F. FUGATE.

Composition Roof.

No. 223,671. Patented Jan. 20, 1880.

FIG. 1.

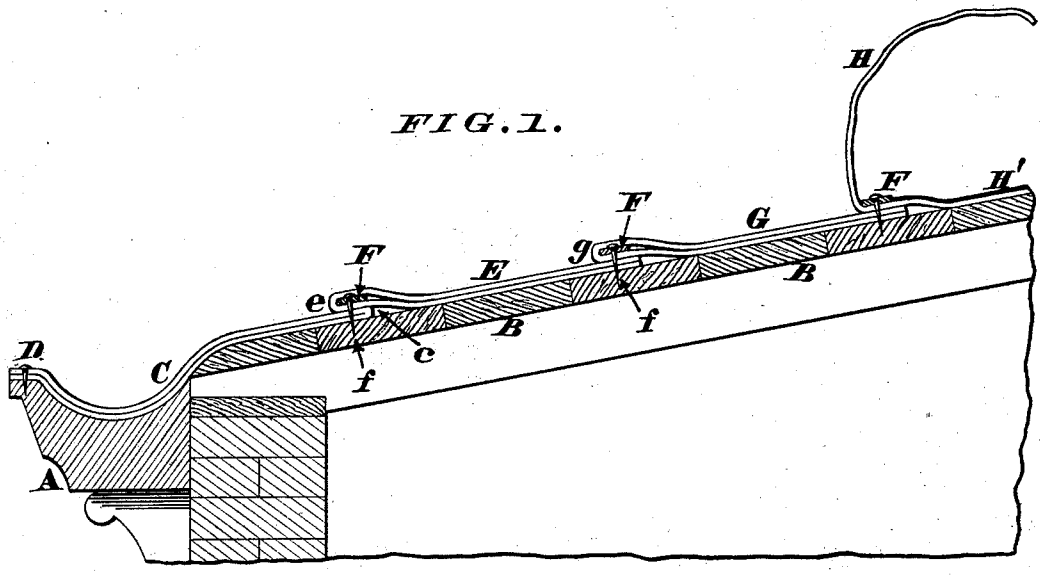


FIG. 2.

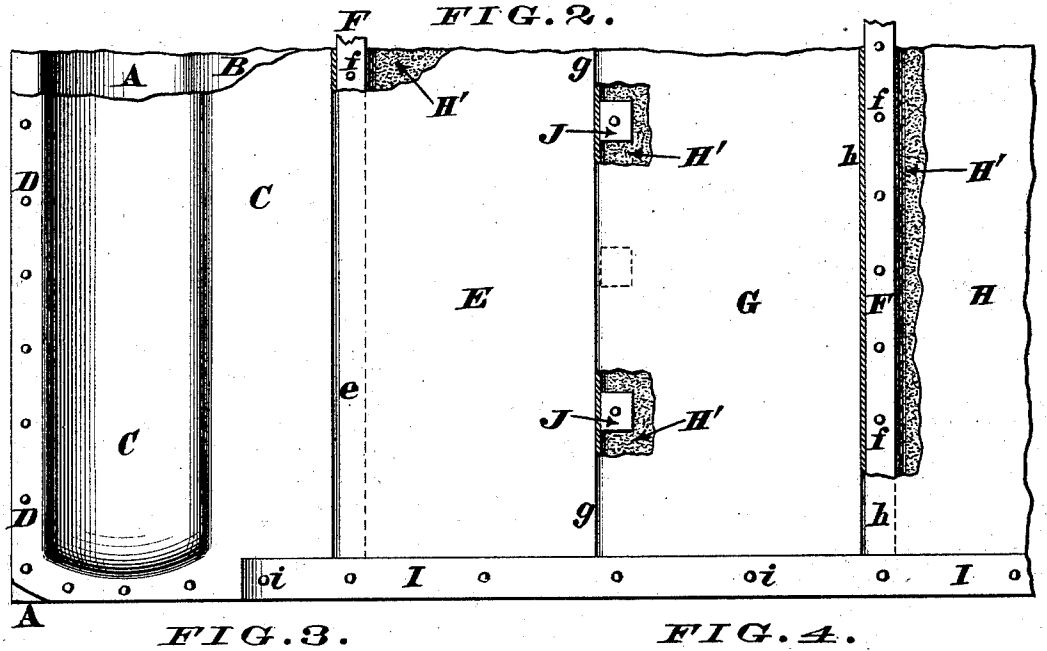


FIG. 3.

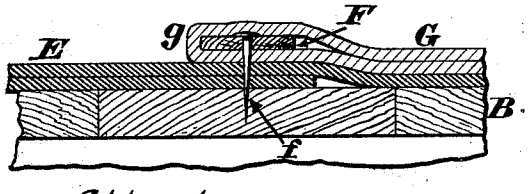
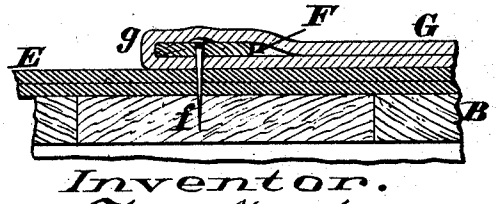


FIG. 4.



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UNITED STATES PATENT OFFICE.

THOMAS FUGATE, OF CINCINNATI, OHIO.

COMPOSITION ROOF.

SPECIFICATION forming part of Letters Patent No. 223,671, dated January 20, 1880.

Application filed May 12, 1879.

To all whom it may concern:

Be it known that I, THOMAS FUGATE, of Cincinnati, Hamilton county, Ohio, have invented certain new and useful Improvements in Composition Roofs, of which the following is a specification.

This invention relates to those roofs which are composed of tarred paper, canvas, felt, or other suitable flexible materials; and my improvement consists in so doubling and applying the various sheets as to afford at least two thicknesses of covering over the entire area of the roof, a strip of wood or other retaining device being located in the bend of each sheet to receive the nails or pins wherewith said sheets are secured. These strips or other retaining devices run parallel with the gutter, and when the sheets of paper are bent around the former the nails or screws or pins are completely housed in, thereby adding to the durability of the roof. Furthermore, this construction allows the inner surfaces of the sheets to be coated with melted pitch or other composition, which coating not only preserves the elasticity of the roof, but, being internal, it cannot run down in hot weather and choke up the gutters and spouts.

In the annexed drawings, Figure 1 is a vertical section through the more simple form of my roof, the upper sheet of paper being shown as in the act of being applied. Fig. 2 is a plan of the same, portions of the paper being torn away to expose the strips. Figs. 3 and 4 are sections representing two of the more elaborate forms of my invention.

A represents a gutter, and B the sheathing of a roof, to which gutter and sheathing the paper, canvas, or other flexible covering is applied in the following manner: The outer edge of the first sheet, C, is brought in line with the exterior of gutter A, and said sheet is then spread on the roof so as to extend completely across from wall to wall. The lower half of the exposed surface of this sheet is then thoroughly coated with melted pitch, and said sheet is doubled longitudinally at *c* and laid back on itself, so as to afford two thicknesses of material, the outer edges of which are secured to the gutter A with nails D. The second sheet, E, is now spread across the roof in such a way as to cause its middle portion to have a sufficient lap over the bend *c* of the first sheet. A wooden or other strip, F, is then applied to this portion of sheet E, and is secured to the boards B with nails or pins or screws *f*, which retaining devices pass through the bend *c* of sheet C. All that portion of sheet E situated above strip F is now coated with melted pitch, and said sheet is then folded back on itself, so as to inclose the strip F in the bend *e*, thereby concealing said strip and its nails and affording two thicknesses of covering. The third sheet, G, is now applied in a precisely similar manner, a strip, F, being employed for securing to the boards B the middle portion of said sheet and the upper edges of sheet E. This third sheet is then coated with pitch, bent around the strip at *g*, folded back on itself, and is at once ready for the fourth sheet, H, which latter is applied as above explained, and these operations are repeated until the entire roof is covered with two thicknesses of paper or other suitable material, the ends of the various sheets being secured with ordinary trimming-boards I, whose nails *i* are driven firmly into the sheathing B, as seen in Fig. 2.

The final proceeding consists in applying to the roof one or more coats of elastic paint, which may be sanded in the usual manner.

From the above description it will be seen that my construction of roof conceals the nails, and as the latter are driven into the strips F there is no danger of their heads cutting through or tearing out the paper.

Another advantage consists in doubling the sheets back on themselves and bringing together their pitched surfaces, as by this arrangement the pitch is completely enveloped by said sheets and cannot run down in hot weather and clog up the gutters, pipes, &c.

Furthermore, this enveloping of the pitch between the double sheets prevents the former evaporating or drying out in the usual rapid manner, and on this account the elasticity or flexibility of my roof is preserved for an indefinite period of time.

Evidently the invention may be modified by substituting blocks or plates or washers J for the continuous strips F; but the latter are preferred because they afford an extended bearing on the sheets.

Another change may be made by placing the various strips F nearer together than shown in Figs. 1 and 2, so as to afford three thicknesses of roofing, as represented in Fig. 3; or the strips may be placed yet nearer together, so as to afford four thicknesses of roofing, as seen in Fig. 4.

In the drawings, the surfaces which are coated with melted pitch are indicated at H′ in Figs. 1 and 2.

I am aware it is not new to nail the edges of two sheets and then turn the upper sheet back to conceal the nails; but this construction of roof affords but a single thickness of material and lacks the security of the strips.

I am also aware it is not new to embed or wrap wooden strips in sheets of paper and place such strips side by side, so as to cover the entire area of roof, which construction is not only very expensive, but it produces vertical channels or joints that admit water, whereas my roof is free from such a serious defect. Therefore my claim is limited to the within-described application of doubled sheets and concealed strips, whereby a roof is constructed with at least two thicknesses of material that is free from vertical joints.

I claim as my invention—

1. A composition roof formed of flexible sheets E G H, &c., bent around and inclosing the strips F, thereby affording a double thickness of material, which covering material is secured by concealed nails driven through said strips, substantially as described.

2. A roof formed of flexible sheets E, bent around the concealed strips F, thereby affording a double thickness of covering material that incloses the pitch H′, said sheets being secured in position by nails *f*, driven through said strips, substantially as described.

In testimony of which invention I hereunto set my hand.

THOS. FUGATE.

Witnesses:

JAMES H. LAYMAN,

GEO. H. KOLKER.