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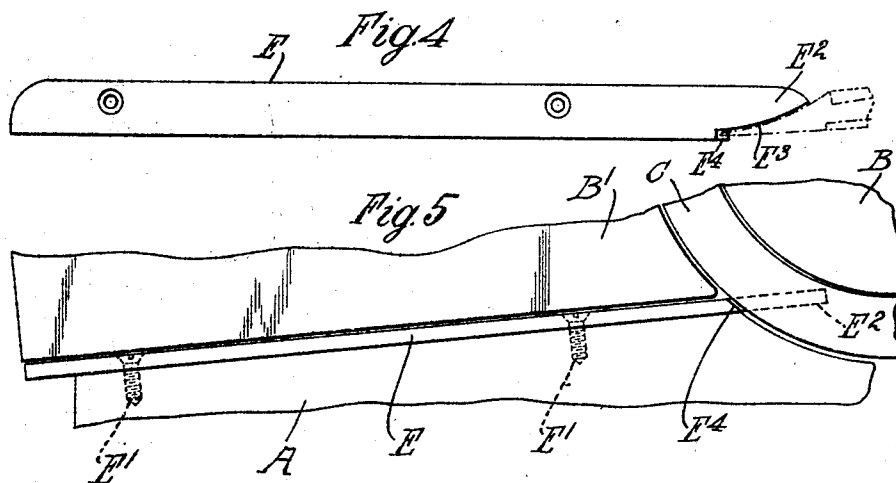
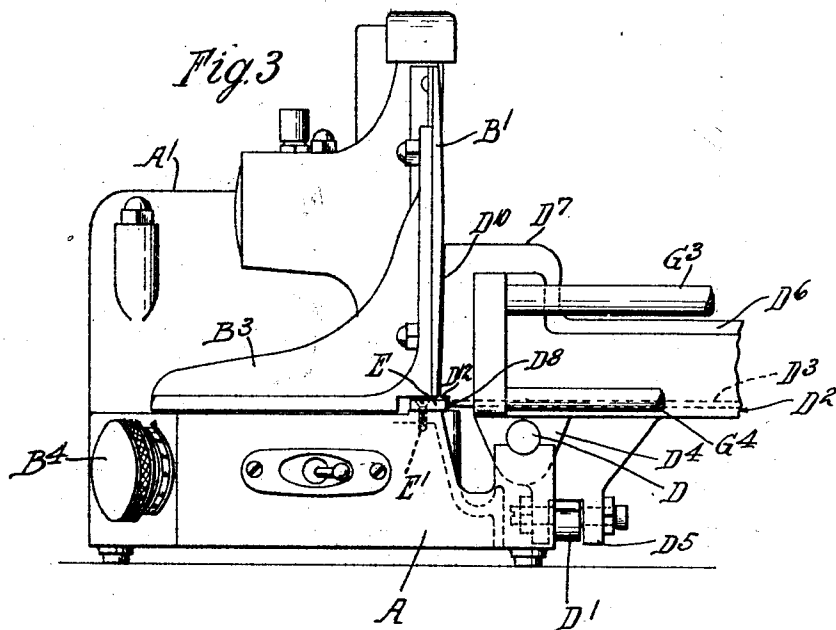
W. J. CAMPBELL

1,778,102

SLICING MACHINE

Filed Sept. 29, 1928

3 Sheets-Sheet 2



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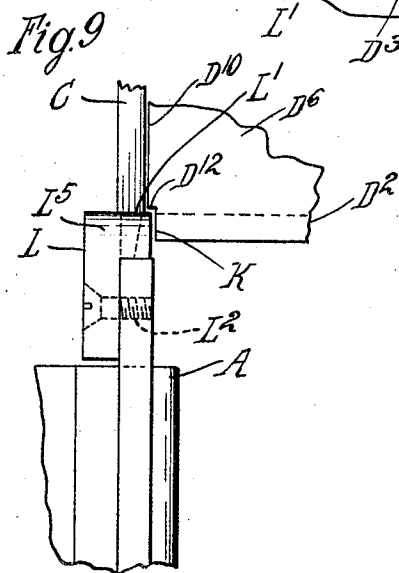
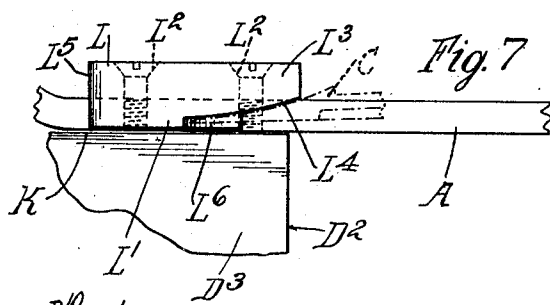
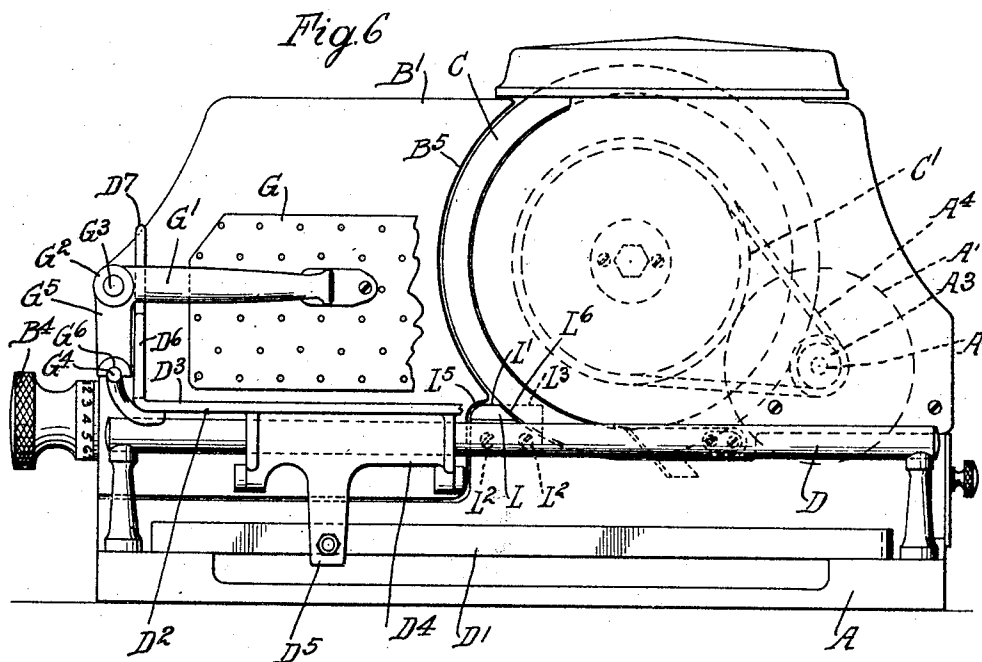
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3 Sheets-Sheet 3



UNITED STATES PATENT OFFICE

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SLICING MACHINE

Application filed September 29, 1928. Serial No. 309,150.

My invention relates to a slicing machine and is applicable for example to a slicing machine of a type having a rotary and preferably a motor driven knife. One object of my invention is to provide means for clearing the slices from the knife as they are severed. Another object is to provide the support for the front end of the work and for the slice as it is severed. Another object is to insure the delivery of flat and uncurled slices. Another object is the provision of means for the return of the work carrying carriage employed for conveying the work past the cutting edge of the knife. Another object is to provide means for protecting or shielding the knife edge. Other objects will appear from time to time in the course of the specification and claims.

I illustrate my invention more or less diagrammatically in the accompanying drawings, wherein—

Figure 1 is a plan view with parts in horizontal section;

Figure 2 is a front elevation;

Figure 3 is an end elevation;

Figure 4 is a detail view of the slice supporting element;

Figure 5 is a partial side elevation illustrating such slice supporting element or meat support;

Figure 6 is a front view of a variant form of my device;

Figure 7 is a partial plan view on an enlarged scale;

Figure 8 is a partial rear elevation; and

Figure 9 is a partial end elevation of the structure shown in Figure 7.

Like parts are indicated by like symbols throughout the specification and drawings.

A generally indicates a base upon which is mounted the motor A¹ with its shaft A² and pulley A³ and driving belt A⁴.

B indicates a guard plate lying in a generally vertical plane and B¹ a gauge plate, details of guard and gauge plate forming of themselves no part of the present invention. B² is a rearwardly extending guard member overlying the rear face of the knife below described. B³ indicates a carrier member for the gauge plate which may be actuated in

any suitable manner, for example by rotation of the knob B⁴, the particular driving connection employed being not illustrated as forming no part of the present invention. The edge of the gauge plate adjacent the knife edge is sharp or squared as at B⁵ in order to provide as adequate and complete a shield or protection for the knife edge as is possible, when the gauge plate B¹ is moved to its inoperative or forward position as shown in Figure 2.

C indicates a knife mounted upon any suitable knife shaft carrying the pulley C¹ whereby it may be driven by the belt A⁴.

D indicates a track and D¹ a guide track therebeneath, herein shown as of rectangular cross-section. The tracks are parallel and both are upwardly inclined from the left to the right of the machine as shown in Figures 1 and 2. Mounted for movement along the track D is the meat carriage generally indicated as D² which includes a generally horizontal or slightly inclined portion D³ upon which the work to be sliced rests.

Associated with and depending from the member D³ is the track engaging portion D⁴ with the lower extension D⁵ for engagement with the guide track D¹. D⁶ indicates a flange or upturned portion across the edge or end of the carriage portion D³ which is farthest from the knife when the carriage is in withdrawn position as shown in Figures 1 and 2. The portion D⁶ has associated with it an upward projection D⁷ lying adjacent the face of the gauge plate. It will be realized that the proportion and position of parts is such that the edge D³ of the carriage is parallel with and rather closely adjacent to the face of the guard plate and to the gauge plate when the gauge plate is in the forward position in which it is shown in Figure 1.

In order to provide a support for the work which shall be constant, regardless of the position of the gauge plate I provide a work support generally indicated as E which may be fixed on the base or frame as by the screws E¹. It is provided with the terminal portion E² adjacent the knife edge, which is formed to conform to the rear face of the

knife edge, as shown in Figures 4 and 5, and closely approaches it. In effect the knife edge is positioned in a recess or cut away portion E³ and the form of this cut away portion is such that at E⁴ the support extends forwardly of the cutting plane of the knife edge. This portion E⁴ is arcuately formed to conform to the curvature of the knife edge and closely approaches it.

It will be observed as from Figures 3 and 4, that the strip or support E in part underlies the gauge plate B¹ and its carrier B². Thus the member E exercises its supporting function regardless of the position of gauge plate and the gauge plate moves freely over it.

It will be further observed, from Figures 1 and 3, that the edge D¹⁰ of the portion D⁶ with its associated upward projection D⁷ overlaps and projects above a portion of the member E as at D¹² and generally conforms to the contour of the cutting edge of the knife C. The result is a support for the article to be sliced which lies closely adjacent the cutting edge of the knife and further assures a clean cut to the very end of the slice.

The top of the member E preferably lies in the same plane as the top of the meat support member D² with the edge D³ of the inclined portion D³ closely approaching the member E.

Mounted for movement on the carriage D² is any suitable pusher plate G attached to which is a handle portion G¹ extending to the bearing sleeve G² which slides on the pin or track G³. A lower guiding pin G⁴ is provided which is engaged by the arm G⁵ downwardly extending from the sleeve G² and formed as at G⁶ to engage the pin G⁴ and prevent rotation of the sleeve G². The member G¹ or the sleeve G² are equally available for use as a handle for the manual actuation of the carriage. When the pusher plate is removed then the pin G³ forms an effective handle.

Referring to the variant forms of Figures 6 to 9, adjacent the path of movement of the carriage at the edge of the cutting arc of the knife is positioned a supporting member L which is mounted on the frame of the slicing machine. It includes a portion L¹ which projects forwardly of the edge of the knife and terminates closely adjacent the opposed edge K of the carriage. The member L is held in place for example by the screws L², and the edge of the portion L¹ is positioned or initially set to reduce to a minimum the space between it and the edge K. The portion L³ of the block or support extends to the rear of the knife and is provided with a face L⁴ conforming to the contour of the knife. It will be observed as in Figure 9 that the main portion of the top of the mem-

ber L lies in the same plane as the top of the meat support member D².

It is however, provided with a rounded or inclined portion L⁵ at its forward end in order that if any meat is overhanging the inner edge K of the meat carriage it engages the portion L⁵ and is lifted into the plane of the top of the member L with a minimum of friction and deformation.

The knife edge is positioned in a recess or cut away portion L⁶ in the supporting member L, similar to the cut away portion E⁴ of the work support E previously described.

I claim:

1. In a slicing machine having a rotary knife and means for rotating it, a work supporting carriage and means for guiding said carriage across the face and past the cutting arc of the knife, a work supporting member lying in the general plane of the carriage, positioned adjacent the cutting edge of the knife, the edge of the carriage opposed to said member being spaced laterally away from the cutting member to conform to such supporting member and an upstanding work engaging flange along the edge of said carriage farthest from the knife when the carriage is at the beginning of the slicing reciprocation, the inner edge of said upstanding flange lying closely adjacent the cutting plane of the knife, and projecting toward said cutting plane inwardly beyond the edge of the work supporting carriage.

2. In a slicing machine having a rotary knife and means for rotating it, and a work supporting carriage and means for guiding said carriage across the face and past the cutting arc of the knife, an upstanding work engaging flange along the edge of said carriage farthest from the knife when the carriage is at the beginning of the slicing reciprocation, the inner edge of said upstanding flange lying closely adjacent the cutting plane of the knife, and a slice support positioned in the general plane of the carriage the inner edge of the carriage being cut back to provide clearance for said slice support.

3. In a slicing machine having a rotary knife and means for rotating it, and a work supporting carriage and means for guiding said carriage across the face and past the cutting arc of the knife, an upstanding work engaging flange along the edge of said carriage farthest from the knife when the carriage is at the beginning of the slicing reciprocation, the inner edge of said upstanding flange lying closely adjacent the cutting plane of the knife, and a slice support positioned in the general plane of the carriage the inner edge of the carriage being cut back to provide clearance for said slice support, the inner edge of the upstanding flange projecting to-

ward said cutting plane inwardly beyond the edge of the carriage.

4. In a slicing machine having a rotary knife and means for rotating it, and a work supporting carriage and means for guiding
5 said carriage across the face and past the cutting arc of the knife, an upstanding work engaging flange along the edge of said carriage farthest from the knife when the carriage is at the beginning of the slicing
10 reciprocation, the inner edge of said upstanding flange lying closely adjacent the cutting plane of the knife, said upstanding flange being formed with a further upward extension above the normal height of the flange,
15 said extension terminating closely adjacent the cutting plane of the knife.

Signed at Indianapolis, county of Marion,
and State of Indiana, this 19th day of
20 September, 1928.

WILLIAM J. CAMPBELL.

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