

T. POTTER.
Manufacture of Floor Oil-Cloth.

No. 207,679.

Patented Sept. 3, 1878.

Fig. 1

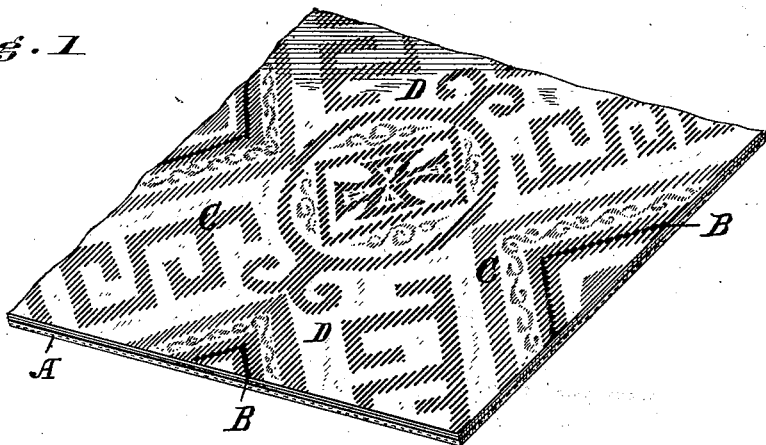
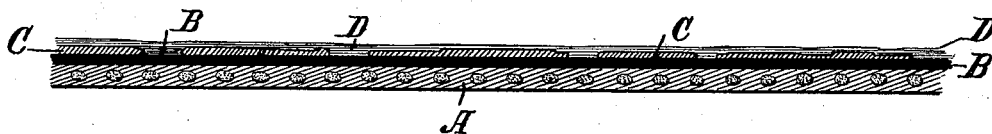


Fig. 2



Attests

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UNITED STATES PATENT OFFICE.

THOMAS POTTER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MANUFACTURE OF FLOOR OIL-CLOTHS.

Specification forming part of Letters Patent No. **207,679**, dated September 3, 1878; application filed December 6, 1877.

To all whom it may concern:

Be it known that I, THOMAS POTTER, of the city and county of Philadelphia, in the State of Pennsylvania, have invented an Improved Floor Oil-Cloth, of which I do hereby declare the following to be a full, clear, and precise description, and sufficient to enable those skilled in the art to which my invention appertains to comprehend and employ the same, reference being had to the accompanying drawing, of which both the figures are illustrations of the structure of the fabric invented, exaggerated in proportion for the sake of explanation—

Figure 1 being a plan view, and Fig. 2 a cross-section on the line *xx* of Fig. 1.

In both figures similar letters of reference indicate corresponding parts.

My invention relates to what are known as "floor oil-cloths," in contradistinction to any oil-surfaced fabric employed for purposes other than the covering of floors.

It consists in a new article of manufacture, a floor oil-cloth the pattern of which is separated from the web by a layer of impervious varnish—that is to say, it consists in a floor oil-cloth the ornamental pattern or coloring of which is wholly printed or placed upon a layer of impervious and elastic varnish, which completely covers and surmounts the sized, filled, and otherwise prepared but uncolored web.

To thoroughly comprehend my improvement, it becomes necessary to state the mode of making heretofore practiced and the defects in floor oil-cloths produced by the methods now in use.

Heretofore the foundation-web of jute, after being straightened and stiffened with size of glue or starch, has been coated and its interstices filled with a compound of ocher, or other earth or coloring-matter, and linseed-oil, or of other analogous substances, rubbed to a smooth but dead surface and then dried.

The pattern or colored figuring has then been printed with pigments, such as white lead or other oil paints, direct upon the dead and porous surface prepared as above set forth, and when the pattern has become dry a coat of copal varnish applied to the surface over all.

Floor oil-cloths produced by the above process are defective, in that the dead surface

first effected on the web, being of necessity to a given extent pervious, absorbs the oils of the pigments used to print the pattern, impairing the tone and brilliancy of color and rendering the printed portions of the surface themselves absorbent, while weakening the fibrous structure of the foundation-web and making it brittle.

The finishing-coat of varnish is likewise and for similar reasons more or less absorbed into the substance both of pattern and of web, weakened, and consequently made liable to be worn off in spots, destroying the function of rendering the finished fabric impervious to wet and thus preserving it.

In my improved floor oil-cloth the foundation-web, after being sized, filled, rubbed, and dried in the usual manner, is coated with an impervious varnish, composed, for instance, when a dark tint is desired, of linseed-oil and Chinese blue, boiled with such a degree of heat as will convert the oil and blue into a varnish, or composed of linseed-oil boiled to the consistency of strong "daub" or "sweetmeats," colored with yellow ocher when a buff ground is desired, or colored with white lead for a drab ground, or being merely copal varnish, or any substance answering the definition of a varnish, upon which varnish coat, when dry, the pattern or other coloring is printed in the usual manner with white lead and oil or other pigments, and allowed to dry, the whole finally being superficially covered with copal or other clear varnish.

In the drawings, A represents the web; B, the layer of impervious varnish; C, the pattern pigments forming the pattern, and D the coat of superficial varnish.

It is obvious that the essence of my invention lies in the production of a floor oil-cloth in which the absorbent ingredients of the pigments composing the pattern and the filling material employed to surface the web are separated by a layer of impervious material, which, surfacing in the most effective manner the filled web, forms a perfect and impervious face or bed, upon which is printed the pattern, and into the substance of which it is impossible for any of the ingredients of the pattern-pigments to penetrate, the cohesion of all portions being meanwhile perfect.

It is obvious, therefore, that the brilliancy of the pigments will be not only unimpaired, but even augmented, when a black or dark tint of varnish is employed, and that the damaging permeation hereinbefore explained will be totally obviated, while the brightness of the entire surface of the finished product will be increased, the superficial varnish encountering an almost entirely non-absorbent surface, while finally the whole fabric will be durable, because impervious to moisture, and both elastic and tough of texture.

The coat of superficial varnish forms no part of my invention, but is to be employed as heretofore.

When the colors forming the pattern are positive it is preferable to use a black or very dark intermediate layer. When, however, the pattern is in light tints, the layer may be light

in color. When, also, the pattern is largely in open work, the layer constituting in such case the ground may be colored to any desired tint of the ground.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

As a new article of manufacture, a floor oil-cloth having an intermediate layer of impervious varnish between the pattern and filled web.

In testimony whereof I have hereunto signed my name this 24th day of November, A. D. 1877.

THOMAS POTTER.

In the presence of—

J. BONSALE TAYLOR,
JOHN M. RIDINGS.