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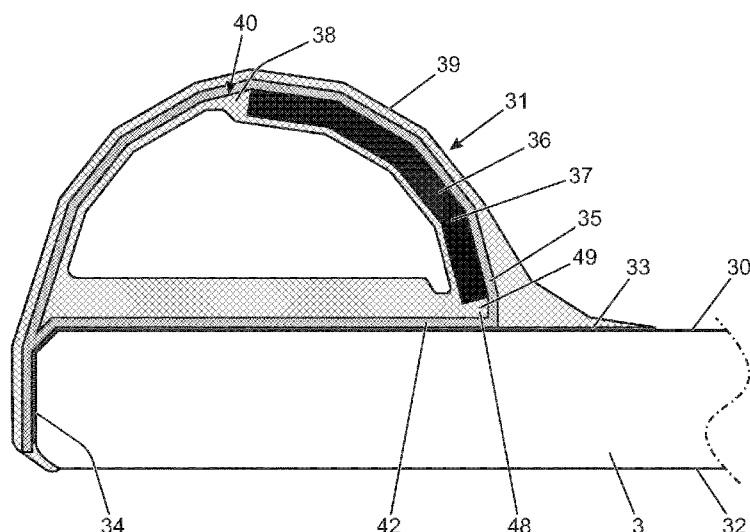


FIG. 3

(57) Abstract: A retaining apparatus (31) for a window (3) of a vehicle (1), the retaining apparatus (31) comprising: attachment means (33) arranged to attach the retaining apparatus (31) to an inner face of the window (3); locking means (37) arranged to engage with a corresponding locking member (41) on the body (25) of the vehicle (1) and retain the window (3) in position when the window (3) is closed, wherein the locking means (37) enables the window (3) to be retained in a position which is flush with a portion of the body (25) of the vehicle (1); and positioning means (35) comprising a tensile member (38) coupled to the locking means (37) and arranged to pull the locking means (37) into a locked position with the corresponding locking member (41) on the body (25) of the vehicle (1).



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A RETAINING APPARATUS FOR A WINDOW OF A VEHICLE

TECHNICAL FIELD

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The present disclosure relates to a retaining apparatus for a window of a vehicle. In particular, but not exclusively it relates to a retaining apparatus for a window of a vehicle which is arranged to retain the window in a position flush with a portion of the body of the vehicle.

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Aspects of the invention relate to a retaining apparatus, a locking member and a vehicle.

BACKGROUND

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It is a desirable to have windows in a vehicle mounted so that the window forms a flush surface with a body portion of the vehicle. This may provide for improved air flow around the vehicle and may also improve the aesthetic appearance of the vehicle. However such windows need to be securely held in position to prevent them from moving outwards when the vehicle is moving at high speeds.

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It is an aim of the present invention to enable a window of a vehicle to be securely retained in position so that the window forms a flush surface with a body portion of the vehicle.

SUMMARY OF THE INVENTION

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Aspects and embodiments of the invention provide a retaining apparatus, a locking member and a vehicle as claimed in the appended claims.

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According to an aspect of the invention there is provided a retaining apparatus for a window of a vehicle, the retaining apparatus comprising: attachment means arranged to attach the retaining apparatus to an inner face of the window; locking means arranged to engage with a corresponding locking member on the body of the vehicle and retain the window in position when the window is closed, wherein the locking means enables the window to be retained in a position which is flush with a portion of the body of the vehicle; and positioning means comprising a tensile member coupled to the locking means and arranged to pull the locking

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means into a locked position with the corresponding locking member on the body of the vehicle.

This provides the advantage that the retaining apparatus can hold the window in a position so that the window forms a flush surface with a body portion of the vehicle. The arrangement of the locking means and positioning means may provide sufficient retaining forces to prevent the window from moving outwards when the vehicle is moving. This enables the window to be positioned level with the body portion of the vehicle.

As the attachment means enables the retaining apparatus to be attached to an inner face of the window this may enable the retaining apparatus to be positioned discretely so that it is hidden from view when the window is in a closed position.

The locking means may comprise a rigid member.

This may provide the advantage that the rigid member can be held in position by a corresponding locking member on the body portion of the vehicle. This may enable the locking means to bear the load of the window and prevent outward movement of the window when the vehicle is moving.

The locking means may comprise a semi-rigid member.

This may provide the advantage that the semi-rigid member can be held in position by a corresponding locking member on the body portion of the vehicle. As the locking means is semi-rigid this may allow for partial deformation of the locking means which may aid alignment of the locking means with the locking member. This may also improve the durability of the retaining apparatus as the partial deformation of the semi-rigid member may reduce strain in other components of the retaining apparatus such as the tensile member.

The locking means may be coupled to the tensile member of the positioning means such that deformation of the tensile member causes movement of the locking means.

This may provide the advantage that positioning means may be arranged to pull the rigid member or semi-rigid member into different positions. When the window is in a closed position the tensile member may be deformed to pull the rigid member or semi-rigid member

into a locked configuration with the locking member of the body portion of the vehicle. When the window is in an open position the tensile member may be deformed to enable the rigid member or semi-rigid member to be pulled into a flat configuration so that the window and retaining apparatus can be received within a door or other part of the vehicle.

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The positioning means may be arranged to be deformed by the corresponding locking member on the body of the vehicle.

10 This may provide the advantage that the deformation of the positioning means causes the membrane to pull the rigid member or semi-rigid member into the locked position and ensures that the window is retained securely in place. This provides a retaining apparatus with a small number of components.

The tensile member may comprise a membrane overlaying the locking means.

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Having the membrane overlaying the locking means provides the advantage that the locking means is securely attached to the positioning means. Using a membrane as a tensile member may provide a simple structure which can be fabricated using a small number of parts.

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The positioning means may comprise a tapered end portion arranged to correspond with a ramp on the body of the vehicle to facilitate movement of the positioning means relative to other portions of the vehicle when the window is opened.

25 The tapered end portion may provide the advantage that it allows for a graduated separation of the window and other vehicle components as the window is opened and closed. In some examples the tapered end portion may also enable the positioning means to pull the locking means towards a flat configuration when the window is opened. This may provide the advantage that it enables the retaining apparatus to be pushed into a flatter configuration
30 when the window is opened. This may provide a smaller profile which needs to be accommodated by the body portion of the vehicle when the window is opened. This may reduce the space required for the window and the retaining apparatus within the body portion.

35 The retaining apparatus may comprise a sealing member overlaying the positioning means.

This may provide the advantage that it provides a seal between the window and the body portion of the vehicle. The sealing member may also be arranged to absorb some of the stresses of the tensile member of the positioning means and prevent the tensile membrane
5 from failing.

The sealing member may be flocked.

The flocking may provide the advantage that it may enable the window to be easily moved
10 between the open and closed positions.

The attachment portion may comprise an adhesive arranged to adhere the retaining apparatus to an inner face of a window.

15 This may provide the advantage that it enables the retaining apparatus to be provided on the inside of the vehicle. As there is no part of the retaining apparatus which needs to be provided on the outer surface of the window this enables the window to form a flush surface with a body portion of the vehicle.

20 The adhesive may also enable the retaining apparatus to be provided in a discrete position so that the retaining apparatus is not visible when the window is in a closed position.

The retaining apparatus may be arranged to be attached to a front side window of a vehicle.

25 This may enable front side windows of a vehicle to form a flush surface with a body portion of the vehicle. This may be advantageous as the front windows of the vehicle may be subjected to higher forces than the rear windows when the vehicle is travelling at speed.

The retaining apparatus may extend around at least a portion of the perimeter of the window.
30

This provides the advantages that it may enable a plurality of edges of the window to be securely held in position. As the retaining apparatus can be provided around the perimeter this may distribute forces on the locking means and positioning means and reduce the likelihood of failure of the retaining apparatus.
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According to another aspect of the invention there may be provided a locking member for attachment to a body portion of a vehicle, the locking member comprising: receiving means for receiving a locking means of a retaining apparatus mounted on a window; and deforming means for deforming a positioning means of the retaining apparatus so as to pull the locking means into the receiving means and hold the locking means within the receiving means and retain the window in a position flush with the body portion of the vehicle.

The body portion may comprise a door.

The body portion may comprise part of the frame of the vehicle.

According to another aspect of the invention there may be provided a vehicle comprising a retaining apparatus and a locking member as described above.

According to another aspect of the invention there may be provide a retaining apparatus for a window of a vehicle, the retaining apparatus comprising: locking means arranged to fit into a corresponding locking member on the body of the vehicle and secure the window in position when the window is closed, wherein the locking means enables the window to be secured in a position which is flush with a portion of the body of the vehicle.

According to another aspect of the invention there may be provided a retaining apparatus for a window of a vehicle, the retaining apparatus comprising: an attachment portion arranged to attach the retaining apparatus to an inner face of the window; a first locking member arranged to fit into a corresponding locking member on the body of the vehicle and secure the window in position when the window is closed, wherein the first locking member enables the window to be secured in a position which is flush with a portion of the body of the vehicle; and a membrane overlaying the first locking member and arranged to pull the first locking member into a locked position with the corresponding locking member on the body of the vehicle.

The apparatus may be for retaining a window within the body of a vehicle.

Within the scope of this application it is expressly intended that the various aspects, embodiments, examples and alternatives set out in the preceding paragraphs, in the claims and/or in the following description and drawings, and in particular the individual features

thereof, may be taken independently or in any combination. That is, all embodiments and/or features of any embodiment can be combined in any way and/or combination, unless such features are incompatible. The applicant reserves the right to change any originally filed claim or file any new claim accordingly, including the right to amend any originally filed claim to depend from and/or incorporate any feature of any other claim although not originally claimed in that manner.

BRIEF DESCRIPTION OF THE DRAWINGS

One or more embodiments of the invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Fig 1 illustrates an example vehicle which may comprise embodiments of the invention;

Fig 2 illustrates a side view of portion of a vehicle which may comprise embodiments of the invention;

Fig 3 illustrates an example retaining apparatus;

Fig 4 illustrates an example locking member;

Fig 5A and 5B illustrate an example retaining apparatus and locking member; and

Fig 6 is a cross section through a part of a vehicle.

DETAILED DESCRIPTION

Figures 3, 5A, 5B and 6 illustrate a retaining apparatus 31 for a window 3 of a vehicle 1, the retaining apparatus 31 comprising: attachment means 33 arranged to attach the retaining apparatus 31 to an inner face of the window 3; locking means 37 arranged to engage with a corresponding locking member 41 on the body 25 of the vehicle 1 and retain the window 3 in position when the window 3 is closed, wherein the locking means 37 enables the window 3 to be retained in a position which is flush with a portion of the body 25 of the vehicle 1; and positioning means 35 comprising a tensile member 38 coupled to the locking means 37 and arranged to pull the locking means 37 into a locked position with the corresponding locking member 41 on the body 25 of the vehicle 3.

Fig 1 illustrates an example vehicle 1 which may comprise embodiments of the invention. The vehicle 1 of Fig. 1 may comprise retaining apparatus 31 and locking member 41 according to examples of the present disclosure. It is to be appreciated that the vehicle 1 of

Fig 1 is provided as an example and that examples of the disclosure may be provided in any suitable vehicle 1.

The vehicle 1 comprises a plurality of windows 3. The example retaining apparatus 31 may be attached to the windows to retain the windows 3 in position. In the example of Fig 1 the windows 3 are provided on the side of the vehicle 1. In some examples the windows 3 could be provided to other parts of the vehicle 3. For instance they could be provided on the roof of the vehicle 1 as a sun roof or on any other suitable part of the vehicle 1.

Fig 2 illustrates a side view of a portion of a vehicle 1 which may comprise embodiments of the invention. Fig 2 illustrates a front side door 21 of a vehicle 1. It is to be appreciated that embodiments of the invention could be applied to other windows 3 within the vehicle 1. For instance it could be provided to rear windows 3 and/or a sun roof.

In the example of Fig 2 the window 3 is mounted within the door 21 so that, when the window 3 is in a closed position, a portion of the door 21 extends around the perimeter of the window 3. The door 21 fits into a frame member 23 of the vehicle 1. When the window 3 is in an open position the window 3 may be received within the door 21.

The door 21 and the frame member 23 may form part of the body 25 of the vehicle 1. The body 25 of the vehicle 1 has a surface. The retaining apparatus 31 of examples of the disclosure may enable the window 3 to be positioned so that it is retained within the door 21 in a position flush with an adjacent surface of the body 25 of the vehicle 1.

It is to be appreciated that the window 3 and the body 25 of the vehicle 1 may be provided in arrangements different to the arrangement illustrated in Fig 2. For instance in some examples the door 21 might only extend around a portion of the perimeter of the window 3. In such examples, when the window 3 and door 21 are closed, the window 3 may fit into the frame member 23 of the vehicle 1.

Fig 3 illustrates an example retaining apparatus 31 according to examples of the disclosure. The retaining apparatus 31 may be attached to the windows 3 of the vehicle 1.

The retaining apparatus 31 comprises attachment means 33, locking means 37 and positioning means 35. In the example of Fig 3 the retaining apparatus 31 also comprises a sealing member 39.

- 5 The window 3 comprises an inner face 30 and an outer face 32. The window 3 may be arranged so that the inner face 30 may be provided on the inside of the vehicle 1 and the outer face 32 forms part of the outer surface of the vehicle 1.

10 The window 3 also comprises an edge portion 34. The edge portion 34 is provided at right angles between the outer face 32 and the inner face 30. As the window 3 is thin, the edge portion 34 is smaller than the inner surface 30 and the outer surface 32.

15 The attachment means 33 may comprise any means which enables the retaining apparatus 31 to be attached to the inner face surface 30 of the window 3. For example, the attachment means 33 may comprise an adhesive. The attachment means 33 may comprise an adhesive such as an epoxy resin or any other suitable material. The material that is used for the adhesive may depend on the material that is used for the window 3 and the materials that are used for the other components of the retaining apparatus 31.

20 The attachment means 33 may enable the retaining apparatus 31 to be positioned on the inner face 30 of the window 3 so that the retaining apparatus 31 can engage with a corresponding locking member 41 on the body 25 of the vehicle 1. In the example of Fig 3 the retaining apparatus 31 is positioned on the perimeter of the inner face 30 of the window 3. The retaining apparatus 31 may extend around at least a portion of the perimeter of the window 3. For instance, the retaining apparatus 31 may extend along one or more edges of the window 3.

30 In the example of Fig 3 the attachment means 33 extends over a portion of the inner face 30 of the window 3 and also the edge portion 34 of the window 3. Having the attachment portion 33 extend over a portion of the inner face 30 and also onto the edge portion 34 provides a large surface area of the window 3 for the attachment means 33 to bond to.

35 In the example of Fig 3 the attachment portion does not extend onto the outer face 32 of the window 3. This may enable the retaining apparatus 31 to be provided on the inside of the vehicle 1.

The locking means 37 may comprise any means which may be arranged to engage with a corresponding locking member 41 on the body 25 of the vehicle 1 so as to retain the window 3 in position. In the example of Fig 3 the locking means 37 comprises a rigid member 36.

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The rigid member 36 may be sized and shaped so that it can engage with the corresponding locking member 41 on the body 25 of the vehicle 1. The rigid member 36 may be sized and shaped to fit into a receiving means of the corresponding locking member 41. In the example of Fig 3 the rigid member 36 has a curved shape. It is to be appreciated that other shapes could be used in other examples of the disclosure.

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The rigid member 36 may comprise any suitable material. In some examples of the disclosure the rigid member 36 may comprise a rigid plastic or a metal or any other suitable material.

15

In other examples the locking means 37 may comprise a semi-rigid member. The semi-rigid member may be sized and shaped so that it can engage with the corresponding locking member 41 on the body 25 of the vehicle 1. The use of a semi-rigid member may allow for partial deformation of the locking means 3 which may aid alignment of the locking means and the corresponding locking member 41.

20

The retaining apparatus 31 also comprises positioning means 35. The positioning means 35 may comprise any means which may be configured to position the locking means 37 into a locked configuration with the corresponding locking member 41 on the body 25 of the vehicle 1. In some examples the positioning means 35 may also enable the locking means 37 to be positioned into an open configuration. For instance, in the open configuration the locking means 37 may be moved into a flat configuration to enable the window 3 to be moved into the door 21.

25

In the example of Fig 3 the positioning means 35 comprises a tensile member 38. The tensile member 38 is provided as a membrane 40. The membrane 40 is provided overlaying the locking means 37. The membrane 40 is arranged so that when the membrane 40 is deformed a force is applied to the locking means 37.

30

The rigid member 36 may be coupled to the membrane 40. The rigid member 36 is coupled to the membrane 40 so that deformation of the membrane 40 causes movement of the rigid member 36. The rigid member 36 may be adhered to the membrane 40 or may be coupled using any other suitable means. In the example of Fig 3 the rigid member 36 is coupled to an inner surface of the membrane 40. Other arrangements of the rigid member 36 and the membrane 40 may be provided in other examples of the disclosure.

In the example of Fig 3 the positioning means 35 comprises a hinge feature 48. The hinge feature 48 may comprise any means which may enable rotation of the rigid member 36 relative to the attachment means 33 or other parts of the retaining apparatus 31. The rotation of the rigid member 36 may aid the positioning of the rigid member 36 within a corresponding locking member 41 on the body 25 of the vehicle 1. In some examples the rotation of the rigid member 36 may aid compression of the retaining apparatus 31 when a window is being opened.

In the example of Fig. 3 the hinge feature 48 comprises a gap 49 between the end of the rigid member 36 and the end of the membrane 40. Other types of hinge features 48 may be used in other examples of the disclosure.

In the example of Fig 3 the attachment means 33 are provided on a portion of the positioning means 35. The positioning means 35 comprises a surface 42 which is provided underneath the locking means 37. The attachment means may be provided on the surface 42 and may enable the surface 42 of the positioning means 35 to be adhered to the inner face 30 of the window 3.

The sealing member 39 may comprise any means which may enable a seal to be formed between the window 3 and the body 25 of the vehicle 1. The seal may prevent the ingress of fluid, such as water, into the vehicle 1.

In the example of Fig 3 the sealing member 39 is provided overlaying the positioning means 35. The sealing member 39 may comprise rubber or any other suitable material.

In some examples the sealing member 39 may be flocked. The flocking may enable the window 3 to be moved between open and closed positions.

Fig 4 illustrates an example locking member 41 which may be provided on a body 25 portion of a vehicle 1. The locking member may be attached to the body 25 of the vehicle 1 so that the locking member 41 engages with the retaining apparatus 31. In the example vehicle 1 of Fig 2 the locking member 41 may be attached to the door 21. In other examples the locking member 41 could be attached to other parts of the body 25 of the vehicle 1 such as the frame 23.

The locking member 41 may correspond to and engage with the locking means 37 of the retaining apparatus 31 and retain the window in position relative to the body 25 of the vehicle 1. In the examples of Fig 4 the locking member 41 comprises receiving means 43 and deforming means 45.

The receiving means 43 may comprise any means which may be configured to receive the locking means 37 of the retaining apparatus 31. In the example of Fig 4 the receiving means 43 comprises a recess 44. The recess may be sized and shaped so that the rigid member 36 of the locking means 37 fits into the recess 44 and can be retained in position within the recess 44.

The deforming means 45 may comprise any means which may be arranged to deform the positioning means 35 of the retaining apparatus 31. The deforming means may be arranged to deform the tensile member 38 of the positioning means 35 so that the tensile member 38 pulls the rigid member 36 into the recess 44.

In the example of Fig 4 the deforming means 45 comprises a projection 46. The projection 46 is positioned on the edge of the locking member 41 so that when the window 3 is closed the projection 46 contacts the retaining apparatus 1. The projection 46 is shaped so that when the window 3 is closed the projection 46 pushes the tensile member 38 inwards as illustrated in Figs 4 and 5B.

Fig 5A and 5B illustrate an example retaining apparatus 31 and corresponding locking member 41. Fig 5A illustrates the window 3 in an open configuration. And Fig 5B illustrates the window 3 in a closed configuration.

In Figs 5A and 5B the locking member 41 is provided on the body 25 portion of the vehicle 1. The body 25 portion could be a door 21 or part of a frame 23 of the vehicle 1 or any other

suitable part of the vehicle 1. The locking member 41 is positioned on the body 25 of the vehicle 1 so that when the window 3 is in a closed configuration the retaining apparatus 31 engages with the locking member 41.

- 5 In Fig 5A the window 3 is open so that retaining apparatus 31 is not engaged with the locking member 41. When the window is open the retaining apparatus 31 is provided in an un-deformed configuration. In the un-deformed configuration the retaining apparatus 31 has a semi circular cross section. In other examples the un-deformed retaining apparatus 31 could have a different shaped cross section.

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In Fig 5B the window 3 is closed and the retaining apparatus 31 is engaged with the locking member 41. When the retaining apparatus 31 engages with the locking member 41 the deforming means 45 of the locking member 31 deforms the positioning means 35 of the retaining apparatus 31. In the example of Fig 5B the projection 46 of the deforming means
15 45 contacts the tensile member 38 and pushes the tensile member 38 inwards. As the tensile member 38 is pushed inwards this causes the rigid member 36 of the locking means 37 to be pulled inwards and retained into position within the recess 44 of the receiving means 43.

- 20 The forces applied to the rigid member 36 by the tensile member 38 may ensure that the rigid member 36 is held securely in position within the recess 44. This may hold the window 3 in position relative to the body of the vehicle 1 and may prevent the window 3 from moving outwards even when the vehicle 1 is moving at high speeds.

- 25 Fig 6 is a cross section through a section of a vehicle 1. Fig 6 is a cross section though A-A as illustrated in Fig 2.

- In Fig 6 the window 3 is in a closed position and the retaining apparatus 31 is engaged with the locking member 41. This holds the window 3 in a position flush with a portion of the body
30 25 of the vehicle 1.

- The window 3 is positioned flush with a portion of the body 25 of the vehicle 1 so that the outer face 32 of the window 3 and the outer surface 61 of the portion of the body 25 of the vehicle 1 are level. There is no step or offset between the surface 61 of the portion of the
35 body 25 of the vehicle 1 and the outer face 32 of the window 3.

In some examples the outer face 32 of the window 3 and the outer surface 61 of the portion of the body 25 of the vehicle 1 may form a smooth continuous surface. As all of the retaining apparatus 31 is provided on the inner face 32 of the window 3 there is no part of the retaining apparatus 31 needed on the outer side of the vehicle 1 which would break up the continuous surface.

In some examples the outer face 32 of the window 3 may be retained so that there is no gap between the outer surface 61 of the portion of the body 25 of the vehicle 1 and the outer face 32 of the window 3. In other examples a gap or other discontinuity could be provided between the outer surface 61 of the portion of the body 25 of the vehicle 1 and the outer face 32 of the window 3.

Although embodiments of the present invention have been described in the preceding paragraphs with reference to various examples, it should be appreciated that modifications to the examples given can be made without departing from the scope of the invention as claimed.

For example in the open configuration illustrated in Fig 5A the retaining apparatus 31 has a semi-circular cross section. In other examples when the window 3 is in an open configuration the retaining apparatus 31 may be compressed into a flatter configuration. In some examples the tensile member 38 may be deformed to enable the rigid member 36 to be pulled into a flat configuration so that the window 3 and retaining apparatus 31 have a thinner profiles and can be received within a door or other part of the vehicle 1. This may reduce the space required for the window 3 and the retaining apparatus 31 within the body portion of the vehicle 1.

In some examples the positioning means 35 may comprise a tapered end portion arranged to correspond with a ramp on the body 25 of the vehicle 1. The tapered end portion and the ramp may be arranged to facilitate movement of the positioning means 35 relative to other portions of the vehicle 1 when the window is opened. The tapered end portion and the ramp may allow for a graduated separation of the window and other vehicle components as the window is opened and closed.

The ramp may comprise any means which may be configured to correspond with the tapered end portion of the positioning means 35. In some examples the ramp may comprise a widening feature which may be positioned on the seal of a door or other part of the vehicle 1. The ramp may be provided for examples where the retaining apparatus 1 extends along the three edges of the window that are visible when the window is closed.

in some examples the tapered end portion may enable the positioning means 35 to pull the rigid member 36 towards a flat configuration when the window is opened. This may reduce the space required for the window and the retaining apparatus within the body portion.

Features described in the preceding description may be used in combinations other than the combinations explicitly described.

Although functions have been described with reference to certain features, those functions may be performable by other features whether described or not.

Although features have been described with reference to certain embodiments, those features may also be present in other embodiments whether described or not.

Whilst endeavoring in the foregoing specification to draw attention to those features of the invention believed to be of particular importance it should be understood that the Applicant claims protection in respect of any patentable feature or combination of features hereinbefore referred to and/or shown in the drawings whether or not particular emphasis has been placed thereon.

CLAIMS

1. A retaining apparatus for a window of a vehicle, the retaining apparatus comprising:
attachment means arranged to attach the retaining apparatus to an inner face of the
5 window;
locking means configurable into a locked configuration to engage with a
corresponding locking member on the body of the vehicle and thereby retain the window in
position when the window is closed, wherein the locking means enables the window to be
retained in a position which is flush with a portion of the body of the vehicle; and
10 positioning means comprising a tensile member coupled to the locking means and
deformable by the locking member to pull the locking means into the locked configuration
with the corresponding locking member on the body of the vehicle.
2. A retaining apparatus as claimed in any preceding claim wherein the locking means
15 comprises a rigid member.
3. A retaining apparatus as claimed in claim 1 wherein the locking means comprises a
semi-rigid member.
- 20 4. A retaining apparatus as claimed in any preceding claim wherein the tensile member
comprises a membrane overlaying the locking means.
5. A retaining apparatus as claimed in any preceding claim wherein the positioning
means comprises a tapered end portion arranged to correspond with a ramp on the body of
25 the vehicle to facilitate movement of the positioning means relative to other portions of the
vehicle when the window is opened.
6. A retaining apparatus as claimed in any preceding claim comprising a sealing
member that enables a seal to be formed between the window and the body of the vehicle.
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7. A retaining apparatus as claimed in claim 6 wherein the sealing member overlays the
positioning means.
8. A retaining apparatus as claimed in claim 6 or claim 7 wherein the sealing member is
35 flocked.

9. A retaining apparatus as claimed in any preceding claim wherein the attachment means comprises an adhesive arranged to adhere the retaining apparatus to an inner face of a window.

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10. A retaining apparatus as claimed in any preceding claim wherein the retaining apparatus is arranged to be attached to a front side window of a vehicle.

11. A retaining apparatus as claimed in any preceding claim wherein the retaining apparatus extends around at least a portion of the perimeter of the window.

12. A locking member for attachment to a body portion of a vehicle, the locking member comprising;

15 receiving means for receiving a locking means of a retaining apparatus mounted on a window; and

deforming means for deforming a positioning means of the retaining apparatus so as to pull the locking means into the receiving means and hold the locking means within the receiving means and retain the window in a position flush with the body portion of the vehicle.

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13. A locking member as claimed in claim 12 wherein the body portion comprises a door.

14. A locking member as claimed in claim 12 wherein the body portion comprises part of the frame of the vehicle.

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15. A vehicle comprising a retaining apparatus as claimed in any of claims 1 to 11 and a locking member as claimed in any of claims 12 to 14.

16. A retaining apparatus substantially as described herein with reference to the accompanying drawings and/or as illustrated in the accompanying drawings.

17. A locking member substantially as described herein with reference to the accompanying drawings and/or as illustrated in the accompanying drawings.

18. A vehicle substantially as described herein with reference to the accompanying drawings and/or as illustrated in the accompanying drawings.

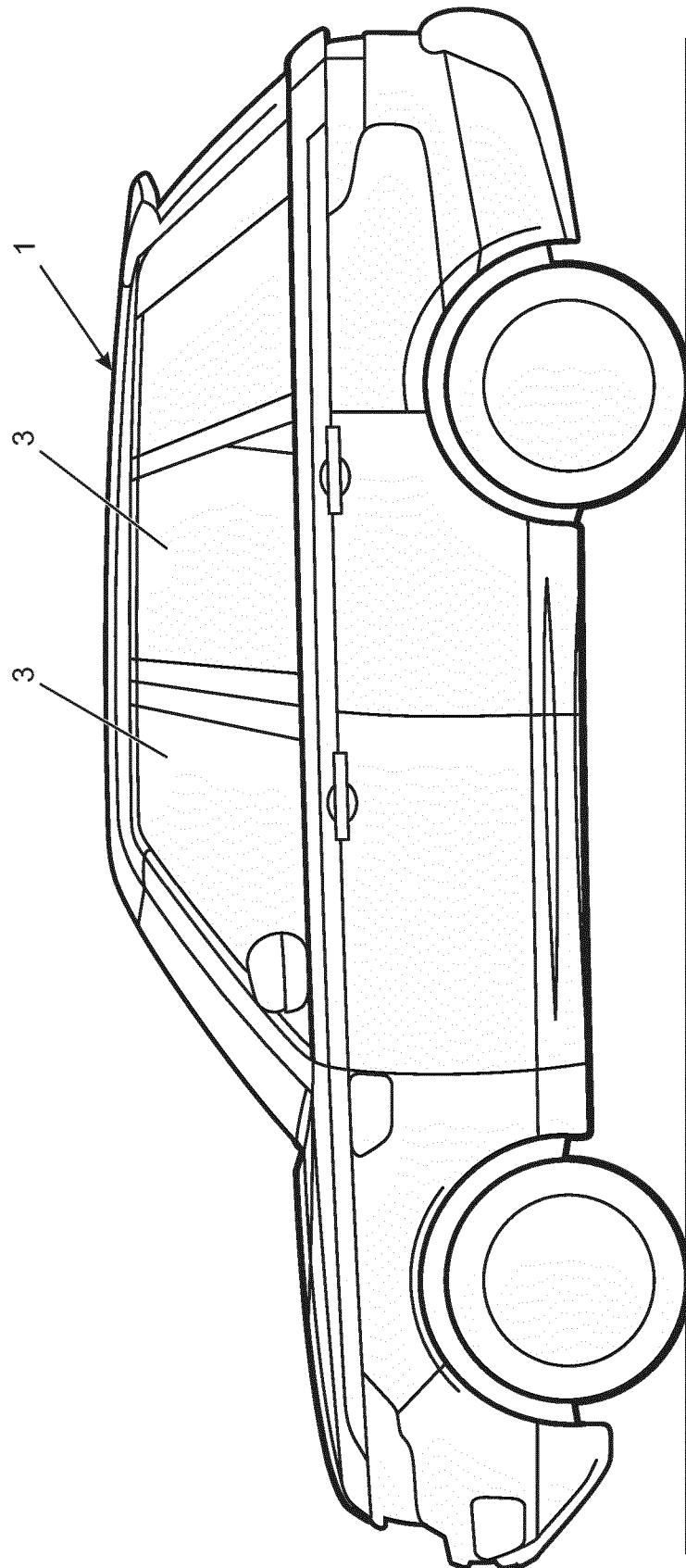


FIG. 1

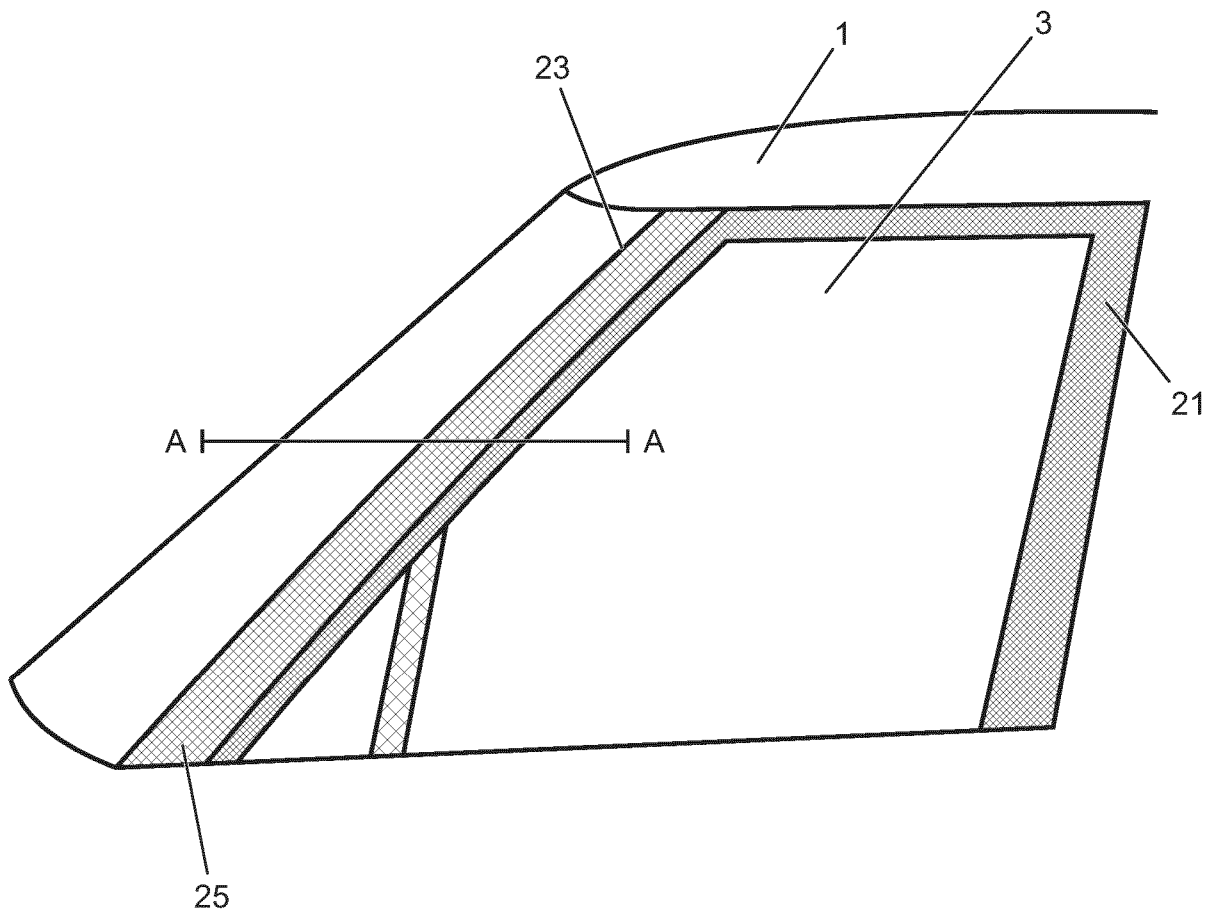
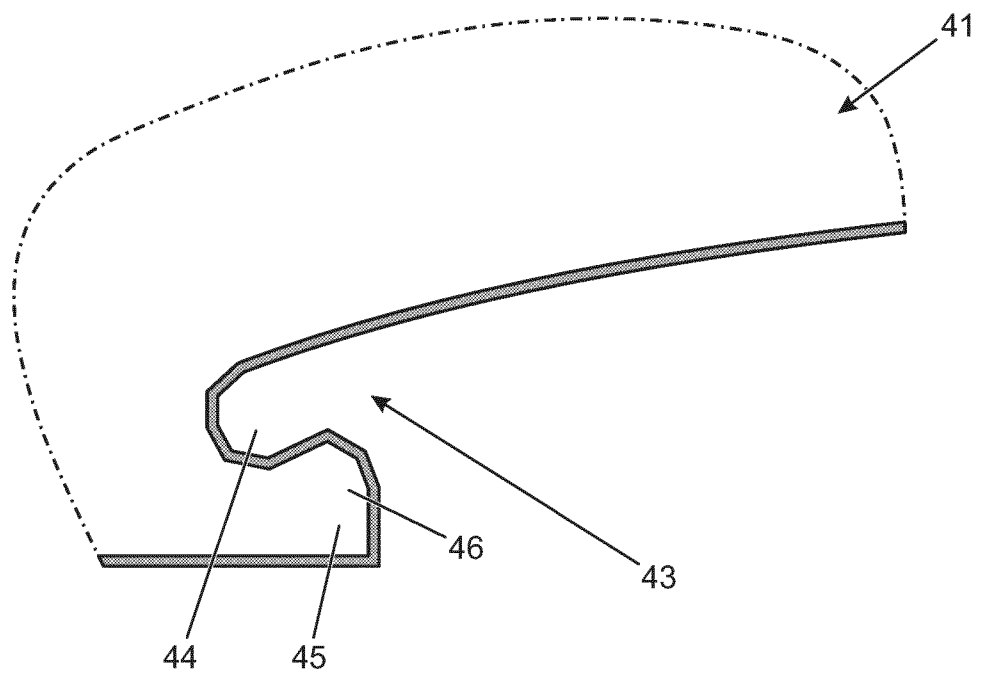
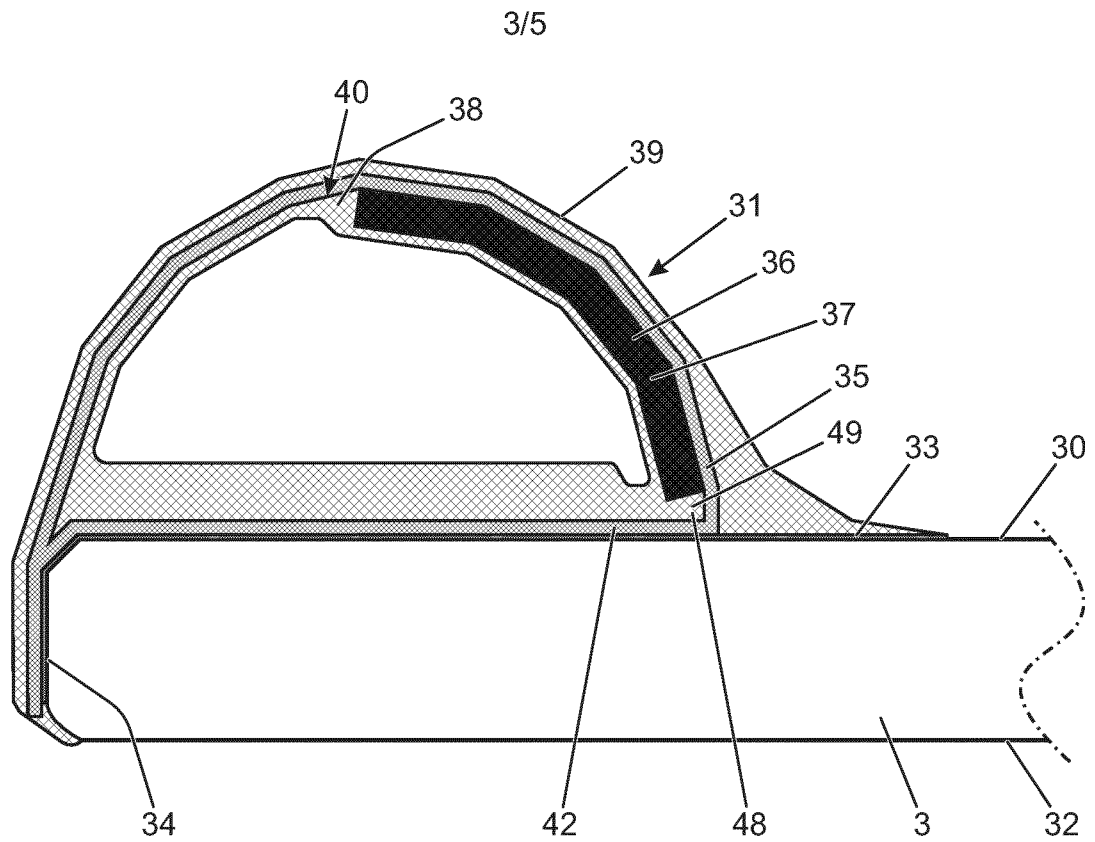


FIG. 2



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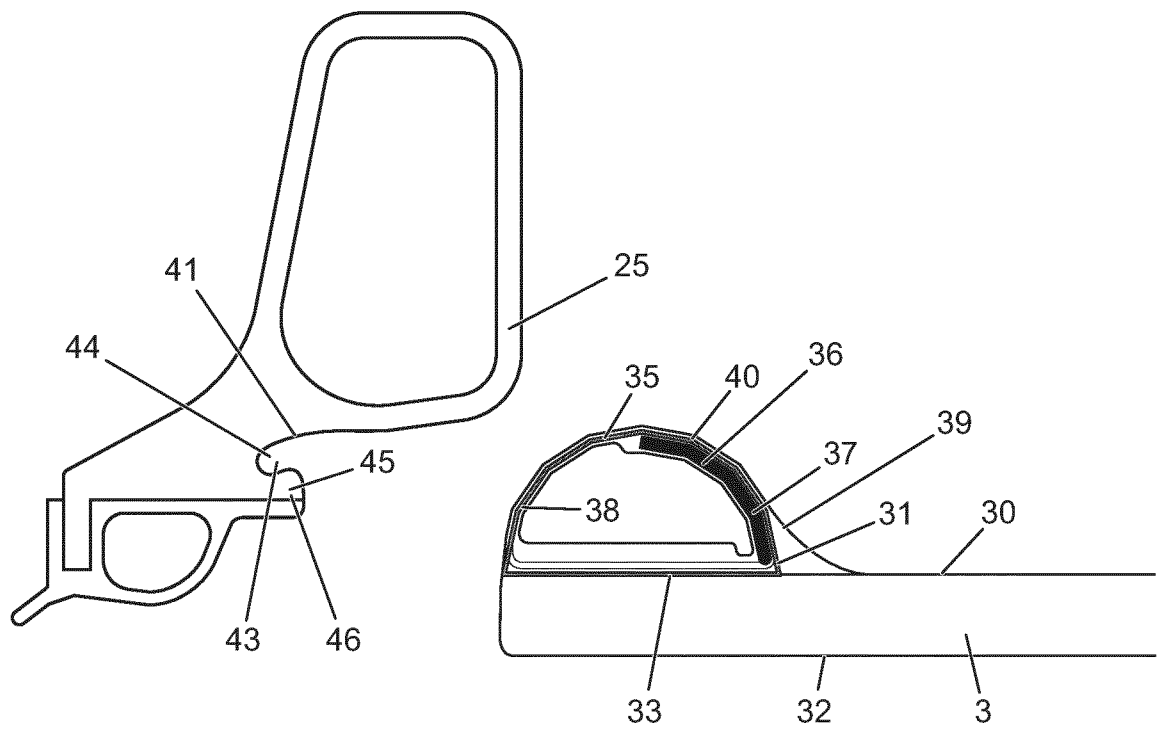


FIG. 5A

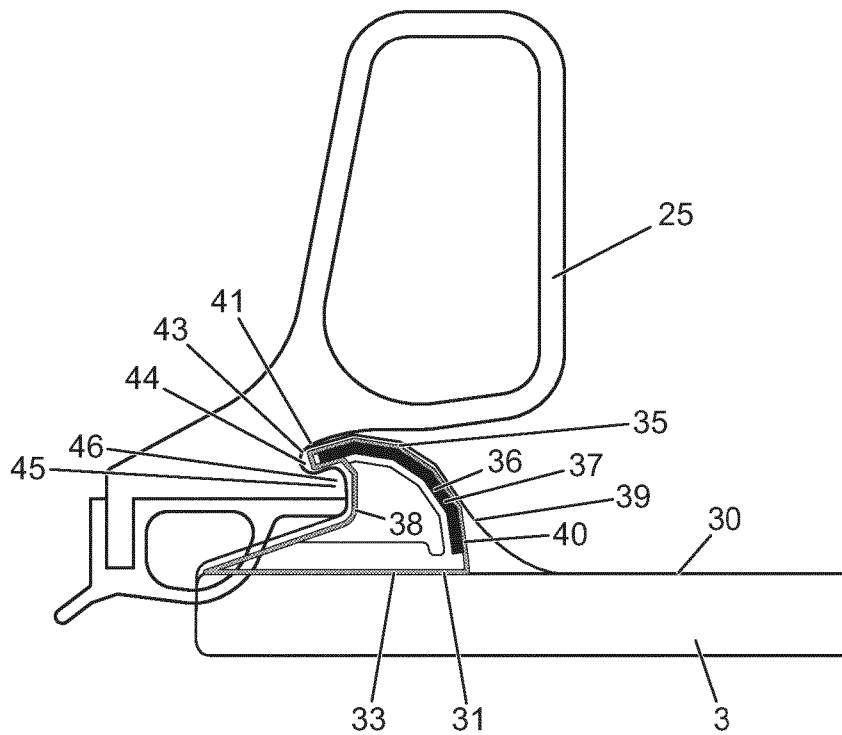


FIG. 5B

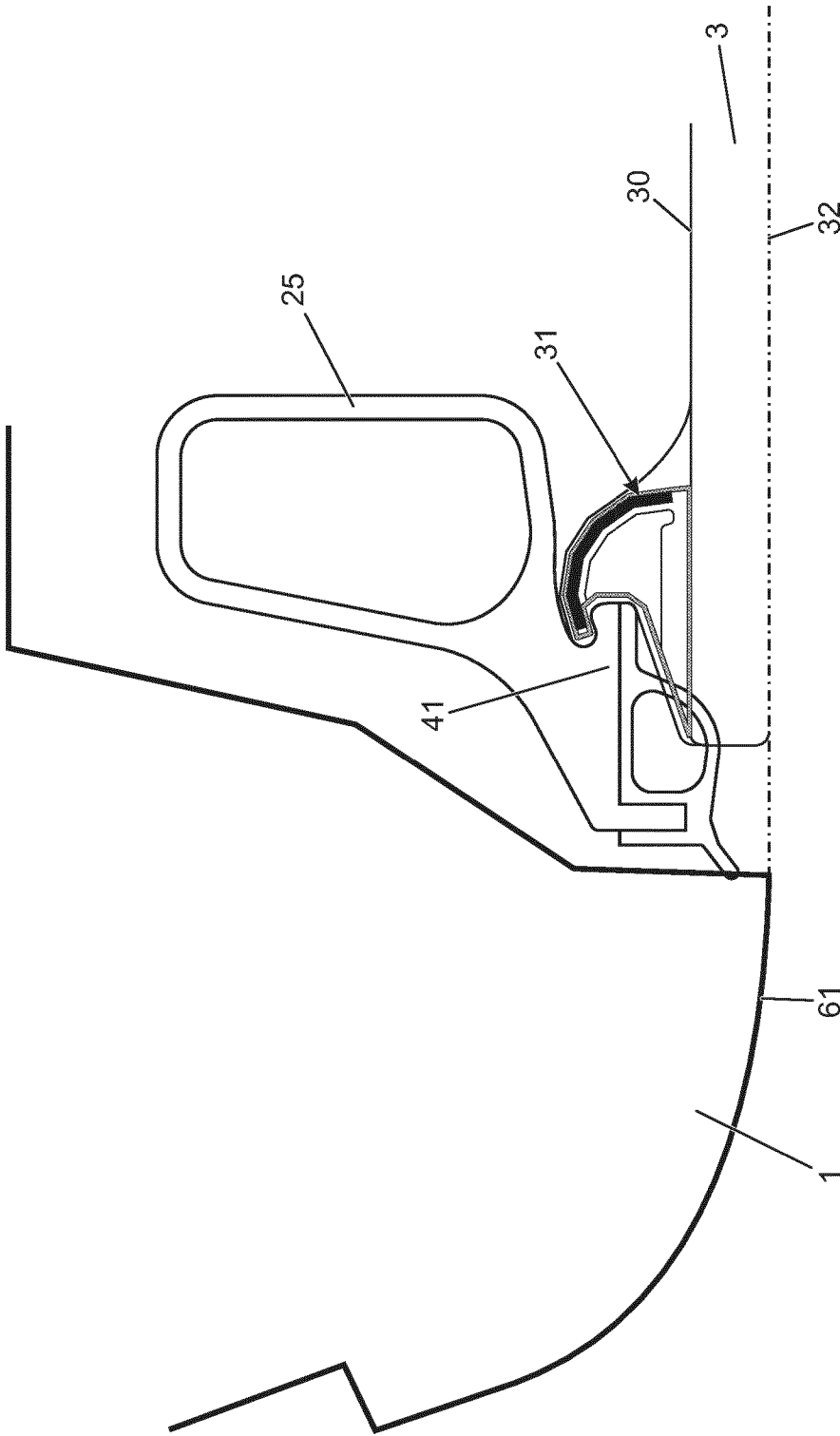


FIG. 6

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2017/055237

A. CLASSIFICATION OF SUBJECT MATTER
INV. B60J10/24 B60J10/763 B60J10/79
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B60J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP S61 94814 A (KINUGAWA RUBBER IND) 13 May 1986 (1986-05-13)	1,3-13, 15-18
Y	abstract; figures 1-5 -----	2
X	DE 43 25 501 A1 (BAYERISCHE MOTOREN WERKE AG [DE]) 2 February 1995 (1995-02-02)	1,3-13, 15-18
Y	the whole document -----	2
X	DE 634 860 C (RUDOLF J SCHEU) 5 September 1936 (1936-09-05)	1,3-12, 15-18
Y	page 1, line 31 - line 60; figures 1, 1a -----	2
Y	US 3 164 870 A (HARMS WILLIAM J ET AL) 12 January 1965 (1965-01-12)	2
	column 3, line 1 - line 43; figures 2, 3 ----- -/-	



Further documents are listed in the continuation of Box C.



See patent family annex.

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Date of the actual completion of the international search

20 April 2017

Date of mailing of the international search report

28/04/2017

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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2017/055237

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	FR 2 608 713 A1 (ATTANASIO RAOUL [FR]) 24 June 1988 (1988-06-24) page 2, line 42 - line 45; figure 3 -----	2
X	US 4 454 688 A (REST HEINZ [DE] ET AL) 19 June 1984 (1984-06-19) abstract; figures 3-6 -----	12-18

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2017/055237

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