



(51) International Patent Classification:

B60R 16/02 (2006.01) *B60N 2/06* (2006.01)
H02G 11/00 (2006.01)

(21) International Application Number:

PCT/JP2012/061297

(22) International Filing Date:

20 April 2012 (20.04.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2011-094911 21 April 2011 (21.04.2011) JP

(71) Applicants (for all designated States except US): **YAZAKI CORPORATION** [JP/JP]; 4-28, Mita 1-chome, Minato-ku, Tokyo, 1088333 (JP). **TOYOTA BOSHOKU KABUSHIKI KAISHA** [JP/JP]; 1-1, Toyoda-cho, Kariya-shi, Aichi, 4488651 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **TSUKAMOTO, Masashi. NAGATA, Hidetoshi. OOOYAMA, Tatsuo.**

(74) Agents: **HONDA, Hironori** et al.; Eikoh Patent Firm, Toranomon East Bldg. 10F, 7-13, Nishi-Shimbashi 1-chome, Minato-ku, Tokyo 1050003 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

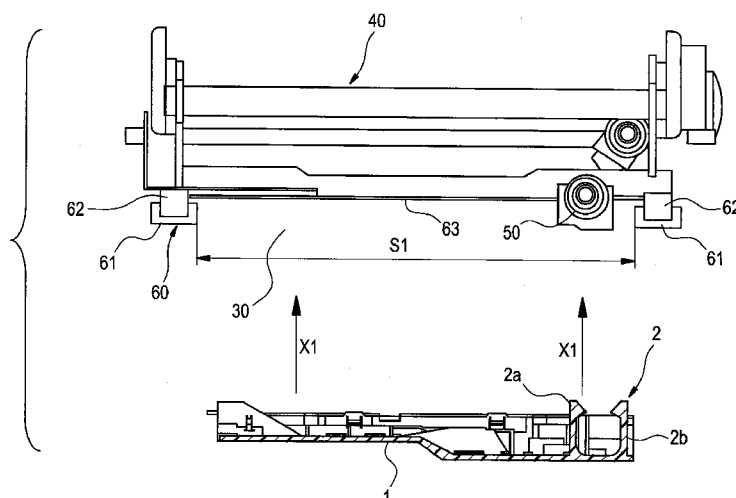
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: ELECTRONIC COMPONENT MOUNTING PLATE

FIG.3



(57) Abstract: An electronic component mounting plate (1) is formed as a predetermined plate-like structure through resin molding, for being attached in a lower space (30) of a seat of a vehicle. The electronic component mounting plate (1) includes a resin-made connecting portion (2) capable of being connected to an electronic component (50) mounted on the seat of the vehicle, the electronic component mounting plate (1) being fixed in the lower space (30) of the seat by a connection between the resin-made connecting portion (2) and the electronic component (50).

DESCRIPTION

ELECTRONIC COMPONENT MOUNTING PLATE

5 Technical Field

The present invention relates to an electronic component mounting plate that is formed as a predetermined plate-like structure through resin molding and equipped with a component mounting part having electronic components assembled thereto and that is attached in a lower space of a seat
10 of a vehicle.

Background Art

Figs. 7 and 8 show an electronic component mounting plate 100 in a related art.

15 The electronic component mounting plate 100 is disclosed in Patent Literature 1. The electronic component mounting plate 100 is a resin-molded body formed as a predetermined plate-like structure through resin molding. A mounting plate top surface 101 that is one surface of the electronic component mounting plate 100, as shown in Fig. 8, includes a
20 component mounting part 110.

The component mounting part 110 is a part to which electronic components 120 are assembled. For example, a wire harness 121, an electronic circuit device 122 connected with the wire harness 121, and the like correspond to the electronic components 120 assembled to the
25 component mounting part 110.

In the case of the illustrated example, the component mounting part 110 includes a harness wiring portion 111 where a wire harness 121 is wired, and a device arrangement portion 112 where the electronic circuit device 122 is arranged. The device arrangement portion 112 has a box-like structure with its top open, and an opening portion thereof is covered with a detachable cover 113.

As shown in Fig. 7, the electronic component mounting plate 100 in the related art is fixed in the lower space 130 of the seat of the vehicle with a surface equipped with the component mounting part 110 turned up, via a dedicated bracket 105. The lower space 130 of the seat is a space secured below a seat skeleton 140 of the vehicle.

The dedicated brackets 105 are made of metal, and are fixed and mounted before and behind the electronic component mounting plate 100 as shown in Fig. 8. The brackets 105 are engaged with sliding rails 150 (refer to Fig. 7) having both ends arranged below the seat in a rod shape that extends in the width direction of the seat, and thereby fixed to the sliding rails 150.

Citation List

20 Patent Literature

Patent Literature 1: JP-A-2010-36667

Summary of Invention

Technical Problem

25 The electronic component mounting plate 100 disclosed in Patent

Literature 1 is fixed in the lower space 130 of the seat via the dedicated brackets 105. However, because the brackets 105 are made of metal, an increase in the weight of a vehicle is caused.

Additionally, in the attachment structure using the dedicated
5 brackets 105 as in Patent Literature 1, it is necessary to manufacture various types of brackets 105 with different dimensions depending on the interval between sliding rails 150 that is different for each vehicle type, and a problem occurs in that an increase in number of components around the seat is caused.

10 Thus, an object of the invention is to solve the above problem and to provide an electronic component mounting plate that can be attached in a lower space of a seat of a vehicle without mounting dedicated brackets, and can reduce the number of components around a seat and reduce the weight of the vehicle.

15

Solution to Problem

The present invention includes some aspects including at least one of the following configurations:

(1) An electronic component mounting plate which is formed as a
20 predetermined plate-like structure through resin molding, for being attached in a lower space of a seat of a vehicle, the electronic component mounting plate including: a resin-made connecting portion capable of being connected to an electronic component mounted on the seat of the vehicle, the electronic component mounting plate being fixed in the lower space of the seat by a
25 connection between the resin-made connecting portion and the electronic

component.

(2) The electronic component mounting plate according to configuration (1), wherein the resin-made connecting portion includes a pair of pinching pieces integrally molded with the electronic component mounting plate to pinch and hold the electronic component mounted on the seat of the vehicle between the pair of pinching pieces.

(3) The electronic component mounting plate according to configuration (1), wherein the electronic component is present at a position capable of being visually recognized if a person looks into the lower space of the seat from one side of the lower space of the seat, and the resin-made connecting portion is connected to the electronic component by moving the electronic component mounting plate to the seat side from the lower side of the lower space of the seat.

(4) The electronic component mounting plate according to configuration (3), wherein the electronic component is a driving motor fixed to a bottom surface of the seat as a component of an electric seat sliding mechanism that slides the seat, and the resin-made connecting portion has a locking structure that is integrally molded with the electronic component mounting plate and grips the outer periphery of the driving motor when being pressed against the driving motor.

According to the above configuration (1), the resin-made connecting portion mounted on the electronic component mounting plate is connected with the electronic component mounted on the seat of the vehicle, so that the electronic component mounting plate can be fixed in the lower space of the seat.

That is, the electronic component mounting plate can be attached in the lower space of the seat of the vehicle without mounting metallic brackets that increase weight, and it is possible to reduce the number of components around the seat or reduce the weight of the vehicle.

5 According to the above configuration (2), since the resin-made connecting portion is integrally molded with the electronic component mounting plate, this is suitable for prevention of an increase in the number of components. Moreover, when the resin-made connecting portion is connected with the electronic component, the electronic component mounting
10 plate can be firmly fixed in the lower space of the seat of the vehicle made simply by pinching and holding the electronic component by the pair of pinching pieces.

 According to the above configuration (3), the position of the electronic component that fixes the electronic component mounting plate can be
15 confirmed by looking in the electronic component from one side of the lower space of the seat. If the position of the resin-made connecting portion on the electronic component mounting plate is aligned with the position of the electronic component that is visually recognized by moving the electronic component mounting plate inserted under the lower space of the seat to the
20 seat side, the electronic component and the resin-made connecting portion are brought into a connected state, so that the electronic component mounting plate can be simply fixed to the electronic component.

 Accordingly, the fixing work of the electronic component mounting plate in the lower space of the seat can be easily done.

25 According to the above configuration (4), the driving motor in the

electric seat sliding mechanism is usually handled as a common part that is commonly mounted on various types of vehicles in many cases. By setting the driving motor as a common component to a connecting mate of the resin-made connecting portion, for example, the dimensions of the resin-made connecting portion can be made common irrespective of a difference in vehicle type, and the manufacture of the electronic component mounting plate can be made easy.

Additionally, since the resin-made connecting portion is integrally molded with the electronic component mounting plate, this is suitable for prevention of an increase in the number of components. Moreover, when the resin-made connecting portion is pressed against the driving motor, the fixing operation of the electronic component mounting plate can be made simply by the locking structure that grips the outer periphery of the driving motor.

Advantageous Effects of Invention

According to the electronic component mounting plate according to the above configuration, the resin-made connecting portion mounted on the electronic component mounting plate is connected with the electronic component mounted on the seat of the vehicle, so that the electronic component mounting plate can be fixed in the lower space of the seat.

Accordingly, the electronic component mounting plate can be attached in the lower space of the seat of the vehicle without mounting metallic brackets that increase weight, and it is possible to reduce the number of components around the seat or reduce the weight of the vehicle.

Brief Description of Drawings

Fig. 1 is a perspective view showing the arrangement of an electronic component mounting plate in a lower space of a seat according to an embodiment of the invention.

Fig. 2 is an enlarged perspective view of the electronic component mounting plate shown in Fig. 1.

Fig. 3 is a front view showing an operation of fixing the electronic component mounting plate shown in Fig. 2 to a lower portion of the seat.

Fig. 4 is a front view of a state where the fixation of the electronic component mounting plate shown in Fig. 2 to the lower portion of the seat is completed.

Figs. 5A and 5B show that the electronic component mounting plate according to the embodiment moves with the sliding of the seat, in which Fig. 5A is an explanatory view of the position of the electronic component mounting plate in a state where the seat slides to one side of a vehicle body, and Fig. 5B is an explanatory view of the position of the electronic component mounting plate in a state where the seat slides to the other side of the vehicle body.

Fig. 6 is an explanatory view of a comparative example in which an electronic component mounting plate is fixed to a lower portion of the seat by a dedicated bracket.

Fig. 7 is a perspective view showing an arrangement state of an electronic component mounting plate in a related art.

Fig. 8 is an enlarged perspective view of the electronic component

mounting plate shown in Fig. 7.

Description of Embodiments

An exemplary embodiment of an electronic component mounting
5 plate according to the invention will be described in detail with reference to
the drawings.

Figs. 1 to 4 show an electronic component mounting plate according
to an embodiment of the invention. Fig. 1 is a perspective view showing the
arrangement of the electronic component mounting plate in a lower space of
10 a seat according to the embodiment of the invention, Fig. 2 is an enlarged
perspective view of the electronic component mounting plate shown in Fig. 1,
Fig. 3 is a front view showing an operation of fixing the electronic component
mounting plate shown in Fig. 2 to a lower portion of the seat, and Fig. 4 is a
front view of a state where the fixation of the electronic component mounting
15 plate shown in Fig. 2 to the lower portion of the seat is completed.

The electronic component mounting plate 1 of the embodiment is
formed as a predetermined plate-like structure through resin molding.
Additionally, the electronic component mounting plate 1 is formed with a
component mounting part 10 to which electronic components 20 are
20 assembled, and is attached in a lower space 30 of the seat of a vehicle.

The lower space 30 of the seat, as shown in Fig. 1, is a space that is
secured below a seat skeleton 40 that is a skeletal structure of the seat (not
shown) of the vehicle.

The electronic components 20 correspond to a wire harness 21 in Fig.
25 2, electronic circuit devices, such as a circuit board connected with the wire

harnesses 21, and the like. The wire harness 21 is, for example, a wire harness as standard equipment on the vehicle, and is attached in the component mounting part 10 before the electronic component mounting plate 1 is attached in the lower space 30 of the seat.

5 In the present embodiment, the component mounting part 10 is a part on the electronic component mounting plate 1 to which the electronic components 20 are assembled.

The electronic component mounting plate 1 of the present embodiment, as shown in Fig. 3, includes a resin-made connecting portion 2.

10 The resin-made connecting portion 2 is a mechanism capable of being connected with a driving motor 50 that is an electronic component fixed and mounted to the seat of the vehicle.

The electronic component mounting plate 1 is fixed in the lower space 30 of the seat by way of the connection between the resin-made connecting
15 portion 2 and the driving motor 50.

The driving motor 50 is a motor that is fixed and mounted to the seat bottom surface side as a component of an electric seat sliding mechanism 60 that slides the seat. The electric seat sliding mechanism 60 includes a pair of right and left lower rails 61, a pair of right and left upper rails 62, and the
20 above driving motor 50.

The pair of right and left lower rails 61 is arranged so as to be spaced apart in the width direction of the seat. The respective lower rails 61 are fixed to a floor portion of the vehicle so as to extend in the front-and-rear direction of the vehicle.

25 The pair of right and left upper rails 62 is fixed and mounted to lower

ends of both side portions of a seat skeleton 40, and slidably fits to the pair of right and left lower rails 61. The upper rails 62 slidably fit to the lower rails 61, and the seat is slidable in the front-and-rear direction of the seat.

The pair of right and left upper rails 62 is connected together by a
5 connecting beam 63 that extends in the seat width direction, and is integrally slidable on the pair of right and left lower rails 61.

The driving motor 50 is fixed to the connecting beam 63. If the driving motor 50 is rotationally driven, the driving motor moves the upper rails 62 along the front-and-rear direction of a vehicle body relative to the
10 lower rails 61 via a power transmission mechanism (not shown). That is, the driving motor 50 slides the seat in the front-and-rear direction of the vehicle body.

The driving motor 50, as shown in Fig. 3, is present at a position within a gap space S1 between the pair of right and left lower rails 61. The
15 position of the driving motor 50 within the gap space S1 is, in other words, a position that can be visually recognized if a person looks into the lower space 30 of the seat from one side (one side in the front-and-rear direction of the vehicle, for example, the side shown by an arrow Y1 in Fig. 1) of the lower space 30 of the seat.

20 As shown in Fig. 3, the resin-made connecting portion 2 of the present embodiment is integrally molded with the electronic component mounting plate 1. The resin-made connecting portion 2 includes a pair of pinching pieces 2a and 2b integrally molded with the electronic component mounting plate 1. When the pair of pinching pieces 2a and 2b is pressed
25 against the driving motor 50, as shown in Fig. 4, a locking structure is

obtained in which the pinching pieces pinch the outer periphery of the driving motor 50 to grip the outer periphery of the driving motor 50.

By moving the electronic component mounting plate 1 to the seat side from the lower side of the lower space 30 of the seat as shown by an arrow X1 in Fig. 3, the resin-made connecting portion 2 is connected to the driving motor 50 as shown in Fig. 4.

Through the connection between the resin-made connecting portion 2 and the driving motor 50, the electronic component mounting plate 1 fixed to the driving motor 50, as shown in Figs. 5A and 5B, slides in the front-and-rear direction of the vehicle body integrally with the upper rail 62 during the sliding operation of the upper rails 62.

In the electronic component mounting plate 1 of the one embodiment described above, the electronic component mounting plate 1 can be fixed to the lower space 30 of the seat by connecting the resin-made connecting portion 2 mounted on the electronic component mounting plate 1 with the driving motor 50 mounted on the seat of the vehicle.

That is, the electronic component mounting plate 1 can be attached in the lower space 30 of the seat of the vehicle without mounting metallic brackets that increase weight, and it is possible to reduce the number of components around the seat or reduce the weight of the vehicle.

Fig. 6 shows a structure in which the electronic component mounting plate 1A is fixed in the lower space 30 of the seat by a pair of metallic brackets 71 that is separate from the electronic component mounting plate 1A, as a comparative example to the above embodiment.

In the example of Fig. 6, the pair of metal brackets 71 is

appropriately fixed to the pair of right and left upper rails 62 by fastening means (for example, screwing), respectively. In the example of Fig. 6, the electronic component mounting plate 1 is fixed to the upper rails 62 by fastening both side edges thereof to the pair of facing metallic brackets 71.

5 In the attachment structure of the electronic component mounting plate 1A shown in Fig. 6, the pair of metallic brackets 71 is mounted, whereby an increase in weight will occur, and the number of components around the seat will increase. Moreover, the working process of attaching the respective metallic brackets 71 to the upper rails 62 is needed, and the
10 attachment workability of the mounting plate top surface 1a also degrades.

 Additionally, in the electronic component mounting plate 1 of the one embodiment described above, the position of the driving motor 50 that fixes the electronic component mounting plate 1 can be confirmed by looking in the motor from one side of the lower space 30 of the seat. If the position of
15 the resin-made connecting portion 2 on the electronic component mounting plate 1 is aligned with the position of the driving motor 50 that is visually recognized by moving the electronic component mounting plate 1 inserted under the lower space 30 of the seat to the seat side, the driving motor 50 and the resin-made connecting portion 2 are brought into a connected state,
20 so that the electronic component mounting plate 1 can be simply fixed to the driving motor 50.

 Accordingly, the fixing work of the electronic component mounting plate 1 in the lower space 30 of the seat can be easily done.

 Additionally, in the one embodiment described above, the driving
25 motor 50 in the electric seat sliding mechanism 60 is usually handled as a

common part that is commonly mounted on various types of vehicles in many cases. By setting the driving motor 50 as a common component to the resin-made connecting portion 2, for example, the dimensions of the resin-made connecting portion 2 can be made common irrespective of a
5 difference in vehicle type, and the manufacture of the electronic component mounting plate 1 can be made easy.

Additionally, since the resin-made connecting portion 2 is integrally molded with the electronic component mounting plate 1, this is suitable for prevention of an increase in the number of components. Moreover, when
10 the resin-made connecting portion 2 is pressed against the driving motor 50, the fixing operation of the electronic component mounting plate 1 can be made simple by the locking structure that grips the outer periphery of the driving motor 50.

In addition, the electronic component mounting plate 1 is not limited
15 to the aforementioned embodiment, and appropriate alterations, improvements, or the like can be made.

For example, the electronic component that connects the resin-made connecting portion on the electronic component mounting plate is not limited to the driving motor in the electric seat sliding mechanism. Other
20 electronic components to be mounted on the seat skeleton 40 or the like may be used.

The present application is based upon and claims the benefit of Japanese patent application No. 2011-94911 filed on April 21, 2011, the contents of which are incorporated herein by reference in its entirety.

Industrial Applicability

The electronic component mounting plate according to the invention is useful for being attached, for example, in a lower space of a seat of a vehicle in which reduction of the number of components around a seat or the weight of the vehicle is desired.

Reference Signs List

- 1: ELECTRONIC COMPONENT MOUNTING PLATE
- 2: RESIN-MADE CONNECTING PORTION
- 10 20: ELECTRONIC COMPONENT
- 21: WIRE HARNESS
- 30: LOWER SPACE OF SEAT
- 40: SEAT SKELETON
- 50: DRIVING MOTOR (ELECTRONIC COMPONENT)
- 15 60: ELECTRIC SEAT SLIDING MECHANISM

CLAIMS

1. An electronic component mounting plate which is formed as a predetermined plate-like structure through resin molding, for being attached
5 in a lower space of a seat of a vehicle, the electronic component mounting plate comprising:

a resin-made connecting portion capable of being connected to an electronic component mounted on the seat of the vehicle, the electronic component mounting plate being fixed in the lower space of the seat by a
10 connection between the resin-made connecting portion and the electronic component.

2. The electronic component mounting plate according to claim 1,
wherein the resin-made connecting portion includes a pair of
15 pinching pieces integrally molded with the electronic component mounting plate to pinch and hold the electronic component mounted on the seat of the vehicle between the pair of pinching pieces.

3. The electronic component mounting plate according to claim 1,
20 wherein the electronic component is present at a position capable of being visually recognized if a person looks into the lower space of the seat from one side of the lower space of the seat, and

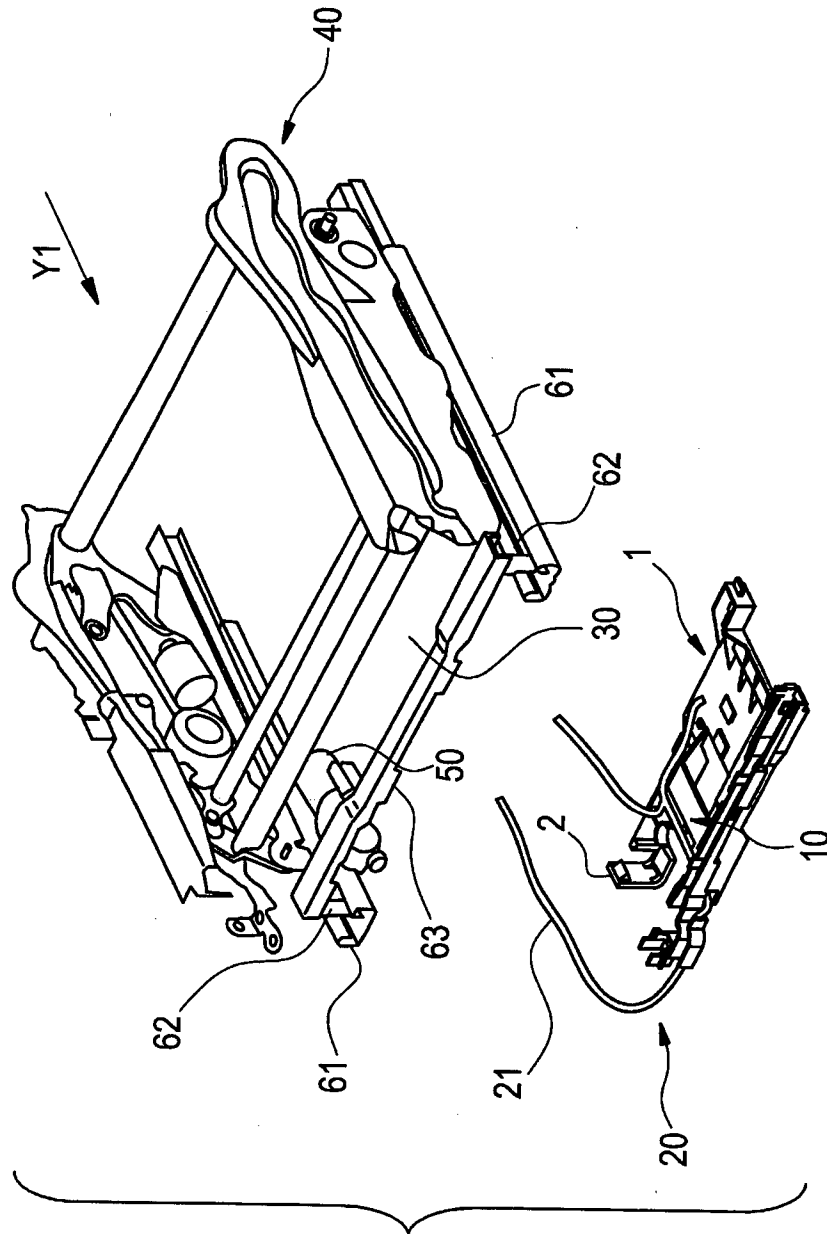
wherein the resin-made connecting portion is connected to the electronic component by moving the electronic component mounting plate to
25 the seat side from the lower side of the lower space of the seat.

4. The electronic component mounting plate according to claim 3,
wherein the electronic component is a driving motor fixed to a
bottom surface of the seat as a component of an electric seat sliding

5 mechanism that slides the seat, and

wherein the resin-made connecting portion has a locking structure
that is integrally molded with the electronic component mounting plate and
grips the outer periphery of the driving motor when being pressed against
the driving motor.

FIG. 1



2 / 8

FIG.2

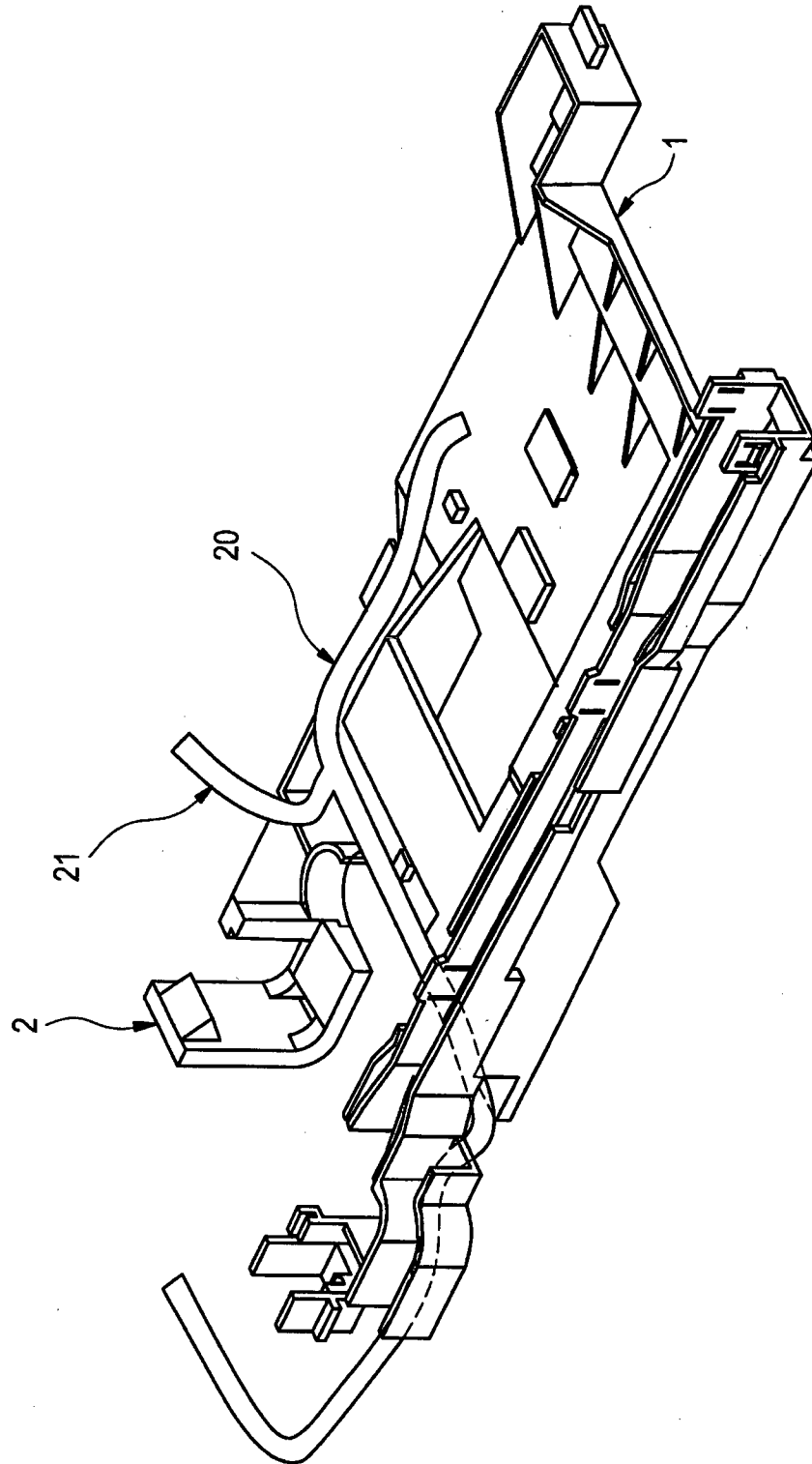


FIG.3

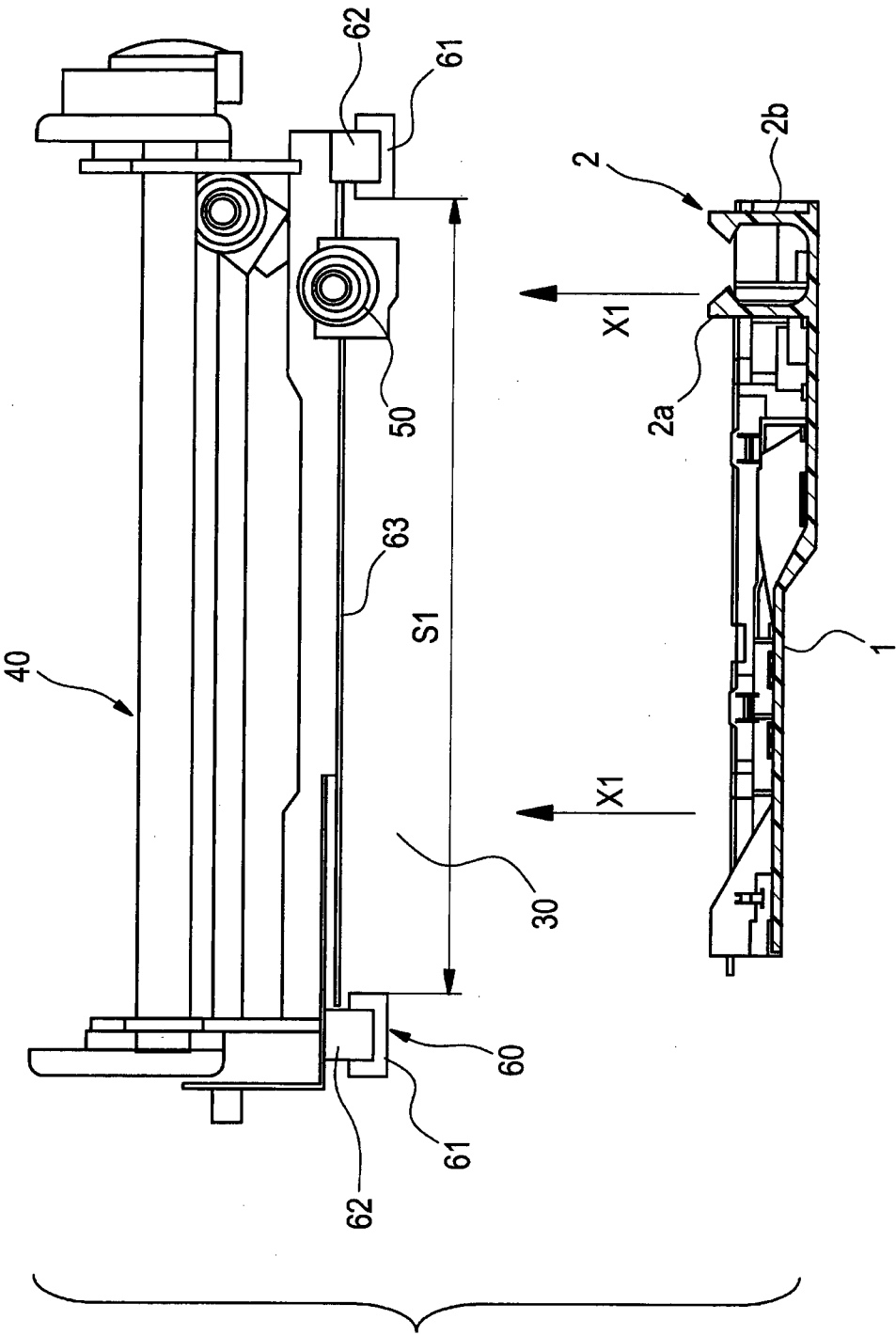


FIG.4

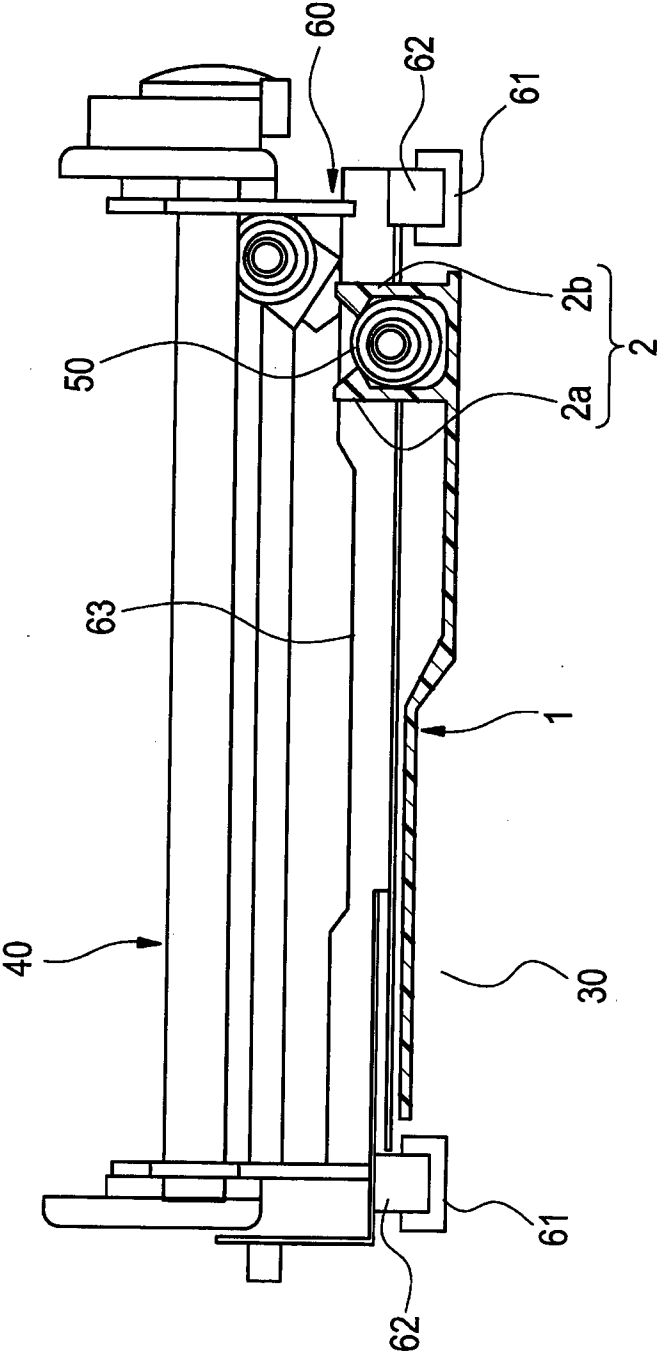


FIG.5B

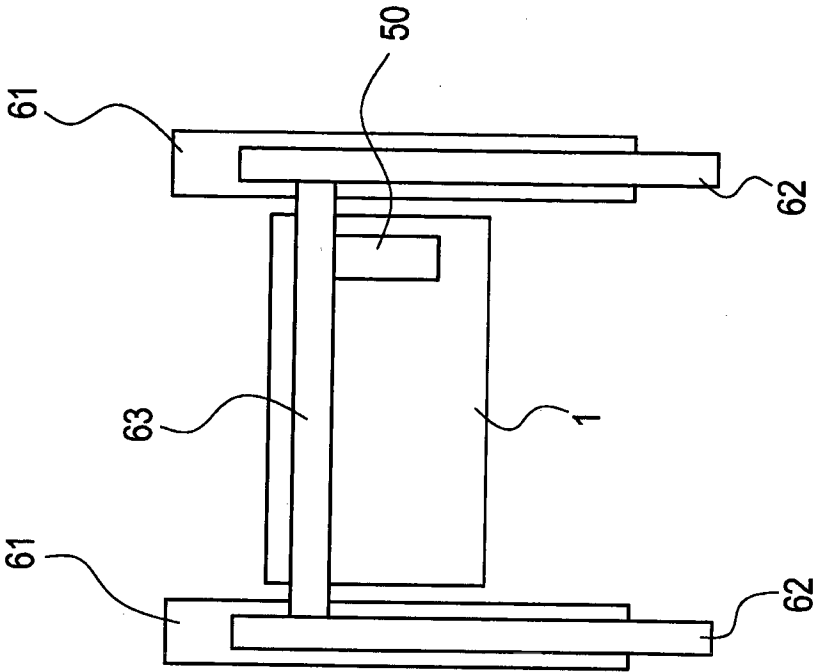
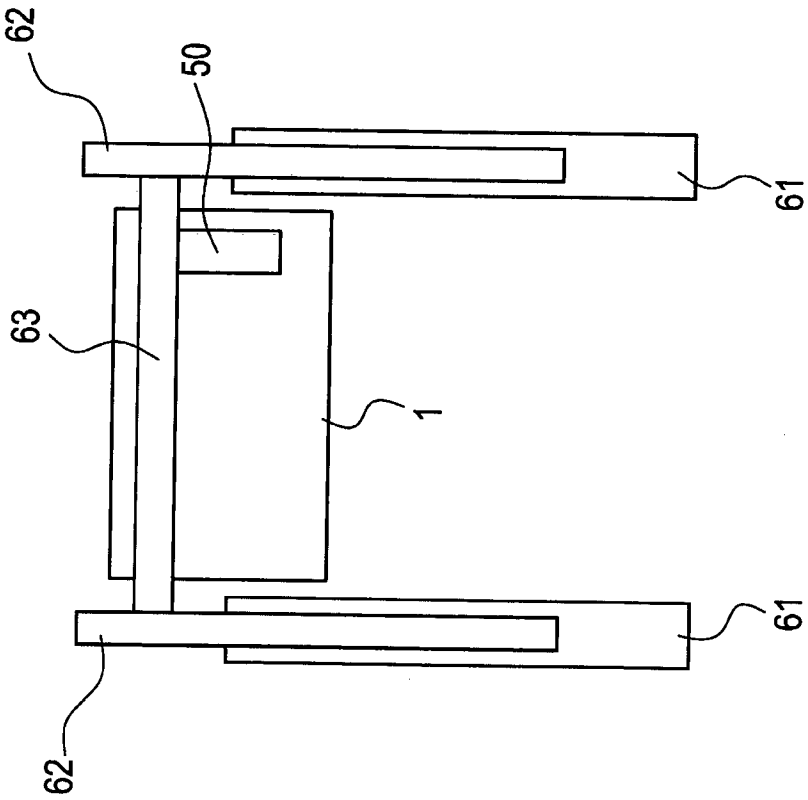
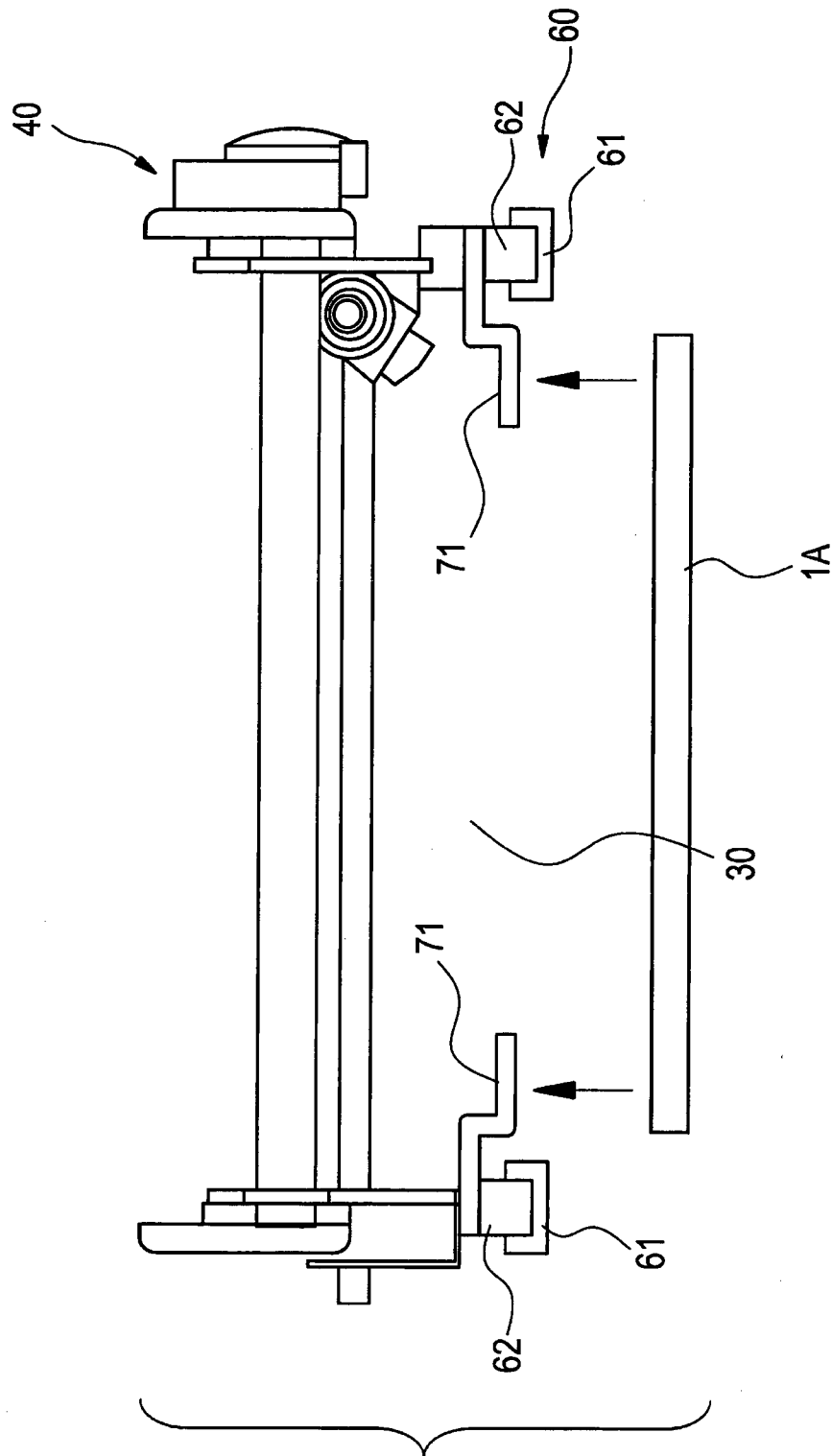


FIG.5A



6 / 8

FIG.6



7 / 8

FIG.7

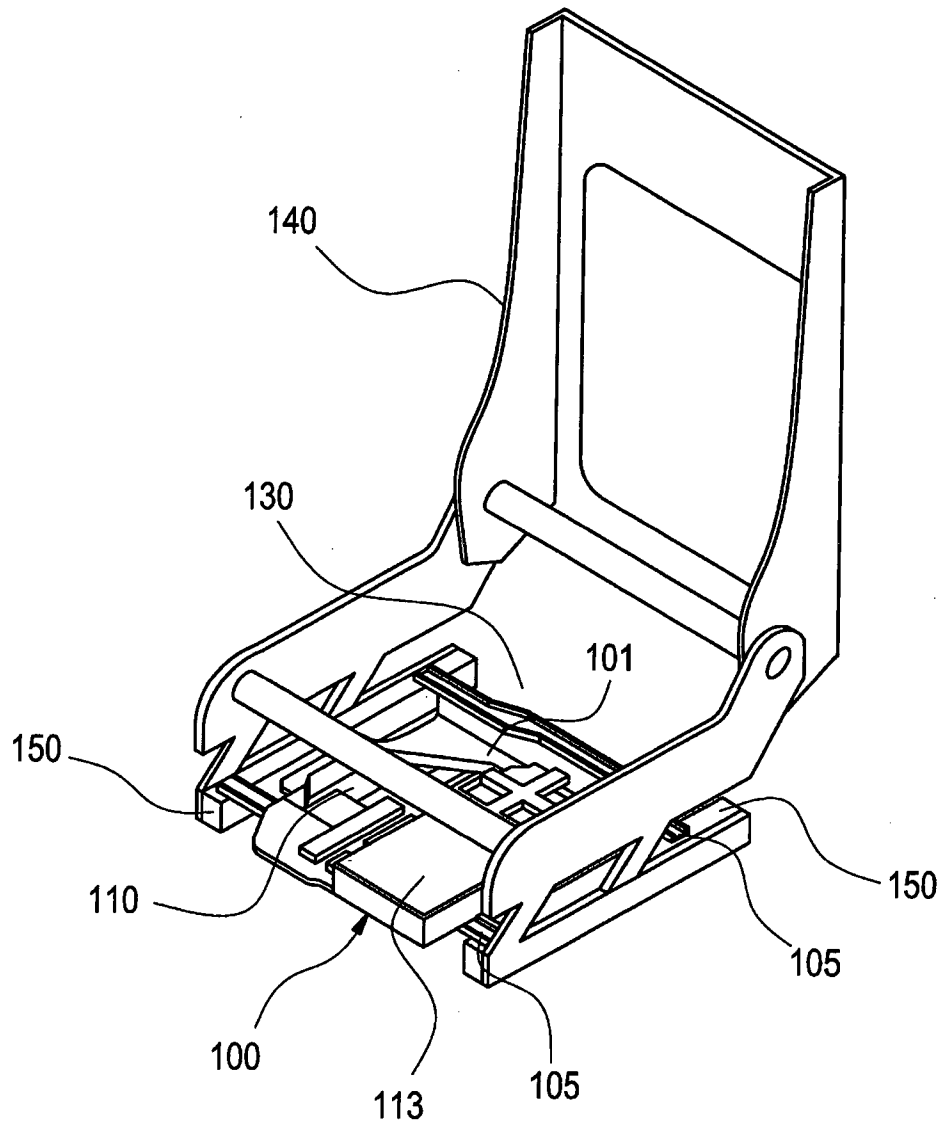
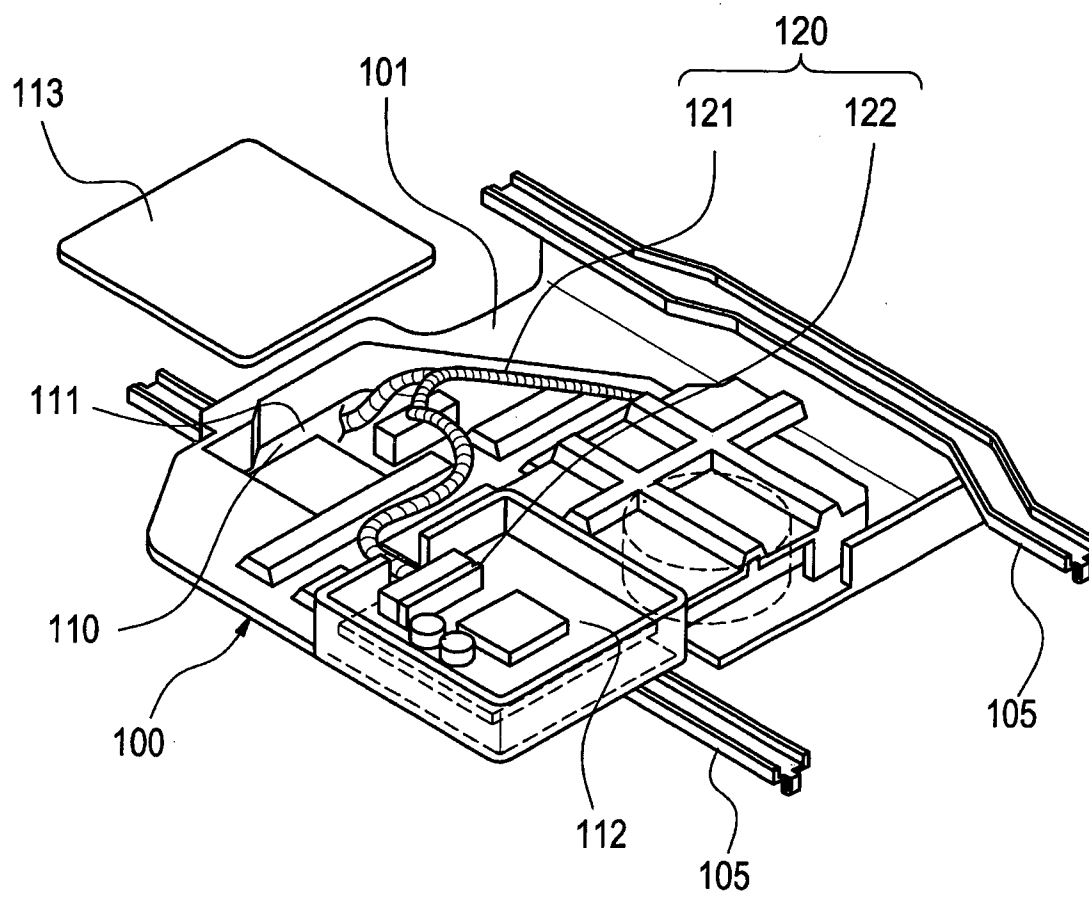


FIG. 8



INTERNATIONAL SEARCH REPORT

International application No

PCT/JP2012/061297

A. CLASSIFICATION OF SUBJECT MATTER

INV. B60R16/02 H02G11/00 B60N2/06
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)

B60N B60R H02G

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.
A	FR 2 924 390 A1 (RENAULT SAS [FR]) 5 June 2009 (2009-06-05) page 7, lines 24,25; claim 1; figures 1,2 -----	1
A	FR 2 924 391 A3 (RENAULT SAS [FR]) 5 June 2009 (2009-06-05) page 7, lines 21,22; claim 1; figures 1-4 -----	1
A	DE 40 02 946 A1 (BROSE FAHRZEUGTEILE [DE]) 8 August 1991 (1991-08-08) column 5, line 19 - column 7, line 26; figures 1-4 -----	1
A	DE 203 07 185 U1 (VOLKSWAGEN BORDNETZE GMBH [DE]) 24 July 2003 (2003-07-24) page 9, line 26 - page 13, line 17; figures 1-4 ----- -/-	1



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

13 July 2012

Date of mailing of the international search report

26/07/2012

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Lotz, Klaus-Dieter

INTERNATIONAL SEARCH REPORT

International application No

PCT/JP2012/061297

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2010 036667 A (TOYOTA BOSHOKU CORP; YAZAKI CORP) 18 February 2010 (2010-02-18) cited in the application abstract; figures 1-5 -----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/JP2012/061297

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR 2924390	A1	05-06-2009	AT 505367 T 15-04-2011
			EP 2214933 A1 11-08-2010
			ES 2362471 T3 06-07-2011
			FR 2924390 A1 05-06-2009
			WO 2009071545 A1 11-06-2009
FR 2924391	A3	05-06-2009	AT 514591 T 15-07-2011
			EP 2217466 A1 18-08-2010
			ES 2364232 T3 29-08-2011
			FR 2924391 A3 05-06-2009
			WO 2009071543 A1 11-06-2009
DE 4002946	A1	08-08-1991	NONE
DE 20307185	U1	24-07-2003	NONE
JP 2010036667	A	18-02-2010	DE 102009026262 A1 15-04-2010
			JP 2010036667 A 18-02-2010
			US 2010027232 A1 04-02-2010