

(No Model.)

J. C. LYON.  
METHOD OF MANUFACTURING LINOLEUM OR OIL FLOOR CLOTH.  
No. 500,812.

Patented July 4, 1893.



Fig. 1.

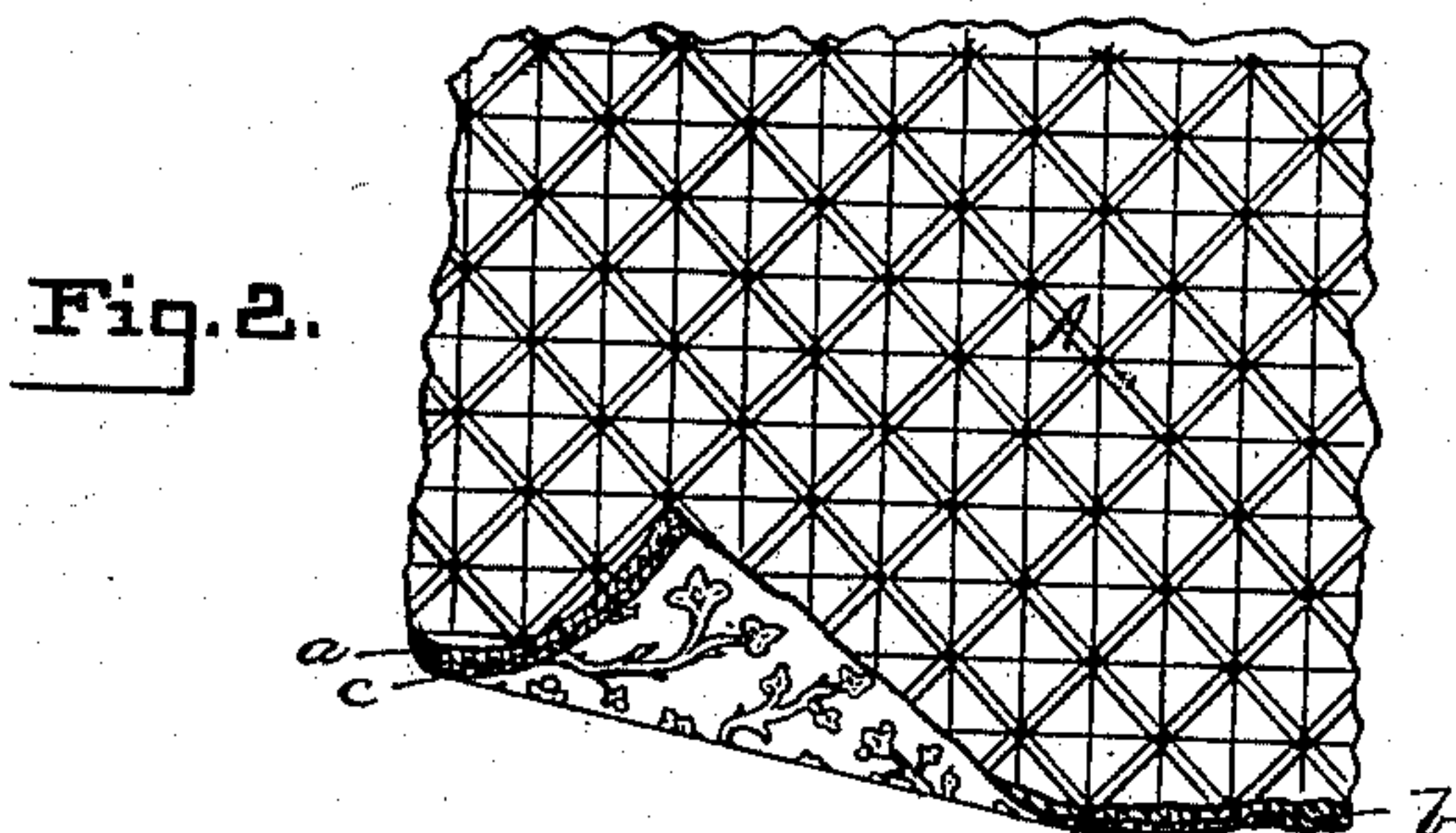


Fig. 2.

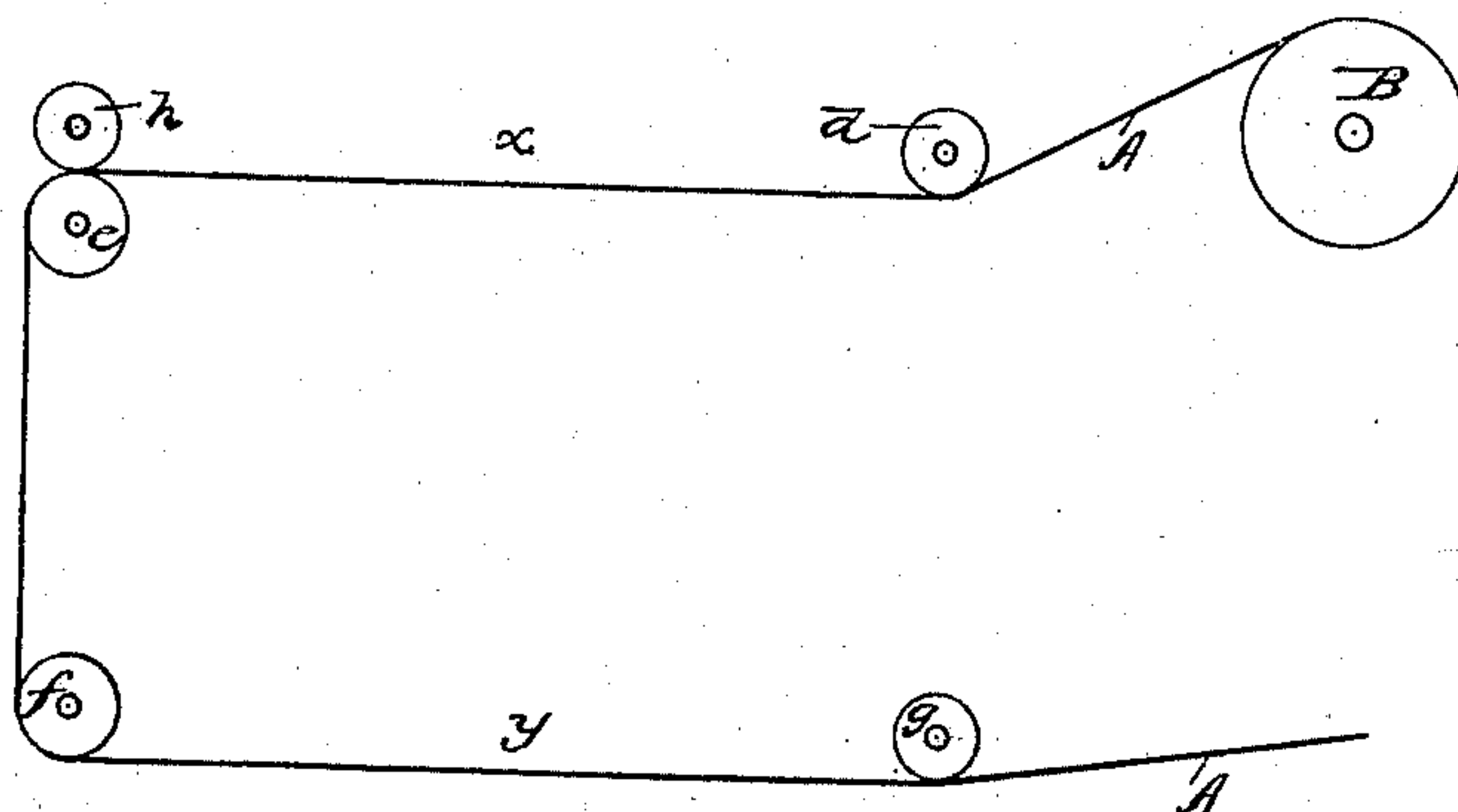


Fig. 3.

WITNESSES:—

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# UNITED STATES PATENT OFFICE.

JAMES CRAWFORD LYON, OF BALTIMORE, MARYLAND.

## METHOD OF MANUFACTURING LINOLEUM OR OIL FLOOR-CLOTH.

SPECIFICATION forming part of Letters Patent No. 500,812, dated July 4, 1893.

Application filed January 16, 1893. Serial No. 458,565. (No specimens.)

*To all whom it may concern:*

Be it known that I, JAMES CRAWFORD LYON, a citizen of the United States, residing at Baltimore, State of Maryland, have invented certain new and useful Improvements in the Method of Manufacturing Linoleum or Oil Floor-Cloths, of which the following is a specification.

My invention relates to an improvement in linoleum and oil-floor-cloths, and has for its object to provide a floor covering of the linoleum-oil-cloth type which shall be double-surfaced, that is, shall have a finished, wearing surface on both sides. The surfaces may be either alike or dissimilar in the printed design.

To this end it consists of a method of manufacture which I shall presently point out.

In the accompanying drawings, Figure 1, is a view in cross-section showing a linoleum-oil-cloth-surfaced fabric, constructed according to my invention. Fig. 2, shows a sheet of my improved floor-covering, one corner being turned over so that both surfaces may be seen. Fig. 3, is a view, illustrating diagrammatically, means for producing my double-surfaced floor covering.

In the drawings, the letter A, indicates the floor-covering of which *b*, is the foundation fabric of jute, or other suitable material. *a*, and *c* are coatings applied thereto and as shown in the drawings, the side *a*, is of linoleum and the side *c*, is of oil-cloth composition, so that the finished article presents on one side an oil-cloth surface, while on the reverse side it is linoleum. Both surfaces have an ornamental printed surface of any desired pattern.

In manufacturing linoleum or oil-cloth, the jute-fabric, ordinarily employed as a base upon which to deposit the composition surfaces, is stretched, and the coatings are applied in successive layers until a desired thickness is attained. When the composition layers have been applied and dried, an outer, ornamental wearing surface of paint or pigment, is applied to the outer surface of each of the said composition layers on either side of the base fabric. The floor-covering is now a finished article.

The letter B, Fig. 3, indicates the supply-roll, from which the base-fabric is unwound

and whence it passes over the tension rollers *d*, *e*, *f*, *g*, *h*, to the drying frames. The coatings of composition are applied at the points *x*, and *y*, between the rollers *h* and *d*, and *f* and *g*, respectively, so that when the fabric has passed the roller *g*, it is coated on both sides and is ready for drying. After each coating the fabric is submitted to the action of heat, to thoroughly dry it, before the next application. When several coatings are applied on one side only, the several heatings which follow each application, tend to damage the fiber of the base-fabric by making it brittle, friable and consequently more easily disintegrated. This is particularly true in the case of oil cloth, where the coatings are so thin that they do not materially protect the fiber. Where one side only is coated, that side of the fabric, which is intended for the under or bottom side of the floor-cloth, is totally unprotected, and is in consequence especially liable to be damaged, as above stated. I avoid this objection by coating the base fabric on both sides without drying the coats or layers on either side separately, and then subjecting both of said coats or layers to an equal extent to the drying action of heat. By this method the coatings are so tempered that the opposite sides alike have the desired property of toughness and elasticity and the fiber of the base-fabric is wholly protected.

In use either side of my improved cloth may be placed uppermost, the under side serving to cushion the upper side and make it soft and easy to the tread of the foot. When a change is desired, the sides may be reversed and the worn side will in turn serve to cushion the fresh side, as well as serving to keep the base fabric from contact with dampness.

I am aware that it is not new to make carpet linings with a soft spongy central layer of paper pulp or some equivalent therefor, and a layer of tough paper on each side of said central layer, but I am not aware that it is old to make a floor covering comprising a foundation or base fabric; a layer of linoleum or oil-cloth composition on each side of said foundation, and an ornamental wearing surface applied to each of the outer sides of the composition layers. With the ordinary floor covering of the class described, when the paint or pigment used to give an outer ornamental



wearing surface is worn through, the article is no longer presentable and it is necessary to replace the worn floor covering with a new one, but with the improved double-surfaced floor covering herein described, when the outer ornamental surface on one side is worn through, the fabric is reversed or turned over and a new and unused surface exposed. The composition layer on the worn side of the floor covering will now serve to cushion the new wearing surface and to protect the underneath side of the base fabric from moisture, but, as hereinbefore described, to successfully make the double-surfaced floor covering, it is essential that the linoleum or oil-cloth composition layers on opposite sides of the base fabric shall be dried and hardened alike by submittal to an equal extent to the action of heat. I contemplate coating both sides with linoleum, or both sides with oil-cloth composition or one side with each as I may desire.

When rolled up for shipment, or storage, the adjacent surfaces of my improved floor covering, having an affinity for each other, tend to stick together, to the injury of both. To obviate this evil I employ a carpet lining having a paraffined or powdered surface, so that it will not adhere to the surface of the

floor covering. I use a sheet of the lining of the same size as the floor-covering, and placing one on the other, I roll them together, so that the wearing surfaces of the floor-covering do not touch each other. When a sale is made, an equal amount of both lining and floor-covering is cut off; the lining is then used to underlay the floor-covering, when the same is placed on the floor.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The herein described method of manufacturing floor-coverings of the linoleum-oil-cloth type, the same consisting first in applying to both sides of a base fabric of fiber, layers of linoleum or oil-cloth composition; second, in subjecting both of said layers to an equal extent to the action of heat to dry them; and third, in applying to the outer side of each of the composition layers, an outer ornamental wearing surface of paint or pigment.

In testimony whereof I affix my signature in the presence of two witnesses.

JAMES CRAWFORD LYON.

Witnesses:

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