F. C. HYTEN AND P. J. HAWKINS.

CONCRETE ROOF TILE PALLET.

APPLICATION FILED DEC. 28, 1921.

1,425,015.

Patented Aug. 8, 1922.

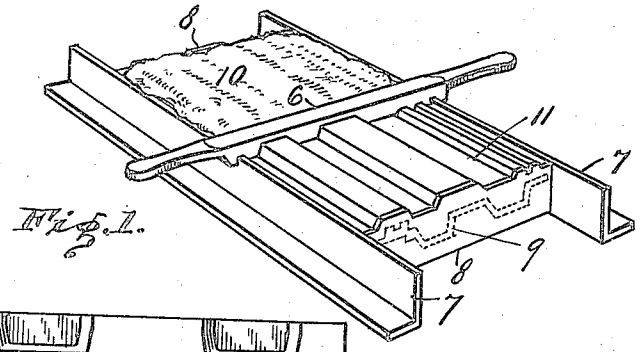


Fig. 1.

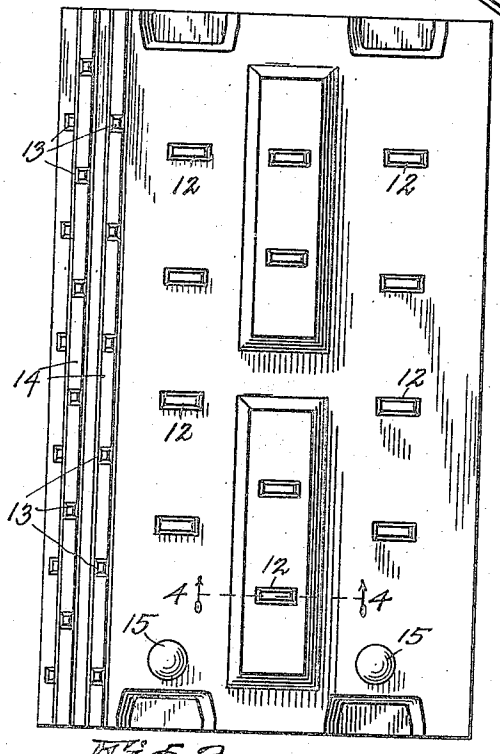


Fig. 2.

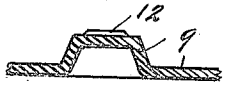


Fig. 4.

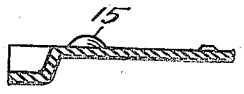


Fig. 5.

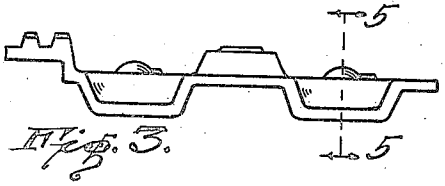


Fig. 3.

Inventors,
Forrest C. Hyten and
Paul J. Hawkins,
By Joseph A Minturn
Attorney.

UNITED STATES PATENT OFFICE.

FORREST C. HYTEN AND PAUL J. HAWKINS, OF INDIANAPOLIS, INDIANA.

CONCRETE ROOF-TILE PALLET.

1,425,015. Specification of Letters Patent. Patented Aug. 8, 1922.

Application filed December 28, 1921. Serial No. 525,422.

To all whom it may concern:

Be it known that we, FORREST C. HYTEN and PAUL J. HAWKINS, citizens of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented new and useful Improvements in Concrete Roof-Tile Pallets, of which the following is a specification.

Concrete roofing tiles, to be of practical value, must be so light in weight as not to overburden its supports or require too heavy rafters in the roof construction. It is frequently as thin as three-eighths of an inch in thickness, and is best produced by troweling the top surface. This requires a concrete mixture which is rich in cement, and which contains enough water to make it trowel easily and smoothly. A rich and wet aggregate thus required has a tendency to slump down and lose its shape readily where the tile is being formed upon a smooth plate or pallet, particularly as the surface of the latter in contact with the cement must be oiled or greased to keep the product from sticking to the mold when the time comes to remove said product. The concrete material during said manufacture tends to mass in front of the trowel-bar and to thin out and loose its density in the middle portions of the tile, due to the under-surface slipping of the concrete material as it is tamped and troweled.

The object of this invention is to provide means to reduce the tendency of the wet concrete to slip along the surface of the pallet during the manufacture of a tile and a further object is to provide means for nailing through the tile without breaking it.

We accomplish the above, and other objects which will hereinafter appear, by the means illustrated in the accompanying drawing, in which—

Fig. 1. is a perspective view of trowel-guides and other pallet supports, with a pallet indicated by dotted lines, the view showing the trowel-bar in the operation of troweling a roof tile. Fig. 2, is a top plan view of a pallet embodying our improvements. Fig. 3, is an end view of the pallet shown in Fig. 2. Fig. 4, is a section on the line 4—4 of Fig. 2, and Fig. 5 is a section on the line 5—5 of Fig. 3.

Like characters of reference indicate like parts in the several views of the drawing.

Referring to Fig. 1, 6 is a trowel-bar which is manually reciprocated on a pair of parallel guide-bars 7, 7, between which and a pair of transverse bars 8, 8, is a pallet 9, the end of which is shown by dotted lines in this view. The pallet 9 supports the concrete mass and gives shape to the underside of the finished tile. As is indicated in Fig. 1, a surplus of concrete material 10 is pushed ahead of the trowel-bar in forming a tile 11, and the tenacity of the concrete tends to cause the troweled material to slip on a smooth pallet surface and lose its density in its effort to follow the mass pushed by the trowel-bar.

Our invention is to overcome the above tendency by providing an obstruction or resistance on the concrete-contacting surface of the pallet. This may be in the form of depressions in the surface of the pallet, but, in practice, we have found a reverse formation, that is, a series of projecting lugs 12 on the principal area and smaller lugs 13 on the marginal ribs 14, to be preferable to depressions because of the greater ease in removing the finished product from the pallet after it has sufficiently dried, and also because the projections on the mold result in depressions on the tile, which interfere less with the assembly of the tiles in a roof.

We also provide semi-spherical projections 15, 15, where nail holes are desired, for fastening the tiles to the roof-sheeting, and these projections 15 also act as anti-slipping formations to hold the wet concrete during the molding of the tile.

We have found that the projections from the pallet surface as shown and above described effectually prevent the slipping and crawling of the wet concrete material under the troweling action, and that the density of the finished product is substantially uniform throughout the entire length of the tile and is not weaker and more liable to break at its middle portions, as was the case where a smooth surfaced pallet was used.

While we have here shown the pallet molding surface as provided with lugs or ribs with their greatest lengths in the direction of the greatest length of the pallet, it is obvious that satisfactory results may be obtained by a different arrangement of the projecting surfaces such as diagonally or in curves, or by providing depressions instead of projections in the manner above stated and we therefore do not desire to be unduly

limited in carrying out our invention in practice, or any more than is required by the appended claims, and

Having thus fully described our invention what we claim as new and wish to secure by Letters Patent is—

1. A pallet on which concrete roofing tiles are troweled in the manufacture of the tiles, having projections in addition to those for positioning the mold members and giving form to the tile at frequent intervals over the entire concrete contacting surface of the pallet to check the sliding of the wet concrete on the pallet during the troweling operation.

2. A pallet on which concrete roofing tiles are troweled in the manufacture of the tiles, having a plurality of projections near one end to check the sliding of the wet concrete during the troweling operation and to form nailing indents in the tile.

3. A pallet on which concrete roofing tiles are troweled in the manufacture of the tiles, having a plurality of projections near one end to form nailing indents in the tile, and having a plurality of lower projections in addition to those for positioning the mold members and giving form to the tile at frequent intervals over the other portions of the concrete contacting-surface of the pallet, all of said projections serving to check the sliding movement of the wet concrete on the pallet during the troweling operation.

Signed at Indianapolis, Indiana, this the 23 day of December, 1921.

FORREST C. HYTEN.
PAUL J. HAWKINS.