J. A. TOPPING.

NAILING CLEAT AND STRIP.

APPLICATION FILED MAR. 11, 1912.

1,048,604.

Patented Dec. 31, 1912.

Fig. 1.

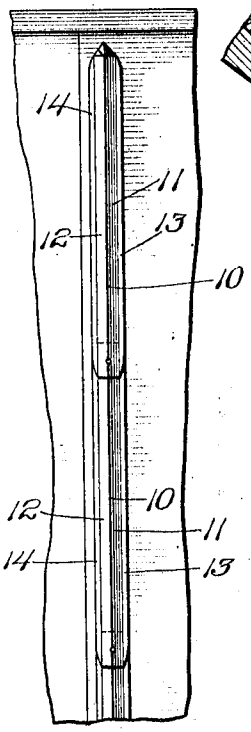


Fig. 2.

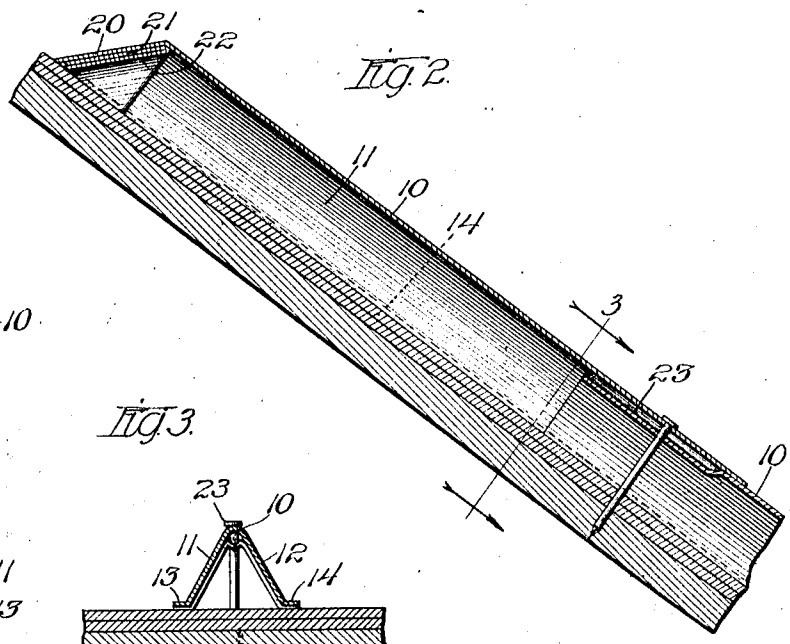


Fig. 3.

Fig. 4.

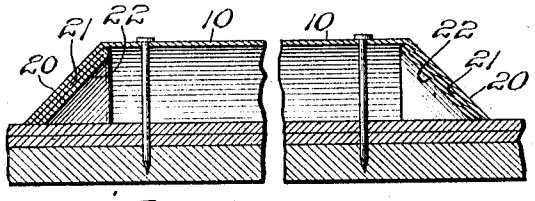


Fig. 5.

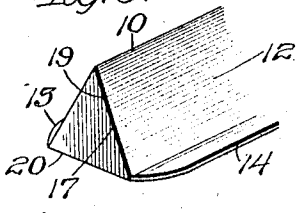


Fig. 6.

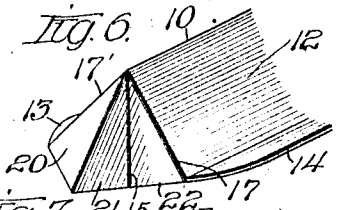


Fig. 9.

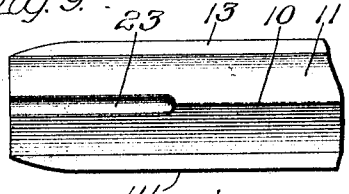


Fig. 7.

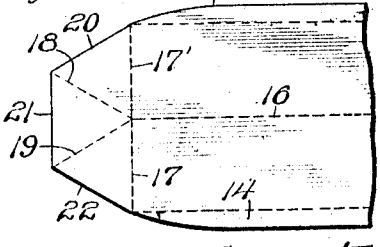
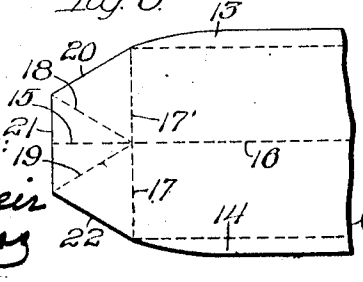


Fig. 8.



Witnesses:

Robert H. Weir

F. W. Dorsey

Inventor

John A. Topping

by Foster Bain & May

Attys

UNITED STATES PATENT OFFICE.

JOHN A. TOPPING, OF CHICAGO, ILLINOIS.

NAILING CLEAT AND STRIP.

1,048,604. Specification of Letters Patent. Patented Dec. 31, 1912.

Application filed March 11, 1912. Serial No. 683,122.

To all whom it may concern:

Be it known that I, JOHN A. TOPPING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Nailing Cleats and Strips, of which the following is a specification.

My invention relates to improvements in nailing cleats or strips for securing flexible sheets of prepared water resisting material to the sides or roofs of buildings.

One of the objects of my invention is to provide a cleat that may be used alone to secure felt, paper, or other sheeting to the sheathing of roofs of buildings and when used with stretchers, intermediate terminal cleats continuous strips may thus be formed for use on roofs or sides of buildings.

With these and other objects in view which will become readily apparent to persons skilled in the art from a consideration of the following description taken in conjunction with the drawing, my invention consists in the combination and arrangements of parts hereinafter more fully described, and pointed out in the appended claims, it being understood, of course, that changes may be made in the form, proportion or size, and details within the scope of said claims, without departure from the spirit of the invention.

In the drawings: Figure 1 is a plan view of a strip composed of a cleat and a series of stretchers; Fig. 2 is an enlarged longitudinal section; Fig. 3 is a transverse view taken on line 3—3 of Fig. 2; Fig. 4 is a longitudinal central section of a cleat closed at both ends; Fig. 5 is a perspective view of a cleat showing the cleat as it appears when folded on the dotted lines of Fig. 7; Fig. 6 is a similar view showing its appearance when folded on dotted lines of Fig. 8; Figs. 7 and 8 are blanks of which the cleats are made; and Fig. 9 is a broken away fragment showing the underlying end of one of the stretchers.

In all of the views the same reference characters are used to indicate similar parts.

The cleat is made of a single strip of sheet metal folded longitudinally on a central line and at an angle substantially as shown in Fig. 3, leaving it rather rounding at the apex, as at 10, having inclined sides 11 and 12 each terminating in flat marginal edges or base flanges 13 and 14 respectively.

Figs. 7 and 8 are the blanks of which the cleats are made. The dotted lines indicate the lines on which the blank is folded or bent to form the various parts thereof. Fig. 8 shows line 15 that is not present in Fig. 7. The latter blank is used to make the point-ended cleat of Fig. 6. The blank is bent longitudinally on line 16 then transversely on line 17—17'. In making the cleat of Fig. 5 the fold is made inwardly on line 18, that is, the part where the fold is made projects outwardly and the sides are inward of this part. The fold is made on line 19 so that the line of the fold is inward of the sides, or in the reverse direction to that made on line 18, and then line 18 is brought up parallel with line 17, and the edges 20, 21, and 22 become the base. When making the point-ended cleat, as shown in Figs. 4 and 6, the fold of line 16 is continued to the end, as line 15. The parts are folded, as in Fig. 8 with a fold made on line 15 just as it is made on lines 16 and 18 and the line 15 is then brought to position midway of the terminals of the edge 22, as shown in Fig. 6. When the cleats are to be used alone they are preferably folded at both ends, as explained above, better to shed water, and the cleats are preferably used at intervals along the longitudinal lapped edges of the roofing sheets, sufficiently separated to permit the water to pass between the adjacent ends. To secure the lapped edges of flexible sheets to vertical supports, or to secure such sheets to a roof where the laps extend in a vertical direction I prefer that the strips shall be continuous. Therefore I provide between terminal cleats a series of stretchers, such as illustrated in Fig. 9, which are made of the same blanks as those of which the cleats are made, but they are preferably not folded at their ends, and preferably near one end I prefer to turn that portion near the apex, downwardly, at substantially the same angle as the upturned portion, but inverted as at 23.

In applying the parts to provide a continuous strip I first place a cleat, folded at one end only, leaving the other end open, I then lap the open end of the cleat over the part 23 of the following stretcher so that when a nail is driven through the apex of the cleat it will enter the inverted angular part 23 of the stretcher and will thereby be made to more easily pierce the wall of the stretcher than otherwise, and the inturned

part 23 being under the superposed part of the cleat, or a similar part of an adjacent stretcher it is protected from the weather. The ending end of a cleat, or of a succeeding stretcher, overlies the adjacent end of the next stretcher in the series, just as part of one shingle is superposed above a part of the one below whereby to shed water. To accommodate the parts to such an arrangement I prefer to point the ends of each cleat and stretcher by removing parts of the marginal edges or flanges 13 and 14. The apex of the cleat is not made so sharp that a nail cannot be driven through it, and therefore I prefer to round it slightly as shown at 10.

When a nail is driven through the outer wall of the lapped parts it would be difficult to make it strike just the right point of the underlying part, to pierce the same as it might strike the side wall, on either side of the apex, and be deflected. I therefore prefer to invert the angular apex of the underlapped part, as at 23, a short distance from the end to more effectively direct the point of the nail.

The cleat and strip formed in the manner described are cheap of construction, efficient in effect and easy of application.

What I claim is:

1. A cleat made of a strip of metal centrally folded in a longitudinal plane and having its side walls angularly folded to close its end.

2. A cleat made of a strip of metal longitudinally folded along its center, the end of said strip being cut to provide three angularly disposed edges (20—21—22) and said end being folded on a plurality of lines converging toward said longitudinal line upon which said strip is folded, to close the end of said cleat, portions of said end therefore overlying other portions thereof.

3. A continuous nailing cleat composed of a cleat and a series of separate stretchers, each made of a blank longitudinally folded along its center, the cleat having one end closed by suitable folding of the side walls thereof the other end being left open, straight flat longitudinal flanges upon each edge of each said cleat and stretcher for coaction with a surface when nails are driven into the overlapping ends of said cleat and stretcher members at their center lines constituting the apex of said continuous cleat structure, the flanges of meeting cleat and stretcher members being tapered at their ends so that they disappear to accommodate the overlapping arrangement, and the longitudinal folds adapted to receive nails driven through the apex of said cleat at its closed end, and through the overlapping ends of succeeding members.

4. A stretcher, for coöperation with a closed end cleat, made of a strip folded longitudinally in a central plane so that its two sides are angularly disposed and having a part of the angular apex thereof inverted for reception of a nail.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

JOHN A. TOPPING.

In the presence of—
W. LINN ALLEN,
MARY F. ALLEN.