This invention relates to doors, windows, and
like objects as, for example, window blinds, shut-
ters, etc., and it has for its object to provide doors,
windows, and window blinds with sash units made
of two panels of transparent material which are
joined together at their edges but are separated
at their inner areas to provide an interspace
adapted to be filled with a colored fluid apt to
render the door or window sections and the
window sash units opaque, thereby preventing the
direct action of the sun's rays upon the persons
within a room. The colored fluid may be in-
serted or withdrawn at will by means of control-
ing valves associated with a pump or means for
feeding the colored fluid and withdrawing the
inner air or for withdrawing the colored fluid and
supplying outer air, depending upon whether
the user desires to maintain the sections of the door,
window or window-blind opaque or transparent.

The invention is described with reference to
the figures of the accompanying drawings, of which:
Fig. 1 is a front elevation of a window closure
embodying the invention.
Fig. 2 is a detailed front elevation of a sash unit
or section of the closure on a larger scale and
partly in section.
Fig. 3 is a vertical transverse sectional view of
the sash unit.
Fig. 4 is a vertical sectional view through sup-
porting elements of the sash unit showing the
means for supplying and withdrawing the fluid in
elevation, this view being on a larger scale than
Fig. 2.
Fig. 5 is a horizontal sectional view through
the support of a sash unit partly in section and
through portions of the frame.
Fig. 6 is a side elevation of a bearing bushing.
Fig. 7 is an end elevation of said bearing bus-
ushing.
Fig. 8 is a sectional view through a sash unit
adjacent its supporting element, this view being
taken on a scale similar to that of Fig. 4, and this
view being taken on the line 8—8 of Fig. 2, and
Fig. 9 is a transverse sectional view through
a bearing element for the sash unit and portions
of the supply elements for the fluid.
In Figs. 1 to 9 both inclusive is illustrated the
application of the invention to the sash units
46 of a frame 47. Each sash is composed of two
panels 2 and 3 of transparent plastic material
the upper and lower edges of which form inclined
engaging surfaces with a projecting tooth 10 at
the top and a projecting tooth 10' at the bottom
so that as all sash units 46 of the frame 47 are
placed in vertical position, the upper edge of one
sash unit will closely engage the lower edge of the
adjacent sash unit, thereby preventing air and
rain from entering the room.
Each sash unit 46 has at one end a journal
formed by two half cylinders 30 projecting from
the end portions of both panels 2 and 3 and held
in operative position by a metallic bushing 48.
Each sash unit 46 has at the other end a metallic
bushing 49 closed at its outer end. Both bush-
ings 48 and 49 are mounted on the axial line of
the sash unit 46 by means of two wings or outer
plates 50 and 51 which diametrically project from
each bushing at its inner end and are inserted
within the solid material formed at each end of
each sash unit 46, each wing 50 and 51 having a
pair of holes 52 and 53 respectively through
which pass the screws securing said wings 50 and
51 to the sash unit 46. The bushing 49 closed at
its outer end is rotatably mounted in a metallic
bearing 54 fixed by screws 55 on the side surface
of a recess formed in the respective side of the
frame 47. The bushing 48 is rotatably mounted in
a metallic bearing 56 secured by screws 57 to
the inner side of a metallic channel 58 inserted in
a longitudinal recess 59 formed at the edge of the
opposing side of the frame 47 and laterally closed
by a wooden cleat 60, the channeled casing 59 hav-
ing its edges bent to form longitudinal flanges 61
and 62 which are applied against the inner faces
of the cleat 60 and the frame 47 itself and are
secured thereto by screws 63 and 64, as shown
in Fig. 5. Each bearing 56 has two diametral
opposed holes, one upper hole 65 and one lower
hole 66, to which are connected the vertical ends
of two elbowed-tube branches 67 and 68 joined to
the vertical tubes 69 and 70 lodged within said
casing 58 and which are respectively in communi-
cation with the air tank 78 and with the colored
fluid tank 26 actuated by the pump 27 all three
mounted on the lower portion of the frame 47.
The two halves 50 of each solid journal have
formed at their joint surfaces two angular con-
ducts 30' extending axially therethrough and
ending at one end in front of holes 71 and 72
formed in bushing 48 in diametral alignment,
said conduits 30' being extended transversely
through the joint surfaces of the panels 2 and 3
until ending at the other end in the upper space 5
of the sash unit 46. The holes 71 and 72 are in
alignment with the two wings 50 and 51, so that
when the sash units are in a position other than
in a vertical position, the holes 71 and 72 will not
register the holes 65 and 66 of the bearing 56, but
as the sash units 46 are placed in vertical position
through any means not shown, as indicated in Fig. 4, the holes T1 and T4 of the bushing 48 will respectively register the holes T5 and T6 of the bearing 54, thereby permitting the flow of colored fluid into the hollow sash units 46 and the displacement of the air which normally occupies the interspace 5 of each sash unit 46 upon the pump 27 being operated.

It is obvious that changes may be made in the details of construction and assemblage of the slideable sections of a door or window sash and of the sash units, without thereby altering the essential character of the invention which is such as claimed hereinafter.

What I claim is:

1. A door or window closure, comprising in combination a frame, a plurality of sash units each consisting of two transparent panels with an interspace between the same, the panels having sealing portions along the marginal formations thereof adapted to confine the interspace of each panel against the outer atmosphere, pivots projecting from each sash unit in opposite directions and in axial alignment with each other, bearings mounted on the frame for supporting said pivots, one of the pivots on each sash unit being provided with passages extending through and connecting the interspace between said panels with diametrically opposite openings in the periphery of said pivot, the bearings for said last described pivots having diametrically opposite openings adapted to register with the peripheral openings in the pivots upon the sash units being placed in a position parallel to the plane of the frame, conduits extending from the openings in the bearings, and means for supplying and withdrawing a fluid through one of said conduits to and from said interspaces of said sash units, said last named means being operable solely when said sash unit is moved to a position in which the opening of the frame is closed thereby.

2. A door or window closure, comprising in combination with a frame, a plurality of sash units each consisting of two transparent panels with an interspace between the same, the panels having sealing portions along the marginal formations thereof adapted to confine the interspace of each panel against the outer atmosphere, pivots projecting from each sash unit in opposite directions and in axial alignment with each other, bearings mounted on the frame for supporting said pivots, one of the pivots on each sash unit being provided with passages extending through and connecting the interspace between said panels with diametrically opposite openings in the periphery of said pivot, the bearings for said last described pivots having diametrically opposite openings adapted to register with the peripheral openings in the pivots upon the sash units being placed in a position parallel to the plane of the frame, conduits extending from the openings in the bearings, and means for supplying and withdrawing a fluid through one of said conduits to and from said interspaces of said sash units, said last named means being operable solely when said sash units are moved to a position in which the opening of the frame is closed by the same.

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