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EUROPEAN PATENT APPLICATION

②① Application number: 83200075.6

⑤ Int. Cl.³: **E 04 D 13/00**

②② Date of filing: 17.01.83

③ Priority: 26.01.82 NL 8200274

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Designated Contracting States: **BE DE FR NL**

④3 Date of publication of application: 03.08.83
Bulletin 83/31

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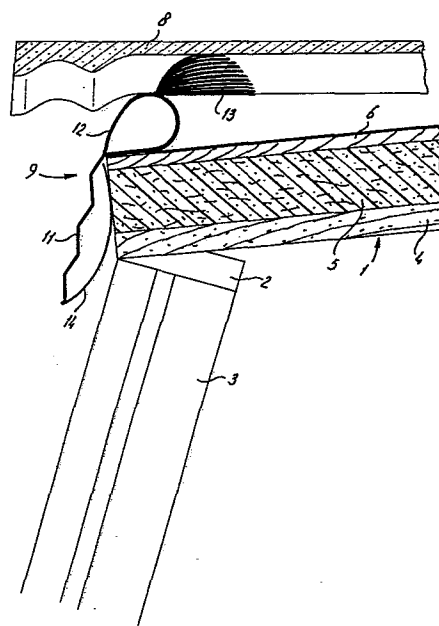
(84) Designated Contracting States: **GB**

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⑤4 Means for the protection of the lower edge of an inclined roof covered by scaly elements, like roof tiles.

57 This invention is related to the combination of a beam (12) of plastic or metal and a roof boarding protecting plate (11). The beam (12) replaces the lower tile lath of a usual roof boarding construction, and the protecting plate (11) protects the lower edge of the chip board roof boarding plate against rain water.



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- Means for the protection of the lower edge of an inclined roof covered by scaly elements, like roof tiles. -

The invention relates to a means for the protection of the lower edge of an inclined roof covered by scaly elements, like roof tiles, said means including a roof boarding protecting plate.

5 The roof boarding of an inclined roof of a modern house usually comprises a roof boarding plate, an insulation layer and a number of inclined roof laths on which the horizontal tile laths are connected. The roof boarding plate is mostly manufactured from chip board. To avoid swelling one has to care that moisture is not blown against the lower edge of this chip board. Therefore
10 protecting plates are used which are secured on the lower tile lath and which extend approximately vertically in front of the lower edge of the roof boarding. It has appeared that by the application of such a roof boarding protecting plate not all problems are eliminated. It happens that the space between the upper face of the insulating
15 layer and the lower face of the roof tiles is too little ventilated, which might lead to a number of harmful appearances. Further it has appeared in practice that the protecting plate is often bent and secured to the lower edge of the roof boarding to avoid rattling, therefore there is a risk that moisture is locked up and the chip board
20 will swell.

The object of the invention is to avoid these disadvantages.

Therefore the means indicated in the preamble is characterized in that the roof boarding protecting plate has a fixed or detachable connection with a beam made of plastic or metal and provided with
25 ventilation openings, wherein at least a part of the lower roof lath may be replaced by said beam.

Essential for the invention is the replacing lower roof lath which at one side may be cheaper than the usual wooden roof lath and at the other side guarantees a good ventilation. Further is it essential
30 that the roof boarding protecting plate is connected to the replacing roof lath.

To avoid birds from entering the spaces between the corrugated tiles or corrugated sheets or plates and the roof boarding, a flexible

comb may be yes or not detachably connected to the beam.

It is important that for each roof inclination not an adapted shape of the lower roof lath must be applied. Therefore it is preferred that the beam has a round portion which may roll on the roof
5 laths so that an adaptation to several roof inclinations can be obtained. This means in fact that for each roof inclination the roof boarding protecting plate may take an approximately vertical position in front of the lower edge of the roof boarding.

For an efficient manufacturing it is preferred that the roof
10 boarding protecting plate, the beam and the comb are manufactured as one single moulding piece of plastic, each piece having at one cross edge a female portion and at the opposite cross edge a male portion.

The application of steel for the means for the protection of the lower edge of an inclined roof is better if a roofer must be able
15 to stand on the beam.

The pieces have a length of for instance one meter and may be connected to each other by putting the male member of a piece into the female member of a next piece.

To avoid rattling of the roof boarding plate against the lower
20 edge of the roof boarding in case of hard wind, fingers may be present at the lower edge of each roof boarding protection plate, said fingers may engage the roof boarding and may keep the protecting plate at some distance from the lower edge of the roof boarding.

Very solid beams consist of open channels having support
25 partitions.

An other possibility is that the beams consist of tubes.

If, however, it is preferred that the beam lies on the roof boarding with a flat surface and nevertheless an adaptation to the roof inclination can be reached, the beam may include such a flat
30 surface as well as a round portion provided with securing openings , on which round portion a roof boarding protection plate may be connected in different positions.

The invention will now be elucidated with the aid of the figures, in which some embodiments are shown.

35 Figure 1 shows an inclined roof in cross section provided with a means according to the invention.

Figure 2 shows an similar cross section, however, the roof is

of bigger inclination.

Figure 3 shows schematically an alternative embodiment.

Figure 4 shows a front view of another embodiment.

Figure 5 shows a front view of another embodiment.

5 The roof boarding 1 according to figures 1 and 2 lies on a wall plate 2 on the upper edge of a cavity wall 3 and includes a roof boarding plate 4 (usually made of chip board), an insulating layer 5 and a number of spaced roof laths 6. The horizontal tile laths 7 (figure 2) are connected to the roof laths and the roof tiles 8 are
10 supported on the horizontal tile laths so that the tile edges stick out.

A means 9 is connected to the lower edge of the roof boarding said means including a protecting plate 11, a beam 12, a flexible comb 13, and a number of fingers 14.

15 The beam 12 replaces at least a portion of the lower tile lath. In the embodiment according to figures 1 and 2 parts 11 - 14 form together one single piece manufactured from plastic (for instance PCV) by injection moulding. The length of each piece is for instance one meter. The tube shaped beam 12 comprises ventilation openings
20 (not shown in the drawings). A number of pieces are united to a long beam having the length of the lower edge of the inclined roof boarding.

The protecting plate 11 is zig-zag shaped to improve the stiffness and the function of this plate is to protect the lower edge of the roof boarding. The plate 11 should take about the shown position.
25 To avoid rattling resilient fingers 14 engage the roof boarding.

By comparing figures 1 and 2 it appears that the means of the present invention is suitable for several roof inclinations. Therefore the beam 12 has a round portion which can be rolled on the roof laths 6. As a consequence the protecting plate 11 can take the same vertical
30 position independent on the roof inclination.

The flexible comb 13 meant as a bird exclusion element has such a shape that the eventual spaces between the roof tiles (or other scaly roof coverings such as corrugated plates and the roof boarding are closed under all circumstances.

35 The embodiment according to figure 3 differs from that according to figures 1 and 2 by the fact that the protecting plate, the beam 12 and the comb 13 consist of separate parts which are detachably

connected to each other. Further figure 3 shows the female member 15 in which the male member 16 of a next piece can be snapped. The ventilation openings are indicated by 17.

5 The beam 12 may consist of steel, in which case also the roof gutter can be suspended from the beam. An advantage of steel with respect to plastic is that it is stronger so that a roofer may stand on the beam without the risk of damages.

In the embodiment according to figure 4 the beam 12 is an open channel in which reinforcing transverse partitions 18 have been positioned.

10 Figure 5 shows a means of which the beam 12 has a flat support face 19, whilst a round portion is present to which the protecting plate 11 can be secured in several angular positions. Therefore this plate 11 is provided with rows of securing openings 21 and of each row one opening can be chosen to brought in alignment with an opening in the
15 round portion of the beam 12 to put securing means through these aligned openings.

The combination of a rather cheap replacing tile lath having ventilation openings and a protecting plate connected with said lath is essential for the invention. Further it is important that the re-
20 placing tile lath has such a shape that in case of very different roof inclination the protecting plate may take a substantially vertical position in front of the lower edge of the roof boarding.

C L A I M S

1. Means for the protection of the lower edge of an inclined roof covered by scaly elements, such as roof tiles, said means having a roof boarding protecting plate, characterized in, that the roof boarding protecting plate (11) has a fixed or detachable connection
5 with a plastic or metal beam (12) provided with ventilation openings, wherein at least a part of the lower roof lath may be replaced by said beam.

2. Means according to claim 1, characterized in, that a flexible comb (13) is connected to the beam (12) the connection being
10 yes or no detachable.

3. Means according to claim 1 or 2, characterized in, that the beam (12) has a round portion which may roll on the roof laths so that an adaptation to several roof inclinations can be obtained.

4. Means according to claims 2 or 3, characterized in, that
15 the roof boarding protecting plate (11), the beam (12) and the comb (13) are made as one single mould piece of plastic, each piece having a female portion (15) at one cross edge and a male portion (16) at the opposite cross edge.

5. Means according to one of the preceding claims, characterized in,
20 terized in, that the lower edge of each roof boarding protecting plate is provided with fingers (14) which may engage the roof boarding and which may keep the plate (11) at a distance from the lower edge of the roof boarding.

6. Means according to one of the preceding claims, characterized in,
25 terized in, that the beam (12) consists of open channels including support partitions (18).

7. Means according to one of claims 1 - 5, characterized in, that the beam (12) consists of a tube.

8. Means according to one of claims 1 - 5, characterized in,
30 that the beam has a flat portion (19) to be put on the roof boarding and a round portion provided with securing openings, on which round portion a roof boarding protecting plate (11) can be secured in several positions.

fig-1

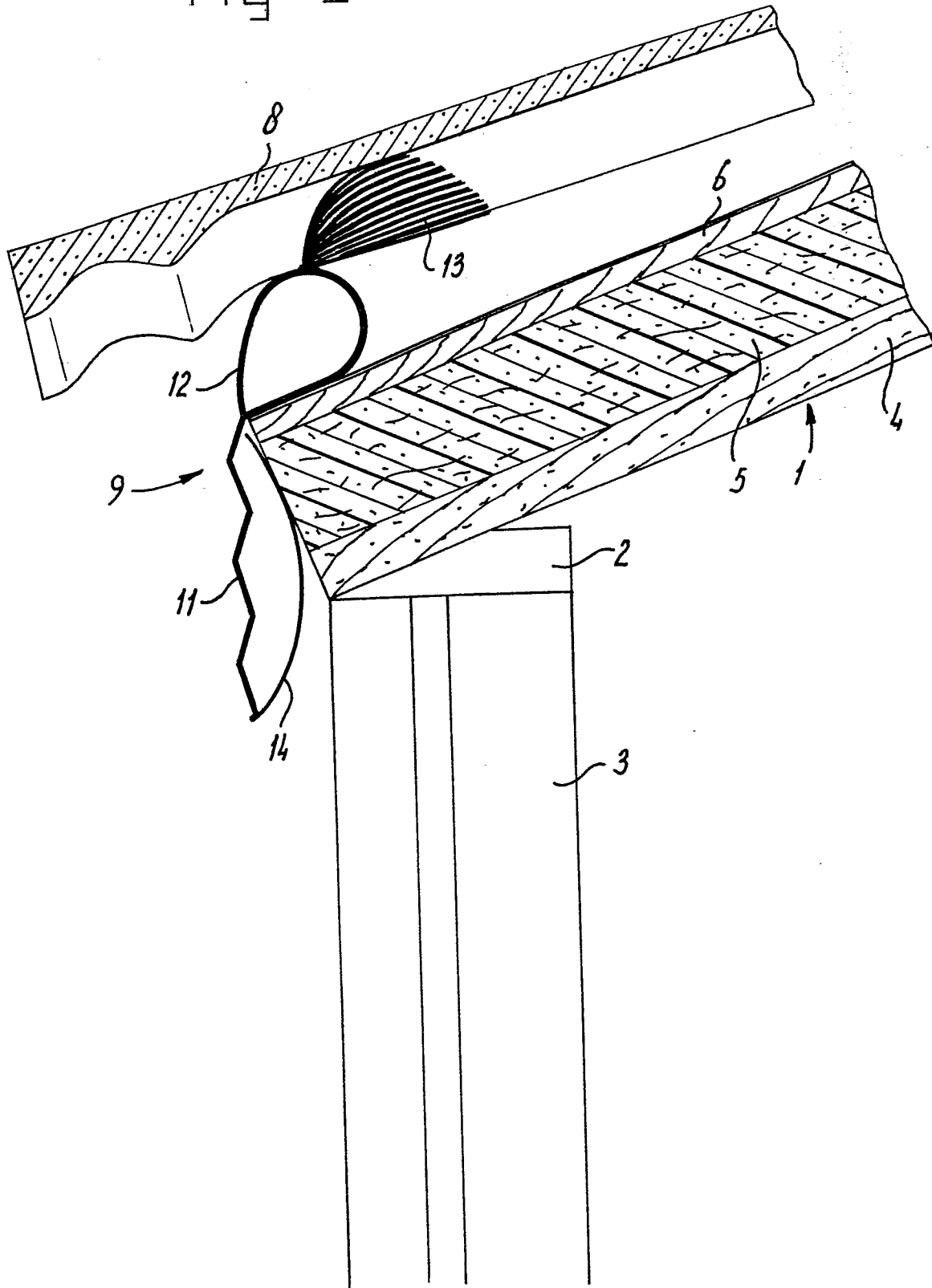


fig-2

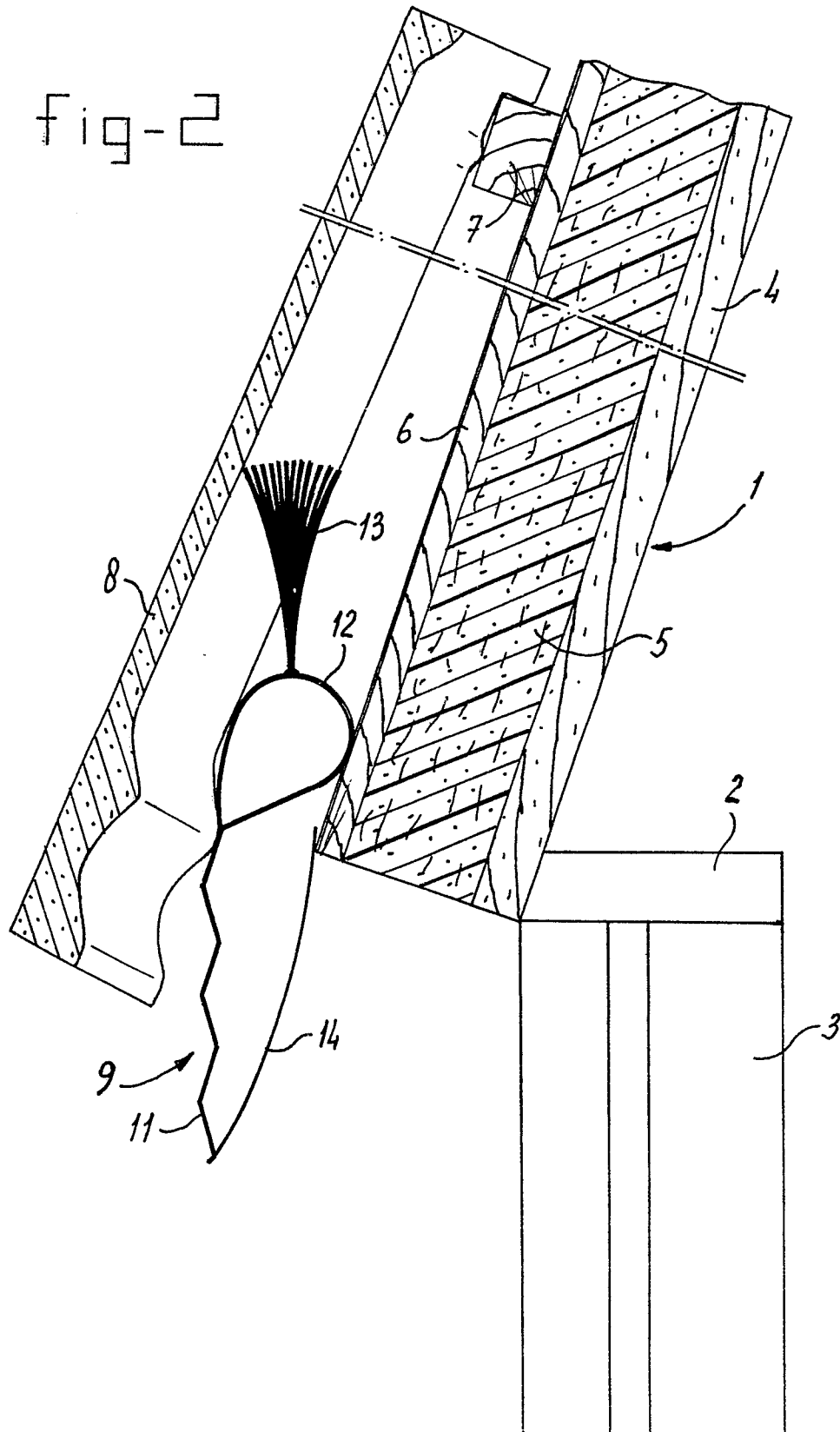


fig-3

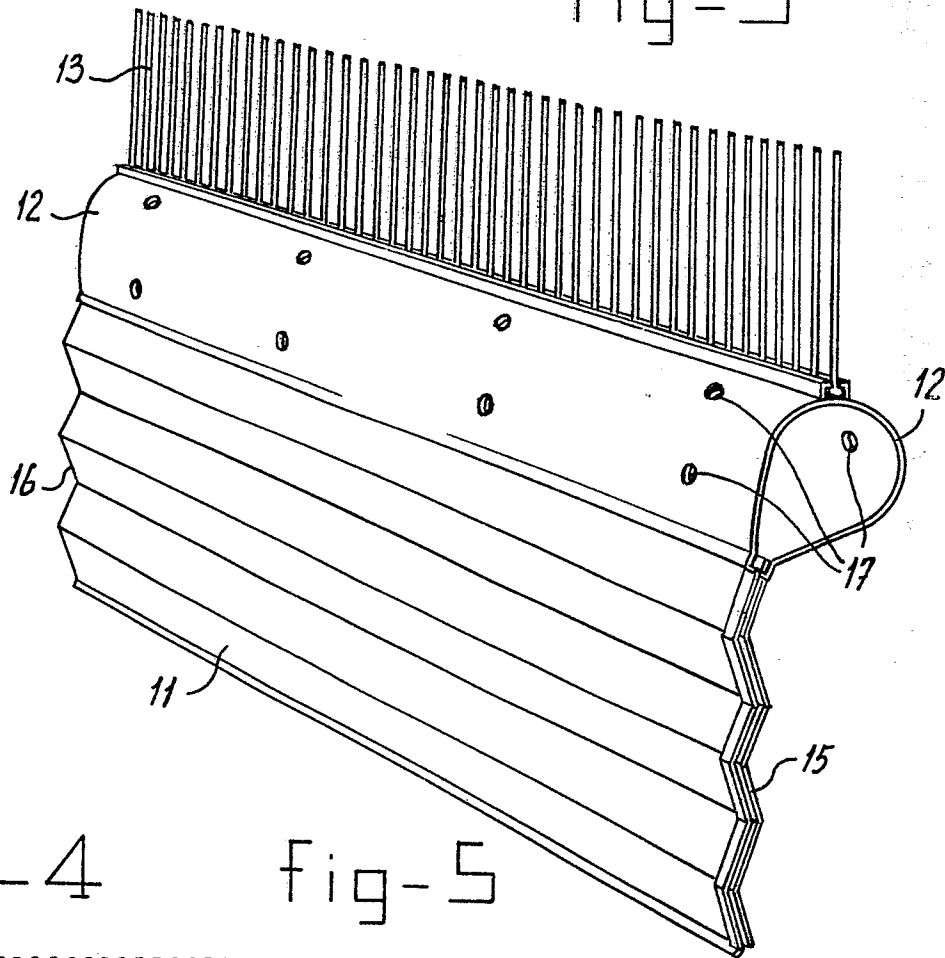


fig-4

fig-5

