

UNITED STATES PATENT OFFICE.

JOHN L. KELLOGG AND BORIS KAZMANN, OF BATTLE CREEK, MICHIGAN, ASSIGNORS
TO KELLOGG TOASTED CORN FLAKE CO., A CORPORATION OF MICHIGAN.

FOOD BEVERAGE AND THE PROCESS OF MAKING THE SAME.

1,349,000.

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To all whom it may concern:

Be it known that we, JOHN L. KELLOGG and BORIS KAZMANN, citizens of the United States, residing at Battle Creek, county of Calhoun, and State of Michigan, have invented certain new and useful Improvements in Food Beverages and the Processes of Making the Same, of which the following is a specification.

10 In our companion case Serial No. 158961, filed concurrently herewith, we have described and claimed a food beverage and process of producing the same from cereals alone, without the necessary addition of
15 saccharine matter, such process consisting, broadly stated, in rendering soluble or dextrinizing at least a part of the starch contents of the product by the application of heat and moisture preferably under pressure, and then roasting in granular form and extracting the soluble contents of the roasted material.
20 The principal object of the present invention is to facilitate and increase the dextrinization which occurs in our above mentioned basic process. We accomplish
25 this object, according to the present invention, by adding malt, or any other suitable enzym of soluble ferment to the cereal dough and by then arresting the diastatic action before the same results in the production of maltose. By such arrested diastatic action, we produce a solubilization or dextrinization of part of the contents of the
30 product.

In carrying out the present process, it is intended to secure the resulting beverage from starch-bearing material which is subjected to a dextrinizing action which is facilitated by the use of a diastase, such as
40 malt; the diastatic action being however, arrested in the manner hereinafter described. In our companion case we specify that the desired result can be secured without the necessary addition of extraneous
45 saccharine matter. Of course such matter can be added, but such addition is not necessary to obtain the desired result.

Among the starch-bearing materials
50 which we propose to employ are, legumes, nuts, tubers, such as taro and arrowroot; starch-bearing roots, starch-bearing grains, fruits, such as figs, prunes and bananas; starch-bearing seeds such as St. John's

bread and algaroba beans; fat-bearing
55 beans, such as soja beans; grains, such as wheat, rye, barley, corn, Kafir corn, rice and cotton seed. We prefer however, to employ as the starch-bearing starting materials, rye, wheat grains and wheat bran.
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As an additional starting material we use malt, or a water extract of malt, preferably in crushed or finely ground form.

With these starting materials the process preferably is carried out in a series of steps
65 as are hereinafter enumerated, but it is to be clearly understood that these steps may be altered in their order and some of them may be omitted, and various other changes in the means and manner of securing the
70 final result may be resorted to within the scope of what is claimed, and as indicated by the variations in the different claims, without departing from the spirit of the invention.
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Step 1—Cleansing.—The selected starch-bearing materials are first thoroughly cleansed in any suitable manner.

Step 2—Grinding.—The starch-bearing materials are milled, ground or granulated
80 in any desirable way and in any suitable apparatus.

Step 3—Blending.—The different starting materials, together with the malt, are suitably blended together according to the
85 flavor desired. We prefer to use a blend composed of thirty parts of wheat flour, thirty parts of rye flour, thirty parts of bran flour, and ten parts of malt flour, but as before stated this blend may be changed
90 from time to time to suit the taste and in some cases any one of the materials may be used alone as a starting material, instead of employing a blend.

Step 4—Water-mixing.—The selected
95 flours are thoroughly mixed with water to produce suitable dough. We prefer to employ from thirty to sixty per cent. of water but other amounts may be used. We have found the ordinary baker's mixer to be
100 suitable for producing the dough.

Step 5—Loaving.—The dough is preferably divided into loaves, either by hand or machine. We have found it convenient to employ loaves approximately twenty-four
105 inches long, twelve inches wide and two inches thick.

Step 6—Dextrinization.—We prefer to