFFICE.

WALTER CHANDLER KNAPP, OF ROCHESTER, NEW YORK, ASSIGNOR TO LIBERTY BREAD SLICER INC., OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

SLICING-MACHINE.

1,380,393. Specification of Letters Patent. **Patented June 7, 1921.**

Application filed September 11, 1919. Serial No. 323,166.

To all whom it may concern:

Be it known that I, WALTER CHANDLER KNAPP, a citizen of the United States, residing at Rochester, in the county of Monroe, State of New York, have invented certain new and useful Improvements in Slicing-Machines; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

My present invention relates to slicing machines of the kind employed for slicing bread, biscuits and the like. The object of my invention is to construct a machine of this kind which is simple in construction, easy to operate, and in which the material being sliced may be continually fed to the knife or cutting blade. A further object of my invention is to construct a machine of this kind in which the knife or cutting blade automatically feeds the material being sliced forwardly and ejects it from the machine. More specifically, the object of my invention is to construct a slicing machine of the kind indicated in which the cutting blade operates in a plane substantially parallel with the direction in which the material being sliced is fed. Another object of the invention is to construct a slicing machine in which the trough or chute for the material to be sliced is adjustable relatively to the knife or blade to vary the depth to which the material is cut, adjustable means being also provided for varying the thickness of the slice. To these and other ends, my invention resides in certain improvements, combinations and arrangements of parts all as hereinafter more fully described and particularly pointed out in the appended claims.

In the drawings:—

Figure 1 is a side elevation of a slicing machine constructed according to my invention.

Fig. 2 is a plan view of the same.

Fig. 3 is a front elevation of the same.

Fig. 4 is a horizontal section on the line 4^x—4^x of Fig. 3.

Fig. 5 is a vertical section on the line 5^x—5^x of Fig. 3.

Fig. 6 is a view of the chute and knife similar to Fig. 5 showing the chute adjusted to only partly cut through the material being sliced, and

Figs. 7 and 8 are detail sectional views showing the means for adjusting the material being sliced relatively to the knife.

The slicing machine illustrated and which embodies one form of my invention comprises a base member or support, 1, of cylindrical form but having a plane or flat side 2 to which a motor 3 is secured by bolts or other suitable means. The motor is inclosed in the base 1 and the side 2 may be provided with an opening 4 through which the motor may be observed if desired. While I have illustrated an electric motor, it will be understood that any suitable motor may be employed since the particular form of motor used forms no part of the present invention. The motor is mounted with the axis of its shaft 5, extending in a substantially vertical direction and has connected or coupled thereto at its upper end a knife shaft 6 having a bearing in an opening 7 in a support 8 extending across the top of the base 1. A collar 9 formed on the bearing member rests on the upper surface of the support 8 and serves as a thrust bearing for the knife shaft. Secured to the shaft 6 near its upper end is a knife or cutting blade 10 fixedly secured to the shaft to rotate therewith by the lock nuts 11 and 12 and the enlarged part 13 of the shaft. Secured to or formed integral with the base member 2 is an extension or projection 15 having its upper face in the plane of the upper face of the base and provided with an arcuate slot 16 for a purpose presently to be described. A perforated lug 17 is also provided on the base at some distance less than a semi-circumference from the projection or extension 15. A chute, trough or guideway 18 normally rests on the base and the extension 15 to which it is adjustably secured. The chute is substantially rectangular in form, open at its ends and top. The top being normally closed by means of a cover or lid 19, hinged or otherwise suitably pivoted at one edge to the inner wall of the trough. The inner wall 20 of the chute or trough is slotted, as at 21, and the blade or knife 10 projects through the slot into the chute as clearly shown in Figs. 5 and 6. The outer wall 22 of the chute opposite the slot 21 may also be slotted

to provide a suitable clearance for the knife when it extends entirely through the chute as shown in Fig. 5. I prefer to guard the knife when thus extending through the wall 22 by means of a housing 23 secured to or formed integral with the wall 22. Near its forward end the chute is provided with an ear 24 by means of which the chute is pivotally secured to the ear 17. By swinging the chute on its pivot the distance to which the knife 10 projects into the chute may be varied or it may be moved to the position shown in Fig. 5, in which the knife projects entirely through both walls of the chute. In order to secure the chute in adjusted position a bolt is provided which extends through the slot 16 and a perforated ear 25 on the chute and receives at its upper end a butterfly nut 26, by means of which the chute may be securely clamped in adjusted position to the extension 15. This feature of my invention enables me to slice biscuits or rolls entirely through or only partly through. With the chute adjusted as in Fig. 5 a loaf of bread may be sliced lengthwise. It will thus be seen that I have provided a slicing machine especially adapted for slicing rolls or bread for making sandwiches for which purpose rolls are frequently only partially cut through, or a loaf of bread when cut in long slices, can be cut crosswise into slices of suitable sizes for sandwiches.

In order to vary the thickness of the slices, I provide the chute with an adjustable bottom on which the material being sliced is supported during the slicing operation. This bottom or support for the material comprises a rectangular plate 29 riveted or otherwise suitably secured to a pair of blocks 30 extending transversely across the bottom of the plate and provided with screw threaded extensions 31 at their ends which project through elongated slots 32 in the side walls of the chute. At their outer ends, the extensions 31 are provided with butterfly nuts 33 by which the blocks 30 and the support 29 secured thereto may be secured in adjusted position. By adjusting the support 29 toward the knife, the thickness of the slice may be gradually diminished while by adjusting it in the opposite direction, the thickness of the slice is increased. Attention is called to the fact that the position of the support 29 is not quite parallel with the plane of the knife but inclines slightly downwardly to prevent the material being sliced from clogging or binding between it and the knife.

In practice, the bread, rolls or other material to be sliced is fed into the forward end of the chute and when moved into contact with the revolving knife it is fed forwardly and ejected from the chute by the knife itself, which revolves in a direction to feed the material forwardly. If desired, a guard or cover 34 may be secured to the top of the base to inclose the knife.

Having described my invention, what I claim and desire to secure by Letters Patent is:

1. In a slicing machine, the combination of a support, a knife revolubly mounted therein, a chute having a slotted wall mounted on said support and adjustable to and from the knife, and means for securing the chute in adjusted positions.

2. In a slicing machine, the combination of a support, a knife revolubly mounted therein, a chute on said support having slotted walls through which the knife is adapted to project to engage the material in the chute, said chute being adjustable to and from the knife, and means for securing the chute in adjusted positions.

3. In a slicing machine, the combination of a support, a knife revolubly mounted therein, a chute mounted on said support and having substantially parallel walls through which the knife is adapted to project to engage the material therein, said chute being adjustable from a position in which the knife projects through both walls to a position in which the knife projects through one wall only, and means for guarding the knife when projected through both walls of the chute.

4. In a slicing machine, the combination of a support, a knife revolubly mounted therein, a chute pivoted to said support and adjustable to and from the knife and having slotted walls through which the knife is adapted to project, and means for securing the chute in adjusted positions.

5. In a slicing machine, the combination of a support, a knife revolubly mounted therein, an extension on said support, a chute having slotted walls pivoted to said support and movable on said extension, and means for securing said chute to said extension.

6. In a slicing machine, the combination of a support, a knife revolubly mounted therein, a chute adjustable on said support, said chute comprising a pair of substantially parallel side walls provided with elongated slots adapted to coöperate with the knife, and a support for the material being sliced adjustable to vary the thickness of the slice.

WALTER CHANDLER KNAPP.