

J. C. WHITE.
ROOF CONSTRUCTION.
APPLICATION FILED APR. 13, 1911.

1,044,612.

Patented Nov. 19, 1912.

2 SHEETS-SHEET 1.

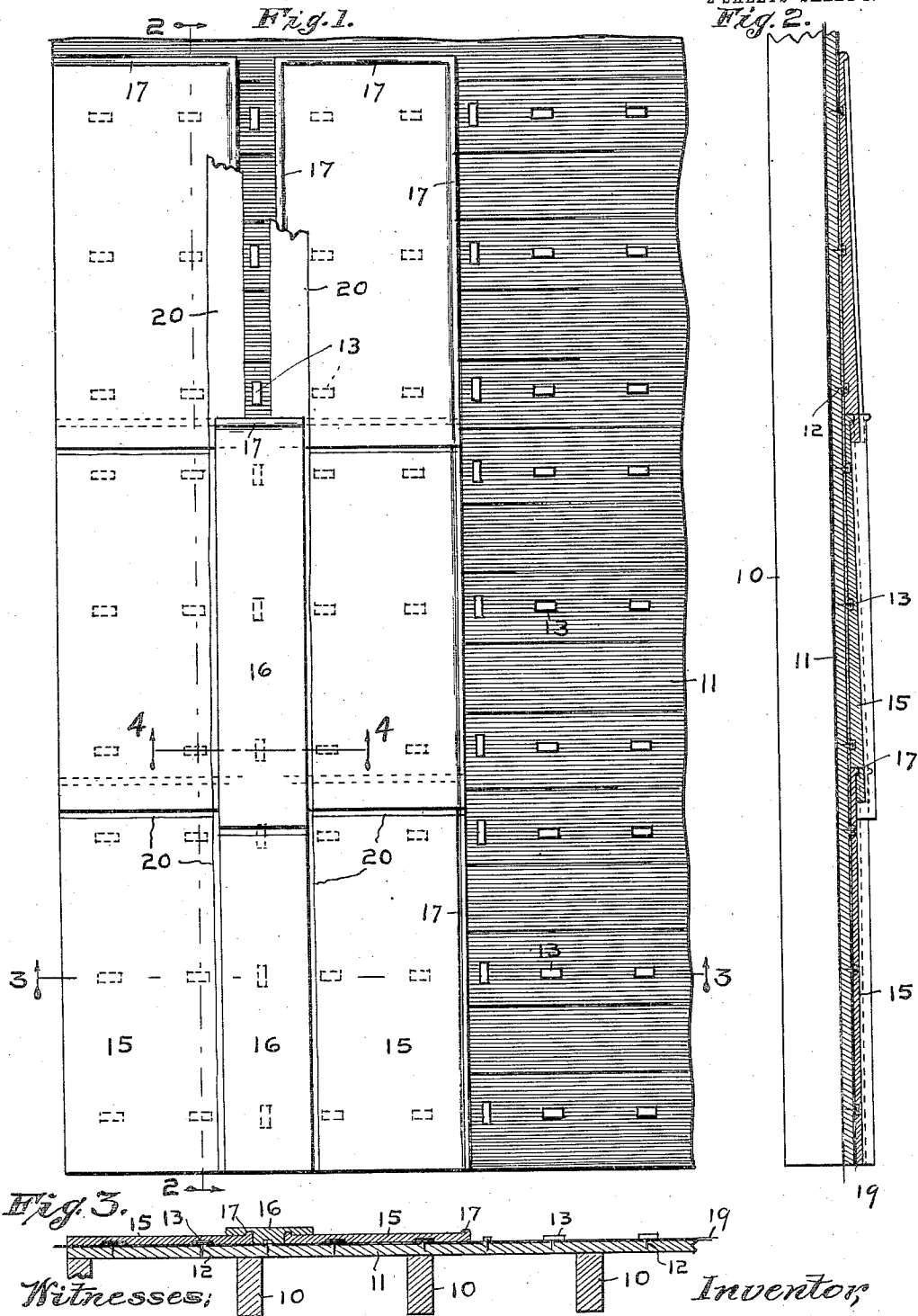


Fig. 3.

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Fig. 4.

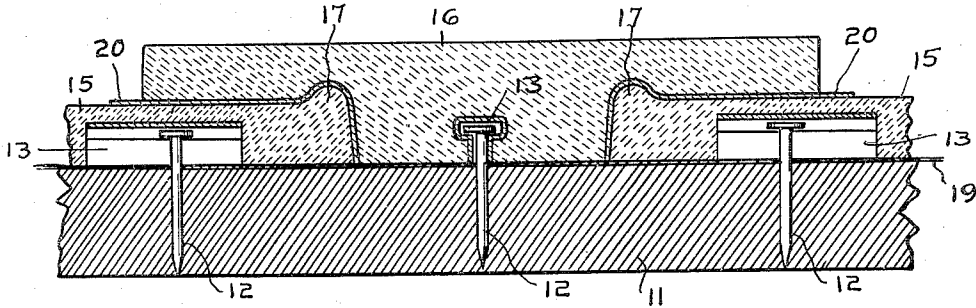


Fig. 5.

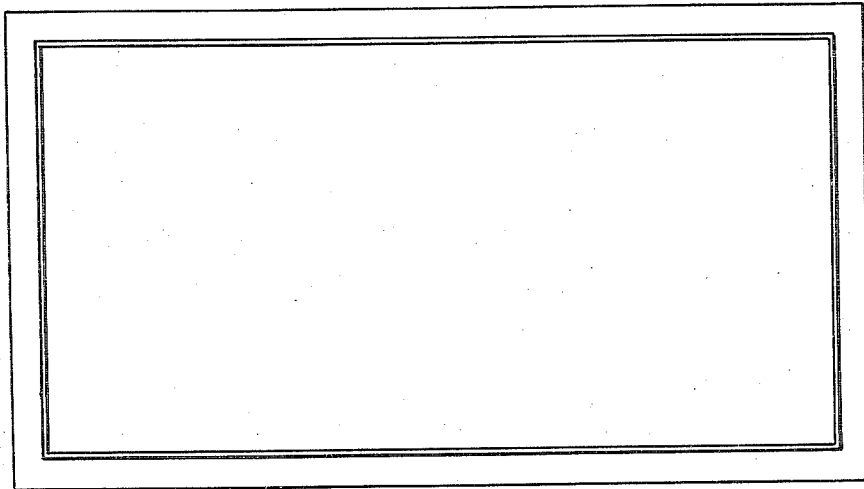


Fig. 6.

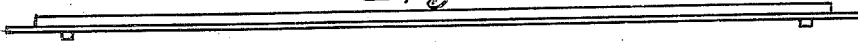


Fig. 7.

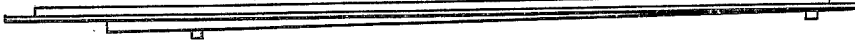
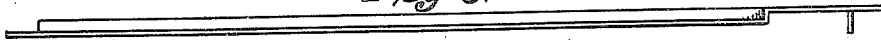


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOHN C. WHITE, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF TO FREDERICK E. MAYNARD, OF INDIANAPOLIS, INDIANA.

ROOF CONSTRUCTION.

1,044,612.

Specification of Letters Patent.

Patented Nov. 19, 1912.

Application filed April 13, 1911. Serial No. 620,936.

To all whom it may concern:

Be it known that I, JOHN C. WHITE, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Roof Construction, of which the following is a specification.

This invention relates to improvements in roof-covers which are formed on the roof out of a plastic material, generally containing cement and plaster of Paris, which sets and hardens or can be hardened by mechanical process in its final position on the job.

The object of my invention is to provide a substitute for wood, metal and other shingles, which will be less expensive and more durable, and easily applied to the roof; also to allow for expansion and contraction in such a roof without breaking, and to permit of easy repairs when same are required.

I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawings, in which:—

Figure 1 is a plan view of part of a roof partially covered with my improved plastic sectional-covering and illustrating the manner in which the sections are applied. Fig. 2 is a vertical section on the line 2—2 of Fig. 1. Fig. 3 is a transverse section on the line 3—3 of Fig. 1. Fig. 4 is a section, on a larger scale, taken on the line 4—4 of Fig. 1. Fig. 5 is a plan view and Fig. 6 a side elevation of a molding frame used in forming the under sections. Fig. 7 is a modified form of this frame for making a section of increasing thickness from top to bottom, and Fig. 8 is a side elevation of a frame used in forming a narrower section which overlaps the adjacent vertical row of under sections.

Like characters of reference indicate like parts through the several views of the drawings.

10 are the rafters, and 11 the wooden sheathing, of usual construction, of a roof to be covered with my improved sections. The sections are held to the sheathing 11 by means of nails 12, which are driven firmly into the boards, but leaving their heads which are large and flat, projecting approximately three-eighths of an inch above.

Before the sections are formed, the nails, driven as above described, have their heads

covered with sheet metal slides 13. These slides are formed out of rectangular sheet metal strips, generally tin, which are bent transversely at a distance from one end somewhat less than the distance of the head above the sheathing (see Fig. 4), thence upwardly to pass the head, thence inwardly to cross above the head, thence downwardly, thence inwardly below the head and thence downwardly close to the body of the nail to form a channel, the inner portion of which is large enough to receive the nail head but the portion communicating therewith is reduced to prevent the withdrawal of the nail-head by a longitudinal movement of the nail. These slides have the material of the sections molded around them and they allow the section to slide on the nail during expansion and contraction.

The sections are preferably in two general sizes, the lower and wider ones 15, and the upper and narrower ones 16, which overlap the side edges of the lower ones. All of the sections are laid in vertical rows beginning at the lower edge of the roof and each upper section overlaps the end of the next one below it. Every section that is overlapped has its overlapped edge provided with an upwardly projected rib 17, which is molded out of the material of the section during the operation of forming the latter, and the overlapping section has a corresponding underside channel to receive said rib.

Fig. 1 illustrates the manner of starting to lay a roof with my improved sections. The first operation is preferably to cover the sheathing-boards with building paper or other fibrous material to keep the cement from entering cracks and other indents which would interfere with the free adjustment of the sections. The two vertical rows of sections 15 are next made by the aid of the forms illustrated in Figs. 5, 6, and 7 which are placed in position on the sheathing boards and filled with the plastic material which afterward hardens into a section. After the first two vertical rows are finished, they are connected by means of the overlying rows of sections 16 which are shaped by the aid of the form illustrated in Fig. 8. Then a new row of sections 15 is made, followed by an upper row 16 and this is repeated until the whole area of the

roof is covered. It is important that each section be separate from every other, that is, that the sections do not adhere to each other, in order that they may have independent movement to keep them from cracking by expansion and contraction with changes in temperature and as the sheathing boards swell and shrink. This separation, I secure by laying strips of properly prepared fibrous material 20 upon each of the flanged edges to be overlapped, before the overlapping material is applied. The fibrous material prevents the adherence of the newly formed sections to each other and as previously stated, permits the sections to expand and contract on the above described fastenings, each independently of the other.

In practice, I have found it to be preferable to double the fibrous material by using two thicknesses together whereby a sufficient air space results between the two which prevents the cement portions thus separated from adhering to each other.

Having thus fully described my inven-

tion, what I claim as new and wish to secure by Letters Patent of the United States, is—

A roof covered with sheathing boards, plastic material in sections applied to the boards in spaced-apart vertical rows, other vertical rows filling the space between said first rows and overlapping the vertical edges of the latter, the upper edges of all lower sections being overlapped by the next section above in its row, all overlapped edges having marginal upper ribs, paper separating the overlapped portions of said sections, and means for adjustably securing the sections to the sheathing boards to allow for individual expansion and contraction of the sections.

In witness whereof, I, have hereunto set my hand and seal at Indianapolis, Indiana, this 3rd day of April, A. D. one thousand nine hundred and eleven.

JOHN C. WHITE. [L. S.]

Witnesses:

F. W. WOERNER.

J. A. MINTURN.