Nov. 1, 1932. A. MILETTE ET AL. 1,885,127

ANTIFREEZING DEVICE FOR WINDOWS, WINDSHIELDS, AND THE LIKE

Filed March 19, 1930

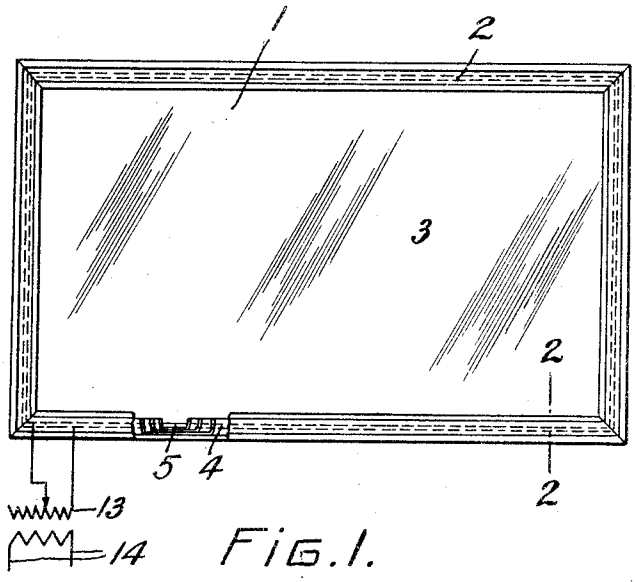


FIG. 1.

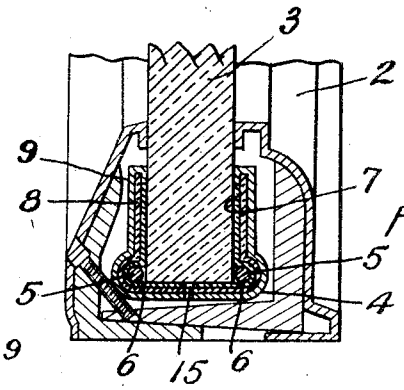


FIG. 2.

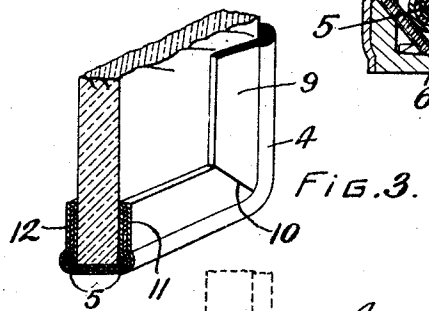


FIG. 3.

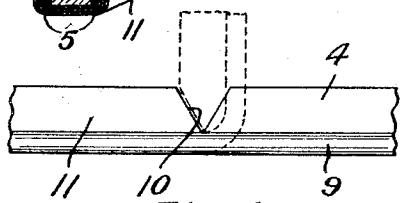


FIG. 4.

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UNITED STATES PATENT OFFICE

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ANTIFREEZING DEVICE FOR WINDOWS, WINDSHIELDS, AND THE LIKE

Application filed March 19, 1930. Serial No. 437,187.

The present invention relates to improvements in an anti-frosting device for windows, windshields and the like, and the main object of the invention is to provide heating means around the edge of the windows which will prevent the formation of frost or ice thereon or to evaporate rapidly moisture, sleet, snow or water which is driven against the said window.

Another object is to provide anti-frosting means consisting of a strip which is readily adapted upon the edge of a window pane, and is such that it will fit snugly within the frame and will be invisible, and also to provide a strip of this character which will be cheap to manufacture and easy to fit on a window pane.

The invention consists in providing a flexible U-shape strip, of any suitable material, in which there is a lining of insulating material, in which one or more longitudinally disposed heating elements, consisting preferably of electrical conductors are provided, and which are located and secured in suitable sockets therefor, said U-shape strip being readily applied upon the window pane edges and easily bent at the corners.

Referring to the drawing:—

Figure 1 is a front elevation view of a window constructed according to the invention;

Figure 2 is an enlarged cross section on line 2—2 of Figure 1;

Figure 3 is a perspective view of a segment of a window pane provided with a strip according to the invention; and

Figure 4 is a side elevation view of the U-shape strip with a notch provided therein, to disclose how the strip is cut to fit corners of window panes.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawing, 1 is a window and 2 is the usual frame therefor. The window pane 3 is mounted in the said frame, as usual, but before mounting same, the edges are provided with the U-shape strip 4, which fits snugly thereon, as shown in Figures 2 and 3 of the drawing.

The strip 4 carries, preferably, two heating elements 5, here shown as ordinary electrical conductors, said conductors being partly enclosed in a longitudinal socket 6 formed in the bottom corners of the U-shape strip. The said U-shape strip may consist of an inner layer of mica 7 or of any other suitable insulating material, which is shaped to conform to the inner side of the strip and in which the conductors 5 are partly enclosed, so that only a portion of the said conductors will rest against and contact with the lower edge of the window pane. Over said mica layer is provided an asbestos layer 8, which also conforms to the shape of the strip and 9 is an outer casing of any suitable material preferably flexible, which serves to bind the mica and asbestos layers together and hold the electrical conductors and the insulating to form one single unit.

The casing should, preferably, be of flexible material so as to enable the bending of the strip at the corners of the window pane.

In order to bend the strip, a V-shape cut is made as at 10 (see Figure 4) in the upright edges 11 and 12 of the strip, so as to form a neat and tight fitting joint.

The ends of the electrical conductors are connected to an adjustable transformer 13, which may be located in any suitable place, near the window, and 14 is a source of electrical energy. If an adjustable transformer is used, the voltage of the electrical source of energy may be reduced to six volts, which is all that is necessary to heat the heating elements. It is thus further possible to regulate the heat according to the temperature. When very cold, more heat is required and if mild, very little heat is necessary to keep the pane free from frost.

It must be noted that the strip 4 is very compact and thus takes very little space. With a strip of this character it is not necessary, in most cases, to build a special window frame. The strip being very compact will take very little space.

These ready-made U-shaped strips may vary in length according to the size of the window pane, but in large size panes, they can easily be connected together.

As the window panes are heated, conden-

sation will form thereon, and in order to provide for this, a plurality of small drain holes 15 are provided in the bottom of the strip.

What we claim as our invention is:—

1. An anti-frosting device for window panes consisting of a unit in strip form and of U-shape in cross section adapted to snugly embrace the edges of a window pane, and a heating member embedded in and carried by the unit, said heating unit contacting with the surface of the glass pane when the strip is in position on the pane.

2. An anti-frosting device for window panes comprising a unitary section of U-form to snugly embrace the edges of a window pane, and heating elements embedded in the section and forming a relatively fixed part thereof, said heating elements being positioned in contact with opposing surfaces of the window pane adjacent the end edges thereof.

3. A unitary anti-frosting device for window panes including a U-shaped, more or less flexible strip adapted to snugly fit the edge of the window pane throughout the length of such edge, said strip including insulating layers and an outer binding layer, and electrical conductors embedded in the insulating layer for unit arrangement, said conductors presenting a portion of their area for contact with the glass pane on opposing faces of such glass pane near the edges thereof.

In testimony whereof we affix our signatures.

ALPHONSE MILETTE.
PHILIPPE DUPUIS.