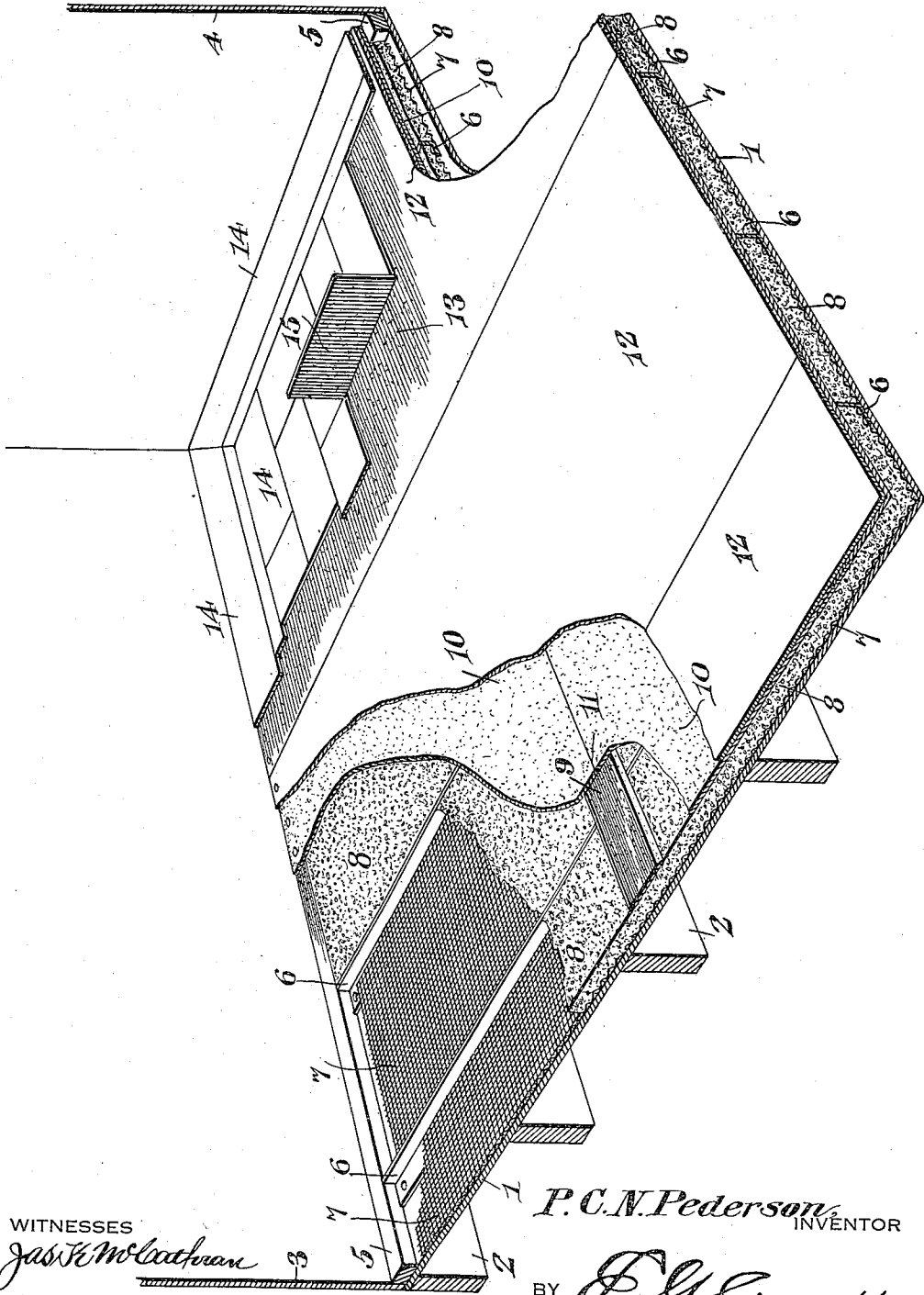


P. C. N. PEDERSON.
FLOOR COVERING.
APPLICATION FILED AUG. 24, 1914.

1,158,835.

Patented Nov. 2, 1915.



WITNESSES

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Specification of Letters Patent.

Patented Nov. 2, 1915.

Application filed August 24, 1914. Serial No. 858,348.

To all whom it may concern:

Be it known that I, PETTER C. N. PEDERSON, a citizen of the United States, residing at Superior, in the county of Superior and State of Wisconsin, have invented a new and useful Floor-Covering, of which the following is a specification.

This invention has reference to floor coverings, and is designed to provide a substantially permanent floor covering producing a smooth, unbroken surface particularly resistant to wear, especially as regards the varnish finish which may be applied, which varnish finish because of the character of the floor will long out last a similar varnish finish applied to a solid hard wood floor.

In accordance with the present invention it is preferred to provide a base of cement which may be laid upon the ordinary rough floor and on this base there is provided a yieldable and more or less elastic covering composed of paper sheets in layers with the sheets of one layer extending crosswise of those of the other, the layers being cemented together and fastened to the edges of the base, so as to be under tension, thus keeping the paper layers smooth. To the upper surface of the applied layers of paper there is secured a wear surface composed of thin wood veneer which may be laid in any desired ornamental design, this veneer being united to the paper layer preferably by shellac, while the latter is rendered adhesive or tacky by heat, wherefore the veneer is not only firmly united with the paper against accidental separation therefrom, but the cementing material is moisture-proof. The veneer surface may be finished with any suitable preparation of which there are many on the market for finishing hard wood floors, whereupon the floor will be found to be of greatly prolonged life both as to the varnish and the wood, over hard wood floors as ordinarily prepared.

The invention will be best understood from a consideration of the following detailed description, taken in connection with the accompanying drawings forming a part of this specification, with the further understanding that while the drawings show a practical form of the invention, the latter is not confined to any strict conformity with the showing of the drawings, but may be changed and modified so long as such changes and modifications mark no material departure from the salient features of the invention.

In the drawings, the figure is a perspective view with parts broken away illustrating the various steps in the preparation of the floor and the application of the floor covering, it being understood that the proportions are more or less exaggerated in the illustration.

Referring to the drawing, there is indicated a small portion of flooring 1 laid directly upon joists 2, the flooring 1 being the ordinary rough flooring upon which it is customary to lay the finishing flooring. In the drawing there are also shown side walls or partitions 3, 4, so that the illustration may be considered as showing one corner of a room or compartment.

Around the edges of the room at the partitions 3, 4 relatively narrow strips 5 are laid and secured to the rough floor 1, and the remaining area of the room is divided into sections by angle strips 6 usually of iron or steel, these strips being made fast by one web to the flooring 1, with the other web upstanding to the height of the strips 5, which latter are of wood.

Extending between the upright webs of the strips 6 over the floor 1 is metal netting 7. Upon the netting 7 there is applied cement 8 to a depth corresponding to the height of the upright webs of the strips 6 and the height of the strips 5, and when the cement hardens there is thus provided a cement base or support coextensive with the area of the floor inside of the strips 5. The filling constitutes a floor which may be smooth and level, and has the hardness incident to cement or concrete. Of course, it will be understood that in place of the angle metal strips 6, wooden strips may be employed.

There are other ways of preparing the floor whereby a smooth hard surface is obtained, but the one described answers excellently for the preparation of a new floor for the final finishing in accordance with the present invention.

At suitable intervals strips 9 of paper are laid upon the prepared base, these strips being relatively narrow and of relatively thin paper, and are so placed as to underlie the joints of the first layer to be applied. Relatively wide strips 10 of paper such as heavy Manila paper, are pasted and tacked or otherwise secured along the strips 5 at the edges of the compartment, and wherever the strips 10 meet their meeting edges may be butted as shown at 11, and there held to-

gether, these meeting edges being underlaid by the strips 9. Applied to the layer made up of the sheets 10 are other sheets 12 similar to the sheets 10 but extending crosswise thereof. The sheets 12 are pasted to the sheets 10 so that the two layers are firmly united, and these layers are made fast to the floor at the edges only where they are secured to the strips 5 by tacks or nails which may be supplemented by paste, and by having both layers damp when applied they dry under sufficient tension to maintain them always taut, and hence flat and smooth upon the sub-base. The top paper layer is now covered with shellac which may be in the form of a thick solution, and this shellac coating may then be allowed to dry, or the drying may be hastened by heat. Such a shellac coating is indicated at 13.

Laid upon the paper covering is a veneer finishing layer 14 of wood either in the form of parquetry or in any other form desired. The showing of the drawing is that of parquetry, and each block has one face provided with a shellac coating 15 applied thereto and dried. Now with the shellac coating of the paper and that of the veneer heated until softened and tacky, the veneer is caused to adhere firmly to the paper by the shellac coatings which coalesce, and by applying pressure until the shellac coating has chilled and hardened the union is made exceedingly firm with the shellac forming a coating of waterproof material between the paper and the wood veneer. After the final coating of wood veneer is laid, the floor is finished in any suitable manner, as by the application of any one of a number of well known floor varnishes.

The sub-base of cement or concrete may be made of various thicknesses, but ordinarily a thickness of about one inch will be found to be sufficient, the sub-base taking the place of the ordinary finishing flooring. A mixture of cement, fine sand and flour paste may be used. The reinforcement 7 serves to strengthen the cement layer. The strips 9 may have their edges beveled by suitably tearing the strips and these beveled edges are then pasted or otherwise caused to adhere to the basic mixture where the joints 11 will come.

When the paper layers have dried after being laid they may be painted or oiled, thus protecting them against dampness, but whether painted or not, the shellac layer for causing the veneer to adhere to the paper will protect the latter from dampness. The softening of the shellac may be accomplished by heating the shellac coating, while still containing the solvent, by the flame of a torch to burn off the solvent, which is usually alcohol, and the veneer may be then laid in place while the shellac is still hot and adhesive, or the veneer may be laid and by

means of a hot iron placed upon the veneer the shellac is softened so that the coating on the veneer and the coating on the paper coalesce, the veneer being held down by a weight until the shellac is finally hardened. Such a floor is readily repaired, since at any time the veneer may be taken off by first heating it to soften the shellac, and then new pieces may be laid as before. Shellac has the advantage over glue and similar adhesives in that it is not affected by water, and readily softens under heat. The veneer after being laid may be scraped, sandpapered and varnished as is customary for finishing parquet floors.

The layers of paper have the advantage of being more or less cushioning and elastic, and this pliable or elastic quality of the floor is retained when the final coating is in the form of veneer. It is found that the finishing layer of varnish applied to the veneer will wear many times longer than a similar coat applied to a solid hard wood floor.

While in the foregoing description reference is made to floors only, it is to be understood that many of the features of the invention are applicable to inside and outside walls, roofs, and other surfaces, and, therefore, the term floor or the like is used in the claims as covering any surface to which the invention is applicable.

What is claimed is:—

1. The combination with a floor or the like, of a covering therefor comprising an under structure of cement, a plurality of superposed paper layers cemented together and connected at the edge portions to the floor or the like, and a finishing or outer layer of veneer with a cementing layer of shellac between the veneer and the adjacent paper layer.

2. A floor or the like comprising a board layer, wooden strips at the margins of the surface to be covered and there secured to the boards, angle strips of metal crossing the area to be covered and secured to the boards in spaced relation one to the other, metal reinforcement between the angle strips, a layer of cement upon the boards covering the reinforcement and lodged between the angle strips and the edge strips and of a depth to reach to the surface of the angle strips and edge strips, a plurality of united paper layers made up of strips of paper with those of one layer crossing those of the other and with the margins of the layers secured to the edge strips of the area to be covered, the paper layers being under tension, and a layer of wood veneer upon the outermost layer of paper with a uniting cement of shellac securing the veneer to the outermost paper layer.

3. In a floor or the like, a covering comprising a plurality of layers each composed

of paper strips laid under tensional strain with one layer cemented to the other, a layer of shellac upon the outermost layer of paper, and a layer of wood veneer upon the shellac and united to the outermost layer of paper by said shellac.

4. The combination with a floor or the like, of a plurality of layers of paper formed of elongated paper strips with the strips of one layer united to those of the other and extending crosswise with respect to those of the other, the united layers being attached to the floor or the like at the margins and under tensional strain, and a surface coating of wood veneer with a uniting layer of shellac interposed between the wood veneer and the outermost layer of paper.

5. The method of preparing floor coverings, which consists in first securing to the floor layers of paper under tensional strain, then producing upon the paper a layer of shellac, applying wood veneer to the shellac layer, and causing the cementing of the

veneer to the paper by the shellac under the action of heat and pressure.

6. The method of surfacing floors and the like, which consists in first producing upon the floor a covering composed of paper in a plurality of layers united together and to the floor, then covering the paper with a coating of shellac, providing wood veneer with one surface having a coating of shellac, laying the wood veneer with its shellac surface in engagement with that of the paper, and then causing a cementing of the veneer to the paper by the action of heat and pressure upon the shellac layers to soften and coalesce said layers.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

PETTER C. N. PEDERSON.

Witnesses:

MARGARET M. HOIT,
OSCAR N. HALVORSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."