

P. Maylor,
Metal Roofing,

N^o 1,321.

Patented Sep. 11, 1839.

Fig: 2

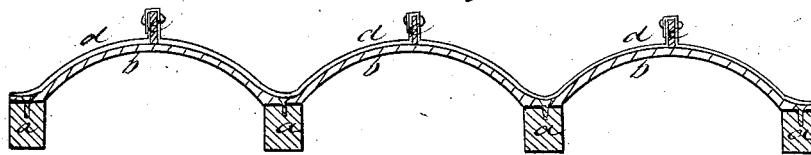


Fig: 1

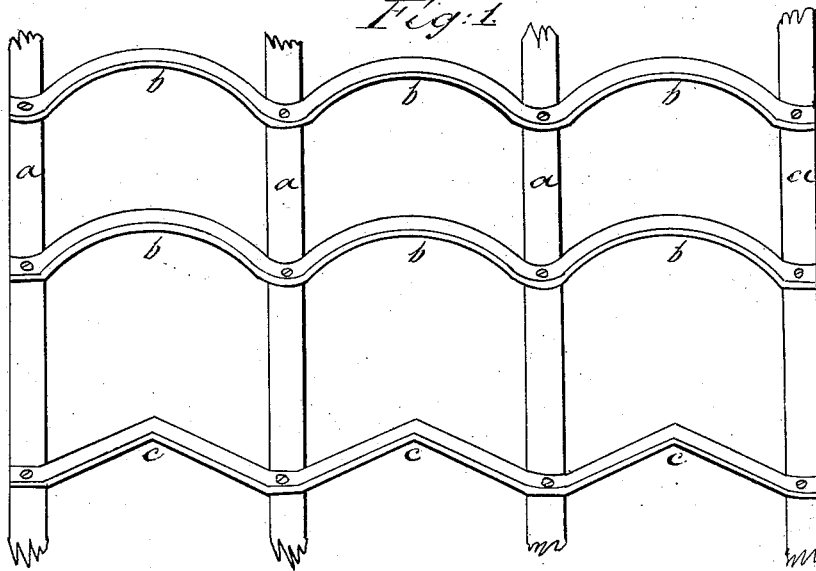


Fig: 4

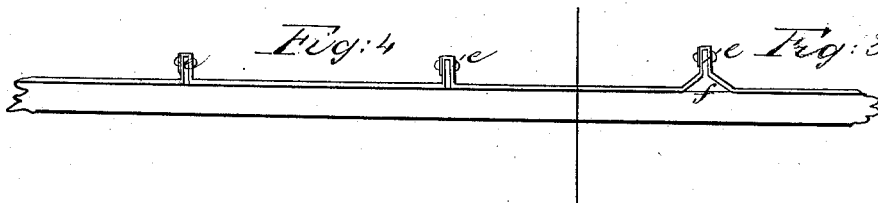


Fig: 3

UNITED STATES PATENT OFFICE.

PETER NAYLOR, OF NEW YORK, N. Y.

COVERING ROOFS WITH METAL.

Specification of Letters Patent No. 1,321, dated September 11, 1839.

To all whom it may concern:

Be it known that I, PETER NAYLOR, of the city of New York, in the State of New York, have invented an improvement in the manner of covering the roofs of houses and other buildings with sheets of metal of any of the kinds adapted to that purpose; and I do hereby declare that the following is a full and exact description thereof.

The roof which is to be covered with sheet metal may be first sheeted, or covered, with plank in the ordinary way of preparing roofs for slating, or other covering, or the planking may be omitted and the metallic covering be placed immediately upon the rafters, or other timbers, constituting the frame-work of the roof. The manner of attaching the metallic plates to the roof must, of course, be varied to suit the construction in other respects.

Figure 1 represents a set of rafters *a, a*, across which are placed arched, or bridge, pieces, *b, b, b*, which may be made either of wrought or of cast iron, and these are to be firmly attached to the rafters by screw bolts or otherwise. The width and thickness of the bars composing the bridge pieces must be regulated by the distance of the timbers from each other, which may, if desired, be four, five, or more feet or they stand at the ordinary distance of the rafters of roofs. Instead of giving an arched form to the bridge pieces, they may be bent angle-wise, so as to form a ridge between each of the timbers, as at *c, c, c*, or other shapes may be given to them. To these bridge pieces the sheet metal is to be attached, it being bent into such form as to adapt it thereto. The sheets employed are to be taken of such width as shall be sufficient to extend from the middle of one arch, or ridge, to the middle of the next, contiguous arch, or ridge, and also to lap over a plate, or thin bar, of metal where the two sheets join, in a manner to be now described.

Fig. 2 is a section of the roof along the bridge pieces, *a, a* being the rafters, or timbers, to which they are fastened, and *b, b*, the bridge pieces; *d, d*, are the plates of metal which form the covering of the roof; *e, e, e*, are thin bars, or plates, of metal which lie upon the middles of the arch or ridge pieces, and extend up and down the roof, from the ridge to the eaves, and over

these bars, or plates, the edges of the covering of sheet metal is to be lapped, the edge of one sheet rising up on one side of said bars, so as to reach the upper edge, and the edge of the next sheet constituting a saddle which laps over on both sides of the bar, embracing the first described bent edge of the next contiguous sheet. The sheets so placed are to be united firmly to the bars *e, e, e*, by rivets passed through the whole, at suitable distances apart.

The sheets of metal are to be united together by lapping, grooving, and riveting at the edges which run lengthwise of the roof, so as to form a continuous sheet extending from the ridge to the eaves, and, in the case of tin plate, they are to be grooved, riveted, and soldered at all their joinings, excepting where they are lapped over and riveted to the bars *e, e*. They may thus be made to form a sheet of any desired width and length, the riveting giving to them a degree of strength which effectually prevents the rupturing of the joints by expansion and contraction. Plates of metal of other kinds may also be widened to any desired extent by lapping, grooving, and riveting.

The bars of metal *e, e*, instead of being laid upon arch pieces, as above described, may be placed edgewise, directly upon the planking, or sheeting, as shown in Fig. 3, said bars extending from the ridge to the eaves, the sheet metal being lapped over them, and riveted, as before described; or, instead of laying the bars directly upon the planking or sheeting, they may be laid upon strips, or battens, *f, f*, Fig. 4, so as to form a trough, or gutter, between each bar, of any required depth. The particular form of the roofing may, in fact, be varied in numerous ways, while the general principle upon which I proceed will remain the same.

The sheet metal may be secured to the arch pieces near the ridge, by screw bolts, or by other means, such, for example, as by strips of metal on the under side of the sheets, made to clip, or embrace, the respective arch pieces. When laid upon the timber, or planking, the same modes are to be adopted for fastening them thereto as are now in use and are well known to workmen.

What I claim as my invention in the

above-described plan of constructing a metallic covering for roofs is—

The manner of connecting the edges of the respective sheets together by lapping
5 them upon, and riveting them through, the bars of metal, *e, e*, whether placed upon arch pieces, as first described, or directly upon the timbers, sheeting, or planking, or raised

therefrom by battens, or strips of wood, or in any other way, while the construction and 10 use remain substantially the same with that herein fully made known and described.

PETER NAYLOR.

Witnesses:

K. S. VAN NOORHIS,
AB. McBOHEE.