

PROJECTED WINDOW AND MOUNTING STRUCTURE THEREOF

BACKGROUND OF THE INVENTION

1. FIELD OF THE INVENTION

5 The present invention relates to a projected window installed to buildings such as houses and a mounting structure used for windows thereof.

2. DESCRIPTION OF RELATED ART

Conventionally, buildings such as houses are provided with open/close type windows. The window comprises a window sash fixed to an opening in a wall, and a
10 windowpane provided to the sash, which can be opened/closed. The windowpane further comprises a windowpane frame and a window material such as a glass embedded inside the frame.

As the open/close structure of the windowpane and the sash, generally sliding type or rotary type doors are used. However, swing-out type projected windows are also
15 used.

The projected window is a window in which, for example, a sash and a windowpane are connected by a designated mounting structure, and are adapted so that the windowpane swings out of the sash while performing a pivotal movement (Refer to
20 JP-57-68893-U or the like).

This mounting structure has a rink mechanism including a plurality of arms designed so as to perform a predetermined pivotal movement at opening/closing. At the both ends of each arm, a windowpane-side mounting base plate and a sash-side mounting base plate are pivotally supported, and each of the mounting base plates is fixedly secured
25 to the window frame and the sash. Here, the mounting structure is ensured to have a sufficient strength for supporting the load of the windowpane. In the mounting structure, the direction of the pivotal movement of the windowpane is appropriately selected from either vertical direction or horizontal direction. When the pivotal axis is in the vertical direction, the mounting structures are provided to the upper and lower horizontal sills of
30 the sash. When the pivotal axis is in the horizontal direction, the mounting structures are



provided to the right and left portions of the sash. Since the part of a rick mechanism (swing-out mechanism) of the mounting structure maintains the current position of the windowpane by means of a force of friction, it is also called as a friction stay.

In the above-described projected window, generally, the mounting base plate and
5 the windowpane frame or the sash of the mounting structure are fixedly secured by means of screws respectively (refer to JP.59-181190-U).

When the connection between the friction stay and the sash or the windowpane frame is made by means of screws, the following problem remains. That is to say, since the load, which is generated when the windowpane is opened/closed, is born by the fixing
10 screws only, the screws may be loosened due to the repetitive open/close operation of the windowpane. As a result, screws may be broken and removed resulting in a falling-off of the windowpane from the sash.

With respect to the above-described problem, the applicant of the present
15 invention has proposed a new mounting structure for the projected window (refer to JP-07-25419-Y2).

In the new mounting structure, a plurality of engaging pieces are formed in the mounting base plate at the windowpane side or the sash side, and in the corresponding windowpane frame or sash, an engaging groove extending in the longitudinal direction
20 thereof is formed in the respective inside surfaces, and a notch is formed at an arbitrary position of the engaging groove. And when assembling them, the engaging piece of the mounting base plate is brought to the notch of the engaging groove, and after being positioned within the engaging groove, the same is moved along the engaging groove. In a state that the engaging piece is held so as not to fall off in the engaging groove, the same
25 is fixedly secured appropriately by means of screws or the like.

According to the mounting structure as described above, the load of the windowpane is supported by the engagement between the engaging groove and the engaging piece; even when screws are fallen off, it is possible to prevent the windowpane from immediately falling off. Also, they can be assembled easily by carrying out such
30 simple work as the engaging piece is brought to the notch and then inserted into the

engaging groove.

However, in the above-described conventional mounting structure, the mounting base plates are fixed on the surfaces facing each other; that is, on the inner periphery of the sash; while, the engaging groove is also formed in the same portion thereof. Accordingly, since the engaging groove and the like are easily come into the view from the outside, it has been desired to improve it from the viewpoint of exterior appearance.

SUMMARY OF THE INVENTION

An object of the present invention is to provide a projected window and a mounting structure thereof that prevent a windowpane from falling off from a sash even when fixing screws thereof are loosened, and enhance the design performance thereof.

The projected window of the present invention comprises a sash fixedly secured to a building, a windowpane capable of closing the inner opening of said sash, and a swing-out mechanism for supporting said windowpane to said sash so as to be opened/closed easily, characterized in that

said swing-out mechanism includes a sash-side mounting base plate fixed to said sash, a windowpane-side mounting base plate fixed to said windowpane, and a plurality of arms for linking these mounting base plates;

an engagement rail that opens toward the outside of said building and extends in the direction of continuing direction of said sash is formed in said sash;

an engaging piece capable of engaging with said engagement rail is formed in said sash-side mounting base plate; and

said sash-side mounting base plate and said sash are fixed to each other in a state that said engaging piece is inserted into said engagement rail.

In the present invention, it is possible that a structure having a roughly C-like cross section is used as the engagement rail, and a piece having a T-like configuration capable of being inserted into the rail is used as the engaging piece. Alternatively, it is possible that a structure having a roughly T-like cross section is used as the engagement rail, and a C-like piece capable of being inserted with the rail is used as the engaging

piece.

Conventional basic link structures such as the sash, the windowpane, the swing-out mechanism and the like may be used appropriately as well as the conventional material may be used therefor.

5 For the fixing the windowpane and the windowpane-side mounting base plate, the conventional mounting structure may be used. In this case also, in addition to the fixing with screws, it is preferred to take a falling-off prevention by means of an engaging piece and an engagement rail, or the like.

10 For fixing the above-mentioned sash-side mounting base plate and the above-mentioned sash, an existing fixing members or structures may be used appropriately. When the above-mentioned engaging piece can be inserted into the above-mentioned engagement rail and fixed with each other, any type is available. However, when taking into consideration the facility for maintenance and inspection or the like, it is preferred to use removable fixing members such as screws.

15 In the present invention as described above, the windowpane is prevented from falling off due to loosen screws by means of the engagement between the engagement rail of the sash and the engaging piece of the sash-side mounting base plate. Also, since the engagement rail is formed in the sash facing outward, it hardly comes into the view of a user within the building. As a result, compared to the conventional one, the appearance
20 can be enhanced.

In the present invention, in the above-mentioned sash, it is preferred that a rising portion extending toward the inside of the opening of the sash is formed on the sash, and the engagement rail is formed in the rising portion.

25 By adopting such arrangement as described above, the engagement rail further hardly comes into the view of the user resulting in a further increased appearance.

In the present invention, it is preferred that a notch for engaging/disengaging the engaging piece is formed in the engagement rail at an arbitrary position thereof.

30 By adopting such arrangement as described above, by positioning the engaging

piece to the notch, the engagement/disengagement with the engagement rail can be made any time. As a result, the degree of freedom of assembling procedure can be increased, and disassembling at inspection or the like after completing the building can be carried out any time.

5 In the case that the notch as described above is not used, it is necessary to insert the engaging piece into the engagement rail and so on at assembling the sash.

In the present invention, it is preferred that the engaging piece is adapted so as to protrude sideward with respect to the longitudinal direction of the sash-side mounting base plate.

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By adopting such arrangement as described above, for example, in a ordinary mode; that is, in a state that the sash-side mounting base plate is disposed inside the sash (in the case of horizontal sill under the sash, the upper face side), since it is possible to protrude the engaging piece toward the inside of the building; i.e., toward the side of the sash-side mounting base plate, it is possible to engage the engaging piece with the engagement rail formed in the sash facing the outside of the building. That is to say, by adapting the engaging piece to protrude toward the side of the sash-side mounting base plate, it is possible to reliably carry out the engagement with the engagement rail, which faces the outside of the building. Further, since the fixing positions of the sash-side mounting base plate and the sash are separated from each other, it is possible to avoid any structural interference from occurring resulting in a high possibility that the assembling work is also carried out easily.

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25 In the present invention, it is preferred that the engaging piece protruding sideward and the sash-side mounting base plate are linked to each other in a displaceable manner.

Here, as for a concrete technique for connecting them in a displaceable manner, for example, a carry-out retainer member may be fixed to the sash-side mounting base plate, and then the engaging piece may be supported pivotally by the retainer member by

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means of a pin or the like. Or, the sash-side mounting base plate and the engaging piece may be linked by means of a flexible member. The above-mentioned retainer member may be fixed to the sash-side mounting base plate by means of an appropriate means such as welding, mechanical press, pin or the like. As for the above-mentioned flexible member, an appropriate member such as metal or plastic tape, a wire, a chain, a cord or the like may be used.

By adopting such arrangement as described above, since the engaging piece and the sash-side mounting base plate are displaceable, the work to move the sash-side mounting base plate or the like is facilitated at assembling or disassembling in a state that the engaging piece is engaged with the engagement rail.

In the present invention, it is preferred that an engagement rail that opens toward the outside of said building and extends along the peripheral edge of the windowpane is formed in the windowpane;

an engaging piece capable of engaging with the engagement rail of the windowpane is formed in the windowpane-side mounting base plate; and

the windowpane-side mounting base plate and the windowpane are fixed to each other in a state that the engaging piece is inserted into the engagement rail.

By adopting such arrangement as described above, in the connecting portion between the windowpane and the swing-out mechanism also, it is possible to take a fall-off prevention by means of the engaging piece and the engagement rail.

In this case, it is preferred that, in the engagement rail formed in the above-mentioned windowpane, a notch for engaging/disengaging the above-mentioned engaging piece is formed at an arbitrary position thereof.

By adopting such arrangement as described above, since it is possible that the engaging piece is engaged or disengaged via the notch at any time, and the windowpane and the swing-out mechanism can be removed in the state that they are assembled, same as the above-described connecting portion between the sash and the swing-out mechanism, the degree of freedom in assembling process and the workability in inspection is enhanced.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a longitudinal sectional view showing a projected window, with a part thereof broken away, according to an embodiment of the present invention;

5 Fig. 2 is a perspective view showing substantial parts of the above-mentioned embodiment;

Fig. 3 is a perspective view showing a coupling procedure of a swing-out mechanism and a windowpane frame of the above-mentioned embodiment;

10 Fig. 4 is a perspective view showing a fixing procedure of the swing-out mechanism and the windowpane frame of the above-mentioned embodiment;

Fig. 5 is a perspective view showing a coupling procedure of the swing-out mechanism and a sash of the above-mentioned embodiment;

Fig. 6 is a perspective view showing a fixing procedure of the swing-out mechanism and the sash of the above-mentioned embodiment; and

15 Fig. 7 is a perspective view showing another embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

20 Now, referring to the drawings, an embodiment of the present invention will be described.

In Fig. 1, a projected window 10 comprises a sash 20 embedded in an opening for window 2 of a building 1, a windowpane 30 capable of opening/closing the inner opening of the sash 20, and a swing-out mechanisms 40 for supporting the windowpane 30 to the above-mentioned sash 20 so as to be opened/closed easily.

25 The sash 20 has four window frame members 21 at the top and bottom and the right and left thereof. Each of the window frame members 21 is an extrusion-molded part of a light alloy, which is easy to form into a desired cross section. In this embodiment, each of the window frame members 21 formed with a rising portion 22 oriented to the inside of the sash 20. Formed at the front-end side of the rising portion 22 is a mounting groove 24 having a C-like cross section for mounting a sealing member 23;

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while, formed at the base-end side thereof is an engaging groove 25 having a C-like cross section that serves as an engagement rail according to the present invention. In this structure, the engaging groove 25 extends in the longitudinal direction of the window frame member 21, and an opening of the groove is formed on the face of the rising portion
 5 22 facing the outside of the building.

The windowpane 30 has a windowpane frame 31 comprised of four windowpane frame members at the top and bottom and the right and left thereof, and has a pane member 32 at the inside thereof. Each of the windowpane frame members is an extrusion-molded part of a light alloy, which is easy to form into a desired cross section.
 10 The pane member 32 is a transparent or semitransparent plate member made of a glass, acrylic or the like, and is retained by a retainer frame 33 from the inner side of the windowpane frame 31. Sealing members 34 are interposed between the windowpane frame 31 and the pane member 32 and between the retainer frame 33 and the pane member 32. Formed on the periphery face of the windowpane frame 31 is an engaging groove 35
 15 having a roughly C-like configuration; and formed in a portion of the engaging groove 35 are notches 36. The notches 36 are formed into a pair of semi-circular configuration on the edges facing each other in the opening portion of the engaging groove 35 and are constituted so as to form a circular opening as a whole.

The basic link structure of the swing-out mechanism 40 is the same as a
 20 swing-out mechanism for conventional projected window. However, the mounting structure to the sash 20 is different from the conventional structure.

As shown in Fig. 3 and Fig. 4, the swing-out mechanism 40 has a windowpane-side mounting base plate 41 for connecting with the windowpane 30, and
 25 fixed on one side thereof is an engaging piece 42 having a disk-like configuration. As shown in Fig. 4, the windowpane-side mounting base plate 41 is fixed in a state being placed along the outer periphery surface of the windowpane frame 31. Here, the engaging piece 42 is of a size to passes through the notches 36, and is received within the engaging groove 35 through the notches 36 into an engagement state.

30 When fixing the windowpane-side mounting base plate 41 to the windowpane

frame 31, as shown in Fig. 3, the respective frame members of the windowpane frame 31 are assembled first, and then, the windowpane-side mounting base plate 41 is disposed along the upper/lower frame member. Then, the windowpane-side mounting base plate 41 is made closer to the frame member, and the engaging piece 42 is introduced into the engaging groove 35 through the notch 36 resulting in the engagement state. As shown in Fig. 4, the windowpane-side mounting base plate 41 is disposed to a predetermined position of the frame member, and in this state, the same is fixed to the frame member by screwing the screws 43 thereinto. Thus, the windowpane frame 31 is formed, in which the windowpane-side mounting base plates 41 are mounted at upper and lower two points.

Owing to such a structure as described above, even when the screws 43 are loosened due to repetitive open/close operation of the windowpane 30, since the engaging piece 42 remains in the engagement state with the engaging groove 35, the windowpane does not disengage from the windowpane frame 31 or the windowpane-side mounting base plate 41.

As shown in Fig. 5 and Fig. 6, the swing-out mechanism 40 has a sash-side mounting base plate 44 for connecting with the sash 20, and attached to the one end thereof is an engaging piece 45 projecting sideward.

The engaging piece 45 is a piece of a light alloy extruded material having a T-like cross section, which is cut into a small dimension. The engaging piece 45 is joined by means of a pin to the front-end side of a retainer member 451, and the base-end side of the retainer member 451, is fixed at the end of the sash-side mounting base plate 44 by means of press.

As shown in Fig. 6, the sash-side mounting base plate 44 is fixed in a state being placed along the inner peripheral surface of the window frame member 21. At this time, the engaging piece 45 is received within the engaging groove 25 continuing along the side of the window frame member 21. Here, as shown in Fig. 5, formed in a portion of the engaging groove 25 is a notch 26 for allowing the front edge having a roughly T-like configuration of the engaging piece 45.

When fixing the sash-side mounting base plate 44 to the window frame member 21, as shown in Fig. 5, in a state that the window frame members 21 has been assembled,

first, the sash-side mounting base plate 44 is placed along the upper/lower sill member. Then, the engaging piece 45 at the one end of the sash-side mounting base plate 44 is brought to the notch 26, and after introducing the same into the engaging groove 25, the sash-side mounting base plate 44 is slid in the continuing direction of the engaging groove 25 to bring the engaging piece 45 and the engaging groove 25 into an engagement state. Then, as shown in Fig. 6, the sash-side mounting base plate 44 is disposed to a predetermined position of the window frame member 21, and in this state, the same is fixed to the window frame member 21 by screwing the screws 46, which are the fixing members, thereinto. Owing to this, the sash-side mounting base plates 44 are mounted at the upper and lower two points of the window frame members 21.

In the respective figures describe above, the swing-out mechanism 40 has a rink mechanism including plural arms between the windowpane-side mounting base plate 41 and the sash-side mounting base plate 44. Since the rink mechanism is the same as one used in an existing swing-out mechanism, detailed description thereof is omitted here. The windowpane-side mounting base plate 41 and the sash-side mounting base plate 44 are capable of performing a relative movement from a state, in which the both are parallel to each other, up to a position where the both cross perpendicular to each other at one end of the respective plates. Owing to this arrangement, the sash 20 and the windowpane 30 that are mounted to the respective base plates are enabled to perform the swing open/close operation.

According to the above-described embodiment, the following advantages are obtained.

That is to say, according to the embodiment, owing to the engagement between the engaging groove 25 of the sash 20 and the engaging piece 45 of the sash-side mounting base plate 44, even when the screws 46 or the like are loosened, the windowpane 30 is prevented from falling off. Also, since the engaging groove 25 is disposed on the sash 20 facing the outside of the building, it is hardly to come into the view of a user within the building. Compared to the conventional model, the external appearance is increased.

According to the embodiment, since the rising portion 22 extending toward the inside of the opening thereof is formed in the sash 20, and the engaging groove 25 is formed in the surface of the rising portion 22 at the outer side of the building, the engaging groove 25 further hardly comes into the view of a user resulting in a further increased external appearance.

According to the embodiment, since the notch 26 for engaging/disengaging the engaging piece 45 is formed at an arbitrary position of the engaging groove 25, the engagement/disengagement between the engaging piece 45 and the engaging groove 25 can be made at any time. Owing to this arrangement, the engagement procedure is not limited to the manner in which, in a state that the window frame members 21 are not assembled yet, the engaging piece 45 and the engaging groove 25 are engaged with each other. After assembling the window frame members 21 into the frame configuration, the swing-out mechanism 40 may be attached thereto. Thus, degree of freedom of the assembling procedure is increased.

Further, since the engaging piece 45 and the engaging groove 25 can be engaged easily with each other, when carrying out an inspection after completing the building, the swing-out mechanism 40 or the windowpane 30 can be removed and reinstalled easily at any time.

On the other hand, according to the embodiment, since the engaging groove 35 and the engaging piece 42 are engaged with each other at the windowpane 30 side also, even when screws 43 are loosened, the windowpane 30 is prevented from falling off.

Furthermore, since the notch 36 for engaging/disengaging the engaging piece 42 is formed in the engaging groove 35, the engaging/disengaging between the engaging piece 42 and the engaging groove 35 can be made any time. Accordingly, the assembling procedure is not limited to such manner that, in a state that the windowpane frame 31 is not assembled yet, the engaging piece 42 and the engaging groove 35 are engaged. But such manner that the windowpane frame 31 is assembled into the frame configuration first, and then swing-out mechanism 40 is attached thereto is also available. As a result, the degree of freedom in assembling procedure is increased.

Still further, since the engaging piece 42 and the engaging groove 35 can be

engaged easily with each other, when carrying out an inspection after completing the building, the swing-out mechanism 40 and the windowpane 30 can be removed and reinstalled easily at any time.

According to the embodiment, since the engaging piece 45 protrude outward with
5 respect the longitudinal direction of the sash-side mounting base plate 44, simpler structure thereof and easier assembly work can be achieved.

That is to say, according to the embodiment, the engaging groove 25 of the sash
20 is formed in the surface, which is facing outside of the building, of the rising portion 22 on the sash-side mounting base plate 44. Although the sash-side mounting base plate 44
10 is positioned on the inner surface of the sash 20, the position thereof is adapted to be close to the rising portion 22 so that the base plate does not interfere therewith. Here, since the engaging piece 45 is formed to protrude facing the inside of the building toward the sash-side mounting base plate 44, the engaging piece 45 is adapted to protrude to the engaging position with the engaging groove 25 when the sash-side mounting base plate 44
15 is disposed at a predetermined position of the sash 20. As a result, the respective positions can be made so as to coincide easily with each other.

That is to say, by adapting so that the engaging piece 45 protrudes to the side of the sash-side mounting base plate 44, engagement with the engaging groove 25, which faces the outside of the building, can be made reliably. Further, since the fixing positions
20 of the sash-side mounting base plate 44 and the sash 20 are separated from each other, it is possible to avoid structural interference from occurring. It is highly possible that the assembling work can be carried out easily.

According to the embodiment, since the engaging piece 45 is connected to the
25 sash-side mounting base plate 44 via the retainer member 451 connected by a pin, the windowpane-side mounting base plate 44 and the engaging piece 45 can be appropriately displaced. Even in a state that the engaging piece 45 and the engaging groove 25 are engaged with each other during assembling or disassembling work, the sash-side mounting base plate 44 can be moved easily.

The present invention is not limited to the above-described embodiment. It should be understood that the following another embodiment, modification or the like are included in the present invention.

As for the connection between the sash-side mounting base plate 44 and the engaging piece 45, it is not limited to such manner as described in the above embodiment. That is, the base side of the retainer member 451, which is connected to the engaging piece 45, is fixed at the end of the sash-side mounting base plate 44 by means of press. The retainer member 451 and the sash-side mounting base plate 44 may be welded or joined by means of industrial adhesive; or the sash-side mounting base plate 44 and the retainer member 451 may be joined by means of a pin which goes therethrough.

As for the technique that joins the sash-side mounting base plate 44 and the engaging piece 45 so as to be displaceable with respect to each other, it is not limited to the manner as described in the above embodiment; that is, the retainer member 451 is fixed to the sash-side mounting base plate 44, and then, the engaging piece 45 is pivotally supported by the retainer member 451 by means of a pin or the like. For example, as shown in Fig. 7, the sash-side mounting base plate 44 and the engaging piece 45 may be joined by means of a flexible member 48. As for the flexible member, a metal or plastic tape, a wire, a chain, a cord or the like may be used appropriately. And as for the fixing manner, retainer brackets 481 are fixed to the both ends of the flexible member 48 by means of press, a pin 482, which goes through the mounting holes, is inserted through the engaging piece 45 and the sash-side mounting base plate 44 respectively, and then, pressed to fix them. Owing to the structure also as shown in Fig. 7, it is possible to take a fall-off preventive measures for the windowpane 30 by means of the engagement between the engaging piece 45 and the engaging groove 25 (refer to the above embodiment) as well as to enhance the appearance owing to the disposition of the engaging groove 25.

In the engaging groove 25, although the notch 26 is not always necessary, it is preferred to provide the notch 26 to increase the operation performance.

Number of the engaging piece 45 is not limited to one at one end of the sash-side mounting base plate 44, but it may be provided at two points of both ends.

In the above-mentioned embodiment, the engaging groove 25 having a roughly C-like cross section is used as the engagement rail; while, a piece having a roughly T-like configuration which can be inserted into the rail is used as the engaging piece 45. However, a continuous rail having a roughly T-like cross section may be used as the engagement rail; while, a piece having a C-like configuration which can be inserted with the rail may be used as the engaging piece. In this case also, the connection and the like with the sash-side mounting base plate 44 can be carried out in the same manner as the above-described embodiment or the like, and the same effect as that can be obtained.

When implementing the embodiment, as for the basic link structures such as the sash 20, the windowpane 30, the swing-out mechanism 40 or the like, the conventional ones may be used appropriately, and also as for the materials therefor, the conventional ones may be used.

Further, as for the fixing manner between the windowpane frame 31 and the windowpane-side mounting base plate 41, it is not limited to the structure of the above-described embodiment, but an arbitrary mounting structure may be adopted. However, taking into consideration the fall-off prevention, in addition to the fixing with screws, it is preferred to take a fall-off prevention by means of the engaging piece and the engagement rail. In this case, it is preferred that the notch 36 is formed to facilitate the engagement/disengagement work. Also, as for the connection between the windowpane frame 31 and the windowpane-side mounting base plate 41, the same structure as that of the engaging groove 25 and the engaging piece 45 that is provided to the sash 20 side in the above-described embodiment may be adopted.

WHAT IS CLAIMED IS:

1. A projected window comprising: a sash fixedly secured to a building, a windowpane capable of closing the inner opening of said sash, and a swing-out
5 mechanism for supporting said windowpane to said sash so as to be opened/closed easily, characterized in that

said swing-out mechanism includes a sash-side mounting base plate fixed to said sash, a windowpane-side mounting base plate fixed to said windowpane, and a plurality of arms for linking these mounting base plates;

10 an engagement rail that opens toward the outside of said building and extends in the direction of continuing direction of said sash is formed in said sash;

an engaging piece capable of engaging with said engagement rail is formed in said sash-side mounting base plate; and

15 said sash-side mounting base plate and said sash are fixed to each other in a state that said engaging piece is inserted into said engagement rail.

2. The projected window according to claim 1, wherein a structure having a roughly C-like cross section is used as the engagement rail, and a piece having a T-like configuration capable of being inserted into the rail is used as the engaging piece.

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3. The projected window according to claim 1, wherein a rising portion extending toward the inside of the opening of the sash is formed on said sash, and said engagement rail is formed in the rising portion.

25 4. The projected window according to claim 1, wherein a notch for engaging/disengaging said engaging piece is formed in said engagement rail at an arbitrary position thereof.

5. The projected window according to claim 1, wherein said engaging piece is
30 adapted so as to protrude sideward with respect to the longitudinal direction of said

sash-side mounting base plate.

6. The projected window according to claim 1, wherein said engaging piece protruding sideward and said sash-side mounting base plate are linked to each other in a
5 displaceable manner.

7. The projected window according to claim 1, wherein
an engagement rail that opens toward the outside of said building and extends
along the peripheral edge of said windowpane is formed in said windowpane;
10 an engaging piece capable of engaging with the engagement rail of said
windowpane is formed in said windowpane-side mounting base plate; and
said windowpane-side mounting base plate and said windowpane are fixed to
each other in a state that said engaging piece is inserted into said engagement rail.

15 8. The projected window according to claim 7, wherein a notch for
engaging/disengaging said engaging piece is formed at an arbitrary position of the
engagement rail that is formed in said windowpane.

9. A mounting structure applied to a projected window having a sash fixed to a
20 building and a windowpane capable of closing the inner opening of said sash, comprising:
a swing-out mechanism for supporting said windowpane to said sash so as to be
opened/closed easily, characterized in that

said swing-out mechanism includes a sash-side mounting base plate fixed to said
sash, a windowpane-side mounting base plate fixed to said windowpane, and a plurality of
25 arms for linking these mounting base plates;

an engagement rail that opens toward the outside of said building and extends in
the direction of continuing direction of said sash is formed in said sash;

an engaging piece capable of engaging with said engagement rail is formed in
said sash-side mounting base plate; and

30 said sash-side mounting base plate and said sash are fixed to each other in a state

that said engaging piece is inserted into said engagement rail.