May 14, 1968 G. A. ZANDELIN 3,382,611

CHILD-PROOF WINDOW AND BALCONY DOOR

Filed March 24, 1966 2 Sheets-Sheet 1

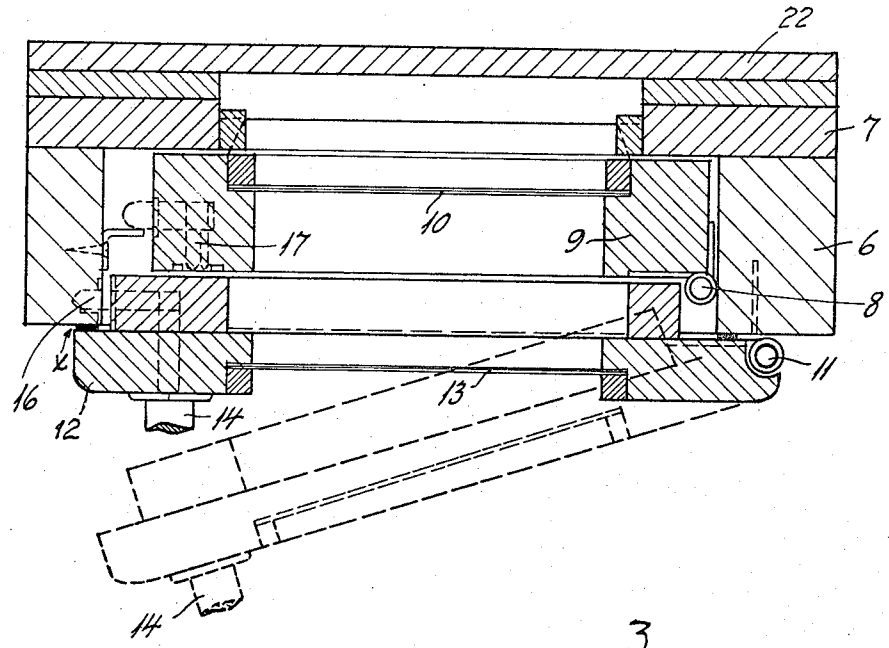


Fig. 2.

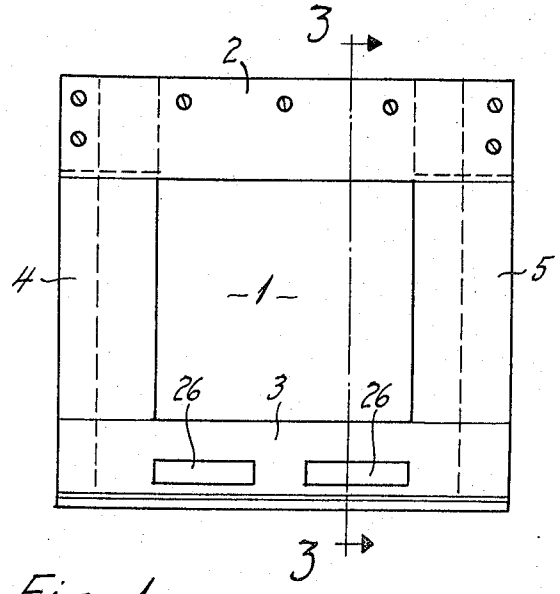


Fig. 1.

INVENTOR

GUSTAF ADOLF ZANDELIN

BY Young & Thompson

ATTYS.

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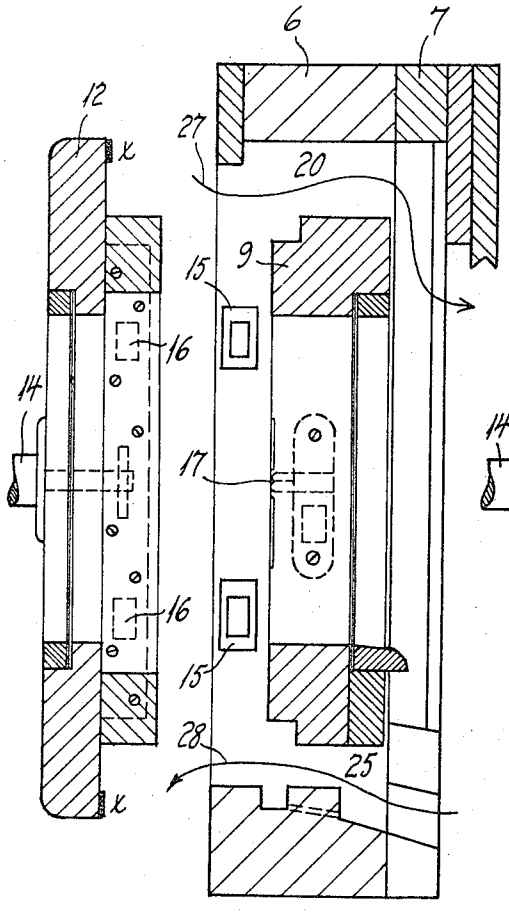


Fig. 4.

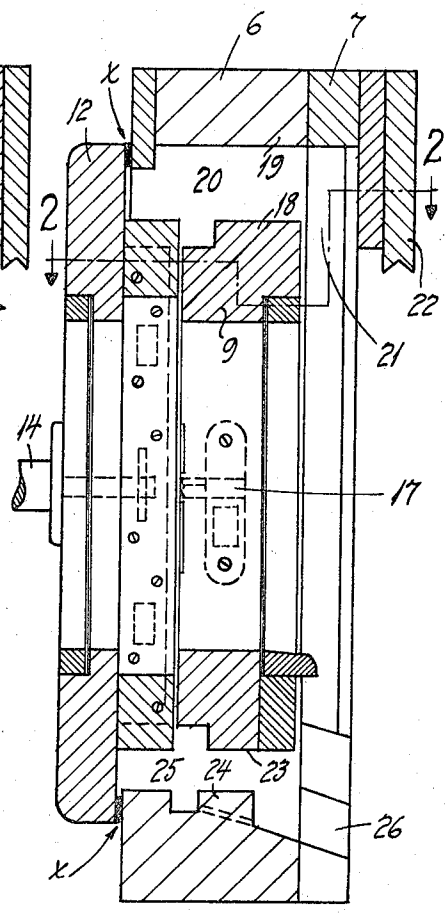


Fig. 3.

INVENTOR
GUSTAF ADOLF ZANDELIN
BY Young & Thompson
ATTYS.

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CHILD-PROOF WINDOW AND BALCONY DOOR

Gustaf Adolf Zandelin, Kungsgatan 58B,
Malmo, Sweden

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ABSTRACT OF THE DISCLOSURE

A window or balcony door has two inwardly horizontally swinging sashes the outer of which is spaced from the top and bottom of the window frame to provide upper and lower ventilation openings. These openings are downwardly outwardly directed to render them weather-proof. The sashes may be selectively individually locked.

The present invention relates to windows and balcony doors of the type that have an outer and an inner frame, the frames being independently rotatable about hinges on a casement frame.

The object of the invention is to produce a window or balcony door in which it is necessary to open only the inner window-frame for the purpose of ventilation, while the outer window-frame remains locked in a closed position to prevent small children falling out of the window.

That which mainly characterizes the window, according to the invention, are the spaces situated above and below the outer window-frame in the casement frame, which are in communication with the open air, and which allow, after the inner window-frame has been opened, stale air to flow out and fresh air to flow into the room that is to be ventilated.

The window, according to the invention, does not allow heavy rain to penetrate during ventilation, and simultaneously prevents illegal or unwanted entry through the window.

The invention will be described while referring to the appended drawings of an embodiment.

FIG. 1 shows a front elevation of the window.

FIGS. 2–4 show sections of the window.

FIG. 2 shows a horizontal cross section along the line 2—2 in FIG. 3.

FIG. 3 shows a vertical section along the line 3—3 in FIG. 1.

FIG. 4 represents a vertical section similar to that in FIG. 3, but with the inner window-frame open, to show how ventilation can be effected thereby.

The numeral **1** indicates a casement-frame comprising an upper part **2**, a lower part **3** and side parts **4** and **5**. The casement-frame, as is made clear by FIGS. 2–4, comprises an inner casement-frame **6**, and connected therewith, an outer-easement frame **7** with a somewhat smaller opening. In the space, which is surrounded by the casement-frames **6** and **7**, is an outer window-frame **9**, supported by vertically mounted rotatable hinges **8** on the one side, said window-frame **9** having a glass pane **10** inserted in an inside edge recess and held in position by means of window molding. An inner window-frame **12** is supported on vertically mounted rotatable hinges **11** on the casement-frame **6**, with a glass pane **13** inserted in an inside edge recess, in said window-frame **12**, being held in position by window molding.

Thus, the window frames **9** and **12** are independent of each other and can be rotated about their hinges **8** and **11** respectively.

The inner window-frame **12** is provided with a locking-handle **14** on the inside, by means of which locking bars or the like **16** can be suitably actuated in conjunction with locking-plates **15** on the casement frame **6**.

The outer window-frame **9** is likewise provided with a locking device, which is generally indicated by the numeral **17**, and which is preferably made "child-proof," i.e. so that it cannot be operated and opened by small children. The "child security" can be achieved by, for example, a special key being necessary for locking and unlocking, said key being made inaccessible to children.

There are many types of locking-devices on the market, which can be regarded as "child-proof," and are, therefore, suitable for utilization with the window according to the invention.

As is apparent from FIGS. 3 and 4, the upper edge **18** of the outer window-frame **9** does not extend completely up to the inner surface **19** of the casement-frame **6**, leaving a space **20**, which is connected with the open air by means of a vertical channel **21** between the outer window-frame **9**, the upper part of the outer casement-frame **7**, and a board-strip **22** fitted on the said upper part which strip serves as a protection against rain.

In a similar way, the lower surface **23** of the outer window-frame **9** does not extend completely down to the inside surface **24** of the casement-frame **6**, but instead a space **25** is left, said space being connected with the open air by means of elongated recesses **26** in the casement-frame **7** (two recesses are shown in FIG. 1).

When the inner window-frame **12** is unlocked, by means of the handle **14**, and the window-frame **12** is swung out about its hinges **11**, ventilation is obtained as indicated by the arrows **27** and **28** in FIG. 4, despite the outer window-frame **9** being locked in a closed position. Stale inside air is then able to flow out, in the direction of the arrow **27** into the space **20** through the channel **21** in the upper edge of the outer window-frame **9**, said channel being connected with the open air, simultaneously as fresh air flows in through the recesses **26** in the outer casement-frame **7** and the space **25** in the lower surface of the outer window-frame **9**.

Due to the "child-proof" locking of the outer window-frame **9**, it is ensured that no small child runs the risk of falling out, despite the window being adjusted for ventilation.

When it is so desired, the outer window-frame **9** can also be opened, e.g. when cleaning, by unlocking and swinging it about its hinges **8**.

Different modifications of the invention are, of course, possible within the scope of the claims.

I claim:

1. A closure comprising a frame, an inner sash and an outer sash, means independently rotatably mounting said sashes on said frame for inwardly opening horizontal swinging movement about vertical axes between open and closed positions, both said sashes being glazed, there being spaces above and below said outer sash between said outer sash and said frame in the closed position of said outer sash, said spaces communicating with the open air, said inner sash closing said spaces in the closed position of said inner sash, and means for preventing unauthorized opening of said outer sash.

2. A closure as claimed in claim 1, said last-named means comprising latch means accessible only from the inner side of said outer sash.

3. A closure as claimed in claim 2, said latch means being of the type requiring operation by a separate key.

4. A closure as claimed in claim 1, said spaces above and below said outer sash being defined by downwardly outwardly directed channels thereby to render said spaces weatherproof.

5. A closure as claimed in claim 1, one of said spaces being defined by an opening through said frame.

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DAVID J. WILLIAMOWSKY, *Primary Examiner.*

DENNIS L. TAYLOR, *Examiner.*