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METHOD OF DRYING WHEAT GLUTEN

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The present invention relates to the drying of wheat gluten, and has for its object the drying of such material more economically than has heretofore been possible.

Another object of the invention is to eliminate certain characteristics of such material and thereby permit the drying to be accomplished in economically operated driers not heretofore usable for the purpose.

Other objects will readily occur to those skilled in the art upon reference to the following description.

The industrial separation of starch and gluten from wheat or flour is well known, but the drying of the recovered gluten has been found to be difficult and costly because of its gummy, elastic and adhesive character.

The procedure commonly followed is to dry this material in vacuum ovens or in trays, while passing over them a current of relatively dry air, or by passing the mass over and between steam heated rollers from which the dried sheet must be scraped.

Such processes are expensive and not continuous, but have heretofore been used because the adhesive property of the gluten would not permit the satisfactory use of continuous driers.

In the present process, the wet gluten mass, having normally a moisture content of 60% to 75% is first heated to a temperature of 190° F. or over the mass being agitated and heated for a sufficient time to insure that all of it reaches the required temperature. Little or no incidental drying will occur during such treatment.

The effect of such heating is to change the gluten to the extent of substantially eliminating its gummy elastic character and at the same time its adhesive properties. The mass, however, remains sufficiently plastic to enable it to be formed into granules or pellets or irregular shreds, which being non-adhesive, may be dried by agitation in a counter current of hot air in the ordinary forms of progressive and continuous driers, such as the rotary inclined tube of drum type in which the material is tumbled in a counter current of hot dry air, or the conveyor-tunnel type of drier, or the shelf type in which

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the material falls from one shelf to another through an ascending current of hot dry air.

The formation of the granules, pellets or shreds may be accomplished by extrusion, shredding or in any suitable manner.

Now having described the invention and the preferred embodiment, it is to be understood that said invention is to be limited, not to the specific details herein set forth, but only by the scope of the claims which follow:

I claim:

1. The process of drying wheat gluten which includes the steps of first destroying the adhesive property of said gluten by a preliminary heating, then forming the material into granules, then passing the latter in counterflow with hot dry air while agitating the granular material.

2. The process of drying wheat gluten which includes the steps of first destroying the adhesive property of said gluten by heating the wet mass to at least 190° F., then forming the material into granules, then passing the latter in counterflow with hot dry air while agitating the granular material.

3. The process of drying wheat gluten which includes the steps of first destroying the adhesive property of said gluten by heating the wet mass to at least 190° F., then forming the material into granules, then passing the latter in counterflow with hot dry air.

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