

Oct. 27, 1925.

1,558,495

F. C. OVERBURY

PROCESS OF MAKING ROOFING FELT OR LIKE MATERIAL

Original Filed July 29, 1915

FIG-1-

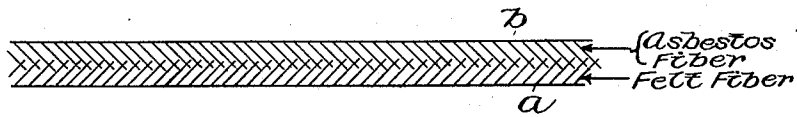
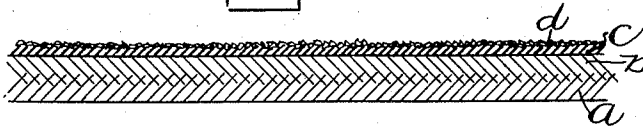


FIG-2-



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UNITED STATES PATENT OFFICE.

FREDERICK C. OVERBURY, OF HILLSDALE, NEW JERSEY, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE FLINTKOTE COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

PROCESS OF MAKING ROOFING FELT OR LIKE MATERIAL.

Application filed July 29, 1915, Serial No. 42,628. Renewed November 14, 1919. Serial No. 338,118.

To all whom it may concern:

Be it known that I, FREDERICK C. OVERBURY, a citizen of the United States, and a resident of Hillsdale, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Processes of Making Roofing Felt or like Material, of which the following is a specification.

This invention has for its object to produce a fibrous material which will possess strength and flexibility and also marked fireproof qualities.

Figure 1 represents conventionally in section a portion of a sheet embodying the invention.

Figure 2 similarly represents a sheet embodying the invention, for use as a roof covering.

According to my invention and to meet the object thus specified, I provide a multiply sheet formed of layers of paper felt and asbestos, the fibers of the several layers being intermingled and adherent, so that the sheet is an integral structure.

In the manufacture of this sheet, the paper felt layer *a* is formed of cotton and wool or other suitable fiber in the usual manner, into a wet pulpy web, upon which is deposited a wet pulpy web of asbestos fiber *b*. These may be then subjected to a felting action in a machine or apparatus of the ordinary construction, or be dried in the usual drying machine, thus producing a sheet, one face of which is paper felt (so-called) and the other face of which is asbestos, the two layers being interlocked together by the intermingling of their fibers without the use of any foreign binder or cement.

It is quite apparent that the sheet may consist of more than two layers of the asbestos and of the wool fiber, as for instance the layer of asbestos can be laid between the layers of wool felt, or vice versa.

After the sheet has been dried into a porous absorbent condition, it then may be saturated with asphalt or any other of the usual waterproofing compositions which are employed in the manufacture of prepared roofings, and then faced, preferably on the wool-felt side, with a layer of high-melting-point asphalt or pitch *c*, as shown in Figure

2. An impregnated and coated sheet may have a layer *d* of grit embedded therein, and, if desired, may be formed into shingles, or into shingle strips, so as to be laid in overlapping rows in simulation of shingles or tiles.

There is a great demand at the present time for increased fire protection for buildings, and great efforts have been made to produce commercially a roofing material which is substantially fireproof. It has been proposed to cement together, as by the use of pitch, sodium silicate, or the like, a layer of asbestos upon a layer of roofing felt, but this increases the cost of production of the roofing material. Sheet asbestos, when sufficiently thin to be used alone, does not possess the necessary tensile strength, whereas wool felt alone, while relatively slow-burning when impregnated as described, does not really possess the desirable fireproof qualities. According to my invention, I provide a single integral sheet, in which the strength is afforded by the felt layer, and the fireproof qualities of the asbestos layer.

It is unnecessary herein to describe the operations by which the raw material, cotton or wool rags, or the asbestos, are disintegrated and reduced to a wet fibrous pulp, or the machines by which they are formed into webs or layers, as the same are well known.

If desired, the sheet may have only the felt layer saturated or coated, or both, with a waterproofing or non-heat-conducting compound, or the asbestos layer may be saturated or coated, or both, in either instance leaving the other layer untreated, this being of course subject to particular requirements.

While the composite sheet as herein described is particularly applicable for use in the manufacture of flexible waterproof roofing, yet its use is not confined thereto, as it may be employed for a variety of other uses. For instance, but without limitation, the sheet may be employed for the purpose of insulation, or as a flooring, or for other purposes.

For some purposes, the sheet may be so treated as to saturate with a waterproofing or non-heat-conducting compound only

the fibrous layer, leaving the asbestos layer unsaturated, or vice versa.

What I claim is:—

5 The herein described method of producing a flexible composite sheet of fibrous material, consisting in bringing into face contact two layers of wet pulpy felted fiber

and asbestos fiber, causing the said fibers of said layers to interlock, and then drying the sheet thus formed.

10 In testimony whereof I have affixed my signature.

FREDERICK C. OVERBURY.