

June 23, 1925.

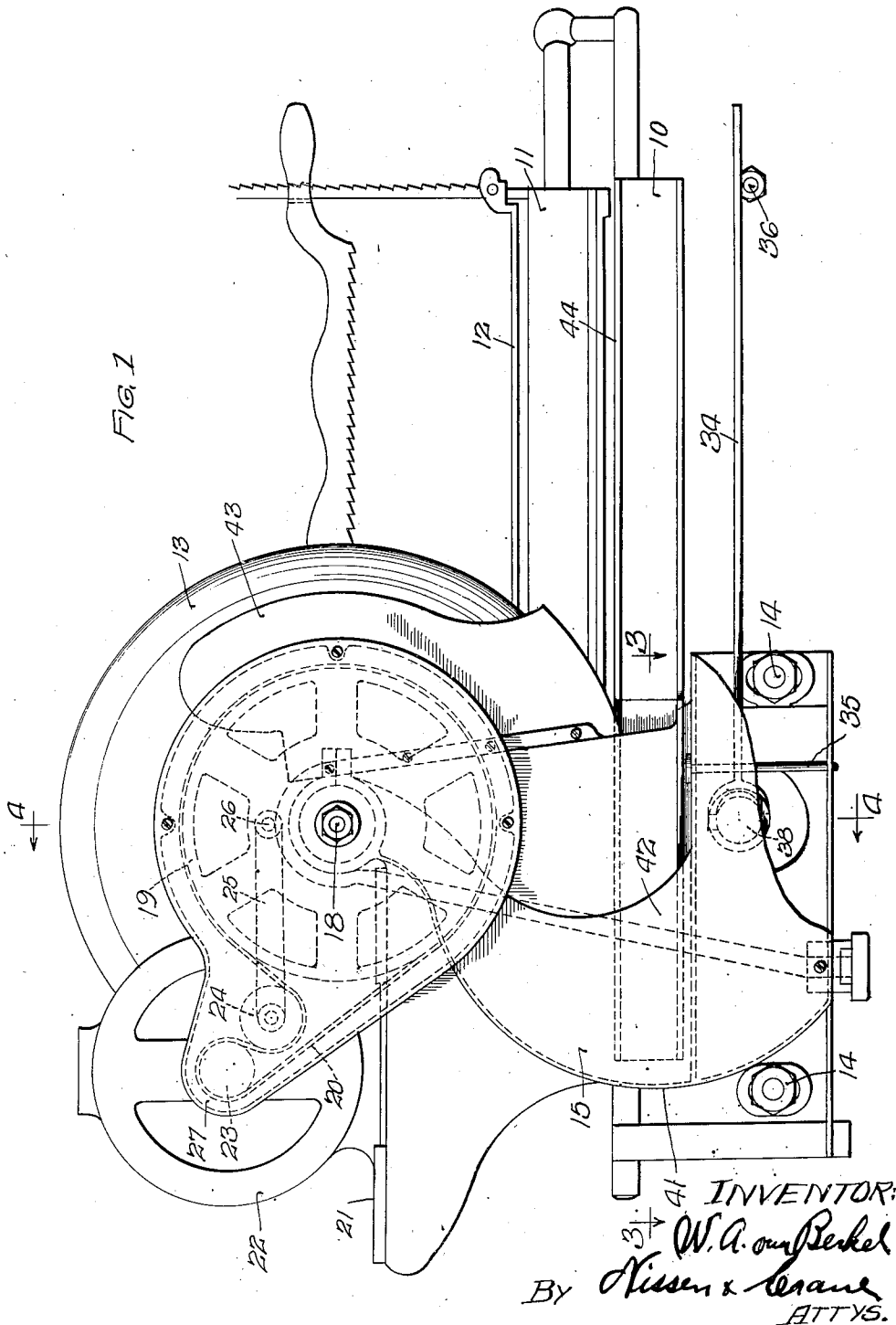
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W. A. VAN BERKEL

SLICING MACHINE

Filed Dec. 8, 1922

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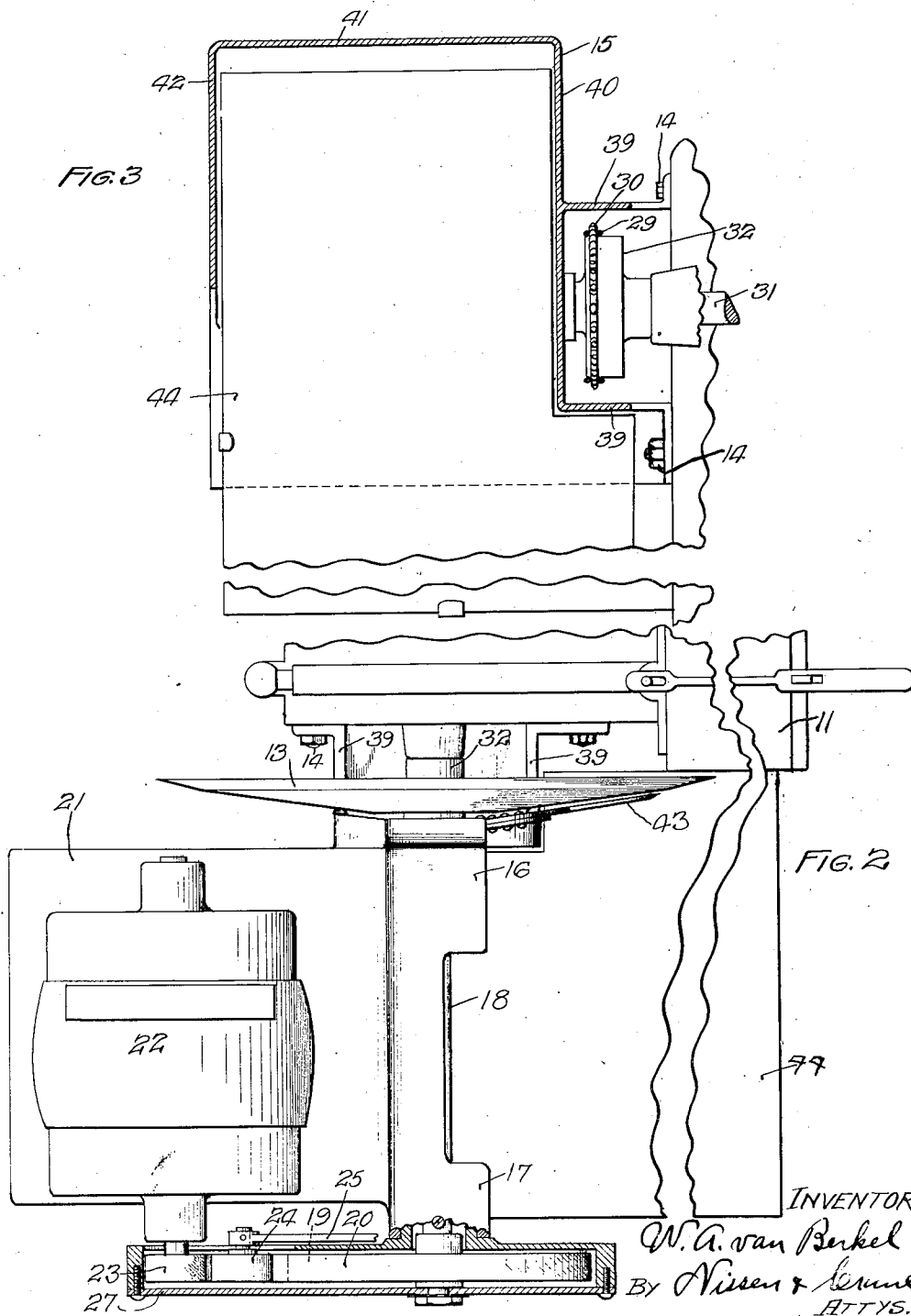
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By *Nissen & Senne*
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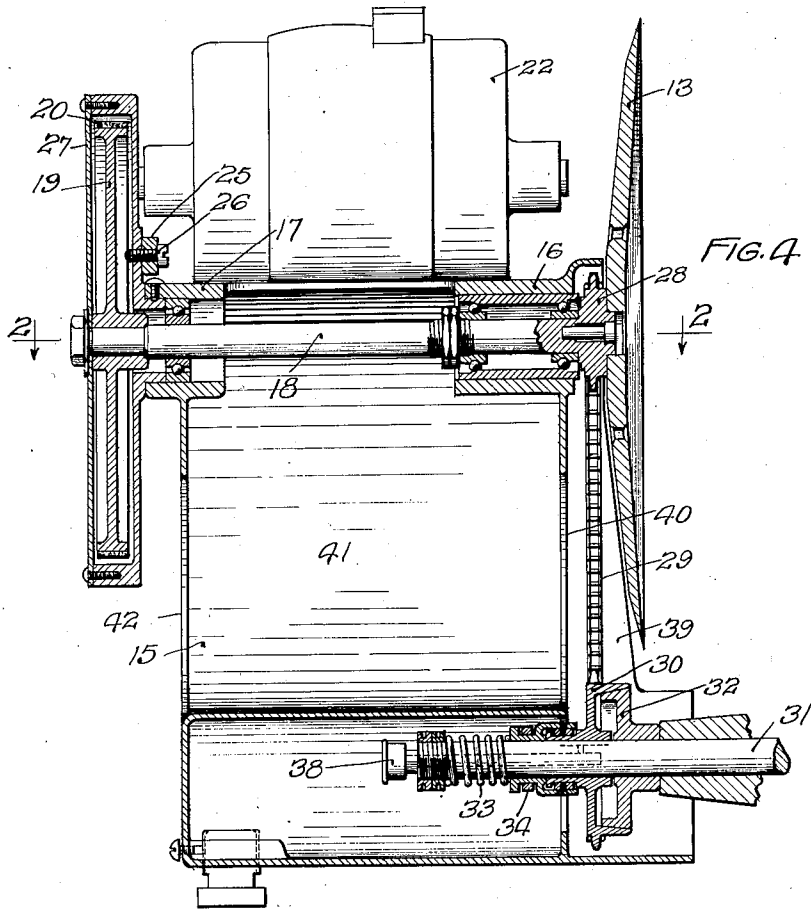


FIG. 4

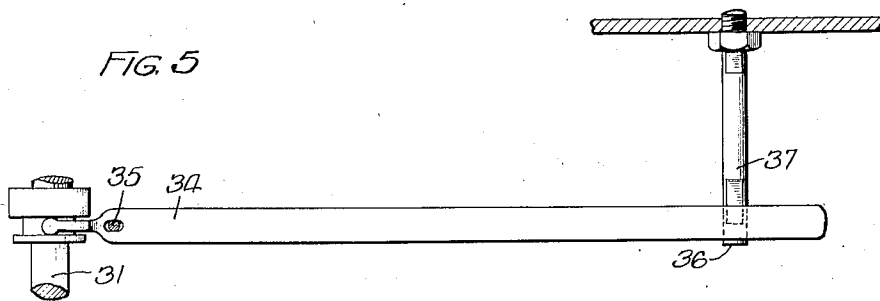


FIG. 5

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UNITED STATES PATENT OFFICE.

WILHELMUS A. VAN BERKEL, OF ROTTERDAM, NETHERLANDS, ASSIGNOR TO U. S. SLICING MACHINE COMPANY, OF LA PORTE, INDIANA, A CORPORATION OF INDIANA.

SLICING MACHINE.

Application filed December 8, 1922. Serial No. 605,549.

To all whom it may concern:

Be it known that I, WILHELMUS A. VAN BERKEL, a subject of the Queen of the Netherlands, residing at Rotterdam, Netherlands, have invented certain new and useful Improvements in Slicing Machines, of which the following is a specification.

This invention relates to a machine for slicing meat and similar material and has for its object the provision of a device of the class named which shall provide an unobstructed space for depositing the slices, and which shall be of improved construction and convenient and efficient in operation.

The invention is exemplified in the combination and arrangement of parts shown in the accompanying drawings and described in the following specification, and it is more particularly pointed out in the appended claims.

In the drawings—

Fig. 1 is an elevation showing one embodiment of the present invention;

Fig. 2 is a top plan view, with parts in section;

Fig. 3 is a horizontal section substantially on line 3—3 of Fig. 1;

Fig. 4 is a vertical section on line 4—4 of Fig. 1; and

Fig. 5 shows a detail of construction.

In slicing machines as heretofore constructed having a rotary disc knife the support for the knife which usually has been positioned adjacent one of the faces of the knife and below the spindle extends more or less into the path of the severed slices making it necessary to deflect the slices from their position adjacent the face of the knife so as to prevent engagement with the knife support. For some kinds of material this is very apt to break the slices and the support also interferes with the hand of the operator as he receives the slice being severed. In the present invention these difficulties are overcome by offsetting the support for the knife spindle to one side of the vertical center line of the spindle and by rearranging the other parts of the machine to permit of this offset position.

Referring more particularly to the drawings, the numeral 10 designates the base frame of a slicing machine of well-known construction having a reciprocating table 11

and a meat support 12 which is fed toward the slicing knife 13 after each slicing operation in a manner well known in the art. Secured to the frame 10 by cap screws 14 is a supporting pedestal 15 preferably in the form of a shell made up of webs or plates which may be cast or otherwise manufactured. At its upper portion the shell 15 is provided with bearings 16 and 17 in which a shaft 18 is journaled for supporting the knife 13. The end of the shaft 18 opposite the knife 13 carries a pulley wheel 19 about which a belt 20 travels.

The pedestal 15 has a shelf 21 projecting therefrom on which a motor 22 is supported, the motor being provided with a pulley 23 for driving the belt 20. A belt tightener 24 bears against the belt 20 and is supported by an arm 25 pivoted at 26 on the pedestal 15. A cover or housing 27 encloses the pulleys 19 and 23 and the belt 20.

Formed on the shaft 18 adjacent the face of the knife 13 is a sprocket wheel 28 connected by a chain 29 with a sprocket wheel 30 loosely mounted on a shaft 31 which is connected with the operating mechanism for the reciprocating table in the usual manner. The sprocket wheel 30 constitutes one of the members of a friction clutch, the other of which, numbered 32, is fixed to the shaft 31. The member 30 is resiliently held in contact with the member 32 by a spring 33 and may be moved out of engagement therewith by means of a lever 34 pivotally mounted on a pin 35. The end of the lever 34 rests upon a stud 36 provided with a notch 37 in which the lever may be seated to retain the clutch parts out of engagement with one another.

A suitable lubricating device 38 may be provided for the member 30. By disconnecting the clutch the knife 13 may be driven by the motor independently of the feed table for sharpening the knife or for other purposes.

Flanges 39 on the rear of the casting 15 provide a housing for the sprocket wheels 28 and 30 and the connecting chain 29. The rear plate 40 of the casting 15 and the curved plate 41 constitute an angle iron construction of sufficient strength to support the bearings 16 for the knife 13. The front web or plate 42 is added to the construction

to provide additional support for the front bearings 17. The three webs, as shown in Fig. 3, surround an open space into which the slices are directed as they are cut from the material.

A deflector plate or guard 43 of usual construction may be connected with the rear plate 40 to guide the slices away from the knife 13. The slice-receiving pan 44 extends into the open space surrounded by the webs 40, 41 and 42 so that the slices may continue in their direction of movement imparted to them by the deflector 43 and may be deposited upon the pan 44 after they have been severed from the material. In depositing the slices or in removing them as they are formed, the operator's hand may be extended over the pan 44 without interference by the support for the knife spindle because of the offset position of the support.

I claim:—

1. In a slicing machine, a rotary knife, a horizontal spindle for said knife, a support for said spindle comprising an open shell, and a slice receiver positioned in said shell.

2. In a slicing machine, a rotary knife, a spindle for said knife, means for feeding material to said knife, a support for said spindle comprising a plate, driving mechanism connecting said knife and feeding means positioned at the side of said plate adjacent said knife, and slice-receiving means positioned at the opposite side of said plate and extending beneath said spindle.

3. A slicing machine comprising a rotary knife, mechanism for feeding material to said knife, a support for said knife comprising a plate substantially parallel with the cutting plane of said knife and a second plate substantially at right angles to said first-named plate, driving mechanism connecting said knife and feeding mechanism and arranged at the side of said first-named plate adjacent said knife, and means for directing slices to a position at the side of said first-named plate opposite said knife.

4. A slicing machine comprising a rotary knife, a spindle for said knife, mechanism for feeding material to said knife, a support for said spindle comprising an open shell, a motor for driving said spindle, a bracket on said shell for supporting said motor, driving mechanism connecting said spindle with said feeding mechanism, and a slice receiver positioned in the opening in said shell.

5. In a slicing machine, a rotary knife, a spindle for said knife, mechanism for feeding material to said knife, a motor for driving said spindle, driving mechanism connecting said spindle and said feeding mechanism, and a clutch interposed between said spindle and said feeding mechanism to per-

mit operation of said knife independently of said feeding mechanism.

6. In a slicing machine, a rotary knife, a spindle for said knife, a support for said spindle comprising an open shell having a plate arranged adjacent to and substantially parallel with one face of said knife, a bracket on said shell, a motor for driving said spindle mounted on said bracket, means for feeding material to said knife, driving means interposed between said knife and said plate and connecting said spindle with said feeding means, a slice receiver positioned at the side of said plate opposite said knife and in the opening of said shell, means for directing slices onto said slice receiver, and a clutch interposed between said spindle and said feeding means.

7. In a slicing machine, a rotary knife, a spindle on which said knife is mounted, a motor for driving said spindle, and a common pedestal on which said motor and spindle are mounted.

8. In a slicing machine, a rotary knife, a spindle on which said knife is mounted, a motor for driving said knife, a support for said motor and spindle, and a receiving tray for slices severed by said knife, said support being offset laterally relative to the vertical plane of said spindle to provide space for said receiving tray beneath said spindle.

9. A slicing machine comprising a rotary knife, a spindle on which said knife is mounted, a reciprocating table for feeding material to said knife, a motor for driving said spindle, a driving connection extending downwardly from said spindle for operating said reciprocating table, a clutch interposed between said driving connection and table, a support for said spindle, and a receiving tray for slices, said driving connection and receiving tray being located on opposite sides of said support.

10. A slicing machine comprising a rotary knife, means for feeding material to said knife, a motor for driving said knife, speed reducing connection from said motor to said knife, and a further speed reducing connection from said knife to said feeding means.

11. A slicing machine comprising a rotary knife, a spindle for said knife, a motor, a speed reducing drive from said motor to said knife, means for feeding material to said knife, a speed reducing drive between said spindle and said feeding means, and a clutch interposed between said spindle and feeding means.

In testimony whereof I have signed my name to this specification on this 1st day of December, A. D. 1922.

WILHELMUS A. VAN BERKEL.