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(54) **A STADIUM SEAT**

STADIONSITZ

UN SIÈGE DE STADE

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Description

Technical Field of the Invention

[0001] The invention relates to a reinforced stadium seat which is mounted in the vertical surface (riser) between two steps in concrete floor steps used in indoor and outdoor sports halls, stadiums and similar places; which is formed in compliance with human anatomy; the metal components of which are designed as one-piece by laser cutting and bending operations in press dies, said metal components also serving as a mechanism and interconnecting the seat and back support plastics; the strength of which is quite high due to the lack of welding operation; and at the same time the durability of which is increased with the concealed transmission rods positioned within the seat and back support plastics.

Background of the Invention (Prior Art)

[0002] Today, stadium seats are used in outdoor or indoor sports halls, stadiums, etc. in order for the spectators to watch the events. It is desired that these seats are easy to mount in halls and stadiums, their design is suitable for the body shape, the seats are closed when not in use, and that they are durable in order to increase the service life thereof. For instance, a stadium seat of this kind is known from GB1461272 A.

[0003] During the mounting of the seats used in the state of the art in halls, stadiums, and similar areas, the parts connecting the seat and back support portions are welded together for mounting, which increases the costs, causes losses of space during transport since the parts to be welded are carried separately, and at the same time leading to increases in the cost due to the welding operation and dyeing costs during the production phase of the seat.

[0004] Again, due to the fact that the parts connecting the seat and back support portions are welded together and that the seating surface is stable, the service life of the seats is reduced in case of setting foot or mounting on the seat portions and cracking and breaking occur in welding areas over time.

[0005] Moreover, the seat portions get either wet or dirty in bad weather conditions due to the seat portion being open. This, in turn, causes the users to watch the events standing.

[0006] In hot or other weather conditions, the spectators sweat a lot because they are very active during the events. As the backrest and seat portions of the seat are typically flat, sweating is experienced more in the regions where the spectators contact with the seat while the spectators are sitting on the seat. Even in the absence of sweating, the spectators start to slide over the seat after some time and have difficulty in watching the game because of the little friction between the spectator and the seat in case of seats with flat backrest and seat portions.

[0007] In order to eliminate the aforementioned drawbacks, it has deemed necessary to make a development in the related technical field due to the fact that the part connecting the back support and seat portions is not one-piece, i.e. weldless, and hence welding operation is required, and that it is not produced for folding seats.

Objects and Brief Description of the Invention

[0008] The present invention relates to a reinforced stadium seat which can be used in outdoor-indoor sports halls and stadiums and which meets the aforementioned requirements, eliminates the drawbacks, and at the same time provides additional advantages.

[0009] An object of the invention is to form the seat which is mounted in the concrete floor in outdoor-indoor sports halls, stadiums and similar places such that the connection part which connects the seat and back support portions of the seat is obtained as one-piece by forming by means of cutting and bending operations, and to provide a self-folding system with high strength as welding operation is not performed.

[0010] Another object of the invention is to save on costs and labor by forming the back support portion of the seat as one-piece by cutting and bending operations, and hence eliminating the welding operation as well as the dyeing costs in the production phase of the seat.

[0011] Still another object of the invention is to eliminate weld cracks and breaking that may result therefrom which are experienced over time in welding areas due to reasons such as mounting on the seat portions or applying force thereon owing to the fact that the seat-back support connection part is produced as one-piece by forming by means of cutting and bending operations, and thus the welding operation is not performed during the production phase of the seat.

[0012] Another object of the invention is to increase the movement areas of the spectators with the seat portion closing and the seat folding upon the users standing up from their seats, by way of the weight rod disposed in the weight rod space of the seat portion.

[0013] Yet another object of the invention is to ensure, by means of the weight rod disposed in the seat portion, that the seat portion closes by itself upon the users standing up from their seats, i.e. when the seats are not in use, and hence the seat portions of the seats remain clean and usable in bad weather conditions.

[0014] Another object of the invention is to increase the strength of the seat portion by way of the transmission rods concealed in the seat portion.

[0015] Another object of the invention is to increase the strength of the back support portion by way of the one-piece connection plate concealed in the back support portion.

[0016] Yet another object of the invention is to provide the weldless one-piece plate, which serves as a mechanism, with caps produced of Polypropylene (PP) material in order to prevent jammed fingers while the users sit on/stand up from their seats.

[0017] Another object of the invention is to connect the weldless one-piece plate of the seats directly to the riser without requiring the use of any other material.

[0018] And another object of the invention is to easily mount the weldless one-piece plate of the seats on the cross members to be produced. These cross members reduce the number of concrete inserts in stadium precast and prevent concrete weakening, at the same time facilitating the replacement of the seats in future.

Description of the Drawings

[0019] The drawings for a better understanding of the stadium seat developed with the present invention and the explanations related thereto are given below.

Figure 1: Perspective view of the unfolded and folded positions of the stadium seat.
Figure 2: Side view of the unfolded position of the stadium seat.
Figure 3: Perspective view of the seat-back support connection plate of the stadium seat.
Figure 4: Cross-sectional view of the region where the weight rod is positioned
Figure 5: Exploded view of the stadium seat.
Figure 6: Side view of the stadium seat.
Figure 7: Exploded view of the stadium seat comprising riser connection mechanism.
Figure 8: Side view of the stadium seat comprising riser connection mechanism.

Description of the Part References

[0020] The parts and portions which are shown in the drawings illustrating the stadium seat developed with the present invention for a better understanding of the invention are enumerated and the reference numbers corresponding thereto are presented below.

1. Seat portion
2. Back support portion
2.1 Advertisement area
3. Seat-back support connection plate

3.1 Main body
3.2 Backrest mounting lug
3.2.1 Backrest mounting lug hole
3.3 Riser mounting lug
3.3.1 Riser mounting lug hole
3.4 Seat centering pin housing
3.5 Seat movement pin housing
3.6 Cross member connection housing
3.7 Cross member mounting lugs
3.7.1 Cross member mounting lug hole

4. Riser connection mechanism

4.1 Riser connection cross member
4.2 Riser mounting bracket
4.3 Riser connection cross member caps
4.4 Riser connection plate

5. Transmission rods
6. Seat connection plate
7. Weight rod
8. Weight rod hole
9. Seat centering pin
10. Seat movement pin
11. Protective cap
12. Connecting bolts
13. Nut
14. Numbering area
15. Lettering area

Detailed Description of the Invention

[0021] According to the invention it is provided a seat as claimed in claim 1.

[0022] In this detailed description of the invention, the preferred embodiments of the stadium seat having been developed herein are described only for a better understanding of the subject matter, without any limitations.

[0023] The stadium seat mainly comprises a seat portion (1), a back support portion (2), a weldless seat-back support connection plate (3) providing the connection between the seat portion (1) and the back support portion (2), and transmission rods (5) which are positioned within the seat portion (1) for reinforcing the same.

[0024] The seat-back support connection plate (3) has a single piece (weldless and one-piece) configuration formed by cutting and bending operation.

[0025] The seat-back support connection plate (3) is connected to the back support portion (2) by extending towards the upper portion, and to the seat portion (1) by extending towards the front.

[0026] The sides of the seat portion (1) are provided with the seat connection plate (6) extending along the seat portion (1) and having the same form. The seat connection plate (6) is coupled to the seat portion (1) by means of the connecting bolts and nut.

[0027] The seat portion (1) is provided therein with transmission rods (5) which are positioned for reinforcing purposes. The transmission rods are not visible from the outside. The transmission rods (5) are positioned along the seating portion of the seat portion (1) and secured by means of the nut (13) by passing the locking bolts (12) through the holes disposed in the seat connection plate (6).

[0028] Disposed within the seat portion (1) is a weight rod (7) which ensures that the seat is folded upon the spectator standing up from the seat portion (1) surface. The weight rod (7) used for ensuring that the seat portion (1) assumes folded position when the spectator stands up from the seat portion (1) is located in the weight rod space (8) subsequent to the injection operation of the seat portion (1) during the production phase of the seat.

The weight rod (7) may be metal or any other material.

[0029] The end portion of the seat-back support connection plate (3) extending towards the seat portion (1) is provided with an oval seat movement pin housing (3.5) that enables seat portion (1) to move up and down. The seat movement pin (10) moves inside the seat movement pin housing (3.5), thereby ensuring the up and down movement of the seat portion (1). The end portion of the seat movement pin (10), on the other hand, is provided with an anti-noise assembly. Said anti-noise assembly is produced of rubber or a similar material. The seat movement pin (10) which moves inside the seat movement pin housing (3.5) hits the boundaries of the seat movement pin housing (3.5) during the up and down movement of the seat portion (1). The anti-noise assembly is located in the end portion of the seat movement pin (10) with a view to prevent the noise likely to be heard during this hitting.

[0030] The portion of the seat-back support connection plate (3) towards the seat portion (1) is provided with a protective cap (11) in order that the seat movement pin (10) can operate easily and it will not cause any accident. Said protective caps (11) are made of polypropylene.

[0031] While the up and down (unfolding-folding) movement of the seat portion (1) is ensured by the seat movement pin (10) disposed in the seat movement pin housing (3.5), there also exists a seat centering pin (9) that prevents the horizontal movement of the seat portion (1). The seat centering pin (9) is passed through the seat centering pin housing (3.5) and then the seat-back support connection plate (3) and the seat portion (1) are secured together.

[0032] In an embodiment of the invention, the weldless, single piece seat-back support connection plate (3) formed by cutting and bending operation comprises:

- a main body (3.1),
- a backrest mounting lug (3.2) which is disposed on the main body (3.1) and which enables the seat connection plate (3) to be secured in the back support portion (2),
- a backrest mounting lug hole (3.2.1) which is located on the backrest mounting lug (3.2) and which allows the backrest mounting lug (3.2) to be mounted in the back support portion (2) by means of the connecting bolts (12) and nut,
- a riser mounting lug (3.3) that enables the seat-back support connection plate (3) to be fixed to the riser,
- a riser mounting lug hole (3.3.1) which is located on the riser mounting lug and which allows the riser mounting lug (3.3) to be mounted in the riser by means of the connecting bolts (12) and nut (13),
- a seat centering pin housing (3.4) through which the seat centering pin (9) interconnecting the back support connection plate (3) and the seat portion (1) passes, and
- a seat movement pin housing in which the seat movement pin (10) moves while the seat portion switches from unfolded position to folded position, or from folded position to unfolded position.

[0033] In an embodiment of the invention, a riser connection mechanism (4) has been developed in order to secure the stadium seat to where it is.

[0034] The riser connection mechanism (4) consists of:

- a riser connection cross member (4.1) on which the seat-back support connection plate (3) is positioned,
- riser connection cross member caps (4.3) that are disposed at both sides of the riser connection cross member (4.1) profile,
- a riser mounting bracket (4.2) which is welded or otherwise joined in the middle portion of the riser connection cross member (4.1), and
- a riser connection plate (4.4) on which one end of the riser mounting bracket is welded and which is mounted on the riser by way of bolts (12) and nut (13).

[0035] Provided at the lower portion of the seat portion (1) is a numbering area (14). Numbers, e.g. 1, 2, 3, are adhered to this area, and thus allowing the spectators to easily find their seats.

[0036] Riser connections cross member caps (4.3), on the other hand, are provided thereon with a lettering area (15). Letters, e.g. A, B, C, are adhered onto the riser connection cross member caps (4.3), and thus allowing the spectators to easily find their seats in the stadium.

[0037] An advertisement area (2.1) is disposed on the front surface (2) of the back support portion.

[0038] The regions of the seat portion (1) and the back support portion (2) which contact with the body of the spectator have a rough configuration that increases friction, prevents sliding and sweating of the spectator, but not a smooth configuration.

[0039] The seat portion (1) and the back support portion (2) may be produced of plastics, or alternatively they may be produced of a sponge material in another embodiment.

[0040] In the stadium seats in which the riser connection mechanism (4) is used, the seat connection plate (3) comprises:

- a main body (3.1),
- a backrest mounting lug (3.2) which is disposed on the main body (3.1) and which enables the seat connection plate (3) to be secured in the back support

portion (2),

- a backrest mounting lug hole (3.2.1) which is located on the backrest mounting lug (3.2) and which allows the backrest mounting lug (3.2) to be mounted in the back support portion (2) by means of the connecting bolts (12) and nut,
- a cross member connection housing (3.6) on which the riser connection cross member (4.1) is positioned,
- cross member mounting lugs (3.7) that provide the connection between the seat-back support connection plate and the riser connection cross member (4.1) positioned in the cross member connection housing (3.6),
- a cross member mounting lug hole (3.7.1) arranged on the cross member mounting lugs (3.7),
- a seat centering pin housing (3.4) through which the seat centering pin (9) interconnecting the back support connection plate (3) and the seat portion (1) passes, and
- a seat movement pin housing in which the seat movement pin (10) moves while the seat portion switches from unfolded position to folded position, or from folded position to unfolded position.

Claims

1. A seat which is mounted in the vertical surface between two steps in concrete floor steps in indoor and outdoor sports halls, stadiums and similar places and which has a seat portion (1) and back support portion (2) formed in compliance with human anatomy, said seat comprising a weldless seat-back support connection plate (3) which is formed as one-piece by cutting and bending operation and which provides the connection between the seat portion (1) and the back support portion (2); and transmission rods (5) which are positioned within the seat portion (1) for reinforcing the same, **characterized in** comprising an oval seat movement pin housing (3.5) that enables said seat portion (1) to move up and down in the end portion of the said seat-back support connection plate (3) extending towards the seat portion (1).

2. A stadium seat according to Claim 1, **characterized in** comprising a seat connection plate (6) extending along the seat portion (1) at the sides of the seat portion (1) and having the same form.

3. A stadium seat according to Claim 1, **characterized in** comprising at least two transmission rods (5) which are positioned inside the seat portion (1) for reinforcing purposes.

4. A stadium seat according to Claim 1, **characterized in** comprising a weight rod (7) which is disposed within the seat portion (1) and which ensures that the seat is folded upon the spectator standing up from the seat portion (1) surface.

5. A stadium seat according to Claim 4, **characterized in** comprising a weight rod space (8) into which the weight rod (7) is positioned.

6. A stadium seat according to Claim 1, **characterized in** comprising an anti-noise assembly in the end portion of the seat movement pin (10).

7. A stadium seat according to Claim 1, **characterized in that** the portion of the seat-back support connection plate (3) towards the seat portion (1) has a protective cap (11) positioned therein so that the seat movement pin (10) can operate easily and it will not cause any accident.

8. A stadium seat according to Claim 1, **characterized in** comprising a seat centering pin (9) that prevents the horizontal movement of the seat portion (1) while the up and down movement of the seat portion (1) is ensured by the seat movement pin (10) disposed in the seat movement pin housing (3.5).

9. A stadium seat according to Claim 1, **characterized in that** the weldless, single piece seat-back support connection plate (3) formed by cutting and bending operation comprises:

    • a main body (3.1),
    • a backrest mounting lug (3.2) which is disposed on the main body (3.1) and which enables the seat connection plate (3) to be secured in the back support portion (2),
    • a backrest mounting lug hole (3.2.1) which is located on the backrest mounting lug (3.2) and which allows the backrest mounting lug (3.2) to be mounted in the back support portion (2) by means of the connecting bolts (12) and nut,
    • a riser mounting lug (3.3) that enables the seat-back support connection plate (3) to be fixed to the riser,
    • a riser mounting lug hole (3.3.1) which is located on the riser mounting lug and which allows the riser mounting lug (3.3) to be mounted in the riser by means of the connecting bolts (12) and nut (13),
    • a seat centering pin housing (3.4) through which the seat centering pin (9) interconnecting the back support connection plate (3) and the

seat portion (1) passes, and
• a seat movement pin housing in which the seat movement pin (10) moves while the seat portion switches from unfolded position to folded position, or from folded position to unfolded position.

10. A stadium seat according to Claim 1, **characterized in** comprising a riser connection mechanism (4) which enables the stadium seat to be secured to where it is.

11. A stadium seat according to Claim 11, **characterized in that** the riser connection mechanism (4) comprises:

• a riser connection cross member (4.1) on which the seat-back support connection plate (3) is positioned,
• riser connection cross member caps (4.3) that are disposed at both sides of the riser connection cross member (4.1) profile,
• a riser mounting bracket (4.2) which is welded or otherwise joined in the middle portion of the riser connection cross member (4.1), and
• a riser connection plate (4.4) on which one end of the riser mounting bracket is welded and which is mounted on the riser by way of bolts (12) and nut (13).

12. A stadium seat according to Claim 1, **characterized in that** the seat portion (1) has a numbering area (14).

13. A stadium seat according to Claim 11, **characterized in that** the riser connection cross member cap (4.3) has a lettering area (15).

14. A stadium seat according to Claim 1, **characterized in that** the regions of the seat portion (1) and the back support portion (2) which contact with the body of the spectator have a rough configuration that increases friction, prevents sliding and sweating of the spectator, but not a smooth configuration.

15. A stadium seat according to Claim 1, **characterized in that** the seat portion (1) and the back support portion (2) are produced of a plastic material.

16. A stadium seat according to any one of the preceding claims, **characterized in that** the seat connection plate (3) comprises the following in the stadium seats in which the riser connection mechanism (4) is used:

• a main body (3.1),
• a backrest mounting lug (3.2) which is disposed on the main body (3.1) and which enables the seat connection plate (3) to be secured in the back support portion (2),
• a backrest mounting lug hole (3.2.1) which is located on the backrest mounting lug (3.2) and which allows the backrest mounting lug (3.2) to be mounted in the back support portion (2) by means of the connecting bolts (12) and nut,
• a cross member connection housing (3.6) on which the riser connection cross member (4.1) is positioned,
• cross member mounting lugs (3.7) that provide the connection between the seat-back support connection plate and the riser connection cross member (4.1) positioned in the cross member connection housing (3.6),
• a cross member mounting lug hole (3.7.1) arranged on the cross member mounting lugs (3.7),
• a seat centering pin housing (3.4) through which the seat centering pin (9) interconnecting the back support connection plate (3) and the seat portion (1) passes, and
• a seat movement pin housing (3.5) in which the seat movement pin (10) moves while the seat portion switches from unfolded position to folded position, or from folded position to unfolded position.

Patentansprüche

1. Sitz, der in der vertikalen Fläche zwischen zwei Stufen in Betonbodenstufen in Sporthallen, Stadien und ähnlichen Orten im Innen- und Außenbereich montiert ist und einen Sitzabschnitt (1) und einen Rückenträgerabschnitt (2) aufweist, der in Übereinstimmung mit der menschlichen Anatomie geformt ist, der Sitz eine schweißfreie Sitz-Rücken-Träger-Verbindungsplatte (3) umfasst, die durch Schneiden und Biegen einteilig geformt ist und die die Verbindung zwischen dem Sitzabschnitt (1) und dem Rückenträgerabschnitt (2) vorsieht; und Übertragungsstange (5), die innerhalb des Sitzabschnitts (1) zum Verstärken derselben positioniert sind, **dadurch gekennzeichnet, dass** umfassend
ein ovales Sitzbewegungsstiftgehäuse (3.5), das es dem Sitzabschnitt (1) ermöglicht, sich im Endabschnitt der Sitz-Rücken-Träger-Verbindungsplatte (3), die sich zum Sitzabschnitt (1) hin erstreckt, auf und ab zu bewegen.

2. Stadionsitz nach Anspruch 1, **dadurch gekennzeichnet, dass** er eine SitzVerbindungsplatte (6) umfasst, die sich entlang des Sitzabschnitts (1) an den Seiten des Sitzabschnitts (1) erstreckt und die gleiche Form aufweist.

3. Stadionsitz nach Anspruch 1, **dadurch gekennzeichnet, dass** er mindestens zwei Übertragungsstangen (5) umfasst, die innerhalb des Sitzab-

schnitts (1) zu Verstärkungszwecken positioniert sind.

4. Stadionsitz nach Anspruch 1, **dadurch gekennzeichnet, dass** er eine Gewichtsstange (7) umfasst, die innerhalb des Sitzabschnitts (1) angeordnet ist und die sicherstellt, dass der Sitz auf den Zuschauer gefaltet wird, der von der Oberfläche des Sitzabschnitts (1) aufsteht.

5. Stadionsitz nach Anspruch 4, **dadurch gekennzeichnet, dass** er einen Gewichtsstangenraum (8) umfasst, in dem die Gewichtsstange (7) positioniert ist.

6. Stadionsitz nach Anspruch 1, **dadurch gekennzeichnet, dass** er eine Anti-Rausch-Anordnung im Endabschnitt des Sitzbewegungsstiftes (10) umfasst.

7. Stadionsitz nach Anspruch 1, **dadurch gekennzeichnet, dass** der Abschnitt der Sitz-Rücken-Träger-Verbindungsplatte (3) in Richtung des Sitzabschnitts (1) eine darin positionierte Schutzkappe (11) aufweist, so dass der Sitzbewegungsstift (10) leicht zu bedienen ist und keinen Unfall verursacht.

8. Stadionsitz nach Anspruch 1, **dadurch gekennzeichnet, dass** er einen Sitzzentrierstift (9) umfasst, der die horizontale Bewegung des Sitzabschnitts (1) verhindert, während die Auf- und Abbewegung des Sitzabschnitts (1) durch den im Sitzbewegungsstiftesgehäuse (3.5) angeordneten Sitzbewegungsstift (10) gewährleistet ist.

9. Stadionsitz nach Anspruch 1, **dadurch gekennzeichnet, dass** die durch Schneid- und Biegevorgang gebildete, schweißfreie, einteilige Sitz-Rücken-Träger-Verbindungsplatte (3) umfasst:

- einen Hauptkörper (3.1),
- eine Rückenlehnenmontageöse (3.2), die am Hauptkörper (3.1) angeordnet ist und die es ermöglicht, die Sitzverbindungsplatte (3) im Rückenträgerabschnitt (2) zu sichern,
- ein Loch (3.2.1) für die Rückenlehnenmontageöse, das sich an der Rückenlehnenmontageöse (3.2) befindet und die Montage der Rückenlehnenmontageöse (3.2) im Rückenträgerabschnitt (2) mit Hilfe der Verbindungsschrauben (12) und der Mutter ermöglicht.
- eine Steigleitungsmontageöse (3.3), die es ermöglicht, Rücken-Träger-Verbindungsplatte (3) an der Steigleitung zu befestigen.
- ein Loch (3.3.1) für die Steigleitungsmontageöse, das sich auf der Steigleitungsmontageöse befindet und die Montage der Steigleitungsmontage (3.3) in der Steigleitung mit Hilfe der Verbindungsschrauben (12) und der Mutter (13) ermöglicht.
- aein Sitzzentrierstiftgehäuse (3.4), durch das der Sitzzentrierstift (9), der die Rücken-träger-Verbindungsplatte (3) und den Sitzabschnitt (1) verbindet, verläuft, und
- ein Sitzbewegungsstiftgehäuse, in dem sich der Sitzbewegungsstift (10) bewegt, während der Sitzabschnitt von einer ausgeklappten Position in eine eingeklappte Position oder von einer eingeklappten Position in eine ausgeklappte Position wechselt.

10. Stadionsitz nach Anspruch 1, **dadurch gekennzeichnet, dass** er einen Steigleitungsverbindungsmechanismus (4) umfasst, der es ermöglicht, den Stadionsitz an seiner Stelle zu befestigen.

11. Stadionsitz nach Anspruch 11, **dadurch gekennzeichnet, dass** der Steigleitungsverbindungsmechanismus (4) umfasst:

- einen Steigleitungsverbindungsquerträger (4.1), auf dem die Sitz-Rücken-Träger-Verbindungsplatte (3) positioniert ist,
- Steigleitungsverbindungsquerträgerkappen (4.3), die beidseitig am Profil des Steigleitungsverbindungsquerträgers (4.1) angeordnet sind,
- eine Steigleitung-Montagehalterung (4.2), die im Mittelabschnitt des Steigleitungsverbindungsquerträgers (4.1) verschweißt oder anderweitig verbunden ist, und
- eine Steigleitungsverbindungsplatte (4.4), an der ein Ende der Steigleitungshalterung angeschweißt ist und die über Schrauben (12) und Mutter (13) an der Steigleitung befestigt ist.

12. Stadionsitz nach Anspruch 1, **dadurch gekennzeichnet, dass** der Sitzabschnitt (1) einen Nummerierungsbereich (14) aufweist.

13. Stadionsitz nach Anspruch 11, **dadurch gekennzeichnet, dass** Steigleitungsverbindungsquerträgerkappen (4.3) einen Beschriftungsbereich (15) aufweist.

14. Stadionsitz nach Anspruch 1, **dadurch gekennzeichnet, dass** die Bereiche des Sitzabschnitts (1) und des Rückenträgerabschnitts (2), die mit dem Körper des Zuschauers in Kontakt kommen, eine grobe Konfiguration aufweisen, die die Reibung erhöht, ein Gleiten und Schwitzen des Zuschauers verhindert, aber keine glatte Konfiguration.

15. Stadionsitz nach Anspruch 1, **dadurch gekennzeichnet, dass** der Sitzabschnitt (1) und der Rückenträgerabschnitt (2) aus einem Kunststoffmaterial hergestellt sind.

16. Stadionsitz nach einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** die Sitzverbindungsplatte (3) in den Stadionsitzen, in denen der Steigleitungsverbindungsmechanismus (4) verwendet wird, folgendes umfasst:

- einen Hauptkörper (3.1),
- eine Rückenlehnenmontageöse (3.2), die am Hauptkörper (3.1) angeordnet ist und die es ermöglicht, die Sitzverbindungsplatte (3) im Rückenträgerabschnitt (2) zu sichern,
- ein Loch (3.2.1) für die Rückenlehnenmontageöse, das sich an der Rückenlehnenmontageöse (3.2) befindet und die Montage der Rückenlehnenmontageöse (3.2) im Rückenträgerabschnitt (2) mit Hilfe der Verbindungsschrauben (12) und der Mutter ermöglicht
- ein Querträger-Verbindungsgehäuse (3.6), auf dem der Steigleitungsverbindungsquerträger (4.1) positioniert ist,
- Querträgermontagelaschen (3.7), die die Verbindung zwischen der Sitz-Rücken-Träger-Verbindungsplatte und dem im Querträger-Verbindungsgehäuse (3.6) angeordneten Steigleitungsverbindungsquerträger (4.1) herstellen,
- eine Loch (3.7.1), für die Querträgermontagelaschen die an den Querträgermontagelaschen (3.7) angeordnet ist,
- ein Sitzzentrierstiftgehäuse (3.4), durch das der Sitzzentrierstift (9), der die Rücken-Träger-Verbindungsplatte (3) und den Sitzabschnitt (1) verbindet, verläuft, und
- ein Sitzbewegungsstiftgehäuse (3.5), in dem sich der Sitzbewegungsstift (10) bewegt, während der Sitzabschnitt von einer ausgeklappten Position in eine eingeklappte Position oder von einer eingeklappten Position in eine ausgeklappte Position wechselt.

Revendications

1. Siège qui est monté dans la surface verticale entre deux marches dans des marches de plancher en béton dans des salles de sport intérieures et extérieures, des stades et des endroits similaires, et qui présente une partie de siège (1) et une partie de support de dossier (2) formées conformément à l'anatomie humaine, ledit siège comprenant une plaque de connexion (3) de support de dossier de siège sans soudure qui est formée d'une seule pièce par opération de coupe et de pliage et qui assure la connexion entre la partie de siège (1) et la partie de support de dossier (2) ; et des tiges de transmission (5) qui sont positionnées à l'intérieur de la partie de siège (1) pour renforcer celle-ci, **caractérisé en ce qu'**il comprend un logement ovale (3.5) de tige de mouvement de siège qui permet à ladite partie de siège (1) de se déplacer vers le haut et vers le bas dans la partie d'extrémité de ladite plaque de connexion (3) de support de dossier de siège s'étendant vers la partie de siège (1).

2. Siège de stade selon la revendication 1, **caractérisé en ce qu'**il comprend une plaque de connexion de siège (6) s'étendant le long de la partie de siège (1) sur les côtés de la partie de siège (1) et ayant la même forme.

3. Siège de stade selon la revendication 1, **caractérisé en ce qu'**il comprend au moins deux tiges de transmission (5) qui sont positionnées à l'intérieur de la partie de siège (1) à des fins de renforcement.

4. Siège de stade selon la revendication 1, **caractérisé en ce qu'**il comprend une tige de poids (7) qui est disposée à l'intérieur de la partie de siège (1) et qui assure que le siège est replié sur le spectateur debout depuis la surface de la partie de siège (1).

5. Siège de stade selon la revendication 4, **caractérisé en ce qu'**il comprend un espace (8) de tige poids dans lequel la tige de poids (7) est positionnée.

6. Siège de stade selon la revendication 1, **caractérisé en ce qu'**il comprend un ensemble antibruit dans la partie d'extrémité de la tige de mouvement (10) du siège.

7. Siège de stade selon la revendication 1, **caractérisé en ce qu'**il la partie de la plaque de connexion (3) de support de dossier de siège dirigée vers la partie de siège (1) comporte un capuchon protecteur (11) positionné dans celle-ci de sorte que la tige de mouvement (10) de siège puisse fonctionner facilement et qu'elle ne provoque aucun accident.

8. Siège de stade selon la revendication 1, **caractérisé en ce qu'**il comprend une tige de centrage de siège (9) qui empêche le mouvement horizontal de la partie de siège (1) tandis que le mouvement vers le haut et vers le bas de la partie de siège (1) est assuré par la tige de mouvement (10) de siège disposée dans le logement (3.5) de tige de mouvement de siège.

9. Siège de stade selon la revendication 1, **caractérisé en ce qu'**il la plaque de connexion (3) de support de dossier de siège sans soudure, d'une seule pièce, formée par une opération de coupe et de pliage comprenant:

- un corps principal (3.1),
- une patte de montage de dossier (3.2) qui est disposée sur le corps principal (3.1) et qui permet de fixer la plaque de connexion (3) de siège dans la partie de support de dossier (2),

• un trou de patte de montage de dossier (3.2.1) qui est situé sur la patte de montage de dossier (3.2) et qui permet de monter la patte de montage de dossier (3.2) dans la partie de support de dossier (2) au moyen des boulons (12) et d'écrou de connexions,
• une patte de montage de colonne montante (3.3) qui permet de fixer la plaque de connexion (3) du support de dossier de siège à la colonne montante,
• un trou de patte de montage de la colonne montante (3.3.1) qui est situé sur la patte de montage de la colonne montante et qui permet de monter la patte de montage de la colonne montante (3.3) dans la colonne montante au moyen des boulons (12) et d'écrou (13) de connexions,
• un logement de tige de centrage de siège (3.4) à travers lequel passe la tige de centrage de siège (9) reliant la plaque de connexion (3) de support de dossier et la partie siège (1), et
• un logement de tige de mouvement de siège dans lequel la tige de mouvement (10) de siège se déplace pendant que la partie de siège passe de la position dépliée à la position pliée, ou de la position pliée à la position dépliée.

10. Siège de stade selon la revendication 1, **caractérisé en ce qu'**il comprend un mécanisme de connexion (4) de colonne montante qui permet de fixer le siège du stade à l'endroit où il se trouve.

11. Siège de stade selon la revendication 11, **caractérisé en ce qu'**il le mécanisme de connexion (4) de colonne montante comprend :

• une traverse de connexion de colonne montante (4.1) sur laquelle est placée la plaque de connexion (3) du support de dossier de siège,
• des capuchons de travers de connexion de colonne montante (4.3) qui sont disposés des deux côtés du profilé (4.1) de la traverse de connexion de colonne montante,
• un étrier de montage de colonne montante (4.2) qui est soudé ou relié d'une autre manière dans la partie médiane de la traverse de connexion de colonne montante (4.1), et
• une plaque de connexion de colonne montante (4.4) sur laquelle une extrémité du support de montage de la colonne montante est soudée et qui est montée sur la colonne montante au moyen des boulons (12) et d'un écrou (13).

12. Siège de stade selon la revendication 1, **caractérisé en ce qu'**il la partie de siège (1) présente une zone de numérotation (14).

13. Siège de stade selon la revendication 11, **caractérisé en ce qu'**il le capuchon de traverse de connexion de colonne montante (4.3) présente une zone de lettrage (15).

14. Siège de stade selon la revendication 1, **caractérisé en ce qu'**il les zones de la partie de siège (1) et de la partie de support de dossier (2) qui sont en contact avec le corps du spectateur ont une configuration rugueuse qui augmente la friction, empêche le glissement et la transpiration du spectateur, mais pas une configuration lisse.

15. Siège de stade selon la revendication 1, **caractérisé en ce qu'**il la partie de siège (1) et la partie de support de dossier (2) sont réalisées en matière plastique.

16. Siège de stade selon l'une quelconque des revendications précédentes, **caractérisé en ce que** la plaque de connexion (3) de siège comprend ce qui suit dans les sièges de stade dans lesquels le mécanisme de connexion (4) de colonne montante est utilisé :

• un corps principal (3.1),
• une patte de montage de dossier (3.2) qui est disposée sur le corps principal (3.1) et qui permet de fixer la plaque de connexion (3) de siège dans la partie de support de dossier (2),
• un trou de patte de montage de dossier (3.2.1) qui est situé sur la patte de montage de dossier (3.2) et qui permet de monter la patte de montage de dossier (3.2) dans la partie de support de dossier (2) au moyen des boulons (12) et d'écrou de connexions,
• un logement de connexion de traverse (3.6) sur lequel est positionnée la traverse de connexion de colonne montante (4.1),
• une patte de montage de traverse (3.7) qui assurent la connexion entre la plaque de connexion du support de dossier de siège et la traverse de connexion de colonne montante (4.1) placée dans le logement de connexion de traverse (3.6),
• un trou de patte de montage de traverse (3.7.1) disposé sur les pattes de montage de traverse (3.7),
• un logement de tige de centrage de siège (3.4) à travers lequel passe la tige de centrage de siège (9) reliant la plaque de connexion (3) de support de dossier et la partie siège (1), et
• un logement de tige de mouvement de siège (3.5) dans lequel la tige de mouvement (10) de siège se déplace pendant que la partie de siège passe de la position dépliée à la position pliée, ou de la position pliée à la position dépliée.

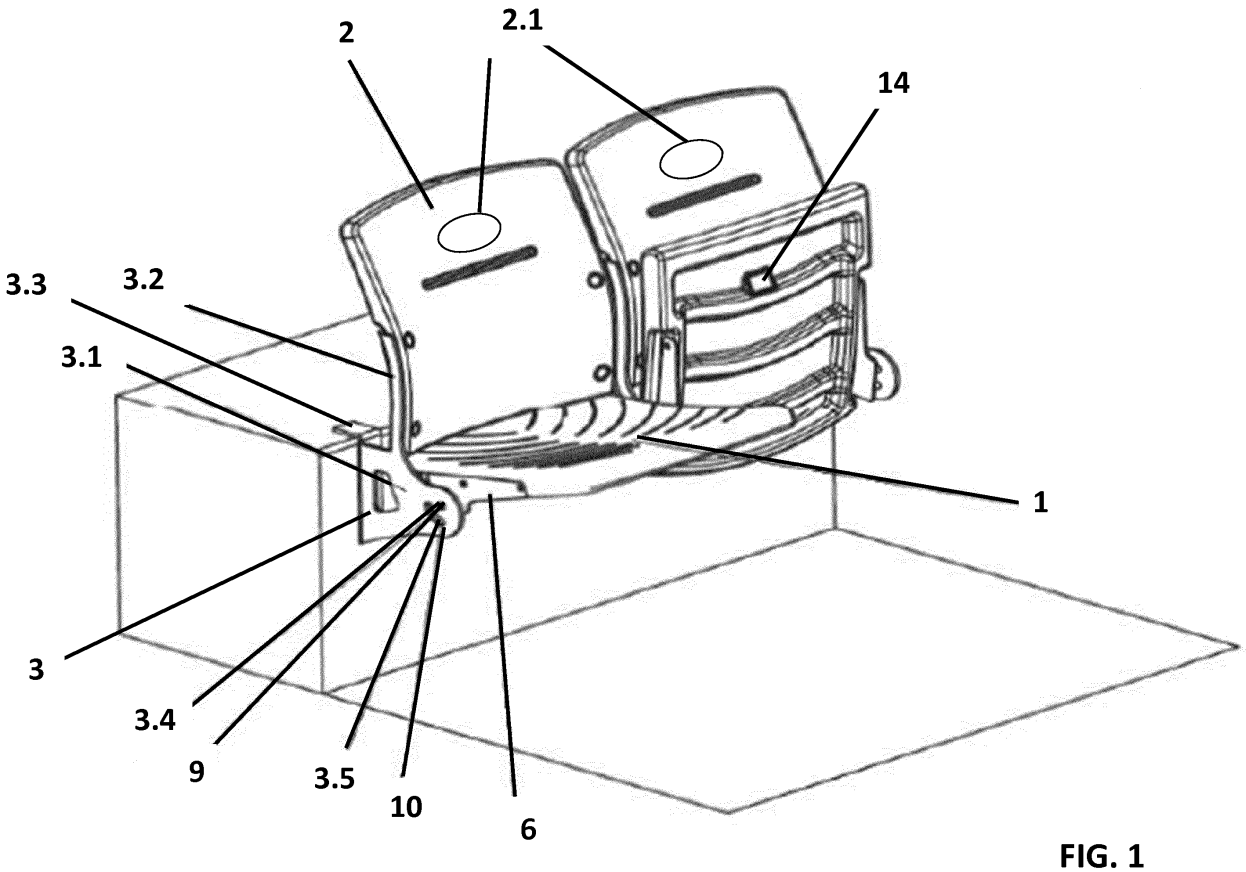

FIG. 1

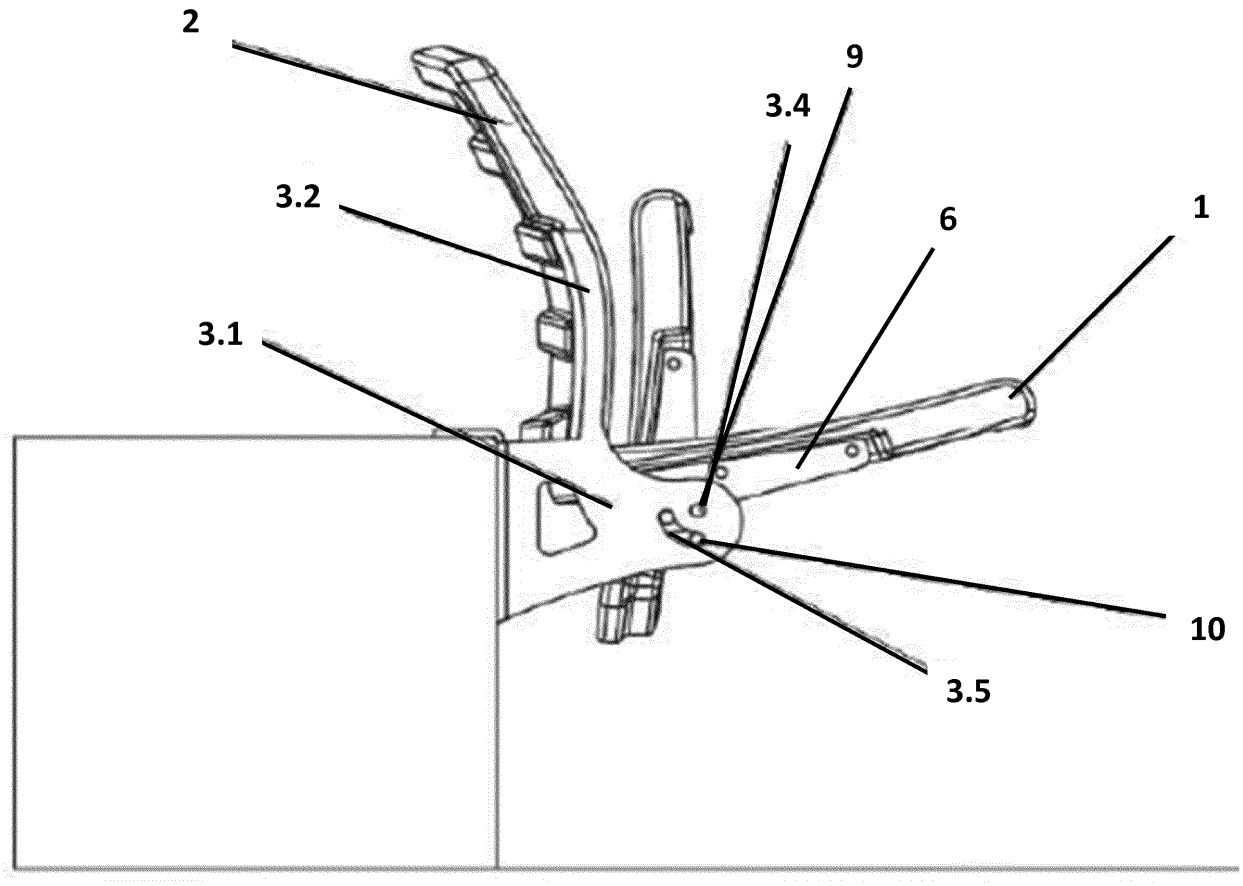

FIG. 2

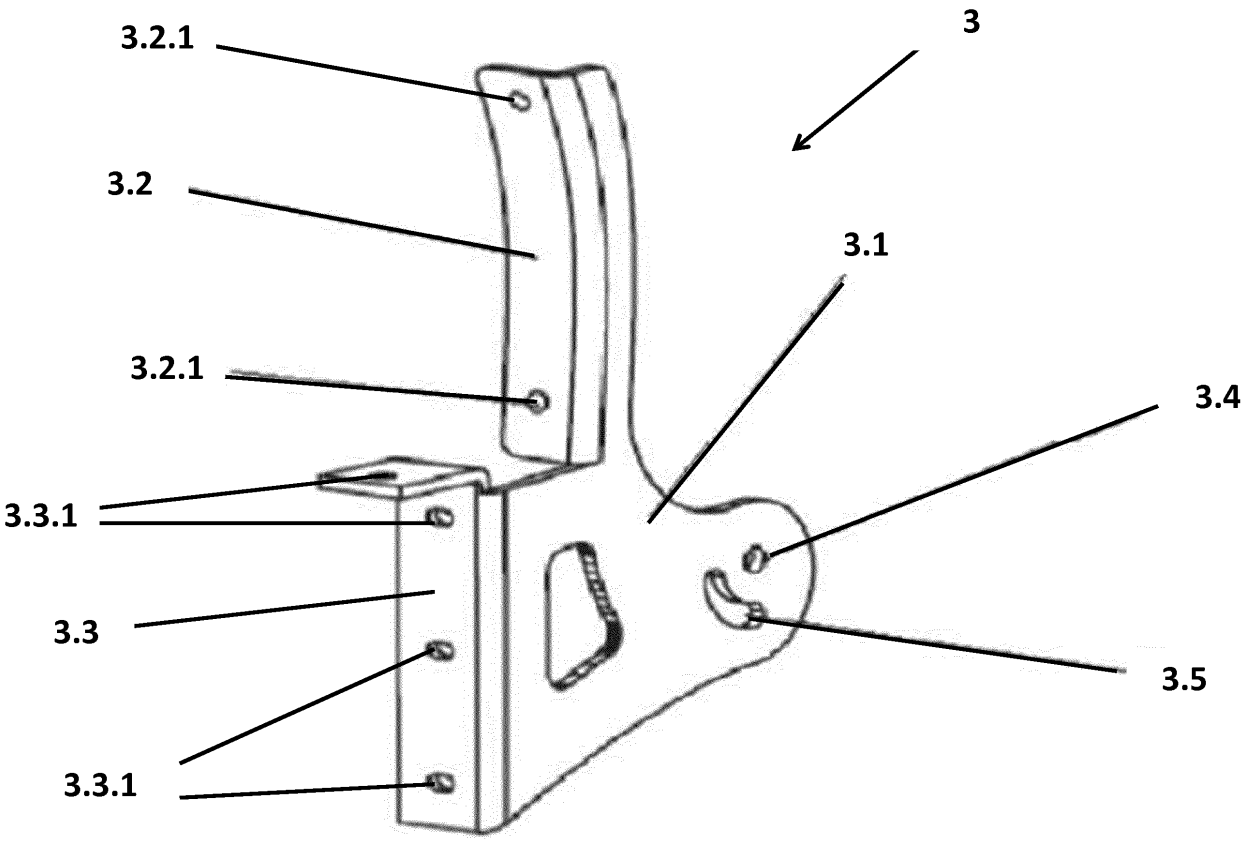

FIG. 3

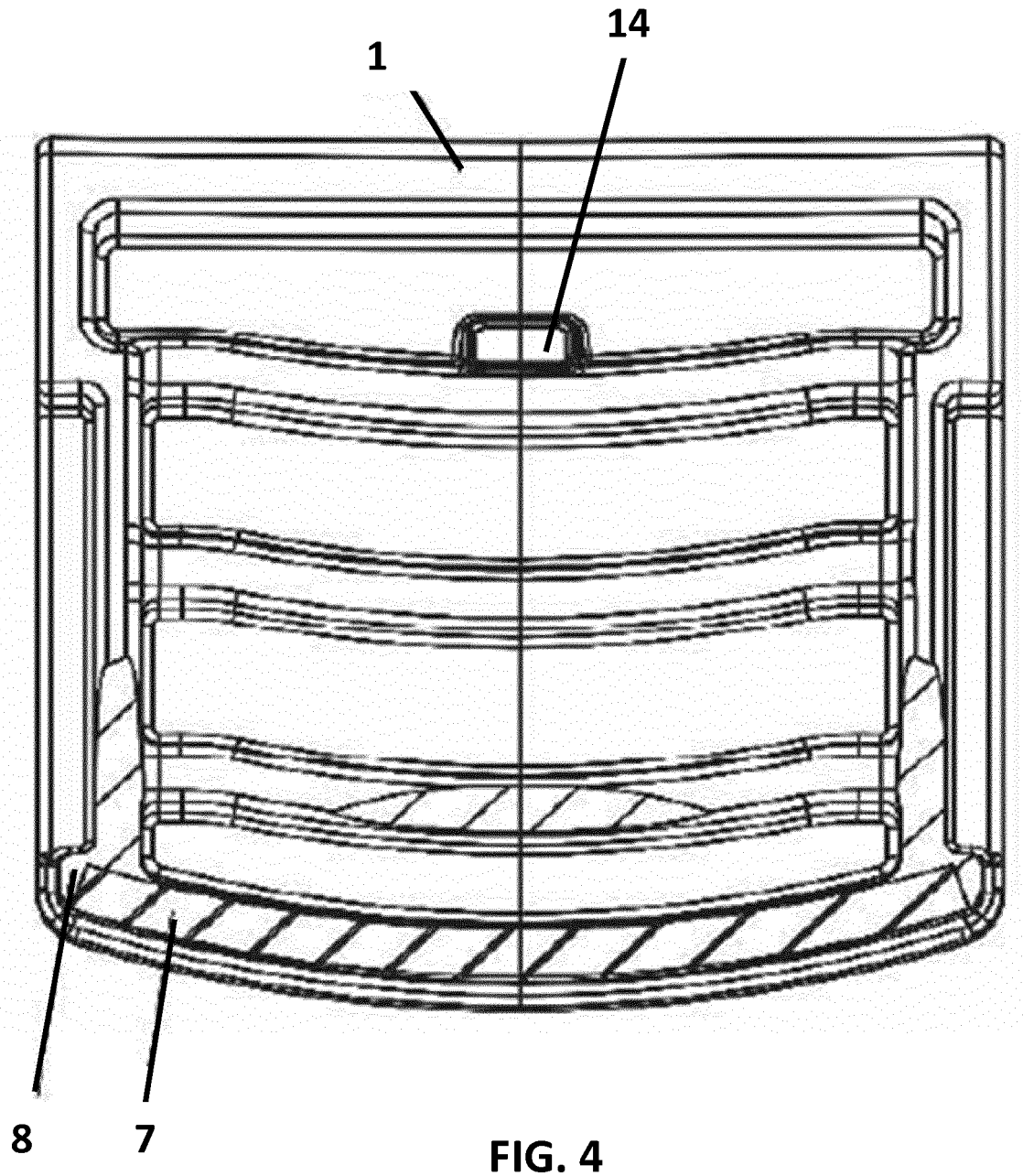

FIG. 4

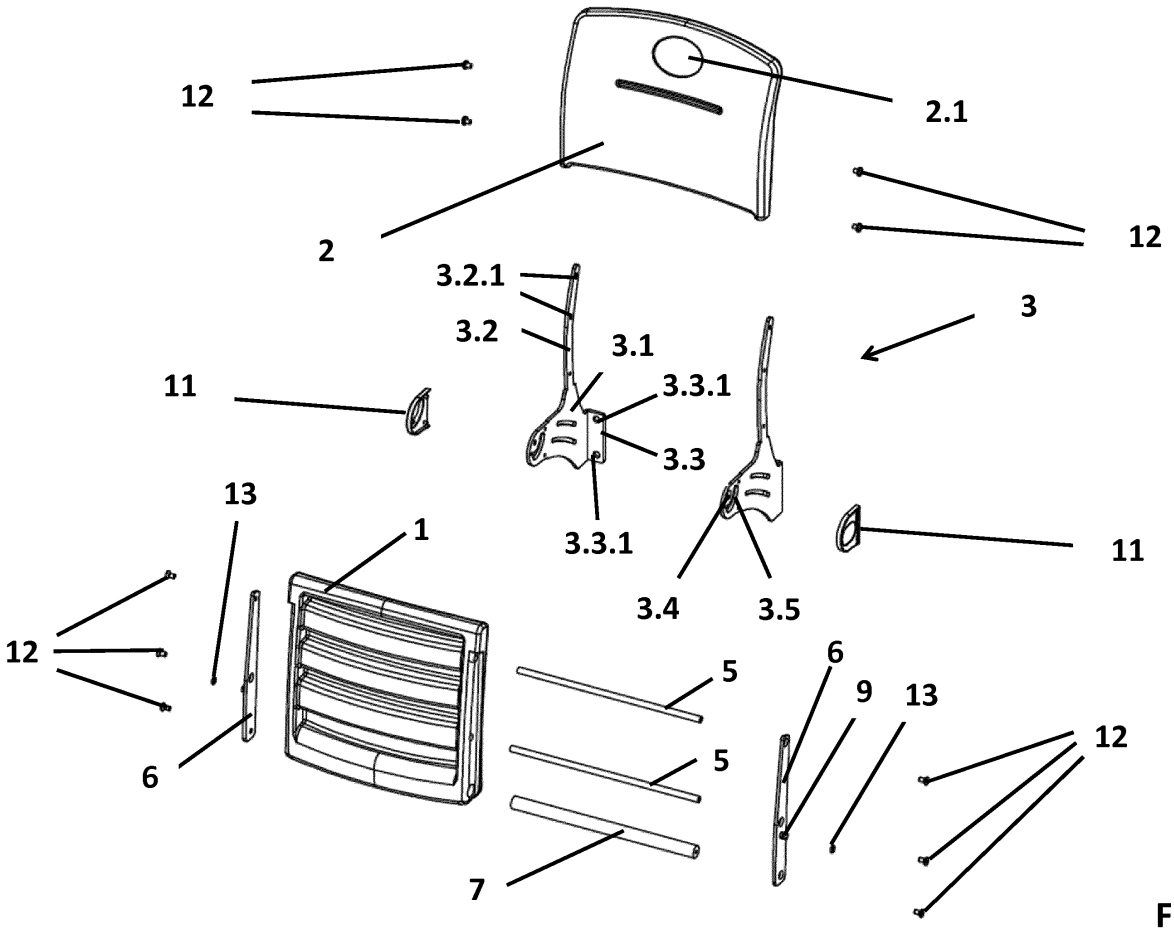

FIG. 5

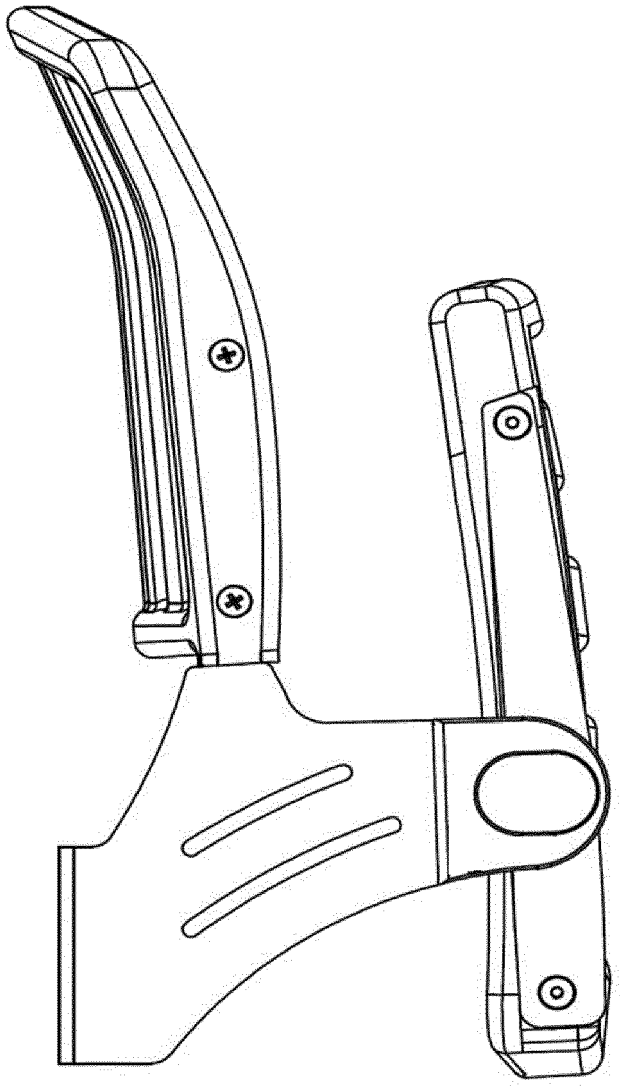

FIG. 6

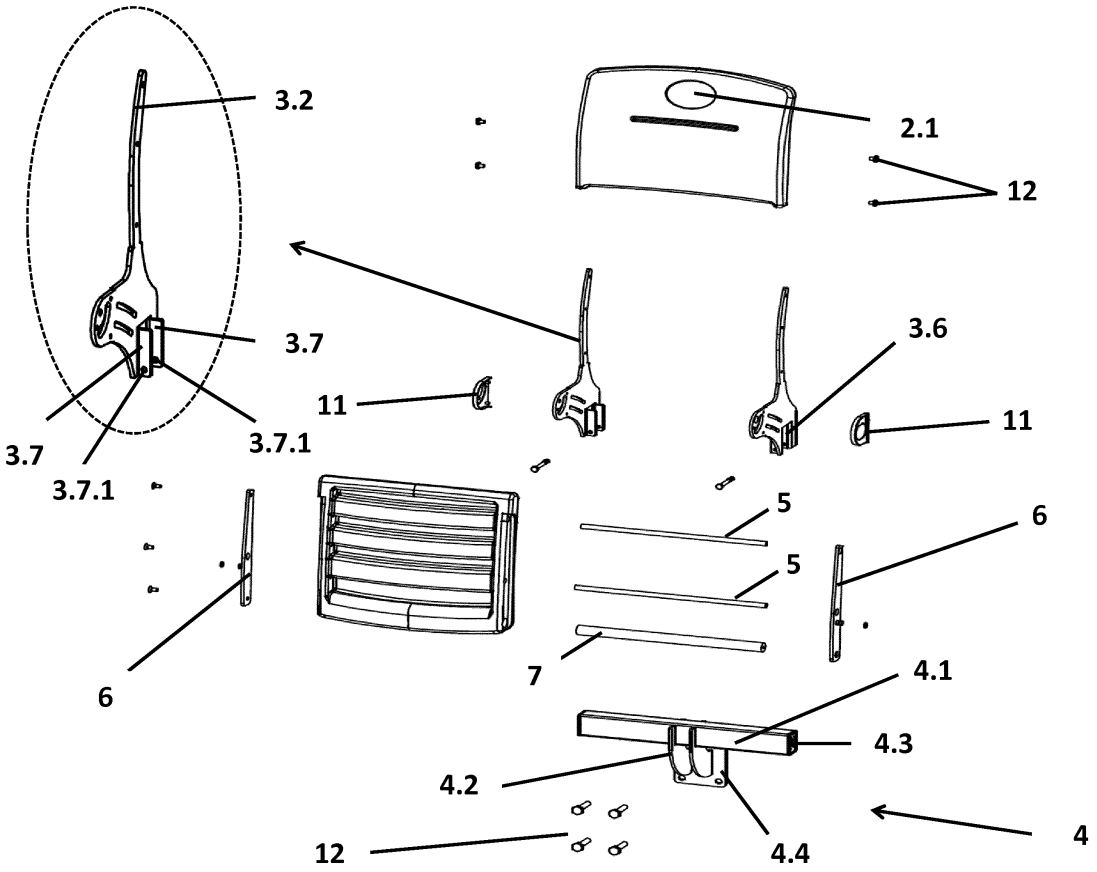

FIG. 7

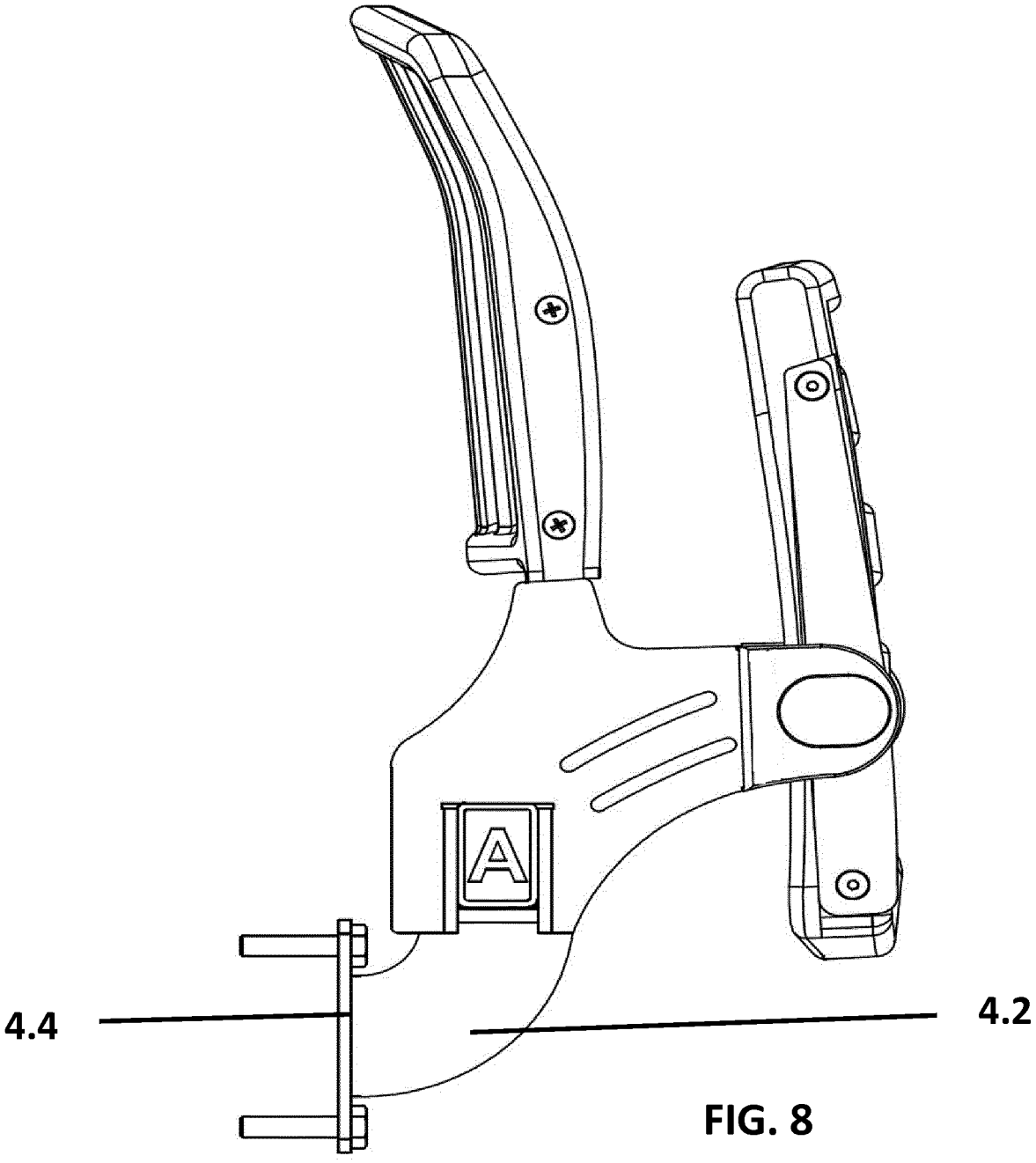

FIG. 8

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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