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DEICING DEVICE FOR ROOFS

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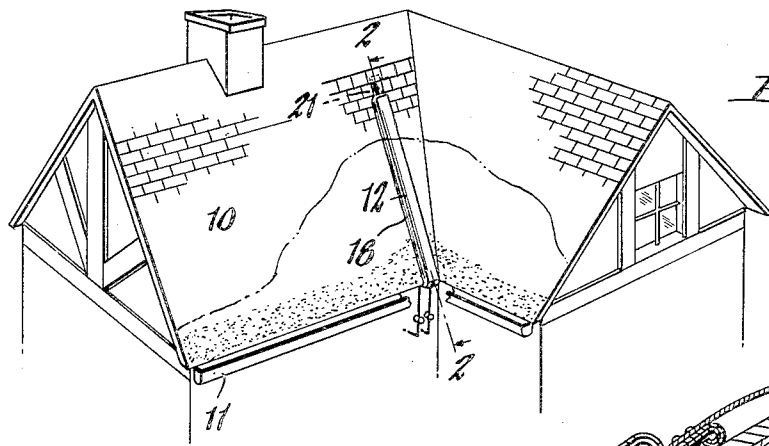


Fig. 1.

Fig. 2.

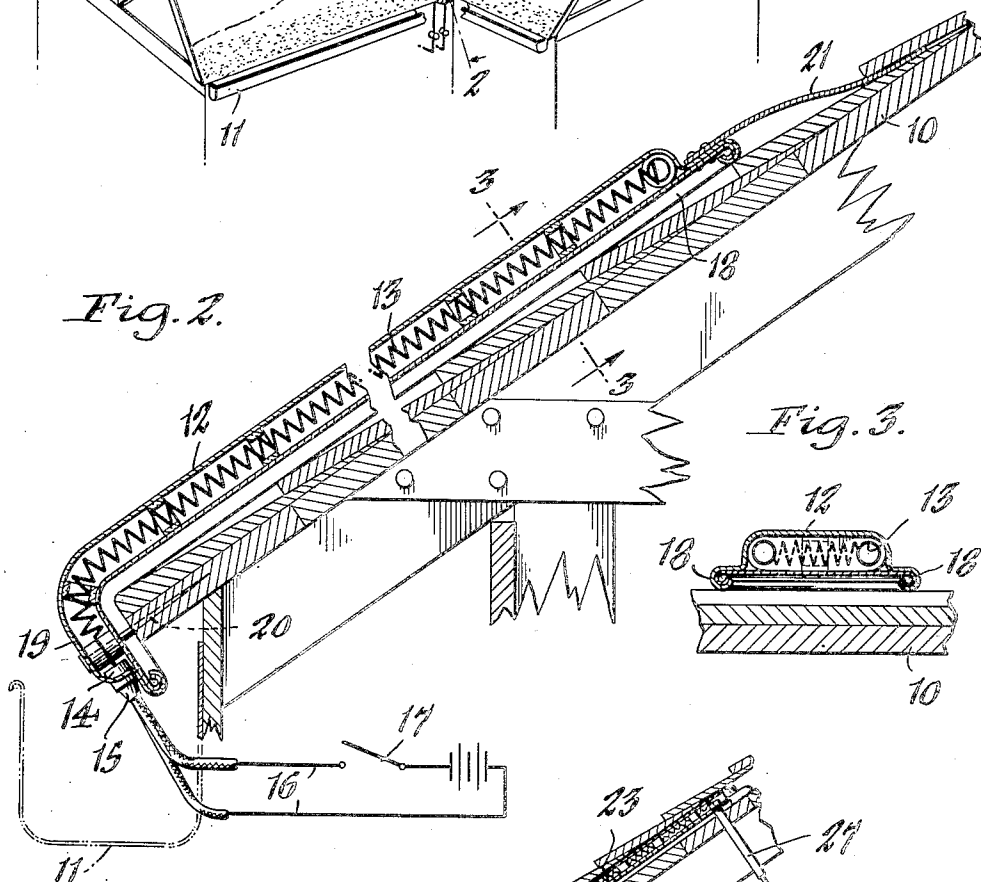


Fig. 3.

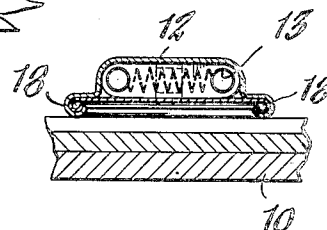
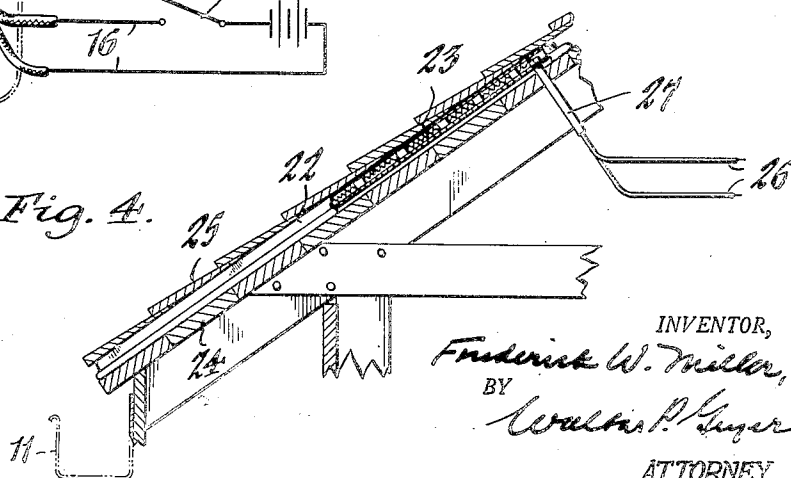


Fig. 4.



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DEICING DEVICE FOR ROOFS

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2 Claims. (Cl. 219—19)

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This invention relates to certain new and useful improvements in devices for preventing the accumulation of snow and ice on the roofs of houses and like building structures.

It is well known in the sloping roof type of house that snow and ice accumulates and is dammed on the lower portions of the roof adjacent the customary gutters, sometimes doing considerable damage to the roof and gutters as well as causing, during a thaw, the water to back under the roof-shingles and seep or leak into the interior of the house to ruin walls, plaster etc.

One of the objects of my invention is to provide a device of this character which is so designed and constructed as to be readily installed or applied to that portion of the roof where the snow and ice may accumulate, and which will act to melt any snow or ice and thereby eliminate any of the resulting damage usually caused by such damming or collection of ice or snow.

Another object of the invention is to provide a de-icing device for attachment to roofs which is simple, compact and inexpensive in construction, which is easy to install, and which is portable for ready mounting where desired.

Other features of the invention reside in the construction and arrangement of parts herein-after described and particularly pointed out in the appended claims.

In the accompanying drawings:

Figure 1 is a fragmentary perspective view of a house showing one of my de-icing devices applied thereto. Figure 2 is an enlarged longitudinal section thereof taken on line 2—2, Figure 1. Figure 3 is a cross section taken on line 3—3, Figure 2. Figure 4 is a sectional view of a roof showing a slightly modified installation of the device thereon.

Similar characters of reference indicate corresponding parts throughout the several views.

In the usual house, the heat from the lower floors rises and in so doing heats the center and upper sloping portions of the roof to cause any snow or ice to melt, while those portions of the roof adjacent the eaves are beyond the heat range and snow and ice therefore accumulates and creates a dam in that roof area and in the gutters, causing, in the event of alternate thaw and freezing temperatures, the obstruction of the gutters and drains and the shingles to expand and separate with the result that the water seeps therebetween and finds its way into the interior of the house to damage the walls, floors, furniture etc., and putting the owner to considerable expense in necessary repairs. My inven-

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tion has been designed to prevent the accumulations of such objectionable dams of snow and ice and to provide a de-icing unit or units which may be readily installed on an existing roof or be built into a new one.

In its preferred construction, and referring first to that form of the invention shown in Figures 1-3 inclusive for application to an existing roof 10 having the usual gutters 11, my de-icing device is in the form of a portable unit consisting of a tubular body or conduit 12 of metal or other heat-conducting material which may be made of any cross section and length desired, or in different lengths to accommodate varying roof conditions, and which rests flatly thereon and has means at its opposite ends for detachably securing it to the roof. Extending through this body from end to end thereof is a heating medium which is preferably in the form of an electric heating element or resistance coil 13 whose ends are connected to a fitting or receptacle 14 secured to one end of the body, as shown in Figure 2, and with which a plug 15 having circuit wires 16 connected thereto is adapted to make contact. A switch 17 may be included in the heating coil circuit for controlling the switching of the circuit "on" and "off" from inside the house. As shown in Figure 3, the body 12 may be of a flat or rectangular cross section and terminates at its marginal side edges in supporting beads or flanges 18 which sustains the tubular portion of the body in spaced relation to the roof.

At its lower end the tubular body 12 is bent inwardly about the lower edge of the roof to provide an attaching portion or flange 19 which may be nailed, as indicated at 20, to the roof, as shown in Figure 2. The upper end of this body has an anchoring strip 21 of yieldable material projecting endwise therefrom for engagement between overlapping shingles, as shown, for detachably retaining the same to the roof. By this construction, the de-icing unit may be readily attached to the roof during the winter months and detached or removed therefrom during the remaining months of the year and as readily connected to and disconnected from the source of current supply.

In Figure 4 the de-icing unit body 22 with its contained heating coil 23 is shown assembled permanently in a new roof structure, the same being disposed between the roof-sheeting 24 and the shingles 25, and the circuit wires to the interior of the house being indicated at 26 and passing through an insulator 27.

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I claim as my invention:

1. A de-icing device for roof structures, comprising a conduit of heat-conducting material adapted for flatwise disposition on the roof and extending upwardly from the gutter thereof, an electric heating element disposed in said conduit for circuit connection with the house circuit, means at one end of said conduit for connecting it to the eave portion of the roof, and a relatively flat yieldable anchoring strip projecting, from the other end of the conduit and forming a longitudinal extension for securing it to the roof.

2. A de-icing device for roof structures, comprising a sheet metal body having a coextensive, hollow portion adapted for flatwise disposition on the roof and extending upwardly from the gutter thereof and having means projecting therefrom for engagement with the roof to support such portion in spaced relation to the roof,

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an electric heating coil disposed in said body-portion for detachable circuit connection with the house current, means at one end of said body for connecting it to the eave portion of the roof, and means at the other end thereof for anchoring engagement between overlapping shingles of the roof.

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