

ALIEN PROPERTY CUSTODIAN

PROCESS OF MAKING BREAD

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This invention relates to a method of producing flat sheet bread preserves.

As is well known, the bread when stored is liable to various physical and chemical changes which cause the crumb to become cracked and dry after a short time while the crust becomes soft and tough and the bread loses its aroma and easy digestibility to a great extent. This phenomena is mainly due to processes in the colloidal system of water and starch. Moreover, in case of bad airing and storing in a moist and warm atmosphere the bread is liable to turning mouldy and to changes by micro-organisms.

The bread can be held fresh for a limited longer time and prevented from getting stale by the addition of chemicals, control of the moisture in the storing rooms or vessels and other means regarding the changes in the colloidal system of water and starch.

The present invention has for its object to provide a method of producing a uniform, permanent baker's ware in the form of a perfectly incrustated flat sheet bread containing substantially only such flour constituents which are perfectly broken up or rendered soluble.

According to one embodiment of the invention a dough which is suitable for the production of mixed bread, grey bread, brown bread or black rye bread or other kind of bread, is rolled out to flat sheets, after the dough has been set aside for the required time of rest, exposed to the process of fermentation and put into the oven. To make baker's ware of rye flour a dough is used which has been produced either by the use of leaven or has been produced by the use of leavening agents on an inorganic or organic basis replacing the action of the leaven in the conduct of leaven and rendered porous by yeast or baking powder.

Where the dough is made on the basis of leaven the share of dough conducted to the end stage of leaven may be about 40 to 65 percent, i. e., 40 to 65 percent of the flour or groats have been worked up to the end stage of the leaven. Where the share of dough thus conducted is less it is advantageous to subject a part of the flour or groats to a preliminary swelling, for example, by stirring it with water on the eve of the dough making.

The dough may be shaped into flat sheets of varying thickness within certain limits. The thickness of the dough prior to its being put into the oven may vary from about 0.3 to about 1.3 centimeters.

The baking time and temperature depends on

the thickness of the piece of dough. With thinner pieces of dough a perfect incrusting may be attained with higher temperatures (about 200° C) and shorter baking time (about 30 minutes). With pieces of dough of greater thickness (up to about 1.3 cms) the baking temperature is reduced to about 150° C and the baking time is extended to about 60 minutes, so as to attain a perfect incrustation.

The baker's ware produced in accordance with the invention is absolutely uniform as regards its interior and exterior properties, palatable and due to its incrustation throughout stimulates an intensive action of the masticators. It is characterised by the fact that the flour components are to a great extent broken up into a digestible product, it has a high contents of vitamins and is not liable to getting musty or being converted by other micro-organisms.

The term "incrustation" as referred to in this specification is intended to define a state in which the baker's ware is crisp and preserves this property on storage in the air without getting soft and tough. It has been found by practical tests that the baker's ware made in accordance with the invention is different physically and chemically from the crust of the various known types of bread. In a physical respect, this difference is shown by the fact that the crust of ordinary known bread when stored in moist rooms becomes soft and tough while the baker's ware made in accordance with the invention remains crisp throughout its cross section. A chemical difference is found, amongst others, in the lower content of dextrin or starch gum in the baker's ware produced in accordance with my novel process.

Permanent bread is known which preserves its properties under predetermined storing conditions. It differs from the ordinary bread, such as, mixed bread and black rye bread by the fact that it is not shaped as a loaf but consists of thin flat sheets of dough which have been heated to a high temperature of 250° C, for example, for some minutes, and subsequently dried in a special drying chamber. This type of baker's ware is highly porous and crisp, provided that it is protected against moisture, but it is not incrustated in accordance with my novel process and has a relatively high content of dextrin. It loses its crisp state on storing in a moist atmosphere, becoming soft and tough, and in this case has to be rebaked before it is used. Further, the difference between such baked goods and my novel bread becomes apparent on stirring with water. My novel baked goods are disintegrated in water in

the form of small particles while the known flat sheet bread on contact with water is converted into a mass of a slimy condition.

Biscuit or rusk, such as, seabread, is obtained by baking and drying in a room which is heated, for example, by the waste heat of a baking stove. Such baked goods are not encrusted in accordance with the invention and, therefore, are only stable when stored in a hermetically closed space.

According to one proposal made in the literature, flat sheets of wheat dough are heated to an average temperature of 220° C, for a period of time of 3 to 4 minutes, and turned over repeatedly. The pieces of dough are then made up into a kind of hollow loaf of bread and baked. The weight of the hollow loaf of bread amounts to about 14 grams before, and about 7 grs after the baking.

Example 1.—A dough is made for whole-meal bread, with the conventional conduct of leaven. 40% of the whole rough ground grain or groats (including the border layers and the germs or seed-buds) is worked up to the end stage of

leaven. The addition of salt is 1 percent, referring to the total amount of groats. The dough is rolled out into flat sheets of 0.3 cm thickness, on metal sheets, and the pieces of dough, on having reached the state of ripeness are baked about 30 minutes, at 180° C.

Example 2.—Wheaten groats are stirred up into a dough, with 3 percent yeast and 1 percent salt, referring to the total amount of groats. The dough is then further treated in accordance with example 1, with a time of rest for the dough of 2 times 30 minutes and a final fermentation or ripeness of 40 minutes.

The method of the present invention has been described in detail with reference to specific embodiments. It is to be understood, however, that the invention is not limited by such specific reference but is broader in scope and capable of other embodiments than those specifically described.

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