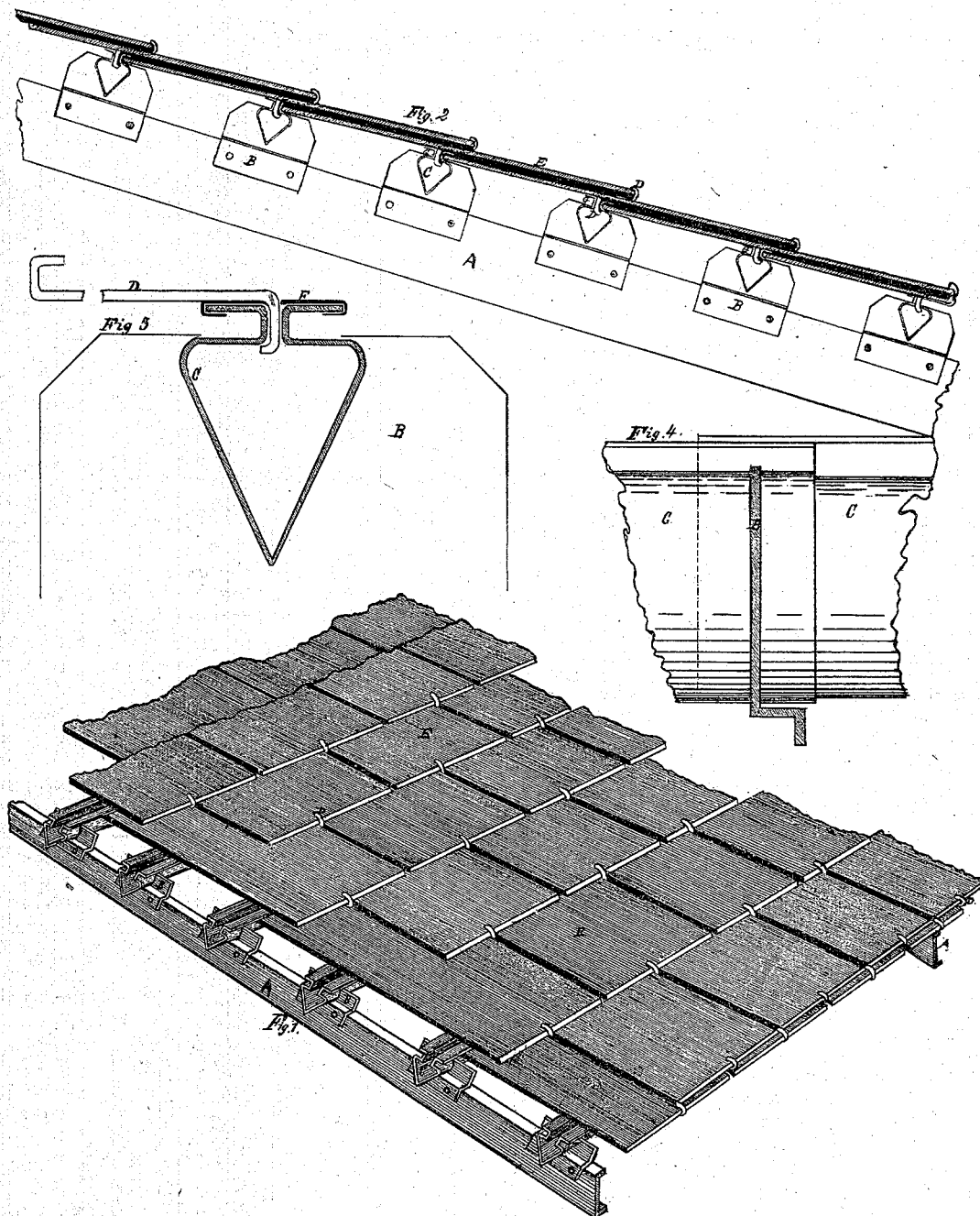


ISAAC HODGSON & WILLIAM H. BROWN.

Improvement in Fire-Proof Roofs.

No. 115,471.

Patented May 30, 1871.



WITNESSES

Benjamin F. Haugh
Edgar J. Hodgson

INVENTORS

Isaac Hodgson
William H. Brown

UNITED STATES PATENT OFFICE.

ISAAC HODGSON AND WILLIAM H. BROWN, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN FIRE-PROOF ROOFS.

Specification forming part of Letters Patent No. 115,471, dated May 30, 1871.

We, ISAAC HODGSON and WILLIAM H. BROWN, of Indianapolis, in the county of Marion and State of Indiana, have jointly invented certain Improvements in Slating and Construction of Fire-Proof Roofs, of which the following is a specification:

Nature and Objects of the Invention.

This invention relates to a new method of covering the roofs of buildings with slate without the interposition of wooden sheathing by means of hollow sheet-iron laths, the slate being secured to the same by means of hooks formed of stiff copper or galvanized-iron wire, the laths being secured to the rafters by iron supporters. The object of the invention is to render the roof thoroughly fire-proof, and at a low rate of cost.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of our invention, showing a portion of a completed roof. Fig. 2 is a section of a roof, showing the manner of securing the laths to the rafters; also the mode of laying the slate and holding the same in position. Fig. 3 is a large-sized section of the hollow laths, showing also the mode of holding the laths in position by means of the iron supporter. Fig. 4 shows the mode of connecting the laths at the joints by slipping the one into the other, telescope fashion, and within the supporter.

General Description.

A is the rafter, which may be of iron or wood, and spaced from four to six feet between centers. B is the supporter for holding the laths, and is designed to be made of iron, about one-sixteenth of an inch in thickness, with an aperture in the upper edge of the same punched to fit the section of the lath. This supporter will be formed with a double right angle below the said aperture, thus forming a shoulder for resting upon the rafter; also as a guide in setting. C is the hollow lath, designed to be made of about No. 24 sheet-iron, the thickness of the metal being increased as the distance between rafters increases. D is the wire-hook for holding the lower end of the slate. E is the slate

for covering. F is a small sheet-iron clamp, crossing the top of the laths at convenient intervals, for the purpose of preventing them from spreading or opening.

The following description will enable skilled artisans to use our invention: The rafters are spread off for the supporters, according to the dimensions of the slate to be used, and, if of iron, will be punched at the proper places for the riveting of the supporters. If of wood, the supporters will be nailed on. The space between the first two rafters will then be filled with the laths. The end of the lath C projecting through the supporter B, will then be spread open by driving in an iron wedge of suitable section to fit the lath. The next length of laths is then pressed into the last, telescope fashion, a sufficient distance, and then drawn through the next supporter, and the end spread as the last mentioned, and thus proceed throughout the whole length of the roof. The wire hooks D, Fig. 3, are made to hook into and under the inner side of the lath, to prevent their drawing out. The upper end of the slate is then slipped into the groove of the lath next above. The wire hook is then bent up over the lower end of the slate tightly, thus holding it firmly at both ends, the middle of the slate resting solidly on the intervening lath. The hooks are put into the laths through the joints between the slats of the preceding course, with the shank slanting parallel with the lath; they are then brought round to the proper position, thus securely fastening them within the lath. The length of the wire is varied to suit the lap of the slate.

If thought necessary, to prevent currents of air from passing, the under side of the roof can be rounded by filling the space G with cement or hair mortar.

The advantage of this over the ordinary mode of slating will be clearly seen. There being no vacant spaces between the courses of slate, the danger of breaking by walking over is materially lessened. This method also preserves the full strength of the slates, as they are not weakened by punching. The mode of connecting the laths telescope fashion admits of all necessary contraction and expan-

sion without injury to the roof, they being free to slide the one within the other.

Should a slate be broken from any cause it is only necessary to turn down the hook, remove the slate, put in a new one, bend up the hook, and the whole is as good as new.

Should the gutters or valleys rust out and require removing, the slate may be removed, new gutters inserted, and the slate replaced, as above described, with the greatest facility.

Claims.

1. In a slate roof, the hooks D for holding the slate E, in combination with the hollow flanged laths C, with which said hooks interlock, essentially as described.

2. The slate E, held and secured in position at both ends, its outer one by means of the hook D, and its inner lapped end by the flange of the hollow lath, as described.

3. In a fire-proof slate roof, the combination, with the beams A, of the grooved flanged plates B, the hollow flanged laths C, and the hooks D, the several parts forming a frame for supporting the laths and slate, and locking the latter thereto, as described.

ISAAC HODGSON.

WILLIAM H. BROWN.

Witnesses:

E. J. HODGSON,

M. Q. WILSON.