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(71) Applicant: **STEELPRESS LIMITED**
46 Helen Street
Glasgow G51 3HQ(GB)

(72) Inventor: **Bell, Alan**
46 Helen Street
Glasgow, G51 3HQ(GB)

(74) Representative: **Fitzpatrick, Alan James et al**
Fitzpatricks 4 West Regent Street
Glasgow G2 1RS Scotland(GB)

(54) **Building flashings.**

(57) A building flashing (1) for use for example for finishing work at building corners, head joins, eaves and ridges comprises a metal sheeting deformed to provide a plurality of wall portions (2a - 2d) set at selected angles to each other dependent on the specific function of the flashing, certain of said wall

portions (2a - 2d) serving to facilitate joining of the flashing to a component of a building. At least one of wall portion (2a - 2d) of the sheeting is embossed (E) and this embossement serves to increase the structural strength of the flashing and can also improve the aesthetic quality of the flashing.

BUILDING FLASHINGS

The present invention relates to flashings for finishing work in building construction.

Building flashings for use in construction work generally serve to bridge wall and/or roof surfaces in a building construction to assist the surfaces weather-tightness and to this end comprise an elongate member which includes a plurality of appropriately disposed wall portions which are set at an angle or angles to each other. Aluminium and commercial quality steel are suitable materials for the manufacture of flashings and can be subsequently coated with paint and/or zinc systems.

It is an object of the present invention to provide a building flashing which is of improved strength and enhanced aesthetic quality.

According to the present invention there is provided a building flashing made of metal, at least one wall portion of the flashing being structurally embossed. The wall portions of the flashing are preferably of commercial quality steel or aluminium and may be coated with zinc and subsequent paint systems.

The precise embossment pattern created by the structural embossing can take a wide variety of forms. For example, the embossing could create an array of separate individual deformations on the flashing wall portion or alternatively a series of elongate continuous deformations or corrugations could be provided extending parallel to a deformation axis. Preferably an axis of the array or said deformation axis is set at an angle to the longitudinal extent of the flashing wall portion. In particular, the deformation axis of the corrugations can be set transversely to the longitudinal direction of the flashing wall portion. The individual deformations of the array pattern can have a variety of shapes in plan view. Thus these deformations could be of rectangular, circular, square or oblong shape in plan with other shapes possible. Further, deformations of different planar shape could be present in a particular array.

Thus the structural embossment of the flashing wall improves the structural strength property of the wall and hence of the complete flashing, enabling a thinner wall to be used with a consequent saving in material and hence in cost, or alternatively, for a given wall thickness, increased structural strength is imparted to the flashing.

Embodiments of the present invention will now be described by way of example with reference to the accompanying drawings wherein;

Fig. 1 shows in end view a lipped ridge flashing according to the present invention fitted at the ridge of a building roof.

Fig. 2 is a horizontal drip flashing of the

present invention fitted at the bottom of a wall;

Fig. 3A and 3B show in end view vertical corner flashings for an external corner and an internal corner respectively;

Fig. 4 is an end view of a flashing of the shadow bargeboard type; and

Fig. 5 shows in end view another flashing which is lipped bargeboard type.

Fig. 6 shows in plan view a portion of one form of structural embossing pattern suitable for use in the present invention.

Fig. 7 shows a sectional side view of a deformation of Fig. 6 through section X-X; and

Fig. 8 shows an end view of a further embossment pattern suitable for use in the present invention.

The drawings show various forms of building flashing 1, each of these flashings comprising an elongate member providing a number of appropriately disposed wall portions 2a, 2b, etc. The flashing 1 of Fig. 1 is a flanged ridge flashing extending between roof parts 3, 4 at a roof ridge, while Fig. 2 shows a drip flashing located at the bottom of a wall 5. The corner flashings 1 of Figs. 3A and 3B bridge wall portions 6, 7 at a building corner with the flashings 1 located externally and internally respectively by means of clamp plates 8. The bargeboard flashing 1 of Fig. 4 is mounted at the top of a wall 9 i.e. as a parapet and serves to hold a sealing plate 10 of a boundary gutter G (such as is described in the application copending patent application) extending between the wall 9 and a roof part 3. Fig. 5 shows a further type of flashing 1 in the form of a lipped bargeboard. The flashings 1 can be made of aluminium or galvanised commercial quality steel. Such commercial (or profiling) quality steel would be satisfied by designations Z1 and Z2 of British Standards 2989 i.e. defined as low grade commercial or profiling quality steel.

It is a particular feature of the present flashings that structural embossing E is applied to one or more of the flashing walls 2. This embossing has the function of strengthening the wall and also strain hardening the wall material. The embossing may be applied substantially over the full area of the wall, but it would be possible for the embossing to be applied at only selected areas of the wall.

The actual embossment pattern can be chosen from a wide variety of different forms, and Figs. 6 and 8 merely show two examples. Thus in Fig. 6, the embossment applies an array of separate individual deformations 11, 12. As can be seen in Fig. 6 the deformations 11 are of oblong form in plan view while the deformations 12 are of a small-

er circular shape, the pattern arrangement being defined by an orthogonal series of lines K-K, L-L with each circular deformation 12 surrounded by four oblong deformations 11. The spacing of the lines K-K, L-L specify the pitch of the deformation array: pitch of 5 mm may be used for example. The structural embossing is achieved by a cold deformation using a suitable embossment tool e.g. rollers, and it is a feature of the embossment that the orthogonal lines K-K, L-L are oblique to the rolling direction R.

Where the embossing of Fig. 6 is applied to the material forming a wall of the flashing, the longitudinal direction of the flashing (extending vertically out of the plane of the paper in Fig. 6) will correspond with the rolling axis R so that the deformation array 11, 12 will be oblique to the longitudinal axis of the flashing 1 i.e. the orthogonal lines K-K, L-L will be oblique to this axis. It is also arranged that the thickness t (Fig. 7) of the wall material remains substantially uniform over the area of the wall even after the embossing process. It will be understood that deformations of other planar shape could be presented in the array of Fig. 6 for example deformations of rectangular or square form could be used. Further, different patterns are possible such as for example a uniform array of similar deformations, and an irregular (non-uniform) deformation array is also possible.

Fig. 8 shows a wall portion embossed so as to be of corrugated form with nodes 13, 14 and the ratio of pitch P to valley depth H can be suitably chosen. Where the flashing is provided with the corrugated embossment of Fig. 8, the axis of deformation (i.e. vertically out of the plane of the paper in Fig. 8) of the profile can be arranged appropriately relative to the longitudinal direction of the flashing. For example, the profile deformation axis may be arranged parallel to the flashings longitudinal direction as shown in Fig. 1 or transversely as shown in Fig. 2.

In all cases it is preferred that the embossment has the effect of increasing a structural strength property e.g. bending resistance of the flashing by at least 5 per cent. If plastic and/or zinc coatings are to be applied to the flashing the embossment may be carried out before or after the coating is applied.

The thickness of flashing wall may be within the range 25mm to 5mm for example and the flashing can have any suitable length.

The application of the embossment to the flashing 1 in accordance with the present invention provides two distinct advantages concerning structural and aesthetic enhancement. Thus, the embossment increases the strength of the flashing and this will enable a thinner metal to be used thereby lightening the flashing and consequently giving rise

to a possible saving in cost since less metal is required. Also varying quality of metal material may be utilised as the strain hardening and cold deformation of the material due the embossment process mitigates against adverse effects created by the use of varying quality material. Further, the embossing deformations will increase the corrosion resistance of the metal.

Where the embossment of Fig. 6 is used the deformations 11, 12 can be arranged to project from the flashing so as to be visible externally and this improves aesthetic qualities. In the case of the corrugated embossment of Fig. 8, the weather face of the profile, for example the surface with nodes 13, can be suitably coated with synthetic material and zinc before or after embossment. The stronger structurally embossed flashings will give a stronger more consistent line to a building and will be more aesthetically satisfying.

Claims

1. A building flashing for use in finishing work in buildings, for example at building corners, head joints, eaves or ridges comprising metal sheeting of substantially uniform thickness deformed to provide a plurality of elongate wall portions set at selected angles to each other, at least one wall portion of the sheeting being structurally embossed, and means to facilitate securing of the sheeting to a building.

2. A building flashing as claimed in claim 1, wherein the sheeting is of commercial quality steel or aluminium.

3. A building flashing as claimed in claim 1 or 2, wherein surfaces of the sheeting include a treatment coating such as zinc.

4. A building flashing as claimed in any one of the preceding claims, wherein the embossing comprises an array of separate individual deformations of the wall portion.

5. A building flashing as claimed in any one of claims 1 to 3, wherein the embossing comprises a series of elongate continuous deformations or corrugations, extending parallel to a deformation axis.

6. A building flashing as claimed in claim 4 or 5, wherein an orthogonal axis of the array of individual deformations or the deformation axis of the corrugations is set at an angle to the longitudinal extent of an elongate wall portion.

7. A building flashing as claimed in claim 6, wherein the deformation axis of the corrugations is set transversely to said longitudinal extent of the elongate wall portion.

8. A building flashing as claimed in claim 4, wherein the individual deformations of the array have a rectangular, circular, square or oblong

shape in plan view.

9. A building flashing as claimed in claims 4 or 8, wherein the array of individual deformations comprises deformations of different shape.

10. A building flashing as claimed in claim 4, 8 or 9, wherein at least some of the individual deformations have a flat top. 5

11. A building flashing as claimed in any one of the preceding claims, wherein the embossment deformations are formed by a rolling operation. 10

12. A building flashing as claimed in any one of the preceding claims, wherein the embossment serves to increase a structural strength property of the flashing by at least 5 per cent, in comparison with a comparable non-embossed flashing. 15

13. A building flashing as claimed in claim 3, wherein an additional covering coating is applied to the sheeting.

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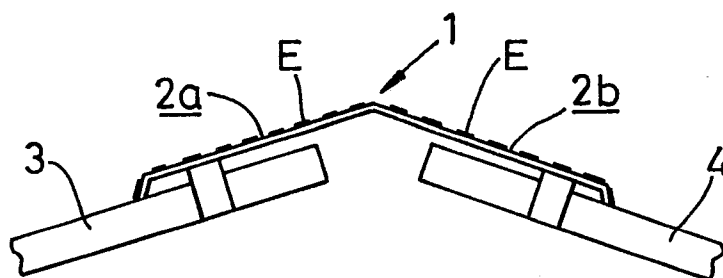


Fig. 1

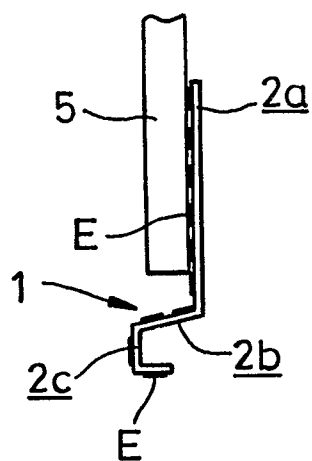


Fig. 2

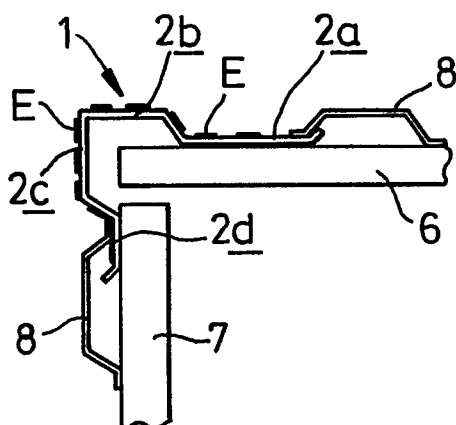


Fig. 3A

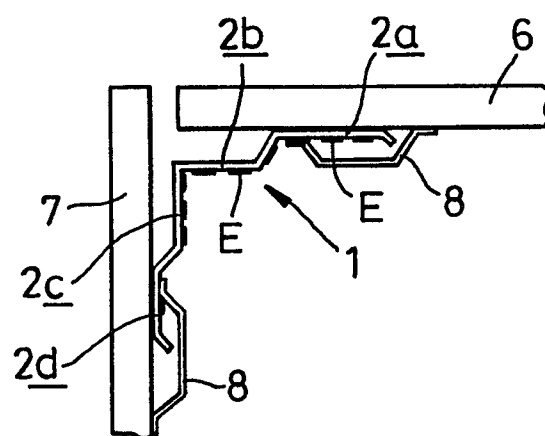


Fig. 3B

*Neu eingereicht / 106
Nouvellement d*

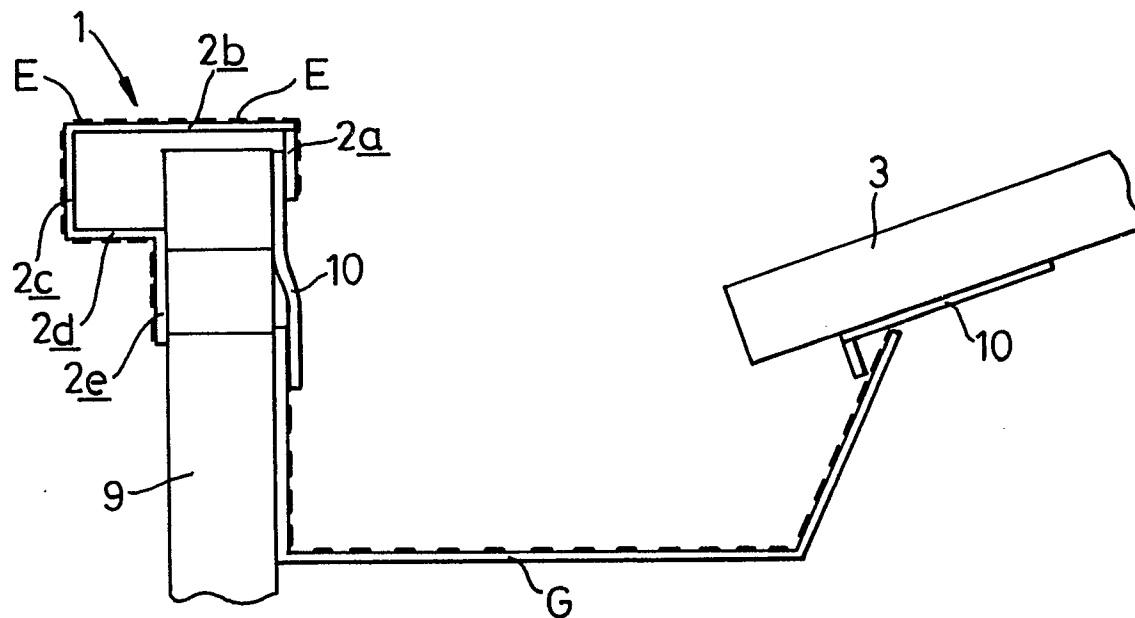


Fig. 4

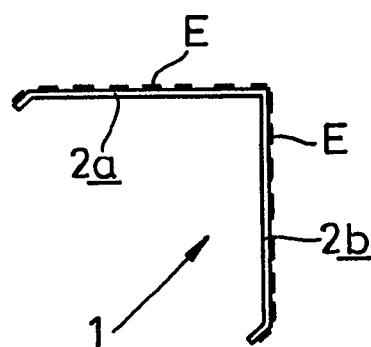


Fig. 5

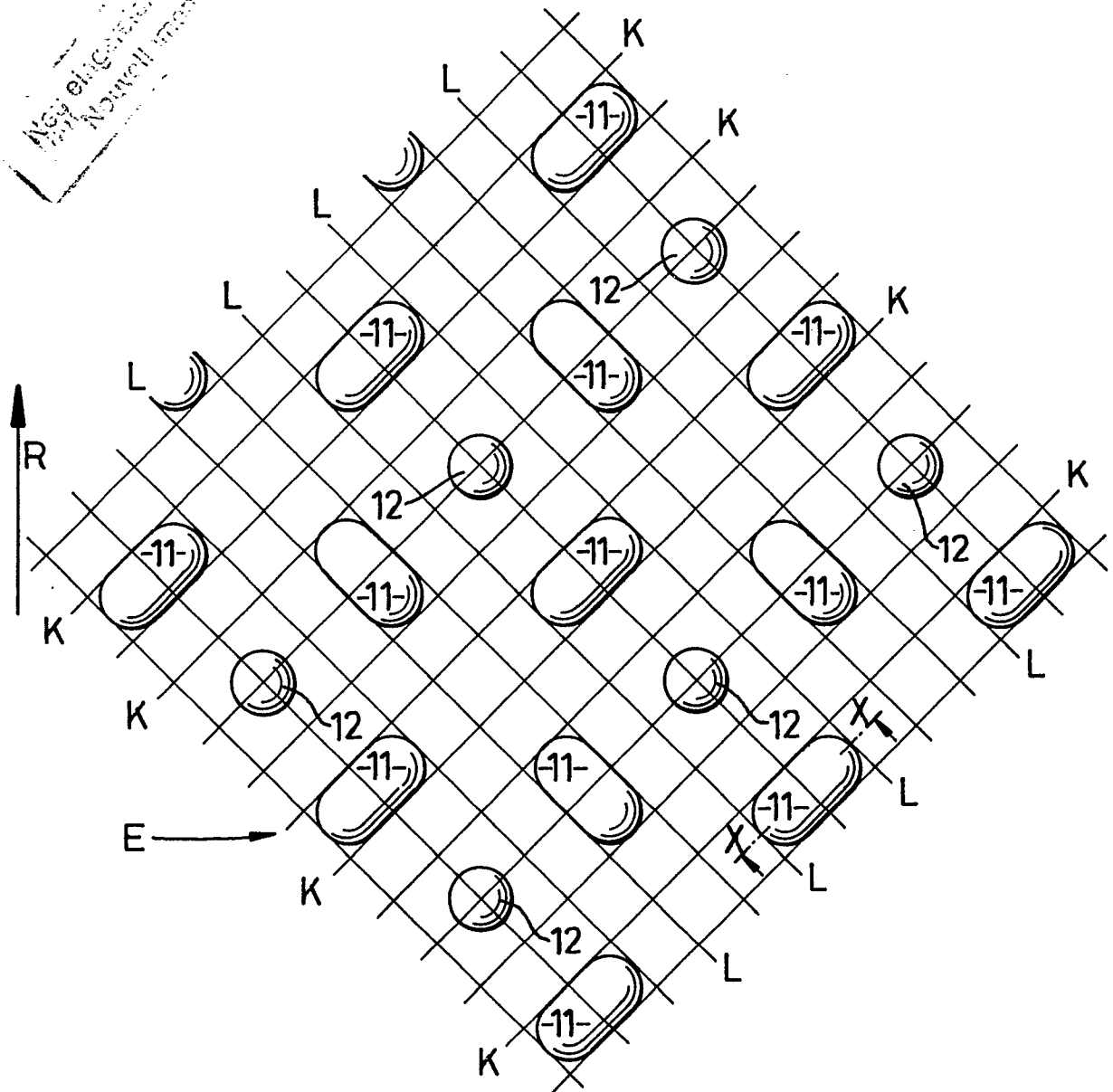


Fig. 6

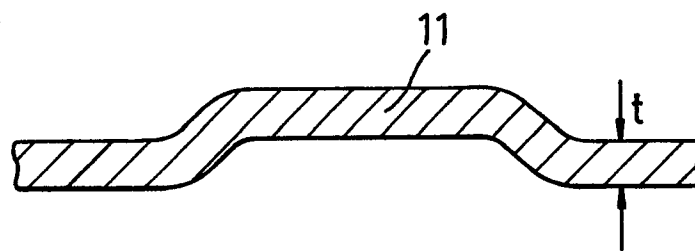


Fig. 7

FIG. 8

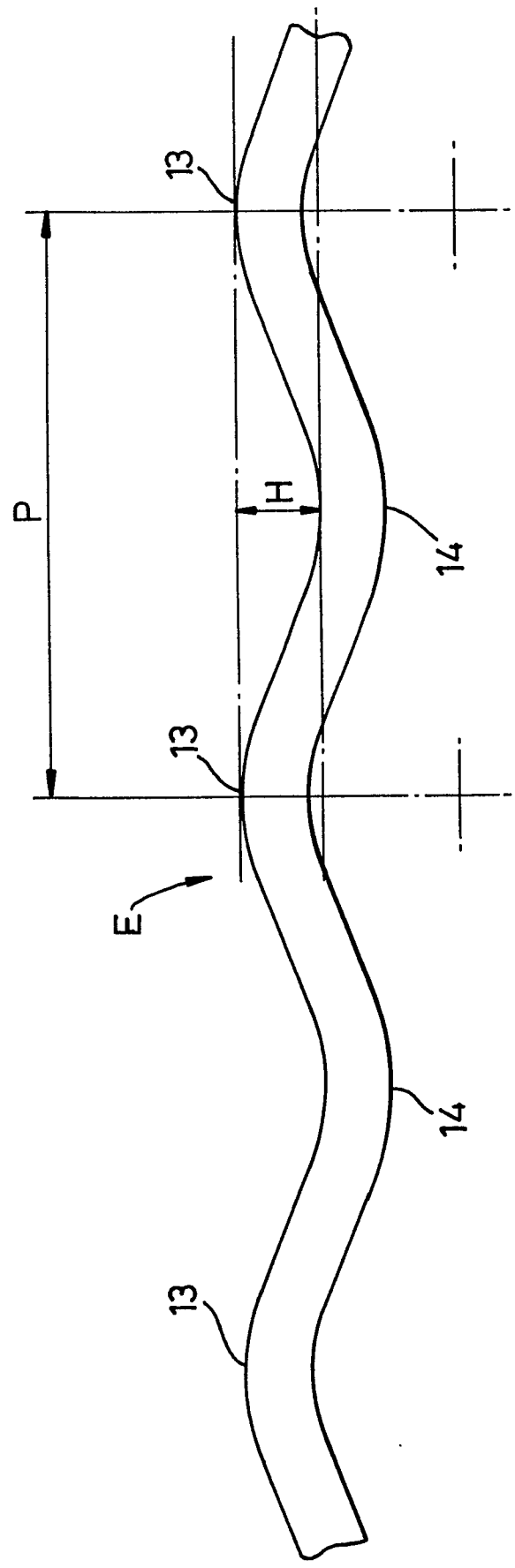


Fig. 8