United States Patent [19]

Langan

[11] **3,855,747**

[45] **Dec. 24, 1974**

[54] **DECK CONSTRUCTION**

[75] Inventor: **Maurice W. Langan,** Des Plaines, Ill.

[73] Assignee: **American Colloid Company,** Skokie, Ill.

[22] Filed: **Dec. 3, 1973**

[21] Appl. No.: **420,780**

[52] **U.S. Cl.** **52/404,** 52/506, 404/18, 404/29, 404/34, 404/70

[51] **Int. Cl.** **E04b 5/08**

[58] **Field of Search** 52/391, 404, 443, 447, 52/461, 465, 470, 506, 511, 378, 315; 404/34, 18, 31, 29, 28, 70, 71

[56] **References Cited**

UNITED STATES PATENTS

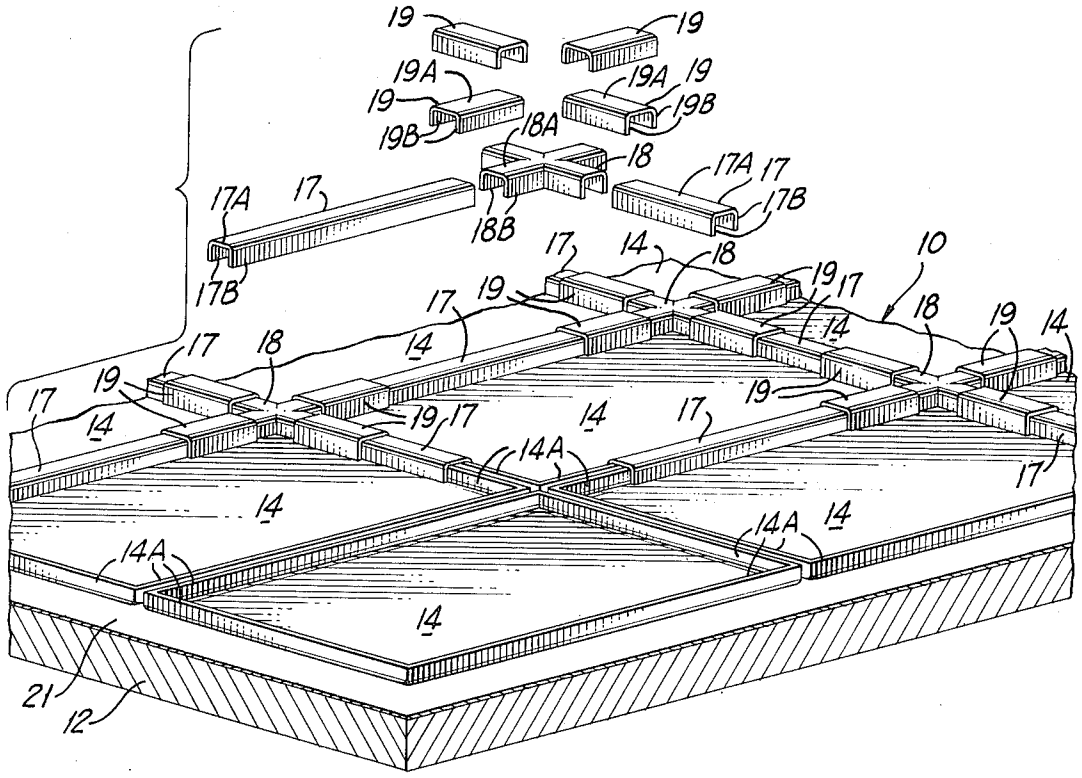
311,994	2/1885	Kuhn	404/29
2,175,070	10/1939	Turco	42/378 X
2,388,968	11/1945	Hedgren	52/506
2,864,324	12/1958	Clements	52/404 X
2,874,652	2/1959	Wilson	52/465 X
3,122,073	2/1964	Masse	52/404 X
3,298,150	1/1967	Ahlquist	52/506
3,373,537	3/1968	Blayden	52/465 X

Primary Examiner—Price C. Faw, Jr.
Attorney, Agent, or Firm—Mason, Kolehmainen, Rathburn & Wyss

[57] **ABSTRACT**

There is provided an improved system for use on structural roof decks between the structural deck and the wear surface or other overlay to prevent leakage through the deck. The deck construction includes a plurality of preformed one-piece shallow pans, which may be of molded fiber glass or other semirigid or rigid material. Suitable coping is provided over the confronting flanges of adjacent panels. Filler material is nested in the panels and a continuous wear surface overlays the pans, coping, and filler material.

5 Claims, 3 Drawing Figures



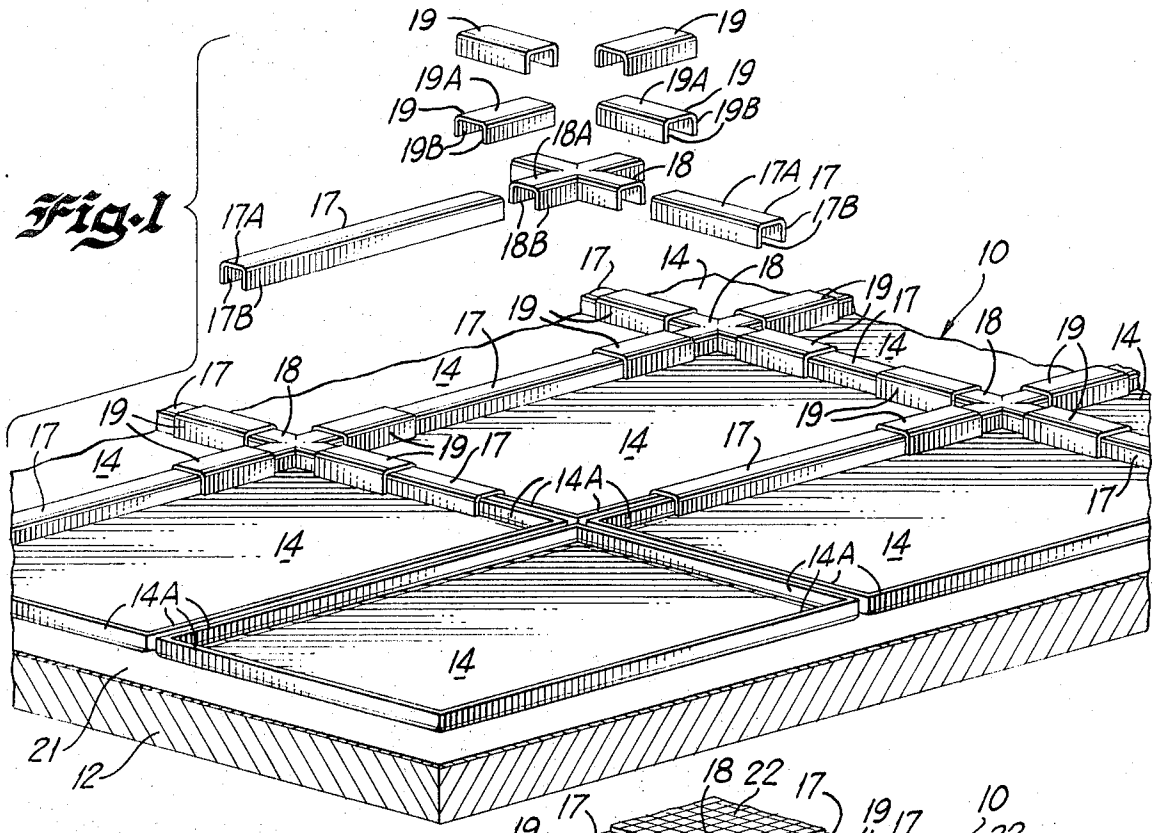


Fig-1

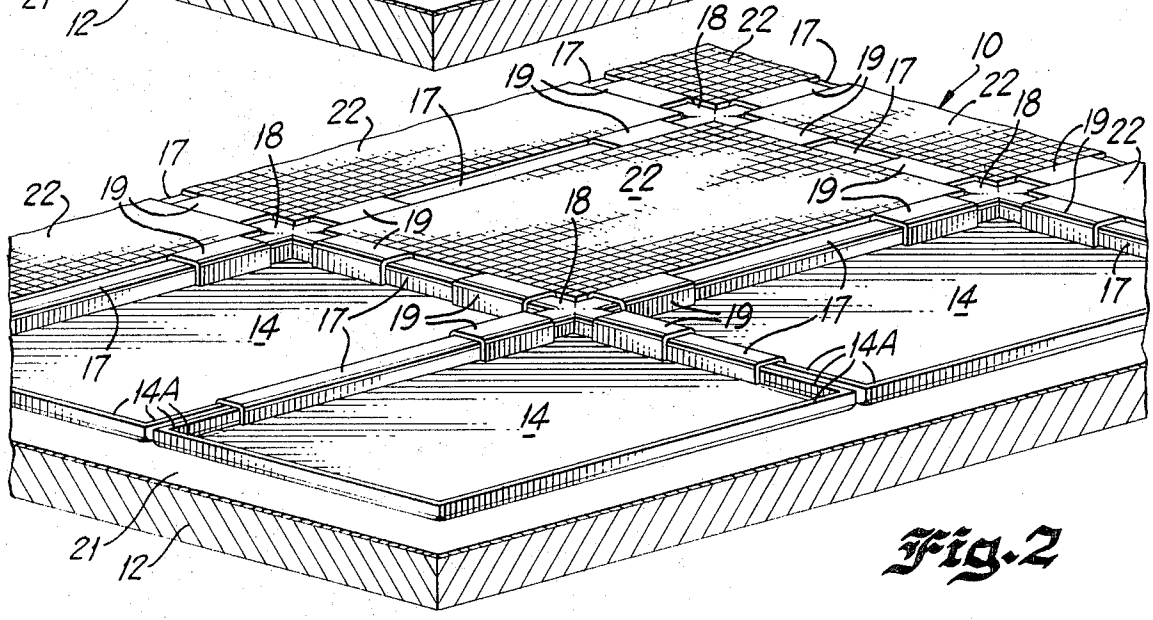


Fig-2

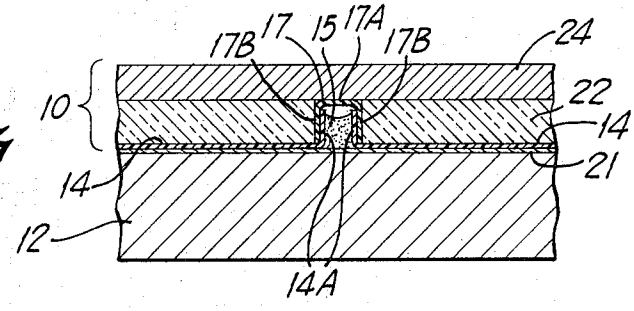


Fig-3

DECK CONSTRUCTION

The present invention relates to an improved deck construction, and more particularly, to a deck construction or system for use on structural decks between the deck and the wear surface or other overlay whereby seepage through the deck is eliminated.

Frequently in the construction of modern commercial buildings a deck is provided over space which may be used for shops, offices and the like. Such decks may include the roof of a building, sidewalks, patios, and malls adjacent the building. Heretofore, difficulty has been experienced with leakage through the building decks. In order to provide maximum utilization or use of the building it is necessary that leakage through the deck be eliminated or minimized.

Accordingly, it is an object of the present invention to provide an improved preformed deck construction.

Another object of the present invention is to provide an improved deck construction which overcomes the above mentioned difficulties.

Further objects and advantages of the present invention will become apparent as the following description precedes and the features of novelty which characterize the invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

In accordance with these and many other objects of the present invention there is provided a new and improved preformed deck waterproofing construction for use on structural decks. The improved deck construction includes a plurality of preformed one-piece shallow pans each having upstanding peripheral flanges, and spaced in close spaced apart relation. Caulking is provided between the pans, and coping in the form of inverted U-shaped strips and corner joints is provided over the confronting flanges of adjacent panels. Filling material is nested in the pans, and the entire assembly covered with a continuous wear surface.

For a better understanding of the present invention reference may be had to the accompanied drawing wherein:

FIG. 1 is an exploded perspective view of the improved waterproof deck construction illustrating one stage of its assembly;

FIG. 2 is a perspective view of the improved deck construction illustrating another step in its assembly;

FIG. 3 is a fragmentary cross-sectional view of an improved deck construction according to the present invention.

Referring now to the drawings, there is illustrated an improved deck construction **10**, shown fragmentarily in FIGS. **1** and **2** and in cross-section in FIG. **3**. The deck construction **10** in the illustrated embodiment is placed on a structural deck **12** of concrete or other similar substance.

In accordance with the present invention the deck construction **10** includes a plurality of preformed shallow pans or pan type panels **14** each having upstanding peripheral flanges **14A** and positioned in close, spaced apart relation. The pans **14** may be formed of one piece molded fiber glass or other semi rigid or rigid material. Suitable caulking **15**, FIG. **3**, such as an elastomeric caulking is placed between the spaced apart pans **14**.

To close the space between the adjacent upstanding flanges of the pans **14** there is provided suitable coping, and in the illustrated embodiment, includes a plurality of straight coping sections **17** and a plurality of one-piece preformed corner coping sections **18** butt fitted with the straight coping sections **17**. Coping joiner **19** covers the joint between the straight coping sections **17** and the corner coping sections **18**. The coping sections and coping joiner are of material similar to or compatible with the material of the pans **14** and are of somewhat generally inverted U-shape in cross-section, each having a bight portion **17A**, **18A**, **19A**, FIG. **1**, interconnecting a pair of spaced legs **17B**, **18B**, **19B**.

The assembly and structure of the completed deck construction is best illustrated in FIG. **3**, and includes, if desired, a suitable slip sheet or base sheet **21** on which rests the preformed deck pans **14**. The caulking **15** seals the edges between adjacent pans **14**, and the coping sections **17**, **18**, overly the adjacent upstanding peripheral flanges **14A** of the adjacent pans. The coping joiner **19** overlies the joints between the coping sections **17** and **18**. Nested within the pans **14** is a suitable filler panel **22** such as an insulation board. A wear surface **24** of asphalt, concrete, or other suitable material overlies the assembly of panels, coping sections, and filler material.

It will be seen that a deck construction according to the present invention may be readily installed, is inexpensive, and provides a superior arrangement for preventing the flow or seepage of water through the deck.

Although the present invention has been described by reference to various embodiments thereof, it will be apparent that numerous other modifications and embodiments will be devised by those skilled in the art which will fall within the true spirit and scope of the present invention.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. A waterproof deck construction for use on a structural deck comprising

a plurality of preformed one-piece shallow pans each having upstanding peripheral flanges and in close, spaced apart relation,

coping joining the confronting flanges of adjacent panels,

filler material nested in said pans, and

a continuous wear surface overlying said pans, coping and filler material.

2. A waterproof deck construction as set forth in claim **1** and including caulking in the spaces defined by the confronting flanges of adjacent panels.

3. A waterproof deck construction as set forth in claim **1** wherein said coping includes a preformed one-piece corner coping and interconnecting coping strips between said corner copings.

4. A waterproof deck construction as set forth in claim **3** and including coping joiner covering the joints between said corner copings and said interconnecting coping strips.

5. A waterproof deck construction as set forth in claim **3** wherein said coping is of generally inverted U-shape telescoped over said confronting flanges.

* * * * *