J. A. TOPPING.

NAILING CLEAT.

APPLICATION FILED SEPT. 23, 1912.

1,066,959.

Patented July 8, 1913.

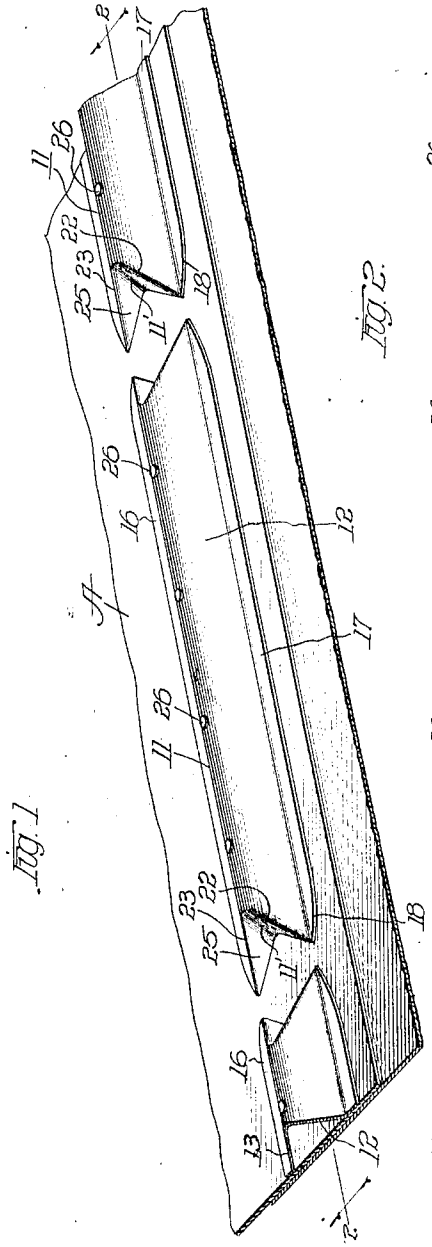


Fig. 1.

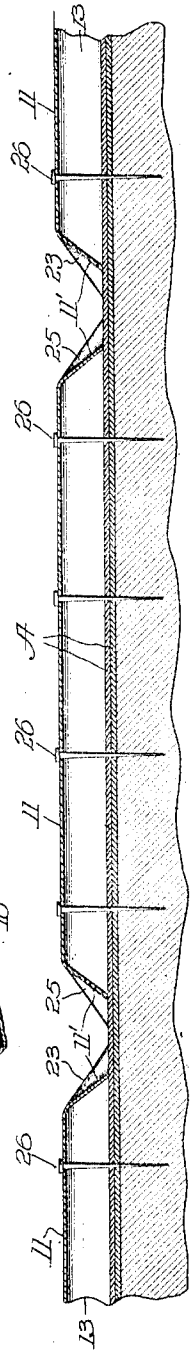


Fig. 2.

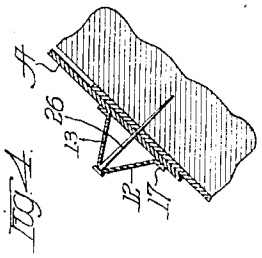


Fig. 4.

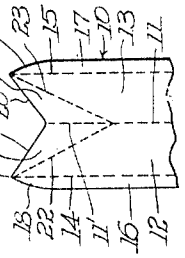


Fig. 5.

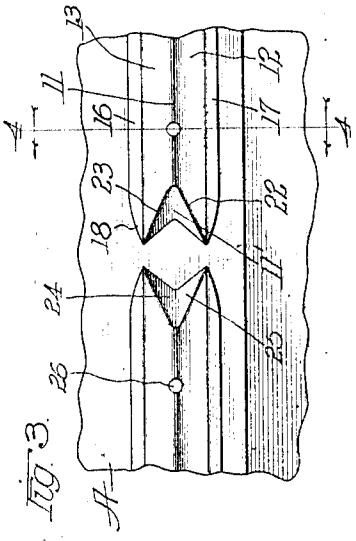


Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN ARTHUR TOPPING, OF CHICAGO, ILLINOIS.

NAILING-CLEAT.

1,066,959. Specification of Letters Patent. Patented July 8, 1913.

Application filed September 23, 1912. Serial No. 721,734.

To all whom it may concern:

Be it known that I, JOHN ARTHUR 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, of which the following is a specification.

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

One of the objects of my invention is to provide a cleat which shall have the combined features of minimum cost of construction and maximum strength and efficiency.

Another object of my invention is to attain these combined results in a device formed simply by folding, in a certain way, a flat sheet-metal blank, said blank suitably cut for such folding.

Other and further objects of my invention will become apparent to those skilled in the art from a consideration of the following description taken in conjunction with the accompanying drawing, wherein—

Figure 1 is a broken-away perspective view, showing cleats constructed and applied to a roofing in accordance with my invention; Fig. 2 is a longitudinal section on line 2—2 of Fig. 1; Fig. 3 is a fragmentary plan view; Fig. 4 is a cross section on line 4—4 of Fig. 3; and Fig. 5 is a fragmentary view showing the blank from which the cleat may be made by folding, and in dotted lines showing the manner of folding such blank for attainment of the results hereafter mentioned.

In my allowed application Serial No. 683,122, filed March 11th, 1912, I have disclosed a cleat where the end of a blank is cut so as to be angularly foldable to close the ends of the cleat and provide at such ends strong double-walls to render the device durable and effective. The present invention contemplates the folding of the ends inwardly without doubling of the walls, an arch-shaped fold being such as to give the desired strength to the device.

Specifically 10 indicates a strip (the end of which is shown flat, as before folding, in Fig. 5) adapted to be angularly folded longitudinally on a central line 11 to form the apex of the cleat arch, the side walls, 12 and 13, slanting downward therefrom. The side walls are provided along their lower edges 14 and 15 with outwardly folded flat marginal base flanges 16 and 17 for coaction with the underlying roofing material A, as shown in Fig. 1. Preferably, each base flange is cut away at its end as at 18 so that the outer edge runs into the fold 14 (or 15) at the extreme end of the strip. The end of the strip is notched as shown in Fig. 5 to provide edges 19 and 20 converging inwardly toward the central line 11 from the points 21—21 where fold lines 14 and 15 meet the outer edges of the respective base flanges 16 and 17.

22 and 23 indicate folds extending convergingly inward toward the central line 11 from said foremost points 21—21, but at a more acute angle to said central line than the edges 19—20, and 11′ indicates a fold lying in the central longitudinal line of the strip but bent inwardly instead of outwardly. It will thus be observed that the sides 24 and 25 (between 19—22 and 20—23) effectively close the ends of the cleat and that the folded portion (24—11′—25) adequately supports the cleat when nails 26 are driven at intervals through the apex 11 and into the wall or roof structure to which the cleat is applied. Obviously also the angle-relation of the edges 19—20 and folds 22—23 may be varied to make the fold 11′, in the completed cleat, stand vertically or at any desired inclination to the vertical, said fold acting, in any event, in the manner of a bracing or arch structure between the nail-receiving apex and the roof-surface. It will be further observed that the folds 22 and 23 diverge downwardly from the apex 11 and each constitute an apex or divide between the triangular wall 24 or 25 and the respective side wall 12 or 13, all the walls therefore slanting downwardly from an apex. Thus this structure minimizes the material and work required in its construction by a novel formation and folding of the blank, while the completed device lacks none of the necessary features of strength, effectiveness in shedding water, etc. It will be apparent, further, that changes may be made in the precise showing herein made

without departing from the spirit of the invention and within the scope of the appended claims.

What I claim is:

1. A nailing cleat made of a strip of metal longitudinally folded along its center and having the end of each of its side walls bent inwardly with a central fold between said inwardly bent portions of the side walls.

2. A nailing cleat made of a strip of metal longitudinally folded along a central line and having its side walls bent inwardly to close its ends, each said side wall portion so bent being triangular and joined to the similarly bent portion of the other side wall at a central fold.

3. A nailing cleat made of a strip of metal longitudinally folded along a central line to form a nail-receiving apex and opposite inclined side walls, the end of said strip being cut and folded to provide folds diverging downwardly and outward from the end of said apex, the portion between said inclined folds bent inwardly along a central line to close the end of said cleat.

4. A nailing cleat made of a strip of metal longitudinally folded along a central line to form a nail-receiving apex and along lines diverging from said central line to form wall-dividing apices extending divergingly from the central apex toward the two foremost points of the strip, the walls which extend inwardly from said diverging apices meeting at an inward center-line fold of the strip.

5. A nailing cleat made of a strip of metal folded longitudinally along a central line to form a nail-receiving apex and side walls, the ends of said cleat being also folded along lines diverging from said central lines, the end portion between said diverging folds being notched to form edges diverging from said central line at less acute angle than said folds, and said end portion being folded inwardly along said central line to bring said diverging edges in the same plane with the edges of said side walls.

6. A nailing cleat made of a strip of metal folded longitudinally along a central line to form a nail-receiving apex and side walls, the ends of said cleat being also folded along lines diverging from said central lines, the end portion of the strip between said diverging folds being notched to form edges diverging from said central line at less acute angle than said folds, and said end portion being folded inwardly along said central line to bring said diverging edges in the same plane with the edges of said side walls, and base flanges extending outwardly from said edges of the side walls in said plane.

7. A strip of metal cut to provide at each end two foremost points, and folded to provide a cleat having a central longitudinal apex, and at each end folds and edges converging from the center of the strip to said foremost points thereof.

8. A strip of metal cut to provide at its ends two foremost points one on each side of the longitudinal center, said strip folded in one direction along its central longitudinal line to provide a nail-receiving apex, said apex terminating at a point somewhat behind said foremost points, and said strip folded in the opposite direction along the portion of said central line which lies beyond said terminal point of the apex, and further folded to provide folds and edges converging from the ends of the last recited central fold toward said foremost points.

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

JOHN ARTHUR TOPPING.

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