

PATENT SPECIFICATION

DRAWINGS ATTACHED

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879.604



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COMPLETE SPECIFICATION

Roof Structure

5 We, THE RUBEROID COMPANY LIMITED, a British Company, of Commonwealth House, 1—19, New Oxford Street, London, W.C.1, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 This invention relates to the laying of roof coverings of the kind comprising a perforated underlayer having a hard, rough under surface, and one or more cover layers, the underlayer being secured in position by adhesive spread over its upper surface penetrating through the perforations, this adhesive also serving to secure into position the cover layer or first cover layer. With roofing of this kind, the various layers are usually bituminous roofing material comprising glass fibre felt; the underlayer is usually surfaced underneath with granules and permits air movement to take place from one part of the sub-structure surface to another. The adhesive used is usually bitumen; this runs through the perforations and spreads side-ways for a short distance only between the granules giving a "dot" anchorage. The cover layer or first cover layer is applied immediately after the bitumen is spread on the top surface of the underlayer.

30 Roof coverings of the kind described serve to equalise the gas or vapour pressure between the covering and the surface of the sub-structure, and this is very useful in itself, but in addition it is commonly desirable to vent the space immediately below the underlayer, occupied by the granules, and this has been effected in the past in other countries, where coverings of this kind have already been adopted, by means of metal fittings. It is an object of the invention to provide for the venting of roof coverings of the kind described, without having to resort to metal fittings like flashings, aprons, drips and special vent pipes.

The invention consists in a roof covering

of the kind described, in which the underlayer extends to a roof edge and then downwardly over a nailing strip, to which it is secured at least partly by means of a welted apron of cover layer material secured thereover by nails driven into the nailing strip and folded to provide a portion extending over the roof to form part of the cover layer.

The expression "nails" and "nailing strip" are to be understood broadly, the former to include any suitable driven anchoring means such as a clout nail or screw and the latter to cover any strip or board of material such as wood into which nails or screws can be driven, whether or not specially provided for this purpose.

In the case of eaves, the method of laying the roof covering in accordance with the invention comprises applying a strip of underlayer along the edge of the roof with a portion overhanging the roof, folding the overhanging portion downwards with its granular face against a nailing strip, nailing one edge portion of an apron strip of cover layer material over the overhang, lifting the other edge of the apron strip to form a channel, pouring adhesive into the channel and then applying the apron strip over the roof to form a welted apron, without completely covering the strip of underlayer material, then applying underlayer material over the roof to lap over the already secured strip of underlayer material, and then applying a cover layer to lap over the welted apron and underlayer.

Where more than one cover layer is employed the first cover layer in contact with the underlayer may be of different material from the outer cover layer, in which case the welted apron will normally be of outer cover layer material. Further, the first cover layer or so-called intermediate layer may be omitted from the welted apron, or may extend simply to the bottom fold of the apron. In the latter case the strip of intermediate layer material

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may be secured by adhesive used for bonding the underlayer strip, before the welted apron strip is folded over and bonded to the intermediate layer.

5 In the case of a verge, the method of laying the roof covering in accordance with this invention comprises applying underlayer material on the roof to overhang the verge, which is provided with a nailing strip, the roof sub-
10 structure in the immediate vicinity of the verge preferably being inclined or otherwise raised upwards to the nailing strip as a water check, folding the overhanging portion down and then applying the cover layer to stop short of
15 the verge, followed by fixing an apron strip over the underlayer margin where this is folded over the nailing strip, and folding the apron strip over the roof edge and securing it to the underlayer, and to the cover layer on
20 the main roof area, with or without an intermediate layer, by adhesive. If desired, before folding over the apron strip, an intermediate layer strip may be applied by adhesive over the adjacent underlayer to overlap the verge
25 and extend into the apron strip welt. The cover layer is then struck down, stopping short of the verge as just described.

When an apron strip is to be attached over a folded-down margin of underlayer material in accordance with this invention, the afore-
30 said margin may be secured temporarily by nailing.

By the means hereinbefore described very satisfactory finish is obtained to the roof edge,
35 and the desired ventilation is achieved, with adequate weather proofing, without resort to extraneous devices and materials such as special metal vents.

The invention will be described further with reference to the accompanying drawings, of
40 which:

Figure 1 is an isometric view, partly cut away, of a verge furnished with a vent in accordance with the invention.

45 Figure 2 is a view similar to figure 1 but on a smaller scale and showing the incorporation of an intermediate cover layer.

Figure 3 is an isometric, partly cut away view of eaves furnished with a vent in accordance with the invention, and

50 Figure 4 is a view similar to figure 3 showing the incorporation of an intermediate cover layer.

Referring now to figure 1, the verge is faced
55 with a wooden nailing strip 1 and incorporates a rising fillet 2 as a water check. Underlayer material 3 of the kind hereinbefore described is laid so as to overhang the verge with its granular face inwards and is folded
60 down and nailed onto strip 1 with clout nails 4. Next, cover layer material 5 is applied over the underlayer material with the aid of bitumen 6 which at the same time anchors the underlayer material down as already explained. This cover layer material stops short
65

of the verge, and the exposed underlayer material is covered by an apron strip 7 likewise of cover layer material. This strip is applied so as to provide a welt 8, that is to say, its marginal portion is nailed down
70 inside out over the underlayer material 3 on the strip 1, the strip is lifted so as to form a gully 9 into which bitumen is poured and then the strip is wrapped over the verge distributing the bitumen and bonding the apron
75 strip down to the underlayer material and to the marginal portion of the cover layer material 5. Additional bitumen may be applied for this purpose. The lower edge of the underlayer material 3, facing the nailing strip 1
80 serves as a vent, which may extend all the way along the verge, or be located at intervals.

In the arrangement shown in figure 2, the method of construction is essentially the same except that an intermediate layer 10 is applied
85 over the underlayer material 3 and under the cover layer material 5. This intermediate layer is brought over the apron strip 7 so as to lie in the fold of the subsequently formed welt. Figure 2 shows a portion of the apron
90 strip 7 in the course of being folded up over the intermediate layer material 10, the bitumen being omitted for clarity.

The eaves are finished in an essentially similar manner but in this case there is no
95 fillet or water check. The nailing strip 1 projects over a gutter 11 and the cover layer material 5 is lapped over the apron strip 7 instead of *vice versa* as in figure 2. As shown in figure 4, an intermediate layer 10 may be
100 provided extending into the welt of the apron strip 7 in the same manner as shown in figure 2.

WHAT WE CLAIM IS:—

1. A roof covering of the kind described, in which the underlayer extends to a roof edge and then downwardly over a nailing strip, to which it is secured at least partly by means of a welted apron of cover layer material secured thereover by nails driven into the nail-
105 ing strip and folded to provide a portion extending over the roof to form part of the cover layer.

2. A covering according to claim 1 in which said edge is represented by eaves, and the covering is fitted by applying a strip of underlayer along the edge of the roof with a portion overhanging the roof, folding the overhang-
115 ing portion downwards with its granular face against a nailing strip, nailing one edge portion of an apron strip of cover layer material over the overhang, lifting the other edge of the apron strip to form a channel, pouring adhesive into the channel and then applying the
120 apron strip over the roof to form a welted apron, without completely covering the strip of underlayer material, then applying underlayer material over the roof to lap over the already secured strip of underlayer material, and then applying a cover layer to lap over
130



stuck

may be secured by adhesive used for bonding the underlayer strip, before the welted apron strip is folded over and bonded to the intermediate layer.

- 5 In the case of a verge, the method of laying the roof covering in accordance with this invention comprises applying underlayer material on the roof to overhang the verge, which is provided with a nailing strip, the roof sub-
10 structure in the immediate vicinity of the verge preferably being inclined or otherwise raised upwards to the nailing strip as a water check, folding the overhanging portion down and then applying the cover layer to stop short of
15 the verge, followed by fixing an apron strip over the underlayer margin where this is folded over the nailing strip, and folding the apron strip over the roof edge and securing it to the underlayer, and to the cover layer on
20 the main roof area, with or without an intermediate layer, by adhesive. If desired, before folding over the apron strip, an intermediate layer strip may be applied by adhesive over the adjacent underlayer to overlap the verge
25 and extend into the apron strip welt. The cover layer is then ~~struck~~ down, stopping short of the verge as just described.

- When an apron strip is to be attached over a folded-down margin of underlayer material
30 in accordance with this invention, the aforesaid margin may be secured temporarily by nailing.

- 35 By the means hereinbefore described very satisfactory finish is obtained to the roof edge, and the desired ventilation is achieved, with adequate weather proofing, without resort to extraneous devices and materials such as special metal vents.

- 40 The invention will be described further with reference to the accompanying drawings, of which:

- Figure 1 is an isometric view, partly cut away, of a verge furnished with a vent in accordance with the invention,

- 45 Figure 2 is a view similar to figure 1 but on a smaller scale and showing the incorporation of an intermediate cover layer,

- Figure 3 is an isometric, partly cut away view of eaves furnished with a vent in accordance with the invention, and

- 50 Figure 4 is a view similar to figure 3 showing the incorporation of an intermediate cover layer.

- Referring now to figure 1, the verge is faced
55 with a wooden nailing strip 1 and incorporates a rising fillet 2 as a water check. Underlayer material 3 of the kind hereinbefore described is laid so as to overhang the verge with its granular face inwards and is folded
60 down and nailed onto strip 1 with clout nails 4. Next, cover layer material 5 is applied over the underlayer material with the aid of bitumen 6 which at the same time anchors the underlayer material down as already explained. This cover layer material stops short
65

of the verge, and the exposed underlayer material is covered by an apron strip 7 likewise of cover layer material. This strip is applied so as to provide a welt 8, that is to say, its marginal portion is nailed down
70 inside out over the underlayer material 3 on the strip 1, the strip is lifted so as to form a gully 9 into which bitumen is poured and then the strip is wrapped over the verge distributing the bitumen and bonding the apron
75 strip down to the underlayer material and to the marginal portion of the cover layer material 5. Additional bitumen may be applied for this purpose. The lower edge of the underlayer material 3, facing the nailing strip 1 serves as a vent, which may extend all the way along the verge, or be located at intervals.

In the arrangement shown in figure 2, the method of construction is essentially the same except that an intermediate layer 10 is applied
85 over the underlayer material 3 and under the cover layer material 5. This intermediate layer is brought over the apron strip 7 so as to lie in the fold of the subsequently formed welt. Figure 2 shows a portion of the apron
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The eaves are finished in an essentially similar manner but in this case there is no
95 fillet or water check. The nailing strip 1 projects over a gutter 11 and the cover layer material 5 is lapped over the apron strip 7 instead of *vice versa* as in figure 2. As shown in figure 4, an intermediate layer 10 may be
100 provided extending into the welt of the apron strip 7 in the same manner as shown in figure 2.

WHAT WE CLAIM IS:—

1. A roof covering of the kind described, in which the underlayer extends to a roof edge and then downwardly over a nailing strip, to which it is secured at least partly by means of a welted apron of cover layer material secured thereover by nails driven into the nailing strip and folded to provide a portion
105 extending over the roof to form part of the cover layer.

2. A covering according to claim 1 in which said edge is represented by eaves, and the covering is fitted by applying a strip of underlayer along the edge of the roof with a portion overhanging the roof, folding the overhanging portion downwards with its granular face against a nailing strip, nailing one edge portion of an apron strip of cover layer material over the overhang, lifting the other edge of the apron strip to form a channel, pouring adhesive into the channel and then applying the apron strip over the roof to form a welted
115 apron, without completely covering the strip of underlayer material, then applying underlayer material over the roof to lap over the already secured strip of underlayer material, and then applying a cover layer to lap over
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the welted apron and underlayer.

3. A covering according to claim 1 in which said edge is represented by a verge, and the covering is fitted by applying underlayer material on the roof to overhang the verge, which is provided with the nailing strip, the roof sub-structure in the immediate vicinity of the verge preferably being inclined or otherwise raised upwards to the nailing strip as a water check, folding the overhanging portion down and then applying the cover layer to stop short of the verge, followed by fixing an apron strip over the underlayer margin where this is fold-

ed over the nailing strip, and folding the apron strip over the roof edge and securing it to the underlayer, and to the cover layer on the main roof area, with or without an intermediate layer, by adhesive. 15

4. A covering according to claim 2 or 3 in which an intermediate layer is provided and extends into the welt of the apron strip. 20

5. A roof covering substantially as hereinbefore described with reference to, and as shown in, any of the figures of the accompanying drawings. 25

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PROVISIONAL SPECIFICATION

Roof Structure

We, THE RUBEROID COMPANY LIMITED, a British Company, of Commonwealth House, 1—19, New Oxford Street, London, W.C.1, do hereby declare this invention to be described in the following statement:—

This invention relates to the laying of roof coverings of the kind comprising a perforated underlayer having a hard, rough under surface, and one or more cover layers, the underlayer being secured in position by adhesive spread over the surface penetrating through the perforations, this adhesive also serving to secure into position the cover layer or first cover layer. With roofing of this kind, the various layers are usually bituminous roofing material comprising glass fibre felt; the underlayer is usually surfaced underneath with granules and permits air movement to take place from one part of the sub-structure surface to another. The adhesive used is usually bitumen; this runs through the perforations and spreads side-ways for a short distance only between the granules giving a "dot" anchorage. The cover layer or first cover layer is applied immediately after the bitumen is spread on the top surface of the underlayer.

Roof coverings of the kind described serve to equalise the gas or vapour pressure between the covering and the surface of the sub-structure, and this is very useful in itself, but in addition it is commonly desirable to vent the space immediately below the underlayer, occupied by the granules, and this has been effected in the past in other countries, where coverings of this kind have already been adopted, by means of metal fittings. It is an object of the invention to provide for the venting of roof coverings of the kind described, without having to resort to metal fittings like flashings, aprons, drips and special vent pipes.

The invention consists in a roof covering of the kind described, in which the underlayer extends to a roof edge and then downwardly over a nailing strip, and is secured in position at least partly by means of a welted apron of cover layer material secured thereover and folded over the roof surface to form part of the cover layer.

The expressions "nails" and "nailing

strip" are to be understood broadly, the former to include any suitable driven anchoring means such as a clout nail or screw and the latter to cover any strip or board of material such as wood into which nails or screws can be driven, whether or not specially provided for this purpose. 75

In the case of eaves, the method of laying the roof covering in accordance with the invention comprises applying a strip of underlayer along the edge of the roof in an overlapping position, folding the overhanging portion downwards with its granular face against a nailing strip, nailing the edge portion of an apron strip of cover layer material over the overhang, lifting the other edge of the apron strip to form a channel, pouring adhesive into the channel and then applying the apron strip over the roof to form a welted apron, without completely covering the strip of underlayer material, then applying underlayer material over the roof to lap over the already secured strip of underlayer material, and then applying a cover layer to lap over the welted apron and underlayer. 80

Where more than one cover layer is employed the first cover layer in contact with the underlayer may be of different material from the outer cover layer, in which case the welted apron will normally be of outer cover layer material. Further, the first cover layer or so-called intermediate layer may be omitted from the welted apron, or may extend simply to the bottom fold of the apron. In the latter case the strip of intermediate layer material may be secured by adhesive used for bonding the underlayer strip, before the welted apron strip is folded over and bonded to the intermediate layer. 85

In the case of a verge, the method of laying the roof covering in accordance with this invention comprises applying underlayer material on the roof to overhang the verge, which is provided with a nailing strip, the roof sub-structure in the immediate vicinity of the verge preferably being inclined or otherwise raised upwards to the nailing strip as a water check, folding the overhanging portion down and 100

then applying the cover layer to stop short of the verge, followed by fixing an apron strip over the underlayer margin where this is folded over the nailing strip, and folding the
5 apron strip over the roof edge and securing it to the underlayer, and to the cover layer on the main roof area, with or without an intermediate layer, by adhesive. If desired, before folding over the apron strip, an inter-
10 mediate layer strip may be applied by adhesive over the adjacent underlayer to overlap the verge and extend into the apron strip welt. The cover layer is then stuck down, stopping short of the verge as just described.

When an apron strip is to be attached over a folded-down margin of underlayer material in accordance with this invention, the afore-
15 said margin may be secured temporarily by nailing.

By the means hereinbefore described, very
20 satisfactory finish is obtained to the roof edge, and the desired ventilation is achieved, with adequate weather proofing, without resort to extraneous devices and materials such as
25 special metal vents.

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