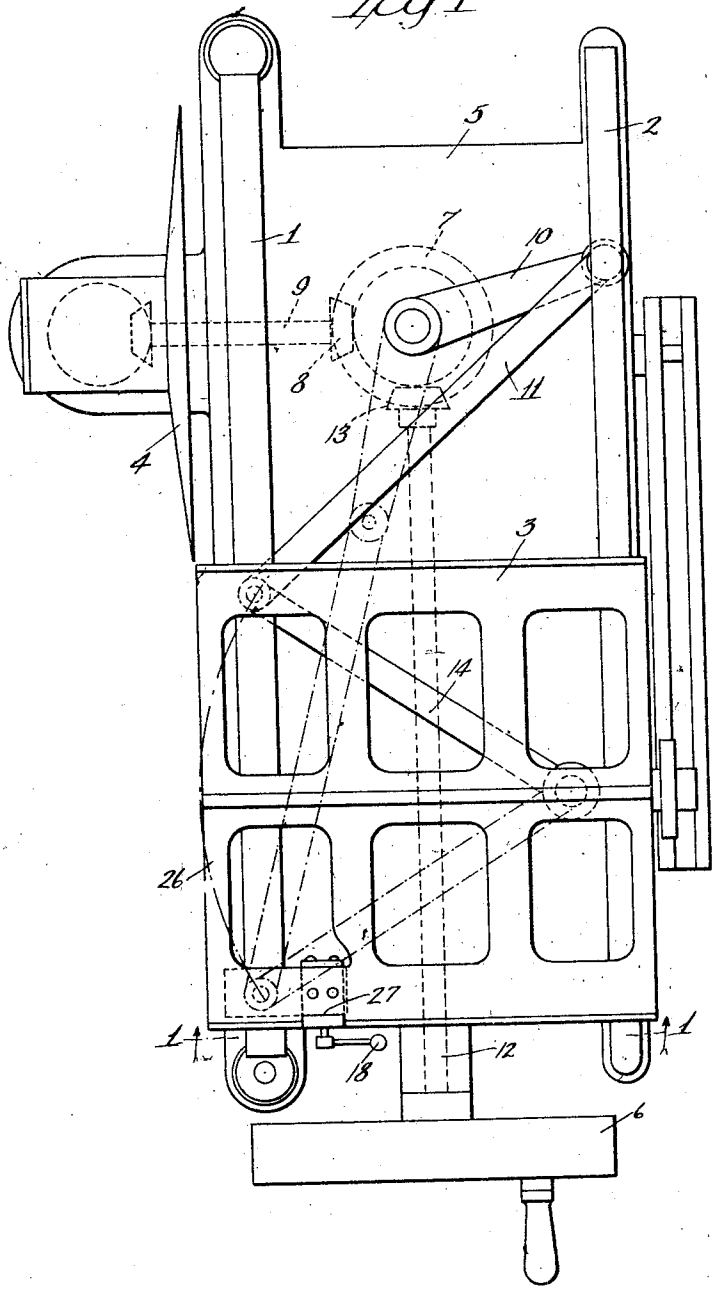
Oct. 9, 1928. 1,687,072

C. F. M. VAN BERKEL

SLICING MACHINE

Filed Nov. 11, 1926 2 Sheets-Sheet 1

Fig 1



Inventor:
Cornelis F. M. van Berkel
By- Nissen & Grant Attys.

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C. F. M. VAN BERKEL

SLICING MACHINE

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Fig 2

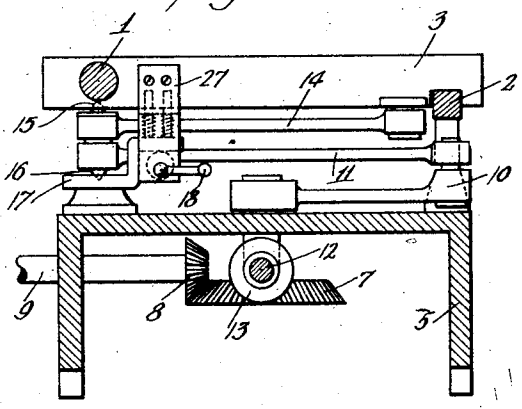


Fig 3

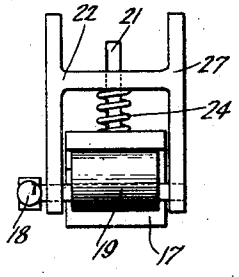


Fig 4

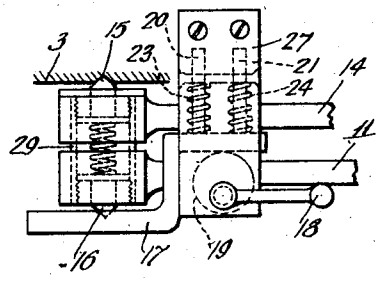
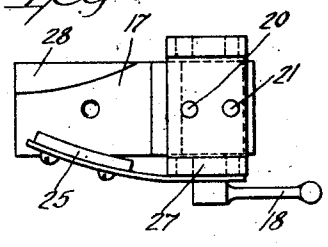


Fig 5



Inventor:
Cornelis F. M. van Berkel
By: Nissen & Mann Attys.

Patented Oct. 9, 1928. 1,687,072

UNITED STATES PATENT OFFICE.

CORNELIS F. M. VAN BERKEL, OF WASSENAAR, NETHERLANDS, ASSIGNOR TO U. S. SLICING MACHINE COMPANY, OF LA PORTE, INDIANA, A CORPORATION OF INDIANA.

SLICING MACHINE.

Application filed November 11, 1926, Serial No. 147,664, and in Germany November 13, 1925.

This invention relates to machines for slicing meat and other material having a reciprocating table for presenting the material to the slicing knife.

The object of the invention is to provide means for readily disconnecting the driving mechanism for the reciprocating table to permit the driving mechanism to continue to operate while the table remains stationary.

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 a somewhat diagrammatic top plan view of a slicing machine having the present invention applied thereto;

Fig. 2 is a transverse section substantially on the line 1—1 of Fig. 1;

Fig. 3 is an elevation of the clamping device for locking the drive to the reciprocating table;

Fig. 4 is a side elevation of the device shown in Fig. 3; and

Fig. 5 is a top plan view of the device shown in Fig. 3 with a buffer member carried thereon.

In the operation of slicing machines having rotary slicing knives and reciprocating tables it is sometimes desirable to be able to operate the driving mechanism without reciprocating the table. For instance, during the grinding of the slicing knife there may be dust from the grinding wheels which would fall upon the parts of the table or upon the meat carried by the table if the table were permitted to continue its reciprocating movement past the slicing knife. If the table can be conveniently disconnected from its driving mechanism and permitted to remain at the forward end of its path of movement, the table and the material carried thereby will not be subjected to the dust from the grinding wheels. This is referred to as an example of one occasion when it is desirable to disconnect the reciprocating table from its driving mechanism. Many other occasions may arise when it will be advantageous to disconnect these parts.

Referring more specifically to the drawings, the numerals 1 and 2 designate the guide bars or ways on which the reciprocating table 3 is mounted to slide. The machine is provided with the usual rotary slicing knife 4, base or supporting frame 5 and hand wheel 6. The base 5 carries the usual upright stud shaft having a beveled gear 7 mounted thereon driven by a beveled pinion 13 secured to the end of the main drive shaft 12. The knife 4 is connected to the gear 7 by a shaft 9, pinion 8, and the usual connection extending upwardly from the shaft 9 to the knife spindle, not shown. The upright shaft connected to the gear 7 carries a crank arm 10 to the end of which the connecting rod 11 is journaled in the usual manner. The opposite end of the crank arm 11 instead of being pivoted to the forward corner of the sliding table 3 in the usual way, is pivotally connected to a swinging arm 14 having the opposite end pivotally mounted on the lower side of the table 3. The ends of the connecting rod 11 and arm 14 are pivoted together by means of a hollow pivot pin 29, as shown in Fig. 4. This pin has perforated plugs threaded into the opposite ends thereof through which pins 15 and 16 project. The pins 15 and 16 have pointed outer ends and are pressed outwardly by means of a spring interposed between the inner ends of the pins. The lower face of the reciprocating table 3 at the forward corner thereof is provided with a tapered recess for receiving the pointed end of the pin 15, as shown in Fig. 2, and a bearing plate 17 is provided having a tapered recess in its top face disposed in alinement with the recess in the lower face of the table 3.

The bearing plate 17 is slidably mounted between the arms of an H-shaped supporting bracket 27 secured to the table 3, as shown in Figs. 1, 2 and 4. Guide pins 20 and 21 are fixed to the upper face of the bearing plate 17 and are guided in openings in the crossbar 22 of the bracket 27. The table 3 is provided with openings for receiving the ends of the pins 20 and 21. Springs 23 and 24 surround the pins 20 and 21 and tend to force the bearing plate downwardly. A cam 19 is journaled between the arms of the supporting bracket and is operated by a handle 18 to raise and lower the bearing plate 17. In its operative position the end of the connecting link 11 extends between the corner of the table 3 and the bearing plate 17 so that the pins 15 and 16 extend into their respective

recesses so that the end of the connecting bar 11 is pivoted to the corner of the table. The arm 14 swings about its pivotal support, as shown in broken lines in Fig. 1, to permit the connecting link to take this position. The bearing plate 17 is pressed upwardly by the cam 19 and handle 18 to hold the pins 15 and 16 in their sockets. When it is desired to release the table 3 from its driving connection, it is only necessary to swing the arm 18, as indicated by the arrow in Fig. 4, until the restricted portion of the cam engages the bearing plate 17. The springs 23 and 24 will force the bearing plate downwardly, releasing the pins 15 and 16 from their sockets so that the table 3 will remain stationary and operation of the driving mechanism will only serve to swing the arm 14 about its pivotal support on the table 3. When it is desired to re-engage the table with its driving mechanism, it is only necessary to shove the table rearwardly until the pins 15 and 16 enter between the bearing plate 17 and the portion of the table 3 provided with the recess for the pin 15. The bearing plate 17 may be beveled on its forward edge, as shown at 28, to assist in lifting the pivotally connected heads of the bars 11 and 14 into position between the bearing block and table. A buffer 25 may be connected to the bracket 27 for engaging the heads of the arms 11 and 14 when the table is moved forwardly to bring the parts into position to be clamped together. The table may be connected up with the connecting rod 11 at any position in the path of travel of the table. The connection and disconnection is readily made since it is only necessary to swing the arm 18 to clamp or unclamp the head of the connecting rod 11 to the table 3. When the parts are disconnected the rod 11 is supported by the arm 14 and is guided in a fixed path of movement during operation of the driving parts so that no parts are left loose to be injured or damage the machine.

I claim:—

1. The combination with a slicing machine having a reciprocating table and driving mechanism therefor, of means for releasably connecting said driving mechanism with said reciprocating table, and means for restricting the path of movement of said driving mechanism when released from said table.

2. In combination, a slicing machine having a reciprocating table and driving mechanism therefor, said driving mechanism comprising a connecting rod, means for releasably connecting said connecting rod with said table, and means for restraining the movement of said connecting rod when disconnected from said reciprocating table.

3. In combination, a slicing machine having a reciprocating table and driving mechanism including a connecting rod, means for releasably connecting one end of said connecting rod with said reciprocating table, and a movable support for said end of said connecting rod adapted to restrict the movement of said end when said end is released from its connection with said reciprocating table.

4. In combination, a slicing machine having a reciprocating table and driving mechanism therefor including a connecting rod, means for pivotally connecting one end of said connecting rod with said reciprocating table, a releasable clamp for holding said connecting means in operative relation, and means for movably supporting said end of said connecting rod and restricting the path of movement thereof when said pivotal connecting means is released.

5. In combination, a slicing machine comprising a reciprocating table, a rotary crank shaft, a connecting rod pivoted to said crank shaft at one end thereof, an arm pivotally connected with said crank shaft at the opposite end thereof, a pivotal support for the end of said arm opposite said connecting rod, and a releasable pivotal connection of the pivotally connected end of said arm and connecting rod with said reciprocating table.

6. In a slicing machine having a reciprocating table and driving mechanism comprising a connecting rod, an arm having one end pivotally mounted on said reciprocating table and having its opposite end pivotally connected with the end of said connecting rod, pivot points projecting from the opposite sides of the pivotal connection between said arm and connecting rod, said table having a recess for receiving one of said pivot points, and an adjustable bearing member secured to said table for engaging the other of said bearing points.

7. In a slicing machine having a reciprocating table and driving mechanism therefor including a connecting rod, an arm pivotally supported on said reciprocating table and having its opposite end pivotally connected to the end of said connecting rod, pivot points projecting from the pivotal connection between said arm and connecting rod, means for releasably clamping said pivot points to said reciprocating table, and a buffer carried by said clamping means for receiving the impact of the ends of said arm and connecting rod when said table is moved to bring said arm and connecting rod into position to be clamped to said table.

8. In a slicing machine, a reciprocating table, a crank shaft for driving said table, a connecting rod for connecting said crank shaft with said table, an arm having its opposite end pivoted to said table and the end of said connecting rod respectively, spring-held pivot pins projecting from opposite sides of the pivotal connection between said arm and connecting rod, said table having a recess therein for receiving one of said pivot pins, a movable bearing plate having a recess for

receiving the other of said pivot pins, and means for moving said bearing plate to releasably clamp said pivot pins in their respective recesses.

9. In a slicing machine, a reciprocating table, a crank shaft for driving said table, a connecting rod for connecting said crank shaft with said table, an arm having its opposite end pivoted to said table and the end of said connecting rod respectively, spring-held pivot pins projecting from opposite sides of the pivotal connection between said arm and connecting rod, said table having a recess therein for receiving one of said pivot pins, a movable bearing plate having a recess for receiving the other of said pivot pins, spring means normally urging said plate away from the end of said last-mentioned pivot pin, and means for moving and locking said bearing plate against said spring means to releasably clamp said pivot pins in their respective recess.

In testimony whereof I have signed my name to this specification on this 20th day of October, A. D. 1926.

CORNELIS F. M. VAN BERKEL.