April 9, 1946. S. E. LIDIN 2,398,017

DOUBLE WINDOW PIVOTED ON HORIZONTAL PIVOTS

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Fig. 1.

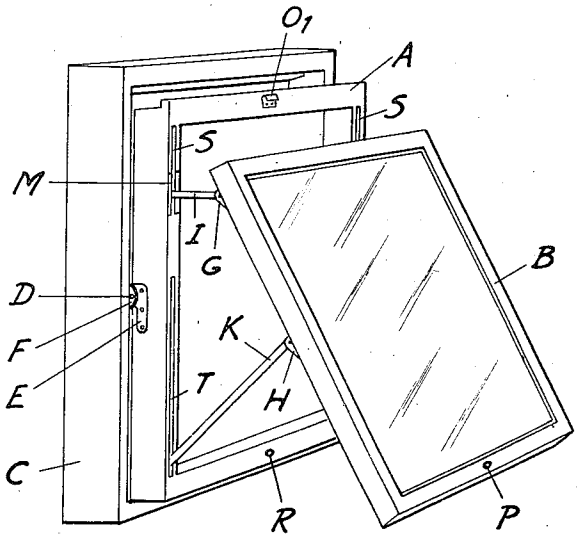
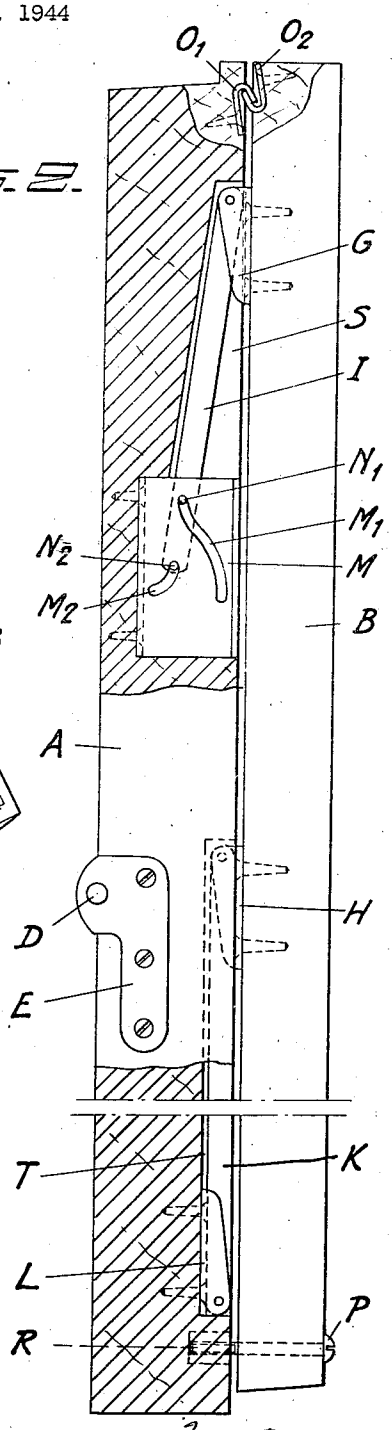


Fig. 2.



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DOUBLE WINDOW PIVOTED ON HORIZONTAL PIVOTS

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6 Claims. (Cl. 20—53)

This invention refers to double windows that is windows with double, interconnected sashes carrying double parallel glass panes.

The chief purpose of this invention is to facilitate the cleansing of such windows.

Another purpose of this invention is to render it possible to force the frames apart by gravity, after they have been swung approximately 180° for cleansing purposes. Thus, the frames will stay safely in their positions forced apart, and the risk of accidents is eliminated.

A preferred embodiment of the invention is illustrated in the annexed drawing.

Fig. 1 is a perspective view of the window, in its position for cleansing.

Fig. 2 shows a vertical cross section through the coupled sashes. Fig. 2 is on a much larger scale than Fig. 1.

Referring now to the drawing, A is the inner sash and B the outer sash. (The words "inner" and "outer" are used as they apply to the window when closed). The sash A is journalled in the stationary window frame C on pivots D, which are secured to the inner sash by means of fittings E and rest in stationary bearings F on the frame C. On each vertical side, the outer sash B carries two fittings G and H, to which rods I and K are articulately connected. The rods K are longer than the rods I. At their opposite ends, each of the rods K is articulately connected with a fitting L secured to the sash A. To this sash also guides M are rigidly secured, in the sides of which curved slots M_1 and M_2 are cut, engaged by pins N_1 and N_2 respectively. These pins are secured to the ends of the rods I.

To one of the horizontal edges of the sashes A and B hook-shaped fittings O_1 and O_2 are secured in such position as to engage each other, when the sashes A and B are rigidly coupled together to lie flat upon each other. Through a sleeve in the sash B extends a screw P adapted to engage a nut R in the adjacent face of the sash A. In that surface of the sash A which faces the sash B, slots or recesses S and T are cut to accommodate the rods I and K when the sashes A, B lie flat upon each other.

From its closed position the window (that is the coupled sashes A, B) may be swung approximately 180° to assume the position shown in Fig. 2. In this position, the (normally) outer sash B faces inwards, that is towards the room in whose wall the window is placed. A person standing in the room can now easily unscrew the screw P, and after this the sash B will fall out and also sink downwards swinging on the rods I, K, until it is checked in the position shown in Fig. 1, due to the fact that the pins N_1, N_2 strike the bottom ends of the slots M_1, M_2. In this position, it is easy to cleanse those faces of the window panes which are facing each other. Both of the sashes A, B are kept in a stable position by gravity, and all dangers due to slipping sashes are efficiently eliminated.

After the cleansing, the operator pushes the sash B upwards and inwards to cause said sash to swing on the rods I and K. At the end of this motion, the fittings or clasps O_1 and O_2 engage each other, as shown in Fig. 2, and are pushed into each other, due to the particular shape of the slots M_1 and M_2. When now the sashes A, B lie flat upon each other, the operator screws the screw P into the nut R, so that the sashes are now rigidly interconnected and coupled together. Now the window may be swung 180° back, to assume its closed position.

Attention is drawn to the fact that when the sashes are thus interconnected, the rods I extend obliquely in relation to the sashes. The pull exerted in the longitudinal direction of the rods I consequently has a component at right angles to the sashes A and B and presses those sashes together, thus relieving the strain on the members O_1, O_2, P, R.

What I claim is:

1. In a window, in combination, a stationary frame, two parallel pane-carrying sashes, pivots for journalling said sashes swingably on a horizontal axis in said frame, a pair of rods pivotally connected at both ends with said sashes at their vertical sides, a second pair of rods each pivotally connected at one end to one of said sashes and slidably connected at the other end to the other of said sashes, and means for coupling said sashes rigidly together lying flat upon each other, said rods being so arranged that after the sashes have been swung 180° from their closed position and said coupling means have been released one of said sashes by gravity swings out to a stable position in which all parts of said sashes are at a distance from each other.

2. In a window, in combination, a stationary frame, an inner sash, pivots for journalling said inner sash to swing approximately 180° on a horizontal axis in said frame, an outer sash, a pair of rods pivotally connected at both ends with said sashes at their vertical sides, a second pair of rods each pivotally connected to said outer sash and slidably connected to said inner sash, and means for coupling said sashes rigidly together lying flat upon each other, said rods be-

ing so arranged that after the sashes have been swung 180° from their closed position and said coupling means have been released one of said sashes by gravity swings out to a stable position in which all parts of said sashes are at a distance from each other.

3. In a window, in combination, a stationary frame, two parallel pane-carrying sashes, pivots for journalling said sashes to swing approximately 180° on a horizontal axis in said frame, a rod pivotally connected at both ends to said sashes at their vertical sides, a second rod pivotally connected at one end to one of said sashes and slidably connected at the other end to the other of said sashes, stops limiting the swinging motion of said rods, and means for coupling said sashes rigidly together lying flat upon each other, said rods being so arranged that after said sashes have been swung about 180° from their closed position and said coupling means have been released one of said sashes swings out by gravity to a stable position in which all parts of said sashes are at a distance from each other.

4. In a window, in combination, a stationary window frame, two parallel glass-carrying sashes, pivots for journalling said sashes in said frame to swing approximately 180° on a horizontal axis, upper and lower rods articulately connected with said sashes, pins on some of said rods, fittings on one of said sashes having curved slots engaged by said pins, and means for coupling said sashes rigidly together lying flat upon each other, said rods being so arranged that after said sashes have been swung about 180° from their closed position and said coupling means have been released one of said sashes swings out by gravity to a stable position in which all parts of said sashes are at a distance from each other.

5. In a window, in combination, a stationary window frame, two sashes carrying parallel window panes, pivots for journalling said sashes in said frame to swing approximately 180° on a horizontal axis, upper and lower rods articulately connected at both ends with said sashes at the vertical sides thereof, hook-shaped fittings at one horizontal edge of said sashes, and coupling members at the opposite horizontal edge of said sashes for coupling said sashes rigidly together lying flat upon each other, said rods being so arranged that after said sashes have been swung about 180° from their closed position and said coupling members have been released one of said sashes swings out by gravity to a stable position in which all parts of said sashes are at a distance from each other.

6. In a swingable window, in combination, a stationary window frame, two sashes carrying parallel window panes, pivots for journalling said sashes in said frame to swing approximately 180° on a horizontal axis, a pair of rods pivotally connected at both ends with said sashes at the vertical sides thereof, a second pair of rods each pivotally connected at one end to one of said sashes and slidably connected at the other end to the other of said sashes, said second pair of rods lying obliquely in relation to said sashes, when said sashes lie flat upon each other, and means for coupling said sashes rigidly together lying flat upon each other, said rods being so arranged that after said sashes have been swung about 180° from their closed position and said coupling members have been released one of said sashes swings out by gravity to a stable position in which all parts of said sashes are at a distance from each other.

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