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# UNITED STATES PATENT OFFICE

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## PROCESS OF MAKING CORNSTALK FIBER COMPOSITION

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This invention relates to the process or method of making cornstalk fiber composition and has as an object the provision of a process or method whereby said composition may be readily and inexpensively prepared without the use of expensive and complicated machinery or tools and with relatively simple and inexpensive ingredients.

A further object of the invention is to provide an improved process or method of making cornstalk fiber composition whereby the said composition may be produced in a multiplicity of forms adapted to a variety of uses.

My invention consists in the combination and proportion of ingredients, sequence and arrangement of operations and combination of operations hereinafter set forth and pointed out in my claims.

The cornstalk fiber composition made by my improved process or method is a material adapted for wide and diverse use, since it is dielectric, does not absorb moisture, will not split or check, is susceptible of being worked with wood working tools, may be painted, gilded, enameled or otherwise finished, is light and rigid and in the process of manufacture may be moulded to any desired form. To make the composition, a filler is compounded of a dry mixture of cornstalk or cane fiber, asbestos fiber and sawdust or wood flour, the fibers being shredded to the desired degree of fineness; a binder is formed by dissolving celluloid in acetone and the dry-mixed filler is mixed with the binder solution, gold size or banana oil being added to the resulting mixture to make the same more plastic and workable and to retard the setting of the binder, linseed oil also being added if desired to further thin the consistency of the mixture and further retard the action of the binder. The dry-mixed filler comprises substantially forty percent of the complete mixture and is preferably compounded of the materials set forth in the following proportions, by weight; eight parts of cornstalk or cane fiber, thirty parts of asbestos fiber and two parts of sawdust or wood flour; the binder and retarding agent constituting the remaining sixty per cent of the mixture in the following weight proportions; fifteen parts of celluloid dissolved in thirty-six parts of acetone and nine parts of gold size or banana oil.

The mixture as above prepared is used to fill pressure moulds of the desired form, moulds and contents being heat treated for an hour or more to set the binder and produce finished articles of the composition that are rigid and dry. The addition of the linseed oil to the mixture somewhat increases the time necessary for the heat treating and setting of the binder, but it makes a more plastic and workable mixture that is easily introduced into the moulds.

Since some variation of the ingredients and proportions used in the cornstalk fiber composition as above set forth may be had without altering the result and the sequence of operations employed in making the same may be varied without departing from the spirit of the invention, I wish to be understood as being limited solely by the scope of the appended claims.

I claim as my invention—

1. The process of making compact and homogeneous masses or articles having the characteristics described which comprises the dry intermixing of finely divided vegetable and asbestos fiber, the addition to said first mixture of a cellulose binder fluid at normal temperatures, the subsequent addition of a binder retarding agent to said admixture and the final heat treatment of the plastic thus formed under pressure to set the binder and solidify the mass.

2. The process of making compact and homogeneous masses or articles having the characteristics described which comprises the dry intermixing of finely divided vegetable and asbestos fiber, the addition to said first mixture of celluloid dissolved in acetone to form a binder fluid at normal temperatures, the subsequent addition of a binder retarding agent to said admixture and the final heat treatment of the plastic thus formed under pressure to set the binder and solidify the mass.

3. The process of making compact and homogeneous masses or articles having the

characteristics described which comprises the dry intermixing of ten parts of finely divided vegetable fiber with thirty parts of finely divided asbestos fiber, the addition to said first mixture of fifteen parts of celluloid dissolved in thirty-six parts of acetone to form a binder fluid at normal temperatures, the subsequent addition of nine parts of a binder retarding agent to said admixture, said proportions being by weight, and the final heat treatment of the plastic thus formed under pressure to set the binder and solidify the mass.

In witness whereof I affix my signature.

SAMUEL A. GILL.