Nov. 23, 1926. 1,607,879

W. J. DRUCKER

SLICING MACHINE KNIFE

Filed August 15, 1924

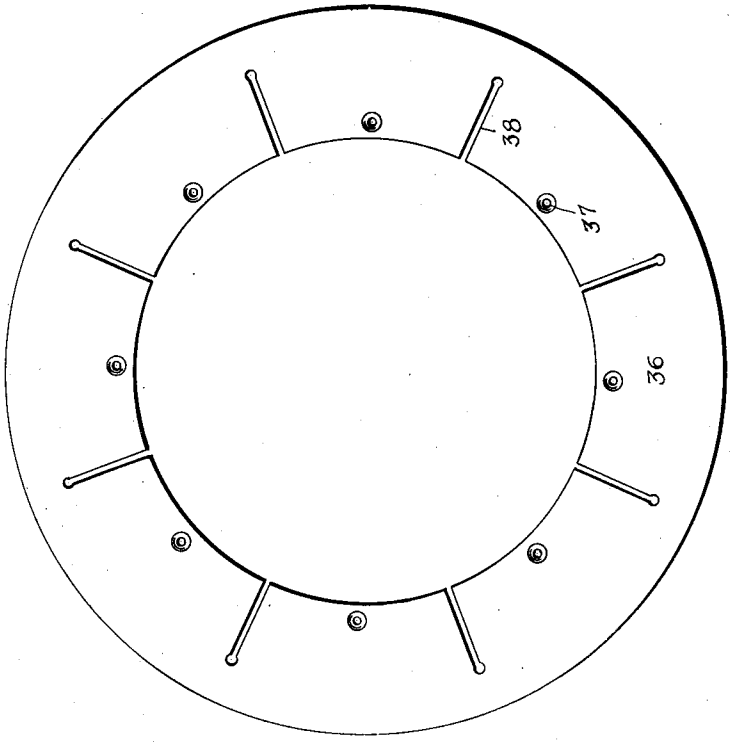


Fig. 1

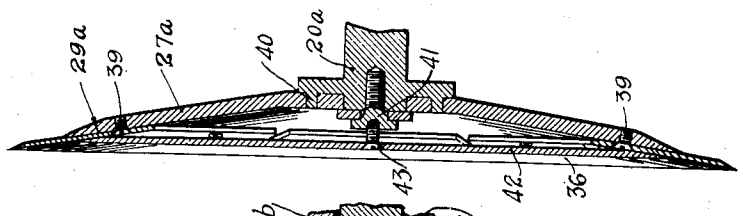


Fig. 2

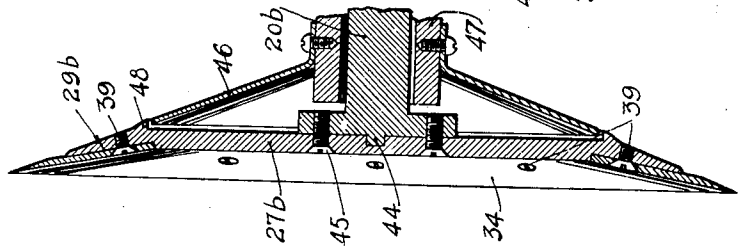


Fig. 3

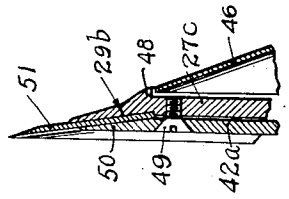


Fig. 4

INVENTOR

W. J. Drucker

BY

Geo. L. Beeler

ATTORNEY

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UNITED STATES PATENT OFFICE.

WILLIAM J. DRUCKER, OF WOODHAVEN, NEW YORK.

SLICING-MACHINE KNIFE.

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This invention relates to slicing machines and has particular reference to machines of that general type that are equipped with rotary knives.

Among the objects of this invention is to provide for a slicing machine a thin rotatable blade removably attachable to a support so as to provide for economy of construction and ease of sharpening.

Still another object of this invention is to provide a knife having various adjustable features.

With the foregoing and other objects in view the invention consists in the combination and arrangement of parts hereinafter described and claimed, and while the invention is not restricted to the exact details of construction disclosed or suggested herein, still for the purpose of illustrating a practical embodiment thereof reference is had to the accompanying drawings in which like reference characters designate the same parts in the several views, and in which—

Fig. 1 is an elevation of my blade.

Fig. 2 is a section showing a method of mounting the blade.

Fig. 3 is a section showing a modified form of knife construction.

Fig. 4 shows still another type of blade and a modified method of mounting the same.

Referring now more specifically to the drawings I show my improved blade at 36 of annular form. This blade is provided with angularly spaced holes 37 located remote from the outer periphery or cutting edge of the blade, and radial slots 38 spaced relatively to each other and located between the holes aforesaid and terminating in spaced relation to the cutting edge, whereby the portions of the blade between said slots constitute in effect a plurality of flexible locking tongues adapted to be secured to a support by means of screws passing through the holes 37, whereby the blade is dished or concaved.

The blades are suitable for mounting in the structure shown in Figs. 2 and 3. Referring more specifically to the modification shown in Fig. 2, screws 39 secure the annular blade to a supporting member 27^a within a concave seat 29^a thereof. Thus this member 27^a is provided with a series of holes to receive lugs 40 or the like of an abutment formed on the arbor 20^a, to which it is secured by means of a screw 41. A cover plate 42 is used particularly in connection with the slotted annular knife 36 to prevent the same from collecting grease and the like, said plate being secured to the knife structure by means of a screw 43 threaded into the head of the screw 41. In the modification shown in Fig. 3 the knife securing means include a supporting member 27^b centered upon an arbor 20^b by means of a lug or point 44, said plate being secured to the arbor in any suitable manner as by screws 45. While the main body portion of said supporting member is of flat disk construction, an annular recessed seat 29^b is provided at the periphery of said member of concave form so that the annular blade 34 received thereby will be concaved or dished in a suitable manner by means of the screws 39 coincident with securing it in place. To prevent any possibility of sliced material clinging or catching to the back of the knife a frusto conical shell or hood 46 is provided at the side of the knife remote from the material to be sliced. This shell is held in close proximity to the knife and stationary relatively thereto by means of a sleeve 47 surrounding the arbor 20^b, to which sleeve said shell is attached in any suitable manner. An annular lip 48 or the like is formed upon the member 27^b in spaced relation to said shell and overlapping or covering the edge thereof to insure effective deflection of the sliced material. Fig. 4 embodies the seat structure disclosed in Fig. 3 with a circular disk or plate 42^a which is secured to the supporting member 27^c in any suitable manner as by screws 49, said disk being beveled as at 50 along the periphery and at the face thereof adjacent to an annular blade 51 so as to be substantially parallel to the seat 29^b and to be adapted effectively to flex and concave the blade. It will be noted that the blade 51 need not be perforated, since the screws 49 do not pass therethrough but are located in spaced relation to the same.

With any of the exposed parts of the knife constructed of sanitary material, such as stainless steel, I am able to produce a knife of the most attractive nature and yet at low cost because of the cheap initial and upkeep expense.

The blade being of thin flat metal is adapted for cheap and rapid construction as well as for a simpler heat treatment for hardening and tempering. The concave or dished form of the blade permits of the

fastening screws or other attaching devices used to lie wholly within and in spaced relation to the plane of the cutting edge of the blade, whereby the material sliced is adapted to move across the face of the knife without being caught or obstructed by any part of the knife.

I claim:—

1. In a slicing machine knife, a supporting member having a concave periphery constituting a seat to support an annular blade, a facing member on the opposite side of the blade from the supporting member and bearing against the blade in proximity to its cutting edge, and means acting upon the facing member to draw it toward the supporting member to cause the blade to be gripped between the facing member and said seat portion of the supporting member.

2. A device as set forth in claim 1 in which the facing member is a disk substantially coextensive with the supporting member and lying within the cavity back of the plane of the cutting edge of the knife.

In testimony whereof I affix my signature.

WILLIAM J. DRUCKER.