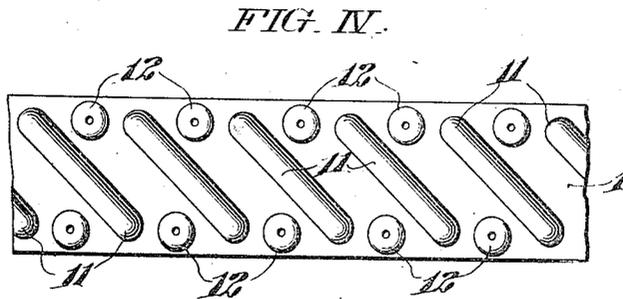
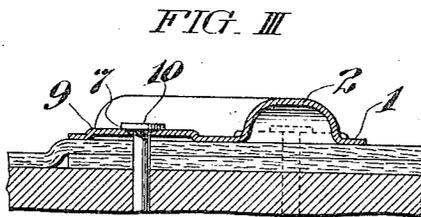
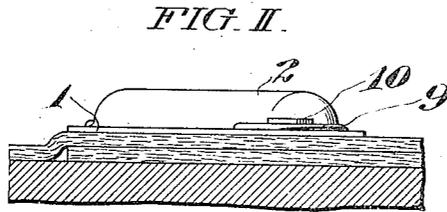
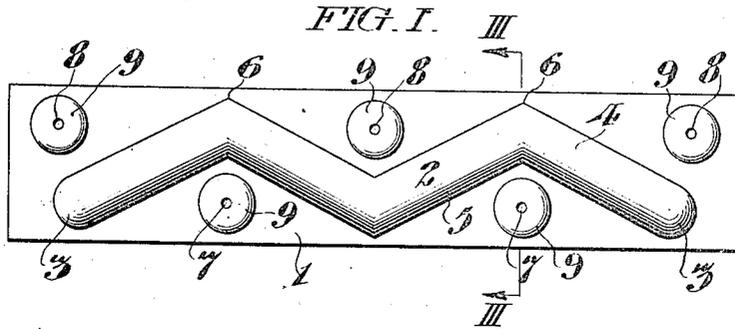


J. H. BELL.  
 ROOFING CLEAT.  
 APPLICATION FILED JULY 29, 1910.

985,501.

Patented Feb. 28, 1911.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JAMES H. BELL, OF PHILADELPHIA, PENNSYLVANIA.

## ROOFING-CLEAT.

985,501.

Specification of Letters Patent. Patented Feb. 28, 1911.

Application filed July 29, 1910. Serial No. 574,439.

To all whom it may concern:

Be it known that I, JAMES H. BELL, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Roofing-Cleats, whereof the following is a specification, reference being had to the accompanying drawings.

My invention relates to new and useful improvements in roofing cleats and more especially to elongated roofing cleats, which are adapted to receive a plurality of securing nails.

An object of the invention is to provide means for longitudinally and transversely strengthening a cleat of the above character.

A further object of the invention is to provide a cleat in which the securing means is so disposed relative to the strengthening means, that the cleat may be firmly seated and held against a roofing material or the like by the securing means.

These and other objects will in part be obvious, and will in part be hereinafter more fully described.

In the drawings, Figure I, is a plan view of a roofing cleat embodying my improvements. Fig. II, is an end view of the same showing the cleat applied to secure a roofing material. Fig. III, is a transverse section through the parts shown in Fig. II. Fig. IV, is a modification showing a slightly different arrangement in the arched sections.

The roofing cleat is preferably made of sheet metal and may be stamped therefrom or rolled or made in any other desired manner. Said cleat consists of a body portion 1, which, as shown in the drawings, is elongated. In Figs. I, II, and III, I have shown the elongated body portion 1, as formed with an arched section 2, which arched section is arranged in a zig zag direction extending longitudinally of the cleat. The ends of the cleat 3, 3, terminate short of the ends of the body portion 1, and are closed as clearly shown in Figs. I, and II. It will thus be seen that the arched or raised portion of the cleat is completely closed to the upper exposed surface of the cleat, and therefore water cannot accumulate under said raised arched portion. The arched section 4, of the zig zag raised portions extends in a direction at an angle to the longitudinal and transverse axes of the cleat. The section 5, of the arched or raised portions which joins the section 4, also ex-

tends at an angle to the longitudinal or transverse axes of the cleat, but in an opposite direction. These angularly arranged sections of the arched or raised portions not only longitudinally strengthen the cleat, but also transversely strengthen said cleat. Furthermore, by the above arrangement, I am able to use a cleat of considerable width, and the zig zag arched section extending from one side to the other, will strengthen the cleat throughout its entire width and length. Located transversely opposite the angles 6, of the zig zag strengthening arched section, I have provided apertures 7, through which a securing nail may be driven. Similarly arranged apertures 8, 8, are located on the other side of the zig zag arched section. Surrounding each aperture is an upwardly dished portion 9. When the head of the nail or other fastening device 10, is driven into the roof, or other object, to which the cleat is to be attached, the dished portion 9, is collapsed, which causes the cleat to be firmly seated against the roofing material. The tendency of the dished portion to return to its normal position will cause the cleat to be brought into firm gripping contact with the roofing material.

By locating the securing apertures transversely opposite the angles of the zig zag portion, I am able to position said apertures within the lateral extremities of the zig zag portion. It will readily be seen that in this position of the apertures, when the securing nails are driven into the roof, the arched strengthening portion will cooperate with the securing means to hold the cleat in firm gripping contact with the roofing material. This firm seating of the cleat against the roofing material prevents any leakage of water under the edge of the clip, which by freezing and expanding may loosen the cleat.

In Fig. IV, I have shown the arched sections 11, 11, as extending in the same direction and at an angle to the longitudinal and transverse axes of the cleat. By this arrangement, I secure also a transverse and a longitudinal strengthening of the cleat. The securing apertures 12, are located at the ends of the angularly arranged arched sections.

It will be observed that minor changes in the details of construction may be made without departing from the spirit of my invention.

I claim:—

1. A roofing cleat comprising a metallic body portion having a section thereof arched, said arched section extending at an angle to the longitudinal and transverse axes of said cleat, whereby said cleat is strengthened longitudinally and transversely.
2. A roofing cleat comprising a metallic body portion having a section thereof arched, said arched section extending in a zig zag direction, whereby said cleat is strengthened longitudinally and transversely.
3. A roofing cleat comprising a metallic body portion having a section thereof arched, said arched section extending in a zig zag direction, whereby said cleat is strengthened longitudinally and transversely, said arched section terminating at a distance from the edges of said cleat.
4. A roofing cleat comprising a metallic body portion having a section thereof arched, said arched section extending in a zig zag direction, whereby said cleat is strengthened longitudinally and transversely, said cleat having apertures located transversely opposite to the angles of said zig zag arched section.
5. A roofing cleat having a metallic body

portion having a section thereof arched, said arched section extending in a zig zag direction, whereby said cleat is strengthened longitudinally and transversely, said cleat having apertures located within the lateral extremities of said zig zag section.

6. A roofing cleat comprising a metallic body portion having a section thereof arched, said arched section extending in a zig zag direction, whereby said cleat is strengthened longitudinally and transversely, said cleat having apertures located transversely opposite to the angles of said zig zag arched section, the body portion of the cleat being dished upwardly about each aperture.

7. A cleat comprising a flat elongated metallic body portion with certain portions thereof arched, said arched portions lying in angular relation to the longitudinal and transverse axes of the cleat.

In testimony whereof, I have hereunto signed my name, at Philadelphia, Pennsylvania, this twenty-seventh day of July, 1910.

JAMES H. BELL.

Witnesses:

C. BRADFORD FRALEY,

E. L. FULLERTON.