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STRUCTURE FOR ATTACHING A DECORATIVE COVER
FOR AN EAVES GUTTER

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to a structure for attaching a decorative cover which substantially covers the whole of the upper opening of an eaves gutter.

2. Description of the Prior Art

Conventionally, an eaves gutter is disposed below an end portion of the eaves of the roof of a building. In order to receive rainwater running down from the roof, the upper face of an eaves gutter is largely opened.

Since the upper face of an eaves gutter is largely opened as described above, a large gap is formed between the building and the front end of the eaves gutter, thereby producing a problem in that the external appearance of the building is impaired. There arises a further problem in that snow on the roof slides down into the eaves gutter and the gutter is broken under the weight of the snow. And there arises a still further problem in that the foreign matters such as fallen leaves, paper pieces, other trashes enter into the eaves gutter through the opening thereof and draining performance is deteriorated.

SUMMARY OF THE INVENTION

The invention has been conducted in view of the problems discussed above. It is an object of the invention to provide a structure for attaching a decorative cover for an eaves gutter which can prevent the external appearance of a building from being impaired, and which can prevent the eaves gutter from being broken under the weight of snow.

According to the present invention, there is provided a structure for attaching a decorative cover for an eaves gutter comprising: a gutter bracket mounted on a building; an eaves gutter attached to a lower side of the gutter bracket; a support member attached to an upper side of the gutter bracket; and a decorative cover detachably attached to the support member so as to substantially cover a whole of an upper opening of the eaves gutter while gaps being opened upward are provided at front and rear of the decorative cover.

In the structure for attaching a decorative cover for an eaves gutter, an engaging portion may be downward projected from an end portion of the decorative cover, the end portion being closer to the building, a coupling portion may be downward projected from another end portion of the decorative cover, the other end portion being remoter from the building. In this case, an engaged portion which is projected toward the building, and a coupled portion which is projected in a direction opposite to the building are formed on the support member. And the engaging portion and the engaged portion are

elastically engaged with each other, and the coupling portion and the coupled portion are elastically engaged with each other.

In this case, an upward protrusion may be formed in a tip end portion of the coupling portion, a recess may be formed in a lower face of the coupled portion. The protrusion and the recess are engaged with each other.

The support member may be formed by an engaging member and a coupling member which are erected from the gutter bracket, the engaged portion is formed at an upper end of the engaging member, and the coupled portion is formed at an upper end of the coupling member.

Further, the eaves gutter may include a front wall most separate from the building. Hereupon, an upper portion of the front wall is forward curved, and a gradient of the decorative cover is substantially equal to that of a roof of the building.

Furthermore, the support member may be integrally formed with the gutter bracket so as to be upward projected from the gutter bracket.

In this case, the support member and gutter bracket may be formed by synthetic resin.

Also in this case, the gutter bracket may include a mounting plate being placed on the building and a reinforcing portion being integrally bridged between the mounting plate and the support member.

A rib may be formed on the reinforcing portion.

A fixing hole which is used for hammering a fixing member may be formed in the mounting plate at a position which is higher than the gutter bracket.

Further, the gutter bracket may have a mounting plate being placed on the building and a connection recess being upward opened is formed in the mounting plate, and the support member may have a connection piece downward projected from the support member. The connection piece is fitted into the connection recess thereby attaching the support member to the mounting plate.

The connection piece may be engageably formed at a position of the connection recess which is arbitrarily set in a vertical direction.

Further, a projection may be formed in the connection recess, a hole is formed in the connection piece, and the connection piece is fitted into the connection recess with fitting the projection into the hole.

Still further, a rib may be formed on the support member.

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings:

Fig. 1 is a perspective view showing a state before eaves gutters, decorative covers and gutter brackets are assembled;

Fig. 2 is a section view showing a first embodiment of

the invention;

Fig. 3 is a section view showing a procedure of attaching the decorative cover of the first embodiment;

Fig. 4 is a partial section view showing the procedure of attaching the decorative cover of the first embodiment;

Fig. 5 is a partial section view showing another procedure of attaching the decorative cover of the first embodiment;

Fig. 6 is a partial section view showing a second embodiment of the invention;

Figs. 7(a) is a section view showing a decorative cover of the second embodiment, and Fig. 7(b) is a side view showing a part of a support member;

Fig. 8 is a partial section view showing a third embodiment of the invention;

Fig. 9 is a partial section view showing a fourth embodiment of the invention;

Fig. 10 is a section view showing a fifth embodiment of the invention;

Fig. 11 is a section view of the fifth embodiment;

Fig. 12(a) is a plan view showing a mounting plate of the fifth embodiment, Fig. 12(b) is a section view taken along the line A-A of Fig. 12(a), and Fig. 12(c) is a section view showing a decorative cover and a support member of the fifth embodiment;

Fig. 13(a) is a side view showing a mounting plate of

modified example, and Fig. 13(b) is a section view showing a part of a support member of the modified example;

Fig. 14(a) is a side view showing a part of a mounting plate of a further modified example, and Fig. 14(b) is a section view showing a part of a support member of the further example;

Fig. 15 is a section view showing a sixth embodiment of the invention;

Fig. 16 is a section view taken along the line A-A of Fig. 15;

Fig. 17 is a modified eaves gutter to which the present invention can be applied; and

Fig. 18 is a further modified eaves gutter to which the present invention can be applied.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Hereinafter, embodiments of the invention will be described.

A first embodiment of the present invention is shown in Figs. 1 to 5.

Fig. 1 is a perspective view showing a state before eaves gutters 3, decorative covers 5 and gutter brackets 2 are assembled.

The gutter bracket 2 which is to be attached to a building 1 is made of a synthetic resin such as polycarbonate. A holding portion 16 is formed integrally with the front face

of a plate-like mounting portion 15 so as to be forward-downward inclined. A body portion 17 which is in a substantially horizontal state is formed integrally with the tip end of the holding portion 16. A projecting portion 18 is disposed on the lower face of the rear end of the body portion 17 so as to be continuous therewith. A fixing piece 20 is formed integrally with the rear face of the projecting portion 18. The fixing piece is projected into an insertion recess 19 which is formed between the body portion 17 and the projecting portion 18, and the mounting portion 15, and which is downward opened. A connecting portion 21 which vertically elongates is formed integrally with the front end of the body portion 17. The upper end of the connecting portion 21 is formed as an insertion piece 22 which is rearward-upward inclined. A support portion 24 which has a substantially triangular section shape is formed integrally with the front face of the connecting portion 21.

The tip end of the holding portion 16 is integrated with the body portion 17 at a substantially center area of the upper face of the body portion 17. A support member 4 is formed integrally with the area so as to be upward projected therefrom. An engaged portion 8 is formed at the upper end of the support member 4 so as to be projected with being rearward-upward inclined. A coupled portion 9 is formed integrally with the front face of the support member 4. The coupled portion is formed by an elastic piece 26 having a substantially L-like

section shape, and an engaging piece 25 which is projected from the upper end of the elastic piece so as to be forward-downward inclined. The edge of the front and upper portion of the engaging piece 25 is curved with being outward projected so as to function as a sliding face 40. The edge of the front and lower portion of the engaging piece 25 is formed into a substantially right-angled shape so as to function as a disengagement preventing portion 41. The engaged portion 8 and the engaging piece 25 are formed so that the line connecting them has a gradient which is substantially equal to that of the roof 27 of the building 1.

The eaves gutter 3 which is made of, for example, a copper plate coated with a vinyl chloride resin is configured by a bottom 28, a front wall 29, and a rear wall 30 into a long shape having a substantially U-like section shape. The upper end of the front wall 29 is formed as a fitting portion 31 having a substantially U-like section shape. A front ear 32 is projected from the fitting portion 31. A mounting piece 33 is rearward projected in a bent state from a substantially center area of the front wall 29. The portion of the front wall 29 which is higher than the mounting piece 33 is curved with being forward projected so as to function as a curved face portion 34. The upper end of the rear wall 30 is formed as an inserting portion 35. A rear ear 36 is projected from the inner face of the inserting portion 35.

The decorative cover 5 is made of the same material as

the eaves gutter 3 and formed into a plate-like shape. A cover rear ear 37 is formed integrally with the rear end of the decorative cover with being downward projected. An engaging portion 6 which is forward projected is formed integrally with the cover rear ear 37. A cover front ear 38 is formed integrally with the front end of the decorative cover 5 with being downward projected. A coupling portion 7 which is rearward projected is formed integrally with the cover front ear 38.

When the eaves gutter 3 is to be attached to the building 1 by using the gutter bracket 2, the mounting portion 15 is placed on the outer wall or the like of the building so as to abut against the wall, and then fixed to the building 1 by hammering fixing members such as screws into the outer wall. Next, the fitting portion 31 of the eaves gutter 3 is fitted onto the insertion piece 22 of the gutter bracket 2, and the mounting piece 33 is placed on the upper face of the support portion 24. The inserting portion 35 of the rear wall 30 is inserted into the insertion recess 19 from the lower side, and the rear ear 36 is engaged with the upper face of the fixing piece 20. In this way, the eaves gutter 3 is attached to the lower side of the gutter bracket 2.

When the decorative cover 5 is to be attached to the gutter bracket 2, the engaging portion 6 is engaged with the lower face of the engaged portion 8 of the support member 4 as shown in Fig. 3. A force (indicated by the arrow A in Fig. 4)

is applied to the front portion of the upper face of the decorative cover 5 with using the engaging part as the fulcrum, so that the elastic piece 26 is rearward pressed to be elastically deformed while moving the cover front ear 38 along the sliding face 40 of the engaging piece 25, thereby downward rotating the decorative cover 5 (see the arrow B of Fig. 4). The downward rotation of the decorative cover 5 is continued until the coupling portion 7 is positioned below the engaging piece 25, whereby the elastic piece 26 is elastically restored so that the coupling portion 7 is engaged with the disengagement preventing portion 41 of the engaging piece 25. In this way, the engaging portion 6 and the coupling portion 7 are engaged with the engaged portion 8 and the coupled portion 9, respectively. As a result, as shown in Fig. 2, the decorative cover 5 can be attached to the support member 4 of the gutter bracket 2 at a gradient which is substantially equal to that of the roof 27.

The decorative cover 5 may be attached to the gutter bracket 2 in another method. First, the coupling portion 7 is engaged with the lower face of the coupled portion 9 of the support member 4. Under this state, a force (indicated by the arrow C in Fig. 5) is applied to the front end of the decorative cover 5, whereby the elastic piece 26 is rearward pressed to be elastically deformed. Next, the decorative cover 5 is downward rotated until the engaging portion 6 is positioned below the engaged portion 8, thereby causing the

engaging portion 6 and the engaged portion 8 to be engaged with each other. In this way, the engaging portion 6 and the coupling portion 7 are engaged with the engaged portion 8 and the coupled portion 9, respectively, so that the decorative cover 5 is attached to the support member 4 of the gutter bracket 2 at a gradient which is substantially equal to that of the roof 27.

When the decorative cover 5 is to be detached from the support member 4, the decorative cover 5 is rearward moved against the resilient force of the elastic piece 26, and the decorative cover 5 is then upward rotated about the engagement portion between the coupling portion 7 and the engaging piece 25, whereby the engagement between the engaged portion 8 and the engaging portion 6 is canceled. Next, the decorative cover 5 is forward moved and the engagement between the coupling portion 7 and (the disengagement preventing portion 41 of) the engaging piece 25 is canceled. As a result, the decorative cover 5 can be detached from the support member 4 of the gutter bracket 2.

In this way, the decorative cover 5 which substantially covers the whole of the upper opening of the eaves gutter 3 is attached to the support member 4 in such a manner that a gap 39 is formed between the eaves-side end portion of the roof 27 and the rear end of the decorative cover 5 and a gap 50 is formed between the front end of the decorative cover 5 and the upper end of the front wall 29 of the eaves gutter 3. Therefore, a

substantially whole area of the large gap (the upper opening of the eaves gutter 3) between the roof 27 of the building 1 and the front wall 29 of the eaves gutter 3 can be covered by the decorative cover 5, so that the external appearance of the building is not impaired. Furthermore, the decorative cover 5 is attached at a gradient which is substantially equal to that of the roof 27, and the upper portion of the front wall 29 is forward curved so as to function as the curved face portion 34. Therefore, a continuous appearance in which the inclination of the roof 27 may be seemed to be continued to the front end of the eaves gutter 3 is attained, thereby improving the appearance of the building 1. Moreover, snow on the roof 27 is caused to slide down with passing over the upper side of the decorative cover 5 and the front side of the eaves gutter 3, thereby preventing the snow from entering into the eaves gutter 3. Consequently, it is possible to prevent the eaves gutter 3 from being broken under the weight of snow. And it is possible to prevent the foreign matters such as fallen leaves, paper pieces, other trashes from entering into the eaves gutter through the opening thereof and draining performance is secured.

Furthermore, the decorative cover 5 is detachably attached to the support member 4. Even when a damage or the like occurs in the decorative cover 5, therefore, the decorative cover can be easily detached from the support member 4, with the result that the replacement of the decorative cover

5 can be easily conducted. Consequently, the decorative cover 5 may not be attached to the eaves gutter during a period other than the period when snow heavily falls. In accordance with the weather, the use/nonuse state of the decorative cover 5 can be easily switched over. Since the edge of the front and upper portion of the engaging piece 25 is curved with being outward projected so as to function as the sliding face 40, the decorative cover 5 can be smoothly downward rotated while the cover front ear 38 slides over the sliding face 40. Therefore, the attachment of the decorative cover 5 can be easily conducted. Since the edge of the front and lower portion of the engaging piece 25 is formed into a substantially right-angled shape so as to function as the disengagement preventing portion 41, moreover, the engagement between the coupling portion 7 and the coupled portion 9 is hardly canceled unless the elastic piece 26 is rearward elastically deformed. Therefore, the decorative cover 5 is prevented from being detached from the support member 4 by a blow of a strong wind, or the like.

In the embodiment in which the decorative cover 5 is attached in the manner described above, in the case of a light rain, rainwater running down from the roof 27 flows down into the eaves gutter 3 through the gap 39 which is formed behind the decorative cover 5, and, in the case of a heavy rain, rainwater running down from the roof 27 flows down into the eaves gutter 3 through the gap 39 which is formed behind the

decorative cover 5 and remaining rainwater which fails to be caught flows down into the eaves gutter 3 through the gap 50 which is formed in front of the decorative cover 5. Irrespective of the quantity of rain, therefore, rainwater is smoothly caught in the eaves gutter 3.

Figs. 7(a) and 7(b) shows a second embodiment. In the embodiment, as shown in Fig. 7(b), a number of recesses 11 are formed in the lower face of the engaging piece 25 of the coupled portion 9 of the support member 4, and, as shown in Fig. 7(b), a protrusion 10 which is upward projected is disposed at the tip end of the coupling portion 7 of the decorative cover 5. The other components are configured in the same manner as those of the first embodiment. In the same procedure as that of the first embodiment, the decorative cover 5 is attached to the support member 4. At this time, the protrusion 10 of the coupling portion 7 is inserted into the recesses 11 of the coupled portion 9 to be engaged therewith.

In this way, the protrusion 10 is engaged with the recesses 11 when the decorative cover 5 is attached to the support member 4. Therefore, the engagement between the coupling portion 7 and the coupled portion 9 is hardly canceled. As a result, the decorative cover 5 can be prevented from being detached from the support member 4 by a blow of a strong wind or the like. The protrusion 10 and the recesses 11 may be formed also at the tip end of the engaging portion 6 and the lower face of the engaged portion 8, respectively, in

addition to the coupling portion 7 and the coupled portion 9.

Fig. 8 shows a third embodiment. In the embodiment, the support member 4 is configured by an engaging member 12 on which the engaged portion 8 is formed, and a coupling member 13 on which the coupled portion 9 is formed. The engaging member 12 is integrated with the area where the holding portion 16 is continued with the body portion 17, so as to be upward projected. The engaged portion 8 is projected from the upper end of the engaging member 12 with being rearward-upward inclined. A rib 14 is disposed on the rear face of the engaging member 12 so as to elongate over a substantially whole length of the engaging member. The coupling member 13 is formed integrally with the upper side of the body portion 17 so as to be upward projected therefrom and forward separated from the engaging member 12. The upper portion of the coupling member is formed as the coupled portion 9. Another rib 14 is disposed on the front face of the lower portion of the coupling member 13. The coupled portion 9 is configured by the elastic piece 26 which is projected with being slightly rearward-upward inclined, and the engaging piece 25 which is projected from the upper end of the elastic piece with being forward-downward inclined. The other components are configured in the same manner as those of the above-described embodiments.

In this way, the support member 4 is formed by the engaging member 12 and the coupling member 13 which are erected from the gutter bracket 2. Therefore, a force due to the

weight of the snow or the like which is applied to the decorative cover 5 from the upper side can be distributed to the engaging member 12 and the coupling member 13, with the result that the support member 4 is hardly broken.

Fig. 9 shows a fourth embodiment. The embodiment is configured by modifying the first embodiment shown in Fig. 2 so that the rib 14 is formed on the support member 4. The rib 14 is formed by: a main rib 14a which is disposed on the rear face of the support member 4 so as to elongate from the upper face of the holding portion 16 to the lower face of the engaged portion 8; a lower corner rib 14b which is disposed on the front face of the support member 4 and in the base of the support member 4; and an upper corner rib 14c which is disposed below the base of the coupled portion 9.

Since the rib 14 is disposed on the support member 4 in this way, the support member 4 to which the decorative cover 5 is to be attached can be reinforced by the rib 14. Therefore, the support member 4 is hardly broken by a force due to the weight of the snow or the like which is applied to the decorative cover 5 from the upper side.

Figs. 10 to 12 show a fifth embodiment.

In this embodiment, as shown in Figs. 12(a) and 12(b), a connection recess 60 which is opened in the upper and rear faces of the mounting plate 15 is formed in the flat mounting plate 15. A projection 63 which is rearward projected is formed on the inner face of the connection recess 60.

As shown in Fig. 12(c), the engaged portion 8, the coupled piece 9, and a connection piece 61 are formed integrally with a support member 4. The engaged portion 8 is formed by erecting a raised piece 65 from the front portion of the upper face of the support member 4, and rearward-upward inclining the upper end of the raised piece 65. The connection piece 61 is downward projected from the rear end of the support member 4. A hole 64 is formed in a substantially center area of the connection piece. A rib 14 is formed integrally with the upper face of the support member 4 and the rear face of the raised piece 65.

The gutter bracket 2, eaves gutter 3 and support member 4 are assembled in the following manner. First, the projection 63 of the mounting plate 15 is inserted into the hole 64 of the connection piece 61, so that the connection piece 61 is fitted into the connection recess 60 from the rear side, thereby attaching the support member 4 to the mounting plate 15. Next, the mounting plate 15 is placed on the outer wall or the like of a building 1 so that the rear face of the mounting plate 15 abuts against the wall, and then fixed to the building 1 by hammering fixing members such as screws into the outer wall, thereby attaching the gutter bracket 2. At this time, the support member 4 is held with sandwiching the connection piece 61 between the building 1 and the mounting plate 15. Next, a fitting portion 31 of the eaves gutter 3 is fitted onto the insertion piece 22 of the gutter bracket 2, and a mounting

piece 33 is placed on the upper face of the support portion 24. The inserting portion 35 of the rear wall 30 is inserted into the insertion recess 19, and the rear ear 36 is engaged with the upper face of the fixing piece 20. In this way, the eaves gutter 3 is attached to the lower side of the gutter bracket 2. Then the decorative cover 5 is attached by the aforementioned manner.

In this embodiment, the connection recess 60 is formed in the mounting plate 15 disposed in the gutter bracket 2, and the support member 4 is attached to the mounting plate 15 by fitting the connection piece 61 of the support member 4 into the connection recess 60. According to the configuration wherein the gutter bracket 2 and the support member 4 are separately formed, therefore, the eaves gutter can be used while the support member 4 is not attached to the mounting plate 15 as shown in Fig. 11, in a usual state such as a district where it snows lightly. Therefore, the components other than the support member and the decorative cover can be commonly used in a district where it snows heavily and that where it snows lightly (or it never snows). When the connection piece 61 is to be fitted into the connection recess 60, the projection 63 is inserted into the hole 64. Therefore, the connection piece 61 and the connection recess 60 can be positioned by the projection 63 and the hole 64, with the result that the attachment of the support member 4 to the mounting plate 15 can be easily conducted.

Figs. 13(a) and 13(b) show another example of the support member 4. In this example, a number of engaging ridges 66 which laterally elongate are arranged in the vertical directions on the front face of the connection piece 61 of the support member 4, and a number of coupling ridges 67 which laterally elongate are arranged in the vertical directions on the inner face of the connection recess 60. When the support member 4 is to be attached to the mounting plate 15, the engaging ridges 66 and the coupling ridges 67 at a vertical arbitrary position are engaged with each other, so that the connection piece 61 is fitted into the connection recess 60 from the rear side.

In this way, the many engaging ridges 66 which horizontally elongate are arranged in the vertical directions on the front face of the connection piece 61, the many coupling ridges 67 which horizontally elongate are arranged in the vertical directions on the inner face of the connection recess 60, and the connection piece 61 is fitted into the connection recess 60 while engaging the engaging ridges 66 with the coupling ridges 67 with each other. Therefore, the attaching position of the support member 4 with respect to the mounting plate 15 can be adjusted in vertical directions by engaging the engaging ridges 66 and the coupling ridges 67 at a vertical arbitrary position with each other. As a result, the vertical position of the decorative cover 5 can be easily set in accordance with the appearance of the building 1.

Figs. 14(a) and 14(b) show a further example of the support member 4. In the embodiment, a mounting hole 68 is formed in the connection piece 61 of the support member 4, and a thorough hole 69 which is opened in the front face of the mounting plate 15 and also in the connection recess 60 is formed in the mounting plate. The reference numeral 51 designates fixing holes which are used for fixing the mounting plate 15 to the building 1. When the support member 4 is to be attached to the mounting plate 15, the connection piece 61 is fitted into the connection recess 60 from the rear side and a fixing member such as a bolt is passed through the mounting hole 68 and the thorough hole 69 and then screwed.

In this way, the mounting hole 68 of the connection piece 61 is formed, the thorough hole 69 which is opened in the front face and the connection recess 60 is formed in the mounting plate 15, the connection piece 61 is fitted into the connection recess 60, and the fixing member is passed through the mounting hole 68 and the thorough hole 69 and screwed. Therefore, it is possible to enhance the coupling between the mounting plate 15 and the support member 4, and hence the decorative cover 5 can be firmly supported.

In the embodiment, the thorough hole 69 may be formed as an oblong hole which vertically elongates. The fixing member is passed through the oblong thorough hole 69 at an arbitrary height of the hole and then screwed in the mounting hole 68 of the connection piece 61, thereby allowing the

attaching position of the support member 4 with respect to the mounting plate 15 to be adjusted in vertical directions. As a result, the vertical position of the decorative cover 5 can be easily set in accordance with the appearance of the building 1. In the embodiment, plural thorough holes 69 may be formed so as to be arranged in vertical positions. In this case, the fixing member is passed through one of the thorough holes 69 which is at an arbitrary height, and then screwed in the mounting hole 68 of the connection piece 61, thereby allowing the attaching position of the support member 4 with respect to the mounting plate 15 to be adjusted in vertical directions. As a result, the vertical position of the decorative cover 5 can be easily set in accordance with the appearance of the building 1.

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Figs. 15 and 16 show a sixth embodiment.

The portion of the mounting plate 15 which is higher than the holding portion 16 is formed as an attaching portion 52. As shown in Fig. 15, fixing holes 51 are formed in the both sides of the attaching portion 52 across the gutter bracket 2, respectively. Also in the lower portion of the mounting plate 15, fixing holes 51 are formed in the both sides across the gutter bracket 2, respectively.

A reinforcing portion 70 which is substantially parallel with the body portion 17 is bridged between the base of the coupled portion 9 which is in the upper portion of the support member 4, and the upper portion of the attaching

portion 52 of the mounting plate 15, so as to be integrated with the support member 4 and the attaching portion 52. A rib 14a is formed so as to elongate on the front face of the attaching portion 52, the upper faces of the holding portion 16 and the body portion 17, the rear face of the lower portion of the support member 4, and the lower face of the reinforcing portion 70. A rib 14b is disposed on the rear face of the upper portion of the support member 4.

When the eaves gutter 3 is to be attached by using the gutter bracket 2, the mounting plate 15 is placed on the outer wall or the like of the building 1 so as to abut against the wall, and then fixed to the building 1 by hammering fixing members such as screws into the outer wall through the fixing holes 51 with using an electric drill or the like. Next, the fitting portion 31 of the eaves gutter 3 is fitted onto the insertion piece 22 of the gutter bracket 2, and the mounting piece 33 is placed on the upper face of the support portion 24. The inserting portion 35 of the rear wall 30 is inserted into the insertion recess 19, and the rear ear 36 is elastically engaged with the upper face of the fixing piece 20. In this way, the eaves gutter 3 is attached to the lower side of the gutter bracket 2.

In this embodiment, the support member 4 is integrally erected from the gutter bracket 2 and the reinforcing portion 70 is integrally bridged between the mounting plate 15 and the support member 4. According to the integration of the mounting

plate 15 and the support member 4 by means of the reinforcing portion 70, the support member 4 can be reinforced by the mounting plate 15 and the reinforcing portion 70 so as to enhance the strength. Moreover, the load applied to the support member 4 can be transmitted to the mounting plate 15 via the reinforcing portion 70, thereby reducing the load applied to the body portion 17 and the holding portion 16. As a result, it is possible to prevent the support member 4 and the gutter bracket 2 from being broken.

Since the support member 4 is integrally erected from the gutter bracket 2, the shapes of the mounting plate 15, the holding portion 16, and the body portion 17 can be simplified as compared with the case where the gutter bracket 2 and the support member 4 are separately formed. In other words, it is not required to form a special structure such as recesses for attaching the support member 4 to the mounting plate 15 and the gutter bracket 2. Therefore, the production cost of the gutter bracket 2, and the cost for attaching the gutter bracket 2 and the decorative cover 5 can be lowered.

Since the reinforcing portion 70 is formed between the upper portion of the support member 4 and the attaching portion 52 which is in the upper portion of the mounting plate 15, vibration of the support member 4 which may be caused by a blast of a strong wind or the like can be reduced to a low degree. Therefore, the gutter bracket 2 is prevented from being deteriorated by vibration of the support member 4, so

that the support member 4 is not broken. Since the fixing holes 51 which are used for hammering the fixing members are formed in the attaching portion 52 which is higher than the body portion 17 of the gutter bracket 2 and which is in the upper portion of the mounting plate 15, the work of hammering the fixing members can be conducted at a position higher than that of fixing holes in the prior art (fixing holes in the prior art are indicated by broken lines in Fig. 2). Therefore, the holding portion 16, the body portion 17, and the connecting portion 21 of the gutter bracket 2 hardly impede the work of hammering the fixing members, with the result that the work of fixing the mounting plate 15 is facilitated.

In the embodiment in which the decorative cover 5 is attached in the manner described above, in the case of a light rain, rainwater running down from the roof 27 flows down into the eaves gutter 3 through the gap 39, and, in the case of a heavy rain, rainwater running down from the roof 27 flows down with passing over the upper side of the decorative cover 5 and the front side of the eaves gutter 3.

Incidentally, the configuration of the eaves gutter 3 is not limited to that as shown in the aforementioned embodiments. For example, the eaves gutters as shown Figs. 17 and 18 can be used together with the present invention.

As described above, an eaves gutter is attached to a lower side of a gutter bracket which is mounted on a building, a support member is disposed on the gutter bracket to be upward

projected, and a decorative cover which substantially covers a whole of an upper opening of the eaves gutter is detachably attached to the support member. Therefore, the upper opening of the eaves gutter can be substantially covered by the decorative cover, and hence it is possible to prevent the external appearance of the building from being impaired.

Further, a continuous appearance in which the inclination of the roof may be seemed to be continued to the front end of the eaves gutter is attained, thereby improving the appearance of the building. In this case, since the upper portion of the front wall of the eaves gutter is formed with being rearward inclined and the gap is formed between the upper end of the front wall and the front end of the decorative cover, the gap is hardly seen from under the eaves gutter. Therefore, the continuous appearance is not impaired.

The decorative cover can block snow so that snow does not fall into the eaves gutter, and hence it is possible to prevent the eaves gutter from being broken under the weight of snow.

In the case of a light rain, rainwater flows down into the eaves gutter through the gap behind the decorative cover, and, in the case of a heavy rain, rainwater flows down into the eaves gutter through both the gaps in front of and behind the decorative cover. Irrespective of the quantity of rain, therefore, rainwater is smoothly caught in the eaves gutter. Since the decorative cover is detachably attached to the

support member, the decorative cover can be easily detached from the support member even when a damage or the like occurs in the decorative cover. Therefore, the replacement of the decorative cover can be easily conducted.

Further, the elastic engagements between the engaging portion and the engaged portion, and the coupling portion and the coupled portion can be easily canceled, and the replacement of the decorative cover can be easily conducted. In this case, moreover, the gaps formed in front of and behind the decorative cover allow the decorative cover to be moved back and forth, thereby facilitating the cancellation of the elastic engagement. As a result, the replacement of the decorative cover can be very easily conducted.

Furthermore, an upward protrusion is formed in a tip end portion of the coupling portion, a recess is formed in a lower face of the coupled portion, and the protrusion and the recess are engaged with each other. Therefore, the engagement between the protrusion and the recess can enhance the coupling strength between the coupling portion and the coupled portion, so that the decorative cover is prevented from being detached from the support member by a blow of a strong wind, or the like.

When the support member is formed by an engaging member and a coupling member which are erected from the gutter bracket, the engaged portion is formed at an upper end of the engaging member, and the coupled portion is formed at an upper

end of the coupling member. Therefore, a force due to the weight of snow or the like which is applied to the decorative cover from the upper side can be distributed to the engaging member and the coupling member, with the result that the support member is hardly broken.

Furthermore, a rib is formed on the support member. Therefore, the support member to which the decorative cover is to be attached can be reinforced by the rib. As a result, the support member is hardly broken by a force due to the weight of snow or the like which is applied to the decorative cover from the upper side.

In the case that the support member is integrally formed with the gutter bracket so as to be upward projected from the gutter bracket, the procedure to attach the support member can be omitted, and the support member formed by synthetic resin contributes to the aforementioned elastic engagement.

If it is possible to use the eaves gutter and the gutter bracket while the support member is not attached to the mounting plate in a district where it snows lightly or never snows, the component other than the support member and the decorative cover can be commonly used in a district where it snows heavily and that where it snows lightly or never snows.

The connection piece is engageably formed at a position of the connection recess which is arbitrarily set in vertical directions. Therefore, the attaching position of the support

member with respect to the mounting plate can be adjusted in vertical directions, and the vertical position of the decorative cover can be easily set in accordance with the appearance of the building.

Further, a projection is formed in the connection recess, a hole is formed in the connection piece, and the connection piece is fitted into the connection recess with fitting the projection into the hole. Therefore, the connection piece and the connection recess can be positioned by the projection and the hole, with the result that the attachment of the support member to the mounting plate can be easily conducted.

According to the integration of the mounting plate and the support member by means of the reinforcing portion, moreover, the support member can be reinforced by the mounting plate and the reinforcing portion so as to enhance the strength. Therefore, it is possible to prevent the support member and the gutter bracket from being broken.

Further, a rib is formed on the reinforcing portion. Therefore, the reinforcing portion can be reinforced by the rib, so that the effect of reinforcing the support member by the reinforcing portion is enhanced, thereby preventing the support member from being broken.

Furthermore, a fixing hole which is used for hammering a fixing member is formed in the mounting plate at a position which is higher than the gutter bracket. Therefore, the work

of hammering the fixing member through the fixing hole can be conducted at a position higher than that of the gutter bracket so that the gutter bracket does not impede the work, with the result that the work of fixing the mounting plate is facilitated.

WHAT IS CLAIMED IS:

1. A structure for attaching a decorative cover for an eaves gutter comprising:

a gutter bracket mounted on a building;

an eaves gutter attached to a lower side of said gutter bracket;

a support member attached to an upper side of said gutter bracket; and

a decorative cover detachably attached to said support member so as to substantially cover a whole of an upper opening of said eaves gutter while gaps being opened upward are provided at front and rear of said decorative cover.

2. The structure for attaching a decorative cover for an eaves gutter according to claim 1, wherein an engaging portion is downward projected from an end portion of said decorative cover, said end portion being closer to the building, a coupling portion is downward projected from another end portion of said decorative cover, said other end portion being remoter from the building, an engaged portion which is projected toward the building, and a coupled portion which is projected in a direction opposite to the building are formed on said support member, said engaging portion and said engaged portion are elastically engaged with each other, and said coupling portion and said coupled portion are elastically engaged with each other.

3. The structure for attaching a decorative cover for an eaves gutter according to claim 1, wherein said eaves gutter includes a front wall most separate from the building and an upper portion of said front wall is forward curved, and a gradient of said decorative cover is substantially equal to that of a roof of the building.

4. The structure for attaching a decorative cover for an eaves gutter according to claim 1, wherein said support member is integrally formed with said gutter bracket so as to be upward projected from said gutter bracket, and said support member and gutter bracket are formed by synthetic resin.

5. The structure for attaching a decorative cover for an eaves gutter according to claim 1, wherein said gutter bracket has a mounting plate being placed on the building and a connection recess being upward opened is formed in said mounting plate, and said support member has a connection piece downward projected from said support member, and said connection piece is fitted into said connection recess thereby attaching said support member to said mounting plate.

6. The structure for attaching a decorative cover for an eaves gutter according to claim 4, wherein said gutter bracket includes a mounting plate being placed on the building and a reinforcing portion being integrally bridged between said

mounting plate and said support member.