



## Description

**[0001]** The present invention relates to a wheelchair structure for disabled persons.

**[0002]** In particular, the present invention has the object to broaden the range of utilizations of the wheelchairs for disabled persons but without bringing about excessive costs for the users.

**[0003]** This result has been achieved, according to the present invention, by adopting the concept of making a structure having the characteristics disclosed in the claim 1. Further characteristics of the invention being set forth in the dependent claims.

**[0004]** Thanks to the present invention, a same wheelchair is easily and rapidly convertible, so that it can be used with maximum safety both at home, also when having a shower, and on the beach, in the swimming pool, and on the shoreline. Besides, a structure according to the present invention is easy to make, cost-effective and reliable even after a prolonged service life.

**[0005]** These and other advantages and characteristics of the invention will be best understood by anyone skilled in the art from a reading of the following description in conjunction with the attached drawings given as a practical exemplification of the invention, but not to be considered in a limitative sense, wherein:

- Fig. 1 is an exploded perspective view of a first example of kit which the structure according to the invention can be equipped with;
- Fig. 2 is an exploded perspective view of a second example of kit which the structure according to the invention can be equipped with;
- Fig. 3 is a partially exploded perspective view of a structure, according to the invention, equipped with the kit of Fig. 1;
- Fig. 4 is a partially exploded perspective view of a structure, according to the invention, equipped with the kit of Fig. 2;
- Fig. 5 is a schematic side view of a wheelchair for disabled persons with reclining backrest according to the invention.

**[0006]** Reduced to its basic construction, and reference being made to the figures of the attached drawings, a structure for making wheelchairs for disabled persons, according to the present invention, comprises a frame able to define a seat (10) and a backrest (11). Associated to the seat (10) are two tubular elements (12) disposed parallel to each other, along two sides of the same seat, with the respective front sections being substantially flush with the front edge thereof. Moreover, associated to the seat (10) are two further tubular elements (13), parallel to the first ones (12) but located more backwardly. Also associated to the seat (10) is a third pair of tubular elements (14). The latter are parallel to each other and disposed, downwardly oriented, in correspondence of the front edge of the seat (10). The

backrest (11) exhibits a transverse hole (15). In the examples illustrated in the drawings, the said hole (15) is at a height intermediate between those of elements (12) and (13): The armrests associated with the backrest (11) are designated by numeral (16).

**[0007]** The kit illustrated in Fig. 1, hereinafter referred to as "beach kit", allows using the wheelchair also on the beach, in a swimming pool and on the shoreline, and comprises:

- an axle (1);
- two wheels (2);
- members (3) for blocking the wheels (2) to the axle (1);
- an antioverturn bar (4) of "U" shape;
- a front bar (5) also of "U" shape;
- a legrest (6) having a shape similar to that of bars (4) and (5).

**[0008]** The kit illustrated in Fig. 2, hereinafter referred to as "shower kit", allows using the wheelchair when the disabled person is having a shower, and comprises:

- a rear support (7) with two L-bent legs provided with rollers (70);
- a front support (8) with two legs provided with pivoting rollers (80);
- a footrest (9) articulated on the two legs of said front support (8) and able to take up an opening condition (as shown in Fig. 2) when in use and respectively a closing condition when not in use.

**[0009]** The said axle (1) can also be made up of more elements.

**[0010]** For the assembly of the "beach kit", the axle (1) is firstly inserted through the hole (15) of the backrest (11), then the two wheels (2) are mounted to the two ends of the axle (1) by blocking them with the wheels lock (3). Thereafter, the free ends of bar (5) are inserted into the bushes (14), the free ends of bar (4) into the bushes (13) and the free ends of the legrest (6) into the bushes (12).

**[0011]** For the assembly of the "shower kit", the free ends of the rear support (7) are inserted into the bushes (13) and the free ends of front support (8) into the bushes (14). The said supports (7, 8) are then blocked to the wheelchair structure by means of safety pins (not shown in the drawings).

**[0012]** The presence of means for the quick connection/disconnection of the additional components (beach kit and shower kit), said means being made up, in the above described example, of tubular elements or bushes (12), (13), (14) and of the transverse passage (15) in the body of the backrest (11), ensure the most efficient convertibility of the frame, thereby allowing different uses thereof according to requirements without having to rely on two or more special models of the frame.

**[0013]** As illustrated in Fig. 5, the backrest (11) is of

reclining type, as it is hinged onto an axis laying in a plane in which the axis (1) of the wheels (2) lies: the said two axes being parallel to each other.

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## Claims

1. Wheelchair structure for disabled persons, comprising a frame with a seat (10) and a backrest (11), **characterized in that** the said seat (10) and/or the said backrest (11) are associated with connection/disconnection means for one or more accessories of configuration conversion, and **in that** it comprises one or more conversion kits. 10
2. Structure according to claim 1 **characterized in that** the said means for quick connection/disconnection comprise a plurality of pairs of tubular elements or bushes (12, 13, 14) associated with the seat (10) and/or the backrest (11). 15 20
3. Structure according to claims 1 and 2 **characterized in that** the said bushes (12, 13, 14) are so disposed as to form pairs of elements parallel to each other. 25
4. Structure according to one or more preceding claims, **characterized in that** the said backrest (11) exhibits a transverse hole (15). 30
5. Structure according to one or more preceding claims, **characterized in that** the said conversion accessories comprise:
  - an axle (1); 35
  - two wheels (2);
  - members (3) for blocking the wheels (2) to the axle (1);
  - an antioverturn bar (4) of "U" shape;
  - a front bar (5) also of "U" shape; 40
  - a legrest (6) having a shape similar to that of bars (4) and (5).
6. Structure according to one or more claims 1 to 4, **characterized in that** the said conversion accessories comprise: 45
  - a rear support (7) with two legs L-bent and provided with rollers (70);
  - a front support (8) with two legs provided with pivoting rollers (80); 50
  - an footrest (9) articulated on the two legs of said front support (8) and able to take up an opening condition (as shown in Fig. 2) when in use and respective a closing condition when not in use. 55
7. Structure according to one or more preceding claims, **characterized in that** the backrest (11) is

FIG. 1

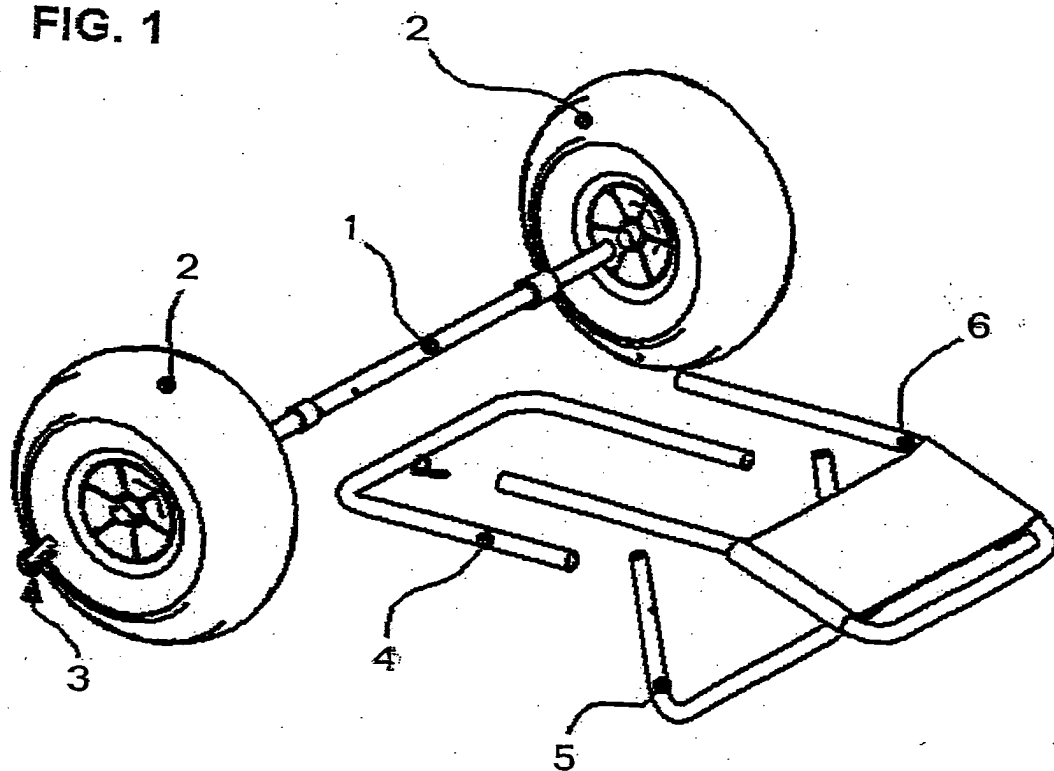


FIG. 2

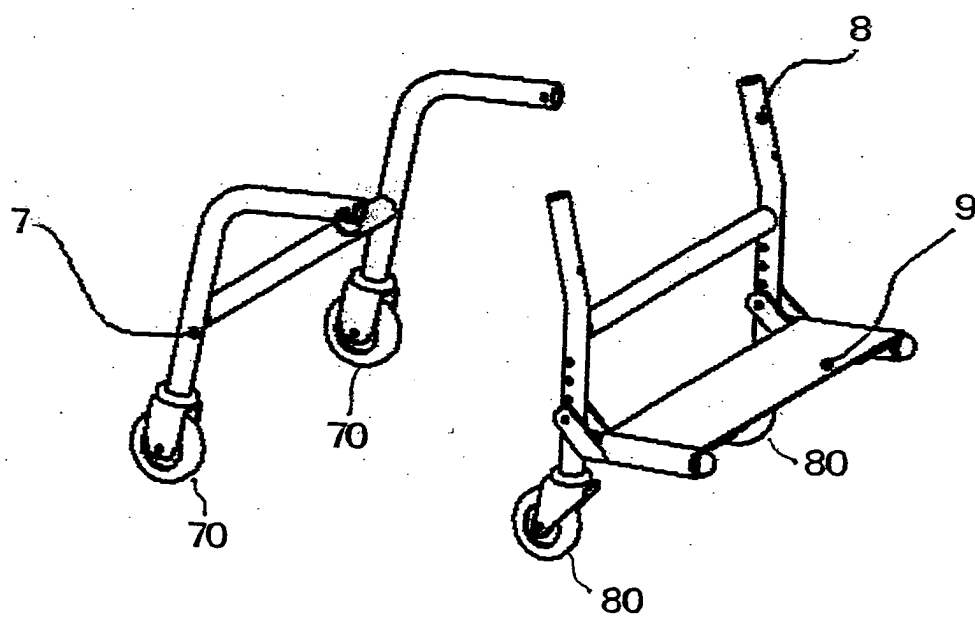


FIG. 3

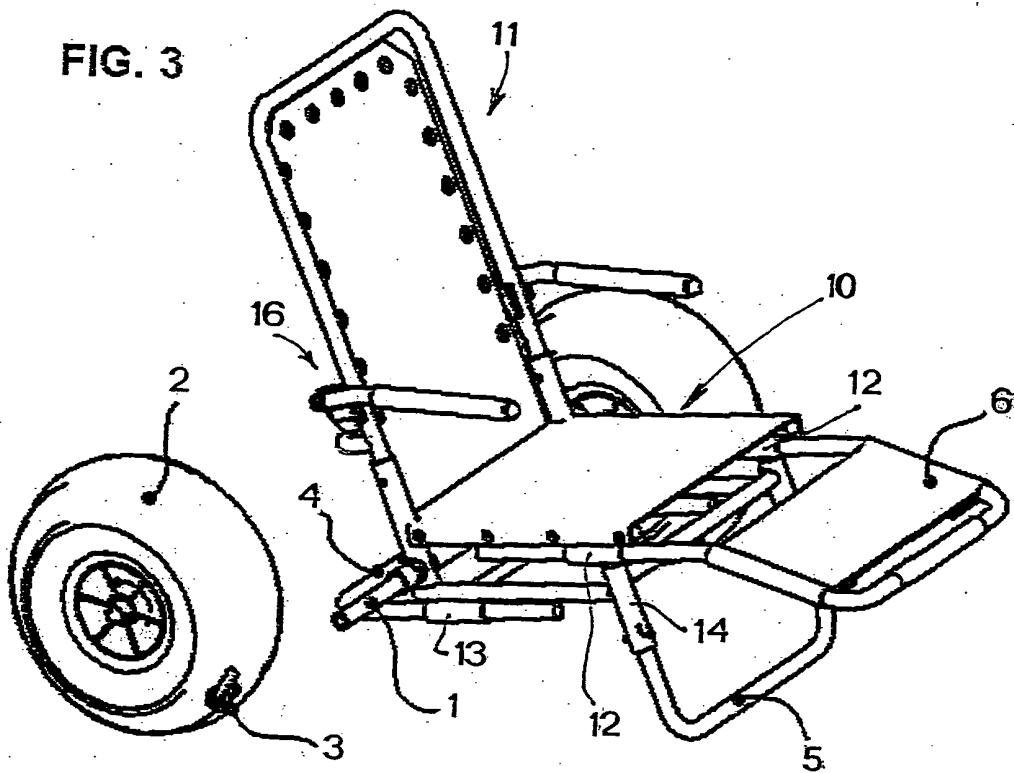
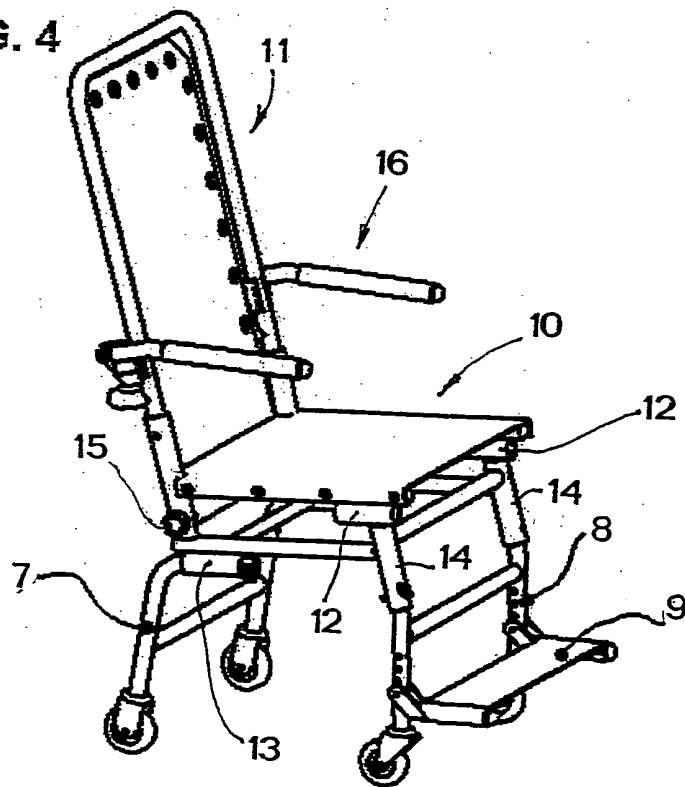


FIG. 4



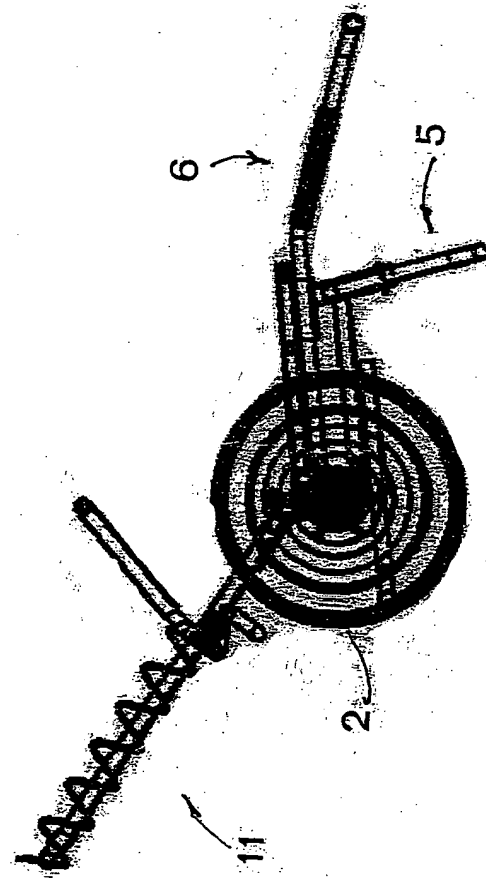


Fig. 5