May 13, 1930. I. A. NEWSBAUM 1,758,328

ROLLER KNIFE

Filed June 29, 1928

Fig. 1.

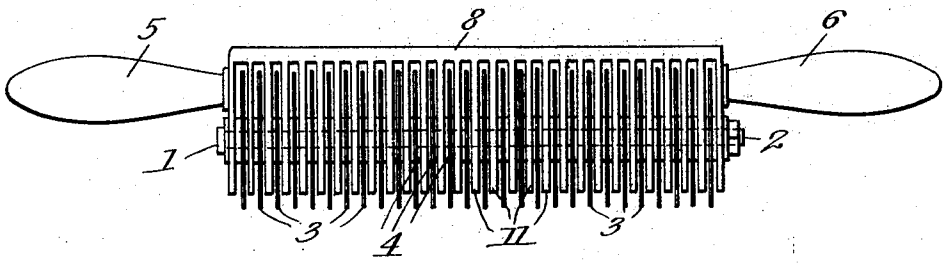


Fig. 3.

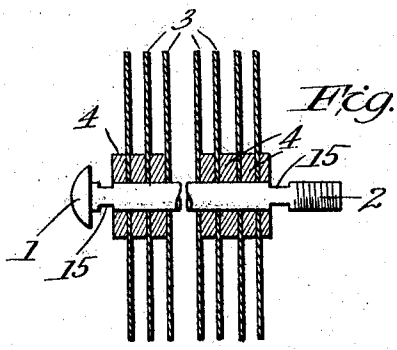


Fig. 2.

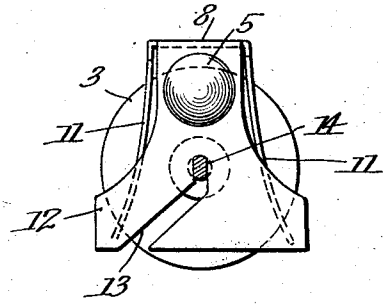


Fig. 5.

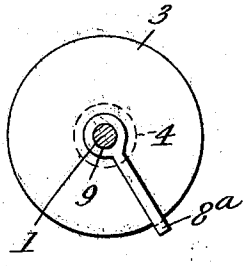
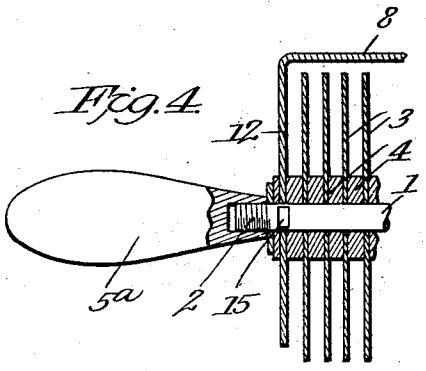


Fig. 4.



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UNITED STATES PATENT OFFICE

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ROLLER KNIFE

Application filed June 29, 1928. Serial No. 289,160.

My invention relates to improvements in roller knives having a plurality of rotary cutters for use in cutting noodles and for other purposes, such as pastry, vegetables, etc.

The object of the invention is to provide a simple, practical and efficient tool of this character, in which the rotary cutting disks may be quickly and easily spread toward and from each other to vary the size of the strips cut, and in the provision of means to dislodge the cut material from between the cutters and permit the same to lie in parallel strips.

With the above and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of devices hereinafter described and claimed.

In the accompanying drawings:—

Figure 1 is a side elevation of one embodiment of the invention;

Figure 2 is an end view of Figure 1;

Figure 3 is a view of the cutter in Figure 1 with the combe removed to show details of construction;

Figure 4 is a modified view of cutter; and

Figure 5 is a fragmentary view of a further modified construction.

Referring to the drawing by numerals, 1 denotes a straight rod of cylindrical form, which has at least one of its ends externally screw-threaded, as shown at 2, and which has slidably and adjustably mounted upon its central portion, a plurality of revoluble cutting disks 3, of uniform size, but of any desired form and construction. These cutters have concentric openings through which the rod 1 slides, and they are spaced apart by blocks or collars 4, which surround the rod between their opposite faces.

These spacing collars are preferably but not necessarily cylindrical, and of varying widths for varying the relative spacing between the cutters. With each roller knife, a number of sets of spacing collars of varying widths, are furnished so that a selection may be made of the sets for spacing the cutter disks 3 as desired or required, for the work to be done. Also, a number of collars from the various sets may be used together to effect a varied spacing of the cutters 3 on the shaft or rod 1.

The tool is operated similar to a rolling pin by grasping the rotary handles 5 and 6 provided upon its opposite ends.

In the form of the invention shown in Figures 1, 2 and 3, a combe 8 is provided with inwardly extending fingers 11 which project between the rotary cutters to prevent the materials from filling the spaces between the cutters. To this end the combe 8 has laterally extending end plate members 12 at its ends formed with a slot 13 extending from one edge thereof to the central portion of each plate having each end portion flattened or grooved, as at 15, on diametrically opposite sides to be received and slide through the slots 13. When the ends of the shaft 1 are at the ends of the slots 13, and the nut 2^a is then tightened sufficiently to hold the shaft in the slots 13. The construction of the combe 8 may be in the form of a relatively wide flat body plate X, as shown particularly in Figure 2, and the fingers 11 projecting laterally from opposite edges of said flat plate X.

In the form of the invention shown in Figures 1, 2 and 3, the handles 5 and 6 are secured to the end plates 12 of the combe 8.

In Figures 4 and 5, the handles 5^a and 6^a are threaded on the ends of the shaft 1, but the combe construction in Figure 4 is the same as in Figures 1, 2 and 3, while in Figure 5 the combe 8^a is in the form of a yoke or bail having its ends formed with an opening or eye 9 to receive the ends of the handles 5 and 6 or the shaft 1 in a manner to permit the combe to be swung freely to opposite sides of the knife to lie at the rear of the same with respect to its direction of movement. This construction also permits the ready assemblage and disassemblage of the parts.

The cross or connecting portion of the combe lies close to the periphery of the disks 3 so as to drag behind the disks and prevent the strips or cut portions of dough from following around the periphery of the disks.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention, as defined by the appended claims.

Having thus described the invention, what is claimed is:—

1. As an improved article of manufacture, a roller cutter including an arbor, a plurality of spaced circular cutting blades having central openings through which the arbor slidably extends, a yoke-like member having openings in its ends to receive respectively the end portions of said arbor, the intermediate portion of said yoke being adapted to lie substantially parallel with the arbor adjacent the periphery of the cutters, and handles at the ends of the device.

2. As an improved article of manufacture, a roller cutter including an arbor, a plurality of spaced circular cutting blades having central openings through which the arbor slidably extends, a yoke-like member having an opening therein to receive the ends of said arbor, the intermediate portion of the yoke having laterally projecting fingers extending between the cutting blades, handles at the ends of the device, and means for holding the parts on the arbor.

3. As an improved article of manufacture, a roller cutter including an arbor having an enlarged head at one end and being threaded at the other end, a plurality of spaced circular cutting blades having central openings through which the arbor slidably extends, a yoke-like member having a slot in each of its ends extending from one edge thereof to a central portion of said ends where it terminates, the ends of the arbor having at least one surface thereof flattened to be fittedly and slidably received in said grooves respectively, an adjustable nut threaded on the extremity of said arbor whereby the parts are held in close assembled relation, the intermediate portion of the yoke extending substantially parallel to the arbor and lying adjacent the periphery thereof, inwardly extending fingers on said yoke extending between said cutting blades and extending substantially diametrically across said blades and lying on opposite sides of said arbor, and handles for the device secured to the ends of the said yoke.

4. As an improved article of manufacture, a roller cutter including an arbor, a plurality of spaced circular cutting blades on said arbor, a yoke-like member having a slot in each of its ends extending from one edge thereof to a central portion of said ends where it terminates, the ends of the arbor having at least one surface thereof flattened to be fittedly and slidably received in said grooves respectively, the intermediate portion of the yoke extending substantially parallel to the arbor and lying adjacent the periphery thereof, inwardly extending fingers on said yoke extending between said cutting blades and extending substantially diametrically across said blades, and handles for the device secured to the ends of the said yoke.

In testimony whereof I have hereunto set my hand.

IVA ALICE NEWSBAUM.