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(54) Folding chair

(57) The present application describes a folding chair of the type used for rest and transport of persons with reduced mobility, that comprises a chassis with three sections (1,2,3) connected together via two axles (4,5) in order to allow its articulation, opening and closing mechanism, a set of upper retractable grips (7) and lower retractable grips (8) to enable and facilitate its handling. The presented technology allows, besides an easy handling of the entire structure, its transportation and packaging.

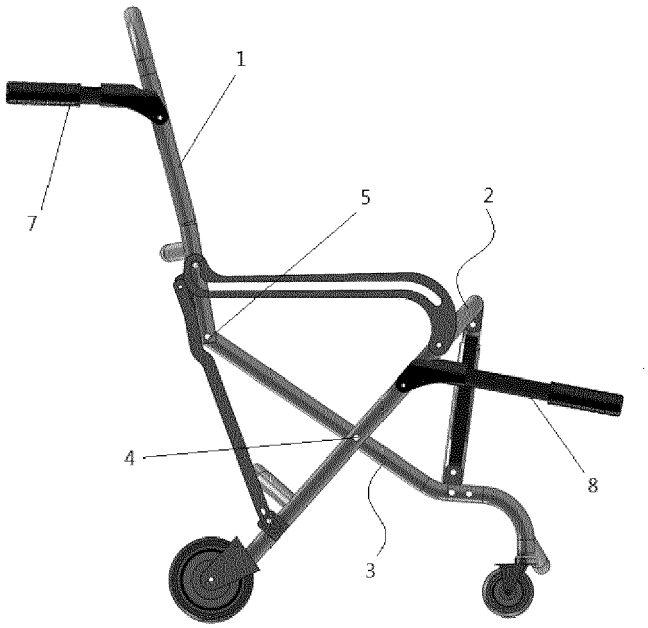

Figure 2

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Description

Technical domain

[0001] The present application discloses a folding chair, which can be preferably used in the transport of persons with reduced mobility.

Background

[0002] The document FR2794643 discloses a folding chair that is characterized by having a chassis comprised of several parts connected to each other via axles, without armrests and without any opening mechanism of the type presented in the present application. On the contrary, the chair now disclosed reveals less technical complexity, while maintaining or even increasing the safety standards and the ease of use for the user.

Summary

[0003] The present application describes a folding chair that comprises the following elements:

- a chassis with three sections (1,2,3) connected together via two axles, (4,5);
- an opening and closing mechanism formed by a telescopic system which consists of a throttle (6) with a pin (15) at one end thereof, a guide tube (13) and a tube (14);
- a set of upper retractable grips (7);
- a set of lower retractable grips (8).

[0004] In one embodiment, the sections (2) and (3) of the folding chair are connected together by axle (4) and sections (1) and (3) by axle (5).

[0005] In another embodiment, the connection between the sections (2) and (3) of the folding chair forms an articulation of the "scissor" type.

[0006] In yet another embodiment, the opening and closing mechanism of the folding chair is placed between sections (2) and (3).

[0007] In one embodiment, the throttle (6) of the folding chair is coupled to a guide tube (13) via the fastening elements (16,16a) and on its inner side a spring be coupled (17).

[0008] In another embodiment, the guide tube (13) of the folding chair presents a hole (20) and by the tube (14) presents a hole (18) and by the pin (15) is inserted into the hole (20) and in the hole (18).

[0009] In yet another embodiment, the folding chair comprises arms (9) and (10) between sections (1) and (2) and by said arms (9) and (10) are composed of an opening that serves as guide, respectively to some guide axles (11) and (12).

[0010] In one embodiment, the arms (9) and (10) of the folding chair block the section (1).

[0011] In another embodiment, the folding chair comprises sidebars (19) that oblige section (2) to rotate about axle (4) in a counter-clockwise direction.

[0012] In yet another embodiment, the sidebars (19) of the folding chair present a "s" configuration.

Description of the Figures

[0013] For an easier understanding of the invention the attached figures are joined, which represent preferred embodiments of the invention that, however, are not meant to limit the object of the present application.

Figure 1 illustrates a schematic representation of the folding chair in the open position, where reference numbers represent:

1,2,3 - Sections;
4,5 - Axles;
6 - Throttle;
7 - Upper retractable grips;
8 - Lower retractable grips.

Figure 2 illustrates a schematic representation of the folding chair in the open position, where reference numbers represent:

1,2,3 - Sections;
4,5 - Axles;
7 - Upper retractable grips;
8 - Lower retractable grips.

Figure 3 illustrates a schematic representation of the folding chair in the open position, where reference numbers represent:

4,5 - Axles;
6 - Throttle;
9, 10 - Arms;
11, 12 - Guide Axles;
13 - Guide tube;
14 - Tube;
19 - Sidebar.

Figure 4 illustrates a schematic representation of the opening and closing mechanism, where the reference numbers represent:

6 - Throttle;
13 - Guide tube;
14 - Tube;
15 - Pin;
16,16a - Fastening elements;
17 - Spring;
18 - Hole;
20 - Hole of the guide tube.

Figures 5 to 9 illustrate a schematic representation of the closing movement of the chair.

Description of the embodiments

[0014] The present application describes a folding chair of the type used for rest and transport of persons with reduced mobility, that comprises a chassis with three sections (1,2,3) connected together via two axles, (4,5) in order to allow its articulation, opening and closing mechanism, a set of upper retractable grips (7) and lower retractable grips (8) so as to allow and facilitate its handling. The chair thus presented allows, besides the easy handling of the entire structure, its transportation and packaging. In particular, sections (2) and (3) are connected together by the axle (4), thereby creating an articulation of the "scissor" type and sections (1) and (3) by the axle (5). Between the sections (1 and 2) arms (9) and (10) are applied which are composed of an opening that serves as a guide, respectively to the guide axles (11) and (12) and that, when the chair is open, i.e. in use, said arms (9) and (10) will block section (1), so that it does not move in either direction.

[0015] Between sections (2) and (3) an opening and closing mechanism is applied, formed by a telescopic system with a stroke that is sufficient for the opening and closing of the chair and which is composed of a throttle (6) with a pin (15) at one end thereof, coupled to a guide tube (13) via the fastening elements (16,16a), in whose inner face a spring (17) is coupled that allows said throttle (6) to maintain the pin (15), present at one end thereof, inserted into the hole (20) of said guide tube (13) and in hole (18) existent in tube (14).

[0016] It is noted that when the chair is open, the position of the hole (18) coincides with the hole (20) and the pin (15) this way traverses both. For the closure of the chair, the throttle is activated (6), withdrawing the pin (15) from the hole (18) present in the tube (14) and of the hole (20) of the guide tube (13), the chassis thereby moving as illustrated in Figures 5 to 8. In order to maintain the chassis stable, sidebars (19) are applied, which, in the closing movement force section (2) to rotate about the axle (4) in a counter-clockwise direction. The "s" shaped configuration of said sidebars (19) allows avoiding interference with any of the other structures when closing the chair.

[0017] The present embodiment is not, naturally, in any way restricted to the embodiments described herein and a person with ordinary skills in the area might provide plenty of changes without departing from the general idea of the invention, such as defined in the claims.

[0018] The preferred embodiments described above are obviously combinable with each other. The following claims define further preferred embodiments of the invention.

Claims

1. Folding chair comprising the following elements:

- a chassis with three sections (1,2,3) connected together via two axles (4,5);
- an opening and closing mechanism, formed by a telescopic system which is composed of a throttle (6), with one pin (15) at one end thereof, one guide tube (13) and one tube (14);
- a set of upper retractable grips (7);
- a set of lower retractable grips (8).

2. Folding chair according to the previous claim wherein the sections (2) and (3) are connected together by the axle (4) and the sections (1) and (3) by the axle (5).

3. Folding chair according to the previous claim wherein the connection between sections (2) and (3) forms an articulation of the "scissor" type.

4. Folding chair according to claim 1 wherein the opening and closing mechanism is placed between sections (2) and (3).

5. Folding chair according to claim 1 wherein the throttle (6) is coupled to a guide tube (13) via the fastening elements (16,16a) and on its inner side a spring is coupled (17).

6. Folding chair according to the previous claim wherein the guide tube (13) presents a hole (20) and the tube (14) presents a hole (18) and the pin (15) is inserted in the hole (20) and in the hole (18).

7. Folding chair according to claim 1 comprising arms (9) and (10) between the sections (1) and (2) and by in said arms (9) and (10) being composed of an opening that serves as guide, respectively to some guide axles (11) and (12).

8. Folding chair according to the previous claim wherein the arms (9) and (10) block the section (1).

9. Folding chair according to claim 1 comprising sidebars (19) that oblige section (2) to rotate about the axle (4) in a counter-clockwise direction.

10. Folding chair according to the previous claim wherein the sidebars (19) present an "s" configuration.

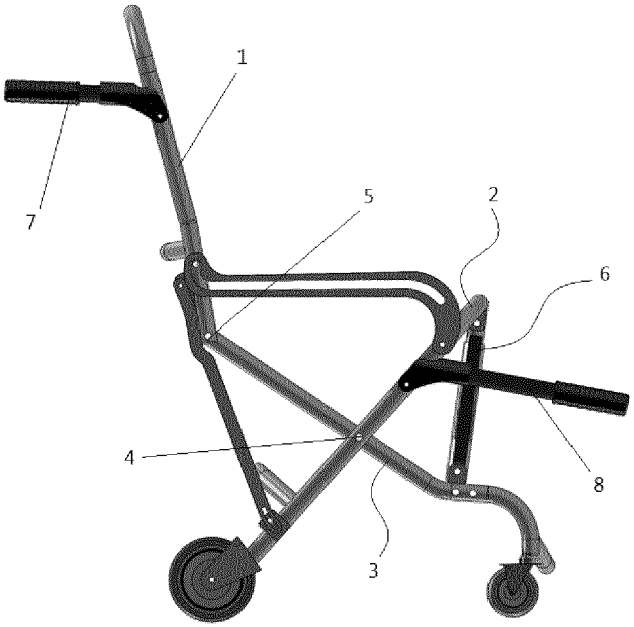

Figure 1

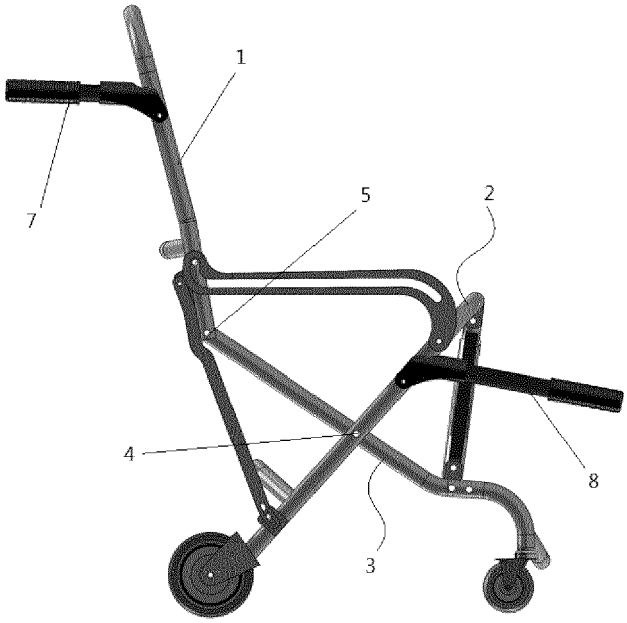

Figure 2

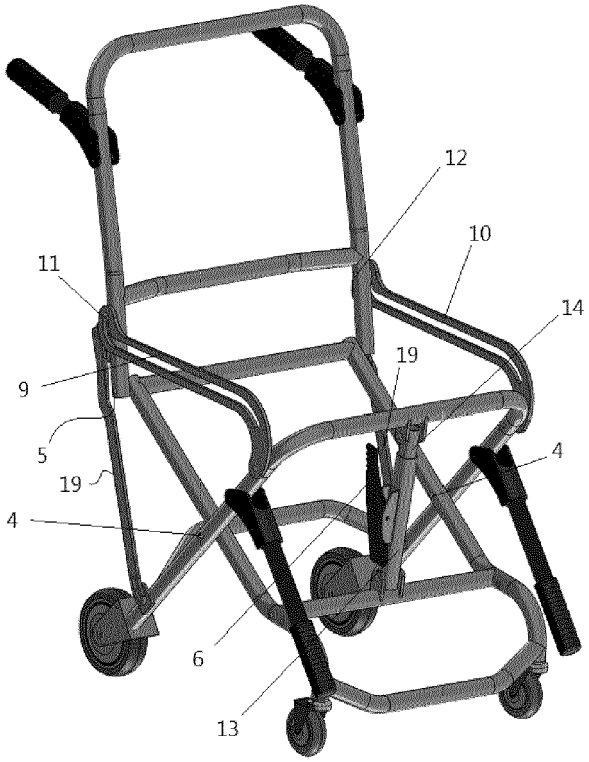

Figure 3

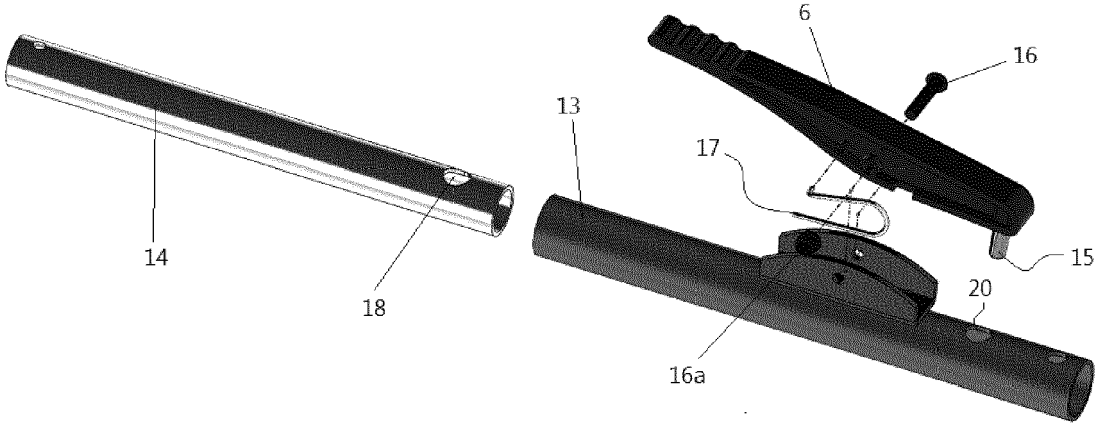

Figure 4

Figure 5

Figure 6

Figure 7

Figure 8

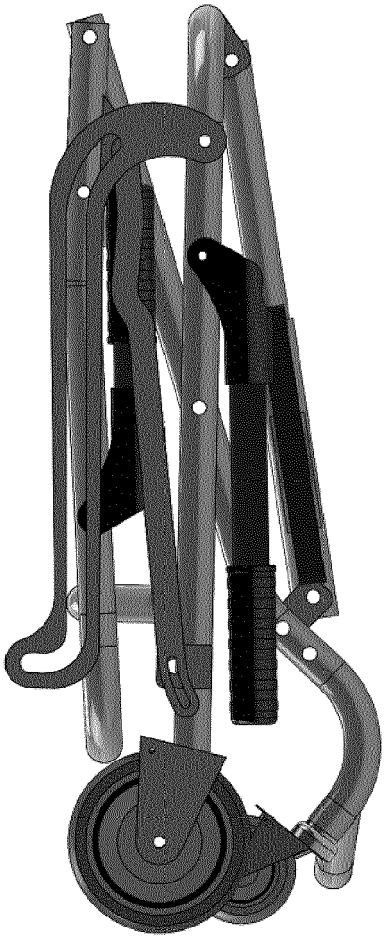

Figure 9

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EUROPEAN SEARCH REPORT

Application Number
EP 14 20 0225

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	27 May 2015	Birlanga Pérez, J

CATEGORY OF CITED DOCUMENTS

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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27-05-2015

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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