W. C. HARLOW.

FINISH FOR BUILDINGS.

APPLICATION FILED SEPT. 4, 1908.

1,083,323.

Patented Jan. 6, 1914.

2 SHEETS—SHEET 1.

FIG. 1.

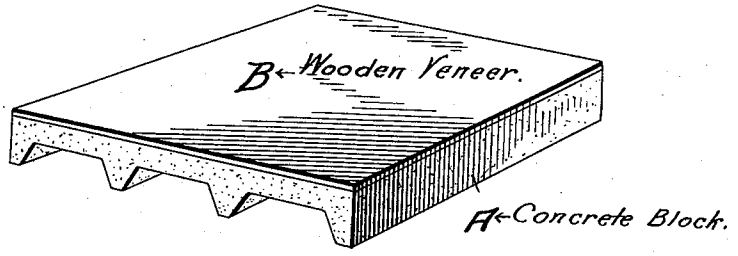
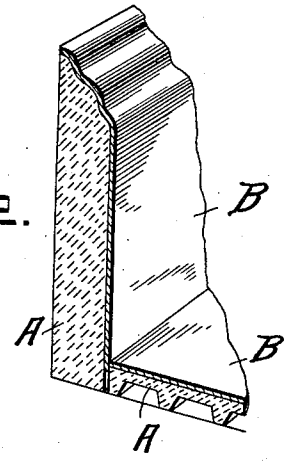
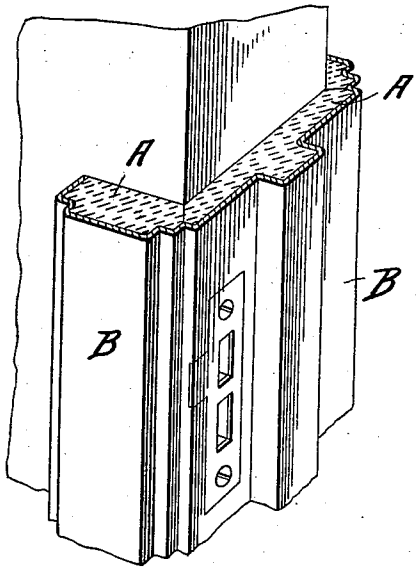


FIG. 3.

FIG. 2.





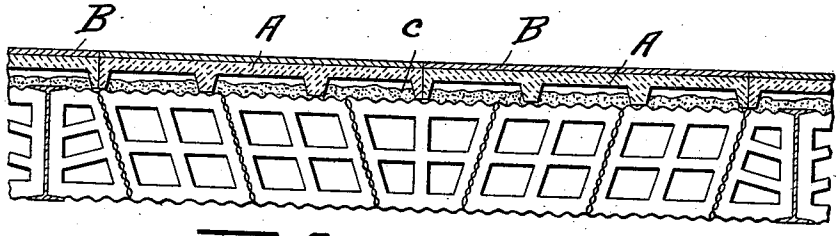


FIG. 4.

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W. C. HARLOW.

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2 SHEETS—SHEET 2.

FIG. 5.

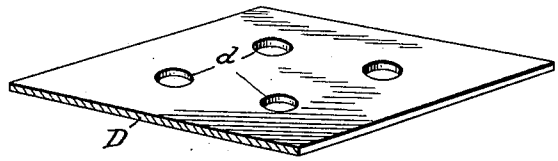


FIG. 6.

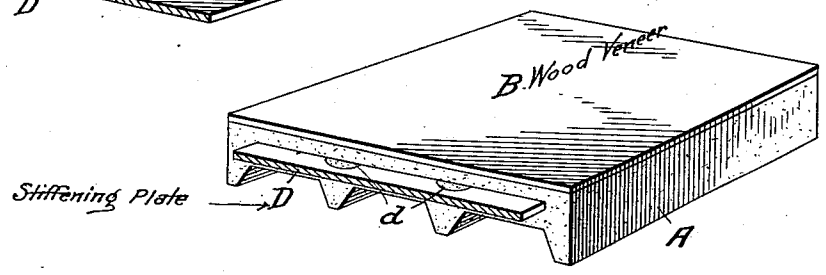
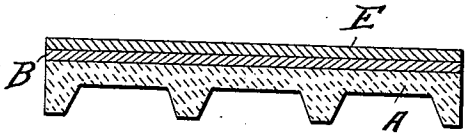


FIG. 7.



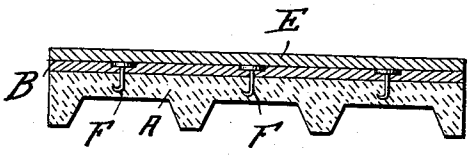


FIG. 8.

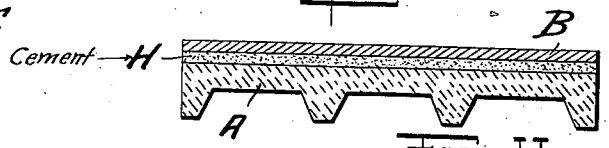


FIG. 9.

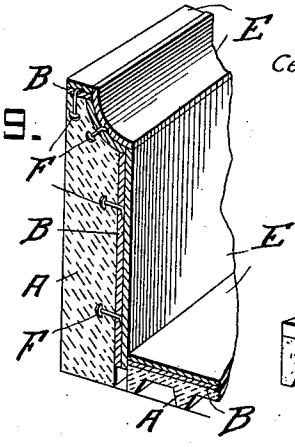


FIG. 11.

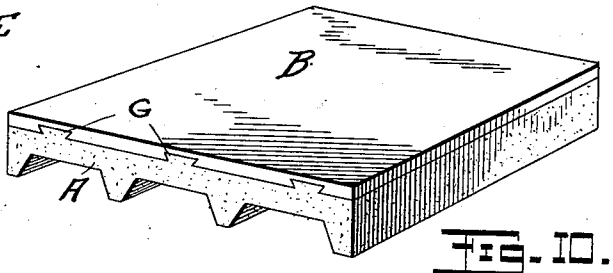


FIG. 10.

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FINISH FOR BUILDINGS.

1,083,323. Specification of Letters Patent. Patented Jan. 6, 1914.

Application filed September 4, 1908. Serial No. 451,764.

To all whom it may concern:

Be it known that I, WALTER C. HARLOW, a citizen of the United States of America, and a resident of the borough of Brooklyn, city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Finish for Buildings, of which the following is a specification.

This invention is an improvement in finish for buildings, more particularly adapted for interior finish, and has for its object to reduce the cost of floors and wood trim by minimizing the amount of costly woods required.

A further object is to reduce the risk of fire, by substituting non-inflammable material for the greater part of the woodwork.

My invention consists essentially in structure comprising a substantial body of cement, concrete, or other hardened-plastic, non-inflammable material, with a veneer of wood attached thereto, to be used in place of the solid wood of which floorings, baseboards and wainscoting, lintels and door-jambs, window-frames and the like have heretofore been made. By veneer is here meant a layer or layers of wood, intended principally for decorative effect, and of the least thickness practically consistent with the attainment of a smooth and durable surface, or with due resistance to wear, rough usage, and weather conditions.

In the accompanying drawings, which illustrate certain only of the applications of my invention, Figure 1 is a perspective view of a floor tile embodying the principles of my invention; Fig. 2 shows a perspective of a fragment of a baseboard similar in construction to the tile; Fig. 3 is a sectional perspective view of a door-jamb embodying the invention; Fig. 4 is a vertical sectional view showing a method of setting tiles and similar pieces; Fig. 5 shows a perforated slab of slate or other suitable material which may be embedded in a tile or other flat piece to prevent warping; Fig. 6 is a perspective sectional view of a tile provided with such stiffening plate; and Figs. 7, 8, 9, 10 and 11 are views of other forms in which the invention may be embodied.

Referring now to Figs. 1, 2 and 3, A indicates the cement or equivalent body of the tile, baseboard, or similar piece, and B the wood veneer. The tile, Fig. 1, may have a corrugated under surface and may be laid in soft cement C, Fig. 4. Baseboard and other vertical members, such as window frames, may be attached to the walls in a similar manner. Obviously, however, the tiles may be left loose, and vertical slabs may be held by screws or other mechanical fasteners. The method of manufacture of such articles as these shown is to put the wood veneer into a mold with the plastic cement, which then hardens in contact with the wood and adheres strongly to the latter. I find, however, that not infrequently there is a tendency for tiles, slabs and flat strips, thus veneered, to warp slightly after the cement has hardened sufficiently to be removed from the mold, and that it is advisable to use means to overcome this tendency. For this purpose I have found a stiffening plate or slab of slate or other rigid material to be highly effective, and in Fig. 5 I show such a slate slab D for use in a tile. The cement, if of suitable character, adheres strongly to the slate, but, if necessary, the slab may be perforated as shown at *d*, to assist in uniting the cement strata above and below the slate. Instead of slate, other materials may be used, as, for example, artificial slabs of cement, which have been allowed to harden into their final shape before being embedded as stiffeners in the body A. It is also possible to use suitably formed and perforated metal plates for this purpose. In Fig. 6, I show a tile partly broken away to show how the stiffening slab D is embedded. Substantially the same result may be attained, as shown in Fig. 11, by molding the cement body of the tile without the veneer, making it of slightly less than its final thickness, and attaching the veneer B by means of a plastic coating H of similar cement, after the body has hardened into its final form and is able to resist the warping tendency of the new coating when the latter hardens.

It was stated above that ordinarily the cement adheres strongly to the wood veneer. I have found that most of the commonly-used woods require no special means of securing the wood to the cement. However, in case it should be desired to use a wood of greasy or non-adherent character, special means may be taken to secure it. One of the simplest of these is to mold the cement in contact with a veneer B, Fig. 7, of some cheap wood which adheres naturally to cement, and to glue the veneer E of greasy wood to this first veneer. Another method, which may

be used in case the first veneer does not give sufficient adhesion, is illustrated in Fig. 8. Short nails or rivets F are driven through the first layer of veneer before the tile is made. Their ends are bent over and serve to hold the cement when the latter is hard. A slightly different expedient, shown in Fig. 9, is to drive the nails or rivets part way through the first veneer before the cement is poured. When the cement is hard, the ends of the nails or rivets are clenched over. In both these cases, Figs. 8 and 9, a second veneer E is glued over the first to hide the fastening devices. A fourth means of securing adhesion is to groove the veneer, as shown at G in Fig. 10. Obviously, many other devices may be resorted to, and I do not limit myself to those here described and shown.

In applying veneer to a fluted or irregular surface, such as shown in Figs 2 and 9, I take advantage of the ease with which thin strips of wood bend parallel to their grain. The veneer strip is laid in the mold and the cement is introduced under pressure, thereby forcing the strip of veneer to conform to the shape of the mold.

An important advantage of my invention lies in the fact that the wood used for veneer does not have to be thoroughly seasoned before it is used. This is partly because the veneer itself is so thin as to dry much more rapidly than the boards, etc., commonly used. A more important reason, however, is the fact that the veneer cannot shrink on drying, since it is held to its first form and dimensions by the cement body. This fact permits flooring to be laid in any desired pattern at a very small expense, and with none of the shrinkage and opening of seams which occur when imperfectly seasoned woods are laid in the ordinary way.

Obviously, the principles of construction above outlined may be applied to many other varieties of wood trim and likewise to structural members having wood surfaces. Examples of the application of my invention are columns, both plain and fluted, mantels, staircases, ornamental arches over doors, and the like. In some cases, three or more veneers may be required to produce an especially fine finish.

By the terms "cement" or "cementitious materials" as used in the specification and claims, I mean self-hardening calcareous or magnesian cementitious materials such as Portland or other like cements.

What I claim as new is:

As a finish for buildings, a tile or slab of cementitious material, a wood veneer applied thereto, and a stiffening plate of rigid, inflexible material incorporated therewith.

Signed at New York, N. Y. this 31st day of August 1908.

WALTER C. HARLOW.

Witnesses:
J. F. BRANDENBURG,
FREDERICK C. BONNY.

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