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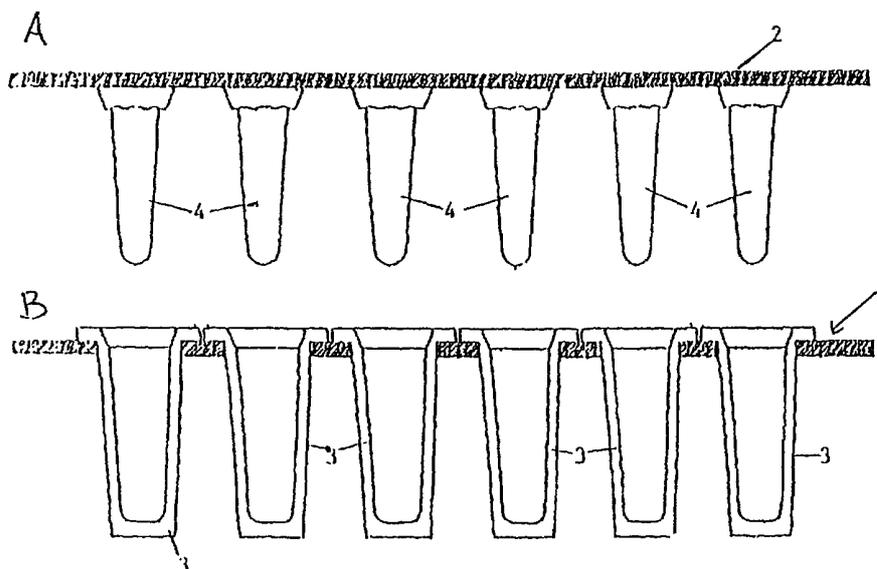
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[Continued on next page]

(54) Title: A PROCESS FOR MAKING A BAKED CUP SHAPED FOOD PRODUCT



(57) Abstract: A process for manufacturing a food product, a food product produced thereby and a plant for production of the food product. The food product may have a generally truncated cone shape which allows the product to be stood on its base. The baking mixture is inserted into mould cavities (3) of a tray (1) and fitting a second tray (2) with male formers (4) corresponding to the mould cavities (3) into the first tray (1) prior to baking. The trays may pass through the oven on an endless conveyor as part of a plant which includes a filling station, for filling the baked product with sweet or savoury fillings, and a freezing station. The food product is baked with a high liquid content to allow for the formation of a thin, tough impervious layer of gelatinised starch skin to form on the product surfaces.

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A PROCESS FOR MAKING A BAKED CUP SHAPED FOOD PRODUCT

5

The invention relates to a process for manufacturing a food product, a food product produced thereby and a plant for production of the food product. Particularly the invention relates to a food product, such as a generally truncated cone shaped product, pie base or the like which allows the product to be stood on its base.

At present a large number of processes are described in patent and other literature for producing food products and because of the number there are too many to separately detail.

One such process is that described in US patent specification No. 5626897. This process describes using a flat strip of dough which is wound to form a cone shaped product. A difficulty with this product is that it is not free standing and that a special coating is required to help seal the overlapping sections of the spirally wound dough to form a cavity in which a filling is placed.

An object of the invention is to provide a process and plant for manufacturing a food product which at least overcomes the disadvantages identified above and provides an end product which offers a consumer an alternative choice.

Further objects and advantages of the invention will become apparent from the following description which is given by way of example.

- 5 According to a first aspect of the invention there is provided a process for producing a food product, the process including the steps of:
- mixing ingredients as herein described to form a consistent mix;
 - placing the mix into cavities of a tray;
 - fitting to the tray a lid incorporating male formers or members adapted to form
 - 10 with the cavities in the tray mould cavities of the same size and shape as the end products;
 - placing the filled and capped tray in an oven for a predetermined time at a preset temperature to thereby par-bake or fully bake the mix to seal and create an impervious surface to each end product;
 - 15 removing the tray from the oven;
 - separating the tray and lid;
 - removing the end products from the mould cavities for use as a food product or for further processing.

- 20 The end products are cooled prior to filling.

The end product produced has a low fat content.

- The mix can be placed into the cavities of the tray by a depositor situated above a
- 25 conveyor on which a series of the trays are moved. The cavities of the tray(s) are filled successively.

The process can further include steps of pre-cooking appropriate savoury and/or sweet fillings which are inserted automatically into each cavity in the end product.

5 The filled end product can then be frozen in a blast freezer ready for packaging and storage in a freezer before transportation for use.

The cavities in the trays and the male members on the lids can be shaped to form a generally truncated cone shaped end product or a pie base shaped end product as well as other shapes all of which have a base which allows them to stand on a surface.

According to a second aspect of the invention there is provided a process for producing a food product, the process including the steps of:

- 15 mixing ingredients as herein described to form a consistent mix;
- placing the mix into cavities of a tray;
- placing into each cavity of the tray a pre-prepared filling;
- fitting to the tray a lid incorporating formers or members adapted to close the cavities and force the mix to enclose/cover the filling;
- 20 placing the filled and capped tray in an oven for a predetermined time at a preset temperature to thereby parbake or fully bake the mix to seal its outer surface to create an impervious skin to each food product;
- removing the tray from the oven;
- separating the tray and lid; and
- 25 removing the end product from the cavities in the mould for use in further processing.

The end product being baked with a high liquid content such as water or milk gives

5 an opportunity for a thin, tough impervious layer of gelatinized starch skin to form on the end product surfaces.

The end product being both yeasted and chemically leavened will create pressure against the mould, again early in baking, to help the build up of the impervious shell
10 layer.

According to a third aspect of the invention there is provided a plant for producing a food product, the plant including:-

a mixing station at which ingredients of a particular food product are mixed;
15 connecting means from the hopper to a depositor positioned over an endless conveyer incorporating a plurality of mould trays;
a second endless conveyer with mould lids positioned to locate immediately above the endless conveyer;
a baking chamber at an output end of which is a cooling region and transfer
20 region and through which the endless conveyors pass;
at the cooling and transfer region the baked end products are removed from the moulds for transfer to either a blast freezer or to a topping station followed by the option of a topping station and then to a blast freezer after which the end products are moved to a packing or storage facility.

25

The transfer of the mix from the mixing station to the depositor may be via a pumping mechanism.

The end products may be removed from the moulds by suction at the transfer

5 station.

The filling station may include an additional topping station.

According to a fourth aspect of the invention there is provided a food product produced from the process or plant as hereinbefore defined which after formation or
10 production has liquid holding capacity.

Particular examples of the invention will now be described with reference to the accompanying drawings in which:

- Figure 1 shows a sectional front view of a tray and corresponding lid
15 shown spaced apart;
- Figure 2 shows a sectional side view of the tray and lid shown in Figure 1;
- Figure 3 shows a similar view to that in Figure 1 with the lid situated on the tray;
- Figure 4 shows a view similar to Figure 2 with the lid on the tray;
- 20 Figure 5 shows on an enlarged scale a section of the lid at position A on Figure 1;
- Figure 6 shows in detail on an enlarged scale a section of the tray indicated at position B in Figure 1;
- Figure 7 shows a detailed view of the tray and lid shown in Figures 5 and 6
25 coming or being moved together;
- Figure 8 shows the lid and tray shown in Figures 5 to 7 assembled together;
- Figure 9 shows a perspective view of a food product produced by the tray and lid combination shown in Figures 1 to 7;

- 5 Figure 10 shows a side view of the food product shown in Figure 9;
- Figure 11 shows a view from below of the truncated cone shaped food
 product shown in Figures 9 and 10;
- Figure 12 shows a plan view of the food product shown in Figures 9 to 11;
- Figure 13 shows a perspective view of a pie base food product;
- 10 Figure 14 shows a side view of the pie base shown in Figure 13;
- Figure 15 shows a plan view of the pie food product shown in Figures 13 and
 14;
- Figure 16 shows a bottom view of the pie base food product shown in Figures
 13 to 15;
- 15 Figure 17 shows a plan view of a plant for use in production of an end product
 according to the invention;
- Figure 18 shows a side view of the plant shown in Figure 17;
- Figure 19 shows a plan view of a second example of plant for use in the
 production of an end product according to the invention; and
- 20 Figure 20 shows a side view of the plant shown in Figure 19.

The ingredients for a mix for producing the generally truncated cone shaped product
are selected to suit and the total weight of flour must be the same as that of the
liquid at about 30°C and if water is included in the recipe then the approximate
25 water temperature should be 27° - 30°C.

The process steps should follow the directions listed below or the cones will not
release from the trays.

5 (a) Mixing the ingredients.

Add instant yeast to bowl just before mixing.

1. Mix dry ingredients in bowl for 1 minute on speed 1 or low.
2. Always use a paddle to mix ingredients.
3. Water at appropriate temperature. Add oil to water.
- 10 4. Pour combined water and oil to bowl.
5. Mix for 3 minutes on speed 1 or low.
6. Stop and check to make sure there is no residue flour at bottom of bowl. If there is, use a scraper to mix in.
7. Mix for 1 minute on speed high.
- 15 8. Mix must be used within 60 minutes and no resting time is required.

(b) Filling trays

9. Pour or pump mix into holding tank then to depositor.
10. Deposit mix into base of tray.
11. Place lid on base and place in oven.

20

(c) Bake for designated time.

(d) Product removal

12. Cones to be cooled completely to ambient temperature.

(e) Optional filling

- 25 13. Fill cone automatically with appropriate savoury or sweet fillings.

14. Transfer to a blast freezer.

The above process steps can be automated.

5 **DEPOSITOR****Control**

10 With control there is no excess mix in moulds and therefore no dried mix debris in the moulds because of the characteristics of the mix which seals its outer surface leaving no debris in the moulds. The mix as it rises in the mould forms an uneven upper surface to the product. This can give a scalloped appearance to the upper edge.

MIX

15 The ingredient list depends on the eventual product required as does mixing and baking procedures.

Do not change mixing times, speeds or replace paddle.

20 **BAKING PROCEDURE**

The combination of ingredients, and mixing method has eliminated the need for proving.

Mix to be used within an hour. Do not use any which has been resting for longer as
25 pulling and stretching begins and ultimately the cone may tear when baked. A small split can occur which is hardly noticeable and then when the cone is filled, problems will arise due to the extra weight contained within the cone.

Mix is pumped into holding tanks for depositing into trays.

5 Mix cannot be stored and remixed or added to other mix. Mixing must be accurate to alleviate the potential problem of waste. Flour ingredient proportion to water is critical.

Each mould is nearly filled before the lids are placed on their upper surface. This
10 enables quality control.

The removed cones are ideally placed on an open mesh conveyor to create quick cooling of the cones.

15 The quicker the cone cools the better the product.

Do not fill cones until totally cool or place empty cones in freezer until cool. The cone becomes stable when cool.

20 Do not leave unprotected filled or empty cones in freezer for more than 8 hours maximum or dehydration and contamination of the cone may occur. There is a long term effect which is splitting which can occur. The cone can be packed either stood vertically when frozen or laid side by side so as to prevent the circular shape becoming oval. They can be stacked inside each other like an ice-cream cone.

25

Filling

Fill the cone to the level of the lowest scallop edge and do not fill the cone until it has been cooled.

5 **Appearance**

Smooth shiny cavity wall and smooth even exterior wall.

Taste

Savoury cone is moorish and nutty, and there is no after taste which indicates high fat, salt or sugar.

10 **Dessert or sweet cone****Feeling**

Firm so it does not fall out of cone when inverted.

15 **Cone and filling specifications**

The following Table shows the ingredient list for a number of example products according to the invention.

	STANDARD	WHOLEMEAL	SWEET	FRUIT
Maximus flour	x	x	x	x
Harvest wholemeal	-	-	-	-
Baking powder	x	x	x	x
Soya flour	x	x	-	-
Dried yeast	x	x	x	x
Cereform deluxe royal	x	x	x	x
Milk powder	x	x	x	x
Vegetable oil	x	x	x	x
Salt	x	x	x	x
Sugar	-	-	x	x
Mixed spice	-	-	-	x
Soy & linseed	-	-	-	-
Parmesan cheese	-	-	-	-
Tomato puree	-	-	-	-
Fruit	-	-	-	x
Water +/-	x	x	x	x

Mould Trays

- 20 In Figures 1 to 8 is shown an example of tray mould 1 and associated lid 2 which are designed to create a plurality of truncated cone shaped food products.

5 The tray mould 1 incorporates a plurality of shaped cavities 3 into which male members 4 of the lid 2 fit. The space 5 between the outside of each male member 4 and its associated cavity 3 forms the mould for the product.

Figures 9 to 16 show the shape of examples of end product which can be produced.

10

Plant

In Figures 17 and 18 is shown a plant for producing the food products. The plant in this example is a modified tunnel oven designed to create a continuous throughput of about 5,000 units per hour.

15

The plant includes a mixing station generally indicated by arrow 6. The mixing station 6 is linked to a depositor 7. The flow of mixed ingredients from the mixing station 6 to the depositor 7 may be by way of a pump (not shown).

20 The depositor 7 is situated above an inlet end C of the oven above an endless conveyer 8 on which a plurality of mould trays are mounted. The mould trays move in the direction of the arrow 9 shown. The mould trays consist of a plurality of cavities the shape of which is similar to the shape of the cavities shown in Figures 1 and 2.

25

The endless conveyer 8 passes through a baking chamber generally indicated by arrow 10.

Also passing through the baking chamber 10 is a second endless conveyer 11
30 carrying mould lids which at the inlet end C rest on top of the mould trays while they

5 pass through the baking chamber 10 to an outlet end generally indicated by 12.

At the outlet end 12 of the baking chamber there is situated a cooling chamber and transfer region 13

10 In the cooling chamber and transfer region 13 the end products are cooled as quickly as possible.

The end products are removed from the cavities by any suitable means such as a suction mechanism which assists in transfer of the end products from the cavities to
15 an output endless conveyer 14 which moves the end products through the cooling chamber. The rate of movement of the conveyer 14 can be adjusted to increase or decrease the dwell time of the end products. Increasing cooling before the cooled product is either passed to a filling and/or topping station or direct to a blast freezer if preferred.

20

At a filling station 15 the cones may be filled with appropriate ingredients and these may be pre-prepared. The ingredients may be topped at a topping station 16 if a topping is appropriate. The end products then pass to a blast freezer 17.

25 After removal of the end products from the blast freezer 17 they may be transferred automatically by a transverse conveyer system 18 to a packing machine 19 from which cartoned products are transferred for shipment or storage.

In the second example of plant shown in Figures 19 and 20 the plant incorporates

5 similar parts to the unit shown in Figures 17 and 18 although its capacity is increased to 10,000 units per hour.

In this instance the dwell time in the cooling chamber 13 and blast freezer 17 are increased by increasing the length of the output conveyer 14.

10

In both examples of plant is shown a logo applicator 20. The logo applicator 20 can be used to apply to the end product a food quality dye in the shape of an appropriate emblem motif or logo to suit particular customer's requirements.

15 The plants as shown can be substantially automated.

Thus by this invention there is provided a process and plant for producing a food product and a food product produced thereby.

20 Particular examples of the invention have been described and it is envisaged that improvements and modifications can take place without departing from the scope of the attached claims.

25

5 Claims

1. A process for producing a food product, the process including the steps of:

mixing ingredients as herein described to form a consistent mix;

placing the mix into cavities of a tray;

10 fitting to the tray a lid incorporating male formers or members adapted to form with the cavities in the tray mould cavities of the same size and shape as the end products;

placing the filled and capped tray in an oven for a predetermined time at a preset temperature to thereby par-bake or fully bake the mix to seal and create
15 an impervious surface to each end product;

removing the tray from the oven;

separating the tray and lid;

removing the end products from the mould cavities for use as a food product or for further processing.

20

2. A process for producing a food product, the process including the steps of:

mixing ingredients as herein described to form a consistent mix;

placing the mix into cavities of a tray;

placing into each cavity of the tray a pre-prepared filling;

25 fitting to the tray a lid incorporating formers or members adapted to close the cavities and force the mix to enclose/cover the filling;

placing the filled and capped tray in an oven for a predetermined time at a preset temperature to thereby parbake or fully bake the mix to seal its outer surface to create an impervious skin to each food product;

- 5 removing the tray from the oven;
separating the tray and lid; and
removing the end product from the cavities in the mould for use in further
processing.
- 10 3. A process as claimed in claim 1 wherein the end products are cooled prior to
filling.
4. A process as claimed in any one of the preceding claims wherein the end
product produced has a low fat content.
- 15 5. A process as claimed in any one of the preceding claims wherein the mix is
placed into the cavities of the tray by a depositor situated above a conveyor
on which a series of the trays are moved.
- 20 6. A process as claimed in claim 5 wherein the cavities of the tray(s) is/are filled
successively.
7. A process as claimed in any one of the preceding claims including the further
step of pre-cooking appropriate savoury and/or sweet fillings which are
25 inserted automatically into each cavity in the end product which is then frozen
in a blast freezer ready for packaging and storage in a freezer before
transportation or use.

- 5 8. A process as claimed in any one of the preceding claims wherein the cavities in the trays and the male members on the lids can be shaped to form a generally truncated cone shaped end product or a pie base shaped end product as well as other shapes all of which have a base which allows them to stand on a surface.
- 10 9. A process as claimed in any one of the preceding claims wherein the end product is baked with a high liquid content such as water or milk to form a thin, tough impervious layer of gelatinized starch skin on the end product surfaces.
- 15 10. A process as claimed in claim 1 or claim 2 and substantially as herein described with reference to the accompanying drawings.
- 20 11. A plant for producing a food product, the plant including:-
a mixing station at which ingredients of a particular food product are mixed;
connecting means from the hopper to a depositor positioned over an endless conveyer incorporating a plurality of mould trays;
a second endless conveyer with mould lids positioned to locate immediately above the endless conveyer;
25 a baking chamber at an output end of which is a cooling region and transfer region and through which the endless conveyors pass;
at the cooling and transfer region the baked end products are removed from the moulds for transfer to either a blast freezer or to a filling station and/or topping station and then to a blast freezer after which the end products are

- 5 moved to a packing or storage facility;
12. A plant as claimed in claim 11 wherein the transfer of the mix from the mixing station to the depositor may be via a pumping mechanism.
- 10 13. A plant as claimed in claim 11 or claim 12 wherein the end products are removed from the moulds by suction at the transfer station.
14. A plant as claimed in any one of claims 11 to 13 wherein the filling station includes a topping station.
- 15
15. A plant as claimed in claim 11 and substantially as herein described with reference to the accompanying drawings.
16. A food product produced from the process of any one of claims 1 to 10 or in
20 a plant as claimed in any one of claims 11 to 15.
17. A food product as claimed in claim 16 which is par baked and filled and is re-heated either in an oven before use or if fully baked it is re-heated in a microwave.
- 25
18. A food product as claimed in claim 16 wherein packaging is chosen so that the end product can be microwaved to form a crisp food product.

- 5 19. A food product substantially as hereinbefore described with reference to the examples.

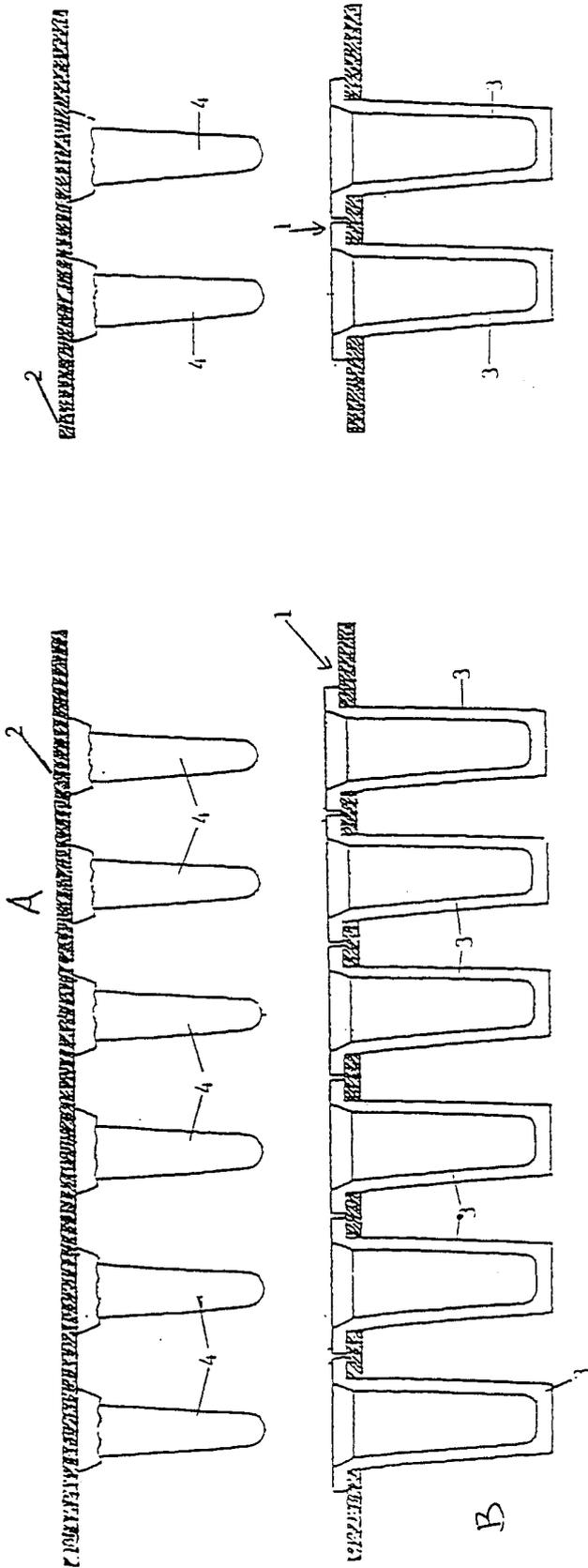


FIGURE 1

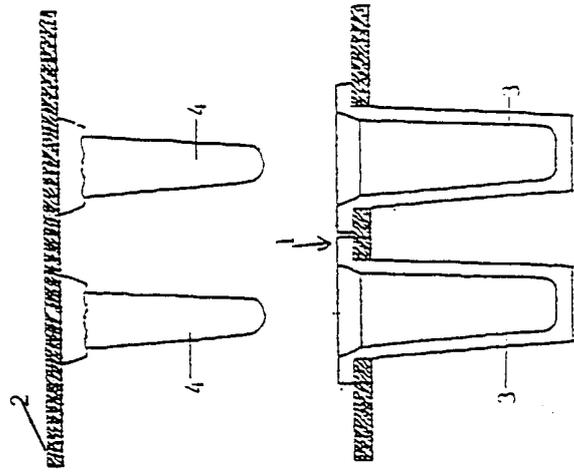


FIGURE 2

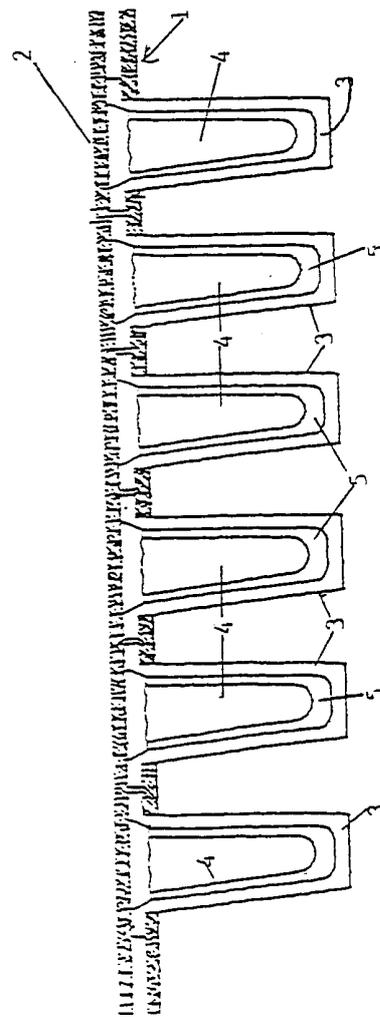


FIGURE 3

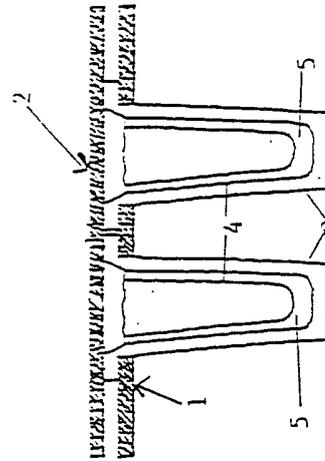


FIGURE 4

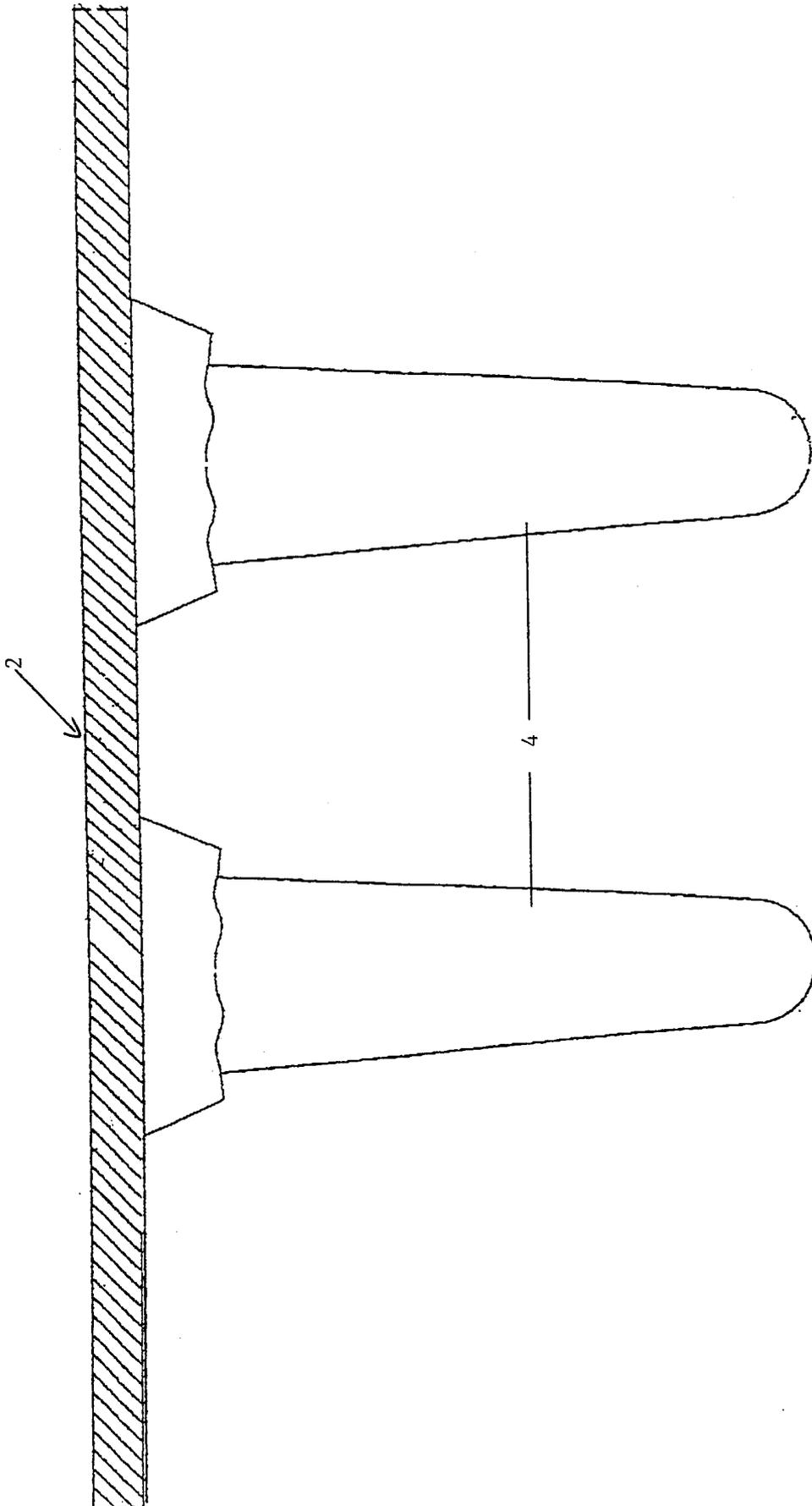


FIGURE 5

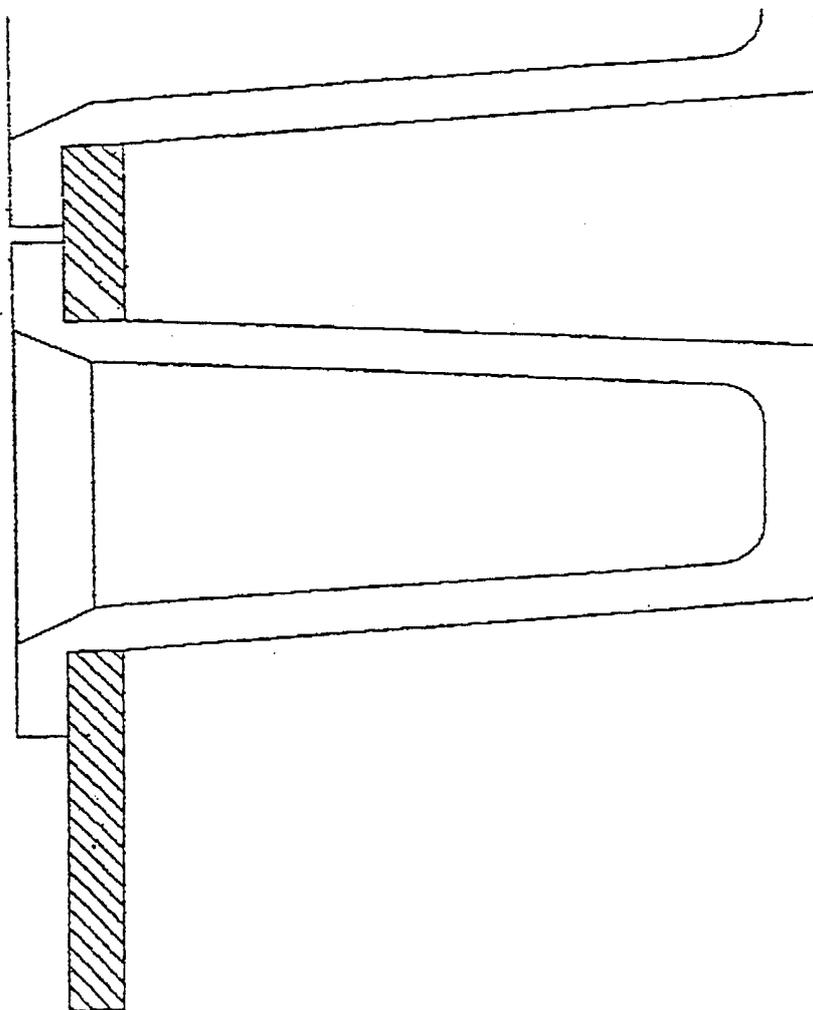


FIGURE 6

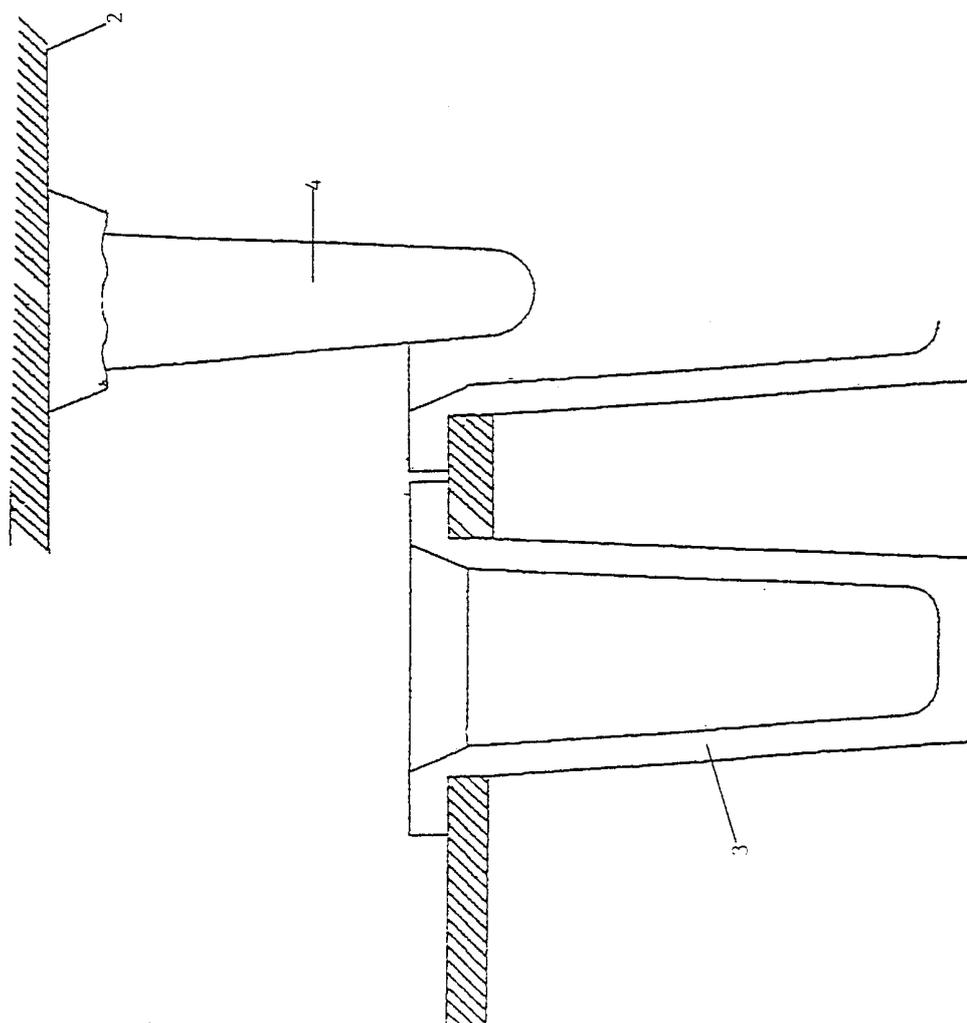


FIGURE 7

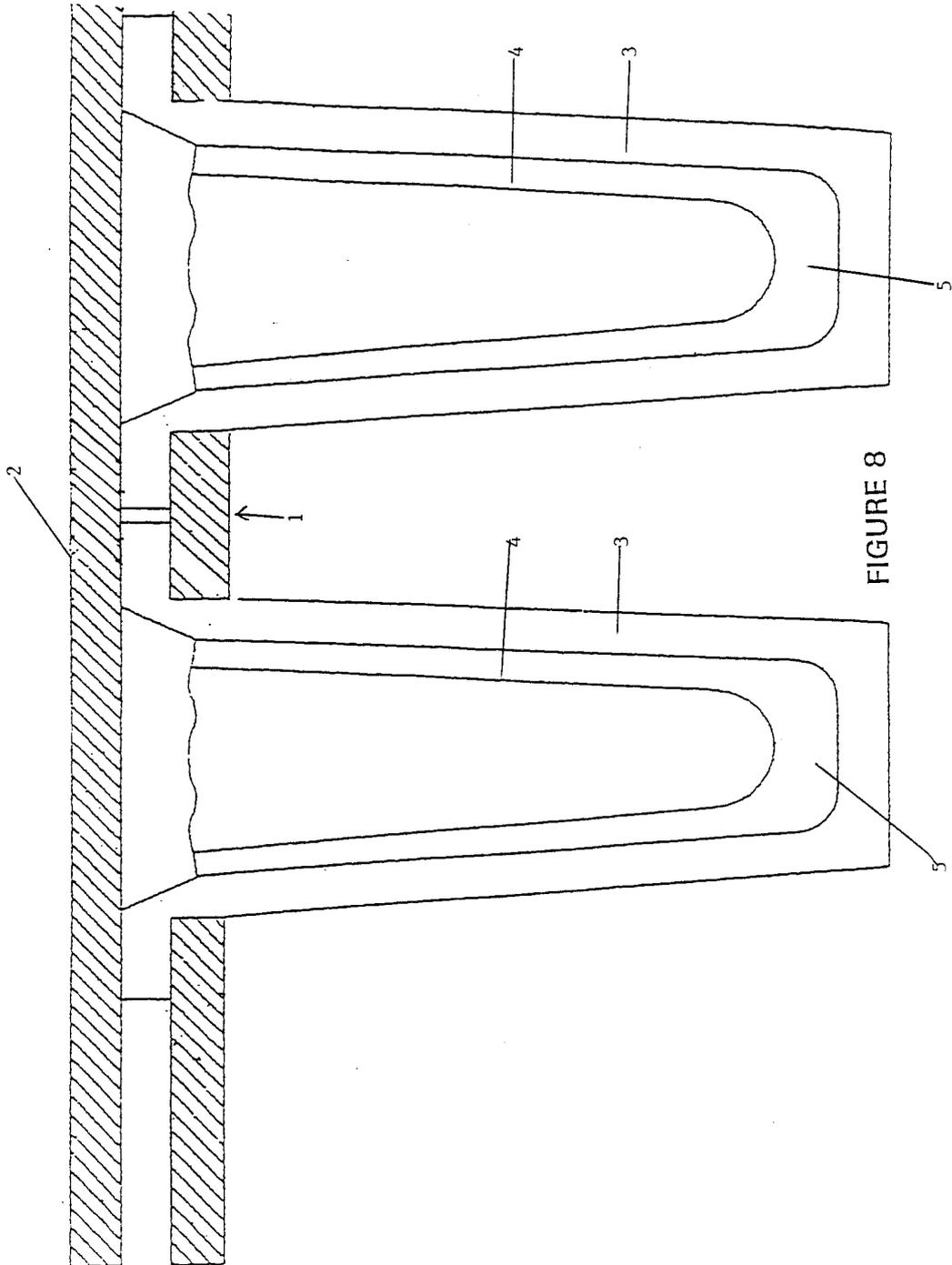


FIGURE 8

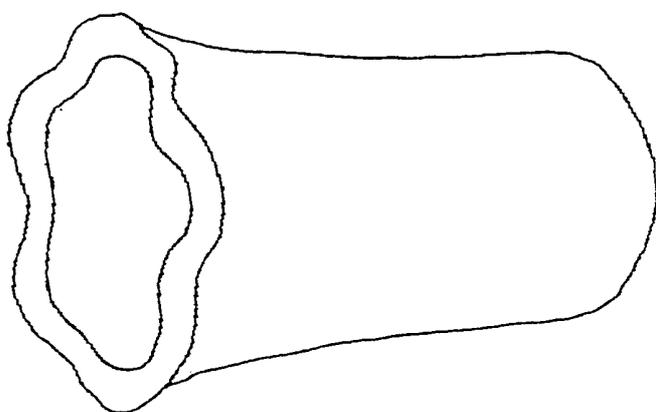


FIGURE 9

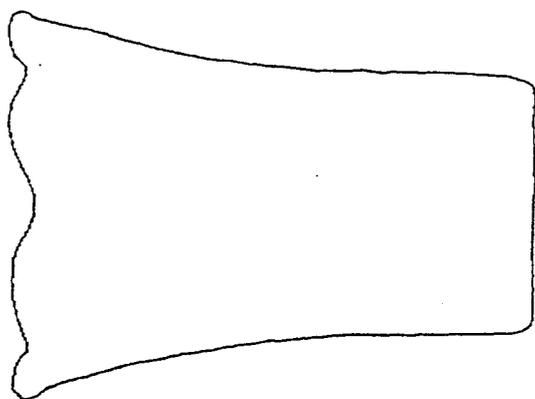


FIGURE 10

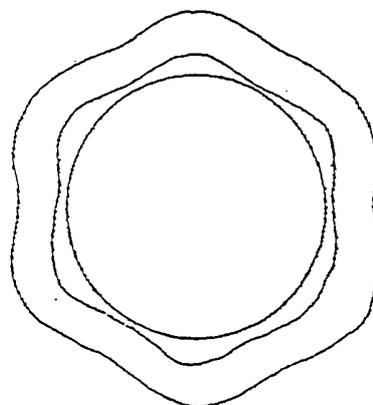


FIGURE 11

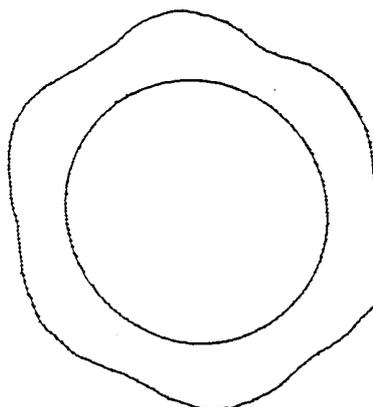


FIGURE 12

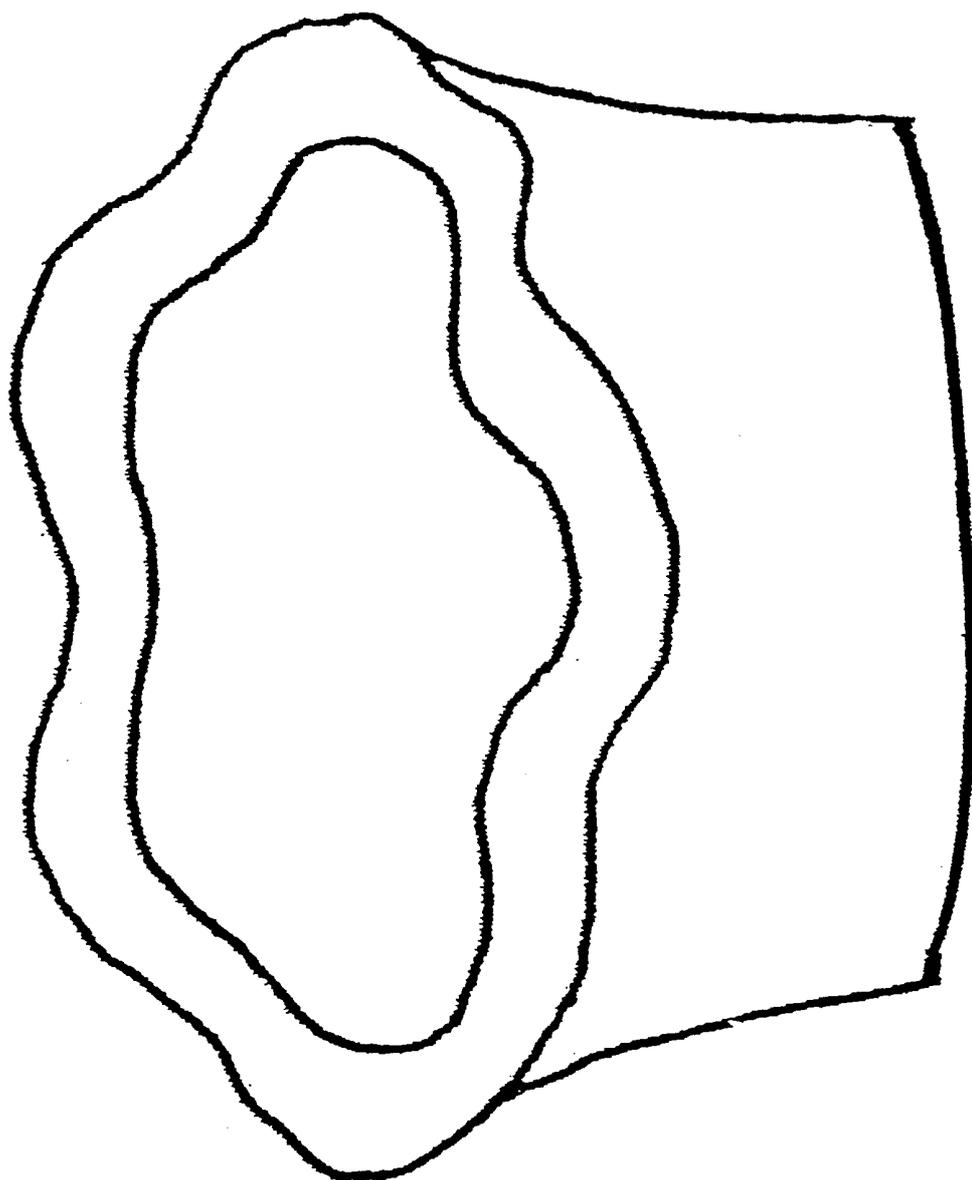


FIGURE 13

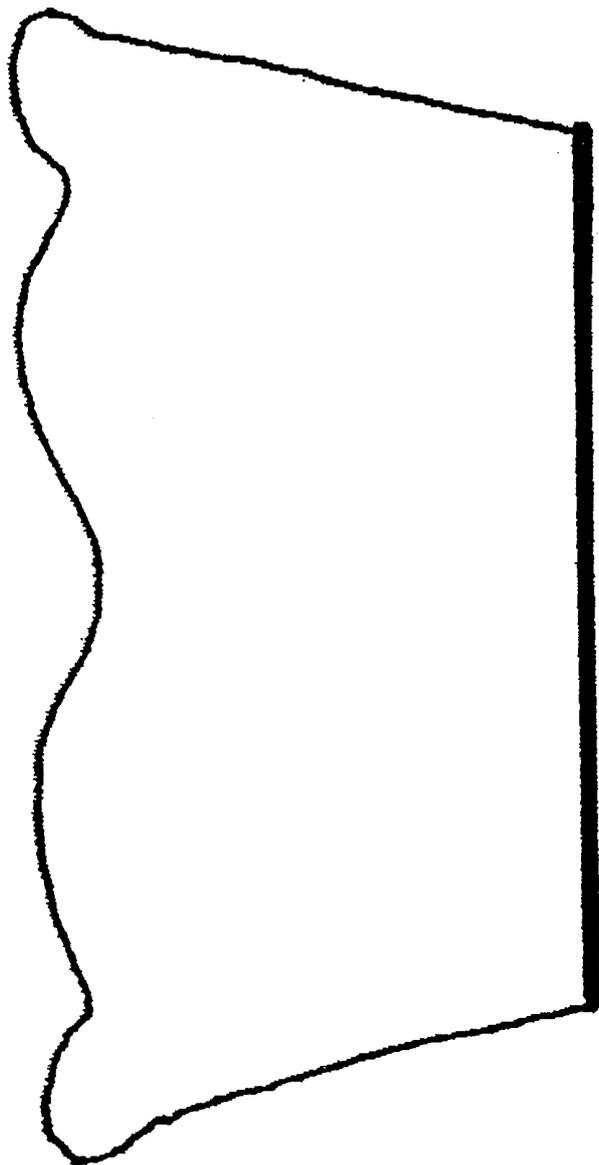


FIGURE 14

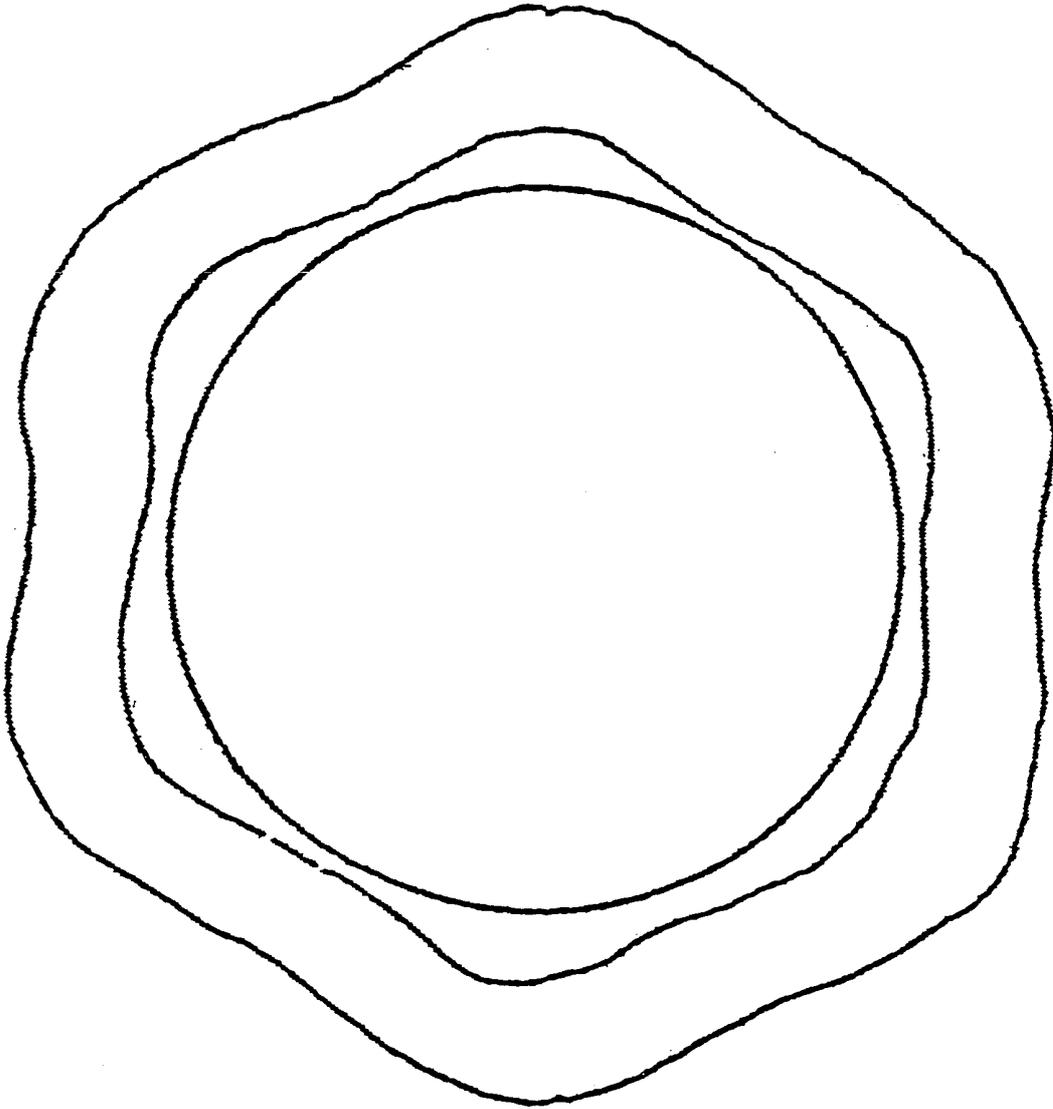


FIGURE 15

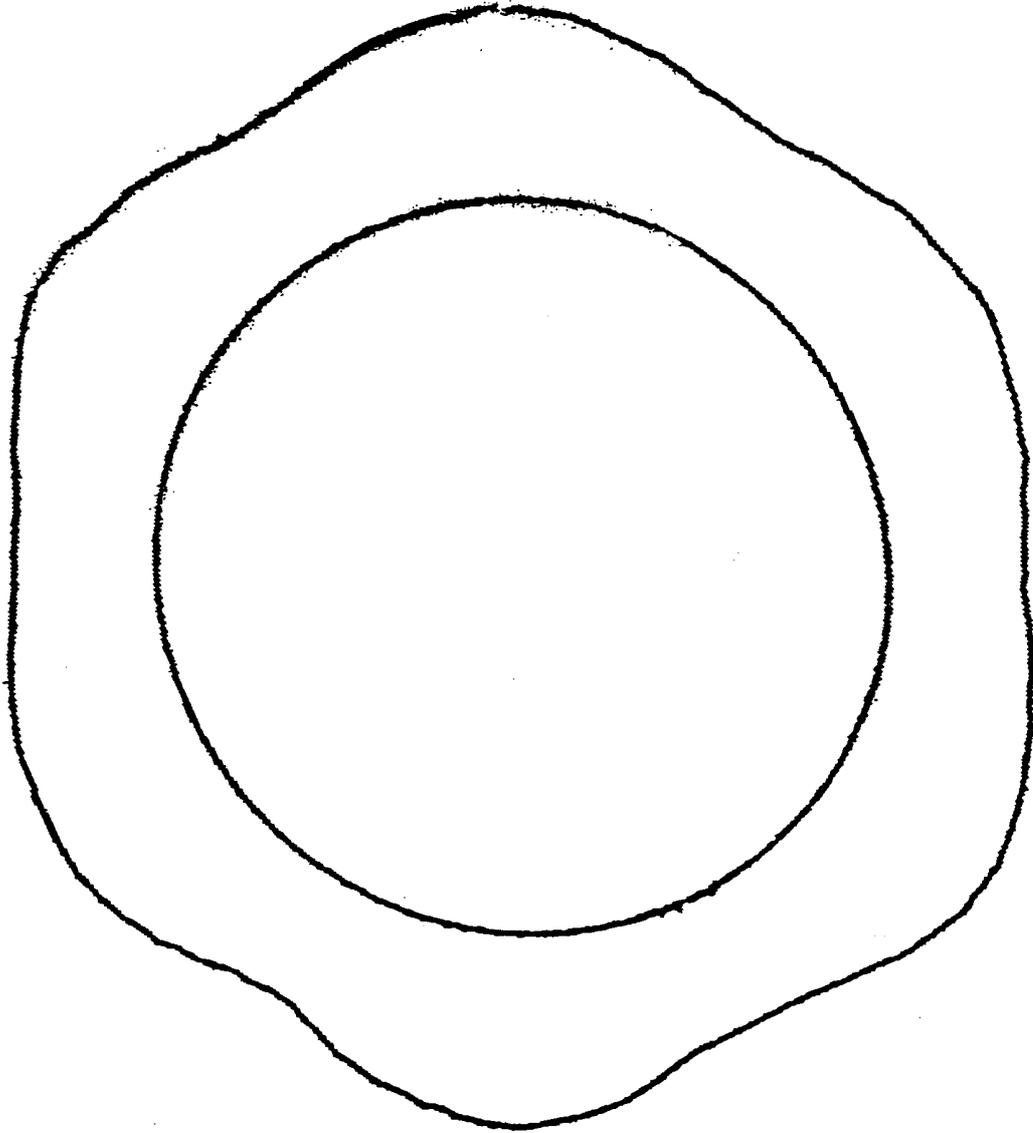


FIGURE 16

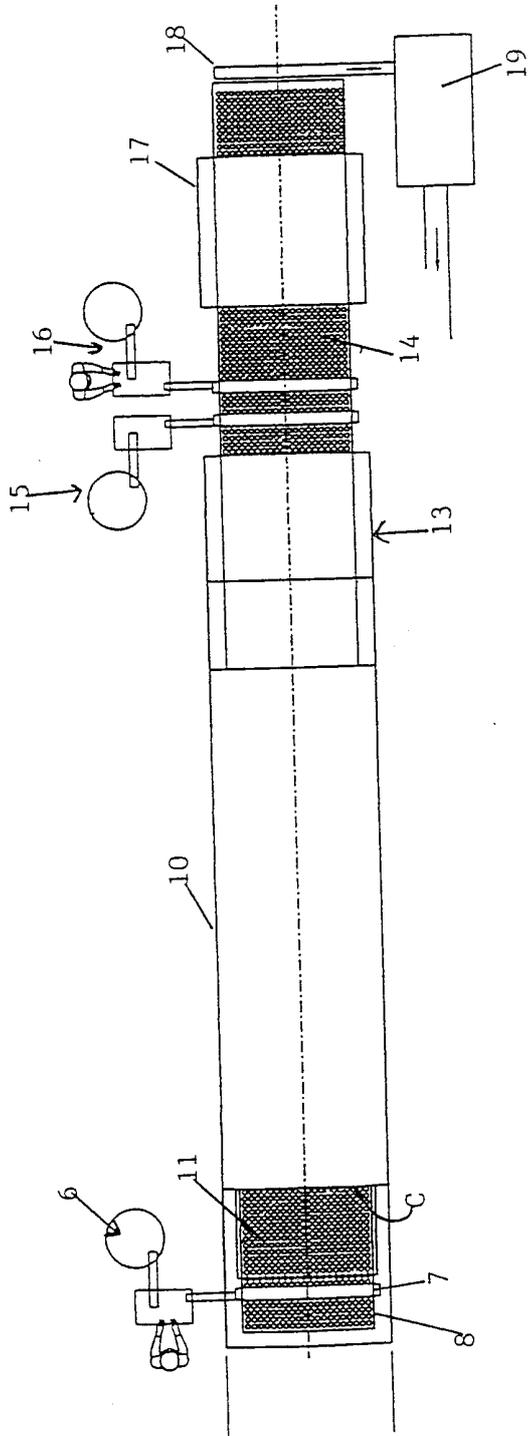


FIGURE 17

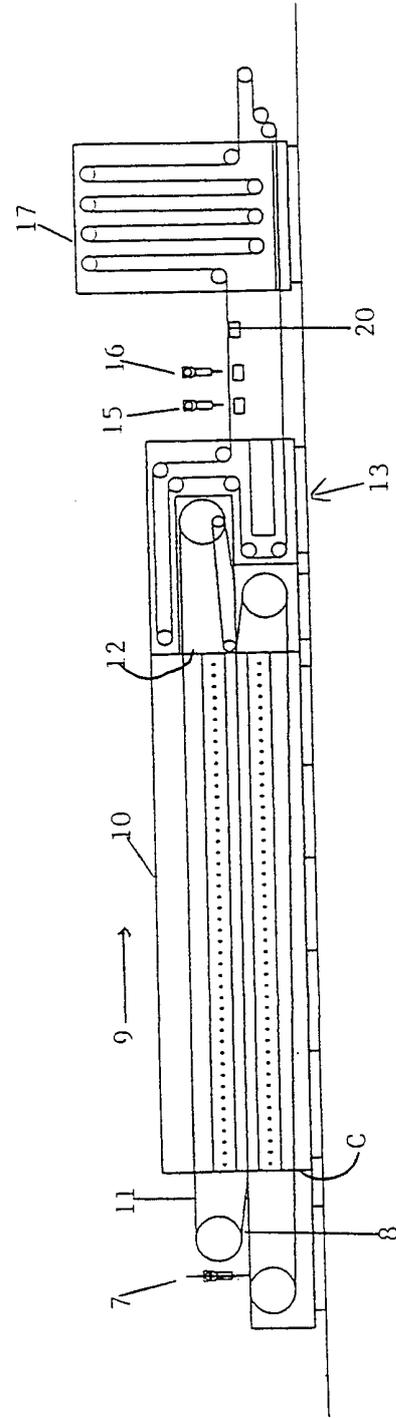


FIGURE 18

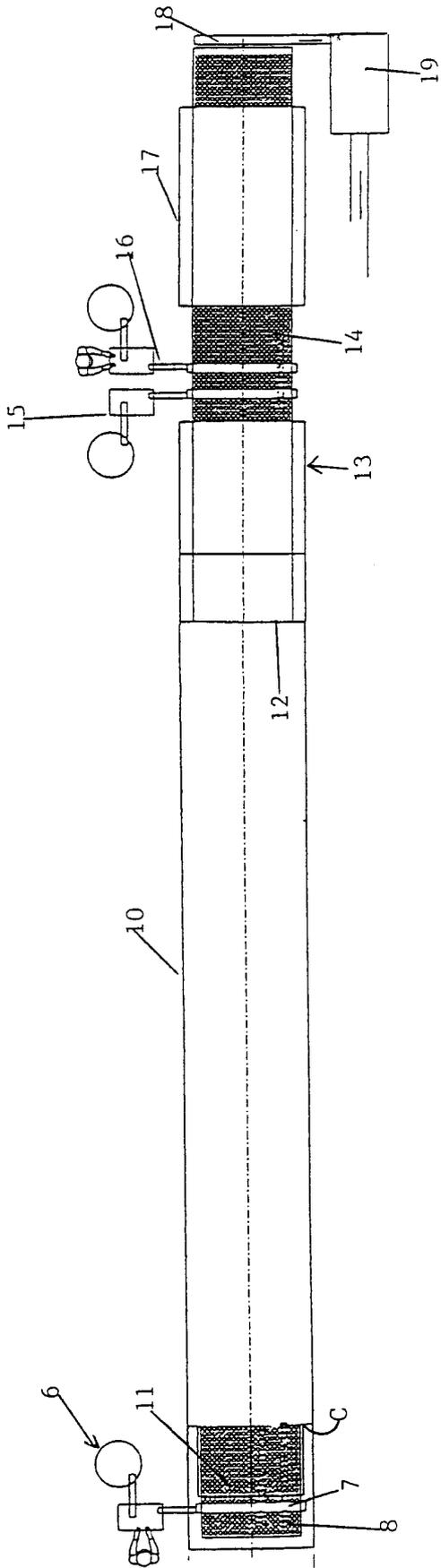


Figure 19

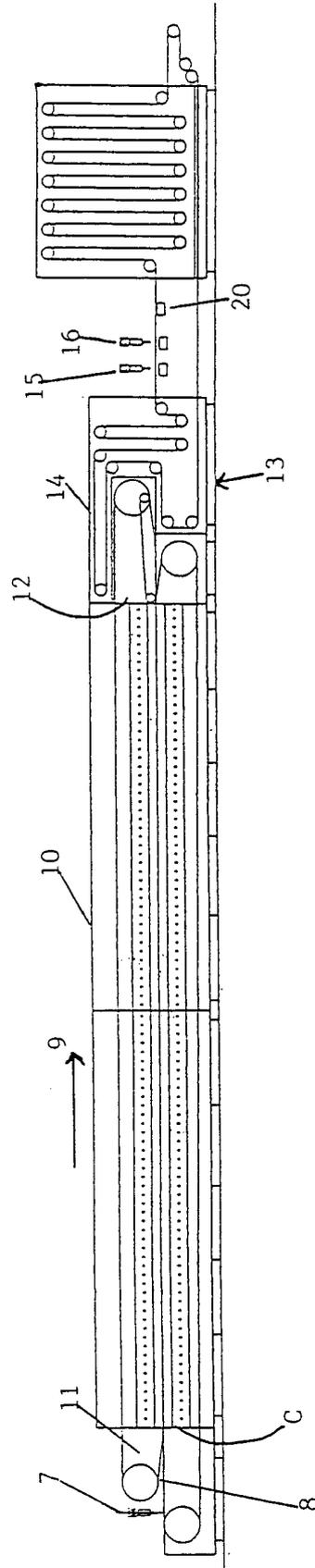


Figure 20

INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ00/00149

A. CLASSIFICATION OF SUBJECT MATTER		
Int. Cl. ⁷ : A21B 5/02, A21D 10/00, A23P 1/10		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) A21B 1/- 5/- 7/-, A21C, A21D, A23P 1/10		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched US CLASSES: 426/138, 426/139, 426/140		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WPAT, USCLASS		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 4 931 301 A (GUISEPPE), 5 June 1990, whole of document whole of document	1-9, 11-14, 16-18 19
X A	EP 896 796 A (AHERN <i>et al</i>), 17 February 1999 whole of document whole of document	1-9, 11-14, 16-18 19
X	Derwent Abstract Accession Number 75-48959W, SU 440 132 (DZHUGAS) 4 February 1975 abstract	1-9, 11-14, 16-18
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
* Special categories of cited documents:		
"A"	document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E"	earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search 28 November 2000		Date of mailing of the international search report 4 - DEC 2000
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929		Authorized officer GARETH COOK Telephone No : (02) 6283 2541

INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ00/00149

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 352 111 A (SELBAK) 4 October 1994 whole of document	1-6
A	US 5 711 908 A (TIEFENBACHER <i>et al</i>) 27 January 1998 whole of document	1-19
A	US 5 376 320 A (TIEFENBACHER <i>et al</i>) 27 December 1994 whole of document	1-19

INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ00/00149

Box I Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos :
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos :
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos :
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box II Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See additional sheet.

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.

Supplemental Box

(To be used when the space in any of Boxes I to VIII is not sufficient)

Continuation of Box No II: Observations where unity of invention is lacking.

The international search report has been drawn up in respect of the entire international application but the International Searching Authority is of the opinion that the application does not appear to comply with the requirements of unity of invention as set forth in the PCT regulations (Article 34(3), Rule 68(1) PCT).

The separate groups of invention are:

1. Claims 1 to 10 (all completely) and claims 16 to 18 (all partially) are directed towards a process for producing a food product by moulding a baking mix between two trays, the lower tray with mould cavities and the upper tray with corresponding male formers then baking.
2. Claims 11 to 15 (all completely) and claims 16 to 18 (all partially) are directed towards a plant for producing a food product, the plant including a mixing station for mixing ingredients, moulding trays with mould cavities and male formers for moulding the mixture before baking in the trays, a baking chamber, and either or both a filling station and/or a blast freezer.

The common features between the two groups of claims are the use of mould trays with mould cavities and male formers. These features are disclosed in many documents, examples of which are the following documents which have already been cited against the application:

US 4 931 301

US 5 352 111

SU 440 132

Accordingly the international application does not relate to one invention or to a single inventive concept, *a priori*.

As a result, omnibus claim 19 must also be considered to not relate to one invention or to a single inventive concept.

INTERNATIONAL SEARCH REPORT
 Information on patent family members

International application No.
PCT/NZ00/00149

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member					
US	5 352 111	AU	91762/91	CA	2 099 598	EP	576 434
		FI	932 774	NO	932 206	WO	92/10938
		US	5 425 527	AU	72148/94	WO	95/00025
US	5 711 908	AU	10578/95	CA	2 178 335	EP	731 649
		HR	940 973	WO	95/15698		
US	5 376 320	AU	72155/91	CA	2 075 384	EP	513 106
		HU	67243	WO	91/12186		

END OF ANNEX