

UNITED STATES PATENT OFFICE.

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BY DIRECT AND MESNE ASSIGNMENTS, OF TWO-THIRDS TO NEWTON
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FIREPROOFING COMPOSITION.

SPECIFICATION forming part of Letters Patent No. 495,166, dated April 11, 1893.

Application filed April 4, 1892, Serial No. 427,737. (No specimens.)

To all whom it may concern:

Be it known that I, FRANK S. CULVER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Fireproofing Composition, &c., of which the following is a specification.

My invention relates to fire-proofing compositions, and to a backing slab, sheet, or body made thereof and adapted to be used as a backing or support for plaster for the plastering of walls, partitions, &c.

My invention has reference more particularly to fire-proof plaster boards.

The composition consists of the ingredients stated below in substantially the proportion set forth, said proportions being by weight. It is, however, to be understood that I do not restrict myself arbitrarily to the proportions stated, but reserve the right to vary the same within reasonable limits.

Formula:—Asbestos or talc fiber, or mineral wool, fifteen per cent.; plaster-of-paris, eighty-four per cent.; long fiber, hemp, jute, &c., one per cent. These proportions are found to give excellent results and are deemed best under ordinary circumstances, but may be varied according to the conditions of use.

The ingredients above recited, in approximately the proportions stated, are mixed together in a dry state and then worked in a pug mill, or otherwise, until made into the consistency of mortar. The material is then introduced into a mold and is troweled, after which a darby is run over it to give it a true surface. The composition is permitted to partially set, when the face of it is scratched to give a rough surface for the wall plaster. The asbestos fiber and plaster-of-paris produce a fire-proof composition.

What I consider new in the art is the use of large quantities of asbestos or talc fiber or mineral wool, with enough plaster-of-paris to cement the asbestos or mineral wool together and act as a filling for the whole mass, thus making a somewhat spongy, flexible, elastic slab.

It will be readily understood that fifteen per cent. of asbestos or of mineral wool would more than equal in bulk the eighty-four per cent. of plaster-of-paris, and it is a very light, fluffy material, and will probably equal over sixty per cent. of the entire composition in bulk.

In all other plaster boards of this nature the main ingredient is plaster-of-paris and the fibers are put in in small quantities only for the purpose of binding the mass together. I find by the use of large quantities of asbestos in this material the slab, owing to its spongy nature, will bend over inequalities of timbers and will not break or fracture, nor will the shrinkage cause cracks in the wall plaster, as would be the case if it were made of plaster-of-paris alone.

While it is contemplated and preferred that the composition be made into the form of a slab or sheet, it is obvious that it may be used in other ways; cast in solid bricks, for instance, as used for the construction of interior walls.

Asbestos, talc fiber, and mineral wool are, for the purposes of this invention, substantial equivalents, hence where the claims recite asbestos, they are to be understood as comprehending said equivalents.

Having thus described my invention, what I claim is—

1. The herein described fire-proofing composition, consisting of asbestos and plaster-of-paris, with a binding fiber of jute or hemp, substantially in the proportion stated.

2. A fireproofing preparation composed of a relatively large quantity of asbestos and a relatively small quantity of plaster of paris, the asbestos serving to afford flexibility and the plaster to bind the fibers together.

In witness whereof I hereunto set my hand in the presence of two witnesses.

FRANK S. CULVER.

Witnesses:

F. W. PRATT,
WARDER VOORHEES.