

F. C. RUPPEL.
CELLULOID COATED CEMENT BODY.
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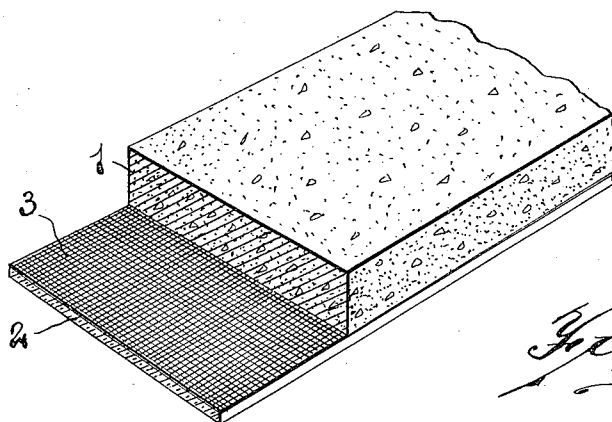


Fig. 1

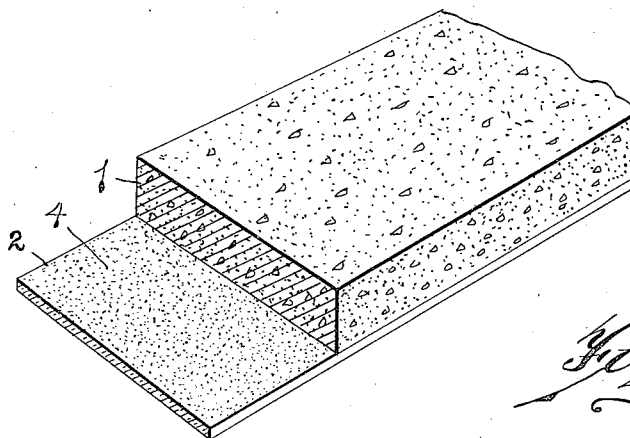


Fig. 2

Frederick C. Ruppel

INVENTOR.

BY

Edward N. Pagelsen

ATTORNEY.

UNITED STATES PATENT OFFICE.

FREDERICK C. RUPPEL, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO HAYES-RUPPEL MANUFACTURING COMPANY, OF GRAND RAPIDS, MICHIGAN, A CORPORATION OF MICHIGAN.

CELLULOID-COATED CEMENT BODY.

1,379,837.

Specification of Letters Patent. Patented May 31, 1921.

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To all whom it may concern:

Be it known that I, FREDERICK C. RUPPEL, a citizen of the United States, and residing at Grand Rapids, in the county of Kent and State of Michigan, have invented a new and Improved Celluloid-Coated Cement Body, of which the following is a specification.

This invention consists in a body of concrete or a similar plastic mass and a transparent or translucent facing united by pouring the plastic mass against the transparent or translucent facing.

It further consists in the details of construction illustrated in the accompanying drawing and particularly pointed out in the claims.

In the drawing, Figures 1 and 2 are perspectives of two concrete slabs faced with translucent materials.

Similar reference characters refer to like parts in the two views.

Attempts have been made to provide tiles, other slabs of concrete and hollow bodies of concrete and other plastic materials with outer surfaces which can be cleaned, but great difficulty has been met heretofore in the attempt to secure such facings to the body of the plastic material. In the present case, a slab 1 of concrete is shown provided with a face 2 of celluloid which may be as thin as desired and which may have any desired tint.

In securing the concrete mass to the facing of celluloid, a sheet of cheese cloth 3 or other thin fibrous material is attached to the celluloid by means of a hot iron which is passed back and forth over the cheese cloth until it unites with the celluloid. Or the fibrous material may be secured to the celluloid by means of a suitable cement such as gums or resins dissolved in acetone, amylacetate, carbon tetrachlorid or other volatile solvents.

After the celluloid has been thus prepared it is placed in the mold for the concrete body and against the bottom or side of the mold and the plastic mass is poured onto or against this sheet of celluloid. The celluloid may be embossed before or after the fibrous layer is applied thereto. The

fibrous layer serves as a bond between the celluloid and the concrete by furnishing a tooth to which the concrete may attach. The concrete may be made up of Portland cement and sand or crushed stone or a mixture of these with magnesium or other oxychlorids, and chopped straw, saw dust, ground cork, or other inert substances may be added if desired.

In Fig. 2 I have indicated the layer 2 of celluloid sprinkled with ground sand, glass, or crystalline rock 4 which is attached to the layer of celluloid by means of any one of the cements above mentioned or by heating the celluloid and pressing this ground material into the softened surface. In this case, these crystalline substances form bases upon which the cement in the concrete may crystallize so as to obtain a strong bond between them.

Where the celluloid is to be attached to the outer sides of hollow bodies, the sheet of celluloid will be bent to fit the mold, before or after being prepared in the manner above stated, after which it is placed in the mold so that concrete can be poured against it. It is not necessary to provide sufficient celluloid to cover the entire surface of a concrete body as smaller pieces may be attached to limited areas of such bodies.

The finished construction is pleasing in appearance in that it is smooth and bright and when transparent celluloid is employed permits the structure of the concrete body to be seen. It permits the outer surface of the composite body to be thoroughly cleaned, which is impossible with ordinary concrete.

While in this description I have used the term celluloid, I do not wish to be restricted to the several celluloids, as any non-crystalline translucent material such as bakelite, redmanol, galalith, and similar compounds may be employed.

The details may all be changed by those skilled in the art without departing from the spirit of my invention as set forth in the following claims.

I claim:—

1. A composite body consisting of a sheet of celluloid, a layer of fibrous fabric at-

tached to the celluloid, and a layer of concrete attached to the fibrous fabric.

2. A composite body consisting of a sheet of translucent material, a layer of cloth
5 united thereto, and a layer of concrete united to the translucent sheet by means of the cloth.

3. A composite body consisting of a sheet of non-crystalline translucent material, a layer of cloth cemented thereto, and a body
10 of concrete united to the translucent sheet by means of the cloth to which the concrete adheres.

FREDERICK C. RUPPEL.