



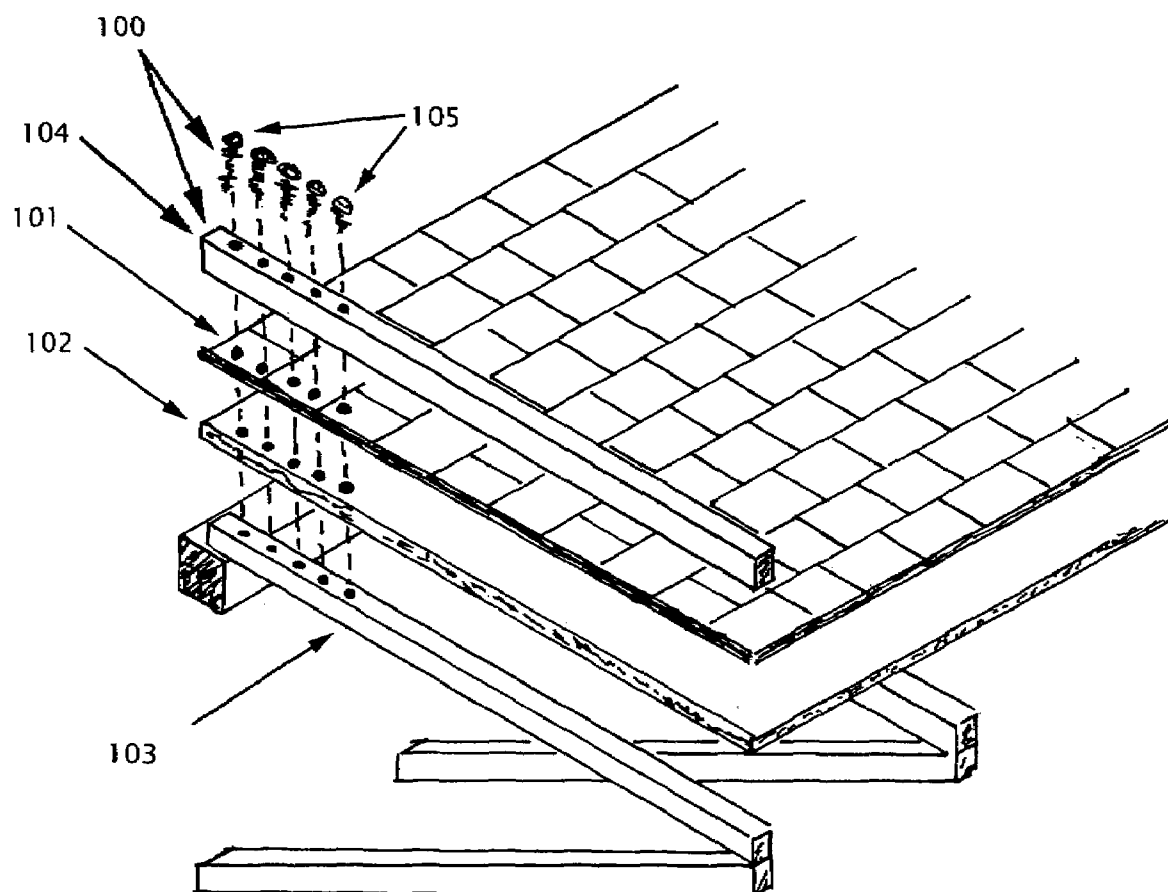
US 20070294977A1

(19) **United States**(12) **Patent Application Publication**
Mitchell(10) **Pub. No.: US 2007/0294977 A1**(43) **Pub. Date: Dec. 27, 2007**(54) **SYSTEM FOR SECURING ROOFING
SHINGLES AND UNDERLYING SHEETING****Publication Classification**(76) Inventor: **Robert J. Mitchell, (US)**

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Robert J. Mitchell**4413 Venice Drive****Land O'Lakes, FL 34639**(51) **Int. Cl.**
E04D 1/34 (2006.01)(52) **U.S. Cl.** **52/543**(57) **ABSTRACT**

A system for securing roofing shingles to a roof's underlying structures is disclosed herein. The system includes a strapping member or members and fasteners for securing roofing shingles to the roof's underlying sheeting and truss. Additionally, methods for sealing the system are disclosed.

(21) Appl. No.: **11/426,125**(22) Filed: **Jun. 23, 2006**

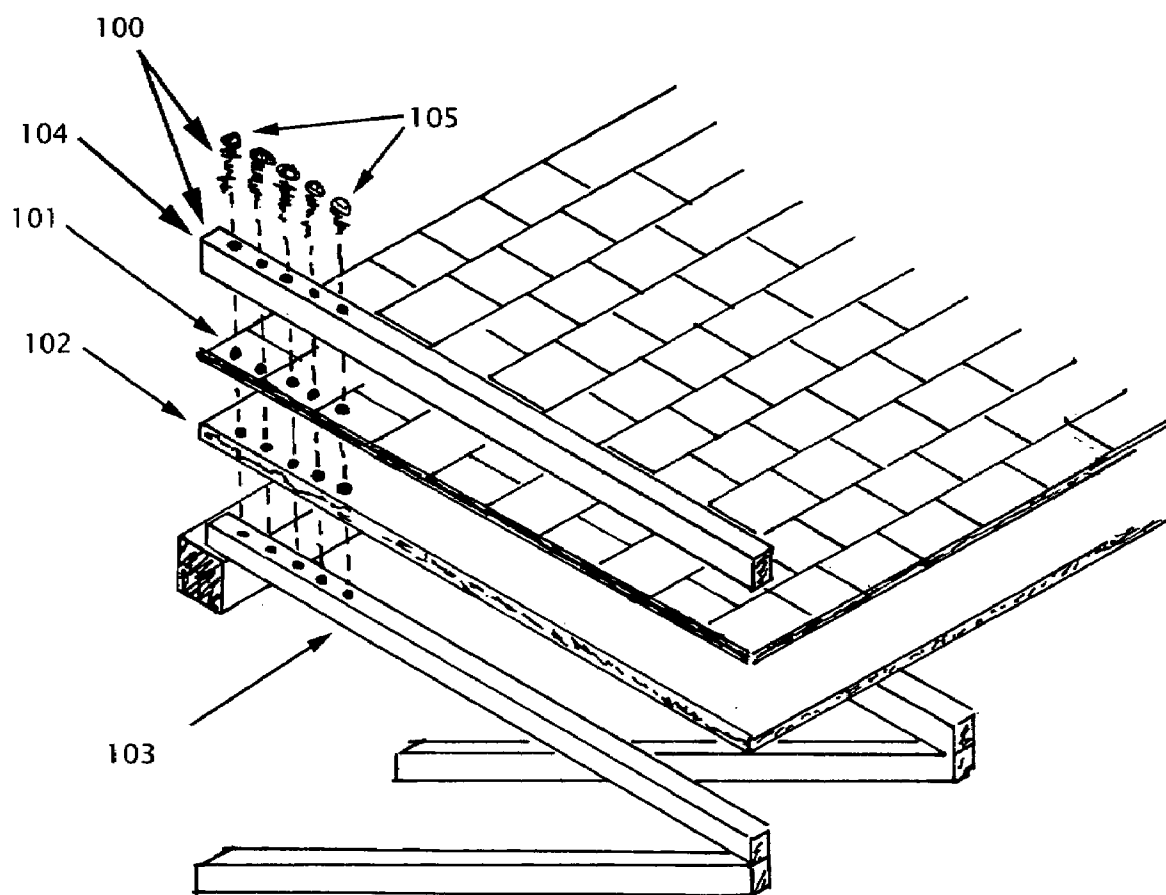


FIG. 1

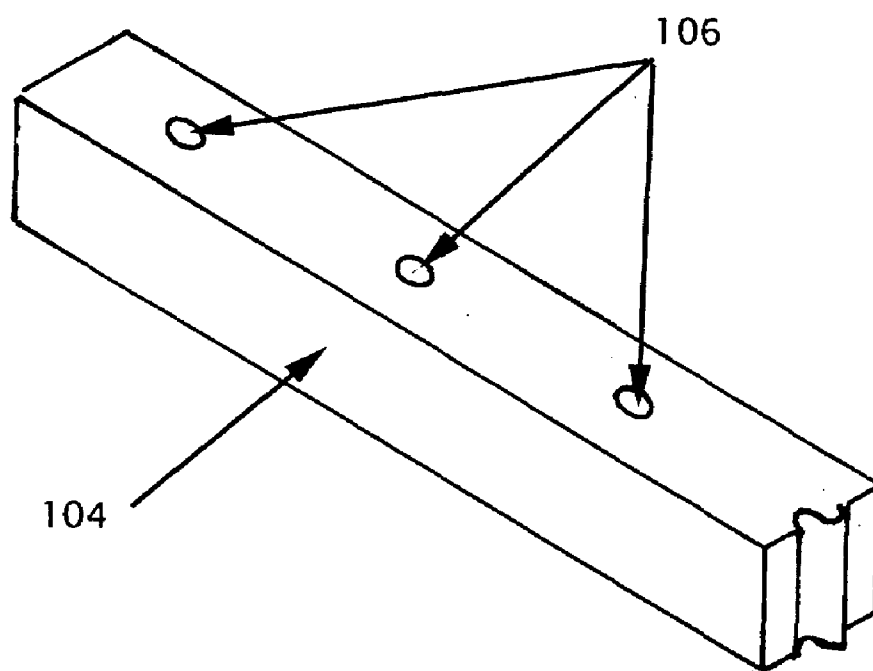


FIG. 2

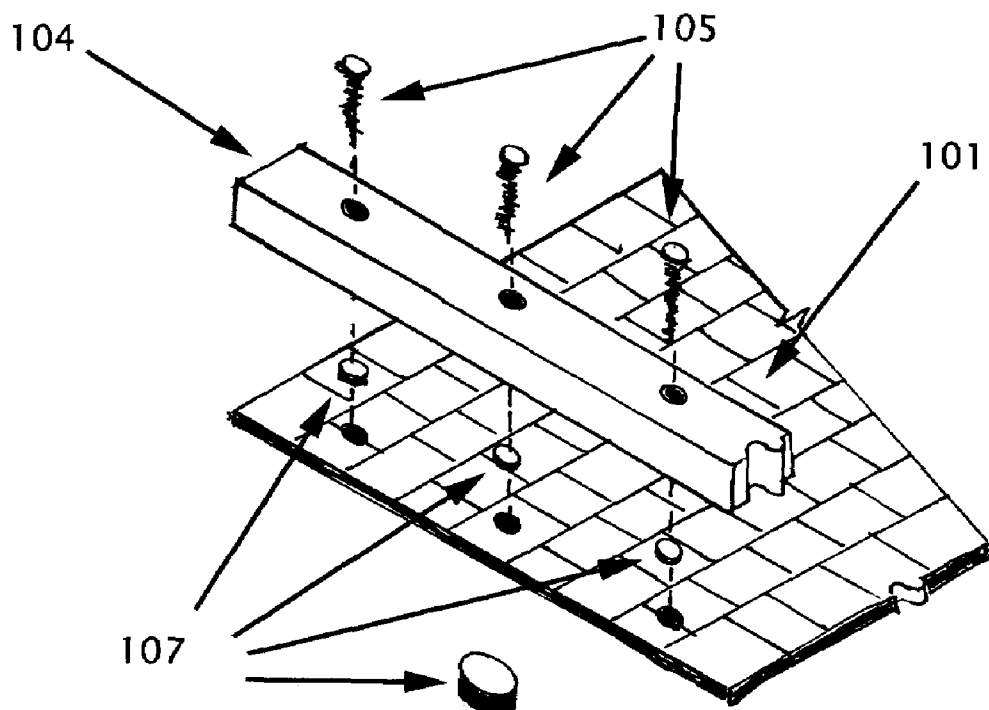


FIG. 3

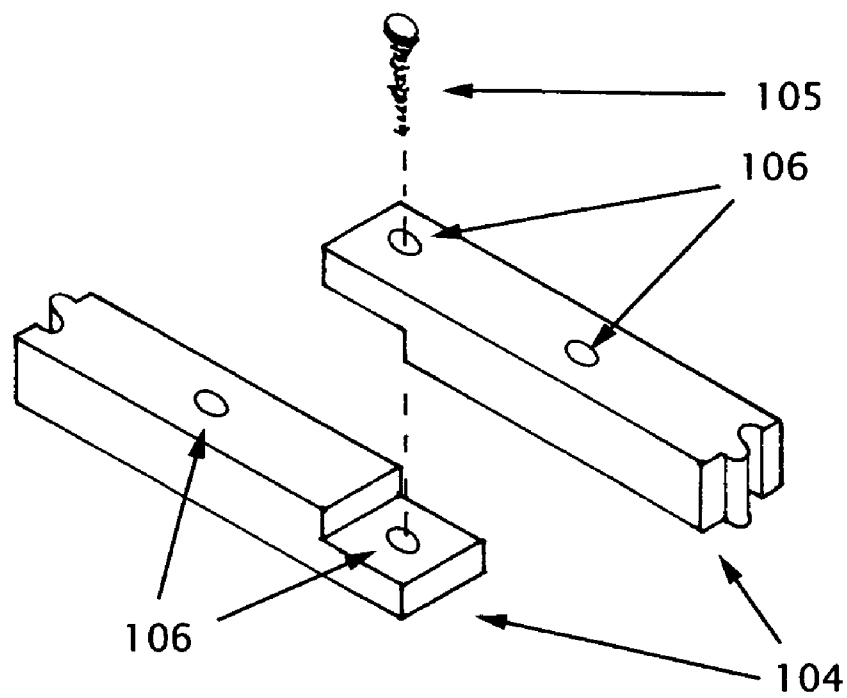


FIG. 4

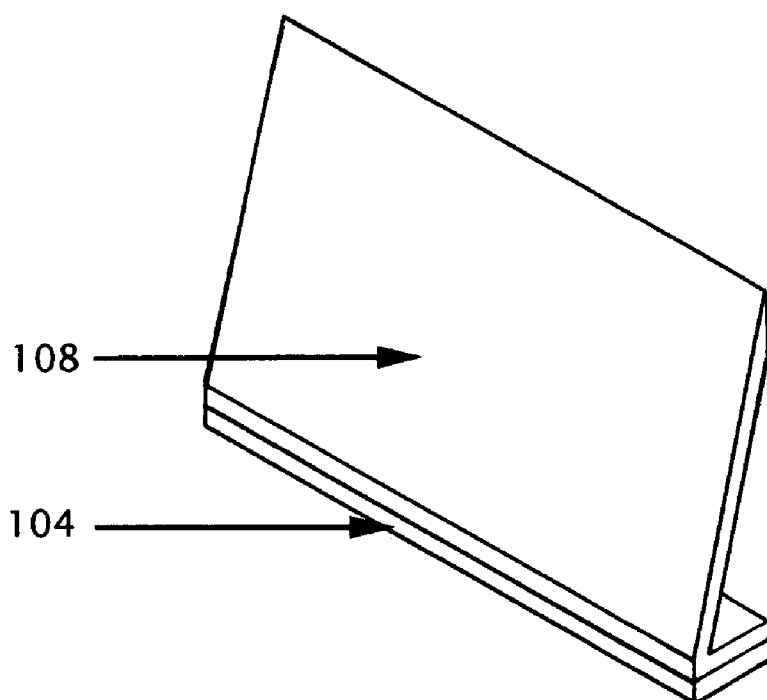


FIG. 5

SYSTEM FOR SECURING ROOFING SHINGLES AND UNDERLYING SHEETING

BACKGROUND

[0001] Shingle roofs are prone to loss of shingles and underlying sheeting during the high wind conditions found in tropical storms, hurricanes and cyclones. Many times, the loss begins at the leading edge of the gable roof section and then propagates across the roof. In the worst case scenario failure of the truss system occurs, leaving the house in collapse.

SUMMARY

[0002] A system for securing roofing shingles and the underlying sheeting to a roof's truss and methods for sealing the system are disclosed herein. The basic system for securing roofing shingles and sheeting against loss during high wind conditions includes a strapping member and a fastener.

BRIEF DESCRIPTION OF DRAWINGS

[0003] FIG. 1 shows an exploded parts view of the roof shingles and sheeting securing system elements used on an existing roof structure.

[0004] FIG. 2 shows the preferred strapping member configuration.

[0005] FIG. 3 shows means for sealing holes found or created in the strapping member.

[0006] FIG. 4 shows a means for allowing individual strapping members to be connected together.

[0007] FIG. 5 shows a strapping member attachment to deflect air flow.

DETAILED DESCRIPTION

[0008] The following description is divided into two portions. The first portion relates to a system for securing a roof's shingles and sheeting to the roof's underlying truss. The second portion relates to a method for sealing the system.

The Roof Shingles and Sheeting Securing System and Method

[0009] Referring to FIG. 1, a system 100 and method for securing roof shingles 101 and roof sheeting 102 to a roof truss 103 is disclosed herein. The simplest system for securing roof shingles 101 and roof sheeting 102 to the underlying truss 103 consists of a strapping member 104 and a set of fasteners 105. The strapping member 104 is placed over the roof shingles 101 and the section of sheeting 102 to be secured. Then a set of fasteners 105 are passed through the strapping member 104, the roof shingles 101, the roof sheeting 102 and then into underlying truss 103. Tightening down the fasteners 105 securely joins the strapping member 104, the captured roof shingles 101, and underlying roof sheeting 102 to the roof truss 103 significantly improving the new configuration's resistance to high winds effects.

[0010] Referring to FIG. 2, the preferred embodiment of the strapping member 104 is disclosed herein. The strapping member 104 maybe constructed of metals including but not limited to aluminum, iron, or steel. Alternatively the strapping member 104 maybe constructed of plastics including but not limited to Lexan™ polycarbonates, or nylon. Addi-

tionally, the strapping member 104 maybe constructed of composites such as fiberglass integrating, Kevlar™ or carbon fiber sheeting. Finally, the strapping member 104 maybe constructed of wood. The preferred embodiment of the strapping member 104 is an elongated body with a top, bottom and two parallel sides constructed of aluminum and incorporating spaced holes 106 penetrating the strapping member 104 from top to bottom, said holes sized and located to facilitate installation and tightening of the system fasteners 105.

[0011] Referring to FIG. 3, a means for sealing the point where a fastener 105 passes through the strapping member 104 and penetrates a roof shingle 101 is disclosed herein. A sealing pad 107 is placed between the strapping member 104 and an underlying roof shingle 101. Passing a system fastener 105 through the strapping member 104, the sealing pad 107, the shingle 101, and the underlying roof sheeting 102 and into the roof truss 103 and then tightening the fastener 105 down compresses the sealing pad causing its material to flow into the hole created in the shingle and the strapping member 104. Ideally, the sealing pad 107 is made from a plastic material that will flow and then act as a water barrier. Many materials are available to form the sealing pad 107 as conceived. The preferred embodiment is constructed by impregnating cotton or felt with roofing tar.

[0012] Referring to FIG. 4, a means for connecting together separate strapping members 104 is disclosed herein. In order to easily manufacture and transport strapping members 104, it would be advantageous to be able to join together individual strapping members 104 of a convenient length on the job site. The preferred strapping member 104 embodiment for connecting together individual strapping members 104 includes end sections that allow the individual strapping members 104 to be overlapped and then secured together by passing a fastener 105 through the holes 106 in the overlapped ends of the strapping member 104, the underlying roof shingles 101 and roof sheeting 102 and into the underlying truss 103, and then tightening the fastener 105 to secure the strapping members 104 to the truss 103.

[0013] Referring to FIG. 5, a means for deflecting air flow is disclosed herein. The system 100 for securing roofing shingles 101 and underlying sheeting 102 can be improved by adding an air flow deflector 108 to the strapping member 104. The air flow deflector 108 maybe constructed from the same materials used to construct the strapping member 104 and includes but is not limited to: metals, plastics, composites or wood. In its preferred embodiment, the air flow deflector 108 is attached to the strapping member 104 with machine screws so that the air flow deflector 108 can be removed and reinstalled when desired. In another embodiment, the air flow deflector 108 and the strapping member 104 may be integrated into a single device which would be permanently installed to secure the roof's shingles 101 and underlying sheeting 102 to the roof's truss 103. The shape of the air flow deflector may be changed to maximize its performance.

What is claimed is:

1. A system for securing roofing shingles to a roof's underlying sheeting and truss said system comprises:

a strapping member with an elongated body, having a top surface and a bottom surface, each surface extending between opposed ends and opposed elongate side edges of the body member;

a means for securing the strapping apparatus, the captured roofing shingles and the underlying roof sheeting to the roof truss.

2. The system in claim 1 wherein the elongated body member (strapping member) incorporates conveniently spaced holes to facilitate securing the strapping member, captured roofing shingles and the underlying roof sheeting to a roof truss.

3. The system in claim 1 wherein the means for securing the strapping apparatus, includes a means for sealing the holes created or found in the strapping member and underlying roof shingles.

4. The system in claim 1 wherein the elongated body member (strapping member) incorporates a mean for sequentially connecting one strapping member to another strapping member.

5. The system in claim 1 wherein an air flow deflector is removably attached to the elongated body member (strapping member).

6. The system in claim 1 wherein the elongated body member (strapping member) is also configured as an air flow deflector.

7. A method for securing roofing shingles to a roof's underlying sheeting and truss the said method comprises:

placing a strapping member over the roofing shingles to be secured and aligning it with an underlying truss;

fastening the strapping member through the shingles and roof sheeting to the underlying truss.

8. The method in claim 5 wherein holes created in or found in the strapping member are sealed.

9. A method for securing roofing shingles to a roof's underlying sheeting and truss the said method comprises:

Connecting two or more strapping members together,

placing the combined strapping members over the roofing shingles to be secured and aligning the combined strapping members with an underlying truss;

fastening the combined strapping members through the shingles and roof sheeting to the underlying truss.

10. The method in claim 7 wherein holes created in or found in the strapping members are sealed.

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