March 27, 1928. 1,663,643

H. THOMAS

SLICE DEFLECTOR FOR SLICING MACHINES

Filed Oct. 14, 1926 2 Sheets-Sheet 1

Fig 1

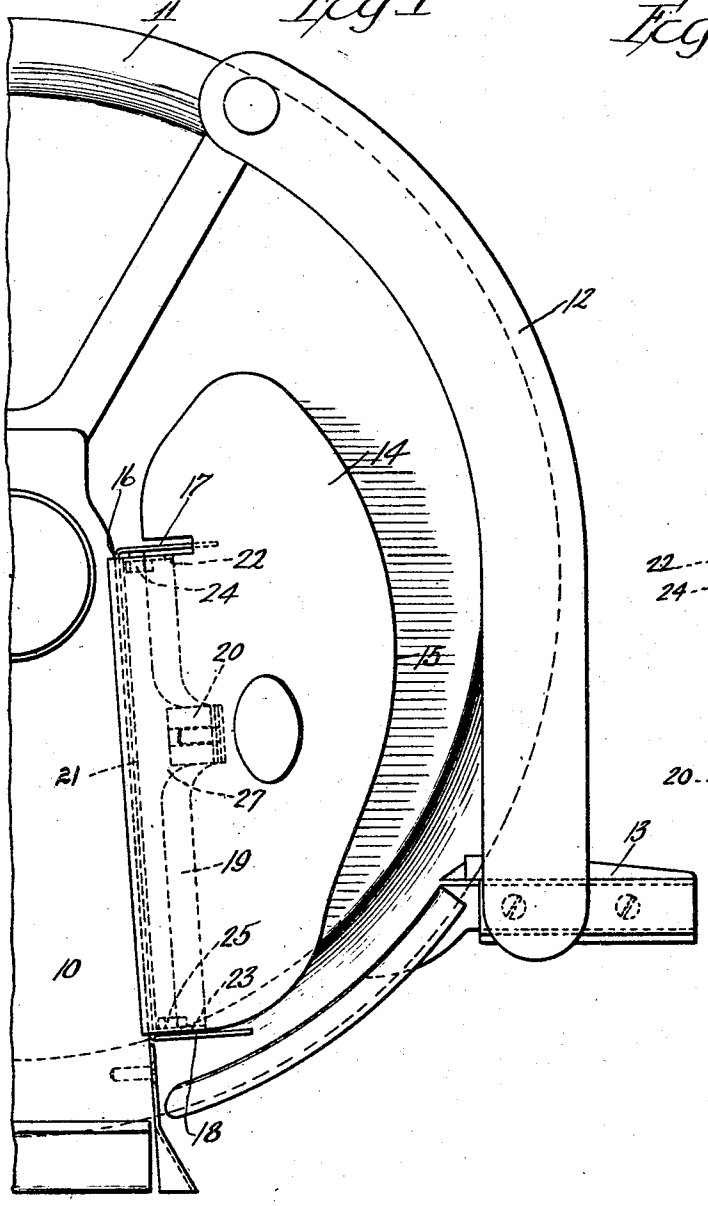
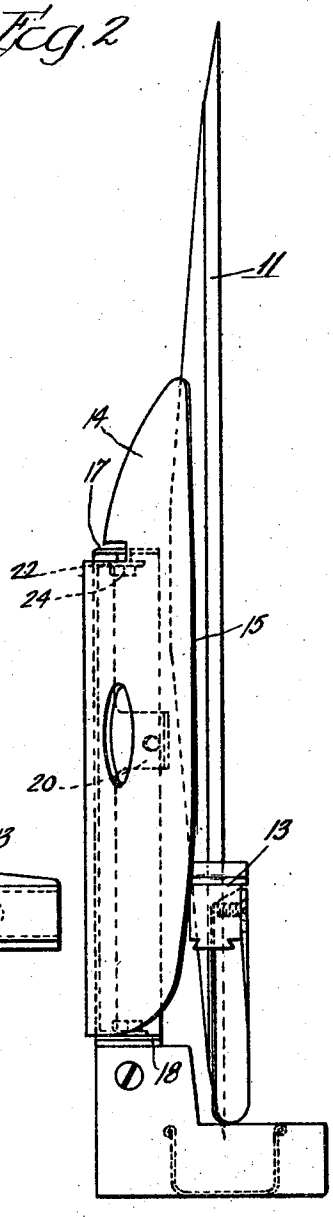


Fig 2



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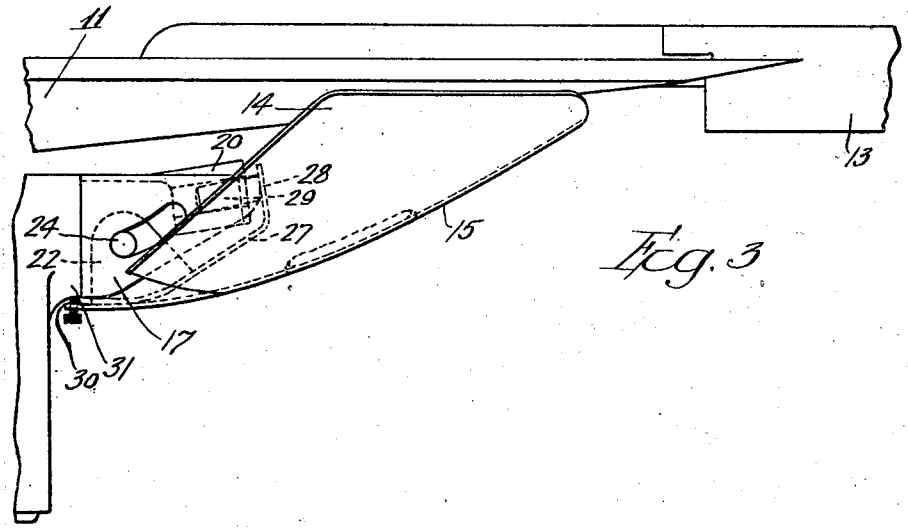

Fig. 3

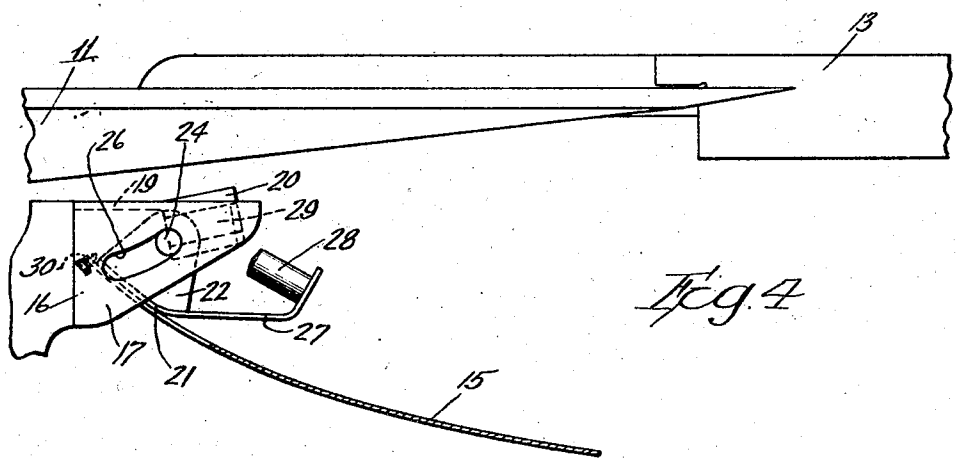

Fig. 4

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Patented Mar. 27, 1928. 1,663,643

UNITED STATES PATENT OFFICE.

HENRY THOMAS, OF LONDON, ENGLAND, ASSIGNOR TO U. S. SLICING MACHINE COMPANY, OF LA PORTE, INDIANA, A CORPORATION OF INDIANA.

SLICE DEFLECTOR FOR SLICING MACHINES.

Application filed October 14, 1926, Serial No. 141,434, and in Great Britain March 13, 1926.

This invention relates to deflectors for directing slices away from the rotary slicing knives of slicing machines, and has for one of its objects the provision of a support for deflectors of this nature which will hold the deflector in position adjacent the face of the slicing knife and will not be moved out of position by the slices engaging the edge of the deflector.

A further object is to provide a deflector which is locked in operative position and in which the force of the slices as they are being cut tends to hold the deflector in its locked position.

A further object is to provide a deflector which will overlap its support when in operative position to prevent any gap or open space between the deflector and support.

Other objects will appear from the following description.

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 front elevation of a portion of a slicing machine showing a deflector made according to the present invention applied thereto;

Fig. 2 is a side elevation looking from the right in Fig. 1;

Fig. 3 is a top plan view of the deflector shown in Figs. 1 and 2; and

Fig. 4 is a plan view similar to Fig. 3 but showing the deflector in section and moved to inoperative position.

In the drawings, the numeral 10 designates the pedestal or chain box of a slicing machine having a rotary slicing knife 11 journaled thereon, the knife being provided with the usual guard 12 and slice support 13. A deflector 14 is disposed adjacent the face of the knife 11 in position to direct the slices away from the knife as they are severed. The deflector is in the form of a plate having its forward edge 15 curved to fit against the face of the knife 11. A bracket 16 is secured to the side of the chain box 10 and has ears 17 and 18 at the top and bottom respectively thereof. The bracket 16 also carries a flange 19 having a socket member 20 supported thereon. A plate 21 is secured to the inner face of the deflector 15 and has ears 22 and 23 at the top and bottom respectively thereof. Studs 24 and 25 are threaded into the ears 22 and 23 and project into slots 26 in the ears 17 and 18. This provides pivotal support for the deflector 15. A tongue 27 projects from the plate 20 and supports a pin 28 of a size to fit in a socket 29 in the socket member 20. When the parts are in the position shown in Fig. 4, the deflector is free to swing about the axis of the studs 24 toward and away from the slicing knife 11. When the deflector is swung outwardly, as illustrated in that figure, the face of the knife is exposed for cleaning or other purposes. When the deflector is swung inwardly toward the knife, the end of the pin 28 will register with the opening 29 and the deflector may then be moved in the direction of the axis of the opening 29 to cause the pin to enter the opening and take the position shown in Fig. 3. It will be noted that the opening 29 is at slight angle to the direction of the slots 26 and that the slots 26 are slightly curved. The tongue 27 is of spring metal and as the pin 28 moves inwardly in the opening 29 the difference in direction of the opening 29 and slots 26 will place the tongue 27 under spring strain, tending to hold the studs 24 against the inner walls of the slots 26. As the studs 24 move to the rear ends of the slots, this spring tension will resiliently lock the studs 24, due to the curvature of the slot so that the parts will be held in position. Before the outer edge of the deflector 15 can be moved away from the face of the knife, it will be necessary to move the deflector forwardly to clear the pin 28 from the opening 29. It will be apparent that the force of the slices against the edge of the deflector tends to move the pin 28 into the opening 29 and thus prevents unlocking of the deflector.

The deflector 15 has a flange 30 at its rear edge which overlaps a shoulder 31 on the chain box 10 when the deflector is in its locked position. When the deflector is drawn forwardly to free the pin 28 from the socket 29, the flange 30 will be moved away from the shoulder on the chain box to permit the deflector to swing upon its pivotal support. When the deflector is in position against the face of the knife and the

pin 28 is in the socket 29, the flange 30 overlaps the edge of the chain box and prevents any gap between the rear edge of the deflector and its support.

I claim:—

1. The combination with a slicing knife, of a deflector for directing slices away from the face of the knife, and a locking means operable by movement of the deflector in the direction of movement of slices severed by said knife for locking said deflector in position adjacent the face of the knife.

2. The combination with a slicing knife, of a deflector for protecting the face of said knife, a pivotal support for said deflector, and a locking means operable by movement of said deflector away from the edge of said knife for locking said deflector against movement upon its pivotal support.

3. The combination with a slicing knife, of a deflector for said knife, a pivotal support for said deflector, said deflector being mounted to swing upon its pivotal support and to move bodily in the direction of movement of slices severed by said knife toward and away from the edge of said knife, and means for locking said deflector against pivotal movement when said deflector is in one position of its bodily movement but permitting pivotal movement of said deflector when said deflector is in a different position closer to the edge of said knife.

4. The combination with a slicing knife, of a deflector for said knife, a pivot and slot support for said deflector, and a spring lock for holding the pivot of said support in one position relative to the slots for said pivot and for preventing said deflector from rotation upon its pivot when in said position.

5. The combination with a slicing knife, of a deflector for said knife, a pivotal support for said deflector, a member having a slot therein for receiving said pivotal support and permitting said deflector and support to move in the direction of said slot toward and from the cutting edge of said knife, and a lock for holding said deflector against rotation upon its pivotal support when said deflector is at the limit of its movement away from the cutting edge of said knife but permitting said deflector to be rotated upon its pivotal support when said deflector is moved toward the cutting edge of said knife to release said lock.

6. The combination with a slicing knife of a deflector for said knife, and a lock for holding said deflector in position relative to said knife, said lock comprising a pin and socket arranged to engage each other when said deflector is in position adjacent the face of said knife and moved away from the edge of said knife.

7. The combination with a slicing knife, of a deflector for said knife, a pivotal support for said deflector shiftable with said deflector toward and away from the cutting edge of said knife, and a lock for holding said deflector against pivotal movement relative to said knife, said lock being moved into holding position by movement of said deflector away from the cutting edge of said knife.

8. The combination with a slicing knife, of a deflector for said knife, a spring tongue connected with said deflector, a pivotal support for said deflector arranged to permit movement of said deflector in a direction transverse to the axis of said support, and pin and socket members for holding said deflector against pivotal movement when in one position, one of said members being mounted upon said spring tongue.

9. The combination with a slicing knife, of a deflector for said knife, a pivotal support for said deflector arranged to permit said deflector to move transversely to the axis of said pivotal support, pin and socket members movable into and out of engagement with each other when said deflector is moved relative to its pivotal support, a spring for connecting one of said members with said deflector, and means for guiding said deflector in a direction to place said spring under strain when said deflector is moved to bring said pin and socket members into engagement with each other.

10. The combination with a slicing knife, of a deflector for said knife, a pivot for said deflector, a curved slot in which said pivot is mounted to permit movement of said pivot and deflector toward and away from the cutting edge of said knife, a pin and socket member for holding said deflector against pivotal movement upon its support, and a spring for connecting one of said members with said deflector, said pin and socket member acting to place said spring under tension when moved into engagement with each other to cause said pivot to bind in its slot to hold said pin and socket member together.

11. The combination with a slicing knife, of a deflector for said knife, a support for said deflector, and means for pivotally mounting said deflector on said support, said mounting means permitting movement of said deflector relative to its pivotal support to bring said deflector into position to overlap said support and close the joint therebetween.

12. The combination with a slicing knife, of a deflector for said knife, a support for said deflector, a bracket on said support, pivot and slot connections between said deflector and bracket, and means for locking said deflector in position adjacent said slicing knife, said deflector being moved to overlap said support when locked in position adjacent said slicing knife.

13. The combination with a slicing knife, of a deflector for said knife, a support for said deflector, a bracket having pivot and

slot connections with said deflector for mounting said deflector on said support, a pivot and slot connection between said bracket and deflector permitting said deflector to move bodily toward and from the cutting edge of said knife, and spring means for locking said deflector against pivotal movement when at the limit of its position away from the cutting edge of said knife, said deflector having a portion thereof arranged to overlap the support for said deflector when in said position.

In testimony whereof I have signed my name to this specification on this 14th day of September, A. D. 1926.

HENRY THOMAS.