

# UNITED STATES PATENT OFFICE.

JOHN T. DAVIS, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO THE  
BRAZILIAN MANUFACTURING COMPANY, OF SAME PLACE.

## PROCESS OF TREATING COCOANUT-HUSKS.

SPECIFICATION forming part of Letters Patent No. 497,911, dated May 23, 1893.

Application filed August 25, 1892. Serial No. 444,115. (No specimens.)

*To all whom it may concern:*

Be it known that I, JOHN T. DAVIS, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Processes of Treating Cocoanut-Husks; and I do hereby declare that the following is a full, clear, and exact description thereof.

10 This invention relates to the treatment of the external husk of the cocoanut for the purpose of producing a fiber adapted for use as artificial hair, and also for the purpose of separating from the fiber the pollen which  
15 forms a part of the husk, and which is capable of use as a substitute for cork in various ways.

In Letters Patent granted to me July 21, 1891, No. 456,241, I described a process for  
20 treating such husks, in which the essential feature was the subjecting of the husks to an alkaline solution under steam pressure—in other words a wet treatment. By means of this solution and subsequent mechanical operations I succeeded in separating the fiber;  
25 but the pollen, a substance which may be rendered valuable in the art was lost, or if separated was found to have lost the tannin contained by it in its natural state as a result  
30 of the wet treatment.

My present invention consists in treating the husks in a dry state without the use of chemicals, by which the separation of the fiber is as completely effected as before, while  
35 at the same time, the pollen is preserved and all its valuable properties saved.

In carrying out my process I divide the husks into halves or smaller sections, as may be most convenient, and then subject them  
40 to pressure between squeeze-rolls of sufficient power to flatten them. The flattened sections of husk are then fed to a picking machine having tapering teeth, which slide over the fiber and as they do so, switch off the pollen by the friction thus applied. The husks  
45 are fed to the picking machine through a pair of feed rollers, which also have tapering teeth which tend to hold the husks back while the teeth on the cylinder of the picking machine  
50 are exerting their friction for the removal of the pollen adhering to the long fiber. The

speed of the feed rolls is properly regulated to suit the condition of the fiber. By this means a complete separation of the fiber and the pollen is effected and the pollen becomes  
55 an article of value suited to the arts as a substitute for cork in the manufacture of various articles now composed largely of cork; and in addition to the fact that such a separation is made, the pollen remains in its natural state preserving its tannin, much of which  
60 would be destroyed by the use of an alkaline solution.

The separation of the fiber and the pollen having thus been effected, I treat the fiber in  
65 order to soften it and render it better fitted for use as artificial hair, in a solution of sodium chloride of about 4° Baumé, and boil the fiber in this solution preferably about ten hours. At the expiration of this time the  
70 fiber has become thoroughly softened, and, when dried and dyed is found to possess all the characteristics of natural hair as to softness and flexibility.

The pollen separated by the process as  
75 above described, is formed into flat sheets like paper board which may be used for making sheathings or packing, such as steam packing, or for cork soles and in many other ways  
80 in which cork is now used exclusively.

In the production of both the fiber and the pollen by this process I thus obtain two independent and valuable substances from the cocoanut husk, which latter is ordinarily considered as a waste product.  
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What I claim is—

The process of treating cocoanut husks for the production of a fiber adapted for use as a substitute for hair, which consists in crushing the husks in a dry state, then teasing and  
90 switching the crushed husks, thereby separating the fiber and the pollen, then boiling the fiber in a solution of sodium chloride substantially as set forth.

In testimony whereof I have affixed my signature, in presence of two witnesses, this 16th day of August, 1892.

JNO. T. DAVIS.

Witnesses:

L. W. SEELY,  
A. WALRATH.