

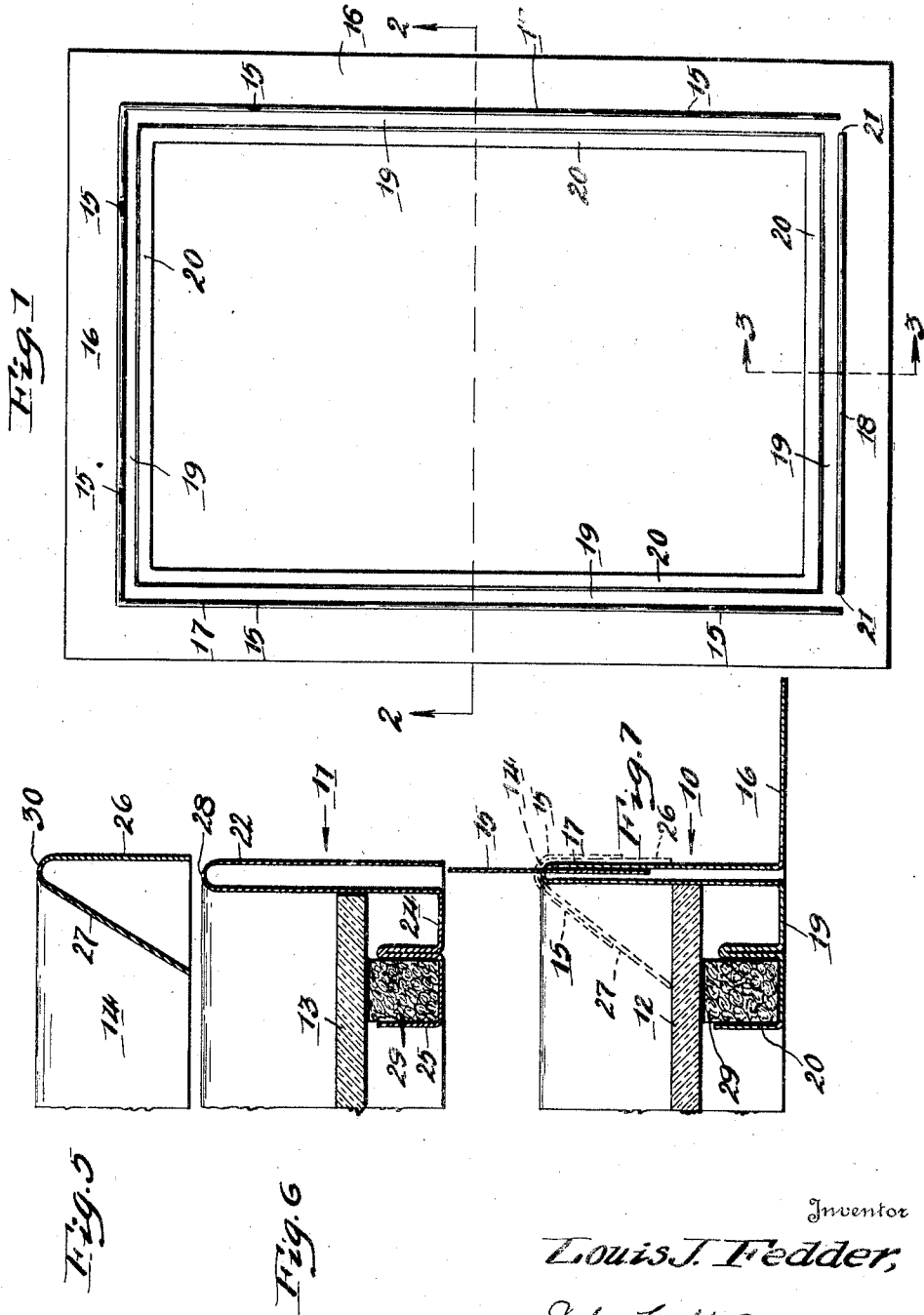
July 5, 1927.

1,634,987

L. J. FEDDER
INSULATED WINDOW

Filed June 15, 1923

2 Sheets-Sheet 1



Inventor

Louis J. Fedder,

By

John E. Styker

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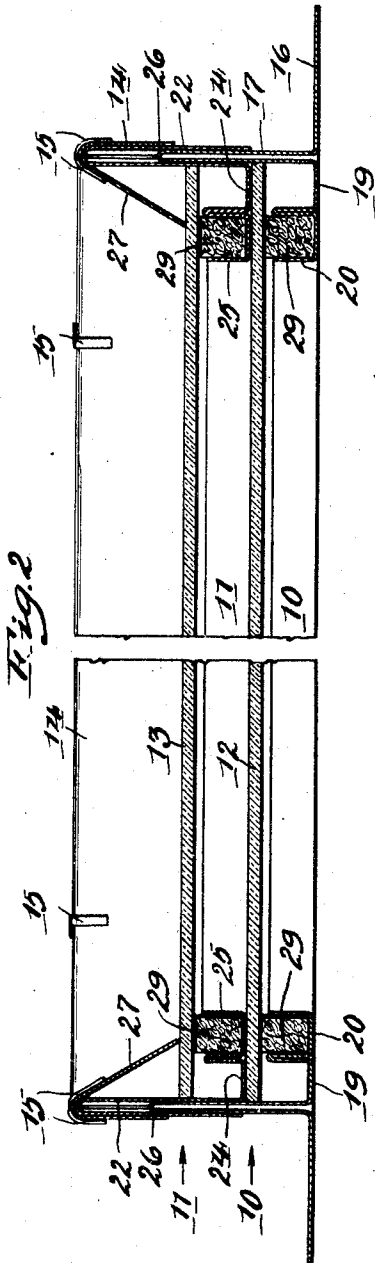
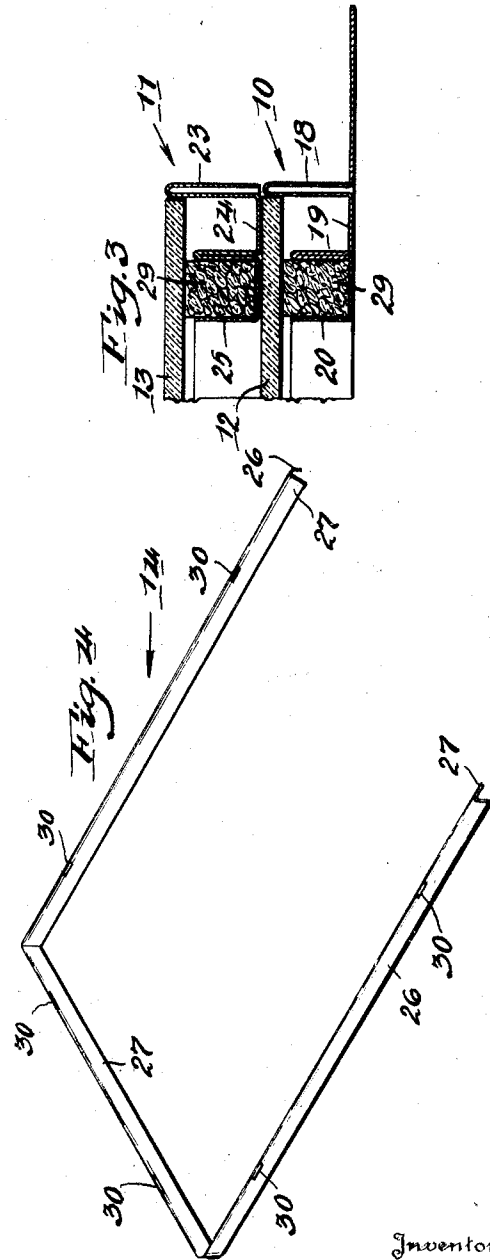
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INSULATED WINDOW

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

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INSULATED WINDOW.

Application filed June 15, 1923. Serial No. 645,584.

The object of this invention is to provide a window with insulating means which are variable according to the demands of the particular installation to be made.

5 A further object is to provide a novel and highly efficient insulating window which is unusually quick and easy to install.

My invention also includes such novel features of construction as are hereinafter more fully pointed out in the specification and claim.

The accompanying drawings illustrate what I at present believe to be the best form of my device.

15 In the drawings I have illustrated a window which is particularly, though, not exclusively, adapted for use in inclined position on the roof of a building. Referring to the drawings; Fig. 1 is a plan view of my improved window with the panes removed; Fig. 2 is a section through the frame taken on the line 2—2 of Fig. 1 and showing the panes and insulation fastened in place; Fig. 3 is a section taken on the line 25 3—3 of Fig. 1 also showing the mounting of the panes in the frame; Fig. 4 is a detail perspective view of the pane clamp; and Figs. 5, 6, and 7 are enlarged sectional views of the several parts of the window in position for assembling.

My improved window consists of two separable frames 10 and 11 carrying glass panes 12 and 13 respectively and a clamp 14 adapted to be fastened on the upper edge of either the frame 10 or the frame 11 by a series of flexible retaining strips 15. The frames 10 and 11 and the clamps 14 are preferably made of sheet iron. Projecting outward from the base of the frame 10 is a suitable flashing 16 which is adapted to be fastened to the building at the edge of the window opening. Projecting upward a substantial distance above the pane 12 on three sides of the frame 10 is a flange 17 forming an abutment for the outer edges of said pane. A shorter flange 18 is formed upon the normally lower or fourth side of the frame 10 (Figs. 1 and 3). A rectangular gutter 19 extends around the frame 10 adjacent to the flanges 17 and 18 and a similarly shaped insulation holder 20 is formed in the frame 10 adjacent to the inner wall of the gutter 19. The flange 18 has openings 21 which

permit the escape of water from the gutter 19.

The frame 11 is somewhat similar to the frame 10 but has no flashing (like the flashing 16) and is provided on three sides with a U shaped flange 22 forming a groove adapted to receive the flange 17. The fourth side of the frame 11 has a short flange 23 (Fig. 3) like the flange 18 on the frame 10. The frame 11 is also provided with a continuous gutter 24 adjacent to the flanges 22 and 23 and a continuous insulation holder 25 like the holder 20.

The clamp 14 is formed to cap either the flange 17 or flange 22, being provided with an outer wall 26 adapted to fit outside of the flanges 17 and 22 and an inner wall 27 extending obliquely downward so as to bear upon the upper surface of either of the panes 12 or 13. The retaining strips 15 which are secured at intervals to and normally project upward from the flange 17 are adapted to be inserted through suitable slots 28 in the flange 22 and through similar slots 30 in the upper edge of the clamp 14. Suitable bars 29 of insulating material are placed in the holders 20 and 25 to support the panes 12 and 13.

To install the window, the frame 10, carrying the insulating bars 29, is first mounted over the window opening in the usual manner. The pane 12 is then placed on the bars 29 where it fits within the hollow rectangle formed by the flanges 17 and 18. The upper frame 11 is next mounted upon the frame 10 so that said upper frame will be supported upon the pane 12 and the flange 17 will project into the U shaped flange 22. As the frame 11 is placed upon the frame 10, the retaining strips 15 pass through the slots 28. The pane 13 is now mounted on the insulating bars 29 of the frame 11 and is finally secured in place by the clamp 14. To fasten the clamps 14 on the upper edge of the flange 22, the flexible retaining strips 15 are inserted through the slots 30 in said clamp and are finally bent downward, as clearly shown in Fig. 2. Water, which may work to a limited extent between the wall 27 and the pane 13 will subsequently flow into the gutter 24 whence it will escape through the openings 21 in the wall 23.

Where a minimum of insulation is re-

quired, the upper frame 11 carrying the pane 13 is omitted. In such case the frame 10 is installed as above described, and as shown in dotted lines in Fig. 7, the clamp 14 is
5 placed over the upper edge of the flange 17, the retaining strips 15 being inserted through the slots 30 in the upper edge of the clamp 14. Finally the projecting ends of the strips 15 are bent downward to press
10 said clamp upon the upper surface of the pane 12. The gutter 19 is now adapted to carry off any water which may enter between the pane 12 and flange 17.

While I have illustrated a window adapt-
15 ed to be installed with either one or two frames, it will be obvious that, where required, three or even more glazed frames like the frame 10 may be placed one upon another to increase the insulation. Any
20 such increase in the number of insulated frames supplied is clearly within the spirit of my invention.

Having described my invention what I claim as new and desire to protect by Letters Patent is:

In a rectangular window, a plurality of
25 similar frames, each having a continuous inner and a continuous outer gutter extending around the four sides thereof, upwardly projecting U shaped flanges formed on each
30 of said frames and arranged to nest one within another to mount successive panes one above another, the gutters of the upper panes being disposed to rest upon the lower panes, insulating material arranged in the inner
35 gutters to support the panes, the outer gutters being arranged to carry off water from beneath the outer edges of the panes and means for securing the several frames one
40 upon another and for holding the top pane in the uppermost frame.

In testimony whereof, I have hereunto signed my name to this specification.

LOUIS J. FEDDER.