



US 20090100779A1

(19) **United States**
(12) **Patent Application Publication**
CLUTHE

(10) **Pub. No.: US 2009/0100779 A1**
(43) **Pub. Date: Apr. 23, 2009**

(54) **PLASTIC ROOF SHINGLE**

Publication Classification

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(51) **Int. Cl.**
E04D 1/34 (2006.01)

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(52) **U.S. Cl.** **52/543**

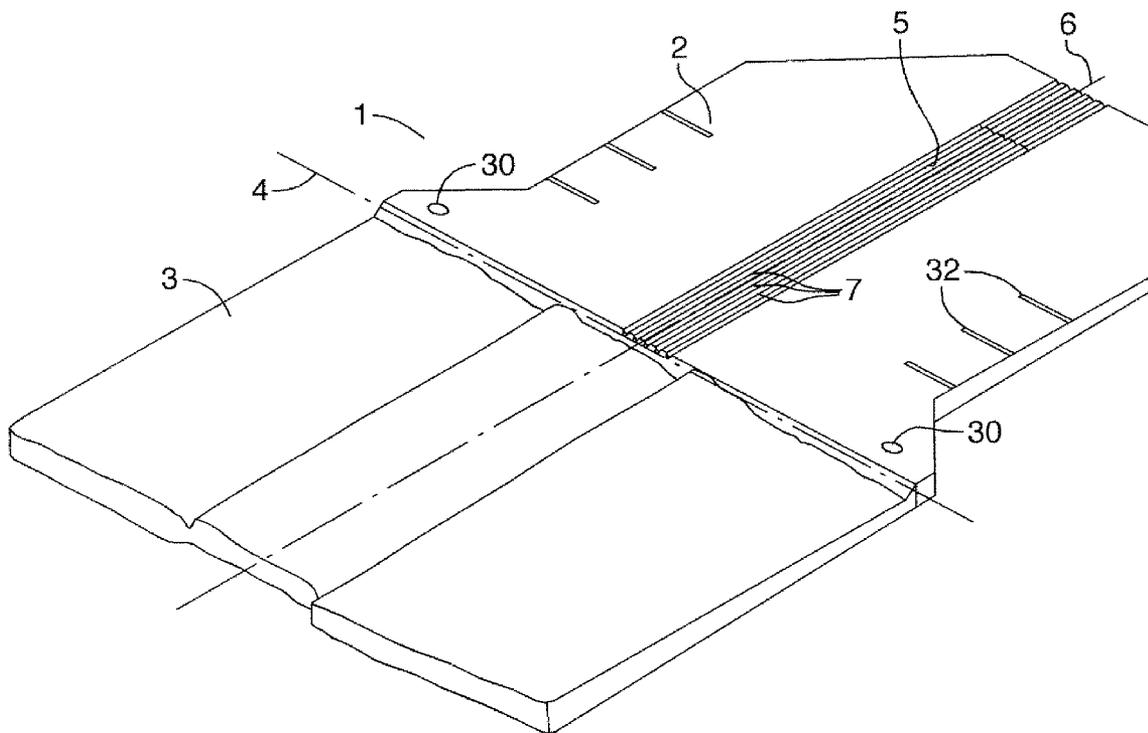
(57) **ABSTRACT**

The roof shingle is made of plastic and has a generally planar nailing portion and a generally planar exposable portion extending generally coplanarly from the nailing portion. An imaginary first axis defines the nailing portion from the exposable portion. The shingle has a fold area extending generally centrally through the nailing portion and the exposable portion along a second axis generally at a right angle to the first axis. For the ridge line of the roof, the shingle may be folded along the fold area to produce a V-shape for installation along the ridge line, without having to cut the shingle or use a different design.

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(21) Appl. No.: **11/876,863**

(22) Filed: **Oct. 23, 2007**



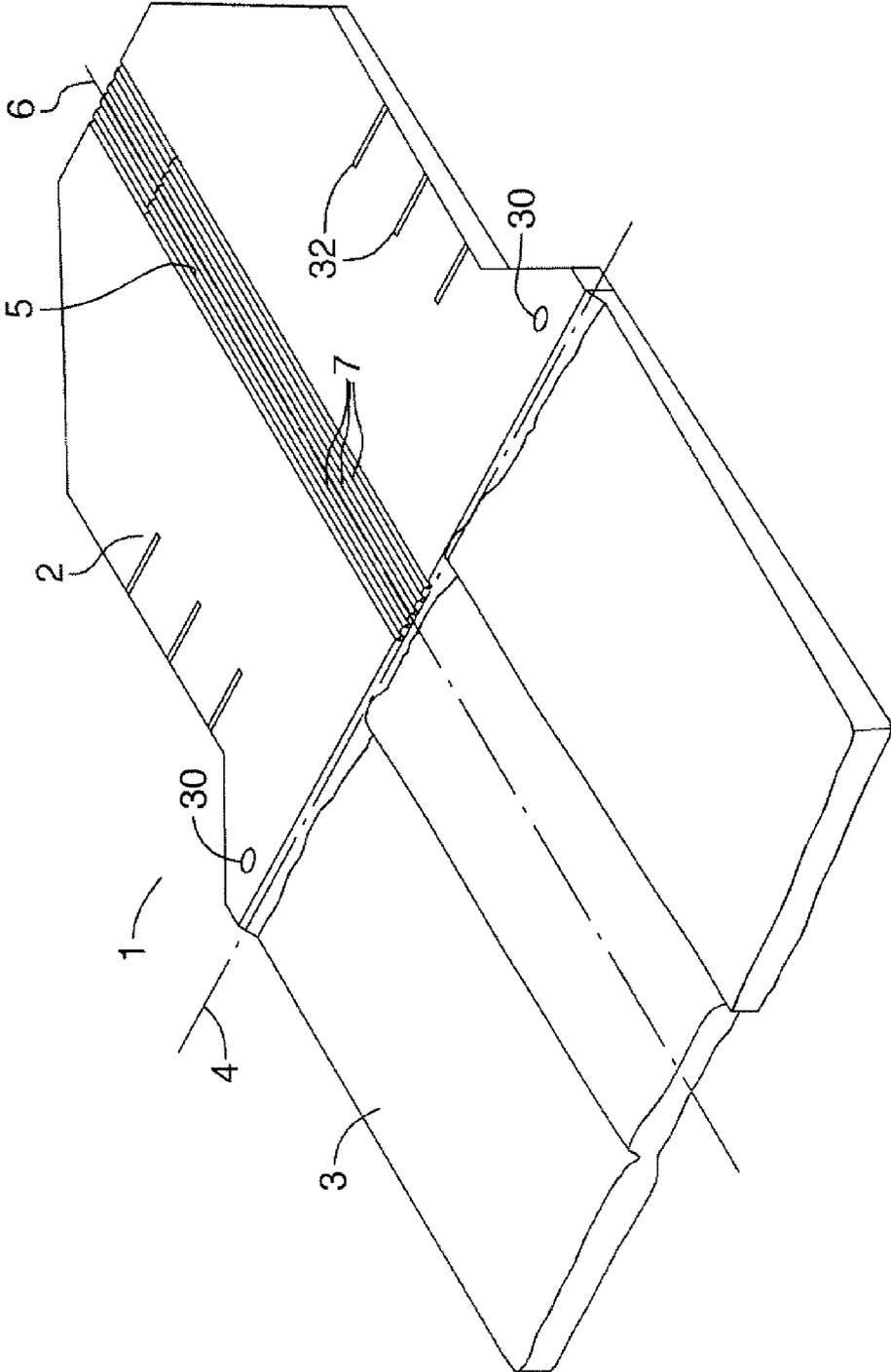


FIG.1

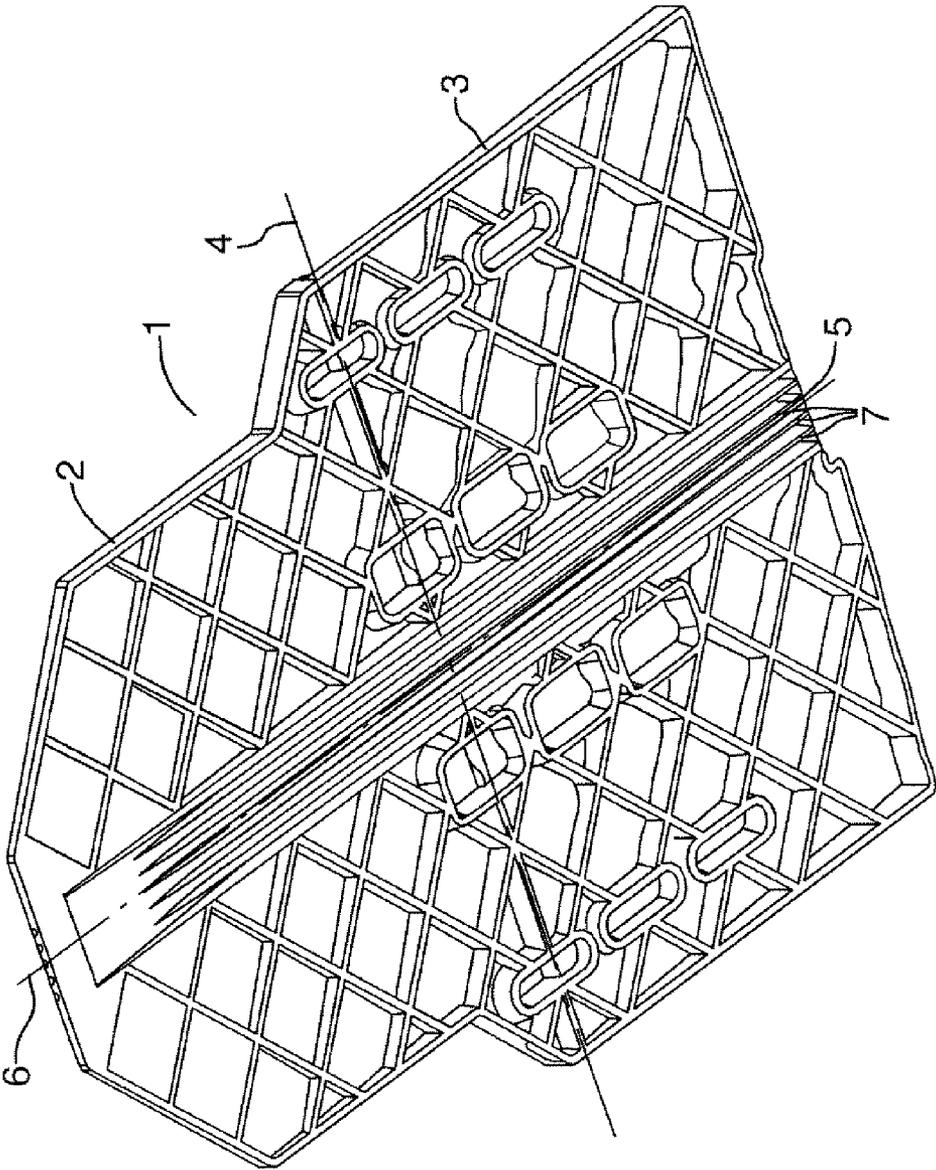


FIG.2

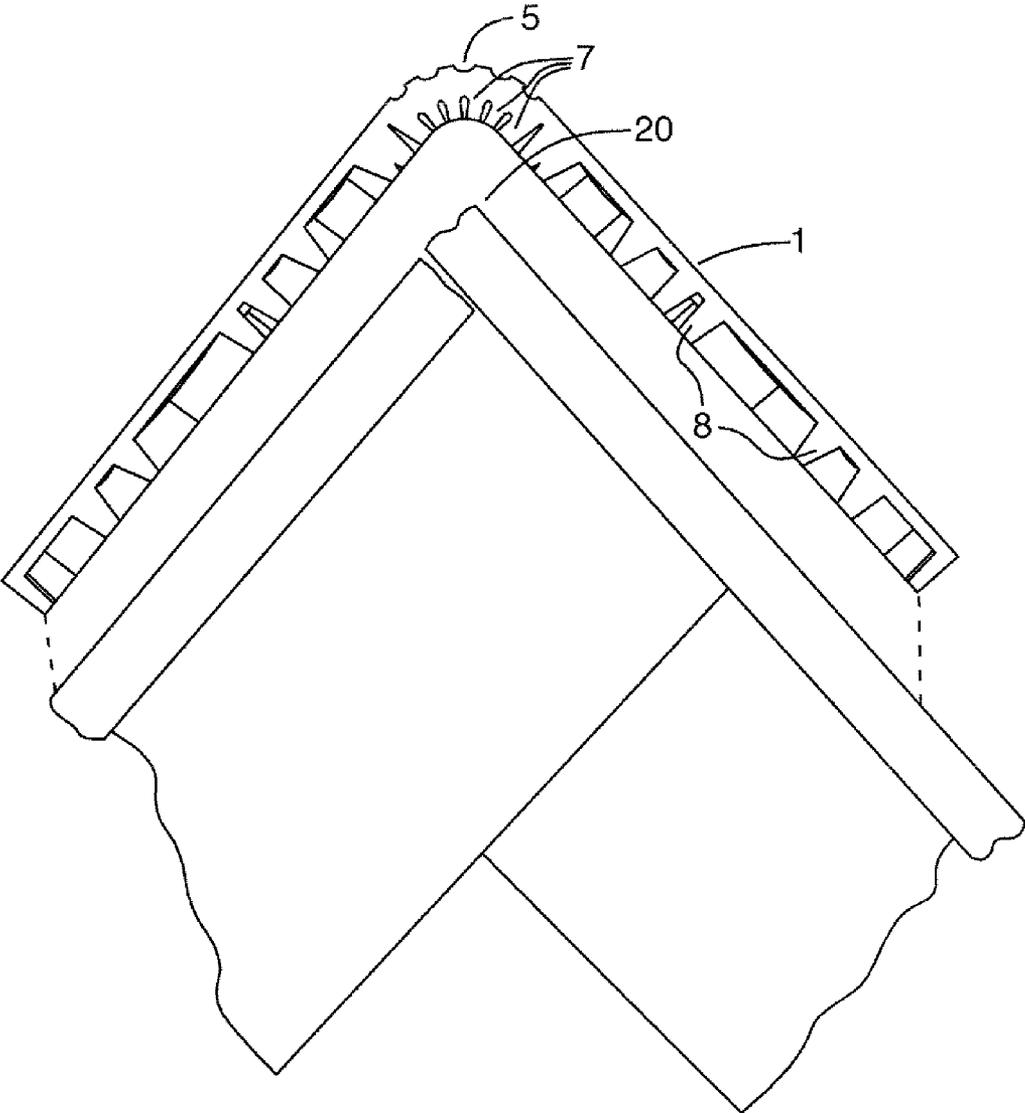


FIG.3

PLASTIC ROOF SHINGLE

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] This invention relates to roof shingles, and in particular to roof shingles made of plastic.

SUMMARY OF THE INVENTION

[0002] It is an object of this invention to provide an improved plastic roof shingle.

[0003] More particularly, it is an object of the preferred embodiment to provide a plastic roof shingle which can also be used easily for the ridge line of a roof.

[0004] According to one aspect of the invention, the roof shingle is made of plastic and has a generally planar nailing portion and a generally planar exposable portion extending generally coplanarly from the nailing portion. An imaginary first axis defines the nailing portion from the exposable portion. The shingle has a fold area extending generally centrally through the nailing portion and the exposable portion along a second axis generally at a right angle to the first axis.

[0005] For the main surface of a roof, the installation is conventional, with the nailing portion of the shingles nailed to sheathing in rows starting from the bottom edge of the roof, working up the roof with the exposable portion of the shingles of one row exposed, and the nailing portion of those shingles covered by the exposable portion of the next row. For the ridge line of the roof, the shingle may be folded along the fold area to produce a V-shape for installation along the ridge line, with part of the folded shingle extending along one side of the ridge line and part extending along the other side of the ridge line. Successive shingles along the roof line overlap each other as on the main surface of the roof.

[0006] In an exemplary embodiment, the fold area is defined by a least one rib on the underside of the shingle extending along the second axis, with no ribs running across the second axis in the fold area.

[0007] As one example of an alternative, the fold area is defined by a plurality of generally parallel ribs on an underside of the shingle extending along the second axis, again with no ribs running across the second axis in the fold area.

[0008] Preferably, a substantial portion of the shingle has ribs across an underside thereof, preferably in several directions, but not extending into the fold area.

[0009] Further details of the invention will be described or will become apparent in the course of the following detailed description and drawings of specific embodiments of the invention, as examples.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] Embodiments of the invention will now be described, by way of example only, with reference to the attached drawings, in which:

[0011] FIG. 1 is a perspective view of the upper surface of an exemplary shingle according to the invention;

[0012] FIG. 2 is a perspective view of the underside of the shingle of FIG. 1; and

[0013] FIG. 3 is a cross-section showing the shingle folded for installation on the ridge line of a roof.

DETAILED DESCRIPTION OF THE INVENTION

[0014] In the following description, various embodiments of the present invention will be described. For purposes of explanation, specific configurations and details are set forth in order to provide a thorough understanding of the embodiments. However, it will also be apparent to one skilled in the art that the present invention may be practiced without the specific details. Furthermore, well-known features may be omitted or simplified in order not to obscure the embodiment being described.

[0015] An exemplary embodiment of the invention is illustrated in FIGS. 1-3.

[0016] FIGS. 1 and 2 show a roof shingle 1, made of plastic. More particularly, in the preferred embodiment, the shingle is made from polyvinylchloride (PVC), for example. However, it should be clearly understood that any other suitable plastic could be used, such as possibly polypropylene, polyethylene, and recycled plastic, among others.

[0017] The shingle has a generally planar nailing portion 2 and a generally planar exposable portion 3 extending generally coplanarly from the nailing portion. An imaginary first axis 4 defines the nailing portion from the exposable portion. The shingle has a fold area 5 extending generally centrally through the nailing portion and the exposable portion along a second axis 6 generally at a right angle to the first axis. Thus, as shown in FIG. 3, in addition to conventional installation on the main area of the roof, the shingle may be folded along the fold area 5 to produce an angled shape for installation along a ridge line 20 of a roof, with part of the folded shingle extending along one side of the ridge line and part extending along the other side of the ridge line, as explained previously. It is the unique configuration of the invention which facilitates folding, so that a single shingle design can be used for the entire roof, including ridge line, without having to cut the shingles or use a different shingle for the ridge line. Among other advantages, this has a significant advantage for manufacturing that only one mold is necessary. This is especially advantageous if a custom color is desired, since separate ribs are not necessary for two separate parts, and thus custom colors can be produced at a lower overall cost. For the purchasing contractor or owner, the invention is advantageous in that only one type of shingle need be purchased.

[0018] In the illustrated exemplary embodiment, the fold area is defined by a least one fold-defining rib 7 on the underside of the shingle extending therealong and no ribs running thereacross. Preferably, there are several such fold-defining ribs 7, generally parallel to each other. As seen in FIG. 3, when the shingle is folded, the ribs on the underside of the shingle approach each other or may come into contact with each other. Preferably, a substantial portion of the shingle has reinforcement ribs or shapes 8 across an underside thereof, preferably in several directions, but not extending into the fold area.

[0019] The ribs 8 also provide support to the central area which preferably is thinned out somewhat relative to the rest of the shingle, to further facilitate folding. This prevents sagging of the center portion (fold area) of the shingle, which otherwise could result, especially in extreme heat.

[0020] As with conventional shingles, the nailing portion of each shingle is intended to be covered by another roof shingle mounted adjacently thereabove on a roof, and the exposable

portion is intended to have at least a portion thereof not covered by another roof shingle mounted adjacently thereabove.

[0021] To facilitate installation of the shingles, the preferred embodiment may include alignment indicia or mechanical alignment or spacing elements, and/or may include nail location indicators such as indicia or mechanical features.

[0022] For example, preferred or suggested nail locations within the nailing portion may be indicated, for example by a cylindrical depression 30 to assist in positioning the nail, especially if nailing by hand.

[0023] Similarly, the shingle may have suitable alignment lines 32 inscribed on the surface thereof, to indicate one or more various alignment/overlap options.

[0024] Preferred and exemplary embodiments of this invention are described herein. Variations of those embodiments may become apparent to those of ordinary skill in the art upon reading the foregoing description. It is expected that skilled persons will employ such variations as appropriate, and it is expected that the invention may be practiced otherwise than as specifically described herein. Accordingly, this invention includes all modifications and equivalents of the subject matter recited in the claims appended hereto as permitted by applicable law. Moreover, any combination of the above-described elements in all possible variations thereof is encompassed by the invention unless otherwise indicated herein or otherwise clearly contradicted by context.

- 1. A roof shingle, made of plastic and comprising:
 - a generally planar nailing portion; and
 - a generally planar exposable portion extending generally coplanarly from said nailing portion, defined from said nailing portion by an imaginary first axis extending across said shingle;

wherein said shingle has a fold area extending generally centrally through said nailing portion and said exposable portion along a second axis generally at a right angle to said first axis.

2. A roof shingle as in claim 1, wherein said fold area is defined by a least one rib on an underside of said shingle extending along said second axis, with no ribs running across said second axis in said fold area.

3. A roof shingle as in claim 1, wherein said fold area is defined by a plurality of generally parallel ribs on an underside of said shingle extending along said second axis, with no ribs running across said second axis in said fold area.

4. A roof shingle as in claim 1, wherein a substantial portion of said shingle has ribs across an underside thereof, not extending into said fold area.

5. A roof shingle as in claim 2, wherein a substantial portion of said shingle has ribs across an underside thereof, not extending into said fold area.

6. A roof shingle as in claim 3, wherein a substantial portion of said shingle has ribs across an underside thereof, not extending into said fold area.

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