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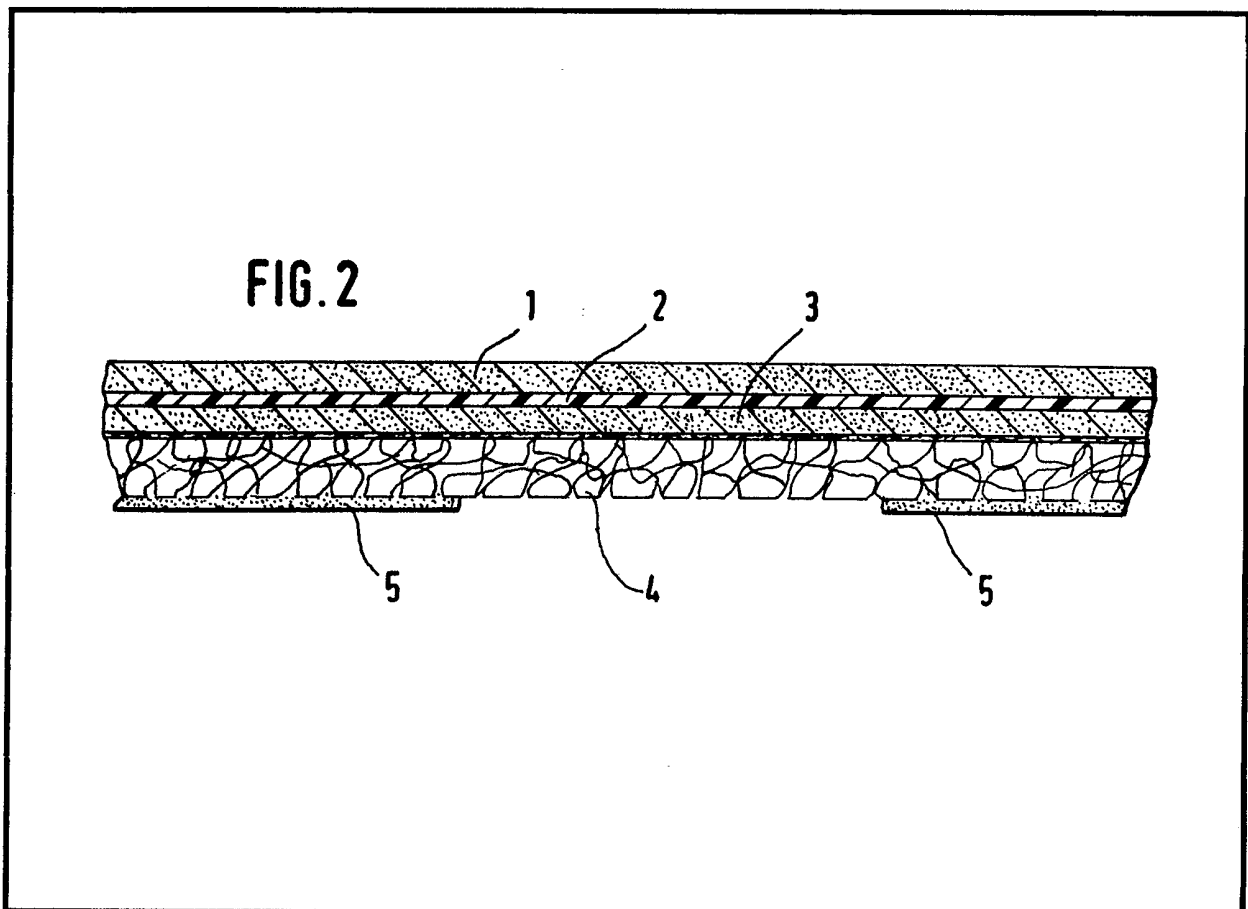
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GB 1498691
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the base covered, and which may readily be attached to the base by an adhesive 5. The mat of the roof-covering sheet may itself be covered by an intermittent coating on its outside surface.

(54) A roof-covering sheet

(57) A roof-covering sheet provided with a spacer member which form an air gap on the side whereof when in use faces towards a base to be covered by the sheet, characterized in that the spacer member 4 is a mat of elastic non-woven wires, threads or fibres, and which has a high air volume. By this means a continuous air gap is formed between the roof-covering sheet and



GB 2 032 988 A

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FIG. 1

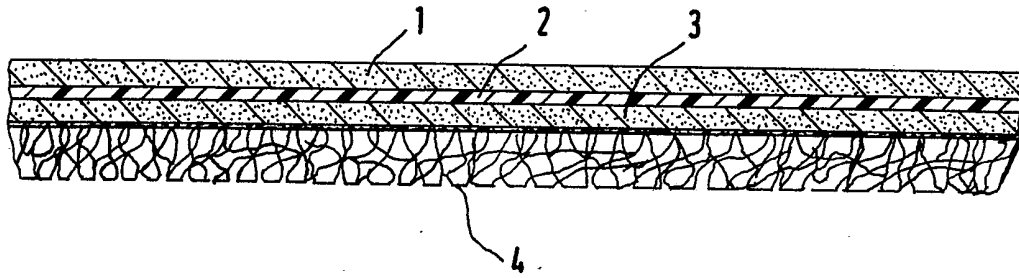
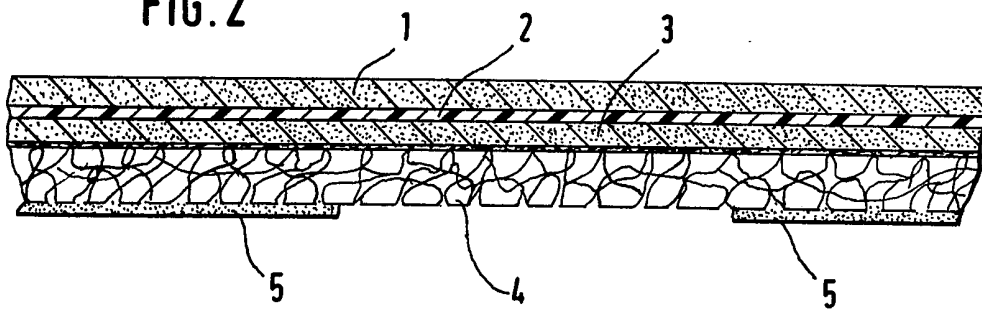


FIG. 2



SPECIFICATION

A roof-covering sheet

5 This invention relates to roof-covering sheets, particularly roofing felts, which are provided with spacer members which form an air gap on the side thereof when in use facing a base to be covered by the sheet.

10 When covering roofs or other surfaces in buildings, in particular where damp rooms are concerned, a roof-covering sheet is used which is provided with air gap-forming spacer members on its side facing towards the base
 15 to be covered. Due to the air gap thus produced between the roof covering sheet and the base, the air and vapour pressure can be equalised whereby blistering beneath the roofing felt or other roof-covering sheet is
 20 avoided. At the same time movements between the roof-covering sheet and the base are accommodated by such spacer members whereby tearing of the roof-covering sheet is avoided when the base undergoes movements as a result of thermal expansion or mechanical stress.

Roofing felts are known in which a mineral material graded according to size, in particular graded particles of fired expanded clay, act as
 30 spacer members. These spacer members have the advantage that the felt can be rolled up into rolls without the side which is provided with the spacer members having to be dusted with talc to avoid sticking when rolling up, or intermediate layers of paper having to be
 35 rolled in with it. However these spacer members have the disadvantage that the felt cannot be designed so as to be weldable, and therefore a binder has to be applied to the upper surface of the base to be covered, to
 40 anchor the felt. Usually heated bitumen or asphalt is used as binder, which is locally applied in such a quantity that the gaps between the spacer members within such
 45 "anchoring spots" are filled with binder. However this procedure results in a rigid bond between sheet and base.

Spacer members made of metal or plastics material are also known, which are stuck to
 50 the roof-covering sheet with hot bitumen. This procedure however has the disadvantage that a rigid bond results between base and sheet in the places in which the spacer members are stuck to the base, whereby reciprocal movements are prevented and the air gap is interrupted. A further disadvantage is that in constructions previously known the spacer members are so stiff that uneven spots on the surface of the base, in particular when a very
 60 rough surface is present, stand out on the upper side of the covering sheet, or lead to inadequate bonding.

Spacer members made of plastics material are also known which can be burnt away in
 65 places, whereby direct contact results between

the sheet and the base, so that adhesion by binders such as bitumen or the like is possible. But again there results a rigid bond between sheet and base, which hinders movements, interrupts the air gap and in which
 70 uneven spots on the base stand out on the upper side of the sheet.

It is the object of the invention to provide spacer members in which all the disadvantages of known spacer members are mitigated and the formation of a continuous air gap is ensured. According to the invention, this object is achieved by the spacer member being formed of a mat of elastic non-woven wires,
 75 threads or fibres, and which has a high air volume. Such a mat can be laminated onto the roof-covering sheet, and for example may have a thickness of up to 30 mm whereby an effective ventilating layer is formed and at the
 80 same time heat transfer is reduced. The mat may for example be a tangled fibre mat of plastics materials for example polyamides or polyesters, and/or natural organic material, e.g. coconut fibre. For the mat to acquire
 85 sufficient elasticity and strength, it may consist of wires, threads or fibres of material with a thickness of 0.1 to 0.6 mm. The air gaps between the wires, threads or fibres should be large so that the volume of solid matter is
 90 approximately 2%. A mat consisting of wires, threads or fibres and having a density of about 40 kg/m³ is of particular utility. The roof-covering sheet can be any known roofing felt, for example a sheet consisting of a support coated on both sides with a layer of
 100 bitumen up to 2 mm thick.

In order to attach a roof-covering sheet onto which such a mat is laminated, to the base to be covered, an adhesive can be applied to the
 105 upper surface of the base. Alternatively a coating can be applied in places to the mat on its side facing towards the base, for example a self-adhesive bitumen layer or a plastics adhesive layer which can be activated by an additional component so that the roof-covering
 110 sheet when placed on the base becomes firmly stuck to it. This coating is applied to the mat in spaced locations only, as otherwise it would form a continuous layer on the base beneath which air or vapour bubbles could
 115 form. By applying this coating only in spots, such blistering is avoided. When the mat is continuously stuck to the base, or when it is provided on the lower side in places with a coating which is stuck to the base, a sufficiently wide air gap is provided between the base and the sheet to ensure air equalisation, and the sheet is also firmly bonded to the base by the elastic fibres of the mat while
 120 nevertheless allowing movements between sheet and base over the whole area, and uneven spots on the base are accommodated by the mat.

Examples of the invention are hereinafter
 130 described and illustrated in the accompanying

drawing, Figs. 1 and 2 of which show a cross section of roof-covering sheets of the invention.

In Fig. 1 the roof-covering sheet consists of a supporting layer 2 on both sides of which are bitumen layers 1 and 3 up to 2 mm thick. A fibre mat 4 is laminated onto bitumen layer 3.

In the embodiment according to Fig. 2, the sheet is constructed in the same way as in the embodiment according to Fig. 1, a fibre mat 4 being laminated onto bitumen layer 3. To the lower side of the fibre mat 4 are additionally applied spaced adhesive layers 5 between which are gaps free from any adhesive layer.

CLAIMS

1. A roof-covering sheet provided with spacer members which form an air gap on the side thereof when in use faces towards a base to be covered by the sheet, characterized in that the spacer member is a mat of elastic non-woven wires, threads or fibres, and which has a high air volume.
2. A roof-covering sheet according to Claim 1, wherein the mat is formed of plastics material and/or natural organic material.
3. A roof-covering sheet according to Claim 1 or Claim 2, wherein the mat is formed of wires, threads or fibres of a thickness of from 0.1 to 0.6 mm.
4. A roof-covering sheet according to any of Claims 1 to 3, wherein the said mat has a thickness of up to 30 mm.
5. A roof-covering sheet according to any of Claims 1 to 4, which has a density of about 40 kg/m³.
6. A roof-covering sheet according to any of Claims 1 to 5, wherein the mat is provided with an intermittent coating on its outside surface.
7. A roof-covering sheet according to any of Claims 1 to 6, which is a roofing felt.
8. A roof-covering sheet according to Claim 1, substantially as hereinbefore described, with particular reference to Fig. 1 or Fig. 2 of the accompanying drawing.