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PATENT



SPECIFICATION

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COMPLETE SPECIFICATION.

Improvements in the Composition and Manufacture of Sausage  
Meat and the like.

I, KONRAD ADENAUER, of 6, Max-Bruchstrasse, Cöln-Lindenthal, Germany, Mayor in Chief, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

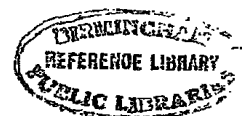
5 Soya beans fat free or not have for some time past been used as human or animal food on account of the large amount of proteins which they contain. For human food the soya beans are made into cheese, sauces, soups or they are used like flour as an addition to foods, cakes, chocolate, and the like, in order to produce preparations rich in proteins particularly for persons suffering from diabetes or kidney troubles.

10 It is however, novel and not yet known to use soya beans as a preservative and they are adapted to be employed in the first place as a preservative for meat.

15 It is true that soya beans become sour fairly quickly when in a moistened condition, for instance, mixed with water in the form of a pulp even if the latter has been boiled; if, however, they are brought into contact with meat they prevent, as far as can be, its decomposition and do not themselves deteriorate. It is not quite clear why this actually takes place. It may, however, be assumed that the following circumstances are likely to account for that fact. The walls of the cells of the soya bean are extremely pervious to aqueous liquids. The cells contain hardly any starch grains insoluble in water but mainly proteins soluble in water, fat, certain kinds of sugar and other substances till now unknown. If dry ripe soya beans are brought into contact with an aqueous liquid their cells greedily absorb the latter, the contents of the cell dissolves therein and to a large extent passes out of the same. Now if soya beans are brought into intimate connection with meat the soya cells extract all the moisture therefrom, thereby preventing the generation of bacteria responsible for the decomposition of the meat and dependent for their vegetation on the moisture thereof. The meat salts which at the same time penetrate into the soya cells apparently form with the substances contained in the latter, particular compounds which exercise a preservative effect both on the soya flour and on the meat. The action has not as yet been sufficiently explained but that it does take place has been proved by the most varied experiments and such proof can be supplied at any time.

30 The supposition for this action is that the meat and the soya beans are brought into such intimate contact with each other as to enable such complete

[Price 6d.]



mutual penetration and interaction to take place. This possibility is provided, for, by causing the soya bean in a ground condition to act on meat in a minced condition. By mixing both substances in this condition they are enabled to act one on the other in their most minute particles. It is not necessary that both substances are used in equal quantities for a relatively small amount of soya flour is sufficient. In order to bring about a uniform penetration of both substances where only a small quantity of soya flour is used, the latter may previously be mixed with water or meat broth, thereby preventing the soya flour from remaining scated in certain parts of the meat and from overdrying the latter and rendering them unfit for consumption while leaving other parts unaffected and liable to become bad.

The preservative action is, moreover, ensured, by enabling the two substances to act one on the other for a sufficiently long time. Only after the expiration of such time which is generally calculated at about 48 hours does the preserving effect actually set in. Prior to that moment the danger of decomposition must be avoided by extreme cleanliness in the preparation, cooling after mixing and the like. Fat free unoled soya flour exerts a stronger liquid extracting action on the meat because its cells are emptier than those of soya flour which is not fat free.

The soya flour which *per se* has a peculiar flavour disliked by many assumes in this process entirely the taste of the meat owing to the penetration with the salts of the latter.

The process hereinbefore described may be applied with the greatest advantage to the preparation of sausages of any kind, thereby rendering it extremely durable whereas hitherto any addition to sausage meat of vegetable matter, such as cornflour, ground beans, pea flour, buck wheat, potato meal was found to cause acidity to set in more quickly than it does in pure meat. Fresh sausage, such as blood or liver sausage, according to this invention, may be made preservable for weeks and months, while the usual preservable sausage such as saveloy sausage or the like if prepared by the present process may be made durable for more than a year without the precautions hitherto employed.

The process is carried out in the following manner:

The meat substance according to whether liver, meat, saveloy or other sausage is to be made, is prepared in the customary way, but with the exercise of the greatest cleanliness. At the same time an appropriate quantity of soya flour is mixed with water or with broth containing the extractive and glutinous substances of meat and bones without any condiments to form a stiff pulp. This pulp is then boiled for about half an hour and after being cooled to about 40 to 50° C. is mixed with the meat to be used. The sausage meat thus obtained is either allowed to stand for about 48 hours at a cool temperature after which it is squirted or filled into the skins and finally treated according to the kind of sausage it is desired to make, or the sausage is first made and then kept in the cool for a similar period.

The advantage of preserving meat in this manner as compared with methods hitherto used is obvious. In addition to the employment of physical agents, such as cool temperatures and the exclusion of air, use has hitherto been made of salts and chemical substances in the preparation of sausage meat. The salt, while extracting the moisture from the meat has the drawback, if used in substantial quantity as is necessary for obtaining reliable preservation to greatly affect the taste while chemical substances such as sulphurous acid, saltpetre, boracic acid, etc., are frequently detrimental to health and likewise affect the taste so that the value of sausage as food is considerably lowered by all these agents.

The above drawbacks are obviated by the process according to this invention, as here it is a case of admixing a purely vegetable matter which is not only not unwholesome but is highly albuminous so that by its addition the nutritive value of the preserved food is greatly increased, while the taste of the latter remains unaffected since the indifferent flavour characteristic of the soya bean

flour entirely disappears in the mixture with the sausage meat due, as already stated, to the absorption by the soya flour of the extractive substances and moistures in the meat.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A process for the preservation of sausage and the like consisting in the addition to sausage or like meat of soya bean flour.

2. A process as claimed in Claim 1 consisting in intimately mixing finely minced meat with the soya bean flour after the latter has been brought into the condition of a stiff pulp by mixture with water or meat broth, boiled for about half an hour and cooled to about 40 to 50° C.

3. A process as claimed in Claim 1 or 2, consisting in cooling the meat substance or the sausage made therefrom for a period of about 48 hours.

Dated this 26th day of June, 1918.

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