

July 18, 1967

F. VISSING ET AL

3,331,180

FASTENING DEVICE FOR WALL AND CEILING COVERINGS

Filed Dec. 22, 1964

FIG. 1

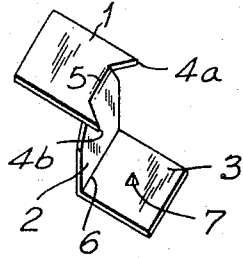


FIG. 2

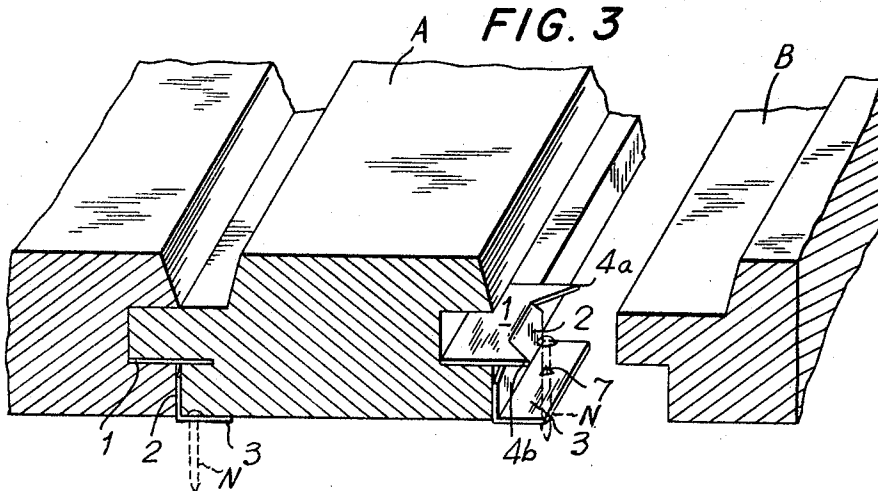
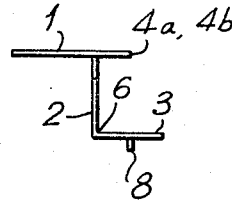


FIG. 4

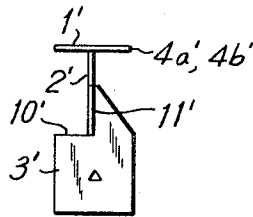
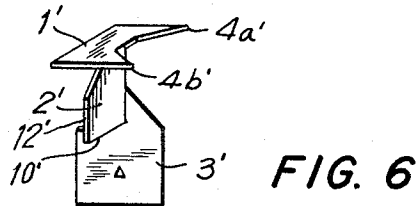
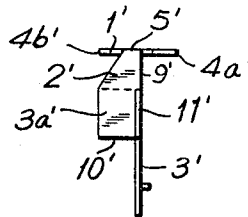


FIG. 5



1

3,331,180

FASTENING DEVICE FOR WALL AND CEILING COVERINGS

Friedrich Vissing, Ehrengutstr. 17, and Georg Linsmayer, Berg-am-Laim-Str. 73, both of Munich, Germany

Filed Dec. 22, 1964, Ser. No. 420,403

Claims priority, application Germany, Dec. 23, 1963, L 36,096

4 Claims. (Cl. 52—714)

The present invention relates to fastening devices for wall and ceiling coverings.

Wall and ceiling coverings made of wood or of plastic have become increasingly popular. For this purpose, use is made, for example, of so-called profile boards which are provided with a groove on one side and with a tongue on the other side and which can thus be pushed into each other.

The means of fastening these boards to ceilings or walls must, of course, be invisible. To this end, it has been customary to nail said profile boards to ceilings or walls by a nail driven at an angle in the groove. This nail holds the board into the groove of which it is driven, but it does not hold the adjoining board which is pushed into the groove with its tongue. This method of nailing often causes considerable damage to the boards, without a very firm support being obtained by the comparatively thin nail. If thicker nails are used, the danger of splitting the wood increases; especially the portion which forms the groove is split off easily. Moreover, it is not easy or simple to effect oblique or inclined nailing.

It is an object of the invention to provide an improved fixing or fastening device which completely overcomes these disadvantages.

To this end, the present invention proposes a metallic member, preferably made of hard sheet metal, which consists of a substantially rectangular piece of metal bent in Z-shape, with a vertical center portion comprising on both sides an incision, cut, or notch extending obliquely upwardly to the bending edge with which the vertical center portion passes over into the upper horizontal portion, the pin-like or spike-like pieces, which are formed thereby and pass over into the upper portion, being located in the plane of and in rearward extension of the horizontal upper portion.

The covering itself will practically be free of damage from such a fastening device. The lower portion of the piece bent off in Z-shape engages the base or backing member, while the upper horizontal portion engages in the groove of one profile board, holding the same with the entire surface of the upper portion. Upon pushing the second profile board into engagement with the first profile board, during which operation the tongue of said second board engages in the groove of the first board, the spike-like pieces of the fastening device penetrate slightly into the second profile board underneath the tongue thereof and provide at the same time a support for this board.

The invention will now be described by way of the accompanying drawings, in which:

FIG. 1 is a perspective view of a fixing or fastening device according to the invention;

FIG. 2 is a side view of the device of the invention;

FIG. 3 shows in perspective the mode of use of the fastening device according to the invention;

FIG. 4 shows a side view of a modification of the fastening device according to the invention for effecting a fastening not at a surface underneath the covering, but at a surface perpendicular thereto;

FIG. 5 is a rear view of the device of FIG. 4; and

FIG. 6 is a perspective view of the fastening device according to FIGS. 4 and 5.

FIGS. 1 and 2 show a Z-shaped metal member com-

2

prising an upper horizontal portion 1, a center vertical portion 2 and a lower horizontal portion 3. The vertical center portion 2 is provided with a cut on both sides extending from the outer edge obliquely upwardly to the bending edge 5, at which the vertical center portion 2 merges into the upper horizontal portion 1, so that pin-like or spike-like pieces 4a and 4b with sharp points are formed on each side. These pin-like or spike-like pieces are bent out of the plane of the vertical center portion and are located in the horizontal plane of the upper portion 1 in rearward extension (i.e., rearward with respect to the vertical center portion 2) of the horizontal upper portion 1. If the upper horizontal portion 1 is cut pointedly in front, it may also act as pin or spike.

It is understood that, in the production of the spike-like pieces 4a and 4b, the lateral incision for their formation will be carried out prior to the metal piece being bent to form a Z-shape, so that the spike-like pieces are located, from the outset, in the plane of the horizontal upper portion.

The simplest way of fixing the metal frame to its support or base is by nailing. For this purpose, a hole 7 is provided in the lower portion 3, which hole is preferably formed by partially cutting out a triangular portion or flap 8, said triangular portion 8 remaining articulately connected at one of its three edges to the lower portion 3 and being bent out of the plane of the lower portion 3 to form a pin or spike which is perpendicular to the engaging or abutting surface. This embodiment offers the advantage that the fastening device according to the invention can first simply be pressed against the support or base and finds a temporary support, so that the hand of the user is free for nailing.

FIG. 3 shows how the fastening device according to the present invention is used. The upper portion 1 of the metal member engages in the groove of a board A, while the lower portion 3 engages the support or base and is secured thereto by a nail N. Upon pushing the next board B against the first board A, the spike-like pieces 4a and 4b penetrate into the mass below the tongue of board B and thus simultaneously provide the second board with a support. The fastening device is not visible from the outside, i.e., from the top in the drawing.

Frequently, the wall and ceiling coverings are not mounted on flat bases (supports, backing members), but on spaced beams or the like. It will then not be necessary to arrange the fastening devices at the surface on which the covering rests and they may preferably be fixed to the lateral surfaces of the beam. This simplifies especially the mounting, since the nailing need not be done from the bottom towards the top. The fastening device will then not lie with its lower portion 3' below the next board, which may sometimes be of advantage, although the flat metal members have generally no deleterious effect at all.

For this lateral fastening, a part of the lower portion 3' is located in the plane of the center portion 2', and the remaining part of the lower portion 3' is located perpendicularly to the plane of the center portion 2' and, at the same time, perpendicularly to the plane of the upper portion 1'. This development can best be described by a description of a possibility of producing the same. A rectangular piece of sheet metal is bent off at an angle to form the upper portion 1', the spike-like pieces 4a' and 4b' being formed by lateral oblique incisions in the center portion 2' so that said pieces 4a' and 4b' are again located in the plane of the horizontal upper portion 1'. On the side of one spike-like piece, for example 4a', the center portion is then cut about half way through, thereby

3

forming a new edge 9' which laterally closes the center portion 2' with respect to the cut-off portion. Said edge 9' is preferably perpendicular to the edge 5' which connects the horizontal upper portion to the vertical center portion. The lower portion 3', which was until then located in the plane of the vertical center portion 2', is then provided with an incision 10' at a distance from the center portion 2' on the side which is opposite the cut-out portion, i.e., in this case, on the side of the spike 4b'. The incision 10' extends from edge 12 to the imaginary extension 11' of the edge 9' and is preferably parallel to the edge 5'. The lower portion 3' can then be rotated through 90° about the extension 11' as an axis, so that it is perpendicular to the plane of the center portion 2' and also perpendicular to the plane of the upper portion 1'. A piece 3a' of the lower portion 3', which is located above the incision 10', remains in the plane of the center portion 2'.

The above-described fastening device can be fixed, with the lower portion 3', to the side face of a beam, in which case the edge engages the side face of the beam, and the upper portion 1' engages, frame-like (in the shape of a bow), in the groove of the covering, also above the beam.

It may be of advantage to cut off the upper edge of the lower portion 3' on the side of the cut-away center portion so as to form a rounded portion.

If the spike-like pieces 4a' and 4b' are to be longer than the center portion 2', which may be the case especially in thin woods, i.e., in woods in which the portions forming the groove are thin, the incision effected for the formation of the spike-like pieces may start in the lower portion 3', whereby only an unessential piece of the lower portion is lost while the spike-like pieces can be extended substantially.

As mentioned initially, it is understood that the fastening or fixing device according to the invention can be used not only for the fixing of wooden coverings, but similarly for the fixing of coverings made of plastics and the like.

What is claimed is:

1. A fastening or fixing device for wall and ceiling coverings comprising a metal piece including an upper horizontal portion, a vertical center portion merging with the horizontal portion along a bend line, said vertical center portion being provided with a lateral notch extending obliquely upwards to said bend line, spike-like pieces

4

connected to and located in the plane of and in rearward extension of said horizontal upper portion, said spike-like pieces having a shape corresponding to that of said notch and a lower portion including a first part located in the plane of the center portion and a second part perpendicular to the plane of the center portion and perpendicular to the plane of the upper portion, the center portion having a cut-away portion opposed to said notch to form an edge which laterally bounds the center portion and which is perpendicular to the said bend line, the lower portion being provided at a distance from the center portion with an incision extending to an imaginary extension of said edge, the lower portion, with the exception of a portion thereof located above the incision and in the plane of the center portion, being perpendicular to the plane of the center portion and extending on opposite sides thereof.

2. A fastening device according to claim 1, wherein the upper edge of the lower portion has a cut off on the side of the cut-away center portion.

3. A fastening device as claimed in claim 1 wherein said lower portion is provided with a hole for a fastener located in the plane of the center portion.

4. A fastening device as claimed in claim 3 wherein said hole is of triangular shape, a flap being formed on said lower portion at said hole extending away from said lower portion to form a spike for temporarily securing the metal piece to a support after which the fastener can be engaged through said hole.

References Cited

UNITED STATES PATENTS

2,200,649	5/1940	Wardle.	
2,216,271	10/1940	Joiner	287—20.92 X
3,187,389	6/1965	Anderson	287—20.92 X
3,237,360	3/1966	Mills	52—483

FOREIGN PATENTS

564,596 1932 Germany.

JOHN E. MURTAGH, *Primary Examiner.*

RICHARD W. COOKE, JR., *Examiner.*

R. A. STENZEL, *Assistant Examiner.*