

H. R. WARDELL.
 ROOFING CLEAT.
 APPLICATION FILED OCT. 31, 1911.

1,017,611.

Patented Feb. 13, 1912

Fig. 1.

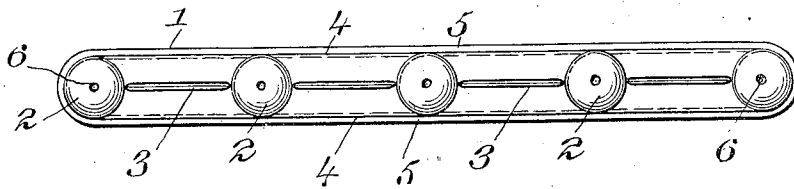


Fig. 2.

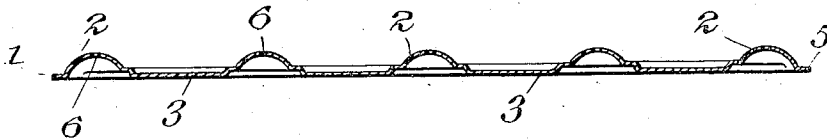
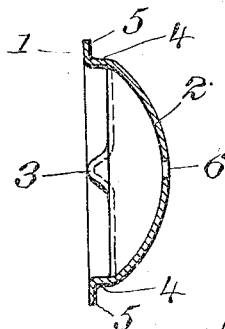


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY R. WARDELL, OF NEW YORK, N. Y., ASSIGNOR TO H. W. JOHNS-MANVILLE COMPANY, A CORPORATION OF NEW YORK.

ROOFING-CLEAT.

1,017,611.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY R. WARDELL, a citizen of the United States of America, residing at New York city, borough of Manhattan, county and State of New York, have invented certain new and useful Improvements in Roofing-Cleats, of which the following is a specification.

My invention relates to cleats for fastening asbestos and other flexible roofing to the roofs of buildings.

The old method of fastening such roofing was to use large headed tacks. As the roofing ages it wears or shrinks loose from such tacks and is easily pulled away from them by the wind or by its own weight.

It has been proposed to use various forms of cleats having high arched portions to serve as intermediaries between the tacks and the roofing. These interfere with the free flow of water down the roof and tend to produce pools of water which soften the roofing material so that it disintegrates or tears easily. Other proposed forms of cleat avoiding the objectionable arched structure have been too weak and have not firmly gripped the roofing.

I have invented a form of cleat which avoids all these difficulties, the preferred form of which is illustrated in the accompanying sheet of drawings in which,

Figure 1 is a plan view of the cleat. Fig. 2 is a longitudinal section on line 2—2 of Fig. 1, and Fig. 3 is an enlarged cross section on line 3—3 of Fig. 1.

Throughout the drawings like reference characters indicate like parts.

1 is a thin strip of steel or other metal of even width throughout and having rounded ends.

2, 2, are dome-like portions stamped up out of the strip at convenient intervals, the diameter of each dome at its base approximately equaling the width of the strip, and its height being sufficient to produce a form that will give a firm resistance against vertical compression.

A series of ribs 3, 3, extend longitudinally of the strip between the domes. Preferably they are arranged centrally of the strip and are formed by stamping down the material of the strip as shown in Fig. 3. The edges 4, 4, of the strip are also crimped downwardly to a distance approximately equal to the depth of the ribs 3, 3, and the outer

edges of the strips may be flanged outwardly, as shown at 5, 5. These ribs are formed in strip 1 by corrugating it longitudinally. This gives it stiffness against bending strains without materially raising it above the surface of the roofing sufficiently to interfere with the flow of water over it. Each of the dome-like portions 2, 2, is centrally perforated at 6, to permit the passage of a tack or other fastening means.

In operation the tacks or other fastening means are forced down until the dome-like portions 2, 2, are partly collapsed. This causes the elastic reaction of the metal to force the cleat down on the roofing with a uniform pressure, and to take up any inequalities in the thickness of the roofing material beneath it, due to wear or original unevenness. The roofing is firmly grasped by the ribs and crimped edges which form a plurality of gripping means on its under surface and these also contribute greatly to the strength of the structure without presenting any substantial obstruction to the flow of water over the cleats when in position on the roof. In short the dome-like portions give strength in transmitting the pressure of the nails to the body of the strip and distributing the same over it, while the corrugated form of the strip produces a truss-like structure that transmits said pressure along from one dome-like portion to another without presenting any substantial obstruction on the roof's surface.

Having, therefore, described my invention, I claim:

1. A cleat for use in fastening flexible roofing to a roof which comprises a strip of metal having a plurality of dome-like upwardly extending portions perforated at their centers, the remaining portions of the strip having longitudinal corrugations formed therein to stiffen the same and afford a plurality of gripping means on its under surface.

2. A cleat for use in fastening flexible roofing to a roof which comprises a strip of metal having a plurality of centrally perforated dome-like portions extending upwardly to a height sufficient to produce stiffness against vertical compression, and also having between said dome-like portions longitudinal corrugations of a much less height calculated to produce stiffness against transverse bending strains.

3. A cleat for use in fastening flexible roofing to a roof which comprises a strip of metal having a plurality of centrally perforated dome-like portions extending upwardly to a height sufficient to produce stiffness against vertical compression, and also having downwardly projecting ribs on the under face of the strip adapted to transversely stiffen the same and also serve as means for gripping the roofing beneath.

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