E. M. STILES.

ATTACHMENT FOR MEAT SLICING MACHINES.

APPLICATION FILED SEPT. 30, 1912.

1,192,013.

Patented July 25, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

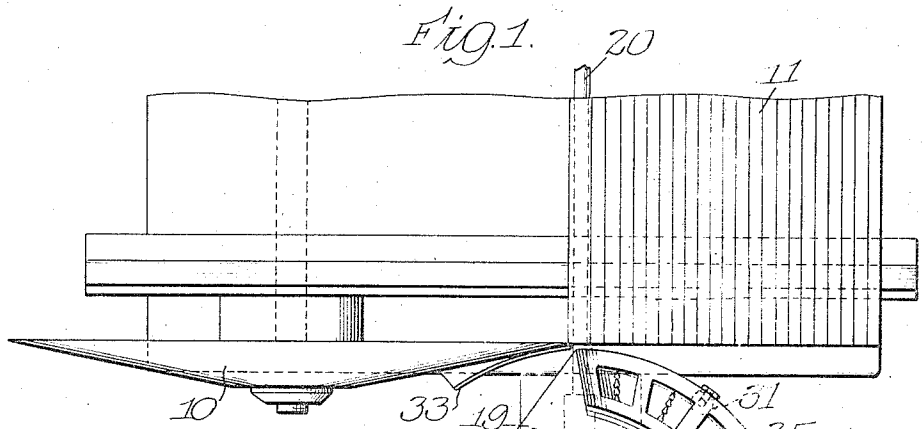
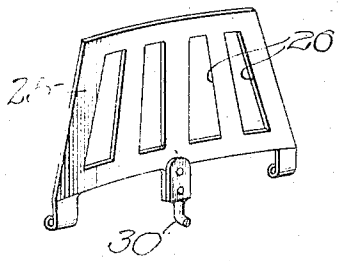


Fig. 3.



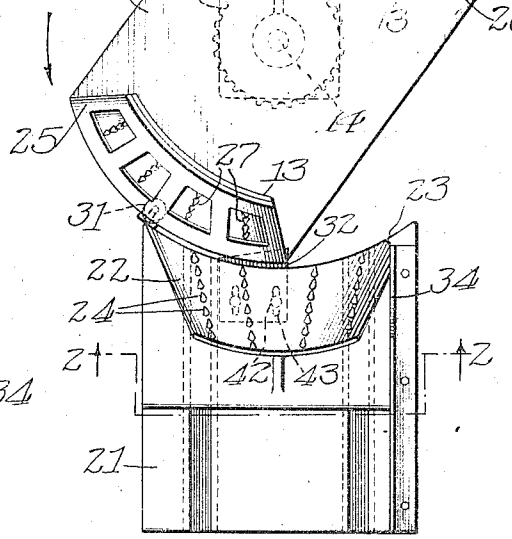


Fig. 2.

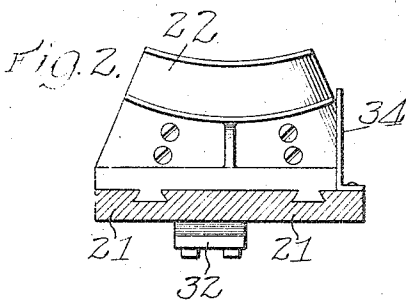
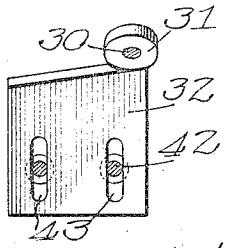


Fig. 4.



Witnesses:
W. P. Kilroy
Maurice Goldberger.

Inventor:
Edward M. Stiles

By: J. F. Jochum, Jr.
Atty.

E. M. STILES.

ATTACHMENT FOR MEAT SLICING MACHINES.

APPLICATION FILED SEPT. 30, 1912.

1,192,013.

Patented July 25, 1916.

2 SHEETS—SHEET 2.

Fig. 5.

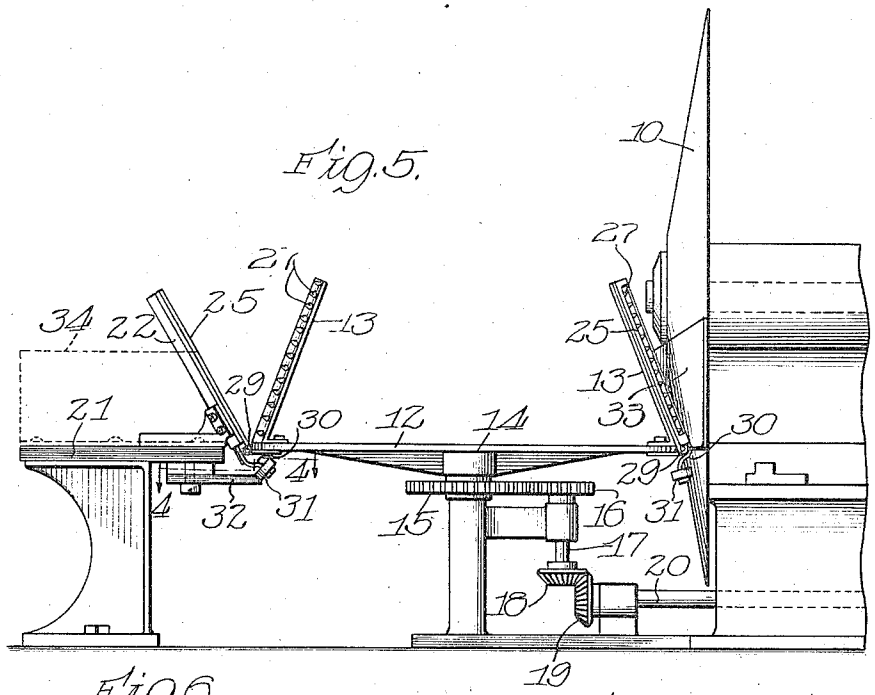


Fig. 6.

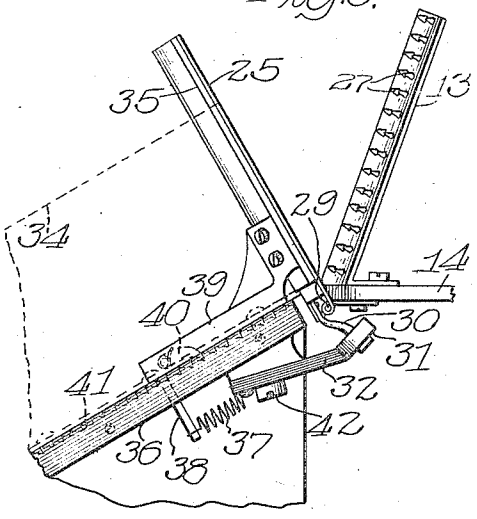
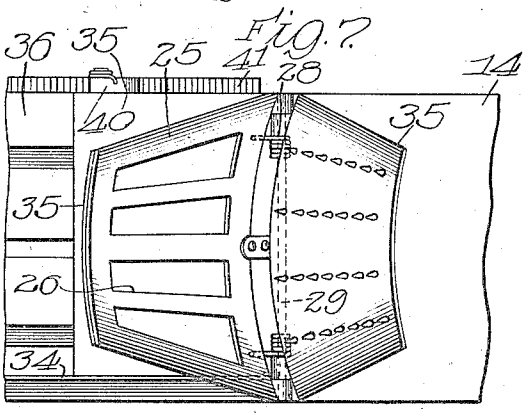


Fig. 7.



Witnesses:
W. P. Kilroy
Maurice Goldberger

Inventor:
Edward M. Stiles

By: J. J. Jochum & Co.
Atty's.

UNITED STATES PATENT OFFICE.

EDWARD M. STILES, OF MOUNT PLEASANT, IOWA, ASSIGNOR TO U. S. SLICING MACHINE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

ATTACHMENT FOR MEAT-SLICING MACHINES.

1,192,013. Specification of Letters Patent. Patented July 25, 1916.

Application filed September 30, 1912. Serial No. 723,120.

To all whom it may concern:

Be it known that I, EDWARD M. STILES, a citizen of the United States, residing at Mount Pleasant, in the county of Henry, State of Iowa, have invented certain new and useful Improvements in Attachments for Meat-Slicing Machines, of which the following is a specification.

This invention relates to improvements in attachments for slicing machines practically adapted, though not necessarily limited in its use, to meat slicing machines of the type in which the meat is supported upon a table and fed to a cutter, the cutter and table being relatively movable to effect the cutting operation, and one of the objects of the invention is to provide an improved attachment of this class having means for automatically collecting and stacking the slices as they are cut, and thereby obviating the necessity of gathering by hand and stacking the slices.

A further object is to provide an improved device of this class which will be simple, durable and cheap in construction, effective and efficient in operation, and one which may be readily attached to a slicing machine.

To the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in substantially the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawings, exemplifying the invention, and in which—

Figure 1 is a top plan view of an improved device of this class constructed in accordance with the principles of this invention, showing the same applied to a meat slicing machine. Fig. 2 is a detailed sectional view on line 2—2, Fig. 1. Fig. 3 is a perspective view of the fly. Fig. 4 is a detailed sectional view on line 4—4, Fig. 5. Fig. 5 is a side elevation of the parts shown in Fig. 1, and with the parts in the position they will assume when receiving a slice from the cutter. Fig. 6 is a detailed view of a modification. Fig. 7 is a top plan view of Fig. 6.

Referring more particularly to the drawings in the present exemplification of the invention, the numeral 10 designates a rotary cutter, and 11 a meat supporting table for holding the meat to be sliced, which table is adapted to be reciprocated so as to effect a cutting operation, while the meat is advanced laterally upon the table, with respect to the cutter in the ordinary well known manner.

Arranged adjacent to the cutter 10 is a horizontally disposed receiver 12, having receiving surfaces 13, which in the present exemplification of this invention are semi-circular, arranged adjacent to each end of the receiver 12 and are inclined upwardly from the receiver and in directions toward the axis of rotation of the receiver. The receiver with these receiving faces, is rotatable about an upright axis 14 journaled in a suitable bearing and rotary motion is imparted thereto in any suitable manner preferably by means of a gear 15 connected with the axle and with which gear a second gear 16, meshes. This gear 16 is connected with a shaft 17, journaled in a suitable bearing and a gear 18 is also connected with the shaft, which gear meshes with another gear 19 on a shaft 20, the latter receiving motion from any suitable source. The surfaces 13 may be spaced from each other any suitable distance and arranged adjacent the path of rotation of the receiver is a support designated generally by the reference numeral 21, upon which is arranged an inclined collector support 22. The receiver has a circular path of movement and has a constant direction of rotation, while the adjacent edge of the support 21 is concaved as at 23 to permit the edges of the receiver and the receiving surfaces 13 to move in close proximity thereto. The collector support 22 is also of a concave construction to conform to the contour of the flies to be hereinafter described, and the support may also be provided with teeth 24, to hold the first slice against slipping with respect thereto.

Coöperating with each of the receiving surfaces 13, is a fly designated generally by the reference numeral 25, which is preferably provided with a series of openings 26 through which the teeth or prongs 27 on the receiving surfaces project and the fly is of a shape to conform to the contour of the receiving surfaces, and is adapted to normally assume a position in contact with the surface and beneath the extremities of the prongs 27. In order to accomplish this a spring 28 is provided on the axis 29 of the

fly for holding it against the surface of the receiver. An arm 30 depends from each of the flies, preferably beneath the receiver 12 and an anti-friction roller 31 is journaled on each of the arms.

Arranged adjacent to the collector support 22 is a cam 32 so disposed that when the receiving surface, together with its fly 25 are in proximity to the collector support the anti-friction roller 31 on the arm 30 of the fly will engage the cam, thereby causing the fly to be rocked about its point of pivotal support to lift the slice from the receiving surface 13, and deposit it against the collector support 22, or against another slice which has been previously deposited against the collector support.

After the slice has been thus dumped from the receiving surface, the anti-friction roller 31 will pass out of engagement with cam 32, and the elastic member or spring 28, will operate to return the fly to its normal position against the receiving surface.

Arranged in close proximity to the cutting edge of the cutter 10, and also adjacent to the path of movement of receiving surfaces is a guide 33 for directing the end of the slice toward the receiving surface.

With this improved construction, when a slice is cut by the cutter 10, one of the receiving surfaces will contact with the slice as it is being cut to cause the prongs 27 thereon to penetrate the slice, and as the slice is cut and the receiver is rotated in the direction indicated by the arrows in Fig. 1, the slice will be taken up by the receiving surface and will be conveyed to the inclined collector support 22 to be deposited there against, when the fly 25 is tripped by the cam 32.

The inclined collector support 22 is adjustably mounted on the support 21, and is frictionally held in position thereon, in such a manner that as each one of the slices is deposited there against by the fly, the collector support will be automatically adjusted a distance substantially equal to the thickness of the slice last cut.

In the event that there will be a tendency of the slices to slide one on top of the other in an edgewise direction by the movement of the fly in a rotary path at the time it is delivering a slice to the collector support, a stop in the form of an abutment 34 is provided which is held in position in any suitable manner, preferably by the support 21, and is arranged to project beyond the surface of the inclined support 22 transversely with respect thereto, and also in the path of an edgewise movement of the slice so that the edge of the slice will engage the abutment and its movement will be arrested.

In order to compensate for the increasing size of the stack of slices and also to permit the collector support to be adjusted as described, the latter is movable relatively to the abutment, which latter is preferably fixed. Thus it will be seen that as the collector suport is automatically adjusted it will be moved relatively to the abutment and in a direction lengthwise with respect thereto.

While in the present form of the invention the collector support 22 and the support 21 are arranged at a right angle to the plane of rotation of the cutter 10, it will be manifest that they may be arranged at any angle with respect thereto so as to arrange the parts more compactly, if desired.

In the form of the invention shown on Figs. 6 and 7, the collector support 35 is arranged at an angle and is bodily movable on an inclined support 36, in a direction upwardly and downwardly, and in order to prevent the collector support 35 from dropping by gravity any suitable means may be provided, such as an elastic member 37 which is connected at one end to a fixed support and by its other end to an arm 38 on a bracket 39, which latter is secured to the support 35. A spring controlled dog 40 is connected with the bracket 39, and coöperates with a ratchet 41 to prevent the elastic member 37 from moving the collector support 35 to a position that it would interfere with the movements of the other parts. With this form of the invention the fly 25 operates in the same manner as with the form already described and when the fly is tripped by the cam 32 to deposit the slice on the collector support, the latter will be adjusted a distance substantially equal to the thickness of the slice being deposited. This is accomplished because the elastic member 37 will yield and the dog 40 will ride over the teeth of the ratchet 41. Obviously when it is desired to return the collector support 35 to its original or normal position, the dog 40 may be tripped, at which time the elastic member 37 will move the collector support.

It will also be manifest that the elastic member 37 is of such a tension that it will yield under the influence of the fly, but is also of such a strength that it will prevent a receiver support 35 from dropping by gravity.

While in the present exemplifications of this invention the preferred forms of construction have been herein described and set forth, it is to be understood that various changes may be made in the details of construction and in the arrangement of the several parts without departing from the spirit of this invention.

The cam 32 is adjustably supported by means of fastening devices which pass through slots 43 therein, thereby rendering it possible to position the cam to effect a tripping operation of the fly at any desired

point in the path of the rotary movement of the latter.

What is claimed as new is:—

1. The combination of a meat slicer, a receiver movable adjacent the slicer for receiving the slices therefrom and traveling in a circular path, means for imparting motion to the receiver, an inclined collector support, and means other than the said motion imparting means for lifting the slices from the receiver and depositing them against the support.

2. The combination of a meat slicer, a receiver rotatable in a circular path adjacent the slicer for receiving the slices therefrom, said receiver having a constant direction of rotation, means for imparting such movement to the receiver, and inclined collector support, and means other than the said motion imparting means for lifting the slices from the receiver and delivering them to the support.

3. The combination of a meat slicer, an upright receiver rotatable in a circular path adjacent the slicer for receiving the slices therefrom, means for imparting such movement to the receiver, an inclined collector support, and means for dumping the slices from the receiver to the support.

4. The combination of a meat slicer, a receiver rotatable in a circular path and adjacent the slicer for receiving the slices therefrom, means for rotating the receiver, a collector support, and means for lifting the slices from the receiver and delivering them to the support.

5. The combination of a meat slicer, a receiver rotatable in a circular path and adjacent the slicer for receiving the slices therefrom as they are cut, means for rotating the receiver, an inclined collector support adjacent the path of movement of the receiver, and means for lifting the slices from the receiver and delivering them to the said support.

6. The combination of a meat slicer, a receiver movable adjacent the slicer for receiving the slices therefrom as they are cut, a collector support adjacent the path of movement of the receiver, and means movable with the receiver and also with respect thereto for delivering the slices from the receiver to the support.

7. The combination of a meat slicer, a receiver movable adjacent the slicer for receiving the slices therefrom, an adjustable inclined collector support adjacent the receiver, and means movable with and also with respect to the receiver for delivering the slices from the receiver to the support.

8. The combination of a meat slicer, a receiver traveling in a circular path adjacent the slicer for receiving the slices therefrom as they are cut, a collector support adjacent the path of movement of the receiver, a fly for lifting the slices from the receiver to the support and means for operating the fly.

9. The combination of a meat slicer, an adjustable inclined collector support, and means interposed between the slicer and support for receiving the slices conveying them away from the cutter directly as each portion of the slice is cut and operating to deliver the slices to the support, said means embodying a fly also operating to adjust the support.

10. The combination of a meat slicer, an adjustable inclined collector support, and means interposed between the slicer and support for receiving the slices and conveying them away from the cutter directly as each portion of the slice is cut and operating to deliver the slices to the support, said means embodying a fly controlled in its action by the movement of the receiver and operating to also adjust the support.

11. The combination of a meat slicer, an adjustable inclined collector support, and means interposed between the slicer and support for receiving the slices and conveying them away from the cutter directly as each portion of the slice is cut and operating to deliver the slices to the support, the said means embodying a traveling fly, and said fly operating to also adjust the support.

12. The combination of a meat cutter, a guide adjacent the cutter, a slice receiver traveling in a constant direction in a circular path adjacent the cutter, means for operating the receiver, an automatically adjustable inclined collector support, and means operating to deliver the slices from the receiver to the support.

13. The combination of a meat cutter, a guide adjacent the cutter, a slice receiver traveling in a constant direction in a circular path adjacent the cutter, means for operating the receiver, an automatically adjustable inclined collector support and a fly operating to deliver the slices from the receiver to the support.

14. The combination of a meat slicer, a slice collector, means interposed between the slicer and collector for receiving the slices and lifting them to the collector, the receiver adapted to move past the collector, means for operating the first recited means, and means with which one edge of the slices engage, whereby the movement of the receiver will not carry the slice past the collector.

15. The combination of a meat cutter, a collector support for the slices, a horizontally rotatable support for receiving the slices from the cutter as they are cut and conveying them to the collector support, and means for delivering the slices from the said receiving surface to the collector support.

16. The combination of a meat cutter, a collector support for the slices, a horizontally rotatable support for receiving the

slices from the cutter as they are cut and conveying them to the collector support, and means for delivering the slices from the said receiving surface to the collector support, said rotatable support having a constant direction of rotation.

17. The combination of a meat cutter, an inclined and adjustable collector support for the slices, a horizontally rotatable support having a surface for receiving the slices from the cutter as they are cut and conveying them to the collector support, and means for delivering the slices from the said receiving surface to the collector support and for automatically adjusting the said collector support.

18. The combination of a meat cutter, an inclined and adjustable collector support for the slices, a horizontally rotatable support having a surface for receiving the slices from the cutter as they are cut and conveying them to the collector support, a fly for delivering the slices from the said receiving surface to the collector support, and means for operating the fly.

19. The combination of a meat cutter, an inclined and adjustable collector support for the slices, a horizontally rotatable support having a surface for receiving the slices from the cutter as they are cut and conveying them to the collector support, and means whereby the slices will be delivered from the said receiving surface to the collector support and the latter will be adjusted a distance substantially equal to the thickness of the slice last delivered.

20. The combination of a meat slicer, a receiver movable adjacent the slicer for receiving the slices therefrom, means for imparting motion to the receiver to take up the slice while it is being cut, an inclined collector support, and means carried with and movable with respect to the receiver, for delivering the slice to the support from the receiver.

21. The combination of a slicer, a receiver for receiving the slices therefrom, said receiver being rotatable in a circular path and means other than the receiver actuating means operating at a predetermined point in the movement of the receiver for lifting the slices from the receiver.

22. The combination of a slicer, a receiver for receiving the slices therefrom, said receiver being rotatable in a circular path and means traveling with the receiver and operating at a predetermined point in the movement of the receiver for delivering the slices from the receiver.

23. The combination of a cutter, a slice receiver, a collector, the receiver being movable past the cutter and the collector, provisions for thus moving the receiver, means for delivering the slice from the receiver to the collector, and provisions for arresting the movement of the slice under the influence of the receiver and while the slice is on the collector.

24. The combination of a cutter, a slice collector, means interposed between the cutter and collector for receiving the slices from the cutter and delivering them to the collector, provisions for operating the receiver, and means projecting into the path of movement given the slice by the movement of the receiver, to arrest such movement of the slice with respect to the collector.

25. The combination of a cutter, a slice collector, means interposed between the cutter and collector for receiving the slices and delivering them to the collector, provisions for operating the receiver, and a stop coöperating with the collector and projecting into the path of movement given the slice by the movement of the receiver, to arrest such movement of the slice with respect to the collector.

26. The combination of a cutter, an inclined slice collector, means interposed between the cutter and collector for receiving the slices from the cutter and delivering them to the collector, provisions for operating the receiver, and means projecting into the path of movement given the slice by the movement of the receiver, to arrest such movement of the slice with respect to the collector.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 26th day of September, A. D. 1912.

EDWARD M. STILES.

Witnesses:

H. R. GOODFELLOW,

J. H. JOCHUNI, Jr.