

Dec. 10, 1968

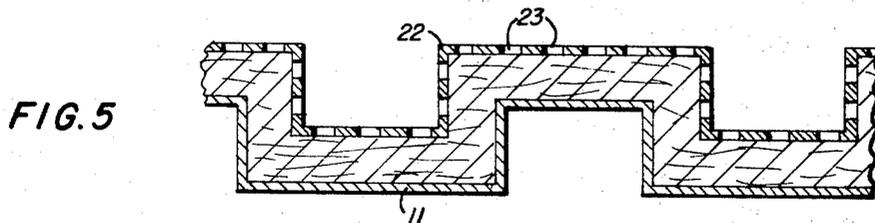
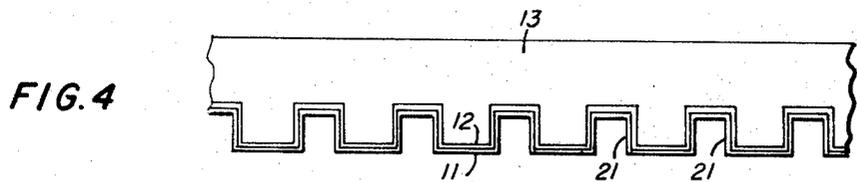
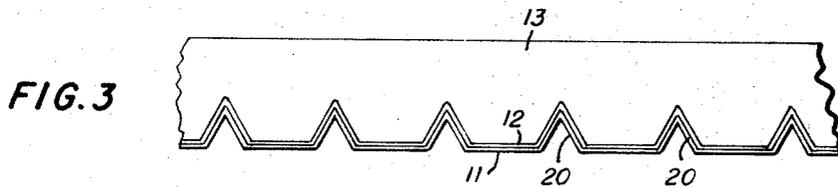
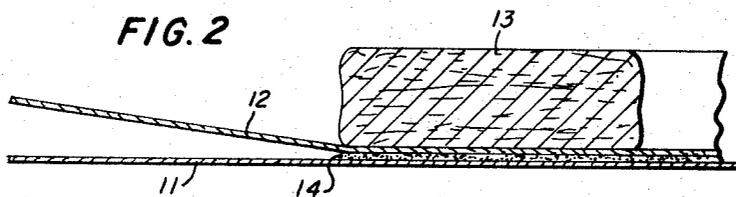
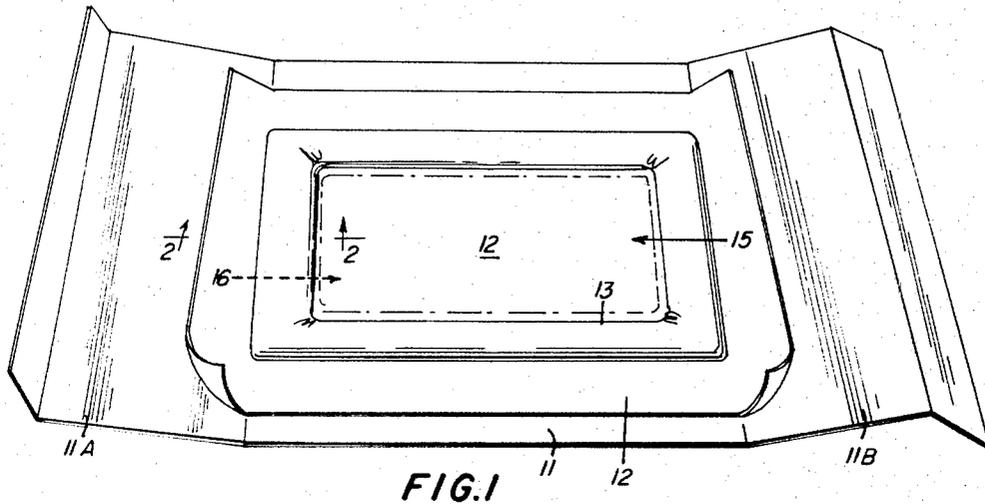
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3,415,662

LAMINATE MATERIAL

Filed April 6, 1965

3 Sheets-Sheet 1



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LAMINATE MATERIAL

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3 Sheets-Sheet 2

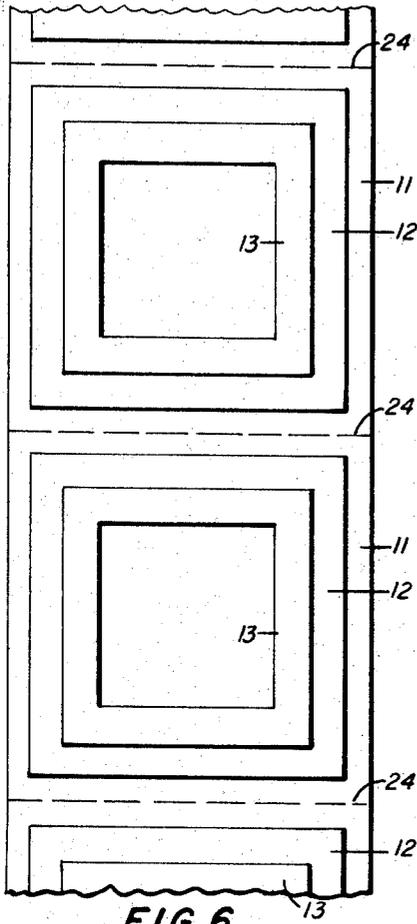


FIG. 6

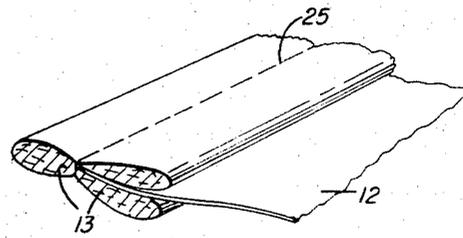


FIG. 7

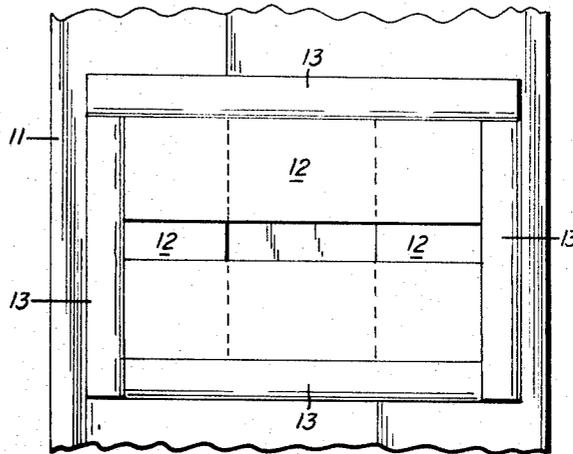


FIG. 8

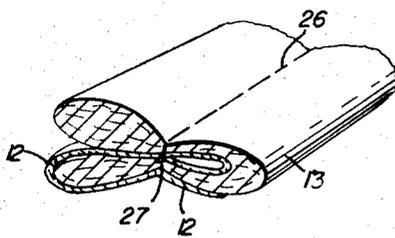


FIG. 9

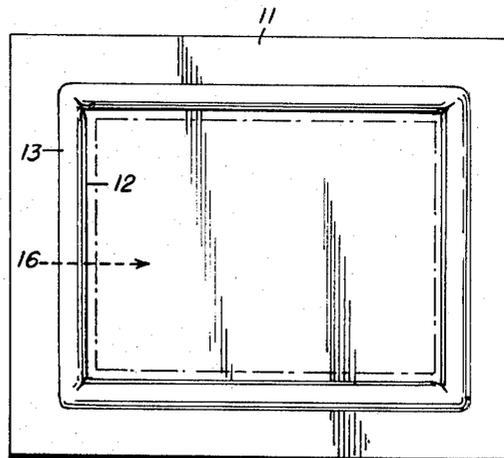


FIG. 10

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LAMINATE MATERIAL

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3 Sheets-Sheet 3

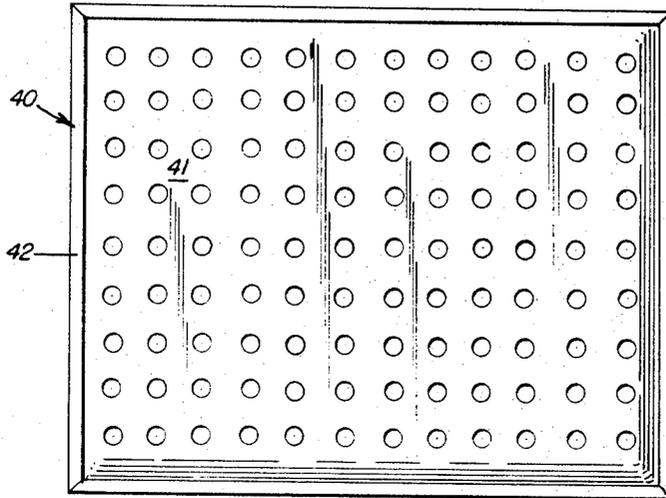


FIG. 11

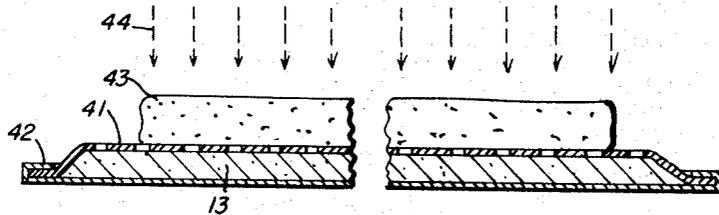


FIG. 12

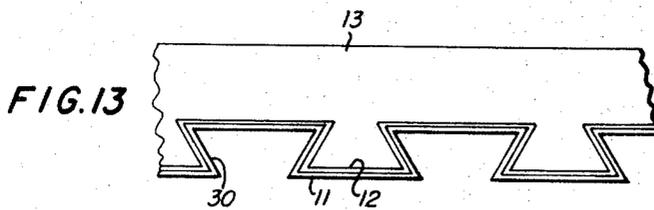


FIG. 13

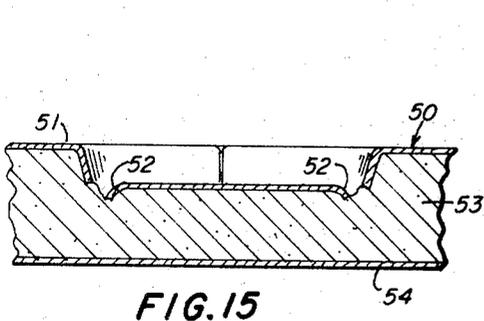


FIG. 15

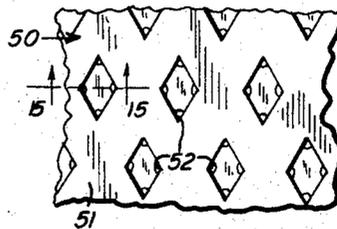


FIG. 14

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ABSTRACT OF THE DISCLOSURE

A package for cooking food therein containing food comprising a metal foil outer lamina, a tissue inner lamina and an absorbent frame on said tissue and surrounding said food whereby said tissue absorbs and carries liquids to said absorbent which are secreted during said cooking process.

This invention relates to packaging material and a package in which food may be cooked. More particularly, this invention relates to a packaging material of aluminum foil having thereon absorbent material for absorbing the liquids secreted by foods while being cooked.

Of recent interest are packages fabricated from metal foil, such as aluminum foil. These packages employ a fair thickness of aluminum foil in which a food product may be packaged and in which the said food product may be cooked. Older examples of such items are the so-called pot pies made of aluminum foil. The food in such pot pies is kept in a frozen condition until such time as it is necessary to cook the food, at which time the entire pot pie with its aluminum container is heated in an oven or the like.

Even newer on the market are packages of aluminum foil which tightly encompass the food on all sides, top and bottom and is a package for distribution. For instance, such a food package may contain partially pre-cooked bacon which need only be rewarmed from a frozen condition by inserting the entire package containing the bacon into a toaster. It has been found that the fat and other liquids resulting from such further cooking makes the food product not as appetizing as one would wish.

Accordingly, it is an object of the present invention to disclose an ingenious food packaging material.

It is another object of the present invention to disclose a food packaging material in which food may be suitably cooked.

It is another object of the present invention to disclose a material which may be utilized in packaging food products having suitable absorbent materials thereon.

It is yet another object of the present invention to disclose a material laminate which may be utilized in wrapping food and the like and at the same time may be utilized in cooking the foods in its own package.

It is still another object of the present invention to disclose a unique pad laminate upon which food may be suitably cooked, said pad being capable of absorbing cooking fluids without creating problems of ignition.

Additional objects of this invention will appear in the following description and appended claims, reference being had to the accompanying drawings forming a part of the specification wherein like reference characters designate corresponding parts in the several views.

In the drawings:

FIG. 1 is a top view perspective of an open package of the present invention;

FIG. 2 is a cross sectional view taken along lines 2—2 of FIG. 1;

FIG. 3 is a fragmentary cross-sectional view of a modification of the present invention;

FIG. 4 is a fragmentary cross-sectional view of yet another embodiment of the present invention;

FIG. 5 is a fragmentary cross-sectional view of still another embodiment of the present invention;

FIG. 6 is a top plan view of an embodiment of the present invention;

FIG. 7 is an end view of another embodiment of the present invention;

FIG. 8 is a top plan view showing the utilization of the embodiment of FIG. 7;

FIG. 9 is an end view of another embodiment of the present invention;

FIG. 10 is a top plan view showing the utilization of the embodiment of FIG. 9;

FIG. 11 is a top plan view of the pad embodiment of the present invention;

FIG. 12 is a cross-sectional view of the pad of FIG. 11;

FIG. 13 is a fragmentary cross-sectional view of another embodiment of the present invention;

FIG. 14 is a fragmentary top plan view of embossed and perforated metal foil; and

FIG. 15 is a cross-sectional view taken along line 15—15 of FIG. 14.

Before explaining the present invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of other embodiments and is being practiced or carried out in various ways. Also it is to be understood that phraseology or terminology employed herein is for the purpose of description and not of limitation.

Attention is now directed to FIG. 1 wherein reference numeral 11 refers to aluminum foil acting as a bottom. Suitably secured to the aluminum foil is a rectangularly-shaped piece of repellent material 12. The repellent material 12 consists of paper tissue or the like and has a unique function. Having a rectangular frame configuration is absorbent material 13 also positioned on the aluminum foil 11 but on the surface of repellent 12. The absorbent material is made of a wad of cellulosic material. A more detailed consideration of this can be seen from FIG. 2 where absorbent material 13 is seen to be in cross-section positioned on the repellent material 12 which is adhesively secured by adhesive material 14 on aluminum foil 11. Inasmuch as there is an opening 15 centrally of the absorbent material 13 whereby the absorbent material 13 gives the appearance of a frame, a receptacle is thereby provided. Within the receptacle is a food material 16 shown in dotted lines. This food material may be a food or meat patty or the like having fatty and watery substances therein which ooze from the patty as the food product is cooked. The function of the repellent is to distribute by capillary action such fatty and watery substances towards the absorbent material 13 so that it may be thereby taken up.

After the food product 16, namely, a meat patty, is positioned as shown in FIG. 1, the package may be then suitably closed. This is easily accomplished by first wrapping the extending edges of the repellent material 12 over the absorbent frame 13. This can be done inasmuch as the repellent material beyond the boundary of the absorbent material is not adhesively secured to the aluminum foil. This has the further advantage of making certain that the absorbent material is utilized on all its surfaces in that the repellent material 12 distributes the watery or liquid substances onto the absorbent. After this has been accomplished the aluminum foil 11 has portions extending considerably beyond the absorbent frame 13 so that these portions 11A and 11B, for instance, may be folded over the top of the entire surface and up the sides. By folding the edges of the aluminum foil in a suitable manner, it is possible to secure quite a tight seal.

The package, once it has been wrapped as indicated in

the above description, may then be chilled so that the food product is frozen. This is not to say that the food product may not be frozen prior to being wrapped. On the other hand, it is within the purview of the invention that the ultimate user, namely, the housewife may wrap the food as indicated in the above and may then utilize the package for its ultimate intended purpose. This ultimate intended purpose is to provide a means for cooking the food product directly in the foil as has been stated. Consequently, the ingenuity of the present invention is such that a package is provided which may protect the food product while it is being refrigerated and is maintained in the store and then may be utilized as a throw-away cooking utensil. In other words, the food package as finally rendered is suitable for cooking in a broiler arrangement, in a toaster or by other suitable means as may be selected.

In order to secure the foil to the absorbent and repellent in a unique manner, attention is now directed to FIGS. 3, 4 and 13. It has been found that by bringing the aluminum foil together with the absorbent material and interspersing the repellent therebetween it is possible to achieve a unitary structure without the utilization of the adhesive material which, due to its nature, has a tendency to counteract the capillary action of the tissue by filling the interstices of said tissue material with adhesive. Accordingly, in FIG. 3 the absorbent material 13 is positioned on aluminum foil 11 with the repellent material 12 therebetween. Similarly in FIG. 4 and FIG. 13 a construction of the same type is shown. However, in order to achieve a unitary structure which stays together, a waffle effect is impressed by suitable die means as indicated in FIGS. 3, 4 and 13. In FIG. 3, the die depression 20 has a conical shape and thereby produces a dimpled effect when viewed head-on. In FIG. 4 the depression 21 is of a more rectangular feature and gives a more true waffled effect when viewed headon. In FIG. 13 an exemplary means has been found to employ a special expanding embossing tool to achieve excellent wider based dimples 30 than openings to achieve good holding characteristics. By utilizing these modifications it has been found possible to eliminate the further need for using an adhesive. Additionally, by using the waffle effect in conjunction with the absorbent and repellent material, it has been found possible to effect a better cooking by a greater distribution of heat and at the same time of providing greater strength characteristics to the entire unit.

In FIG. 5 one can see yet another embodiment of the present invention. In some instances it has been found that the food product, depending upon the type being dealt with, will adhere to the repellent material and/or the absorbent material. In order to avoid this objectionable characteristic of the package of the present invention, it has been found that an additional aluminum foil may be laminated to the surface of the absorbent material as at 22. In such instances the upper lamination touching the food will have a number of perforations 23 to insure the fact that the food product secretions emanating from the food will make contact with the absorbent material sandwiched between foil 22 and foil 11. Additionally, for obtaining rigid retention of the structural unit, it has been found effective to waffle both sides of the lamination as shown in the enlarged cross-sectional view of FIG. 5.

Along similar lines attention is directed to FIGS. 11 and 12. This embodiment of the invention is a pad 40 having a metal foil lower substrate upon which is placed an absorbent 13 of the same material as heretofore. The absorbent 13 is of a smaller dimension than the substrate. An upper perforated metal foil 41 is positioned over the absorbent 13 and is of a similar dimension as the substrate. As can be seen from FIG. 12 the edges are rolled to give a crimp as at 42. Also from FIG. 12 one can see the positioning of food product 43 and broiler flame 44 directed towards the food in order to cook it. The juices secreted by the food will flow through the perforations into the

absorbent. Due to the presence of the perforated foil the food will not readily stick to the pad nor will be pad constitute an appreciable fire hazard.

In FIG. 14 it will be seen that the perforations in unit 50 may be made concurrently with the embossing step. The embossing tool has a diamond configuration and has protruding portions at the apices of the diamond to make a deeper dimple in foil 51 and, thereby, will cut the foil at 52. FIG. 15 is a fragmentary cross-sectional view of how the cut dimples look. Absorbent 53 is positioned between foils 51 and 54.

While it was indicated in the above that the present invention contemplates the concept of packaging the food as indicated in the present invention at the site of manufacture and then to distribute the entire package containing the food to the housewife this is not to say that the housewife herself could not buy a roll or a series of these package units put together in a linear relationship which may be purchased in the store for utilization; or even these units may be sold already pre-cut into individual readily utilizable units. For instance, attention is now directed to FIG. 6 which shows an aluminum foil 11 having the frame absorbent material 13 positioned on a repellent material 12 much as in the same manner as shown in FIG. 1. However, it will be noted that a plurality of these units are situated on an elongated web of aluminum foil. In such instances it has been found that the provision of a tear or weakening strip for tearing purposes as at 24 makes it possible for the housewife or the manufacturer to purchase a great number of these elongated strips which may then be separated into units for packaging.

In another modification of the present invention, it may be that the housewife may wish to construct her own package in order to conform to a variety of sizes of food products which may be packaged therein. As will be evident as in connection with the modification of FIG. 6 and FIG. 1 the food product must be of a size not larger than the frame of the absorbent material 13. If it were larger, it would be obvious that the food product would not fit therein. Accordingly, the housewife will be given the option of constructing her own units and such units may be sold so that they may be utilized in connection with aluminum foil to render a complete arrangement. For instance, FIG. 7 shows an end view of absorbent material 13 which consists of a great plurality of folds of tissue material, that is, cellulosic material having sandwiched therein the repellent material 12 which extends therefrom for a short dimension. The sandwich is achieved by stitching or embossing as at 25. Adhesive material should be avoided due to its ability to clog the interstitial regions of the absorbent material. In FIG. 8 one can see how the modification of FIG. 7 is utilized. It will be seen that on aluminum foil 11 sections of the modification of FIG. 7 are positioned to frame a food product, not shown. Additionally, it will be seen that the repellent material 12 faces inwardly to give a flooring for the food material. Once this has been accomplished, the package may be folded over by the extended foil portions as in connection with FIG. 1.

Yet another embodiment is shown in FIG. 10. Here, too, the housewife may purchase elongated strips of the absorbent material having a repellent material sandwiched in the center and stitched as at 26. In FIG. 9, which is an end view, the repellent material 12 has its loose end looped over and stitched at the bottom as at 27. This last embodiment is particularly significant in utilization with food items having odd shapes. Again, the housewife sets out aluminum foil on a flat surface and the food item is then positioned on the aluminum foil as shown in FIG. 10. The modification of FIG. 9 is then wrapped around the peripheral edge of the food in a manner so that the repellent materials 12 stitched on the underside is utilized in distributing the secretions from the food product as it is cooked into the absorbent material 13 which lies on the other side of the repellent surface as shown in FIG. 9.

It will be apparent that many changes and modifications of the several features described herein may be made without departing from the spirit and scope of the invention. It is therefore apparent that the foregoing description is by way of illustration of the invention rather than limitation of the invention.

What is claimed is:

1. A package for cooking food therein containing food comprising a metal foil outer lamina, a tissue inner lamina and an absorbent frame on said tissue and surrounding said food whereby said tissue absorbs and carries liquids to said absorbent which are secreted during said cooking process:

2. The package of claim 1 wherein the tissue is adhesively secured to the foil over a dimension approximately the size of said absorbent frame.

3. The package of claim 1 wherein the metal foil outer lamina, tissue inner lamina and absorbent materials are secured together by physical waffle effect.

4. The package of claim 1 wherein the metal foil is aluminum.

5. A packaging material comprising a web of metal foil, a web of tissue positioned on said foil, said tissue having smaller dimensions than said foil, a frame of absorbent material positioned on said tissue, said frame having smaller linear dimensions than said tissue.

6. The packaging material of claim 5 wherein the absorbent material is cellulosic material.

7. The packaging material of claim 5 wherein the metal foil, the tissue and the absorbent materials are secured together by dimpling.

8. The packaging material of claim 5 wherein the tissue and the absorbent materials are secured together by an adhesive.

9. A method for packaging and cooking food comprising placing food in an absorbent frame, said frame being positioned on tissue extending beyond said frame, folding said extensions of tissue over the absorbent towards said food, said tissue being a lamina on metal foil which extends beyond said tissue, folding said metal foil over said tissue and food to close said package and then heating said package having the food contents therein.

10. A method for packaging comprising placing food in an absorbent frame, said frame being positioned on tissue extending beyond said frame, folding said extensions of tissue over the absorbent towards said food, said tissue being a lamina on metal foil which extends beyond said tissue, folding said metal foil over said tissue and food to close said package and maintaining said package having the food contents under preservation conditions.

11. A method for packaging comprising placing food in an absorbent frame, said frame being positioned on tissue extending beyond said frame, folding said extensions of tissue over the absorbent towards said food, said tissue being a lamina on metal foil which extends beyond said tissue, folding said metal foil over said tissue and food

to close said package and maintaining said package having the food contents under chilling conditions.

12. A method for packaging and cooking food comprising placing self-supporting food on a metal foil web, placing around the side edges of said food an elongated strip of absorbent material, said absorbent having an inwardly facing tissue adapted to transmit food juices to said absorbent, wrapping said foil about said absorbent and food and then heating said package having the food contents therein.

13. A method for packaging comprising placing self-supporting food on a metal foil web, placing around the side edges of said food an elongated strip of absorbent material, said absorbent having an inwardly facing tissue adapted to transmit food juices to said absorbent, wrapping said foil about said absorbent and food and maintaining said package having the food contents under preservation conditions.

14. A method for packaging comprising placing self-supporting food on a metal foil web, placing around the side edges of said food an elongated strip of absorbent material, said absorbent having an inwardly facing tissue adapted to transmit food juices to said absorbent, wrapping said foil about said absorbent and food and maintaining said package having the food contents under chilling conditions.

15. A method for packaging food comprising cutting pieces to make a frame of absorbent material on a web of metal foil, said absorbent material having a tissue web extending therefrom, said pieces being positioned whereby said tissue extends inwardly, placing self-supporting food within said frame, wrapping said foil about said absorbent and food.

16. A method for packaging and cooking foods comprising cutting pieces to make a frame of absorbent material on a web of metal foil, said absorbent material having a tissue web extending therefrom, said pieces being positioned whereby said tissue extends inwardly, placing self-supporting food within said frame, wrapping said foil about said absorbent and food and then heating said package having the food contents therein.

References Cited

UNITED STATES PATENTS

2,441,477	5/1948	Farrell	99—171
3,012,894	12/1961	Nagel	99—192
3,026,209	3/1962	Niblack et al.	99—174
3,083,876	4/1963	Schneider et al.	99—171 X

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U.S. Cl. X.R.

99—174, 181; 161—113