Dec. 6, 1966 W. H. HOLLIDAY 3,289,361

SNOW GUARD CONSTRUCTION AND METHOD OF MAKING THE SAME

Filed June 1, 1962 2 Sheets-Sheet 1

Fig 1.

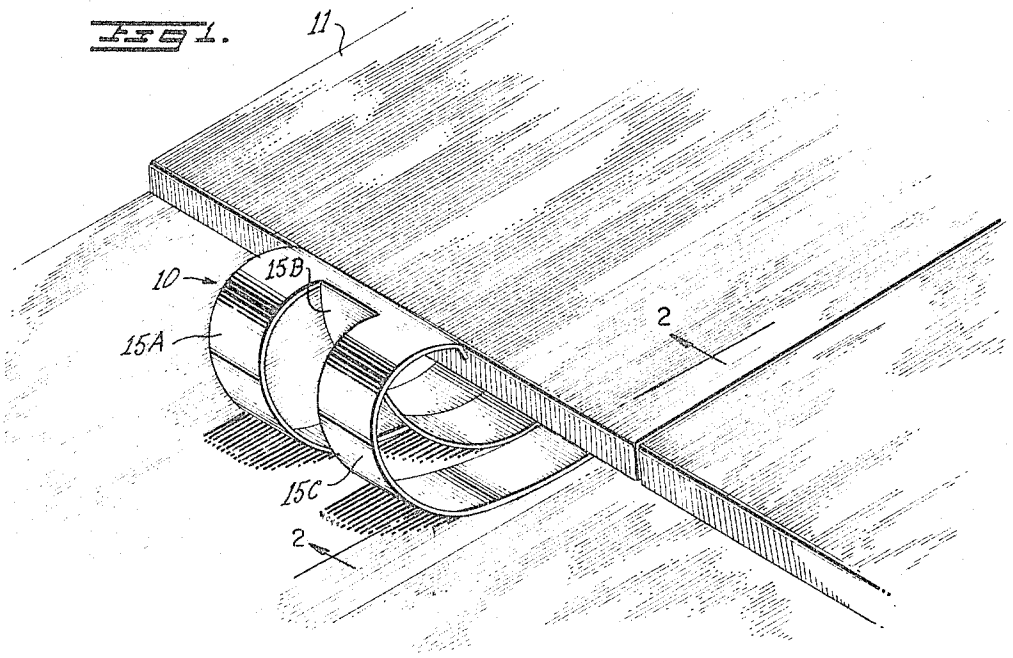
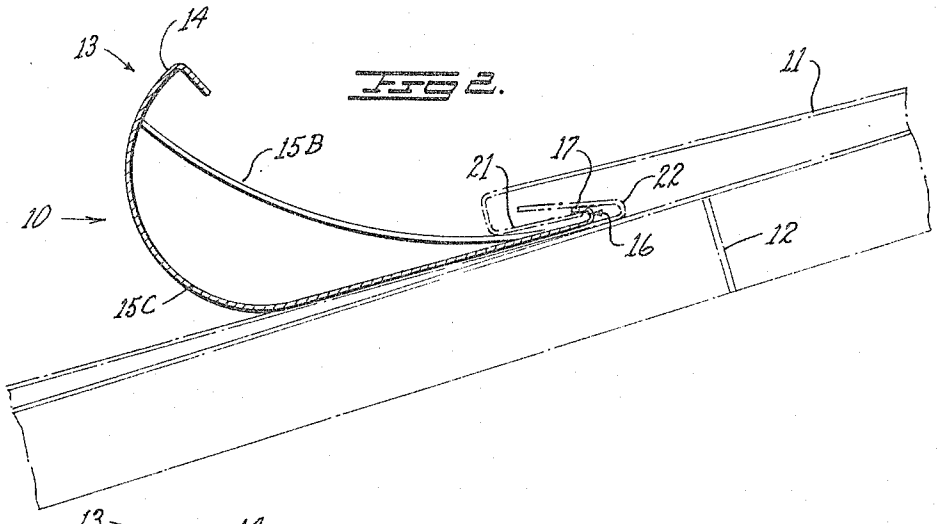


Fig 2.



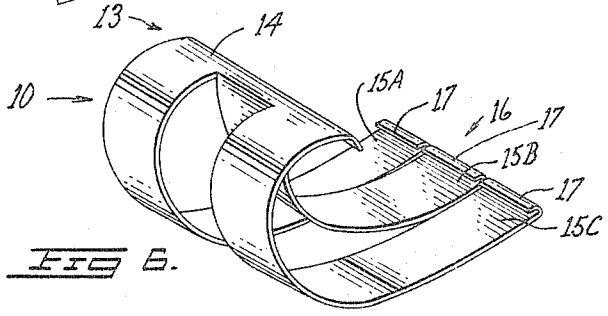


Fig 6.

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Filed June 1, 1962 2 Sheets-Sheet 2

Fig 3

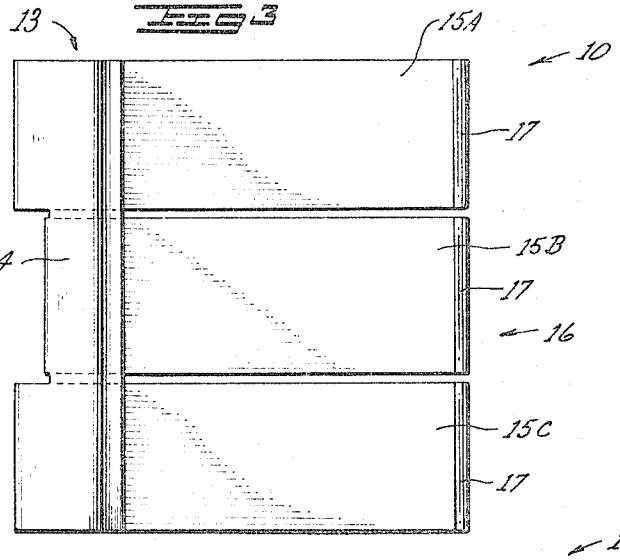


Fig 4.

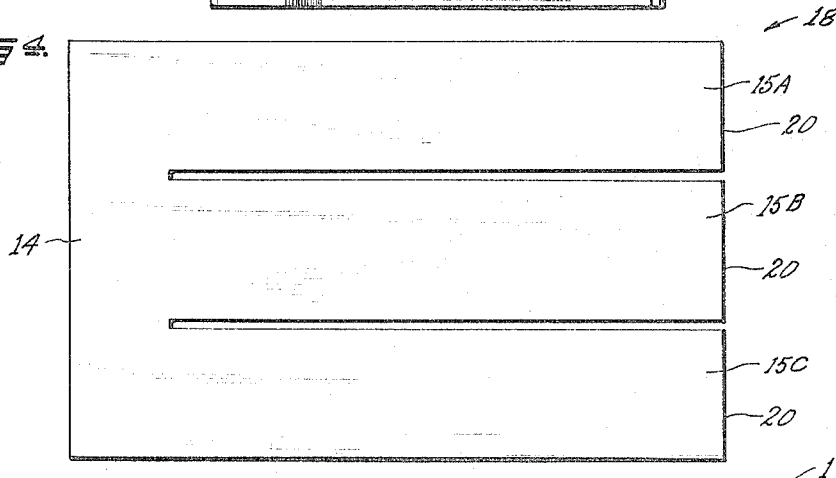
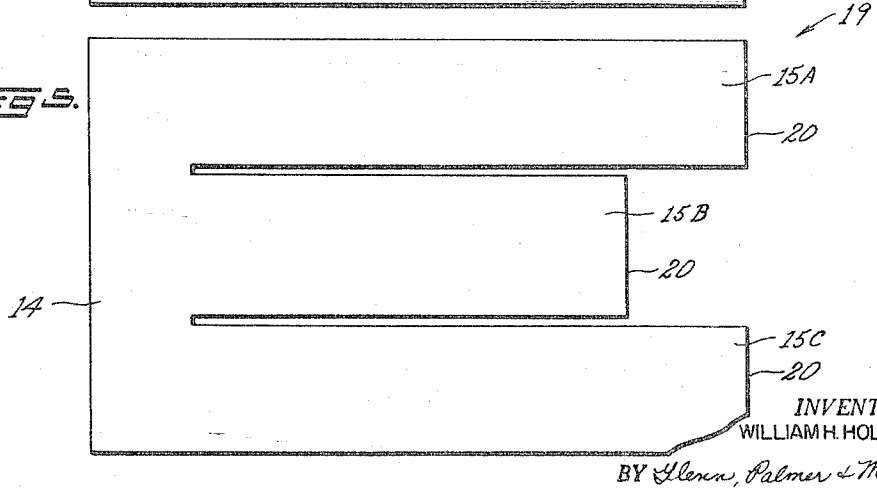


Fig 5.



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3,289,361

SNOW GUARD CONSTRUCTION AND METHOD OF MAKING THE SAME

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11 Claims. (Cl. 52—24)

This invention relates to an improved snow guard construction as well as to an improved method of making such a snow guard construction or the like.

It is well known that when snow piles up on roof structures of buildings, homes and the like, the same provides a hazardous condition should large sections thereof subsequently slide off the roof structures and fall to the surrounding area.

For example, such large quantities of sliding snow readily damage rain gutter systems, and expensive shrubbery and the like surrounding the home.

Accordingly various attempts have been made to provide snow guards which are adapted to be secured to the roof structure in any desired patterns thereof to arrest movement of the snow thereon so that large quantities of snow will not slide off the roof structure at one time.

Therefore, it is a feature of this invention to provide an improved snow guard for such purposes and the like.

Another feature of this invention is to provide such a snow guard which is relatively simple and inexpensive to manufacture as well as relatively simple and inexpensive to install.

Further, the snow guard of this invention is so constructed and arranged that the same is adapted to be readily secured to existing metallic or aluminum shingle constructions in a manner hereinafter described.

Accordingly, it is an object of this invention to provide an improved snow guard construction or the like having one or more of the novel features of this invention set forth above and hereinafter shown or described.

Another object of this invention is to provide an improved method of making such a snow guard construction or the like.

Other objects, uses and advantages of this invention are apparent from a reading of this description which proceeds with reference to the accompanying drawings forming a part thereof and wherein:

FIGURE 1 is a fragmentary, perspective view illustrating a snow guard construction of this invention.

FIGURE 2 is a fragmentary, cross-sectional view taken on line 2—2 of FIGURE 1.

FIGURE 3 is a top view of an unattached snow guard of this invention.

FIGURE 4 is a plan view of one snow guard blank of this invention.

FIGURE 5 is a view similar to FIGURE 4 illustrating another snow guard blank of this invention.

FIGURE 6 is a perspective view of an unattached snow guard of this invention.

While the various features of this invention are hereinafter described and illustrated as being particularly adaptable for forming a snow guard for a roof construction or the like, it is to be understood that the various features of this invention may be utilized singly or in various combinations thereof to provide other constructions as desired.

Therefore, this invention is not to be limited to only the embodiment illustrated in the drawings, because the drawings are merely utilized to illustrate one of the wide variety of uses of this invention.

Referring now to FIGURE 1, an improved snow guard of this invention is generally indicated by the reference numeral **10** and is secured to metallic or aluminum shingles **11** covering a roof sub-structure **12**, FIGURE 2, in a manner conventional in the art, to prevent large quantities of snow from sliding off the shingles **11** at one time.

The snow guard **10** has an arresting end **13** defined in part by a band of material **14** having a substantially C-shaped cross-sectional configuration.

A plurality of legs **15A**, **15B** and **15C** are integrally joined to the band **14** and are transversely disposed relative thereto, the legs **15A**, **15B** and **15C** defining an attaching end **16** of the snow guard **10** at the free ends of the legs **15A**, **15B** and **15C**. The free ends of the legs **15A**, **15B**, and **15C** are disposed in aligned relation and have reversely turned ends **17** for a purpose hereinafter described.

The arresting end **13** of the snow guard **10** is raised relative to the attaching end **16** thereof as the legs **15A**, **15B** and **15C** have portions thereof that are arcuate in cross section as fully illustrated in FIGURE 2, the outboard legs **15A** and **15C** having portions thereof disposed outboard of the arresting end **13**.

The snow guard **10** is so constructed and arranged that the leg **15B** is shorter than the legs **15A** and **15C** whereby the shorter leg **15B**, when secured in aligned relation with the outboard legs **15A** and **15C**, tends to hold the arresting end **13** of the snow guard **10** raised relative to the attaching end **16** thereof even though a bank of snow or the like is pressing against the arresting end **13** and tending to straighten out the legs **15A**, **15B** and **15C** thereof.

As illustrated in FIGURE 2, the legs **15A**, **15B** and **15C** have substantially straight portions thereof which are adapted to rest on the flat surface of the shingles **11** in a manner hereinafter described.

While the snow guard **10** has been illustrated and described as having three legs **15A**, **15B** and **15C**, it is to be understood that the snow guard **10** can be constructed with two or more legs and that one or more legs thereof could be formed similar to the short leg **15B** as desired.

While the snow guard **10** can be formed in any suitable manner and of any suitable material, the embodiment of the snow guard **10** illustrated in the drawings is made from metallic material, such as aluminum-containing metallic material or the like, formed in flat blanks **18** and **19** as illustrated in FIGURES 4 and 5 respectively.

The snow guard blank **18** is substantially rectangular and has the band **14** thereof disposed at one end thereof with the legs **15A**, **15B** and **15C** extending transversely therefrom and having the terminal ends **20** thereof disposed in aligned relation.

During the forming of the snow guard **10** from the blank **18**, the legs **15A** and **15C** are stretched and drawn to be subsequently longer than the leg **15B** so that when the snow guard is formed in the configuration illustrated in FIGURE 6, the legs **15A** and **15C** are longer than the leg **15B** while the reversely turned ends **17** thereof are disposed in aligned relation as illustrated in FIGURE 3.

In this manner, the shorter leg **15B** holds the arresting end **13** of the snow guard **10** raised above the attaching end **16** thereof in the manner previously described.

Alternately, the snow guard **10** can be made from the blank **19** wherein the legs **15A**, **15B** and **15C** extend transversely away from the band **14**, the end **20** of the leg **15B** terminating short of the ends **20** of the legs **15A** and **15C** so that when the snow guard **10** is formed therefrom no appreciable drawing of the legs **15A** and **15C** is required.

Therefore, it can be seen that the snow guard **10** can be formed from the flat blanks **18** and **19** in a relatively simple manner by the methods of this invention which require simple drawing and forming operations.

One type of roof construction to which the snow guards **10** of this invention are adapted to be readily attached is illustrated in FIGURES 1 and 2 wherein the shingles **11** are formed from metallic material, such as aluminum-

containing metallic material and the like, and respectively have hook-shaped ends 21 and 22 respectively at the leading and trailing edges thereof.

The shingles are normally secured to the roof structure 12 by nailing the trailing ends 22 thereof to the roof structure 12 after the leading ends 21 thereof have been hooked around the trailing end 22 of a lower shingle 11 in the manner illustrated in FIGURE 2.

A snow guard 10 of this invention is adapted to be readily attached to the shingles 11 by inserting the attaching end 16 thereof underneath the leading end 21 of an upper shingle 11 until the reversely turned ends 17 of the snow guard 10 pass beyond the hook-shaped end 21 of the upper shingle 11 and snap upwardly.

Thereafter, the snow guard 10 can be pulled downwardly to hook the reversely turned ends 17 thereof to the hook-shaped end 21 of the upper shingle 11 in the manner illustrated in FIGURE 1 whereby the snow guard 10 is firmly anchored to the upper shingle 11 and to the roof structure 12.

Therefore, it can be seen that it is a relatively simple and inexpensive matter to secure the snow guards 10 to existing roof structure of the type illustrated in FIGURES 1 and 2.

However, it is to be understood that the snow guards 10 can be installed at the same time that the shingles 11 are being installed on the roof structure 12, as desired.

Further, since the snow guard 10 of this invention can be installed without fasteners or the like, no leakage problems exist as in prior known snow guard attaching means.

If desired, the snow guard 10 can be formed from shingle coiled stock and can be made the same color as the shingles to which it is to be applied whereby the snow guard will be as inconspicuous as possible where this is a requirement.

While the snow guards 10 can be arranged on a roof structure in any desired pattern thereof, one example is to arrange the snow guards 10 approximately 30 inches apart along the lower horizontal row of shingles 11 on a particular roof structure.

Further, while the snow guard 10 of this invention can have any suitable dimensions, one embodiment thereof that has been found satisfactory with existing and newer aluminum shingles is approximately 3.500 inches wide and 3.500 inches long with the arresting end 13 thereof raised approximately 2.000 inches from the attaching end 16.

The thickness of the material of the snow guard can be approximately 0.019 of an inch and the material can be aluminum alloy R396 with a temper of H–134. The arcuate portions of the legs 15A and 15C are described by radius of approximately 1.062 inches while the arcuate portion of the shorter leg 15B is described by a radius of approximately 3.875 inches. The band 14 has the free end thereof approximately 0.375 of an inch wide and has the arc between the legs thereof described by a radius of approximately 0.062 of an inch. The reversely turned ends 17 of the legs 15A, 15B and 15C are approximately 0.090 of an inch wide and are turned on a radius of approximately 0.031 of an inch with the reversely turned portions thereof making an angle of approximately 15° with the horizontal. The legs 15A, 15B and 15C are approximately 1.125 inches wide and have a spacing of approximately 0.062 of an inch therebetween.

Accordingly, it can be seen that an improved snow guard has been provided by this invention as well as improved methods of making the same or the like.

While the form of the invention now preferred has been disclosed as required by the statutes, other forms may be used, all coming within the scope of the claims which follow.

What is claimed is:

1. A snow guard or the like having an arresting end thereof raised relative to an attaching end thereof and having a plurality of legs joined together at said arresting end and disposed adjacent each other at said attaching end, at least one of said legs being shorter than the other legs to hold said arresting end raised relative to said attaching end, said legs each having a reverse bend means for defining part of said attaching end and being in alignment with the other reverse bend means.

2. A snow guard or the like as set forth in claim 1 wherein said legs are curved between said arresting end and said attaching end.

3. A snow guard or the like as set forth in claim 1 wherein said other legs have portions thereof disposed outboard of said arresting end.

4. A snow guard or the like having an arresting end thereof raised relative to an attaching end thereof and having a plurality of legs joined together at said arresting end and disposed adjacent each other at said attaching end, said legs respectively having reversely turned ends defining said attaching end, at least one of said legs being shorter than the other legs to hold said arresting end raised relative to said attaching end, said reversely turned ends of said legs being disposed in aligned relation.

5. A snow guard or the like as set forth in claim 4 wherein said reversely turned ends of said legs open toward said arresting end.

6. A snow guard or the like having an arresting end thereof raised relative to an attaching end thereof and having a plurality of legs integrally joined together by a band at said arresting end and disposed adjacent each other at said attaching end, at least one of said legs being shorter than the other legs to hold said arresting end raised relative to said attaching end, said legs each having a reverse bend means defining part of the said attaching end and being in alignment with the other reverse bend means.

7. A snow guard or the like as set forth in claim 6 wherein said band has a substantially C-shaped cross-sectional configuration.

8. A snow guard or the like as set forth in claim 6 wherein said legs have portions thereof disposed in the same plane adjacent said attaching end.

9. In combination, a roof structure, a plurality of shingles disposed on said roof structure and each having hook-shaped ends interconnected to said hook-shaped ends of adjacent shingles, and a snow guard having an arresting end thereof raised above said shingles and having a hook-shaped attaching end hooked to one of said hook-shaped ends of one of said shingles, said snow guard having a plurality of legs joined together at said arresting end and disposed adjacent each other at said attaching end, at least one of said legs being shorter than the other legs to hold said arresting end raised relative to said attaching end, said legs each having a reverse bend means forming part of said attaching end and being aligned with the other reverse bend means.

10. A method of making a snow guard or the like from a flat blank having a band integrally joined to transversely disposed legs, said method comprising the steps of raising said band relative to the free ends of said legs to form an arresting end of said snow guard, said raising step permitting certain of said legs to be longer than the remainder of said legs with all of said legs having the free ends thereof in alignment with each other, and forming the free ends of said legs with reverse bends in alignment with each other to define an attaching end of said snow guard, said legs of said blank being of the same length and said raising step includes the step of holding the free end of said legs in alignment with each other and drawing at least some of the legs longer than the remaining so that the free ends of the legs of the snow guard are aligned and the remainder is shorter than the long legs to hold said arresting end raised relative to said attaching end.

11. A method of making a snow guard or the like from a flat blank having a band integrally joined to transversely disposed legs, said method comprising the steps of raising said band relative to the free ends of said legs to form an arresting end of said snow guard, said raising step per-

mitting certain of said legs to be longer than the remainder of said legs with all of said legs having the free ends thereof in alignment with each other, and forming the free ends of said legs with reverse bends in alignment with each other to define an attaching end of said snow guard, at least one leg of said blank being shorter than the other legs and said raising step brings the free end of the shorter leg into alignment with the free ends of the longer legs so that said shorter leg holds said arresting end raised relative to said attaching end.

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