United States Patent

Crookston

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[54] METHOD OF APPLYING SHINGLES

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[58] **Field of Search** 52/748, 747, 518, 13

[56] **References Cited**

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[57] **ABSTRACT**

The method includes applying a vertically overlapped course of undercover shingles to the valley formed between two adjoining roof sections and then applying conventional courses of top shingles which are of shorter vertical extent than the undercover shingles to the adjacent roof sections and progressively partially covering the undercover shingles with courses of top or cover shingles whereby an improved shingle covering unit is provided for the valley formed between the roof sections.

5 Claims, 5 Drawing Figures

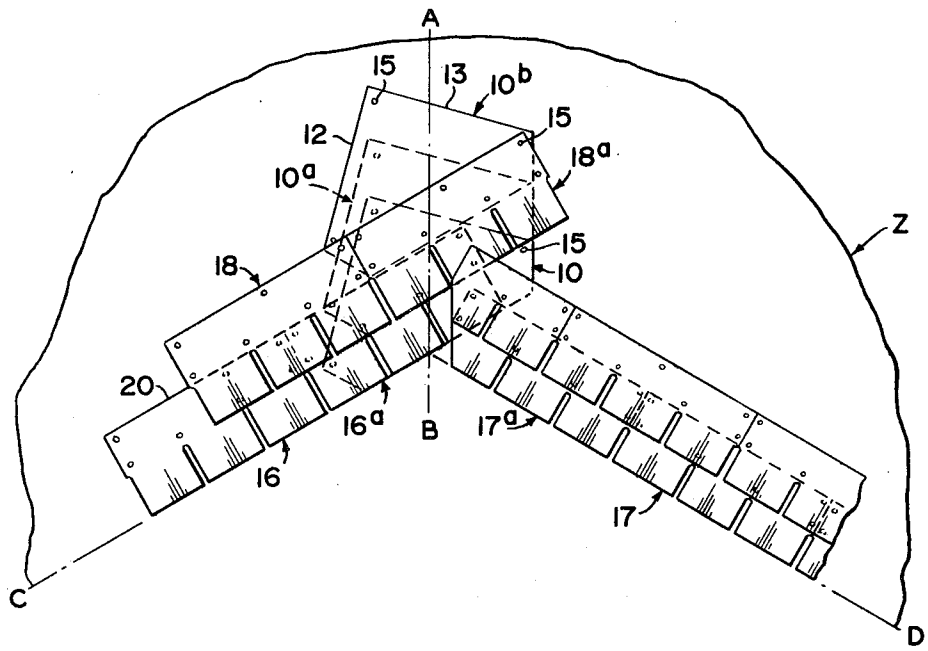


FIG. 1

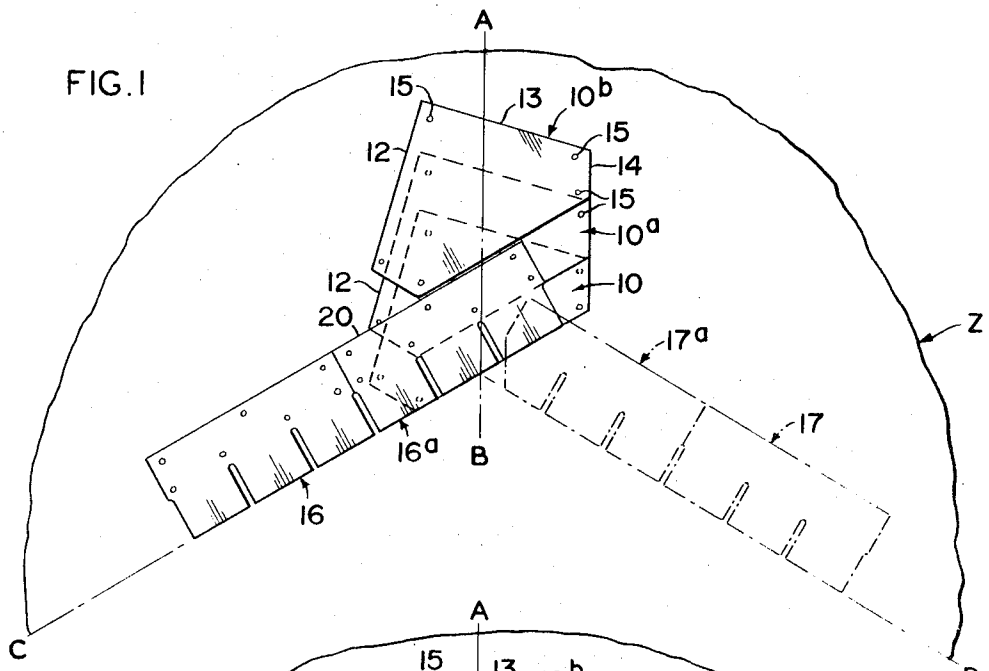


FIG. 2

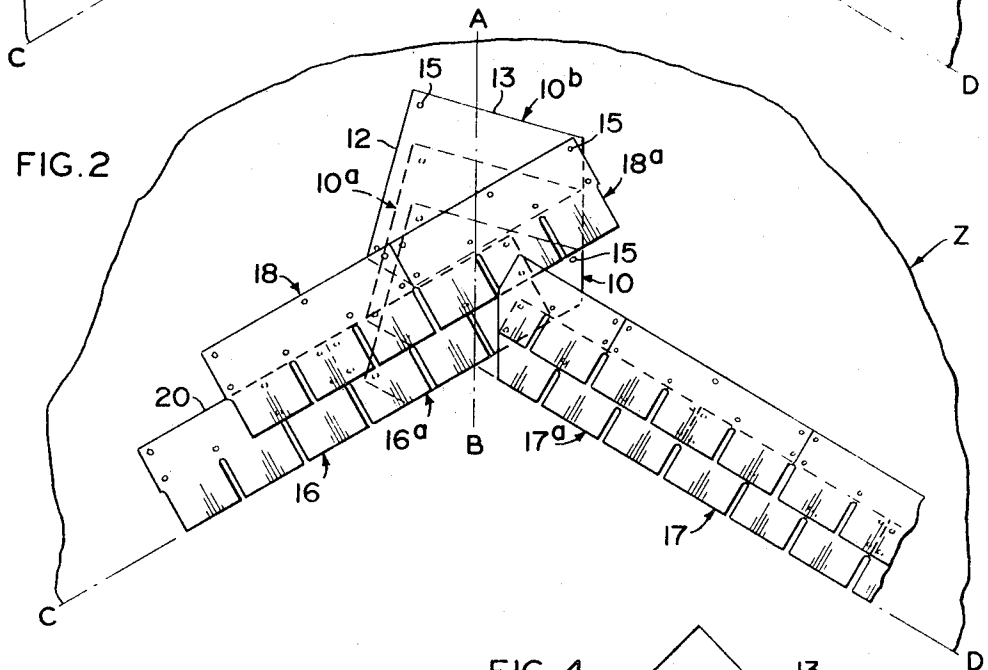


FIG. 3

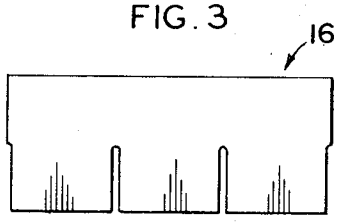
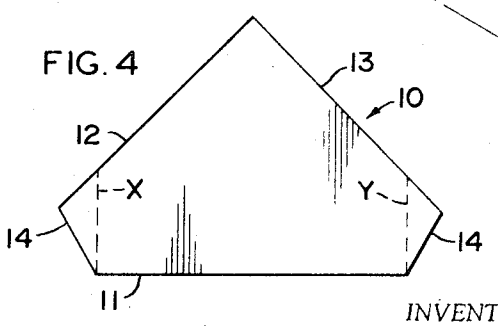


FIG. 4



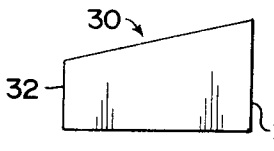


FIG. 5

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METHOD OF APPLYING SHINGLES

The present invention relates to a novel and improved shingle and a method of applying shingles to the valley formed between adjoining roof sections.

Heretofore there have been various types of roof coverings proposed for use in endeavoring to provide a permanent watertight cover over a building roof at the valley formed between adjacent roof sections. In some instances, a metal cover strip is applied at the valley between the roof sections and this may be under or over the shingle coating provided on the roof. In addition, it has been conventional practice to attempt to interleave end portions of the terminal shingles provided on the adjacent roof sections and to have such interleaved shingles overlap in the roof valley for providing a watertight cover thereover. However, insofar as I am aware, none of such valley covering techniques as practiced before and shingle means provided for covering valleys have been able to provide satisfactory, permanent, easily installed coverings for the valleys formed between adjacent roof sections.

The general object of the present invention is to provide a novel and improved method of applying shingles to a roof valley and characterized by the provision of a vertically overlapped course of undercover shingles applied solely to the valley portion of the roof and adjacent edge portions of the roof sections.

Another object of the invention is to provide undercover shingles which may be thinner than conventional top shingles and which are of greater vertical height than conventional shingles whereby when courses of undercover shingles and top shingles are applied to a valley, the overlapped joints between the individual shingles of the undercover layer and the cover layer are vertically offset from each other whereby an improved, watertight covering action is obtained.

Another object of the invention is to provide a novel and improved undercover shingle for use in covering roof valleys and the like and wherein the shingle is of greater vertical height than conventional top shingles.

A further object of the invention is to provide an easily practiced method for building up, progressively, an effective watertight covering over roof valleys.

The foregoing and other objects and advantages of the invention will be made more apparent as the specification proceeds.

Attention now is particularly directed to the accompanying drawings, wherein:

FIG. 1 is a plan view of a roof forming a roof valley and indicating the initial application of shingles to the roof valley;

FIG. 2 is the next progressive step showing how shingles can be applied in accordance with the method of the invention;

FIG. 3 is a plan view of a conventional roof shingle;

FIG. 4 is a plan view of an undercover roof shingle of the invention; and

FIG. 5 is a reduced scale plan of another undercover shingle.

When referring to corresponding members shown in the drawing and referred to in the specification, corresponding numerals are used to facilitate comparison therebetween.

INVENTIVE SUBJECT MATTER

The present invention relates in general to a method or progressively attaching roof shingles to a valley formed between adjoining roof sections and wherein the method comprises using undercover shingles of greater height than conventional top shingles and progressively securing such shingles to a roof valley in vertically overlapping relationship, and then progressively applying courses of conventional top shingles to adjacent roof sections forming a roof valley and associating adjacent end shingles of such courses to provide a top cover shingle over the roof valley.

With reference to the accompanying drawings and the details shown therein, a building Z is shown which has a valley indicated by the centerline AB formed in the roof of the building between adjacent roof portions indicated by the area ABC, and ABD, respectively. These roof sections normally are flat and drain to the centerline AB of the roof valley.

In order to provide an easily applied, practical, watertight cover to the valley section AB formed between the adjoining roof sections, the method of the invention is used with a plurality of undercover shingles **10**. These shingles **10** are of greater vertical height than conventional shingles and the shingles preferably are of roughly triangular shape and have a straight base edge **11** and converging upper edges **12** and **13**. These shingles may be made from thinner material than the regular top shingles and thus may be made, for example, from 50 lb. rolled roof paper, or equivalent material, or they may be made from any suitable shingle material.

In applying the roof shingles **10** to the valley AB, initially the straight lower edge **11** of the shingle **10** is applied along the lower edge of the one roof section ABC so as to extend over the roof valley and have a portion including a side edge **14** of the shingle extend up and cover part of the adjacent roof section ABD. After applying to the roof valley and pressing against the adjacent surface, the shingle is secured in place by conventional roofing nails **15**, or equivalent members.

After the first shingle **10** has been positioned, then other similar shingles **10*a***, **10*b***, etc., can be applied to extend up in vertically overlapped relationship to each other along the valley AB in the roof. Then conventional shingles **16**, **16*a***, etc., can be applied as a course staring along the lower margin of the roof section ABC. It is indicated that the shingle **16*a*** normally will extend across the valley line AB formed in the roof and be secured thereover. Next similar course of shingles can be applied to the roof section ABC and they are indicated by shingle **17**, **17*a***, etc. Usually the layer or course of the top or cover of conventional shingles formed from the shingles **17**, **17*a***, etc., will terminate short of the valley line AB but, if desired, these shingles can also overlap the course formed from the shingles **16**, **16*a***, etc. Then if other under shingles **10*a***, **10*b***, etc., have not been applied over the valley, and in order to complete the roof, the next vertically associated under cover shingle **10*a*** would be applied over the roof valley and be secured to both roof sections. Next additional course of shingles **18**, **18*a***, etc., can be applied to the roof section ABC and a similar course or next row of shingles will be applied to the other roof section ABD. Such steps would then be repeated to cover the roof and roof valley.

It will be noted that the undercover shingles **10**, **10*a***, etc., are applied to cover the valley AB with the apex of the roughly triangularly shaped shingle being offset from the roof valley, and usually on the same side thereof. However, the portions of the shingles **10** at the valley are of greater height than the rectangular shingles **16**, **18**, etc., and the top edge **13** of each of the shingles used in covering the valley has a different angle to the horizontal, or formed with the valley, than the similar angle formed by top edge **20** of a conventional shingle **16** as it extends across the valley AB. Hence, these different relationships of the shingles **10**, **10*a***, etc., to the associated shingles **16*a***, **17*a***, **18*a***, etc., provide effective ways to prevent any possible leakage of water through the shingles used to cover the valley AB in the roof.

The drawings show a conventional shingle **16** in FIG. **3** and an undercover shingle **10** in FIG. **4** and these are shown to similar scales and are of corresponding sizes to those actually preferred in use. Thus it is noted that the vertical height of the undercover shingle **10** is appreciably greater than the vertical height of the conventional shingle. Such undercover shingles **10** can always be applied to the roof valley so that the top edge **13** of these shingles will always be vertically offset from the top edge of the cover shingles at the actual roof valley line.

It should be noted that the undercover shingles **10** need not be of the shape shown, thus the end portions of the shingle **10** may be cut off on the lines as indicated at X and Y in FIG. **4**, while it also is possible to form a shingle of other shape such as the roughly trapezoidal shape shingle **30** shown in FIG. **5**. In this instance, the shingle is made higher at the end or side edge

31 than at its end 32 so that as the shingle 30 is applied to the roof section ABC to extend over the valley and onto the adjacent roof section, usually such edge 31 will be applied to the adjoining section ABD. The height of even the shorter side 32 is greater than the height of a conventional shingle whereby the shingles again will not provide any vertically overlapped joints with the same top edge line angle or positioning as in the overlapping of the conventional cover shingles applied over the roof valley. But by use of a roughly equal top edge shaped shingle, as the shingle 10, a greater vertical overlap and a good angle of divergence is provided between the top edges 13 and 20 with minimum material in the shingle 10.

The shingles 16*a* and 17*a* normally would be interlocked with each other at the roof valley for extra layers of protection and corner portions of the shingles usually would not be removed even though it is so indicated in FIGS. 1 and 2.

Hence, from the foregoing, it is believed that a novel and improved shingle has been provided for use in covering roof valleys and that an improved method of covering valleys with the watertight shingle layers has been provided. Thus, the objects of the invention have been achieved.

What is claimed is:

1. A method of attaching shingles to a roof to cover a valley and using undercover shingles of a greater height than conventional rectangular top shingles, which method comprises the steps of

applying an undercover shingle to both sides of a roof valley to extend across the same at the lower edge of the roof and securing the same in position,

laying a second undercover shingle over said valley and said first undercover shingle and vertically offset from said first shingle to overlap the same partially and securing such second shingle in position,

continuing the buildup of a layer of undercover shingles in vertically overlapped relation over said valley,

applying a course of rectangular shingles to the lower edge of a first side of the roof to extend at least to the valley and partly cover the lowermost undercover shingle, said rectangular shingles being of less height than said undercover shingles,

laying a course of rectangular shingles on the opposite side of said valley at the lower edge of the roof to extend at least to said valley, at least one of said courses of shingles extending across said valley, and

progressively laying further courses of rectangular shingles on both sides of said valley and only partly covering parts of one undercover shingle with each of such courses, the overlapped portions of said undercover shingles being offset along said roof valley in relation to the overlapped portions of said rectangular shingles.

2. A method of attaching shingles as in claim 1 including the steps of

providing undercover shingles of roughly triangular shape and having a vertical height greater than a conventional rectangular shingle, and

securing said undercover shingle to the valley with the apex of the shingle offset from such valley, and positioning the top edge of such shingle at a different angle to the valley than the angle of the top edge of the conventional rectangular shingles forms with the valley.

3. A method of attaching shingles to a roof to cover a valley comprising the steps of

providing undercover shingles of a greater height than conventional rectangular shingles,

applying an undercover shingle to a first side of a roof valley to extend across the valley at the lower edge of the roof and securing it in position,

applying a conventional rectangular shingle to the lower edge of said first side of the roof to extend across the valley and partly cover the undercover shingle,

laying a course of shingles on the opposite side of said valley at the lower edge of the roof and extending at least to said valley,

laying a second undercover shingle on said first side of said valley over the first undercover shingle to contact and partly cover and vertically overlap said first undercover shingle,

laying a next course of shingles on said first side of said valley and extending an end shingle over said valley and securing the same in position, and

continuing the progressive buildup of vertically advancing courses of said undercover and conventional shingles to cover the roof and provide at least a double layer of overlapped, undercover and top shingles at the valley, the overlaps of said undercover shingles on themselves and of said rectangular shingles on themselves being offset along the axis of said valley.

4. A method of attaching shingles as in claim 3 where the undercover shingles are of roughly triangular shape and have a vertical height greater than a conventional rectangular shingle, and

including the steps of

securing said undercover shingle to the valley with the apex of the shingle offset from such valley, and positioning the top edge of such shingle at a different angle to the valley than the angle of the top edge of the conventional rectangular shingles forms with the valley, said top edges being vertically offset from each other.

5. A method as in claim 3 wherein an undercover shingle is applied to and extends across said valley before the courses of regular rectangular shingles are applied to said valley.

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