

No. 676,579.

Patented June 18, 1901.

H. M. ESSELEN.  
BUILT-UP STRUCTURE AND HOLDER.

(Application filed Oct. 2, 1899.)

(No Model.)

Fig. 1.

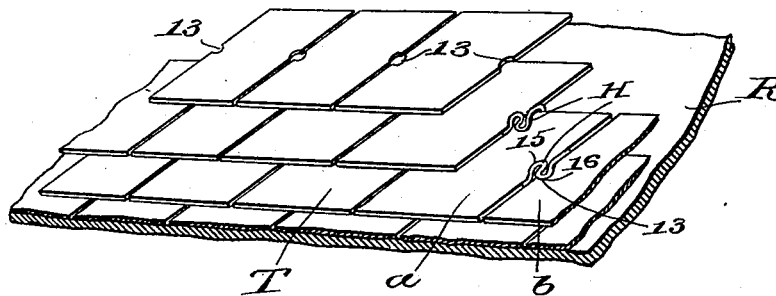


Fig. 2.

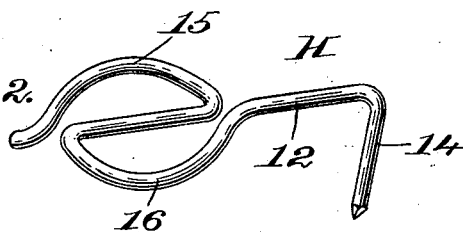


Fig. 3.

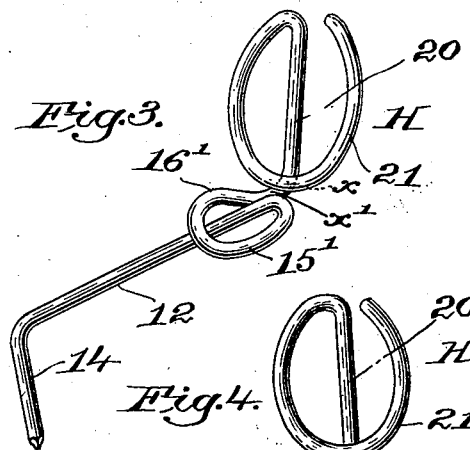
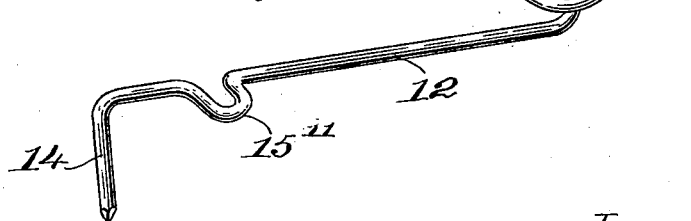


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## BUILT-UP STRUCTURE AND HOLDER.

SPECIFICATION forming part of Letters Patent No. 676,579, dated June 18, 1901.

Application filed October 2, 1899. Serial No. 732,270. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY M. ESSELEN, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Holders for Tiles, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to what I shall for convenience term a "tile-holder."

In the following description and the appended claims I shall make use of the term "tile," and at this point I desire to state that I include within the meaning of such term not only a so-called "tile," but analogous and substantially similar articles—such as slate, slabs, shingles, and the like—which can be laid adjacent to each other or overlapped to form a composite structure, as in the case of a roof, and I prefer to employ in connection with such structure a plurality of independent holding devices.

Each holder comprises a body or shank provided with a lateral projection, the projection and the body of the holder being in the same plane, and the projection is adapted to engage or interlock with a recess in the tile, and the body of the holder is provided with suitable means for attaching the same to the roof. In some cases the holder can cooperate with two contiguous tiles, in which case it may be interlocked with both.

While the holder may be formed from any suitable material, I can produce it very cheaply from wire in one piece.

In the drawings, Figure 1 is a perspective view, on a reduced scale, of a tiled structure, showing the tiles overlapped upon a roof and a holder in combination therewith. Fig. 2 is a similar view of the holder represented in Fig. 1, and Figs. 3 and 4 are like illustrations of modified types of the holder.

The holder shown in the several figures of the drawings is denoted in a general way by H.

The holder represented in Figs. 1 and 2 is made wholly of wire, and it comprises a shank 12, adapted to be disposed between two adjacent tiles, as shown in Fig. 1. In said figure I have represented a series of overlapped tiles arranged edge to edge longitudinally thereof, and it will be seen that the holder is situated between the contiguous longitudi-

nal edges of two adjacent tiles. The tiles are each denoted by T, and they are shown having in their opposite longitudinal edges alined recesses or pockets 13. The tiles are shown as laid upon a roof R, and the holders are fastened thereto in any convenient manner. A simple means consists in providing them with downturned drive-points 14 of suitable lengths and disposed approximately at right angles to the shanks or bodies 12. These points are to be driven into the roof until the shanks are near said roof.

Tiles or slate are frequently from various causes—for example, by roofers walking over the same or through their inherent brittleness—broken longitudinally thereof, and ordinarily one section will separate from the other and will slide off the roof or other inclination and will be followed by the other piece, and this is decidedly objectionable in that it causes the roof to leak where such breaks occur. By my combination of parts, however, such a result as this is not possible, for the tiles and holders are so interlocked that even though the tiles be broken in the manner before specified the pieces, no matter how many lines of separation there may be, cannot be displaced, nor is the stability or solidity of the roof in any wise affected.

A simple means of interlocking the holders and tiles is by providing one of each of them with a recess adapted to receive a projection upon its companion or cooperating element.

In the construction represented in Fig. 1 the holders are represented as provided with two projections, (denoted, respectively, by 15 and 16.) In the lower right-hand corner of Fig. 1 I have illustrated two adjacent tiles, and it will be evident that the opposite recesses of the same are in transverse alignment and this at a point slightly near the center of the tiles, although this location is in no wise essential. The two adjacent tiles just alluded to are denoted, respectively, by a and b, and it will be seen that the projection 15 upon the holder H snugly fits within the adjacent recess of the tile a, while the opposite projection 16 likewise enters the recess 13 of the tile b.

In tiling a roof two adjacent tiles are laid thereupon flatwise and are separated from each other by a distance substantially equal-

ing the width of the body or shank of the holder H. The drive-point 14 is then driven into the roof by means of a hammer or like tool at a point near the middle of the upper edge of the subjacent tile or that upon which the two just alluded to are placed, and the shank or body of the holder is introduced into the space between the same, and until it is near the roof and toward the last part of the driving operation the opposite projections are placed within the cooperating and adjacent recesses. The motion of the holder will be straight down, so that the opposite projections 15 and 16 can be properly entered or guided into the cooperating recesses of such tiles. Therefore it will be understood that the holder is provided not only with means for interlocking it with one or more tiles, but also with a suitable fastening device by which it can be secured to a roof.

It will be seen that the projections 15 and 16 lie in a plane transverse to that of the drive-point.

The projections or offsets 15 and 16 are substantially curvilinear and are formed in a simple manner by being bent over the stock or body of the holder.

At this point I desire to state that the invention is in no wise limited to the employment of any of the parts previously set forth nor those hereinafter described, for the invention may be materially modified within the scope of the appended claims. I have represented certain simple and easily-manufactured forms of the invention.

In Fig. 3 the body portion 12 of the holder is provided at its upper end with the downwardly-extending sharpened drive-point 14 and also provided at its lower end with a projection or hook 20, perpendicular to the body portion 12, and consequently projecting from the body portion 12 in a direction opposite to that of the drive-point 14. Said body portion is also provided at its lower end, at which the perpendicular projection is located, with the oppositely-disposed projections 15' and 16', of similar contour, though smaller than the corresponding offsets or projections shown in Fig. 2. These projections 15' and 16', like the others, are insertible in two aligned recesses or notches in two adjacent slates or tiles, and a superposed tile is adapted to bear at substantially the middle of its lower edge against the projection 20, which constitutes a support for further securing the tile. Although the projection or support 20 is advantageous, its use in some cases can be dispensed with and the interlocking engagement described at length simply relied upon to hold the tiles firmly in position. The lower portion of the projection 20—say between the points  $x$  and  $x'$ —constitutes the support proper for the tile, while the upper portion of such projection constitutes part of a snow-guard, of which the open-loop or U-shaped piece 21 is the remainder, and the said open loop lies in the same plane as the perpendicu-

lar projection 20, the whole forming a skeleton-like or open-work device. These snow-guards are arranged at substantially close intervals across the roof and project a proper distance above the same, and they serve to break up the body of snow as it slides off the roof, so that it will pass off in fragments or pieces, which would not be the result if a continuous barrier were placed across the roof.

In Fig. 4 I have shown a holder of different construction. This holder is adapted to interlock with but one tile, and it is provided with a single projection (denoted by 15'') extending laterally or sidewise from the body 12 and, like the other, in a plane at right angles to that of the drive-point 14. The projection 20 extends from the lower end of the holder, and its base is adapted to sustain a tile lying on the one with which the holder interlocks. Said projection 20, like that shown in Fig. 3, constitutes, with the open loop or eye 21, a snow-guard.

The present invention includes certain fundamental features expressed in the accompanying claims, and hence, as before stated, it is not limited in any manner to the construction previously set forth in detail.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A tile-holder having a body provided with a lateral projection adapted to enter a recess in a tile, the holder when in use having its body and projection in the plane of the tile.
2. A tile-holder having a body provided with a lateral projection adapted to enter a recess in a tile, the body and the projection being in the same plane, and the body being furnished with means for attaching the holder to a roof, and when in operative position lying parallel to the edge of a tile.
3. The combination of a tile having a recess and a tile-holder having a body provided with a lateral projection adapted to enter the recess, the body of the holder and the projection thereon being in the plane of the tile, and means to attach the holder to a roof.
4. The combination of a tile having a recess in one of its longitudinal edges and a tile-holder having a body provided with a lateral projection adapted to enter said recess, the body and the projection of the tile being in the plane of the tile.
5. The combination of a tile having a recess and a holder therefor having a body furnished with a lateral projection adapted to enter said recess, said body being provided at one end with a drive-point at right angles thereto.
6. The combination of a tile having a recess and a holder therefor, said holder having a body provided with a lateral projection adapted to enter said recess, and furnished at one end with a drive-point at an angle to said body and at right angles to the plane of the projection.
7. A tile-holder having a body provided

with means for securing the same to a roof, and furnished with a lateral projection adapted to engage in a recess in a tile and also with a support for the lower edge of a tile.

5 8. A tile-holder having a body provided with means for securing the same to a roof, and furnished with a lateral projection adapted to engage in a recess in a tile and also with  
10 a support for the lower edge of a tile, said body having a snow-guard.

9. A tile-holder having a body provided with means for securing the same to a roof, and furnished with a lateral projection adapted to engage in a recess in a tile and also with  
15 a support for the lower edge of a tile, said

body having a snow-guard, and the whole being formed from wire in one piece.

10. A tile-holder having a body provided with a lateral projection adapted to enter a recess in a tile, the body and projection being in the same plane, and said body when in operative position lying parallel to the edge of a tile. 20

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 25

HENRY M. ESSELEN.

Witnesses:

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LOUISE ROTHSTEIN.