

UNITED STATES PATENT OFFICE.

FRANCIS N. DAVIS, OF BELOIT, WISCONSIN.

IMPROVEMENT IN THE MANUFACTURE OF FLOOR-CLOTHS FROM STRAW-BOARD.

Specification forming part of Letters Patent No. **133,210**, dated November 19, 1872.

To all whom it may concern:

Be it known that I, FRANCIS N. DAVIS, of Beloit, in the county of Rock and State of Wisconsin, have invented certain new and useful Improvements in Oil-Cloths; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to manufacture and use the same.

A cheap, and at the same time ornamental and durable, substitute for oil-cloth and carpeting has long been a desideratum with dealers and housekeepers, and various articles have from time to time been produced for the purpose; but they have generally failed when submitted to practical tests, or in the end proved too expensive in their manufacture.

My invention has for its object to provide such an article for general use as shall possess all the strength and durability of oil-cloth and carpeting, and which shall be capable of a high degree of finish and ornamentation, and at the same time cost less than one-fourth or one-fifth the price of the cheapest oil-cloths and carpets. To the accomplishment of these results my invention consists in a new product, to wit: Straw-board manufactured in continuous lengths of the required thickness, having a hard, firm finish or face, and painted or printed with oil-colors or water-colors in any ornamental design suitable for oil-cloth and carpeting.

In carrying out my invention I take straw-board in continuous lengths, either plain or rendered fire-proof or damp-proof, or both, and pass it between suitable rollers, by which a ground-color or size is applied, and a smooth hard surface produced to receive the subsequent ornamentation. I then subject it to the operation of printing-rollers or paint it by hand, so as to form any ornamental figure or design, the same as ordinary oil-cloth or carpeting. After the paint has thoroughly dried I varnish the whole painted surface, preferably using No. 1 coach-varnish. This may be done immediately after printing, or after the board has been applied to a floor.

I generally employ water-colors in ornamenting, printing, or painting the board, as they can be laid on much more rapidly and

economically than oil-colors, and when dry and coated with varnish form a firm and hard instead of a soft and gummy surface. The board, therefore, will wear and retain its finish longer than the ordinary oil-cloth. In some cases, however, I use oil-colors, but prefer water-colors for the reasons above stated.

The board may be treated with alum before ornamentation in order to render it fire-proof, or with chemicals that will increase its strength and firmness, or render it fire-proof or damp-proof, or both fire and damp proof.

The sizing or ground-coloring process may be performed upon the machine on which the board is made, or by a separate apparatus, either connected with the paper-engine or constituting a separate machine.

I do not confine myself to any special order in working the process for preparing the board to receive the colors and varnish, as it may be varied extensively, the main object being that the board shall be sized and finished with a hard, firm surface before being painted or varnished. Any process, therefore, that shall accomplish these results I regard as included in my invention.

Instead of using clear straw for the manufacture of the board, I sometimes add a little stock to the straw; this, however, is a matter of preference.

In applying the board to a floor I tack it about one inch apart and about one-half inch from the edge, placing a tack occasionally in the center.

By my invention a substitute for oil-cloth and carpeting is produced which is as strong and durable as oil-cloth, possessing as fine a finish and costing about one-sixth as much. The expense of covering a room is about five dollars, where the cost would be thirty dollars to cover it with oil-cloth.

I am aware that Manila paper has been used as a carpet-lining, and also as a floor-covering without a carpet. This, however, I do not claim. Its cost is nearly equal to that of oil-cloth, and forms but a light, thin floor-covering.

Having thus described my invention, what I claim is—

1. As a new article of manufacture and

trade, a floor-covering composed of straw-board in continuous lengths, having a hard, firm surface painted or printed in suitable ornamental designs and coated with varnish, substantially as described, for the purpose specified.

2. Floor-coverings composed of continuous

lengths of straw-board ornamented in suitable designs with water-colors, substantially as described, for the purpose specified.

FRANCIS N. DAVIS.

Witnesses:

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