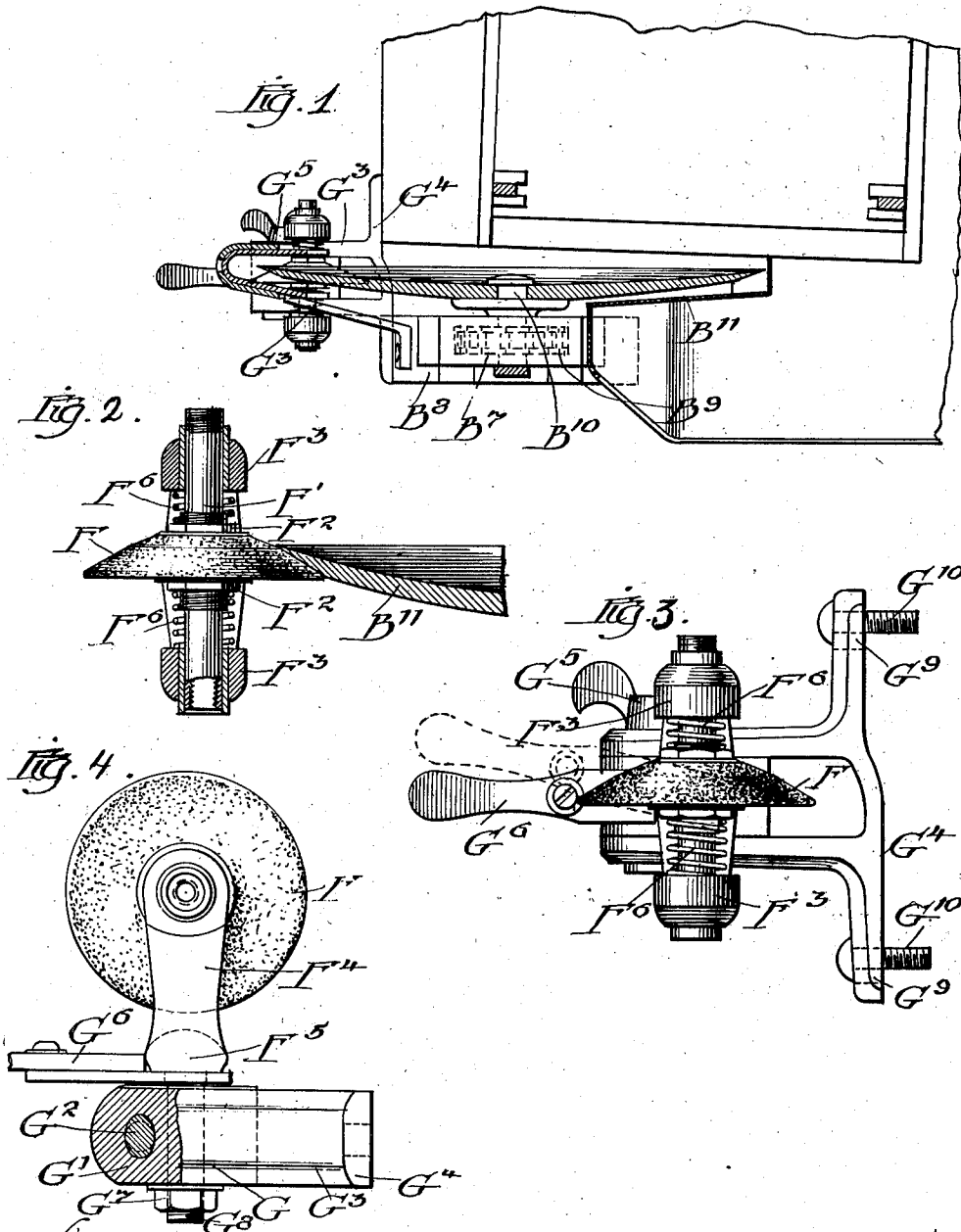


W. B. WOLFF & F. M. SCHAEFER.
SHARPENING DEVICE FOR SLICING MACHINES.
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Patented Mar. 14, 1911.



Witnesses:

Frank B. Blanchard
Sophie B. Werner.

Inventors
W. B. Wolff
F. M. Schaefer
By Parker & Carter
Attorneys.

UNITED STATES PATENT OFFICE.

WALLACE B. WOLFF AND FRANK M. SCHAEFER, OF CHICAGO, ILLINOIS, ASSIGNORS TO
AMERICAN SLICING MACHINE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION
OF NEW YORK.

SHARPENING DEVICE FOR SLICING-MACHINES.

986,617.

Specification of Letters Patent. Patented Mar. 14, 1911.

Application filed January 21, 1909. Serial No. 473,486.

To all whom it may concern:

Be it known that we, WALLACE B. WOLFF and FRANK M. SCHAEFER, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Sharpening Device for Slicing-Machines, of which the following is a specification.

Our invention relates to meat slicing machines and particularly to devices for automatically sharpening the knife.

It is illustrated in the accompanying drawings, wherein—

Figure 1, is a horizontal section and part plan view in detail showing the general relation of the grinding wheel to the knife; Fig. 2 is a detail showing the grinding wheel and knife in contact; Fig. 3 is a detail showing the lateral adjustability of the grinding wheel, and Fig. 5 is a detail of the grinding wheel support.

Like parts are indicated by the same letter in all the figures.

F is a grinding wheel of any desired form or shape, preferably that shown, and adapted to engage the outer beveled edge of the knife B¹. It is secured on a shaft F¹ by means of the nuts F² F² on opposite sides of the grinding wheel.

F³ F³ are boxes at the end of arms F⁴ F⁴ which rise from a yoke F⁵. These boxes furnish the bearings for the ends of the shaft F¹. On opposite sides of the grinding wheel and between it and the sides of the boxes are the spiral springs F⁶ F⁶ whereby the wheel is elastically held in position. It can be moved to either side of the cutting wheel with its shaft, the latter moving laterally in the boxes.

The yoke F⁵ terminates in a central pin G which is pivotally mounted in a block G¹ which is in turn eccentrically mounted by means of the pin G² in the arms G³ G³ which rises from the base piece G⁴. This pin is elliptical in shape where it passes through the block G¹ and has at one extremity the thumb nut G⁵ whereby pressure may be applied to the arms G³ G³ to cause them to clamp the block G¹ and hold it securely in position.

G⁶ is a handle projecting from the block and from the yoke whereby the block, yoke and grinding wheel may be swung on the pin G² when the thumb nut G⁵ is loosened

to throw the grinding wheel toward or from the knife.

The grinding wheel may be applied to either side of the knife edge by pushing it either way along with its supporting shaft against the action of one or the other of the springs F⁶. The manner in which it is usually in contact with the knife is illustrated in Fig. 2. The pin G is provided at its lower end with the nut G⁷ on its screw threaded portion G⁸ and thus the yoke may be tightened in position, but if the nut G⁷ is loose the yoke with its pin may be turned about the axis of the pin and this movement may also be accomplished by operating the handle G⁶. Thus the grinding wheel may be moved into any desired position as indicated by dotted lines in Fig. 3. The base piece G⁴ is provided with two enlarged apertures G⁹ G⁹ through which pass the securing screws G¹⁰ G¹⁰. These are adapted to enter into the casing or frame of the machine so that the device may be secured in proper position and in proper relation to the grinding wheel and the movable portion E⁵ of the guard. The base G⁴ can be adjusted in any desired position within reasonable limits by reason of the enlarged holes G⁹. This is indicated in Fig. 3.

The use and operation of our invention are as follows: When the operator desires to sharpen the knife the thumb nut G⁵ is then loosened and the handle is grasped and by means thereof the grinding wheel is thrown forward through the opening left in the guard rim by the removal of the lower portion thereof and the grinding wheel is or may be brought into contact with the knife. The wheel can be moved in either direction so as to throw it on either side of the knife and it is held elastically against the surface of the knife on which it lies by means of the springs. Thus it is enabled to follow the inequalities and irregularities along the edge of the knife. The grinding wheel being rigid on its shaft and in contact with the springs, is held somewhat securely but yieldingly in position so that it rotates sufficiently to present an ever changing grinding surface to the knife but is of a different diameter and sufficiently sluggish in its movement of rotation to effect the grinding or sharpening of the knife. If for

any reason the knife is out of position with reference to the wheel, the latter may be swung, as indicated in Fig. 4, on its vertical supporting axis to bring it to the proper position. The grinding wheel may be locked in any desired position by means of the nut G⁷ or the thumb nut G⁵.

We have not stopped to describe the operation of the meat supporting carriage because our invention is independent of the peculiarities of it or its operation.

We claim:

1. A sharpening device for slicing machines comprising a grinding wheel, a shaft upon which said wheel is mounted, a U-shaped support engaging both ends of said shaft and located upon either side of the wheel, and a base upon which said support is mounted so as to oscillate in a plane perpendicular to said shaft.

2. A sharpening device for slicing machines comprising a grinding wheel, a shaft upon which said wheel is mounted, a U-shaped support engaging both ends of said shaft and springs between said support and the wheel.

3. A sharpening device for slicing machines comprising a grinding wheel, a shaft upon which said wheel is mounted, a U-shaped support engaging both ends of said shaft, springs between said support and the wheel, and a base upon which said support is mounted so as to oscillate in a plane perpendicular to said shaft.

WALLACE B. WOLFF;
FRANK M. SCHAEFER.

Witnesses:

EDNA K. REYNOLDS,
MINNIE M. LINDENAU.