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2,046,540

BISCUIT AND DOUGHNUT CUTTER

Filed Sept. 3, 1935

2 Sheets-Sheet 1

Fig. 1

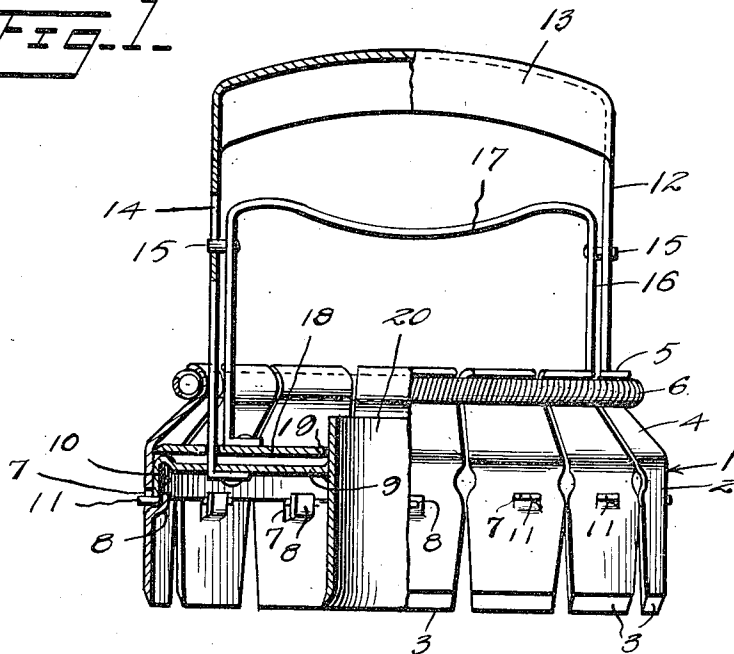
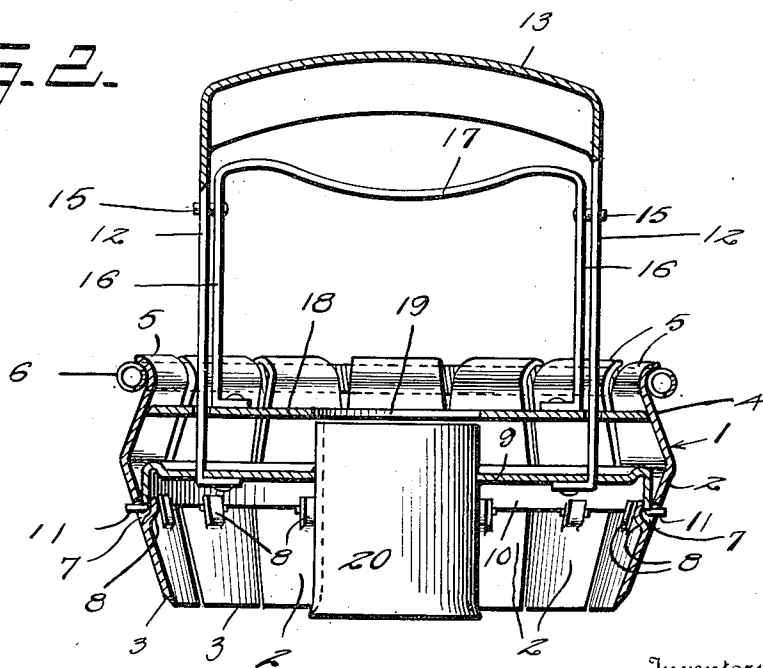


Fig. 2



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FIG. 3.

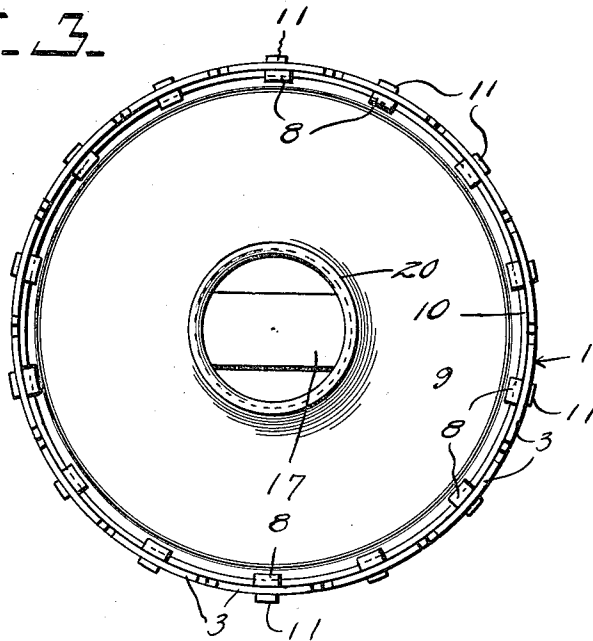
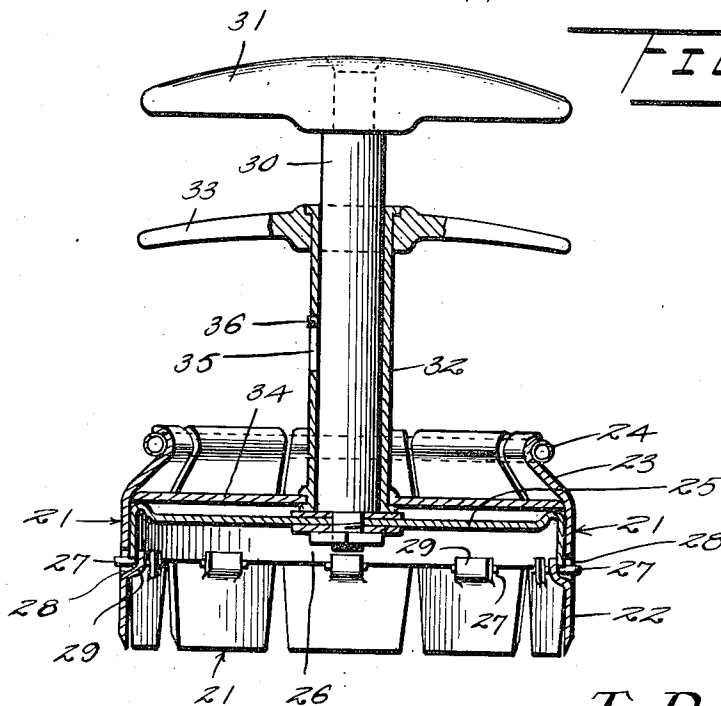


FIG. 4.



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BISCUIT AND DOUGHNUT CUTTER

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7 Claims. (Cl. 107—51)

This invention relates to the class of kitchen articles and pertains particularly to a device for cutting doughnuts, biscuits, or the like.

The primary object of the present invention is to provide a cutter for doughnuts or biscuits which is designed to eliminate the necessity of picking up the cut article with the hands after the cutting operation, the device being designed to perform this function whereby the article after being cut may be lifted directly into the baking pan.

Another object of the invention is to provide a cutter of the above described character which is readily manipulated with one hand for performing the cutting and picking up steps.

A further object of the invention is to provide a cutter of the character described wherein the cutting blade is so designed that it may be deformed to effect the picking-up operation, thereby making it unnecessary to employ a multiplicity of parts for the performance of the two operations.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawings, but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawings:

Figure 1 is a view partially in vertical section and partially in elevation of the doughnut cutter embodying the present invention.

Fig. 2 is a vertical sectional view through the doughnut cutter showing the same in position for picking up a doughnut.

Fig. 3 is a bottom plan view of the cutter.

Fig. 4 is a view in vertical section through the formation of the cutter employed for cutting biscuits.

Referring now more particularly to the drawings, wherein like numerals of reference designate corresponding parts throughout the several views, the numeral 1 indicates broadly the body of the form of the cutter designed for cutting doughnuts. This body is of the usual circular formation and comprises a plurality of narrow vertically disposed plates 2 arranged in edge-to-edge relation and each having the necessary slight transverse curvature to adapt the group to the formation of the required circular body. Each of these

plates has its bottom edge sharpened, as indicated at 3, and its upper end is bent to extend inwardly, as indicated at 4, and terminates in the reversely bent lip 5. Encircling these lips 5 is an annular coiled spring 6 which constantly tends to draw the inturned ends 4 of the plates inwardly.

Each of these plates has an opening 7 formed therein substantially midway between the cutting edge 3 and the point where the inturned portion is formed, by striking inwardly the lug 8. Disposed within the group of plates 2 is a disk 9 with which is integrally formed the downwardly extending narrow flange 10 about the lower edge of which a plurality of fingers 11 is formed, and each of these fingers extends through the opening 7 of a plate 2, thus positioning the adjacent portion of the flange 10 between the plate and the lug 8. The disk 9 has secured to the top thereof at opposite sides of its center the upwardly extending legs 12 of a handle 13. Each of these legs has a vertical slot 14 therein for the reception of a pin 15 which projects outwardly from the adjacent leg 16 of an inner handle 17. The lower ends of the legs 16 are attached to a camming disk 18 which lies above the disk 9 beneath the inturned upper ends 4 of the plates 2. This camming disk 18 has a central opening 19 through which extends the upper end of a cylinder 20 which is secured to the disk 9 and which has its lower edge in the plane of the edges 3 and operates to cut the hole in the doughnut.

In the operation of the doughnut cutter, the plates 2 which are maintained normally in vertical position, have their lower edges forced downwardly thru the dough in the usual manner. After the cutting operation the fingers of the hand grasping the handle 13 are engaged under the handle 17 and the camming disk 18 is drawn upwardly, thus forcing the periphery of the disk 18 against the inner faces of the portions 4 of the plates. This causes the plates to be oscillated about the points where they are attached to the flange 10, thus swinging the lower edges inwardly and moving the upper ends downwardly against the tension of the spring 6. The lower edges of the plates thus slip beneath the cut-out dough body so that the same may be lifted with the cutter and placed in a receiving receptacle.

The numeral 21 designates generally the biscuit cutter. The essential features of this cutter are the same as the doughnut cutter, in that it comprises a plurality of plates 22 arranged in the

same circular relation as in the doughnut cutter and having their upper ends inturned, as at 23, and joined together by the spring annulus 24. The disk 25 disposed within the group of plates 22 has its down-turned flange 26 provided with the tongues 27 which extend laterally through receiving openings 28 in the cutter plates, engaging the adjacent portion of the flange behind the in-pressed lugs 29 by which connection between the flange and the disk is made. In the biscuit cutter the disk 25 has secured to the central part thereof the post 30, upon the upper end of which a handle 31 is secured. This post has slidably mounted thereon the sleeve 32 which at its upper end carries a centrally apertured inner handle member 33 through which the post 30 passes, while at its lower end is fixed to the central part of a camming plate 34 thru which the post 30 passes.

The operation of the biscuit cutter is the same as the doughnut cutter. It will be readily apparent that after cutting the biscuit, by pulling the inner handle 33 upwardly, the periphery of the camming disk 34 will be forced against the in-turned ends of the plates 22 and cause them to oscillate across the edge of the flange 26 so that the cutting edges will be moved in beneath the dough body, enabling the operator to lift the same with the cutter.

The sleeve 32 is slotted, as indicated at 35, and a pin 36 carried by the post 30, works in this slot and limits the relative movement between the post and sleeve, thus preventing the cam disk from coming out from between the inturned ends of the cutting plates 22.

From the foregoing it will be readily apparent that with the device as herein described, the operation of making doughnuts and biscuits will be greatly expedited, since the operator is not required to perform two separate operations in the cutting of the dough and laying aside the cutter and picking up the cut body to place it in a receiving receptacle, as is the present practice. What is claimed, is:

1. A dough cutter comprising a circular body made up of a plurality of plate members arranged in side-edge relation, each of said plates being sharpened along one edge, means resiliently coupling the plates together adjacent their other ends, an element coupling the plates together intermediate their ends and providing a point of oscillation for each plate, and means for effecting the oscillation of the plates simultaneously against the tension of said resilient connecting means whereby the said cutting edges will be drawn inwardly.

2. A dough cutter comprising an annular body, a plurality of elongated plate portions disposed transversely of said body and in side-edge relation, said plates being sharpened along one end edge and having their other ends turned in across the body, means forming a pivotal connection between each plate and said body, means connecting said turned-in ends and constantly resiliently urging the same together, a handle connected with said annular body, and shiftable means adapted to be brought into contact with the inner surfaces of said inturned ends to effect the oscillation of the plates against the tension of the resilient means.

3. A dough cutter comprising an annular body, a plurality of elongated plate portions disposed transversely of said body and in side-edge relation, said plates being sharpened along one end

edge and having their other ends turned in across the body, means forming a pivotal connection between each plate and said body, means connecting said turned-in ends and constantly resiliently urging the same together, a handle connected with said annular body, shiftable means adapted to be brought into contact with the inner surfaces of said inturned ends to effect the oscillation of the plates against the tension of the resilient means, and a cylindrical cutter element carried by the annular member and disposed at the center of the cutter.

4. A dough cutter comprising a disk having a surrounding flange, a plurality of elongated plate members disposed across said flange and in side-edge relation, means coupling each of said plates with the flange forming a pivotal connection therewith, each of said plates being sharpened along one edge, each of said plates at its other end being turned inwardly across said disk and terminating in a reversely bent tongue, an annular spring member encircling the inturned ends of the plates and engaging said tongues, a camming disk disposed above said first disk and having its periphery adjacent the inner sides of the inturned ends of the plates, a handle carried by the first disk, and means connected with the camming disk for movement relative to the handle for effecting the shifting of the camming disk against the adjacent plate portions.

5. A cutting device, comprising a circular body, a plurality of transversely arcuate blades disposed in edge to edge relation about the body with the concave faces toward the body, each of said blades having its lower edge sharpened and each having its side edges slightly convergent from adjacent the body to the lower edge of the blade, means pivotally coupling each blade to the body facilitating the swinging of the lower edge of the blade in beneath the body, resilient means joining the top ends of the blades together and constantly acting to maintain the blades perpendicular to the body, a handle carried by the body, and means movable relative to the handle and contacting said blades to oscillate the same in unison against said resilient means.

6. A cutting device, comprising a circular body having an angularly extending integral flange, a plurality of fingers formed integral with the free edge of said flange and projecting outwardly with respect to the body, a plurality of transversely arcuate blade members disposed in edge to edge relation about said flange, each of said blade members having an aperture receiving a finger upon which the blade oscillates, each of said blades having its side edges slightly convergent downwardly and having its lower edge sharpened, the upper ends of the blades extending above the body, resilient means joining the said extended upper ends of the blades and normally urging the same to oscillate inwardly at their upper ends whereby the sharpened lower end edges of the blades are maintained in a circle of a diameter equal to the overall diameter of the body, a handle fixed to said body, an element disposed over the body and adapted to move relative to the handle, and means connected with and actuated by said element for oscillating the said upper ends of the blades in opposition to the action of said resilient means.

7. A cutting device, comprising a circular body having an angularly extending integral flange, a plurality of fingers formed integral with the free edge of said flange and projecting outwardly with respect to the body, a plurality of transversely

arcuate blade members disposed in edge to edge relation about said flange, each of said blade members having an aperture receiving a finger upon which the blade oscillates, each of said
5 blades having its side edges slightly convergent downwardly and having its lower edge sharpened, the upper ends of the blades extending above the body, resilient means joining the said extended upper ends of the blades and normally urging the
10 same to oscillate inwardly at their upper ends whereby the sharpened lower end edges of the blades are maintained in a circle of a diameter equal to the overall diameter of the body, a handle

fixed to said body, an element disposed over the body and adapted to move relative to the handle, means connected with and actuated by said element for oscillating the said upper ends of the blades in opposition to the action of said resilient means, and a cylindrical cutter fixed to the
5 said body and concentric therewith, said cylindrical cutter being of materially less diameter than the body and having a lower sharpened cutting edge disposed in the plane of the cutting
10 edges of the blades.

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