APPLICATION FOR A STANDARD/PETTY Patent

We hereby apply for the grant of a Standard/Petty Patent for an invention entitled "Pastry Roll Cutter" which is described in the accompanying complete specification.

(Note: The following applies only to Convention applications)

Details of basic application(s)

<table>
<thead>
<tr>
<th>Application No.</th>
<th>Country</th>
<th>Filing Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>066,900</td>
<td>United States of America</td>
<td>August 16, 1979</td>
</tr>
</tbody>
</table>

Address for Service:

PHILLIPS ORMONDE AND FITZPATRICK
Patent and Trade Mark Attorneys
367 Collins Street
Melbourne, Australia 3000

Dated (g) April 28, 1980

By: Henry Edward Jacob, Assistant Secretary
DECLARATION FOR A PATENT APPLICATION

In support of the application made by Dart Industries Inc., AUSTRALIA, for a patent for an invention entitled "Pastry Roll Cutter",

I, Henry Edward Jacob, Assistant Secretary of and care Dart Industries Inc., 8480 Beverly Boulevard, Los Angeles, California 90048, United States of America do solemnly and sincerely declare as follows:

1. I am authorized to make this declaration on behalf of the applicant(s).

2. Pieter Karel Jan De Coster Dr. A. Goiffartstraat 69 9300 Aalst, Belgium is the actual inventor(s) of the invention and the facts upon which the applicant(s) is entitled to make the application are as follows:

   by virtue of an assignment dated August 1, 1979, the applicant is the assignee of the invention from the actual inventor.

3. The basic application(s) for patent or similar protection on which the application is based is/are identified by country, filing date, and basic applicant(s) as follows:

   United States of America, August 16, 1979, USSN 066,900 Pieter Karel Jan De Coster

4. The basic application(s) referred to in paragraph 3 hereof was/were the first application(s) made in a Convention country in respect of the invention the subject of the application.

Declared at Los Angeles, California USA

Dated April 28, 1980

By: Henry Edward Jacob, Assistant Secretary

To: The Commissioner of Patents

PHILIPS ORMONDE & FITZPATRICK
Patent and Trade Mark Attorneys
367 Collins Street
Melbourne, Australia
(54) THREE-DISC ROLL CUTTER
(71) DART INDUSTRIES INC.
(21) 59 182/80 517 988 (22) 10.6.80
(23) 10.6.80 (24) 16.8.79
(31) 065900 (32) 16.8.79 (33) US
(43) 19.2.81 (44) 10.9.81
(51) A21C 5/00
(72) De Coster, P.K.J.
(74) PO
(56) 35 902/71 34.6
  20 402/56 209 861 34.6 70.8
(57) Claim 1. A roll cutter comprising a body portion including opposed spaced-apart side wall portions connected by a top wall and having means for rotatably journaling at least three cutter discs of like diameter for selective engagement of one, two or three of said discs with a sheet of material to be cut, said cutter discs being journaled for rotation on planes normal to at least two longitudinally spaced-apart parallel axes, one of said discs being journaling for rotation on a plane normal to one axis and two other of said discs being journaled for rotation on a plane normal to a second axis, each one of said two other discs being positioned laterally spaced-apart on one side of the plane of rotation of said one disc, wherein selective engagement of the discs with material to be cut selectively enables trimming the material, cutting the material into relatively wide strips or into relatively narrow strips.
The following statement is a full description of this invention, including the best method of performing it known to applicant(s):

"PASTRY ROLL CUTTER"
BACKGROUND OF THE INVENTION

Pastry dough cutters have usually consisted of one or more cutter wheels or discs mounted on a single shaft. Cutters having a plurality of cutter wheels are generally adjustable to cut a sheet of pastry dough into strips of various widths by adjustably positioning the cutter wheels along the shaft.

Generally such cutters are of rather complex structure involving numerous elements, generally formed of metal, and due to their complexity not readily adjustable to cut a sheet of pastry dough into strips of varying widths.

U.S. Patent No. 663,222 is directed to a device for cutting noodle dough and provided with cutting discs journaled on a common axle for cutting the dough into strips of varying widths by inverting the device. However, the structure proposed therein is of rather complex construction thereby requiring the production of numerous separate components.

SUMMARY OF THE INVENTION

The present invention contemplates an improved roll-type cutter particularly suited for use as a pastry tool.

More particularly in accordance with a preferred embodiment of the present invention the pastry roll cutter comprises a vastly simplified device formed of relatively few components integrally molded of a synthetic polymer. The several integrally molded member may readily be separated into components that when operatively assembled without the aid of tools provides a very versatile, highly simplified pastry tool.

Because all components of the preferred form of the pastry roll cutter are formed of a polymer, problems associated with corrosion are avoided.
More particularly in accordance with the present invention, there is provided a roll cutter comprising a body portion including opposed spaced-apart side wall portions connected by a top wall and having means for rotatably journaling at least three cutter discs of like diameter for selective engagement of one, two or three of said discs with a sheet of material to be cut, said cutter discs being journaled for rotation on planes normal to at least two longitudinally spaced-apart parallel axes, one of said discs being journaled for rotation on a plane normal to one axis and two other of said discs being journaled for rotation on a plane normal to a second axis, each one of said two other discs being positioned laterally spaced-apart on one side of the plane of rotation of said one disc, wherein selective engagement of the discs with material to be cut selectively enables trimming the material, cutting the material into relatively wide strips or into relatively narrow strips.

In a preferred form, the cutter is a vastly simplified device formed of relatively few components integrally molded of a synthetic polymer. The several integrally molded member may readily be separated into components that when operatively assembled without the aid of tools provides a very versatile, highly simplified pastry tool.

Because all components of the preferred form of the pastry roll cutter are formed of a polymer, problems associated with corrosion are avoided.
Another feature of the invention resides in a substantial economy of production by virtue of an all polymeric construction.

**BRIEF DESCRIPTION OF THE DRAWINGS**

A better understanding of this invention as well as many further features and advantages thereof will be had by now referring to the accompanying drawings in which:

FIGURE 1 is a perspective view of a preferred embodiment of the pastry roll cutter of this invention shown cutting relatively narrow strips of pastry dough;

FIGURE 2 is a perspective view of the pastry roll cutter of this invention shown being utilized as a pastry dough trimmer;

FIGURE 3 is a perspective view of the pastry roll cutter of this invention shown cutting relatively wide strips of pastry dough.

FIGURE 4 is a longitudinal cross section, somewhat enlarged, of the pastry roll cutter of FIGURES 1-3;

FIGURE 5 is a cross section taken in the direction of the arrows 5-5 of FIGURE 4;

FIGURE 6 is a cross section taken in the direction of the arrows 6-6 of FIGURE 4; and

FIGURE 7 is a perspective view of an integral molding consisting of the components of the device of this invention.

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

Referring first to FIGURES 1, 2 and 3, the pastry roll cutter indicated generally at 10 comprises a body portion having
spaced apart side walls 12 and 14 connected by a top wall portion 16. In the preferred embodiment illustrated, the top wall portion 16 comprises an arcuate extension of the side walls 12 and 14. The side walls 12 and 14 are maintained in generally parallel relationship as will become clearer as the description proceeds.

The preferred embodiment 10 of the pastry roll cutter includes two shafts 18 and 20 rotatably journaled in the body portion in general and more specifically the spaced apart side walls 12 and 14. The shafts 18 and 20 are in longitudinally spaced apart parallel relation generally, but not necessarily, on a common horizontal plane.

In the preferred embodiment of the pastry roll cutter 10, at least three cutter discs 22, 24 and 26 are provided and wherein one disc, namely the disc 22, is operatively associated with one shaft, namely shaft 18 and the other two discs 24 and 26 are operatively associated with the other shaft 20 of the two shafts 18 and 20.

As will be seen from a comparison of FIGURES 1, 2 and 3 illustrating the pastry roll cutter 10 in use, a sheet of pastry dough 28, or the like, is shown for purposes of illustration as supported on a generally horizontal planar surface such as a pastry board, not shown, upon which a portion of pastry dough has been rolled into sheet form.

In FIGURE 1 it will be seen that when a user, such as by grasping the side walls 12 and 14 of the pastry roll cutter 10 between the thumb and index finger and traversing the pastry roll cutter 10 across the pastry dough sheet 28 with all three cutter discs 22, 24 and 26 in rolling, cutting engagement with the dough 28, two relatively narrow strips of dough 30 and 32 are cut from
the sheet of pastry dough 28. It will be appreciated when utilizing the pastry roll cutter 10 in the mode illustrated in FIGURE 1 wherein the discs 22, 24 and 26 are of generally equal diameter, the body portion of the cutter is generally horizontal to the plane of the support surface for the pastry dough sheet 28 when the shafts 18 and 20 are on a generally common horizontal plane.

It will be appreciated that the shafts 18 and 20 need not necessarily be on a common horizontal plane relative to the body portion of the pastry roll cutter 10 since such interrelationship, as well as the longitudinal spacing between the two parallel shafts 18 and 20 may be selectively varied depending upon the diameter of the cutter discs 22, 24 and 26. In this latter regard, it is generally only necessary that the cutter discs on a given shaft be of the same diameter for the pastry roll cutter 10 to function in accordance with this invention.

In FIGURE 2 it will be seen that the body portion of the pastry roll cutter 10 is presented in rolling cutting engagement with the pastry dough sheet 28 with the common plane of the shafts 18 and 20 other than at horizontal to the support surface for the pastry dough sheet 28 and wherein only disc 22 is in rolling cutting engagement with the pastry dough sheet 28 as would normally be the case when trimming a sheet of pastry dough to a desired geometrical configuration.

Turning specifically to FIGURE 3, it will be appreciated that a user, such as by grasping the pastry roll cutter 10 as described above is presenting cutter discs 24 and 26 in rolling cutting relation to the pastry dough sheet 28 so as to cut the
sheet to form a relatively wide strip of pastry dough. It
will be appreciated that in the preferred embodiment illustrated
a user presents the pastry roll cutter in cutting relation
to the pastry dough sheet with the common plane of the shafts
oppositely inclined relative to the horizontal support
surface for the pastry dough sheet. Turning briefly to
FIGURE 7, it will be appreciated that the pastry roll cutter is illustrated as being formed of an integral molding such as
formed by conventional injection molding techniques and formed of suitable synthetic polymer, such as polypropylene, high
density polyethylene, etc., having suitable physical properties,
e.g., substantially rigid at ambient temperatures, etc. It will
be seen that the body portion of the pastry roll cutter comprises side wall portions and coextensive arcuate top
wall portion and wherein as indicated generally at for
purposes of assembly of the components of the pastry roll cutter
into operative relationship as shown in FIGURES 1-3, the side
and top wall portions are folded back upon themselves along a
hinge portion indicated generally at . It will be appreciated
that the hinge portion indicated generally at need not necessarily
be of the living hinge type since once the several components
comprising the pastry roll cutter are separated from the integral
molding shown in FIGURE 7 and operatively assembled in cooperative
relation, it is generally not necessary to repeatedly hinge the
side wall and top wall portions , respectively about the longitudinally extending hinge portion .

From a consideration of FIGURE 7, it will be seen
that the shaft and its associated cutter disc would be broken
off, or otherwise severed from, the side wall portion at the
point generally indicated normally comprising a sprue inter-
connection of relatively small diameter between one end of the shaft 18 and the side wall portion 14. In a similar manner, the shaft 20 and its associated cutter discs 24 and 26 would be severed at the location of a sprue connection of one end of the shaft 20 with the side wall portion 12 as indicated generally at 40.

As will further be seen from FIGURE 7, the interior wall surfaces 13 and 15 of the side wall portions 12, 14 and 16, respectively, are provided with integral generally interlocking tabs, which in the embodiment illustrated comprise one centrally disposed tab 42 carried by wall portion 12 which cooperates with two spaced apart tabs 44 and 46 wherein the tab 42 having an arcuate surface 48 complementary to the arcuate interior surface 15 of the associated top wall portion 16 ensures that in assembled relationship the top portion of the pastry roll cutter 10 is maintained such that the side wall portions 12 and 14 are generally parallel and that as will become more clear as the description proceeds, the tabs, and particularly the tab 42, prevent the upper portion of the pastry roll cutter 10 from being flattened. The tabs 44 and 46 preferably coact with the tab 42 so as to limit, in conjunction with a shaft journaling means to be described, skewing of the side wall portions 12 and 14 out of parallel relationship. It will be understood that it is not necessary that the tabs 42, 44 and 46 be of a press-type fit as will become clearer as the description proceeds.

In FIGURE 7, it will be seen that the lower portions of the side walls 12 and 14 are provided with a portion of a means for rotatably journaling the shafts 18 and 20 in the operative relationship shown in FIGURES 1, 2 and 3.
In this regard and as best seen from a simultaneous comparison of FIGURES 4 and 7, the means for rotatably journaling the shafts 18 and 20, in the preferred embodiment, comprises keyhole slots 50 to be positioned and sized so as to rotatably receive reduced diameter shaft portions 52 of shafts 18 and 20 wherein shafts 18 and 20 are disposed on a generally common plane in spaced apart parallel relationship.

In the preferred embodiment illustrated, the cutter discs 22, 24 and 26 are integral with, and thus fixed relative to their respective shafts 18 and 20. In the preferred embodiment illustrated, the shaft 18 includes side wall spacer means comprising shaft portions 54 extending laterally, and generally equally, from either side of the cutter disc 22, the combined length of the shaft portions 54 and the cutter disc 22 being such that when the reduced diameter portion 52 of the shaft 18 are pressed into two opposed respective keyhole slots 50, the side walls 12 and 14 are set in their generally parallel relationship and the outward hub portions 56 of shafts 18 and 20 function to hold the side wall portions 12 and 14 in the closed position as shown in FIGURES 1, 2 and 3.

It will be appreciated from FIGURE 7 and other figures to be described, that the shaft spacer portions 54 need not be provided on both shaft 18 and 20, and in fact are not present on shaft 20.

In this latter regard, and turning specifically to FIGURES 5 and 6, it will be seen that with respect to shaft 20, the spacing of the integral cutter discs 24 and 26 on their respective shaft 20 is such that the outwardly disposed surfaces of the cutter discs 24 and 26 maintain the side wall portions 12 and 14 in parallel relation and the hub portions 56 of the
shaft 20, as in the case of the hub portions 56 of the shaft 18 assist in holding the side wall portions 12 and 14 in the closed position.

As best seen in FIGURES 5 and 6, the cutter disc 22 is preferably generally equidistantly spaced from the interior side wall surfaces of the side wall portions 12 and 14 and the cutter discs 24 and 26 each laterally disposed relative to the cutter disc 22 so as to provide the cooperative relationship as best appreciated from FIGURES 1, 2 and 3 and the foregoing description thereof.

Briefly returning to FIGURE 6, if desired, the coacting tabs 42, 44 and 46 may be of a press-type fit to assist in maintaining the elements of the pastry roll cutter 10 in their assembled relationship.

It will be understood that while the preferred material of construction for the pastry roll cutter is a high density polymeric material such as polyethylene, other synthetic polymers, as briefly referenced above, can be used with equal effectiveness. Further, while only one specific embodiment has been set forth for purposes of illustration, it is to be understood that changes and alterations as fall clearly within the scope and spirit of this invention will occur to those skilled in the art. In this respect, it will be appreciated that the cutter discs may be other than of equal diameter and may be rotatably journaled on their respective shafts if forming in such manner is expedient. Further, the discs may be of somewhat flatter than specifically shown for purposes of illustration as long as they terminate in a peripheral edge sufficiently sharp, and sufficiently rigid to cut "plastic", i.e., pliable material, with which the device is
Finally, it will be noted that another aspect of the pastry roll cutter 10 of this invention resides in the fact that the longitudinal spacing of the shafts 18 and 20 on a generally common plane together with utilization of cutter discs of generally equal diameter wherein the discs on respective shafts are in effect interdigitated, the linear extent of contact of the cutter discs with plastic material to be cut, such as pastry dough, enables the user, such as when utilizing the pastry roll cutter as shown in FIGURE 1, to cut even arcuately narrow strips of dough.

Accordingly, the pastry roll cutter of this invention is not to be thought of as limited to the exact embodiments set forth.
The claims defining the invention are as follows:

1. A roll cutter comprising a body portion including opposed spaced-apart side wall portions connected by a top wall and having means for rotatably journaling at least three cutter discs of like diameter for selective engagement of one, two or three of said discs with a sheet of material to be cut, said cutter discs being journaled for rotation on planes normal to at least two longitudinally spaced-apart parallel axes, one of said discs being journaled for rotation on a plane normal to one axis and two other of said discs being journaled for rotation on a plane normal to a second axis, each one of said two other discs being positioned laterally spaced-apart on one side of the plane of rotation of said one disc, wherein selective engagement of the discs with material to be cut selectively enables trimming the material, cutting the material into relatively wide strips or into relatively narrow strips.

2. A roll cutter according to claim 1, in which said cutter discs are fixed relative to their respective shafts.

3. A roll cutter according to claim 1 or claim 2, in which said journaling means includes shaft receiving means for rotatably receiving said shafts relative to said side wall portions.

4. A roll cutter according to any one of claims 1 to 3, in which the elements comprising said pastry roll cutter are integrally formed as a unitary molded member for separation and assembly of the several elements.
comprising said pastry roll cutter.

5. A roll cutter according to any one of claims 1 to 4, in which said at least two shafts are on a generally common plane and are generally horizontally disposed relative to a support surface for material to be cut when the cutter is oriented for engagement of the material by each of the three cutter discs.

6. A roll cutter according to any one of claims 1 to 5, in which said body portion includes means for maintaining said side wall portions in spaced apart relation.

7. A roll cutter according to claim 6, in which said means for maintaining said side wall portions in spaced apart relation includes interiorly disposed tab spacer means integral with said body portion and means integral with said shafts.

8. A roll cutter, substantially as herein described with reference to the accompanying drawings.


PHILLIPS ORMONDE AND FITZPATRICK
Attorneys for :-
DART INDUSTRIES INC.