

UNITED STATES PATENT OFFICE

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ROASTED COFFEE PRODUCT AND METHOD OF MAKING SAME

No Drawing.

Application filed July 21, 1932. Serial No. 623,913.

The invention relates to new and useful improvements in roasted coffee products and the method of producing the same.

Coffee, as at present marketed and prepared for brewing, is ground, and consists of coarser and finer particles, giving ununiform extraction during brewing. Due to the firmness and resistance of the coffee cell walls, the coarse particles are under-extracted in the interior thereof, while the fine particles are over-extracted in the time necessary to obtain proper strength of brew. It is also well known that coffee after it is roasted and ground, evolves a gas rapidly for a considerable period of time, making it difficult to market the coffee in sealed metal containers. The evolving gas causes internal pressure even when the container is closed under vacuum, which results in an objectionable and unsightly swelling or bulging of the ends of the container.

An object of the present invention is to provide a roasted coffee product which is capable of uniform extraction and from which little or no sediment is obtained in the brewing.

A further object of the invention is to provide a roasted coffee product from which a greater portion of the gas initially in the cells of the coffee has been forcibly expelled therefrom without affecting the natural flavor and aroma of the coffee.

A still further object of the invention is to provide a method whereby the gas initially in the cells of the coffee may be forcibly expelled therefrom without affecting the natural flavor and aroma of the coffee.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

Perhaps the improved roasted coffee product forming a part of the present invention will be better understood by a description of one method of producing the product. The coffee bean is roasted in the usual way, and it is ground or broken or cut to suitable size. The particles of coffee are then subjected to a mechanical pressure for the purpose of crushing the particles. This may be accomplished in a hydraulic press, but in the preferred form

of method of treating the coffee, the coffee particles are passed between smooth rolls.

The rolls are so set that the coffee particles passing between the rolls will be crushed and dropped from the rolls in the form of flakes. Each particle forms a separate flake. The flakes are firm and remain intact during handling. The crushing of the particles of coffee expels from the cells a greater portion of the gas contained in the cells. The cells are crushed or collapsed, and the gas forced therefrom. The particles are quickly crushed and the gas expelled with little or no loss in the aroma and flavor of the coffee.

It is well known that the coffee particles contain, after the bean is roasted, a mixture of gases consisting mainly of carbon dioxide and carbon monoxide gas. The gas is in the cells under considerable pressure, and when the coffee bean is broken, the gas evolves by solution or effusion from the cell walls. Normal evolution of the gas from the roasted coffee carries with it a proportional amount of aroma, thus decreasing the freshness of the coffee. Furthermore, the gas evolving from the coffee cells in a sealed container will create an internal pressure, producing a swell or bulging of the ends of the container, even though the coffee is hermetically sealed in the container in vacuum. This crushing of the coffee particles expels a greater portion of this gas, and thus renders the coffee more suitable for packing in sealed containers. Inasmuch as there is little or no gas evolving from the flaked coffee, there will be no swelling or bulging of the walls of the container.

The flaked coffee falling from the rolls is very thin, and is of substantially uniform thickness. The product produced has advantages over the usual form of ground or pulverized coffee. In the customary grinds of coffee, there are coarser particles and finer particles. These coarser particles are over-extracted on the surface and under-extracted on the interior, while the finer particles are always over-extracted in the time necessary to obtain a proper strength of brew. The firmness and resistance of the cell walls makes proper extraction impossible, and the increase