Conventional pita bread members are produced by flat pressing of a lump of pita bread dough, whereby they end up with an almost circular shape. By the baking the edge is closed, while the area inside the edge separates. For opening and filling the pita bread a segment of the bread is cut off, this giving rise to much waste for a large opening and less waste for an opening, which is shorter, but then also difficult to use. According to the invention the bread members (6) are shaped and baked with a flat oval contour, such that later on when cut across their middle portion they will form two uniform halves (18), each constituting an opened pita bread that has been cut to show a long opening (20) entirely without any waste. In practice the dough members (6) cannot be shaped by flat pressing, but they can be successfully produced by orthogonal rolling of the dough into a flat dough plate (4), from which the bread members are produced by stamping.
DESIGNATIONS OF “DE”

Until further notice, any designation of “DE” in any international application whose international filing date is prior to October 3, 1990, shall have effect in the territory of the Federal Republic of Germany with the exception of the territory of the former German Democratic Republic.

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A pita bread member and a method of producing it.

The present invention relates to the production of so-called pita breads. These breads are characteristic in appearing as flat bread members having a coherently baked edge area, but otherwise being internally separated, this during the baking resulting in the bread members adopting an almost spherical shape due the interior steam pressure; however, the bread members collapse when they cool off afterwards. The members to be baked are normally manufactured from dough lumps, which are pressed into a circular disk shape, and they are produced in specialized factories in very large numbers, e.g. some one million bread members per day.

At the places of use of the breads, typically the so-called fast food sales units, the pita bread members are treated in the manner that a segment of the circular members is cut off, whereby the remainder of the member forms a bread pocket which is fillable with many different kinds of foodstuff. By this cutting off an amount of bread material will be wasted, and in view of the large production figures this will amount to a really considerable waste. The waste can be reduced by cutting off only a small segment, but in that case the accessible bread pocket opening will be so short that the pocket is difficult to fill reasonably rapidly. A large part of the produced bread members are filled industrially, whereafter they are frozen down, such that they are thereafter ready to be distributed in a conventional freezing chain system; thus, at the places of use they may be prepared merely by being heated from their frozen condition, optionally with an addition of additional, fresh filling material. However, the bread members may of cause also be distributed in a frozen and non-filled condition.
Thus, the industry concerned is a mass producing industry, in which it is very important that the bread members can be produced and handled as easily as possible and with a spillage as low as possible, and it is to be noted that these considerations have so far been concentrated about the size of the cut off segment portion. It should be mentioned that it is also known to cut the closed bread members along an arched outer edge area, whereby at the place of use it is possible to avoid spillage of bread material, but such a cutting is difficult and requires extra time.

It is the purpose of the invention to provide a method of preparing pita bread members ready for use, whereby a kind of overall solution to the problems here considered is achieved, such that the breads may be prepared in an optimal manner, without special compromises being required. According to the invention this is achieved by producing the baked members with a superelliptical or so-called flat oval shape, of a width substantially corresponding to the width of traditional pita breads and a length of approximately the double thereof, the bread members being full-baked with this shape, such that by the baking they will be blown up over the entire area inside their peripheral edge, whereafter, when they are cool and flat, they are cut over at the middle so as to form two preferably uniform pita bread members, which, at the filling places, may be filled through the access opening produced by the said cutting. In other words, the piece which is cut off for providing the access opening of a single pita bread by itself constitutes a fully similar pita bread, whereby the "waste" is converted into a fully usable product. No material is removed by the simple cutting, and since the cutting takes places over a wide area a large access opening is provided, facilitating both a manual and automatic filling of the breads.
The cutting can be effected in a simple and rational manner by arranging the bread members in a pile, which can be cut as a whole in one operation, optionally with the use of a templet.

A pita bread member must be shaped with a smoothly rounded bottom. The traditional whole-round shape is achievable by a simple flat pressing of a lump of dough between two pressure tools, but it has not been found possible to produce the bread members according to the invention in this manner. These members, due to their elongated shape, would be well suited to be produced by a simple rolling out of a lump of dough, but even this method gives rise to problems, because tensions will be created in the flat members, which will then, during the baking, adopt unacceptable, pointed bottom shapes. It has been found, however, that a correct and stable shape is achievable by producing a plate of dough by orthogonal rolling thereof and a subsequent stamping out of the bread member or members therefrom. This will involve the use of a certain surplus of dough, but the dough plate material around the bread member or members is directly reusable, such that a waste is not bound to occur.

In the following the invention is explained in more detail with reference to the drawing, in which: Fig. 1 is a perspective view of a forming web for dough members for pita breads according to the invention,

Fig. 2 is a side view of a pile of such members,
and

Fig. 3 is a perspective view of a pita bread member according to the invention.

In Fig. 1 is shown a conveyor web 2, on which a dough plate 4 of pita dough has been laid out. The dough plate has been worked by rolling in both the longitudinal and the transverse direction and has thereafter been passed through a stamping station, in which dough
members 6 have been stamped out, while surplus dough 8 is removed. The stamped members 6 have a flat oval shape, i.e. with semicircular end portions 10 and intermediate straight side edges 12. The members are brought to be baked at a high temperature as by baking of conventional pita breads, whereby their free edge areas are rapidly baked so as to be coherent, while the remainder of the members will be 'blown up', separated at a middle plane. Nothing is done for holding together the opposed side portions along one or more transverse lines, i.e. the individual dough members are blown up as a whole. When the members are cooled afterwards they will collapse so as to then be substantially planar.

As shown in Fig. 2 the baked members 6 may be placed on each other in a pile 14, which will be easy to divide by cutting through a transverse middle plane 16, whereby to both sides of this plane pita bread members 18 as shown in Fig. 3 will be formed.

These bread members exhibit a widely traditional pita bread shape in that they appear as a bread pocket with side panels having a rounded bottom shape, while at the top there is provided an access opening 20, through which stuffing may be filled into the bread member. The access opening 20 will be created and be freely accessible immediately after the cutting of the members 6, insofar as care has been taken that each member 6 was blown up as a whole by the baking process, without the opposed side panels being coherent along the cutting line.

The pita bread or breads 18 thus provided, see Fig. 3, will be widely similar to conventional pita breads, but their bottom rounding will be upwardly extended in straight edge portions 12, which limit the upper opening 20, this opening thus being of maximum width and therewith being easily accessible for the filling in of the pita stuffing.
If desired the bread members 6 may be cut along a longitudinal middle line, whereby 'pita boats' will be provided, exhibiting an access opening that is particularly wide relative to the height of the bread member. Moreover, the single member 6 may be cut both lengthwise and crosswise, whereby four separate 'half boats' will be provided.
CLAIMS:

1. A pita bread member prepared with a coherent edge area, characterized in that it is has a superelliptical or flat oval shape with a length approximately the double of its width, preferably approximately 14.5 x 25 cm.

2. A pita bread having an opened edge area, characterized in that it appears as one half of a bread member according to claim 1, viz. after cutting thereof substantially along a line of symmetry.

3. A method of manufacturing a pita bread member according to claim 1, characterized in that from a pita dough there is provided a flat dough web, which is worked by rolling in different directions, whereafter the dough member or a larger number of such members is produced by stamping from said web and is transferred to a baking at a conventional, relatively high temperature.
INTERNATIONAL SEARCH REPORT

International Application No
PCT/DK 90/00243

I. CLASSIFICATION OF SUBJECT MATTER

According to International Patent Classification (IPC) or to both National Classification and IPC

IPC5: A 21 C 5/00

II. FIELDS SEARCHED

Classification System
IPC5

Classification Symbols
A 21 C

Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in Fields Searched

SE, DK, FI, NO classes as above

III. DOCUMENTS CONSIDERED TO BE RELEVANT

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<td>DE, B2, 2508079 (HAYASHI, TORAHIKO) 19 February 1981, see the whole document</td>
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IV. CERTIFICATION

Date of the Actual Completion of the International Search
19th November 1990

Date of Mailing of this International Search Report
1990-12-19

International Searching Authority
SWEDISH PATENT OFFICE

Signature of Authorized Officer
Agneta Änggård

Form PCT/ISA/210 (second sheet) (January 1995)
ANNEX TO THE INTERNATIONAL SEARCH REPORT
ON INTERNATIONAL PATENT APPLICATION NO. PCT/DK 90/00243

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