

July 1, 1952

J. A. HYLAND
LOUVER-WINDOW

2,601,707

Filed Dec. 21, 1950

2 SHEETS—SHEET 1

Fig. 1.

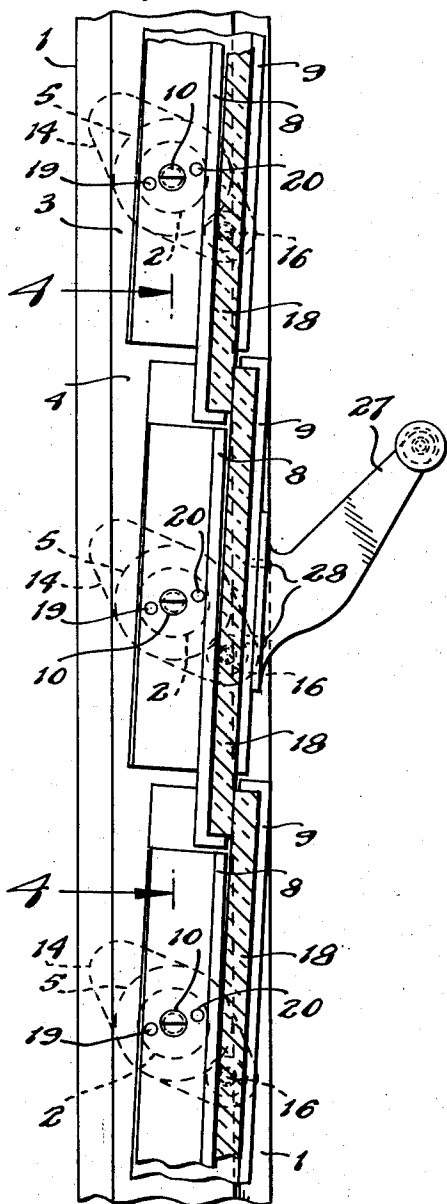
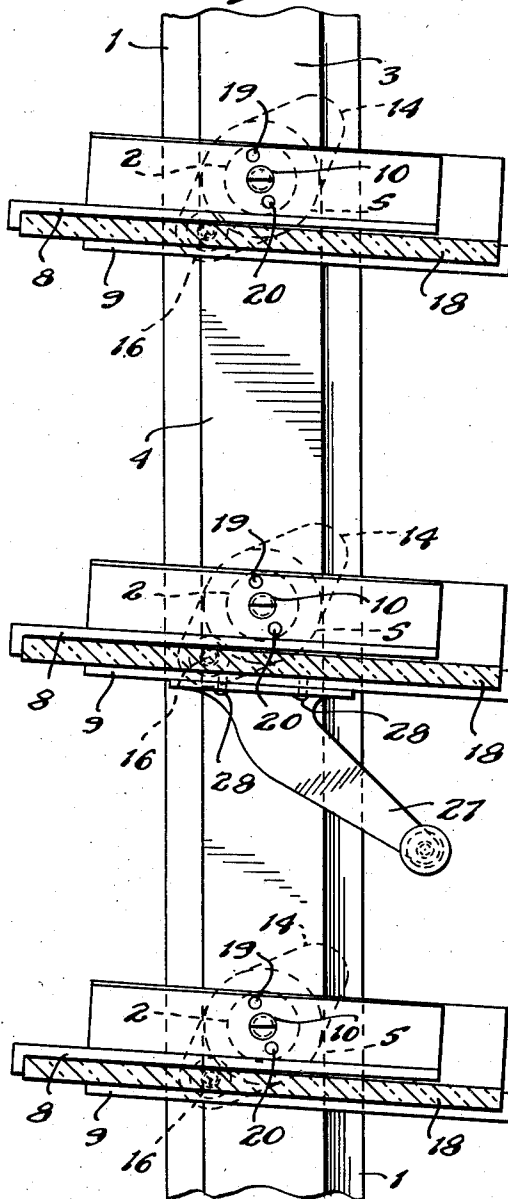


Fig. 2.



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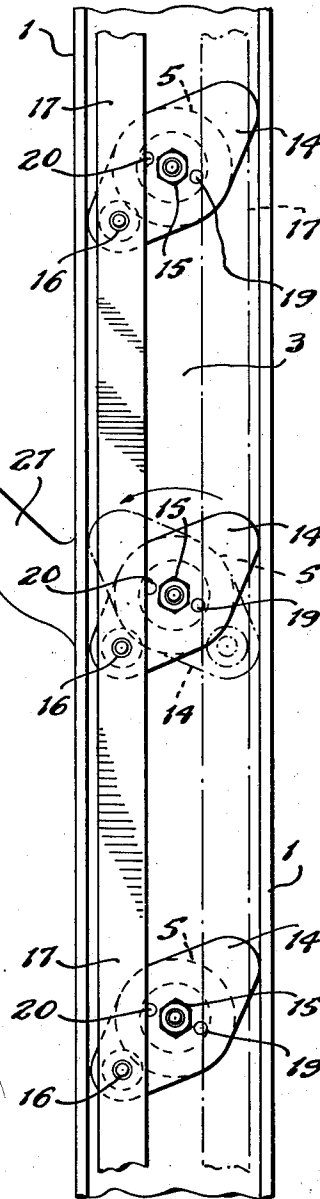
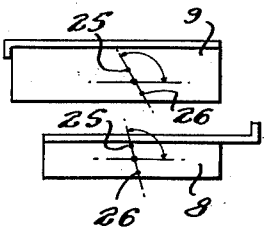
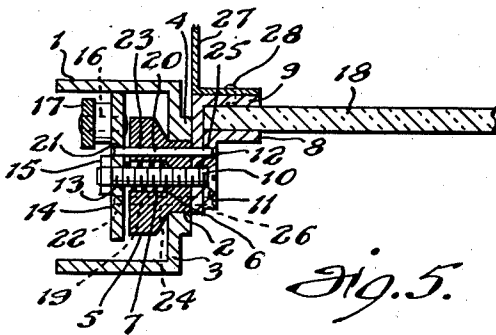
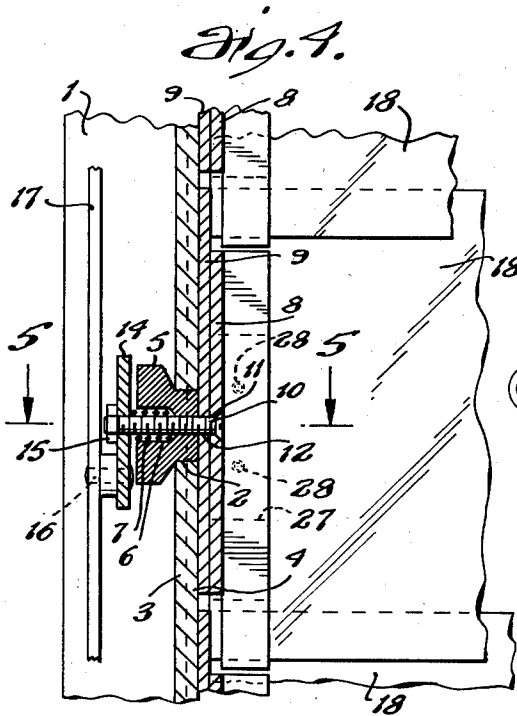
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2 SHEETS—SHEET 2

Fig. 3.



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LOUVER-WINDOW

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5 Claims. (Cl. 20—53)

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The present invention relates to a louver-window and in particular to a window which permits of easy ventilation.

The conventional windows consist of glass panes and in order to provide ventilation it is necessary to open the windows by sliding, or in case the windows are mounted on hinges, by turning the windows and a separate ventilator must be inserted instead. In most cases it could not be prevented that rain-water penetrates through the ventilators bringing about a number of drawbacks connected with such structures.

It is, therefore, one object of the present invention to provide a window, preferably of glass or any other suitable material, which permits of easy ventilation by means of the window itself.

It is another object of the present invention to provide a window, preferably of glass or any other suitable material, which is made in a louver-type and which comprises means for opening and closing, respectively, the plurality of window panes disposed one above the other.

It is the further object of the present invention to provide a louver-type window having means for opening and closing, respectively, of all of the plurality of window panes by means of one single movement.

With these and other objects in view, which will become apparent in the following description, the present invention will be clearly understood in connection with the accompanying drawings, in which:

Figure 1 is a sectional elevation of the louver-window;

Fig. 2 is a sectional elevation of the louver-window showing the window panes in open position;

Fig. 3 is an end view of the louver-window;

Fig. 4 is a section along the lines 4—4 of Fig. 1;

Fig. 5 is a section along the lines 5—5 of Fig. 4, and

Fig. 6 is an elevation of the L-shaped members indicating the different angle to the longitudinal axis of the diametrical line connecting the pin openings.

Referring now to the drawings, the louver-window comprises two vertically disposed channel members 1 which are preferably of U-shape. A plurality of circular openings 2 are provided in the base 3 of the channel member 1, which openings are disposed along a vertical line and spaced apart at equal distances. Preferably, the base 3 of the channel portion 1 is equipped with an embossed part 4 surrounding the openings 2, which embossed part 4 extends outside of the channel member 1.

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Each of the mentioned circular openings 2 receives a circular member 5. The circular member 5 is at one end of cylindrical shape which has a diameter corresponding with the diameter of the opening 2 in order to ensure a complete fitting of the circular member 5 in the opening 2. The other end of the circular member 5 is also of cylindrical shape, but of a larger diameter than that of the opposite end which is received by the opening 2. The two cylindrical parts of the circular member 5 are connected by a tapered part (see Figs. 4 and 5) and the tapered part provides a limit in the insertion of the cylindrical member 5 into the opening 2. The cylindrical member 5 is also equipped with an axial boring 6 which is set off to larger diameter towards the end of the member 5 disposed in the channel member 1. The wider portion of the boring 6 is adapted to receive a helical spring 7 for a purpose to be described later.

A plurality of L-shaped members 8 and 9 are arranged adjacent each opening of the channel member 1 and are secured to the channel member 1 by means of a screwbolt 10 which extends through openings 11 and 12, respectively, of the L-shaped members 8 and 9, which screwbolt 10 extends through the circular member 5 and beyond the latter and also through an opening 13 of a preferably oval-shaped flat member 14. The screwbolt 10 is maintained in position by a nut 15 screwed on its end in the channel member 1. The oval-shaped flat member 14 is equipped with a pin 16 which is permanently secured to a vertically disposed bar 17, which receives the pins of all oval-shaped flat members 14, so that upon vertical movement of the bar 17 all oval-shaped flat members 14 will perform simultaneously a rotating movement. One end of the helical spring 7 finds its seat in the set off in the boring 6 of the circular member 5, while its other end abuts against the oval-shaped flat member 14.

The two L-shaped members 8 and 9 coordinated to each opening 2 of the channel member 1 are adapted to receive a panel 18 of glass, or any other suitable material, between one of their respective arms which are spaced apart and the other of their arms are disposed one above the other adjacent the outer face of the channel member 1. The said other arm of said L-shaped members 8 and 9 are disposed at a slight angle relative to each other so that the panel 18 may be inserted in the space formed between the other arms of the two L-shaped members 8 and 9 without any additional securing means.

In order to secure common rotation between the oval-shaped flat member 14 and the two

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L-shaped members 8 and 9 carrying the panel member 18, two pins 19 and 20 are inserted into two diametrically oppositely disposed openings 21 and 22 in the oval-shaped flat member 14, which pins 19 and 20 extend through corresponding openings 23 and 24 in the circular member 5 and finally enter corresponding openings 25 and 26 in the L-shaped members 8 and 9.

As shown in Fig. 6, the diametrical line in the L-shaped member 8 is at a slightly different angle to the longitudinal axis thereof compared with the angle in the L-shaped member 9. By this arrangement it is possible upon insertion of the pins 19 and 20 into the L-shaped members 8 and 9 that the longitudinal axis of the other arm of the member 8 is disposed at a slight angle to the longitudinal axis of the corresponding arm of the member 9.

A handle 27 is secured by screws 28, or other equivalent means, to one of the L-shaped members 9 so that upon turning of the handle 27 the L-shaped members 8 and 9 and thereby the panels 18 may be turned from the position shown in Fig. 1 into that shown in Fig. 2.

The structure as described above operates in the following manner:

The helical spring 7 exerts pressure against the oval-shaped flat member 14 which by means of the screwbolt 10 presses one of the two L-shaped members 8 and 9 towards the outer face of the base 3 of the channel member 1. Nevertheless, upon exertion of sufficient force overcoming the pressure of the spring 7, it is possible to turn the L-shaped members 8 and 9 and thereby the panels 18 upon the screwbolts 10 as pivots. Since the bar 17 provides a connecting means for all oval-shaped flat members 14, a turning of the L-shaped member 9 by means of the handle 27 and thereby turning of the coordinated oval-shaped flat member 14 brings about a turning of all other oval-shaped flat members by means of the bar 17 and finally of all panels 18 simultaneously.

In order to provide sufficient sealing against wind and weather, the upper portion of each of the panels 18 may be covered by a sleeve of rubber, or any other suitable material. (Not shown.)

While I have disclosed one embodiment of the present invention, it is to be understood that this embodiment is given by example only and not in a limiting sense, the scope of the present invention being determined by the objects and the claims.

I claim:

1. A louvre-window comprising two vertically disposed and oppositely arranged flat members, each having a plurality of openings spaced apart at equal distances, a circular member rotatably inserted into each of said openings, a pair of L-shaped members, one arm of said L-shaped members disposed one above the other adjacent one side of said flat member and next to each of said openings of said flat member, and the other arm of said L-shaped members being spaced apart to form an open space therebetween, said circular

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member extending through the said opening to the other side of said vertical flat member, a longitudinally shaped member disposed adjacent said circular member, a bolt extending through said L-shaped members, said circular member and said longitudinally shaped member and securing together the said last three mentioned members, means for common rotating of said last three mentioned members, resilient means between said circular member and said longitudinally shaped member, said resilient means being adapted to press one of said L-shaped members towards the face of the said flat member, a panel member inserted into the space formed between the other arm of said L-shaped members, and means for simultaneous turning of all said L-shaped members and thereby of said panels from a substantially vertical closing position of the panels to a substantially horizontal ventilating position thereof.

2. The louvre-window, as set forth in claim 1, in which said circular member has an opening receiving the bolt, and said opening is set off to a larger diameter than that of the part of the cylindrical member adjacent said L-shaped members, thereby providing a circular space to receive a helical spring abutting against said longitudinal member.

3. The louvre-window, as set forth in claim 1, in which said means for simultaneous movement of all panels comprises a vertically disposed bar, means connecting said bar with each of said longitudinal members so that upon substantially vertical movement of said bar all panels are rotated from a substantially vertical position to a substantially horizontal position.

4. The louvre-window, as set forth in claim 1, in which said common rotating means for said L-shaped members, said circular member and said longitudinally shaped member comprise at least one pin extending in axial direction through said three members.

5. The louvre-window, as set forth in claim 1, in which said common rotating means for said L-shaped member, said circular member and said longitudinally shaped member comprise two pins in axial direction through said three members, the corresponding openings of said L-shaped members for said pins and the central opening of said L-shaped members for said bolt being disposed along a diameter-line, and said diameter-line on one of said L-shaped members at a slightly different angle to its longitudinal axis than that of the diameter-line on the other of said L-shaped members.

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