

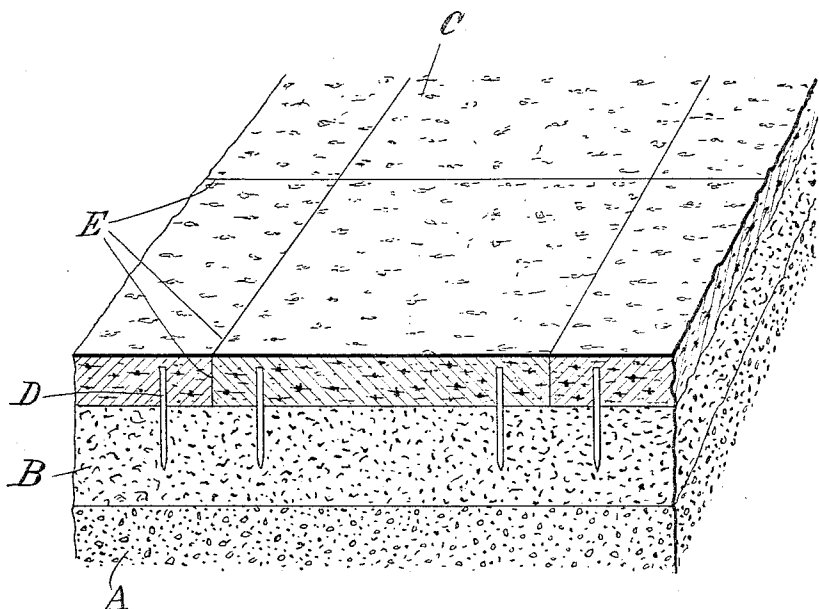
D. E. KENNEDY.

TILE FLOORING.

APPLICATION FILED DEC. 16, 1911.

1,054,424.

Patented Feb. 25, 1913.



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TILE FLOORING.

1,054,424.

Specification of Letters Patent.

Patented Feb. 25, 1913.

Application filed December 18, 1911. Serial No. 686,278.

To all whom it may concern:

Be it known that I, DAVID E. KENNEDY, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Tile Flooring, of which the following is a specification.

The object of my invention is to improve the art of tile flooring and to overcome the existing difficulties in constructing a floor having a tread surface of cork or similar tiling upon a hard non-pierceable base of concrete or similar material, and the invention consists in providing means whereby the tiles may be laid without the use of weights, and in the various features of construction and combinations of parts hereinafter set forth and claimed.

Heretofore cork and similar tiling that is yielding and that tends to absorb moisture and to expand and contract under varying atmospheric conditions and which possesses other characteristic properties, has been most satisfactorily applied to wooden floors to which the tiles could be securely nailed. Although the benefits and advantages of covering a cement floor with a tread layer of cork or similar material seem obvious, the use of cork tiles on such a cement base has been limited because of the difficulty and expense of laying such tiles on account of the characteristics of the material itself, and specially on account of the difficulty of securing the tiles to the base. It is necessary to squeeze such tiles together under pressure when being laid to prevent the formation of cracks between adjacent tiles and this tends to cause the tiles to spring away from the top of the concrete base. Also, on account of the inequalities of the surface of the concrete base, air pockets tend to form beneath the tiles, thus rendering inefficient any adhesive that might be put on the concrete surface.

Various attempts have been made to overcome the bulging of the tread surface and the formation of air pockets, particularly by placing bags of sand or iron weights over the entire floor surface until the bulging of the tiles and any tendency to curl at the edges was overcome. But such attempts have proven impractical, owing to the expense and delay involved. I have discovered, however, that a tread layer consisting of tiles of cork or similar material may be laid upon a concrete base by providing an interposed

layer, which may be bonded, both to the concrete or other hard base and to the cork tread and which is sufficiently soft to permit the tiles to be nailed into intimate contact with the surface thereof while being bonded to said layer, but which will be sufficiently hard to form a firm support for the tiles. Such intermediate layer may be made of cement and sand with a yielding filler, such as sawdust, factory ashes, asbestos, granulated cork and like materials, which will serve the good offices of a wooden floor for receiving the nails and at the same time make it possible to have the desirable solid concrete flooring instead of the undesirable wooden flooring.

The drawing forming a part of this specification is a perspective view showing a portion of such a floor, the tiles being shown at the front in section to more clearly show the attaching nails.

My floor thus comprises a non-pieceable base, which may be of usual reinforced concrete construction or otherwise as desired. Upon this base is laid the composition capable of receiving nails and being bonded to the tiles, and upon this are laid the tiles, which are then nailed in place. The tiles are preferably cemented to the composition backing and also to each other at their abutting edges by a suitable glue or adhesive. The composition, as is obvious, will be thoroughly bonded to the base or concrete floor proper. This provides a solid floor substantially as if made in one piece, but which comprises the desirable hard base, the desirable cork, or other similar tiling, and the intermediate layer of composition cement which does not detract from the qualities of the hard base beneath it, but serves to permit the tiles to be nailed in place.

In the drawing the part indicated by A represents a hard concrete base, its upper portion only being shown, as any hard floor may be used.

The part B represents the composition material.

Portions of six tiles C are shown, the front one being shown in section to more clearly show the nails, and the bounding lines E are also intended to represent a thin layer of adhesive cement. Brads are preferably used in nailing the tiles, and the final blow given them is directed toward driving them somewhat below the surface of the

tile, as shown in the drawing, so that when the tile recoils from the blow, the puncture will close above the brad to conceal it. Enough of these brads are applied around the edges of the tiles or elsewhere to securely hold them in place.

I do not wish to limit myself to any particular cement composition, it only being necessary that the composition unite with the concrete base to form a solid floor and at the same time to be capable of receiving the nails. I have found that sawdust, asbestos, granulated cork or cinders may be satisfactorily used as a filler, but I do not limit myself to these, as other fillers giving the desired results may be used. When using cinders, a good composition is made by using one part Atlas Portland cement (or its equivalent), two parts screened sand, and five parts fine, clean, screened anthracite cinders, or four parts soft coal cinders. The cinders are best screened through a screen having about twenty-five meshes to the square inch. The cement, sand and cinders are thoroughly mixed dry, after which water is added, and they are again thoroughly mixed. It is best to lay this composition upon the concrete base while the latter is still wet and green. If this is not possible, the surface of the concrete should be prepared by first thoroughly sweeping and then soaking with water. Dry cement is then sprinkled on the wet surface, which may be spread with a broom to form a thin grout over the entire surface of the concrete. The composition is then laid on this grout. This grouting is not absolutely essential, but it gives better results. After it is thoroughly dry, the cork tiling is laid,

which should preferably be within a month after the composition is applied. The layer of composition should be at least one inch thick to give the best results, and troweled to a smooth sidewalk finish.

Having thus described my invention, I claim:

1. A permanent flooring comprising a plurality of non-homogeneous superimposed layers forming an integral structure comprising a hard non-pierceable base, a yielding non-metallic wear or tread layer comprising a plurality of independent units or tiles and an interposed layer between the base and tread layers, said intermediate layer being relatively softer than the base layer and adapted to be pierced by metallic securing means when in a dry condition.

2. A permanent flooring formed of a plurality of non-homogeneous superimposed layers, comprising a concrete base, an intermediate layer consisting of a relatively soft composition bonded to the base layer, a tread layer consisting of a plurality of tiles of non-mineral yielding material, an adhesive between said intermediate layer and tread layer, and independent securing means engaging with the intermediate layer for holding the bottoms of said tiles in intimate contact with the surface of the intermediate layer while said adhesive hardens.

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

DAVID E. KENNEDY.

Witnesses:

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