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 adjacently arranged to fit a variety of window sizes, the assemblage being maintainable in substantially weather-tight position within an opening by fluid expanisible 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, such as 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 temporary window closures 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 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 a view of a window enclosure assemblage embodying the principles of the invention, and shown 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;

Fig. 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 being 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 transparent 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 glidable 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 securing 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 yeldable
frame which readily conforms to irregularities of the
surfaces engaged thereby as well as to hold the assemblage
fractionally yet firmly in place.

In the installation of the assemblage 11 within a win-
dow 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 assem-
blage, 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 open-
ing defined by the edges of these side pieces. The as-
semblage is then placed in position in the window open-
ing, and each tube 37 is inflated so that a sub-
stantially 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 eas-
ily removed and reused in subsequent applications.

The modified embodiment of a panel 40 shown in
Figs. 9 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 to-
gether 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 main-
tained 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 portions 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 in-
vention as set forth herein. While the temporary en-
closure 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 with-
out thought of limitation since the inventive principles
involved are capable of assuming other physical embodi-
ments 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 hy-
potenuse 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 expandable means
carried individually by each panel and extending along
said outer sides thereof, said expandable means collec-
tively being adapted to hold the panel assembly in posi-
tion 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 ar-
ranged 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, 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 contin-
uous rectangular perimeter for the panel assembly re-
gardless of the relative position in which the panels are
adjusted, means to fix said panels in a given relative
position of adjustment, and expandable means carried indi-
vidually by each panel and extending along said outer
sides thereof, said expandable 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 con-
tinuous 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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