(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
19 December 2013 (19.12.2013)

WIPO | PCT

(10) International Publication Number
WO 2013/188371 A1

(51) International Patent Classification:
B60N 2/48 (2006.01)

(21) International Application Number:
PCT/US2013/045134

(22) International Filing Date:
11 June 2013 (11.06.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/658,041 11 June 2012 (11.06.2012) US

(71) Applicant: **CARDIFF PRODUCTS** [US/US]; 310 S. Twin Oaks Valley Road, #107-252, San Marcos, CA 92078-4387 (US).

(72) Inventors: **ARRIOLA, Jason**; 2071 Acacia Drive, San Marcos, CA 92078 (US). **REGAN, Will**; 7574 Gibraltar St., Unit C, Carlsbad, CA 92009 (US).

(74) Agent: **MOYER-HENRY, Kari**; Lewis Kohn & Fitzwilliam LLP, 10935 Vista Sorrento Parkway, Suite 370, San Diego, CA 92130 (US).

(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, BN, 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, JP, KE, KG, 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, PA, 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, 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, KM, ML, MR, NE, SN, TD, TG).

Published:

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

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(54) Title: SEAT HEADREST

(57) Abstract: The present invention is directed to solving a deficiency in the art of car headrests. The present invention describes a seat headrest having at least one side cushion, a base and a plurality of headrest connection points for use in conjunction with existing, standard car headrests. The seat headrest may have a first side cushion and a second side cushion to provide head and neck support by serving as headrests on the sides of a user's head. The user may be any individual in a passenger vehicle.

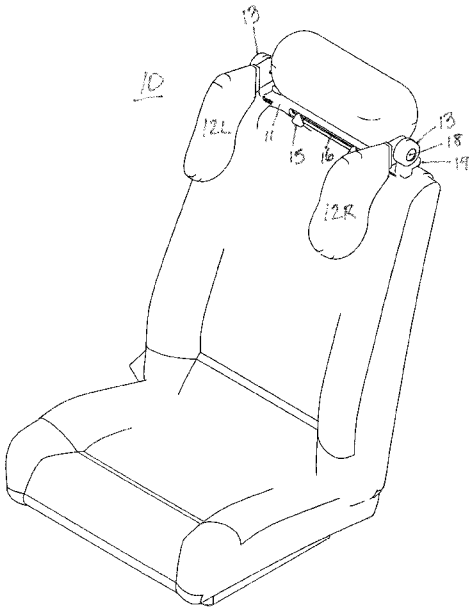

Figure 1

WO 2013/188371 A1

Seat Headrest

by

Jason Arriola and William Regan

RELATED APPLICATIONS

This application claims priority from U.S. Provisional Application No. 61/658,041, filed on June 11, 2012, the contents of which are hereby incorporated by reference herein.

FIELD OF THE INVENTION

The present invention pertains generally to seat headrests. More particularly, the present invention pertains to a supplemental headrest attached to currently existing car seats with headrests.

BACKGROUND OF THE ART

Car headrests are well known in the art. Since the 1960's, cars have included headrests as standard equipment. One of the more prevalent designs of the car headrest has a padded surface attached to two headrest posts which lock into position. The padded surface is positioned to be at the rear of a head of a user and does not provide any support elsewhere.

Neck pillows are also well known in the art. A common configuration of a neck pillow has a generally 'U' shaped pillow placed around a neck to provide a pillow base around a head. This configuration does not have sufficiently structural support outside of the density of the pillow itself. The neck pillow also does not have rigidity in terms of positioning. This means that

the neck pillow will shift and move along with the user causing it to not be positioned in a way most optimal for resting or sleeping.

United States Patent No. 3,578,383 to Earl discloses a pillow for full support of one side of a user's head and is designed to slip over the top of a seat back. The user must sleep leaning to that one side in order to take advantage of the pillow support. If desired, two pillow supports can be used with a separate base support designed for the two pillow device.

United States Patent No. 4,440,443 to Nordskog discloses a headrest inflated with air or liquid, or filled with foamed plastic material for attachment to the backrest of a chair, sofa, etc. The headrest may also provide improved privacy through incorporation of a privacy roof and eye shield. When not in use the headrest may be removed from the backrest for storage.

United States Patent No. 5,154,477 to Lacy discloses a head support attachable to a vehicle seat for providing both frontal and lateral support of the head. However, attachment of the head support is dependent on a jacket or slipcover being placed over the vehicle seat and secured with a hook-and-loop-type fastener.

United States Patent No. 5,505,523 to Wang discloses a safety nap cushion for use with a chair back consisting of a reverse U-shaped inflatable back cushion, two inflatable side cushions and an adjustable retraining strap suitable for being positioned over the user's face and across the front of the side cushions to prevent lateral movement of the side cushions when under pressure.

United States Patent No. 6,789,851 to Smith discloses a child's sleep collar for use with a child safety seat that includes a pair of collar supports and provides lateral and frontal support to the head of a sleeping child restrained in the child safety seat. Each of the individual collar supports includes a coupling end for attachment to the child safety seat.

United States Patent No. 7,938,491 to Montuore discloses a curved shape head rest to provide full head support backing with two concave sides of equal proportion to support the head while turned as well as preventing the neck from tilting at an uncomfortable angle. The headrest attaches to the existing headrest on a seat by adjustable straps.

United States Patent Publication No. 2010/0289315 to Jackson discloses a head and neck support for a passenger in a vehicle including a rod for joining the apparatus to a seat headrest and side rods for supporting cushions. Positioning of the side cushions is restricted to a vertical movement up or down the length of the side rod.

United States Patent Publication No. 2012/0007405 to Kim discloses a car seat headrest comprising a holding bar and a head support portion attached to the holding bar. Installation of the headrest to a car seat requires the complete removal of the existing headrest in order to be able to insert the headrest stays into the openings in the holding bar. Positioning of the headrest pillow requires disassembly of the headrest and additional components to accomplish alternative configurations of the pillows.

In light of the above, it is an object of the present invention to provide the desired features described herein as well as additional advantages such as providing a user with supplemental head and neck support when desired. The compact design of the supplemental headrest provides for convenient stowage when the headrest is not in use. The key to a compact design is the minimal base and integrated hinge as part of each side cushion. Preferably, the seat headrest is used in conjunction with an already existing seat headrest. Another object of the present invention is to provide a seat headrest that is easily assembled and disassembled for ease of transport and compatibility with all types of seats with existing headrests.

It is an object of this invention to provide a system and method to provide head and neck support supplementing currently existing seat headrests.

SUMMARY OF THE INVENTION

The present invention is directed to solving a deficiency in the art of car headrests. The present invention describes a seat headrest having at least one side cushion, a base and a plurality of headrest connection points. The seat headrest may have a first side cushion and a second side cushion.

The standard car headrest only provides support to the back of the head without regard to the left side or the right side of the head due to its positioning. The first side cushion and the second side cushion provide head and neck support by serving as headrests on the sides of the user's head. The user can then rest their head on the first or second side cushion for a more comfortable resting or sleeping position.

The side cushion, the base and the plurality of headrest connection points are preferably constructed from injection molded plastic to provide a sturdy and rigid structure. The side cushion may then be covered by a padded material such as foam to provide a soft, cushioned surface. The side cushion is then wrapped by a soft outer material such as fabric or nylon to cover the padded material and provide a more desirable aesthetic. The soft outer material can have a design print or be monochrome without departing from the spirit of the present invention. There may also be an expandable fabric hood or a strap that attaches over the car's original headrest as an optional mounting type to accommodate vehicle headrests not supported by support rods. The side cushion is curved about a midpoint, and the first side cushion and the second side cushion extend downwardly from the headrest arm.

The headrest arm is vertically adjustable by having hinges located in the side cushions where the side cushions attach to the base allowing for variable vertical positioning of the side cushions independently of each other.

BRIEF DESCRIPTION OF THE DRAWINGS

The novel features of this invention, as well as the invention itself, both as to its structure and its operation, will be best understood from the accompanying drawings, taken in conjunction with the accompanying description, in which similar reference characters refer to similar parts, and in which:

Figure 1 illustrates a perspective view of the seat headrest.

Figure 2 illustrates a side view of the seat headrest.

Figure 3 illustrates a front view of the seat headrest.

Figure 4 illustrates an exploded perspective view of the base mount of the seat headrest.

Figure 5 illustrates an exploded side view of the base mount of the seat headrest.

Figure 6 illustrates a side view of the base mount of the seat headrest.

Figure 7 illustrates a perspective view of the base mount of the seat headrest.

Figure 8 illustrates a front view of the base mount of the of the seat headrest.

Figure 9 illustrates a perspective view of the assembly of the side cushions to the base mount of the seat headrest.

Figure 10 illustrates a side view of the assembly of a side cushions to the base mount of the seat headrest.

Figure 11 illustrates a front view of the assembly of the side cushions to the base mount of the seat headrest.

Figure 12 illustrates several views of the assembled seat headrest as 12a, 12b, 12c, 12d, 12e and 12f.

Figure 13 illustrates several exploded views of the seat headrest as 13a, 13b, 13c, 13d, 13e and 13f.

Figure 14 illustrates a perspective view of the side cushion of the seat headrest.

Figure 15 illustrates a top view of the side cushion of the seat headrest.

Figure 16 illustrates a side view of the side cushion of the seat headrest.

Figure 17 illustrates an exploded view of the hinge within the side cushion of the seat headrest.

Figure 18 illustrates a perspective view of a second alternative positioning of the seat headrest.

Figure 19 illustrates a perspective view of a third alternative positioning of the seat headrest.

DETAILED DESCRIPTION OF THE INVENTION

Reference is made to Figure 1 which illustrates one embodiment of the seat headrest **10** fully assembled and installed on a car seat. The seat headrest **10** is configured to provide additional head and neck support for a user when used in conjunction with a car headrest having a plurality of car headrest poles. The seat headrest **10** has a base **11** with one base arm **19** extending approximately perpendicular to the base **11**at each lateral end which serves as the mounting point for a first side cushion **12L** and a second side cushion **12R**. The first side cushion **12L** and the second side cushion **12R** are mounted to the base **11** at the hinge **13.** Each hinge **13** has a push button **18** which functions to activate the hinge assembly (no shown). The base **11** is mounted to the existing car headrest using adjustable knobs **15** at central opening **16.** The first side cushion **12L** and the second side cushion **12R** are bent downward from the base arm **19** to point generally downward towards a user's shoulders. This configuration of the first and second side cushions (**12L** and **12R**) allows for slight restraint across the user's shoulders. The position of the first and second side cushions (**12L** and **12R**) allows the user to rest their head on a rigidly positioned surface that is not normally provided by the car headrest. The user can then sleep without resulting head and neck pains caused by having their head falling into a poor position for an extended period of time.

Reference is made to Figure 2 which illustrates the side view of the seat headrest **10** shown in Figure 1. The seat headrest **10** is configured of a side cushion **12R** mounted to the base **11**(not shown) at the base arm **19.** The side cushion **12R** also includes a hinge **13** with a push button **18.**

Reference is made to Figure 3 which illustrates the front view of the seat headrest **10** shown in Figure 1. The seat headrest **10** is comprised of a base **11** with one base arm **19** at each lateral end of the base **11** and a first side cushion **12L** and a second side cushion **12R** attached to the base **11** at base arm **19**. The first side cushion **12L** and the second side cushion **12R** each have an independently acting hinge **13**. The seat headrest **10** is mounted to the existing car seat in part by adjustable knobs **15** at central opening **16**.

Reference is made to Figure 4 which illustrates the perspective view of the assembly of the base mount of the seat headrest shown in Figure 1. The base **11** secures to the plurality of car headrest poles **41** by a plurality of headrest connection points made up of screw hooks **14** and adjustable knobs **15** configured to hold securely about the diameter of the plurality of car headrest poles **41**. The plurality of screw hooks **14** can slide horizontally along opening **16** in the base **11** to accommodate for the variable distance between the plurality of car headrest poles **41** which exists between vehicle models and types, i.e. planes, trains, etc. The base arms **19** having recess **17** are positioned such that once the base **11** is mounted to a car seat, the base arms **19** sit at roughly the outer edge of the standard car headrest.

Reference is made to Figure 5 which illustrates the side view of the assembly of the base mount of the seat headrest shown in Figure 4. The base **11** secures to the plurality of car headrest poles **41** by screw hooks **14** secured with adjustable knobs **15**. Once base **11** is mounted to the car seat, base arm **19** is positioned externally to the outer edge of the standard car headrest.

Reference is made to Figures 6, 7 and 8 which illustrate the side, perspective and front views of the mounted base of Figure 4. Figure 6 shows the base arm **19** positioned relative to the standard car headrest secured by screw hook **14** and adjustable knob **15**. Figures 7 and 8 show the base **11** mounted securely between the car seat and standard car headrest in part by adjustable knobs **15** at central opening **16** such that the base arms **19** and recess **17** are positioned externally to the standard car headrest.

Reference is made to Figure 9 which illustrates an exploded view of the assembly of the side cushions **12L** and **12R** onto the base **11**. Clearly shown is a seat headrest **10** comprised of a base **11** with a central horizontal opening **16** and one base arm **19** at each lateral end which serves as the mounting point for a first side cushion **12L** and a second side cushion **12R**. The side cushions (**12L** and **12R**) and their attached hinge **13** readily snap into the base **11** at recess **17**. Each hinge **13** also includes a push button **18**. Full depression of push button **18** results in the release of the cantilever snaps **51**, as can be seen better in Figure 14, inside recess **17** to allow for ease of assembly and disassembly of the side cushions (**12L** and **12R**) to the base **11**. The base **11** is securely mounted to the existing car headrest in part using adjustable knobs **15**.

Reference is made to Figures 10 and 11 which illustrate the side and front views respectively of the assembly of the side cushions **12L** and **12R** onto base **11** as shown in Figure 9. In Figure 10, the side cushion **12R** is inserted into base **11** (not shown) at side arm **19** and secured with screw hook **14** and adjustable knob **15.** Side cushion **12R** also has a hinge **13** with a push button **18** and cantilever snaps **51** extending vertically downward from said hinge **13.** In

Figure 11, the side cushions (**12L** and **12R**) are inserted into base **11** at side arms **19.** The side cushions (**12L** and **12R**) each have a hinge **13**. The base **11** is securely mounted to the existing car headrest in part using adjustable knobs **15** at central opening **16.**

Reference is made to Figure 12 which illustrates various views of the fully assembled seat headrest. Figure 12a shows a perspective view of the assembled seat headrest comprised of a base **11** with a side arm **19** at each lateral end of base **11** and a central opening **16**, a first side cushion **12L** and a second side cushion **12R**, each side cushion having a hinge **13** with a push button **18,** at least two screw hooks **14** and at least two adjustable knobs **15**. Figure 12b shows a top view of the assembled seat headrest comprised of a base **11,** a first side cushion **12L** and a second side cushion **12R**, each side cushion having a hinge **13**, at least two screw hooks **14** and at least two adjustable knobs **15**. Figure 12c shows a rear view of the assembled seat headrest comprised of a base **11** with a central opening **16,** a first side cushion **12L** and a second side cushion **12R**, each side cushion having a hinge **13**. Figure 12d shows the left side view of the assembled seat headrest comprised of a base **11** with a side arm **19**, at least one screw hook **14** and at least one adjustable knob **15**, and a first side cushion **12L** having a hinge **13** with a push button **18.** Figure 12e shows the front view of the assembled seat headrest comprised of a base **11** with a side arm **19** at each lateral end of base **11** and a central opening **16** with at least two adjustable knobs **15,** a first side cushion **12L** and a second side cushion **12R**, each side cushion having a hinge **13.** Figure 12f shows the right side view of the assembled seat headrest base **11** with a side arm **19**, at least one screw hook **14** and at least one adjustable knob **15**, and a second side cushion **12R** having a hinge **13** with a push button **18**.

Reference is made to Figure 13 which illustrates various exploded views of the disassembled seat headrest shown in Figure 12. Figure 13a shows a perspective view of a base **11** with a side arm **19** at each lateral end of base **11** and a central opening **16**, each side arm **19** having a recess **17**, a first side cushion **12L** and a second side cushion **12R**, each side cushion having a hinge **13** with a push button **18**, at least two screw hooks **14** and at least two adjustable knobs **15**.. Figure 13b shows the top view of a seat headrest comprised of a base **11**, a first side cushion **12L** and a second side cushion **12R**, each side cushion having a hinge **13**, at least two screw hooks **14** and at least two adjustable knobs **15**. Figure 13c shows the rear view of a seat headrest comprised of a base **11** with side arms **19** and a central opening **16**, a first side cushion **12L** and a second side cushion **12R**, each side cushion having a hinge **13**, each hinge **13** having a pair of cantilever snaps **51** extending downward from said hinge **13**. Figure 13d shows the left side view of a seat headrest comprised of a base **11** with a side arm **19**, at least one screw hook **14** and at least one adjustable knob **15**, and a first side cushion **12L** having a hinge **13** with a push button **18** and a pair of cantilever snaps **51** extending downward from said hinge **13**. Figure 13e shows the front view of the seat headrest comprised of a base **11** with a side arm **19** at each lateral end of base **11** and a central opening **16** with at least two adjustable knobs **15**, a first side cushion **12L** and a second side cushion **12R**, each side cushion having a hinge **13**. Figure 13f shows the right side view of a seat headrest comprised of a base **11** with a side arm **19**, at least one screw hook **14** and at least one adjustable knob **15**, and a second side cushion **12R** having a hinge **13** with a push button **18** and a pair of cantilever snaps **51** extending downward from said hinge **13**.

Reference is made to Figure 14 which illustrates a close up view of a side cushion of the seat headrest. The first side cushion **12L** has a hinge **13** comprised of a push button **18** in the center of said hinge **13** and pair of cantilever snaps **51** extending vertically downward from said hinge **13.**

Reference is made to Figure 15 which illustrates the contour nature of the side cushions **12**. A top view of a side cushion **12L** and attached hinge **13** are shown. The bottom most end of the side cushion **12L** has an angle between 15° and 25° beginning preferably at the midpoint **61** of said side cushion **12L**.

Reference is made to Figure 16 which illustrates the side view of the side cushion of the seat headrest shown in Figure 14. The side cushion **12R** has an attached hinge **13** with a push button **18** and a pair of cantilever snaps **51** extending vertically downward from said hinge **13**. In a preferred embodiment, the side cushion **12R** may be covered by a padded material such as foam to provide a soft, cushioned surface. The side cushion is then wrapped by a soft outer material such as fabric or nylon to cover the padded material and provide a more desirable aesthetic. The soft outer material can have a design print or be monochrome without departing from the spirit of the present invention.

Reference is made to Figure 17 which illustrates the hinge **13** integrated into each of the first and second side cushions. The first side cushion **12L** and integrated hinge **13** is further comprised of a push button **18** that once pressed engages and disengages a gear **55** and a compression spring **95** to allow said side cushion to move freely between locking positions. The

gear **55** and compression spring **95** are held together by a pin **45** within the hinge cap **54**. The hinge **13** provides vertical adjustment of the side cushions (**12L** and **12R**) to accommodate the height and comfort needs of the user or in the alternative to allow the side cushions (**12L** and **12R**) to be moved out of the way when not in use, such as when a user is entering or exiting the vehicle. The side cushion **12L** may have a waffled structure **85** to reduce the manufacturing costs of the cushions as well as the overall weight of the cushions. In yet another alternative embodiment the push button **18** within the integrated hinge **13** may be recessed in relation to the hinge cap.

Reference is made to Figures 18 and 19 which illustrate alternative positioning of the side cushions of the fully assembled seat headrest **10**. Figure 18 shows the vertical repositioning of the side cushions (**12L** and **12R**) of the seat headrest. Figure 19 shows the side cushions (**12L** and **12R**) in the stowed position when not in use.

In an alternative embodiment the seat headrest utilizes a frictional hinge at the junction of the base arm. The frictional hinge is comprised of a plurality of washers, preferably constructed of nylon, and a bolt and nut to apply pressure to the frictional hinge to prevent movement of the side cushion once the side cushion is in the desired vertical position.

In another alternative embodiment, the hinge may be replaced with a pivot button having an integrated gear and compression spring to adjust the position of the side cushion.

An alternative embodiment reconfigures the positioning and structure of the base, the first side cushion and the second side cushion. The base would have a plurality of car headrest connector holes passing through the base. The plurality of car headrest connector holes allows for the car headrest poles to pass through the base securing the base to the car headrest. The base is then configured to extend in an outward direction forward of the car headrest. The first side cushion and the second side cushion would then be pivotally coupled to the base. The pivotal coupling allows the first side cushion and the second side cushion to pivot about an axis extending from the base. The angular position of the first side cushion and the second side cushion would be fixed by a frictional hinge.

While the preferred embodiment of the present invention is directed toward supplementing standard car headrests, it is not outside the scope of this invention to supplement other headrests on commercial buses, airplanes, trains or any other vehicle having headrests. The configuration of the plurality of headrest connection points would have to be modified to accommodate the number of headrest poles in the corresponding headrest. This may require that only one headrest connection point be used instead of a plurality with the addition of a stabilizing feature such as an elastic strap to better facilitate proper coupling. Furthermore, while described as a seat headrest, the user is not limited to any particular type of seat or user.

It is contemplated that the present invention be used in conjunction with booster seats. Toddlers that are too big for car seats but are too small to use the standard seat belt are required to ride in booster seats. Often, the child in the booster seat is also too small to benefit from the position of the traditional seat headrest because of their small stature and the fact that standard

car headrests are designed to fit the average adult. The present invention provides for supplemental support for the head and neck of a child using a booster seat without requiring permanent alteration of the existing seat headrest. The user can also be an adult seeking additional support while traveling in a vehicle without departing from the scope of the invention.

Many alterations and modifications may be made by those having ordinary skill in the art without departing from the spirit and scope of the invention. Therefore, it must be understood that the illustrated embodiments have been set forth only for the purposes of example and that it should not be taken as limiting the invention as defined by the following claims. For example, notwithstanding the fact that the elements of a claim are set forth below in a certain combination, it must be expressly understood that the invention includes other combinations of fewer, more or different elements, which are disclosed in above even when not initially claimed in such combinations.

Insubstantial changes from the claimed subject matter as viewed by a person with ordinary skill in the art, now known or later devised, are expressly contemplated as being equivalently within the scope of the claims. Therefore, obvious substitutions now or later known to one with ordinary skill in the art are defined to be within the scope of the defined elements.

While the particular seat headrest as herein shown and disclosed in detail is fully capable of obtaining the objects and providing the advantages herein before stated, it is to be understood that it is merely illustrative of the presently preferred embodiments of the invention and that no

limitations are intended to the details of construction or design herein shown other than as described in the appended claims.

CLAIMS

We claim:

1. A supplemental seat headrest for providing head and neck support to a user in a passenger vehicle when used in conjunction with an existing seat headrest, the supplemental seat headrest comprising:

a base portion;

at least one side cushion; and

a plurality of seat connection points.

2. The supplemental seat headrest of claim 1, wherein the base portion fits securely in a horizontal orientation within the space between a seat and an existing seat headrest.

3. The supplemental seat headrest of claim 2, wherein the base portion further includes a lateral opening within the central crossbar of said base such that the lateral opening is positioned directly below an existing seat headrest upon placement of said base.

4. The supplemental seat headrest of claim 2, wherein the base portion further includes a base arm located at each lateral end of said base, said base arm extending approximately perpendicular to said base.

5. The supplemental seat headrest of claim 4, wherein the base arm further includes a recess within the base arm for receiving a side cushion.

6. The supplemental seat headrest of claim 1, wherein the at least one side cushion is further comprised of an integrated hinge and a pair of cantilever snaps.

7. The supplemental seat headrest of claim 6, wherein the at least one side cushion is removably attached to the base portion utilizing said cantilever snaps.

8. The supplemental seat headrest of claim 1, wherein the at least one side cushion is configured in a downward orientation from the base arm to point generally downward towards a user's shoulders.

9. The supplemental seat headrest of claim 8, wherein the at least one side cushion further curves inward towards a user's shoulders at an angle between 15° and 25° beginning preferably at the midpoint of the side cushion.

9. The supplemental seat headrest of claim 6, wherein the integrated hinge is further comprised of:

a compression spring;

a gear;

a hinge cap with integrated cantilever snaps;

a pin; and

a push button.

10. The supplemental seat headrest of claim 9, wherein the integrated hinge provides for repositioning of the at least one side cushion.

11. The supplemental seat headrest of claim 9, wherein reposition of the at least one side cushion is achieved by depression of the push button which further activates the compression spring, thereby allowing for the rotation of the hinge cap and gear to facilitate movement of said side cushion to a desired position.

12. The supplemental seat headrest of claim 6, wherein the integrated hinge is a frictional hinge.

13. The supplemental seat headrest of claim 1, wherein the plurality of seat connection points is further comprised of a pair of screw hooks and a pair of adjustable knobs.

14. The supplemental seat headrest of claim 13, wherein the pair of screw hooks engage the headrest poles of the existing headrest and extend through the lateral opening in the base portion to be secured by the adjustable knobs, thereby securing the base portion to the existing seat headrest.

15. The supplemental seat headrest of claim 9, wherein the push button is recessed relative to the hinge cap.

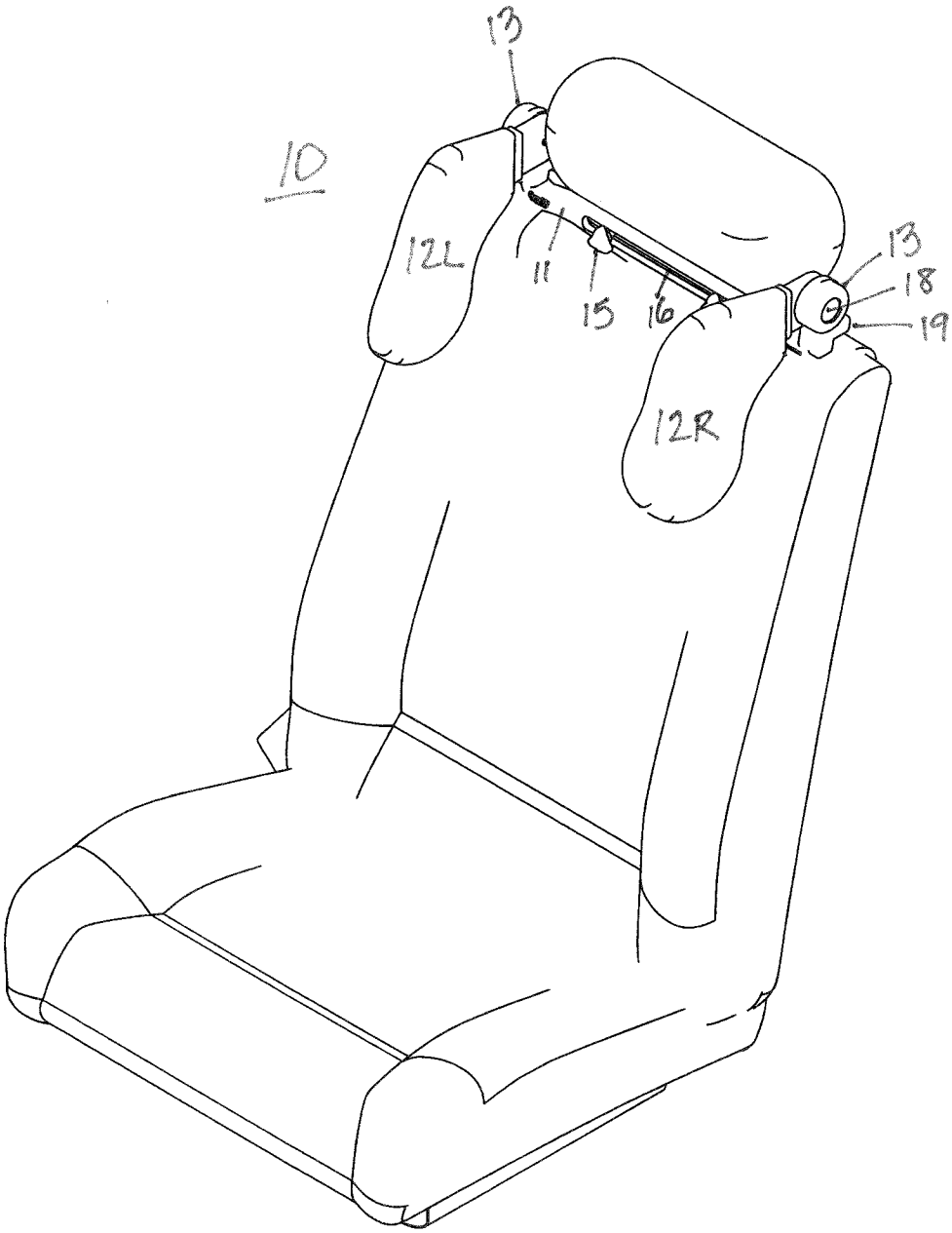

Figure 1

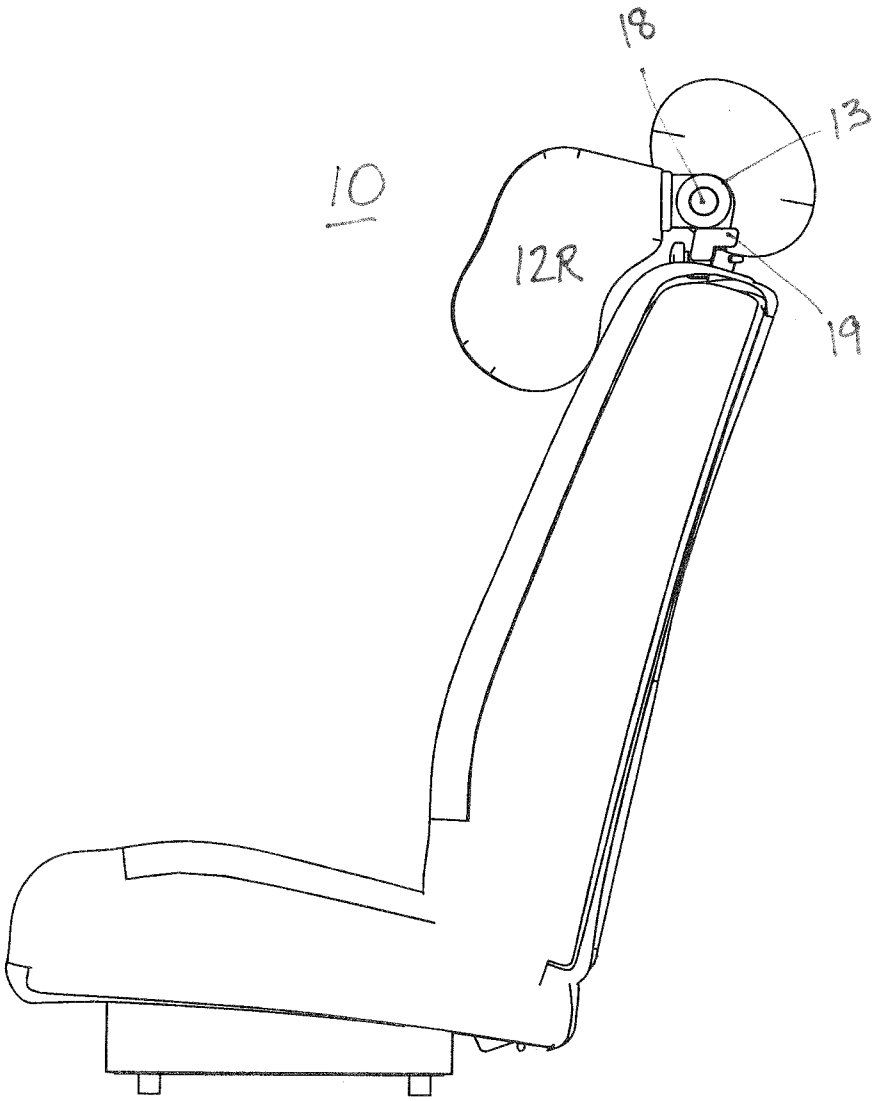

Figure 2

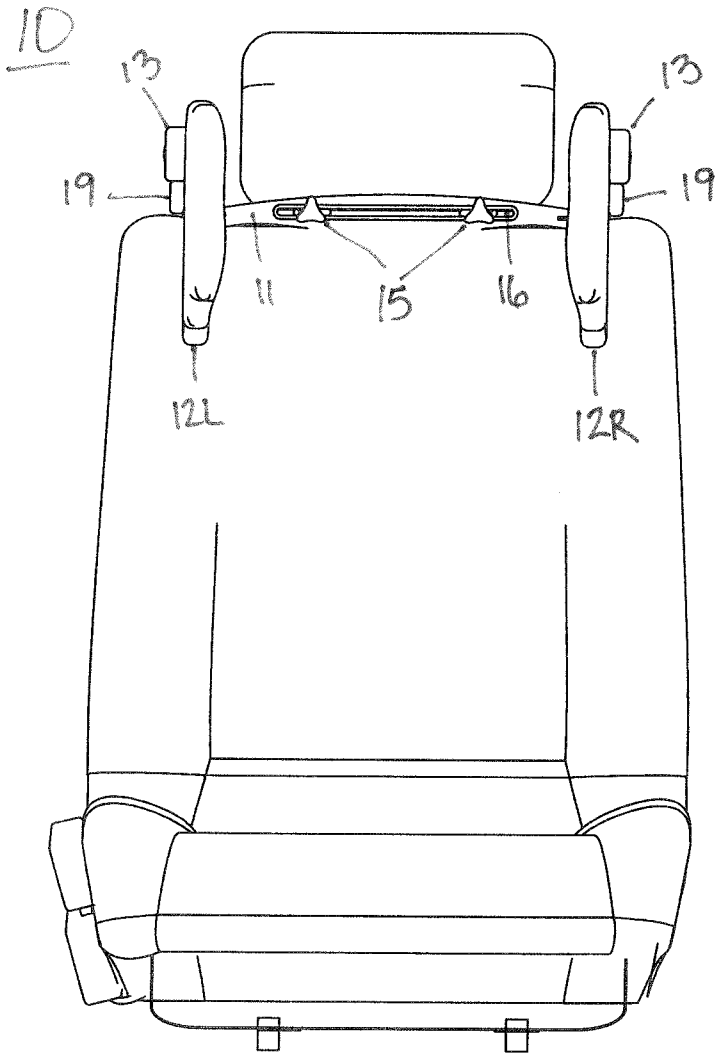

Figure 3

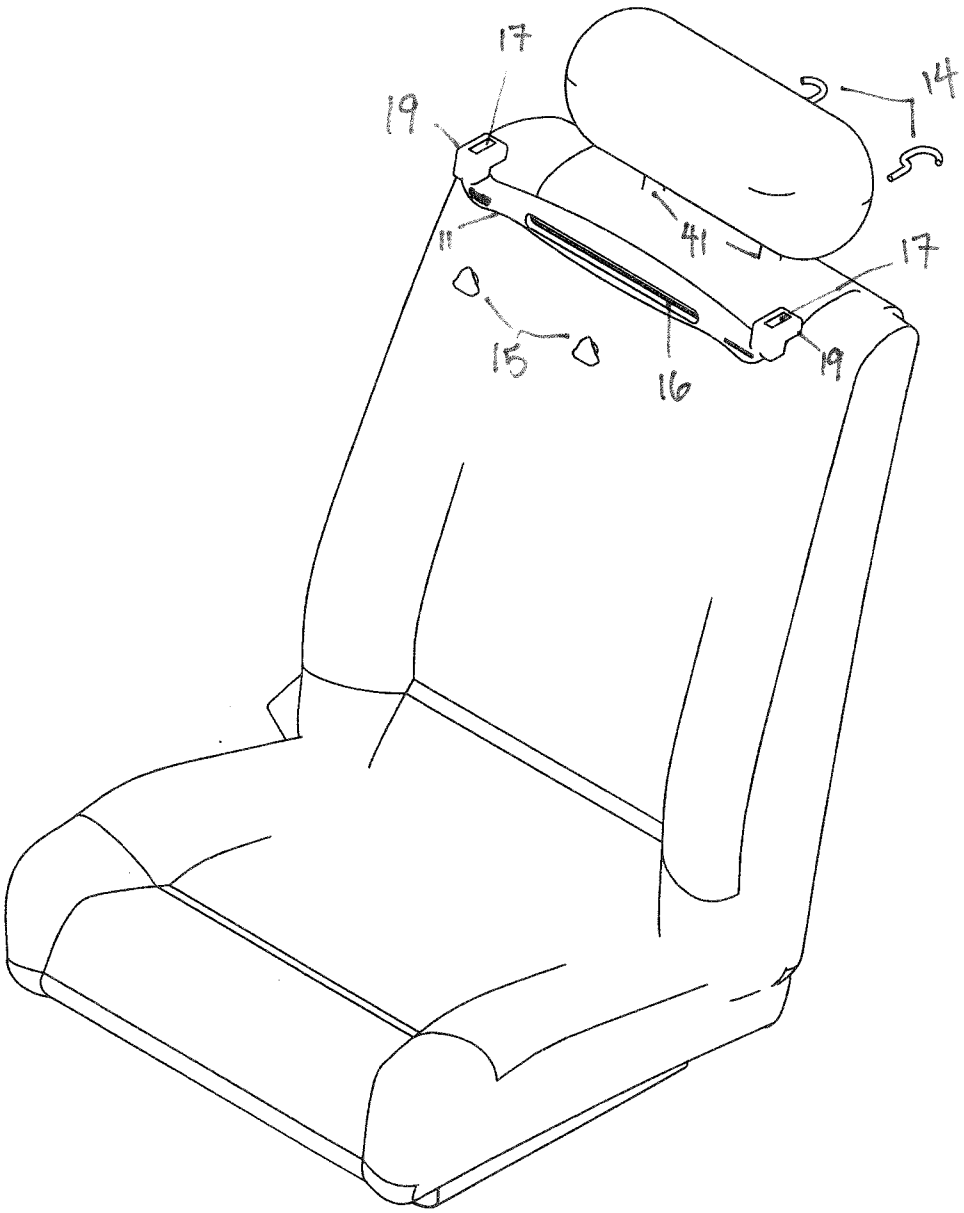

Figure 4

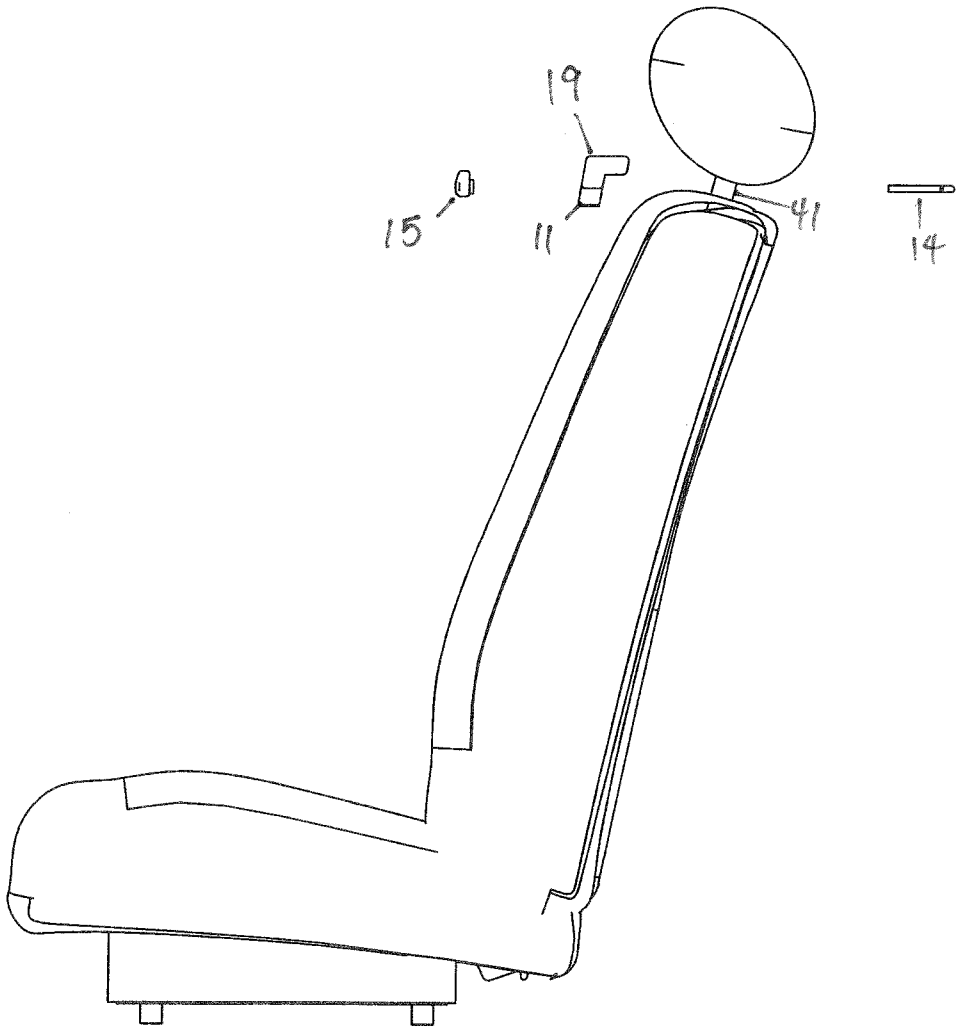

Figure 5

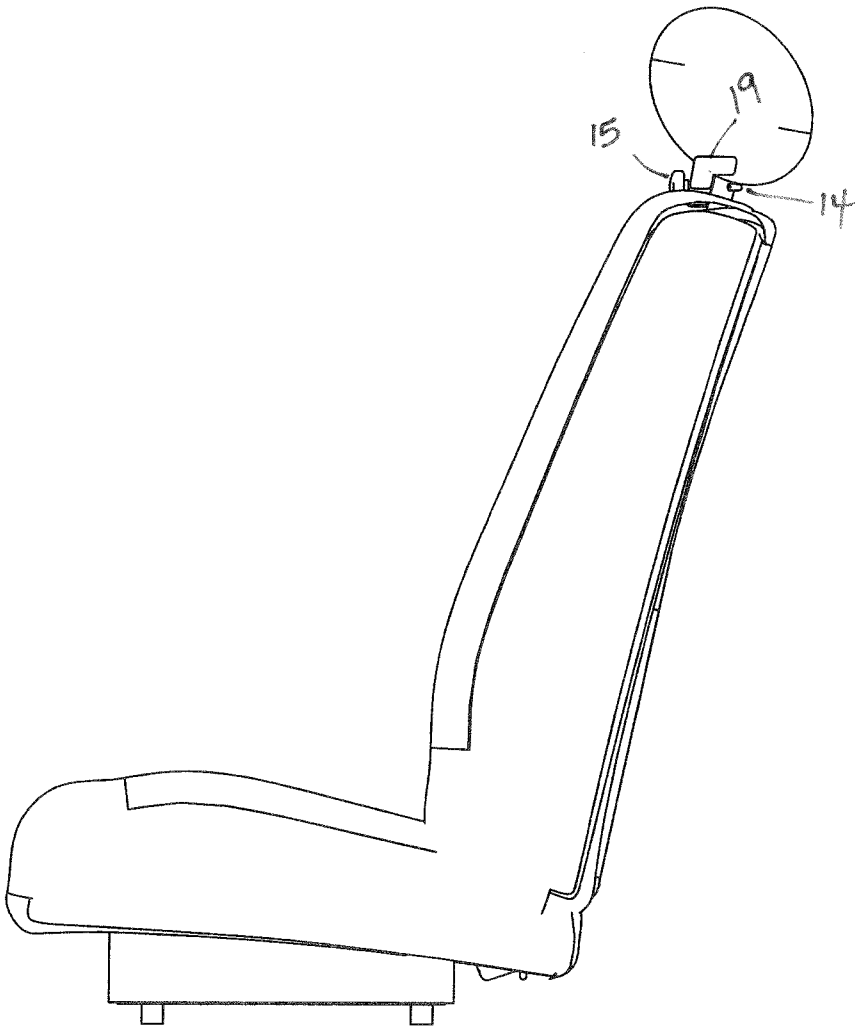

Figure 6

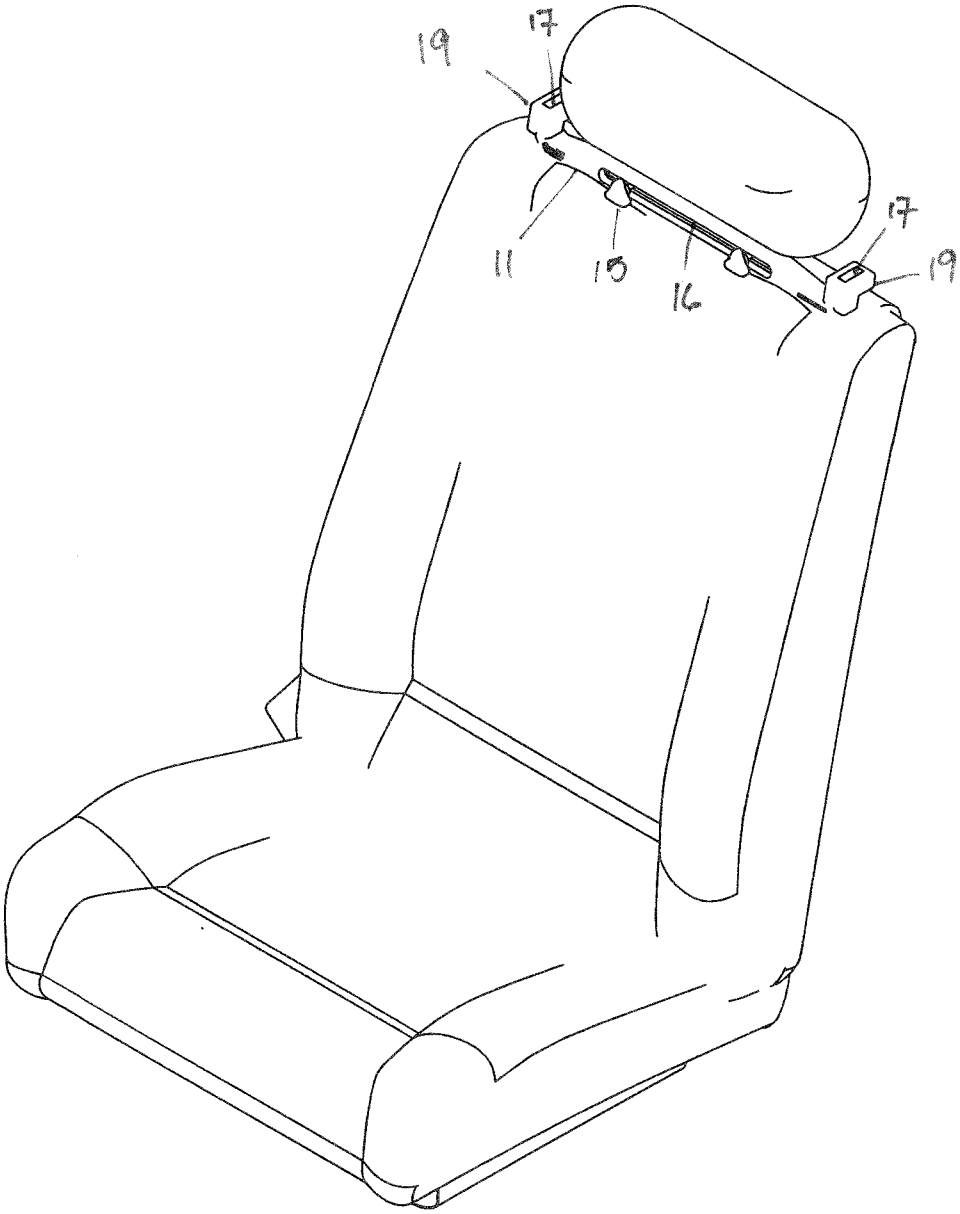

Figure 7

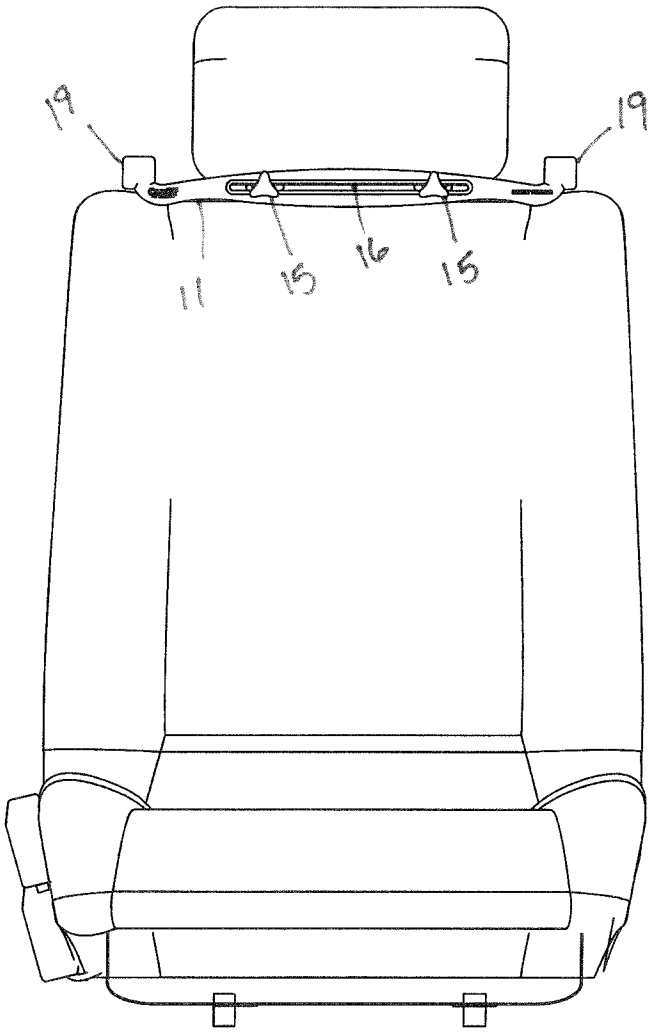

Figure 8

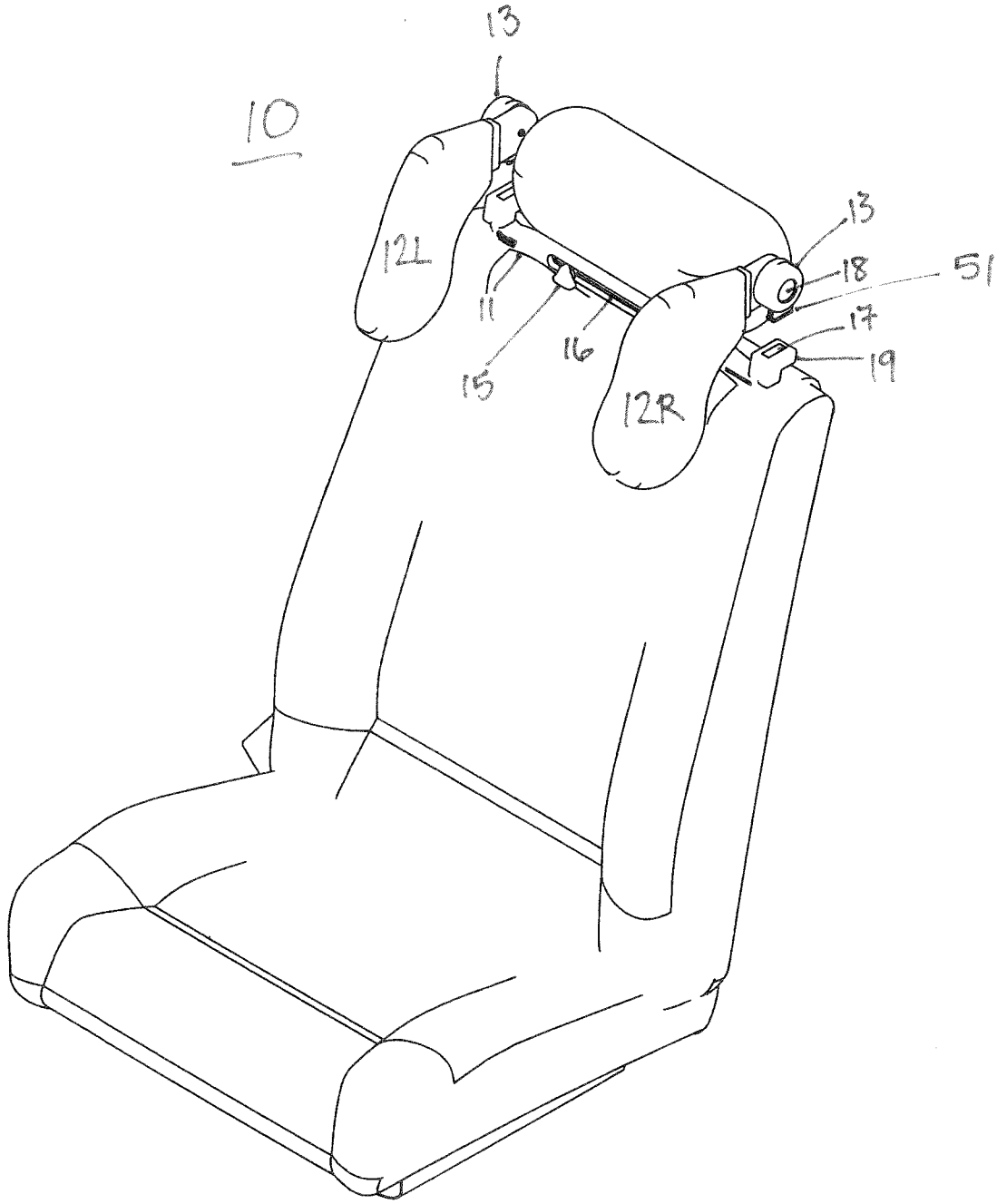

Figure 9

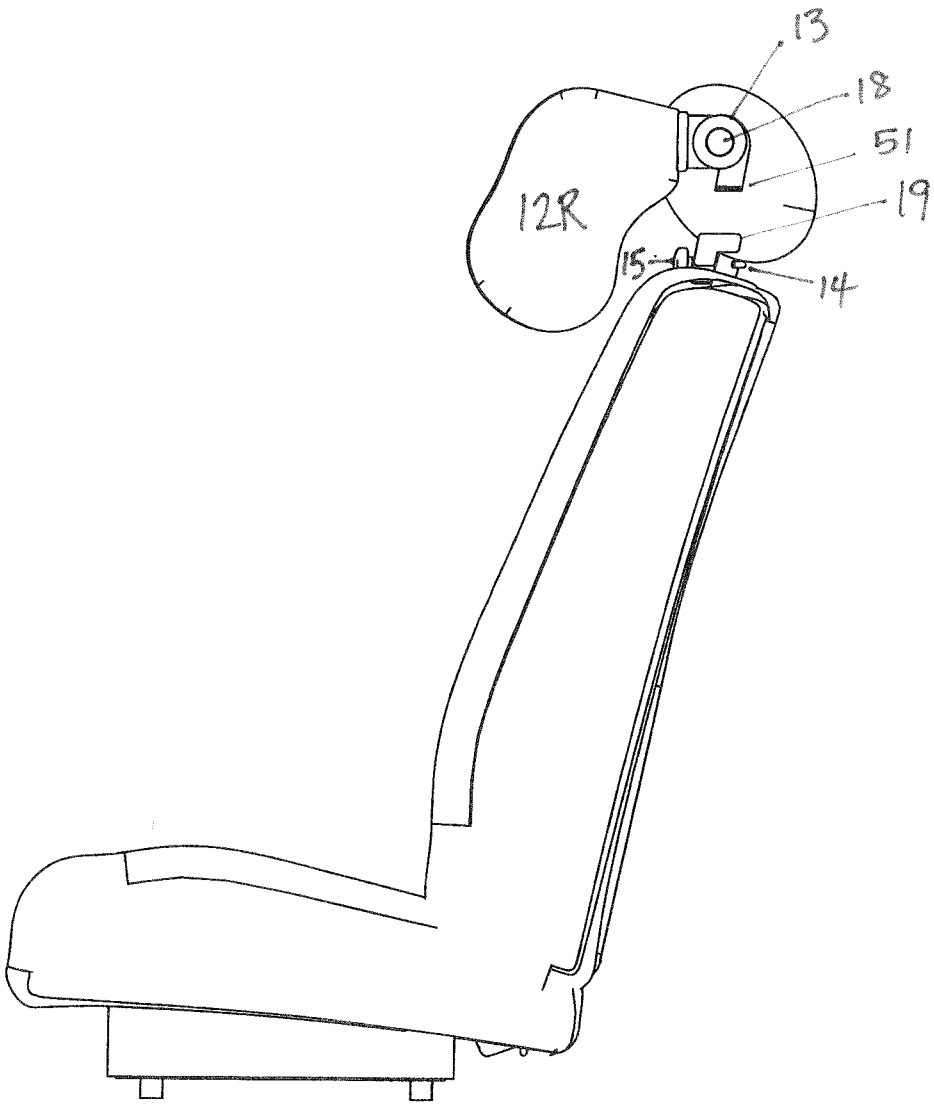

Figure 10

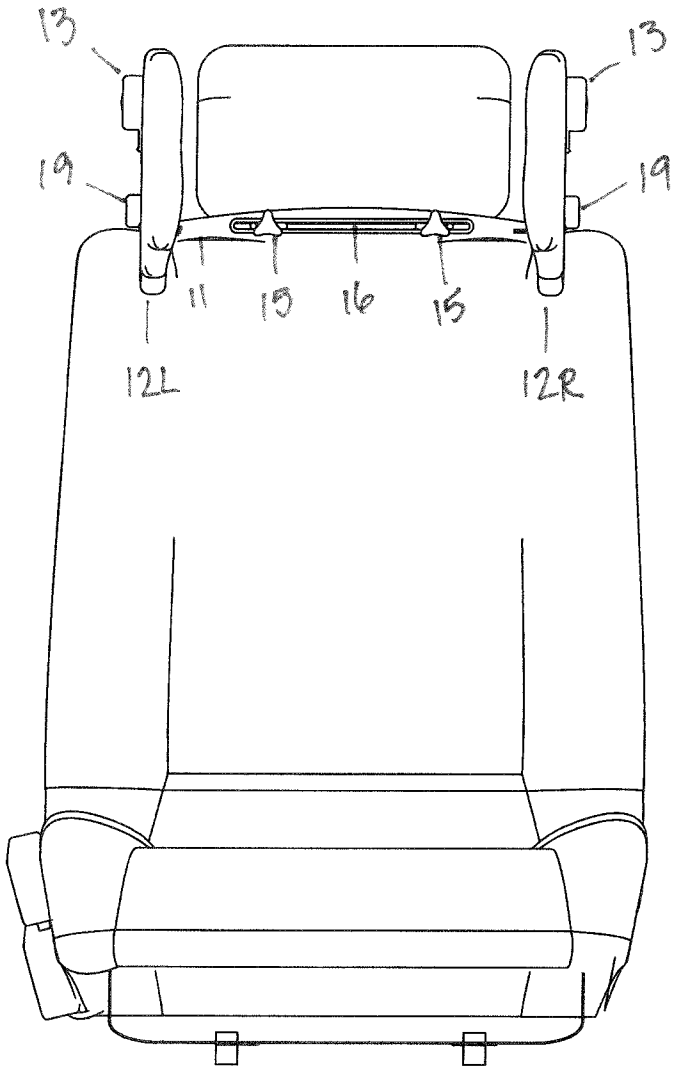

Figure 11

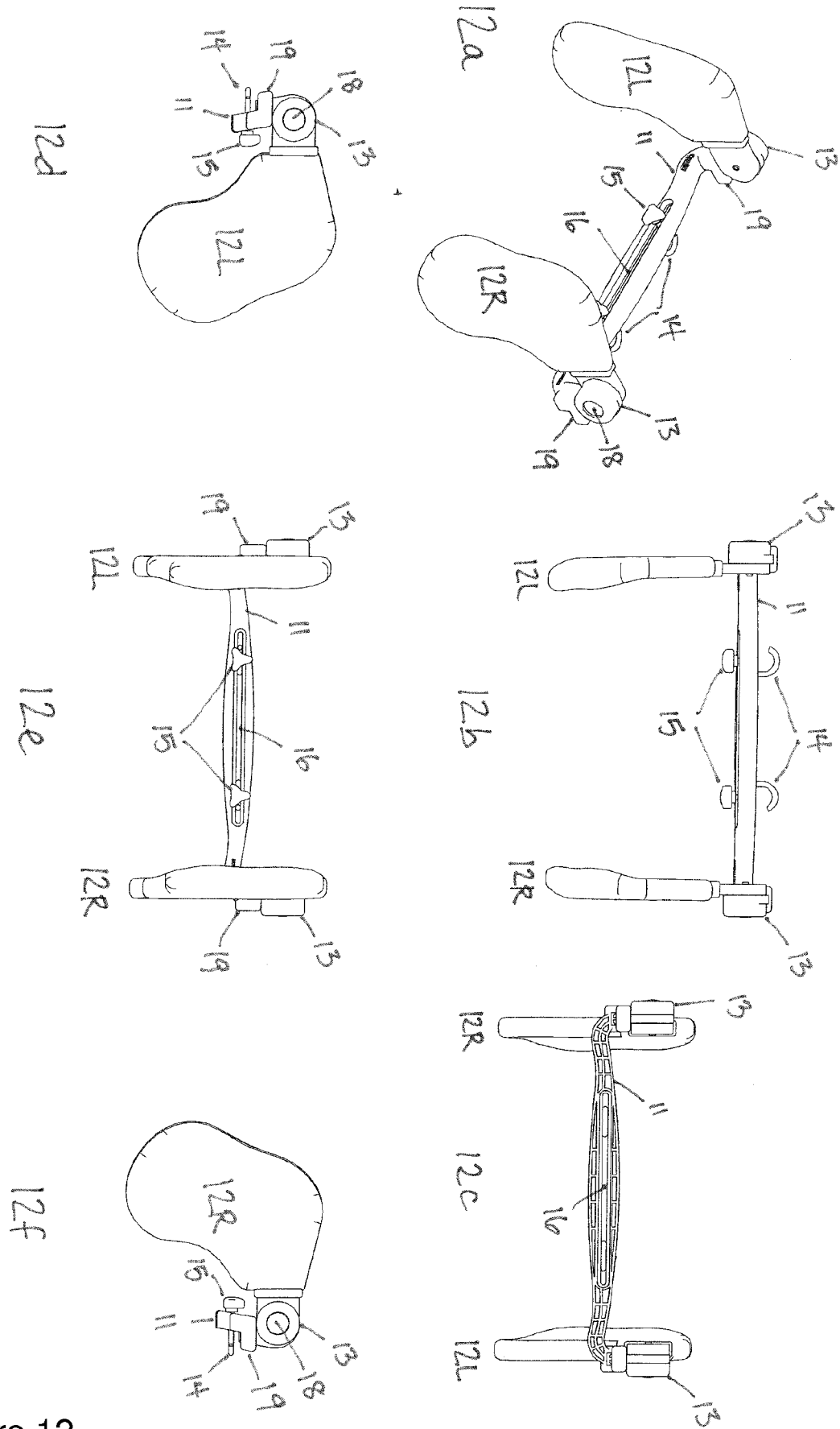
12a
12L
11
13
15
19
16
12R
14
13
19
18
12b
12L
13
11
15
14
12R
13
12c
12R
13
11
16
12L
13
12d
14
19
18
11
13
15
12L
12e
19
13
12L
11
15
16
12R
19
13
12f
12R
15
11
13
14
19
18

Figure 12

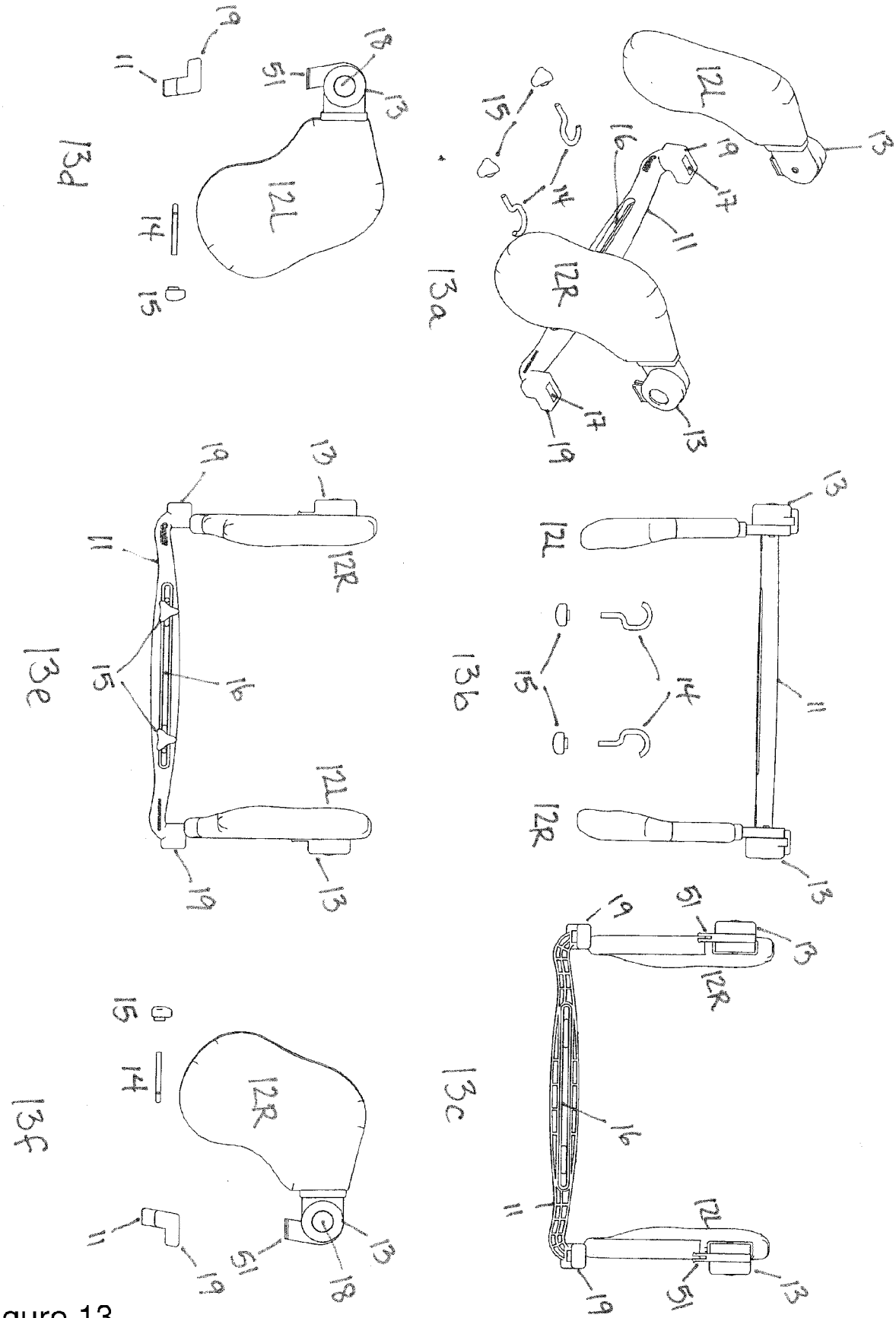

Figure 13

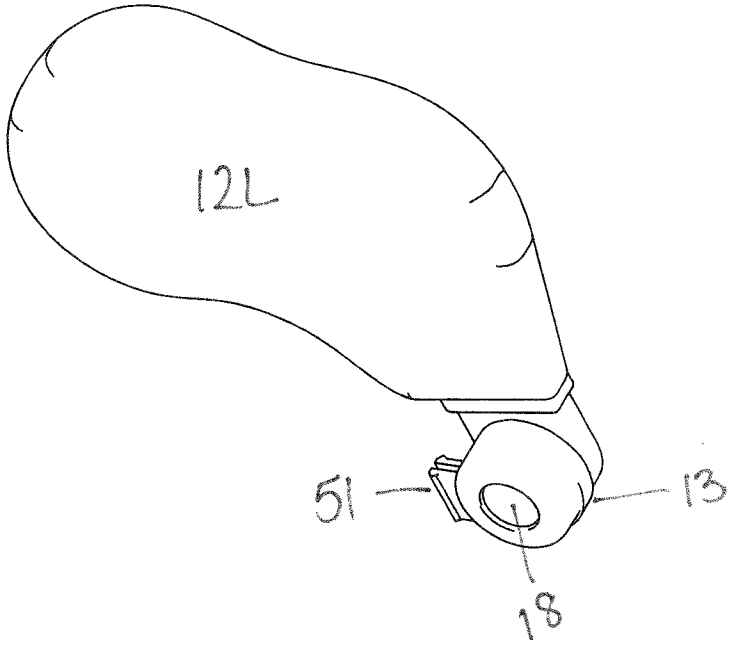

Figure 14

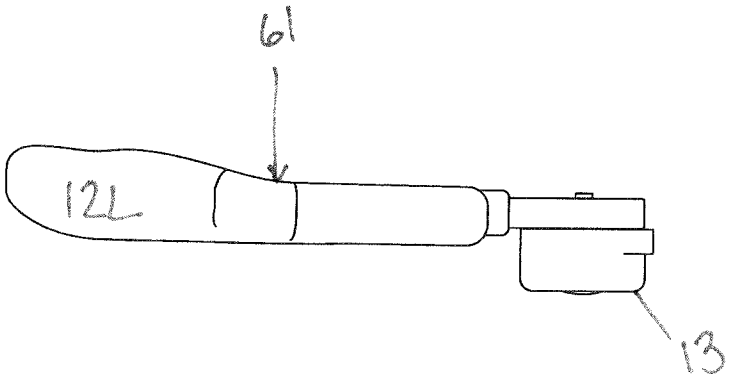

Figure 15

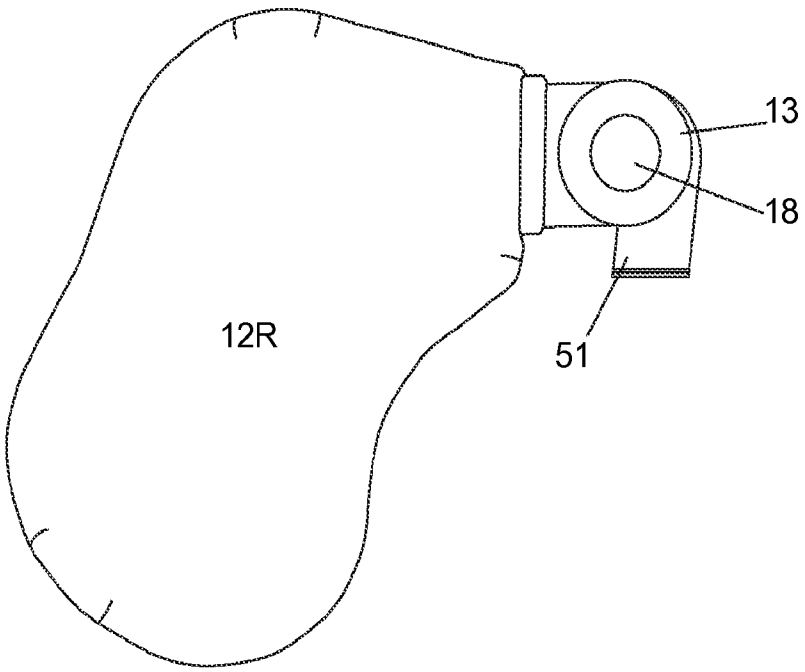

Fig. 16

16/18

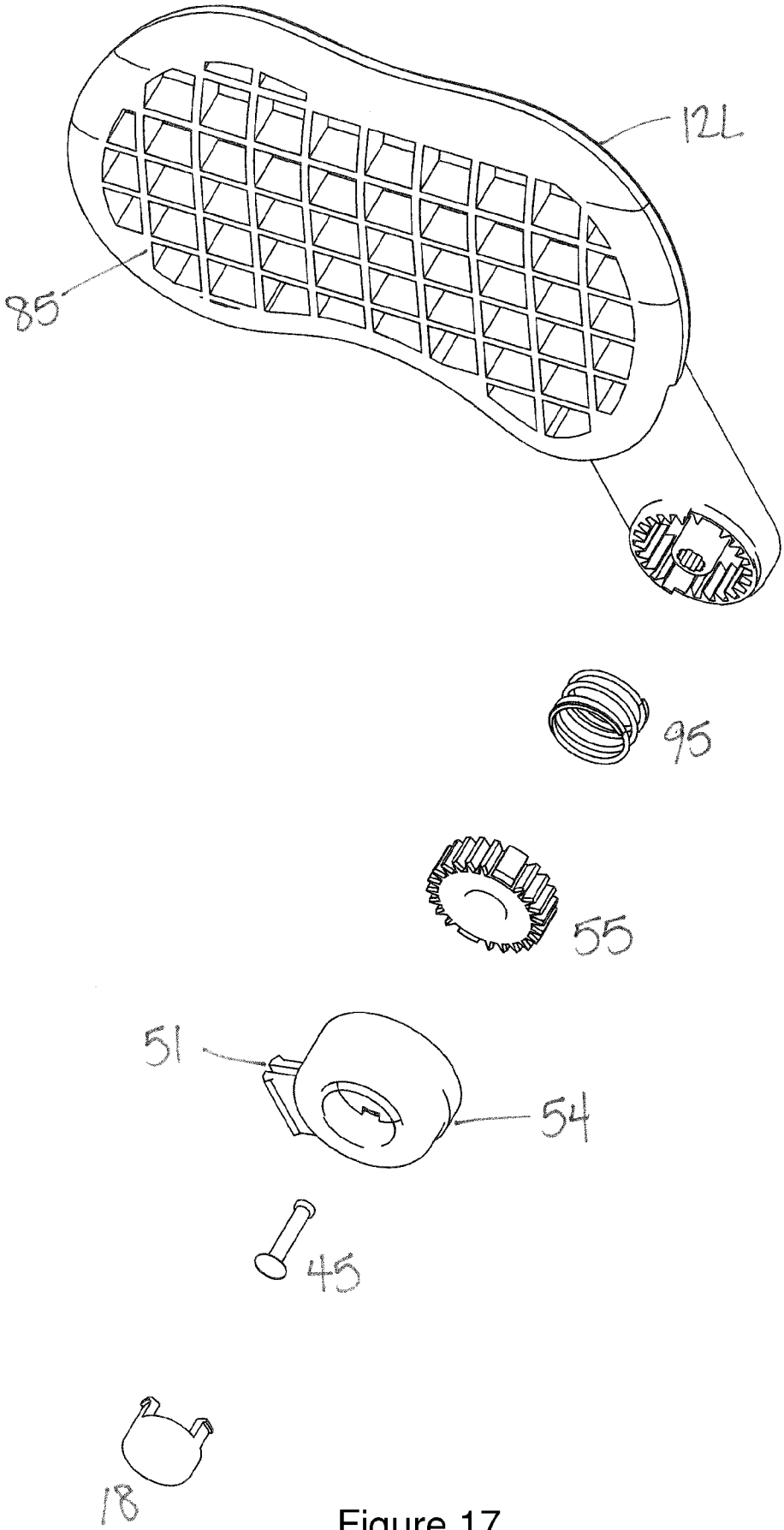

Figure 17

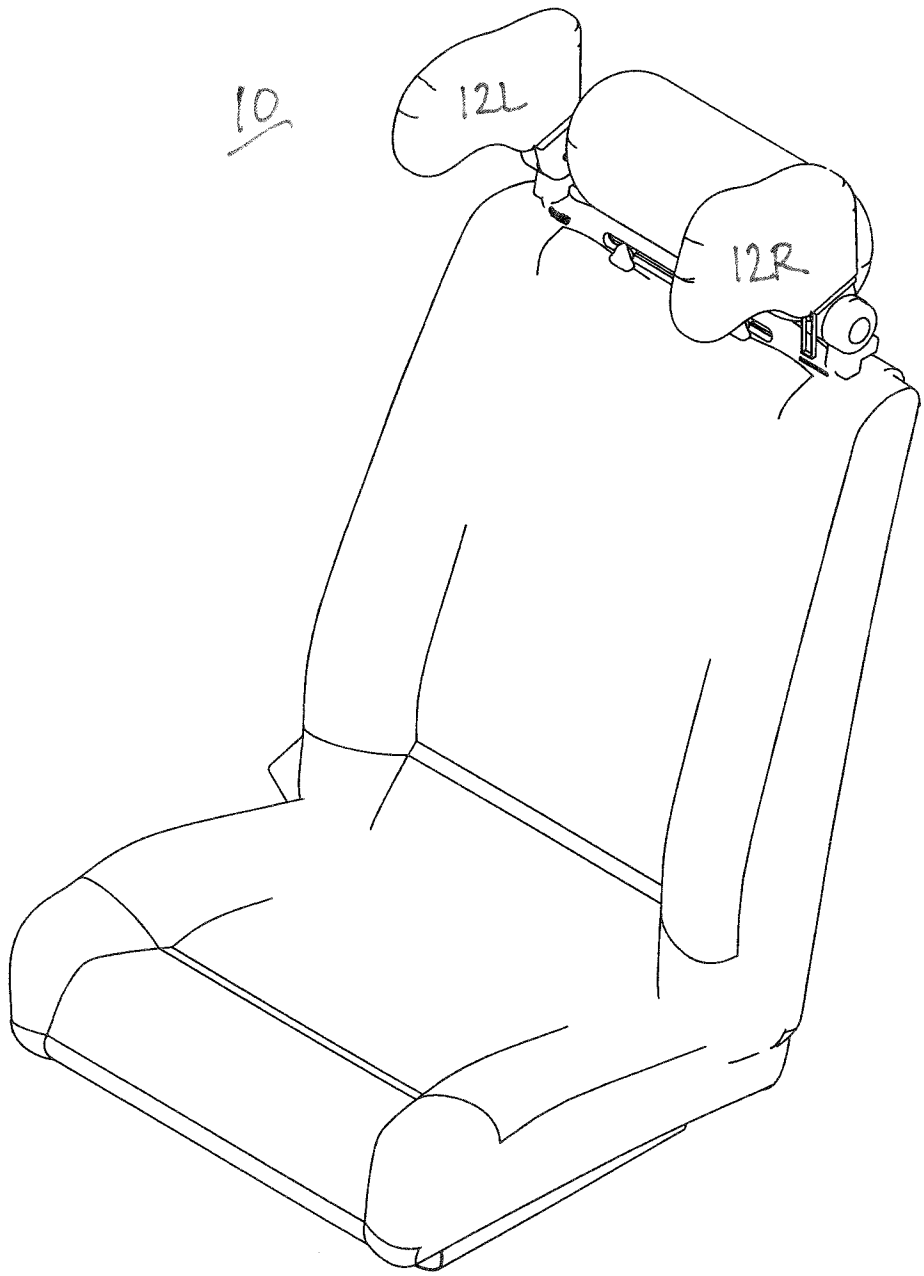

Figure 18

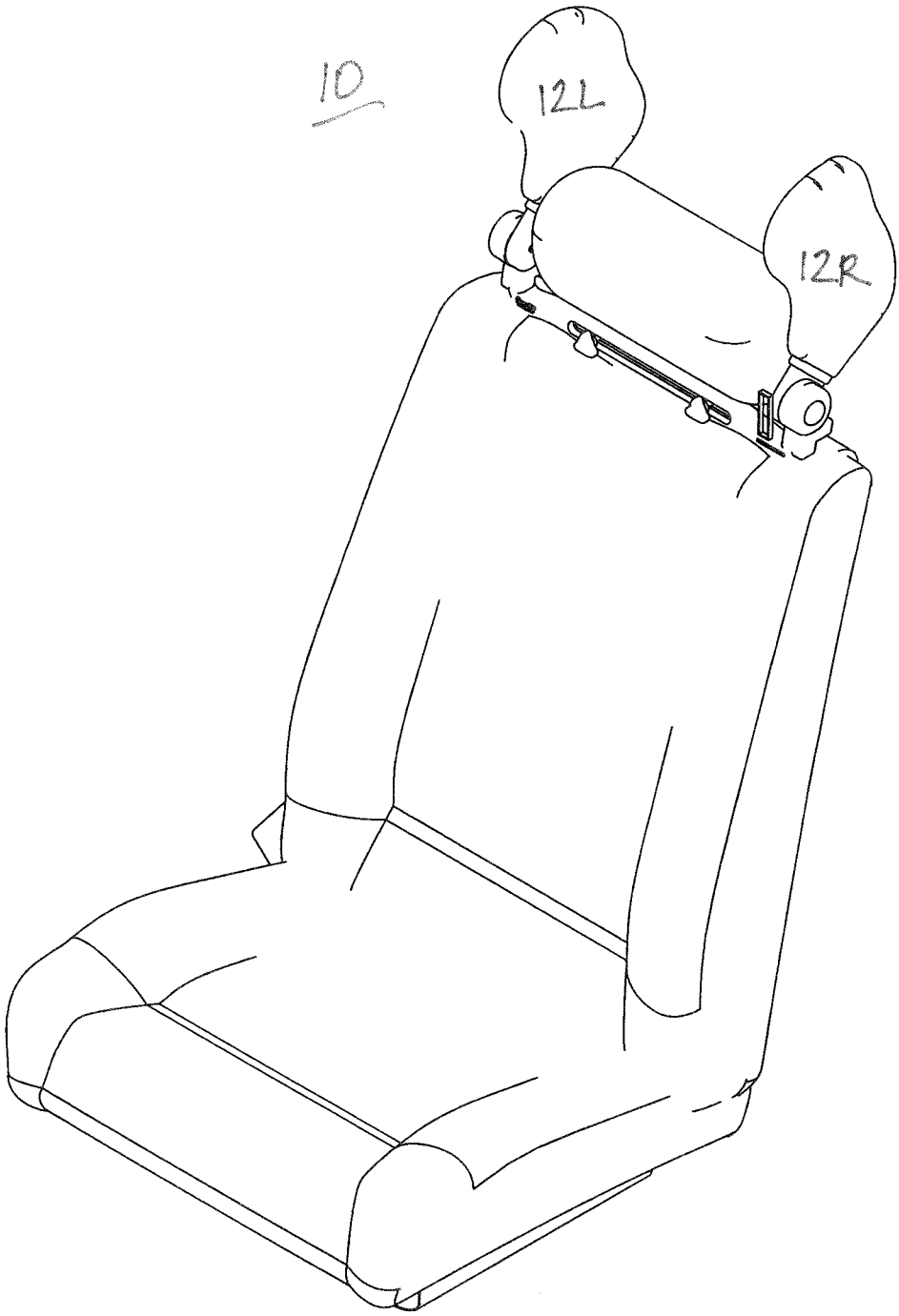

Figure 19

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/045134

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - B60N 2/48 (2013.01)
USPC - 297/397
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)
IPC(8) - A47C 16/00, 7/36, 7/38; A61G 5/00, 5/10, 5/12; B60N 2/26, 2/28, 2/48; B60R 22/28 (2013.01)
USPC - 5/636, 637, 640, 643, 644; 128/870; 248/118; 297/219.12, 250.1, 284.9, 391, 392, 393, 397, 406, 408, 410

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - A47C 7/36, 7/38, 7/383; A61G 5/12, 2005/1054, 2005/1091; B60N 2/2851, 2/4879, 2/4882; Y10S 297/06 (2013.01)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	FR 2 836 100 B1 (MOREL) 09 July 2004 (09.08.2004) see machine translation	1-5, 8, 9a --- 6, 7, 9b-15
Y	US 2007/0057545 A1 (HARTENSTINE et al) 15 March 2007 (15.03.2007) entire document	6, 7, 9b, 10-12, 15
Y	Universal Rear Seat Headrest Mount for Tablets. Installation Manual. Arkon Resources, Inc. 2011 [retrieved on 2013-11-01]. Retrieved from the Internet: <URL: http://www.arkon.com/manuals/TAB-RSHM.pdf>. entire document	13, 14
A	US 6,648,416 B2 (O'CONNOR et al) 18 November 2003 (18.12.2003) entire document	1-15

☐ Further documents are listed in the continuation of Box C. ☐

* 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	Date of mailing of the international search report
01 November 2013	15 NOV 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)