Oct. 11, 1960 E. H. REPLOGLE 2,955,651

TEMPORARY WINDOW CLOSURE

Filed Feb. 17, 1958 2 Sheets-Sheet 1

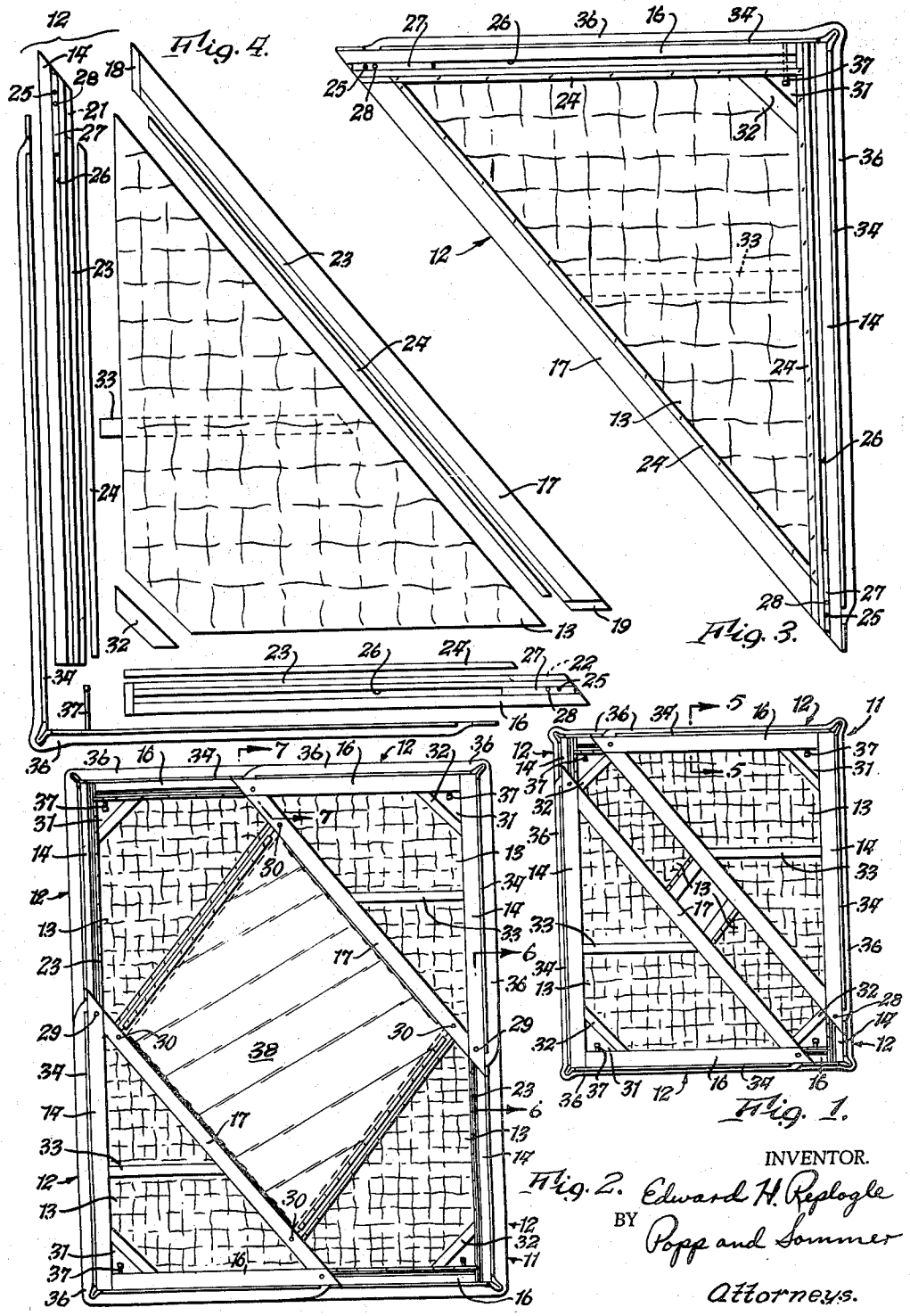


Fig. 4.

Fig. 3.

Fig. 1.

Fig. 2.

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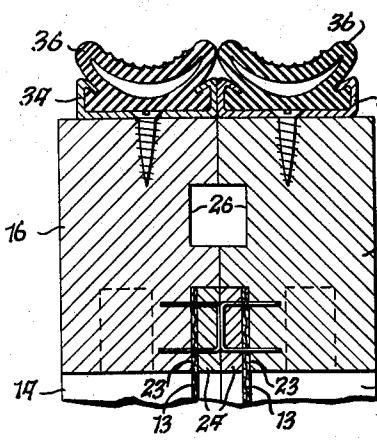


Fig. 5.

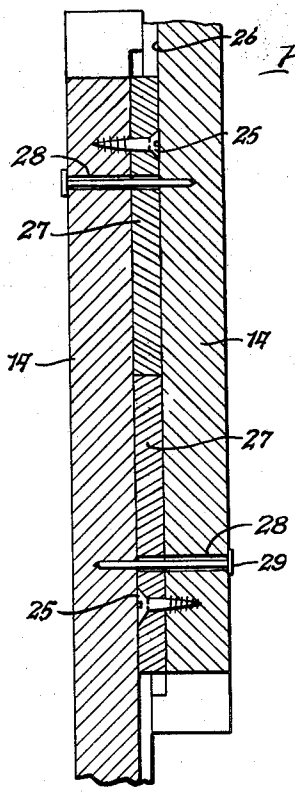


Fig. 6.

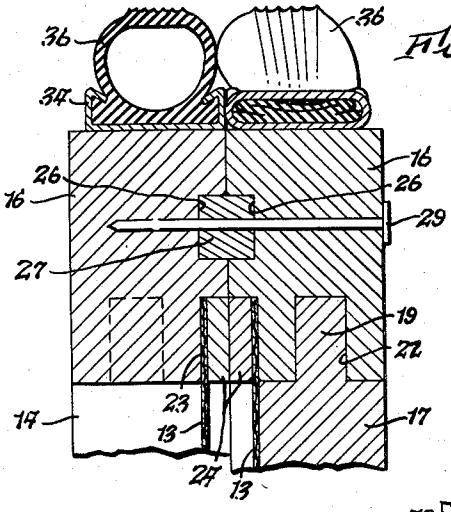


Fig. 7.

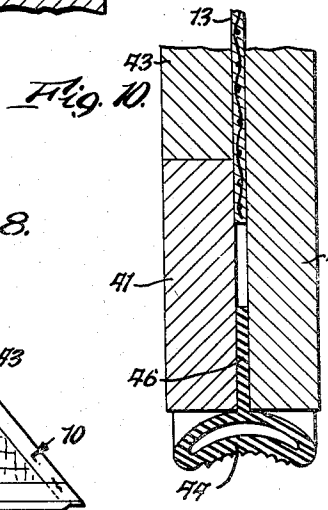


Fig. 10.

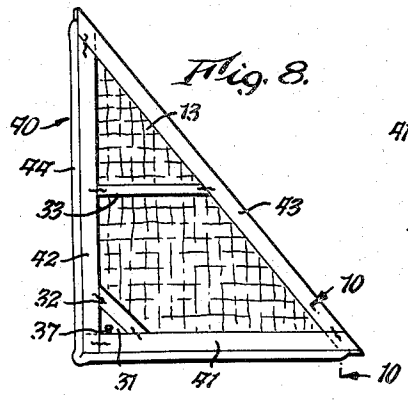


Fig. 8.

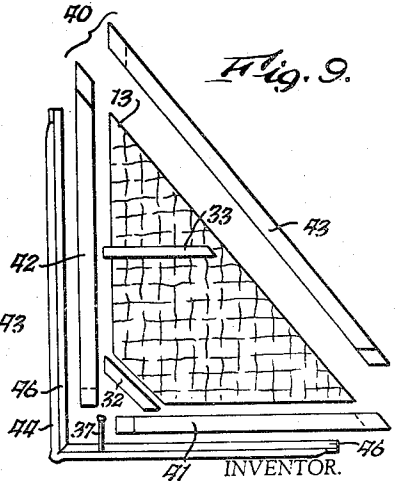


Fig. 9.

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TEMPORARY WINDOW CLOSURE

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3 Claims. (Cl. 160—40)

This invention relates to window closures, and more particularly to a temporary window closure especially well suited for use in building construction.

It is common practice in building construction, and particularly in commercial or industrial types of buildings, to defer installation of the windows, i.e., glass panels, until a major portion of the exterior and interior work is completed, since to do otherwise would result in the possibility of high window breakage as the work proceeds. Various solutions have been proposed and utilized with varying degrees of success and satisfaction, for temporarily closing window openings.

The present invention offers a simple and effective means for temporarily closing window openings during building construction. Briefly, the invention comprises an assemblage of interfitting panels which are adjustably arranged to fit a variety of window sizes, the assemblage being maintainable in substantially weather-tight position within an opening by fluid expansible means arranged about the periphery of the assemblage. The panels each include a portion of reinforced translucent material such as plastic covered wire screen or cloth netting, thus providing high strength to avoid breakage, coupled with good light transmission quality. A further feature of the temporary window enclosure of the invention is the fact that it may be readily applied in position within a wall opening the surface forming which may be rough or uneven, may be easily removed from the opening, and may be reused in subsequent applications.

The main object of this invention is to provide a temporary window closure for an opening during building construction.

A further object is to provide a temporary window closure which will fit a variety of window opening sizes in substantially weather-tight manner.

Still another object of this invention is to provide a temporary window closure that is of high strength to avoid breakage, and which has good light transmitting qualities.

A further object of this invention is to provide a temporary window enclosure that may be readily applied in position within an opening, and which may be easily removed and reused in subsequent applications.

These and further objects and features of the invention will become more apparent from the following description and accompanying drawings wherein:

Fig. 1 is a view of a window enclosure assemblage embodying the principles of the invention, and shown in contracted condition;

Fig. 2 is the same but in expanded condition;

Fig. 3 is an enlarged view of one of the panels forming the assemblage of Fig. 1;

Fig. 4 is an enlarged exploded view of one of the panels of the assemblage of Fig. 1;

Fig. 5 is an enlarged section view as generally seen from line 5—5 in Fig. 1;

Figs. 6 and 7 are enlarged section views as generally seen from lines 6—6 and 7—7 respectively in Fig. 2;

Fig. 8 is a view of a modified panel for use in an assemblage embodying the principles of the invention;

Fig. 9 is an exploded view of the panel of Fig. 8; and

Fig. 10 is an enlarged section view as seen from line 10—10 in Fig. 8.

Referring now to the form of the invention illustrated in Figs. 1 to 7 of the drawings, the numeral 11 identifies a temporary window enclosure assemblage representative of an embodiment of the invention, which consists of four triangular shaped panels 12, each of which includes a translucent portion 13 preferably of the reinforced type, such as a sheet product commercially available and formed of transparent or translucent sheet plastic applied to both sides of a wire screen or cloth netting. Of course, these panels might also be composed of any other suitable translucent material, including even glass having an embedded wire mesh. In such manner the panels 12 are of high strength to resist breakage, and have good light transmission qualities. Each panel 12 is in the form of a right triangle having a long side wooden frame piece 14, a short side wooden frame piece 16, and a hypotenuse side wooden frame piece 17, the latter having tongues 18 and 19 at the ends for fitting into grooves 21 and 22 respectively formed on the inner end of the sides 14 and 16. As best shown in Fig. 4, a recess 23 is formed along one side edge of each side piece for receipt of the edge portion of the translucent portion 13, as well as a wooden strip 24, the latter of which is used to hold the translucent portion in position within the recesses 23 by being nailed, stapled or otherwise attached to a side piece.

Each of the side pieces 14 and 16 has a groove 26 extending along one side, in which is disposed near one end thereof, a strip or block 27 which projects outwardly from the groove 26 as a key for entry and slidable movement in a similar groove of an oppositely arranged panel 12, as shown in Fig. 6. One or more screws 25 holds the block 27 fixed in its groove 26. A hole 28 is provided in the end of each of the side pieces adjacent the hypotenuse piece 17, such hole extending through the side piece and corresponding key block 27 and adapted to receive a fastening means, such as a nail 29, which can be driven into the side piece of an oppositely arranged and overlapping panel 12 when the assemblage 11 is being set for use in a given window opening. Thus it will be seen from Fig. 2 that a nail 29 is disposed at the acute angle tips of each of the panels 12 and which passes through one side piece and into the opposite side piece to affix the panels in set position. If desired, the securement of opposing panels can be improved by driving an additional nail 30 through the hypotenuse side pieces of such panels at their place of intersection.

The corner of each translucent portion 13 at the junction of the short and long sides, is cut off to provide an opening 31 when the panel is assembled. A diagonal reinforcing strip 32 is arranged along the cut off edge of the translucent portion 13 to which such edge is suitably fastened. A reinforcing strip 33 may be arranged on one side of the translucent sheet 13 to extend between the side pieces 14 and 17 of each panel. The strips 32 and 33 are of such thickness as to avoid projection beyond the plane of the side pieces 14, 16 and 17.

Positioned about the outer periphery of the side pieces 14 and 16 of each panel, and maintained thereon by metal clamp strips 34, is an inflatable flexible tube 36, which is formed on the lower side to fit within the metal clamp strips, and has a longitudinally serrated surface on the upper side, as shown in Figs. 5 and 7. The tube has valve stem 37, which is adapted to project inwardly through the side piece 16 so that the end of the stem is in

the opening 31. A valve (not shown) similar to a tire valve, is arranged in the stem 37, whereby air pressure may be maintained in the tube 36. This tube is made of any suitable flexible material such as rubber or plastic, and by providing such a tube on the outer sides of each panel 12, the assemblage 11 is bounded by a yieldable frame which readily conforms to irregularities of the surfaces engaged thereby as well as to hold the assemblage frictionally yet firmly in place.

In the installation of the assemblage 11 within a window opening, the four panels 12 are adjusted by sliding one over another so that the overall outside dimensions are approximately one-half inch less in each direction than the opening. The nails 29, and possibly 30, are then applied to fix the adjusted position of the assemblage, after which a sheet of translucent plastic material 38 is tacked about its edges to the various hypotenuse side pieces 17 in order to enclose the rhomboidal opening defined by the edges of these side pieces. The assemblage is then placed in position in the window opening, after which each tube 37 is inflated so that a substantially weather-tight joint is provided between the assemblage 11 and the window opening. To complete the installation, masking tape (not shown) may be used to enclose each corner opening 31. The window opening is thus enclosed in a substantially weather-tight manner, by an assemblage which is firmly held, strong and has good light transmission qualities, and which may be easily removed and reused in subsequent applications.

The modified embodiment of a panel 40 shown in Figs. 8 to 10, is generally similar to the panel 12 above disclosed, however, it differs therefrom in certain details of structure. For example, it incorporates split side pieces 41, 42 and 43, each formed from matching parts which are shifted longitudinally and suitably fixed together to hold therebetween a translucent panel 13. The ends of each split side piece thus are provided with offset ends which form an overlap joint with the end of an adjacent piece. In addition, the form of an inflatable tube 44 used, differs from tube 36, insofar as it is maintained in position about the periphery of the side pieces 41 and 42 by means of an inner integral lip 46, which is affixed between the split side pieces 41 and 42, and the overlap joint therebetween.

In assembling the panels 40 to make an assemblage, the panels are set and nailed together in appropriate manner without the use of guide means such as the groove 26 and key block 27, as used in the panels 12. In other respects, the assembly and installation, i.e. use of a plastic material 38, and inflation of the tubes 44, is similar to that of the panel assembly 11.

From the foregoing it will be seen that either form of assembly disclosed, will satisfy the objectives of the invention as set forth herein. While the temporary enclosure has been described for use in enclosing window openings, it is obvious that it may be used for closing other openings, such as door openings, by a change in proportions in the parts.

The foregoing description has been given in detail without thought of limitation since the inventive principles involved are capable of assuming other physical embodiments without departing from the spirit of the invention and the scope of the appended claims.

What is claimed is:

1. A temporary window closure for insertion in and support by a structure defining a rectangular opening, said closure comprising a first pair of right triangular panels arranged in a first common plane with their hypotenuse sides opposing each other, a second pair of right triangular panels arranged in a second common plane with their hypotenuse sides opposing each other, said planes being parallel to each other, the acute angle apex portions of each panel in one plane severally overlapping the adjacent acute angle apex portions of both panels in the other plane, the outer sides of each panel in one plane severally being in alignment with the companion outer sides of both panels in the other plane, whereby all of said outer sides jointly provide a continuous rectangular perimeter for the panel assembly, and expansible means carried individually by each panel and extending along said outer sides thereof, said expansible means collectively being adapted to hold the panel assembly in position within said structure and to provide a substantially weather-tight seal therebetween.

2. A temporary window closure for insertion in and support by a structure defining a rectangular opening, said closure comprising a first pair of relatively movable, right triangular panels arranged in a first common plane with their hypotenuse sides opposing each other, a second pair of relatively movable, right triangular panels arranged in a second common plane with their hypotenuse sides opposing each other, said planes being parallel to each other, the acute angle apex portions of each panel in one plane severally over-lapping the adjacent acute angle apex portions of both panels in the other plane, the outer sides of each panel in one plane severally being in alignment with the companion outer sides of both panels in the other plane, guide means operatively interposed between the panels in one plane and the panels in the other plane to permit relative movement between the panels in their planes while maintaining said alignment, whereby all of said outer sides jointly provide a continuous rectangular perimeter for the panel assembly regardless of the relative position in which the panels are adjusted, means to fix said panels in a given relative position of adjustment, and expansible means carried individually by each panel and extending along said outer sides thereof, said expansible means collectively being adapted to hold the panel assembly in position within comprising a first pair of separated right triangular panels seal therebetween.

3. In a temporary window closure, the combination comprising a first pair of separated right triangular panels arranged in a first common plane with their spaced-apart hypotenuse sides opposing each other, a second pair of separated right triangular panels arranged in a second common plane with their spaced-apart hypotenuse sides opposing each other, said planes being parallel to each other, the acute angle apex portions of each panel in one plane severally overlapping the adjacent acute angle apex portions of both panels in the other plane, the outer sides of each panel in one plane severally being in alignment with the companion outer sides of both panels in the other plane, whereby all of said outer sides jointly provide a continuous rectangular perimeter for the panel assembly, and a sheet of light transmitting material to enclose the opening defined by said hypotenuse sides of the panel.

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