Jan. 20, 1925. 1,523,634

R. B. CRABBS

BUILDING MATERIAL AND PROCESS OF MANUFACTURE THEREOF

Filed March 16, 1922

Fig. 1.

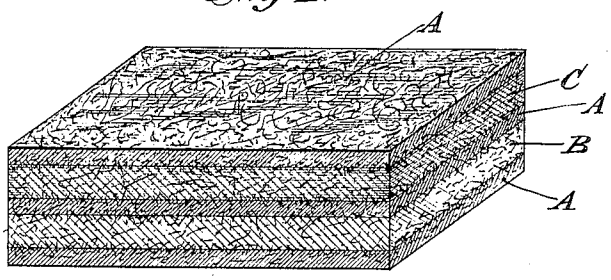
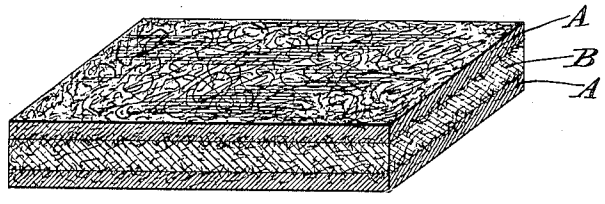


Fig. 2.



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UNITED STATES PATENT OFFICE.

ROSCOE B. CRABBS, OF CINCINNATI, OHIO.

BUILDING MATERIAL AND PROCESS OF MANUFACTURE THEREOF.

Application filed March 16, 1922. Serial No. 544,086.

To all whom it may concern:

Be it known that I, ROSCOE B. CRABBS, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton, State of Ohio, whose post-office address is Lockland, Ohio, have invented new and useful Improvements in Building Materials and Processes of Manufacture Thereof, of which the following is a specification.

My invention relates to building material and more particularly to materials used for sound deadening, heat and fire insulating or waterproofing and process of manufacturing of same.

My improved material is formed of one or more strata, integral with each other, but of different materials having different characteristics. I have found that I can form in a unitary structure distinct layers of different materials without the application of a cement layer between them. In materials having the cement or adhesive layer between layers, under temperature changes, the tendency is for the layers to separate. This disadvantage I overcome by my invention which is a unitary structure.

My invention permits of the production of a building material which may serve as a sound deadening, heat insulation, and waterproofing felt. It may be of any thickness desired arranged in one or more layers of fire resistant, sound deadening, or heat insulating and waterproofing material each of which may be of any desired thickness.

In the drawings Fig. 1 is a view of my invention.

Fig. 2 is a modification of my invention.

In the drawings, in which like letters refer to like parts, in Fig. 1, I have shown a perspective view of a section of my improved material having layers A, A, formed of fire resistant material, a layer B of sound deadening or heat insulating material and a layer C of waterproofing material.

In the drawings I have shown, in exaggeration, the fibres of adjacent layers as they are intermingled to form an integral mass formed of strata of different characteristics. The layer A is formed of an asbestos paper pulp in which is contained a major proportion of asbestos. The layer B is formed of a rag or paper felt pulp. The layer C is formed of a rag or paper felt stock formed into a pulp by use of a waterproofing such as asphalt or other suitable waterproof material. These pulps are mixed in the ordinary way as in the manufacture of paper and then deposited on a felt in the order desired. To form a product such as shown in the drawing the order of depositing the pulps is as follows: first, the asbestos paper pulp; second, the rag or paper or hair felt pulp; third, the asbestos paper pulp; fourth, the waterproofed felt; fifth, the asbestos pulp. The thickness of the finished product or of either layer, is regulated by the quantity of pulp deposited. After the proper quantity and desired number of different pulps have been deposited on the felt, of the paper making machine, the surplus moisture is removed under pressure and the product dried. This process is performed on an ordinary paper making machine placing the different pulps in the vats in the order it is desired to have the layers, and regulating the thickness of a layer by the number of adjacent vats containing the same pulp.

I prefer for many purposes to form a material composed of layers B of sound deadening felt and a liner on one or both faces of fire resistant material as shown in Fig. 2.

By the process set forth above the fibres in the pulp mass of adjacent layers, or strata, intertwine, intermingle or intermix, and when pressure is applied they interlock and are matted or felted together, thereby forming a unitary mass formed of strata or layers of different materials.

By my process I also make a wall board having a strata of chip board with an intermediate stratum or layer of fire resistant material either with, or without, a waterproof stratum or layer. Of course any arrangement of the strata of the different materials may be made by arrangement of the order of same in the vats which will control the order of the deposit of same on the felt of the machine.

I claim—

1. A building material composed of a stratum or layer of insulating material and a stratum or layer of fire resistant material felted together forming a unitary mass.

2. A building material composed of a stratum or layer of insulating material, a stratum or layer of waterproof material, and a stratum or layer of fire resistant material felted together forming a unitary mass.

3. A building material composed of a plu-

rality of strata of fibrous material, having different characteristics, the fibres of adjacent strata intermingling and interlocking.

4. An article of manufacture composed of a sheet consisting of a stratum of fibrous material containing a major proportion of mineral fiber a stratum of non-mineral material, said materials being felted together to form a unitary structure.

5. An article of manufacture composed of a sheet material consisting of a stratum of fibrous material, a stratum of fibrous material having different characteristics than the first mentioned fibrous material and an intermediate stratum formed of the fibrous material of the first two strata intermixed, said three strata being felted together so as to form a unitary felted mass.

In testimony whereof, I have signed my name to this specification.

ROSCOE B. CRABBS.