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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : B62B 7/14

A1

(11) International Publication Number: **WO 00/06437**

(43) International Publication Date: 10 February 2000 (10.02.00)

(21) International Application Number: PCT/NL99/00476

(22) International Filing Date: 23 July 1999 (23.07.99)

(30) Priority Data:
1009753 28 July 1998 (28.07.98) NL

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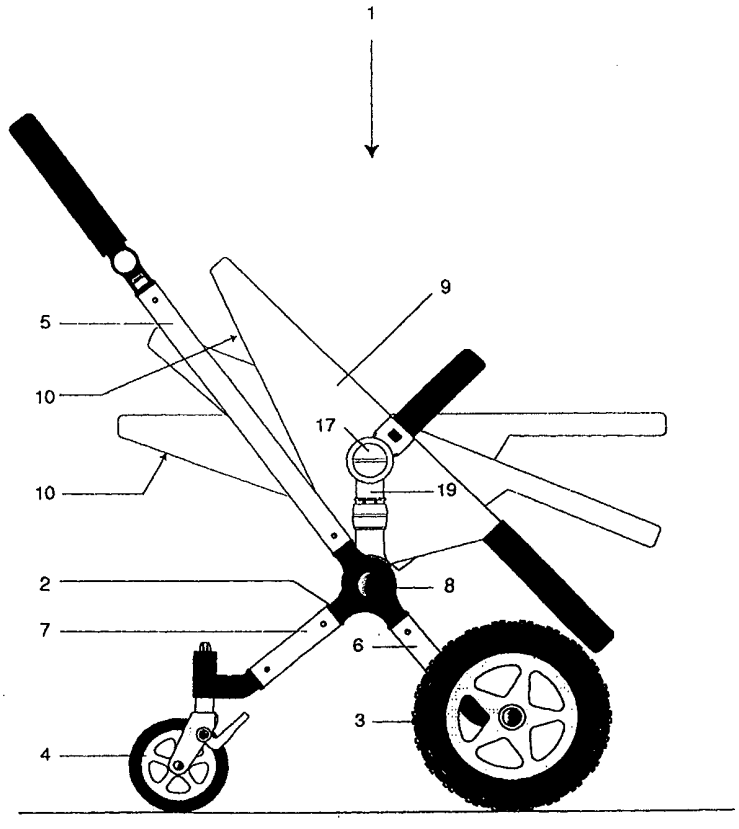
(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published
With international search report.
In English translation (filed in Dutch).

(54) Title: BUGGY

(57) Abstract

The invention concerns a buggy (1) comprising a frame (2) with front (3) and rear wheels (4), a pull and push bar (5), and front wheel bars (6) and rear wheel bars (7) that support the front and rear wheels and which are connected to the pull and push bar, and a seat (9) accommodated in the frame, the buggy being provided on either side with a coupling device (8) for the rotatable connection of the pull and push bar and the front wheel and rear wheel bars, this coupling device being equipped for the detachable fitting of the seat (9).



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Buggy

The invention concerns a buggy comprising a frame with front and rear wheels, pull and push bar, and front wheel bars and rear wheel bars that support the front and rear wheels and that are connected to the pull and push bar, and a seat accommodated in the frame.

Such a buggy is generally known from practice. The purpose of the invention is to construct a buggy that is highly versatile in use and meets all the safety requirements that are made of buggies. These requirements of versatility in use and safety are at odds with one another. Increasing the versatility usually requires attention by the user for the way in which the buggy is used.

The invention aims to provide a buggy that is inherently safe, while still being extremely versatile in use. A further aim of the buggy according to the invention is its drastic simplification. This is achieved with the buggy according to the invention in that the buggy is provided on either side with a coupling device for the rotatable connection of the pull and push bar and the front wheel and rear wheel bars, this coupling device being equipped for the detachable fitting of the seat.

In a certain aspect of the invention the buggy has been designed so that it essentially has two positions for use, in a first position the front and rear wheels being placed apart and in a second position the front and rear wheels being placed close together. This latter position is also called the wheelbarrow position.

The versatility of the buggy according to the invention manifests itself in that in the first position for use the seat can be fitted in two ways, firstly by the seat being fitted facing the front and secondly by the seat being fitted facing the rear.

For safety reasons the buggy is preferably made so that in the second position for use the seat can only be fitted with its back towards the front and rear wheels.

An advantageous form of construction of the buggy according to the invention is characterised by the coupling device being made up of interconnected rotatable discs that are connected as the case may be to the pull and push bar and the front and rear wheel bars, in the first and the second positions for use the said discs forming at least one recess that is suitable for taking a projection that is provided on the seat. One of the effects this has is that by fitting the seat the projection slots into a recess formed by the discs and the discs are secured against mutual rotation. A further effect is that the frame is only collapsible when the seat has been removed. This of course serves safety.

It is preferable that in the first position for use two recesses are formed that are suitable for taking the projection and that in the second position for use one recess is formed that is located in such a way that the seat can only be fitted with its back towards the front and rear wheels. On the one hand this meets the wish to provide a buggy with great versatility and on the other the requirement to make the buggy completely safe to use in spite of this versatility. In the second position for use in particular, in other words the wheelbarrow position, there could be a risk in the user losing contact with the pull and push bar. In this case the seat is fitted in such a way that it will land on the ground safely and with a low drop height.

It is also desirable that the coupling device and the seat are equipped with a male and female connection. This guarantees a simple and secure fitting of the seat in the frame.

It is also preferable that the seat is provided on either side with a lockable hinge and that effectuation of the male and female connection makes the hinge adjustable to a predetermined number of selected intermediate positions. In this way the seat can be set to the desired position in the frame, while, if the seat is used separately from the frame, the hinge is released for rotation so that it can be positioned in such a way that a safe placement of the seat on the ground is provided. This is achieved in the form of construction that is characterised by the hinge being connected to a part of the male and female connection that in a first position of the hinge essentially

runs diagonally in relation to the back of the seat and extends beyond the back of the seat. In a second position of the hinge this part essentially runs parallel to the back of the seat. If the male and female connection is broken, the hinge can be rotated between the first position and the second position.

The construction is preferably such that effectuation of the male and female connection adjusts a pawl incorporated into the hinge of the seat which releases the hinge for rotation.

The invention will now be explained in detail with reference to the drawing which

in figs. 1 and 2 shows the buggy according to the invention in the first position for use,

in fig. 3 shows the buggy according to the invention in the second position for use,

in fig. 4 shows separately from one another the frame and the seat of the buggy according to the invention,

in figs. 5A and 5B shows the seat with the hinge connected to it in its two possible positions,

in figs. 6 and 7 shows in detail a coupling device of the buggy according to the invention with the seat not fitted and fitted respectively,

in fig. 8 shows a coupling device of the buggy according to the invention in the wheelbarrow position and

in figs. 9A and 9B shows a side and front view respectively of a section of the male and female connection of the seat and the coupling device of the buggy according to the invention.

Like reference numbers used in the figures refer to the same parts. Figures 1 to 4 show the buggy 1, which comprises a frame 2 with front wheels 3 and rear wheels 4, a pull and push bar 5, front wheel bars 6 and rear wheel bars 7, which support the front wheels 3 and rear wheels 4 and which are connected to the pull and push bar 5 by means of a coupling device 8.

The buggy 1 also comprises an adjustable seat 9. The buggy 1 is provided on either side with a coupling device 8 by which the rotatable connection of the pull and push bar 5 is provided in respect of the front wheel

bars 6 and rear wheel bars 7. The coupling device 8 is also equipped for the detachable fitting of the seat 9 as shown in fig. 4. This will be explained in further detail below.

The buggy 1 essentially has two positions for use. In a first position, as shown in figs. 1 and 2, the front wheels 3 and rear wheels 4 are placed apart and in a second position, as shown in fig. 3, the front and rear wheels are placed close together.

Figs. 1 and 2 show that the seat 9 can be fitted in two ways. In the first the seat 9 is fitted facing the front. This is shown in fig. 1.

In the second, as shown in fig. 2, the seat 9 is fitted facing the rear.

Fig. 3 shows that in the second position for use of the buggy 1, that is the wheelbarrow position, the seat 9 can only be fitted with the back 10 of the seat 9 towards the front and rear wheels.

Referring to figs. 6, 7 and 8, the preferred form of construction of the coupling device 8 of the buggy according to the invention will now be explained in further detail.

The coupling device 8 is preferably made up of in essence interconnected rotatable discs 11, 12 and 13 which are connected as the case may be to the pull and push bar 5, the front wheel bars 6 and rear wheel bars 7. In both the first position for use of the buggy, in which the coupling device 8 occupies the position shown in figs. 6 and 7, and in the second position for use of the buggy according to the invention, in which the coupling device 8 occupies the position shown in fig. 8, the discs 11, 12 and 13 form at least one recess 14 or 15 that is suitable for taking a projection 16 that is provided on the seat.

Figs. 6 to 8 show the hinge 17 to which the seat 9 not shown is connected.

The coupling device 8 is preferably arranged so that in the situation of the first position for use as shown in figs. 6 and 7 there are two recesses 14 or 15 present that are each suitable for taking the projection 16.

In the second position for use, the wheelbarrow position, in which the position of the coupling device 8 is as shown in fig. 8, there is only one

recess 15 present that is suitable for taking the projection 16. There can then also be a recess 14' present as shown in fig. 8, but it is not suitable for taking the projection 16. With this arrangement the seat 9 can only be fitted with its back 10 towards the front and rear wheels 3, 4.

Fig. 7 clearly shows that by fitting the seat 9 the projection 16 slots into a recess 15 formed by the discs 11, 12 and 13, as a consequence of which the discs 11, 12 and 13 are secured against mutual rotation.

Figs. 6, 7, 8, 9A and 9B also clearly show that the coupling device 8 and the seat 9 are provided with a male and female connection 18, 19. It has already been mentioned that the seat 9 is provided on either side with a hinge 17. This hinge 17 can be locked. Through effectuation of the male and female connection 18, 19 the hinge 17 is fixed in one of a predetermined number of intermediate positions, so that the seat 9 is locked against rotation.

The hinge 17 is connected to a part 19 of the male and female connection 18, 19 that in a first position of the hinge 17 extends beyond the back 10 of the seat 9. This is shown in figs. 4B and 5A.

In a second position of the hinge 17 as shown in figs. 4C and 5B this part 19 essentially runs parallel to the back 10 of the seat 9.

Figs. 4 and 5 show the seat 9 separately from the coupling device 8 with the male and female connection being broken. Then the hinge 17 is rotatable between the first position according to figs. 4B and 5A and the second position according to figs. 4C and 5B. The fixed intermediate positions that have been explained above are obtained by effectuating the male and female connection 18, 19. Figs. 9A and 9B show that when this male and female connection 18, 19 is made, a pawl 20 incorporated into the hinge 17 of the seat 9 is adjusted which adjusts a disc 21 with teeth 22 sideways until these teeth 22 are taken up in recesses 23 of an adjacent disc 24. The discs 23 and 24 are secured against mutual rotation.

The invention is not restricted to the form of construction described. The form of construction described serves merely as a means of explaining the claims below. Variations are possible within the scope of these claims without departing from the thinking behind the invention.

CLAIMS

1. Buggy comprising a frame with front and rear wheels, a pull and push bar, and front wheel bars and rear wheel bars that support the front and rear wheels and which are connected to the pull and push bar, and a seat accommodated in the frame, **in which** the buggy is provided on either side with a coupling device (8) for the rotatable connection of the pull and push bar (5) and the front wheel and rear wheel bars (6, 7), this coupling device being equipped for the detachable fitting of the seat.

2. Buggy according to claim 1, **in which** it essentially has two positions for use, in a first position (figs. 1, 2) the front and rear wheels (3, 4) being placed apart, and in a second position (fig. 3) the front and rear wheels being placed close together.

3. Buggy according to claims 1 or 2, **in which** in the first position for use (figs. 1, 2) the seat can be fitted in two ways, firstly (fig. 1) with the seat (9) being fitted facing the front and secondly (fig. 2) with the seat (9) being fitted facing the rear.

4. Buggy according to claims 1, 2 or 3, **in which** in the second position for use (fig. 3) the seat (9) can only be fitted with the back (10) of the seat (9) towards the front and rear wheels (3, 4).

5. Buggy according to one of the claims 1-4, **in which** the coupling device (8) is made up of interconnected rotatable discs (11, 12, 13) which are connected as the case may be to the pull and push bar (5) and the front and rear wheel bars (6, 7), in the first (figs. 6, 7) and in the second (fig. 8) position for use the said discs (11, 12, 13) forming at least one recess (14, 15) that is suitable for taking a projection (16) that is provided on the seat (9).

6. Buggy according to claim 5, **in which** in the first position for use two recesses (14, 15) are formed that are suitable for taking the projection (16).

7. Buggy according to claim 5 or 6, **in which** in the second position for use (fig. 8) a recess (15) is formed that is located in such a way that the

seat (9) can only be fitted with the back (10) towards the front and rear wheels (3, 4).

8. Buggy according to one of the claims 1-7, **in which** through the fitting of the seat (9) the projection (16) slots into a recess (15) formed by the discs (11, 12, 13) and the discs (11, 12, 13) are secured against mutual rotation.

9. Buggy according to claim 8, **in which** the coupling device (8) and the seat (9) are provided with a male and female connection (18, 19).

10. Buggy according to claim 9, **in which** the seat (9) is provided on either side with a lockable hinge (17) and in which effectuation of the male and female connection (18, 19) makes the hinge adjustable to a predetermined number of selected intermediate positions.

11. Buggy according to claims 9 or 10, **in which** the hinge (17) is connected with a part (19) of the male and female connection (18, 19) that in a first position (fig. 4B, 5A) of the hinge (17) essentially runs diagonally in relation to the back of the seat and extends beyond the back (10) of the seat (9) and in a second position (fig. 4C, 5B) of the hinge (17) essentially runs parallel to the back (10) of the seat (9) and in which if the male and female connection (18, 19) is broken the hinge is rotatable between the first position and the second position.

12. Buggy according to claim 10 or 11, **in which** effectuation of the male and female connection (18, 19) adjusts a pawl (20) incorporated into the hinge (17) of the seat (9) for fixing the hinge (17) in one of the predetermined number of intermediate positions.

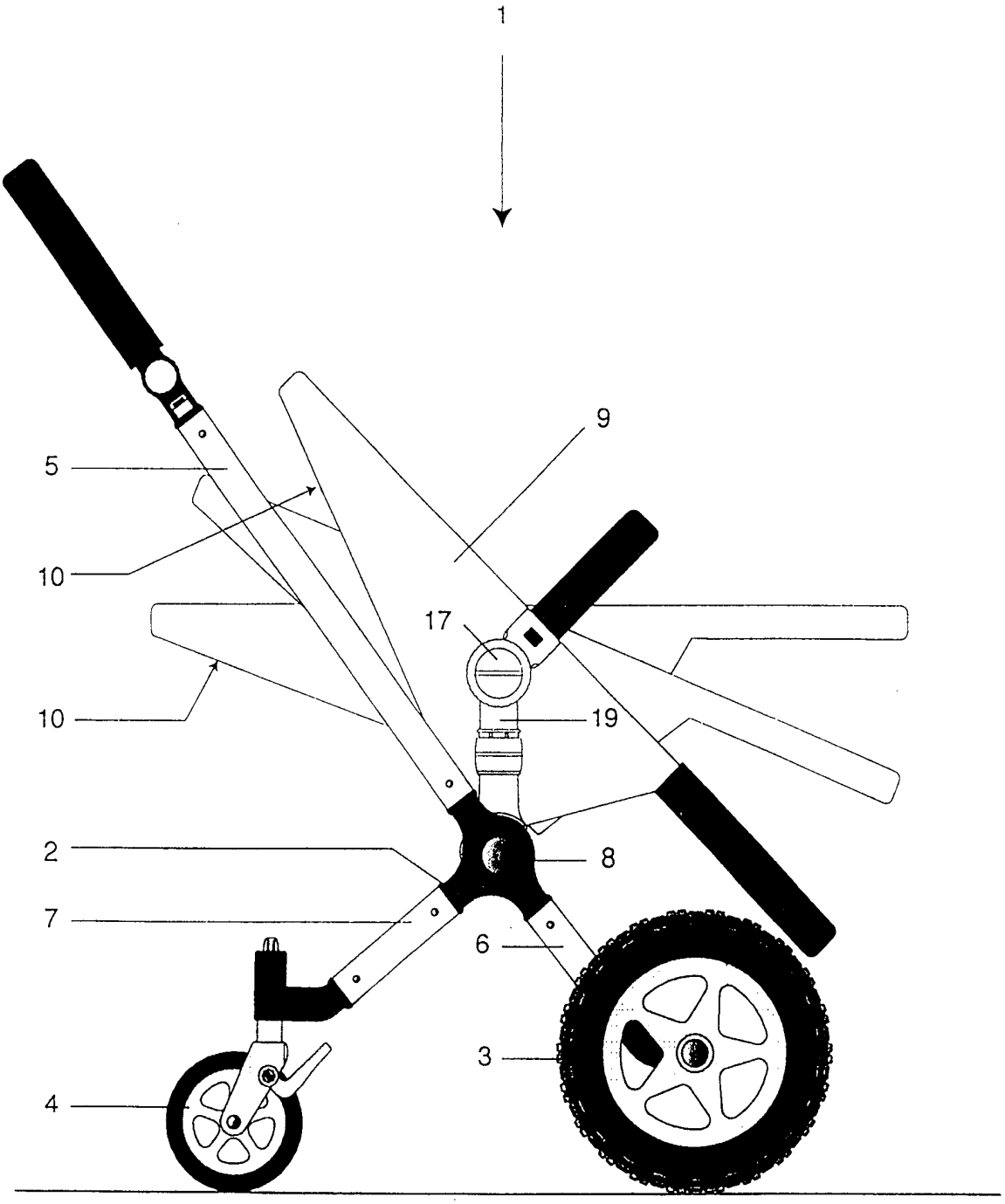

FIG. 1

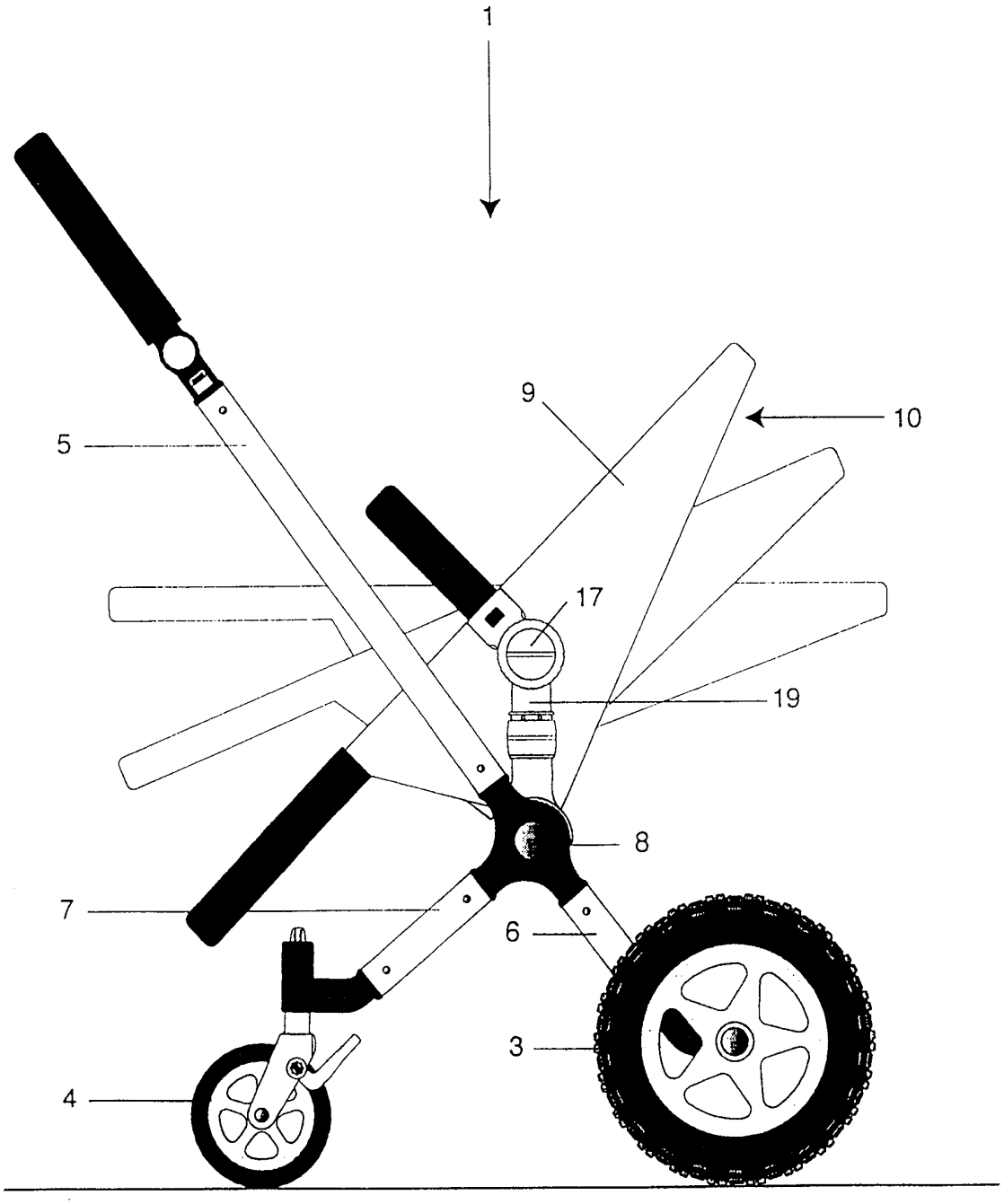

FIG. 2

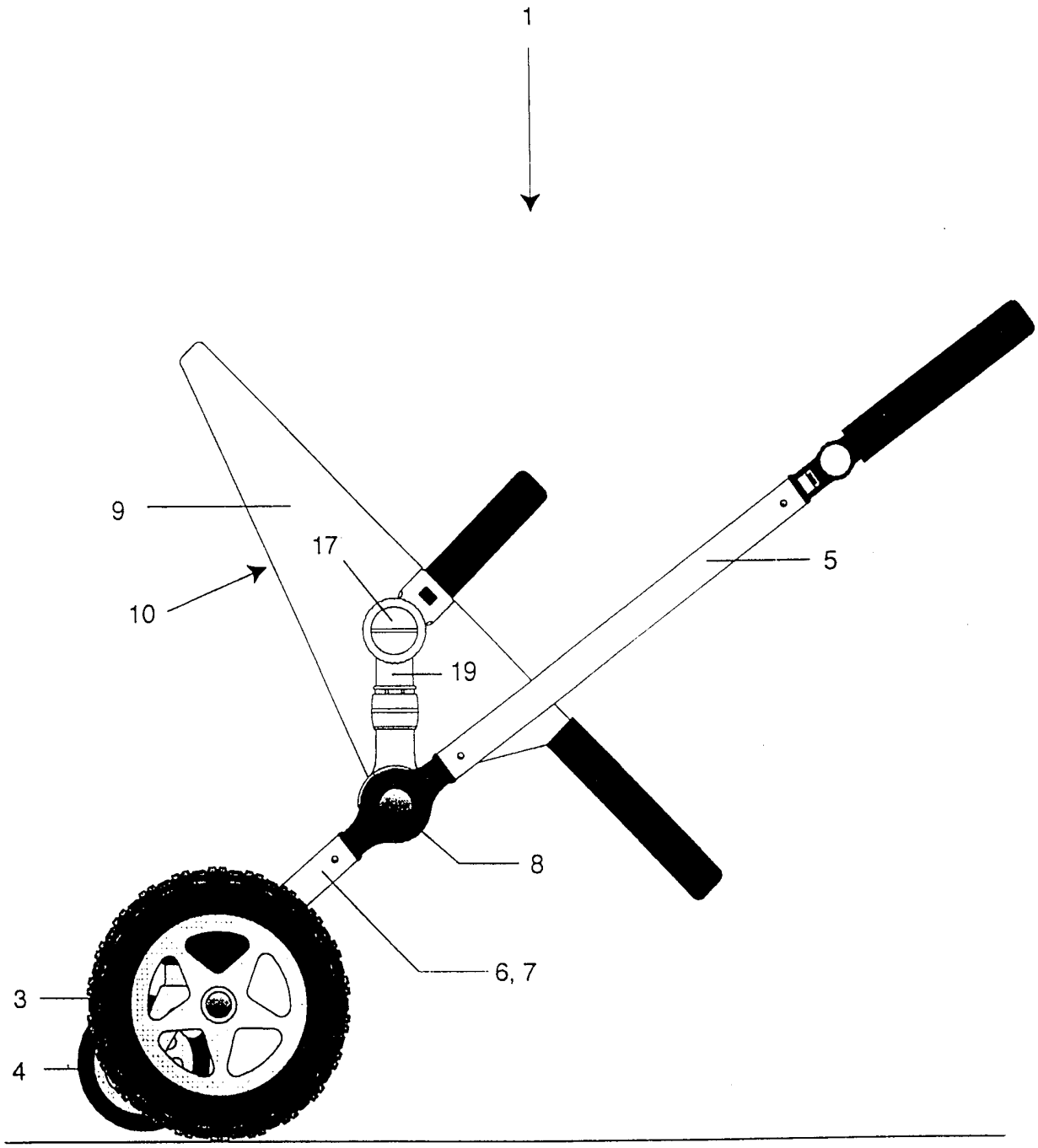

FIG. 3

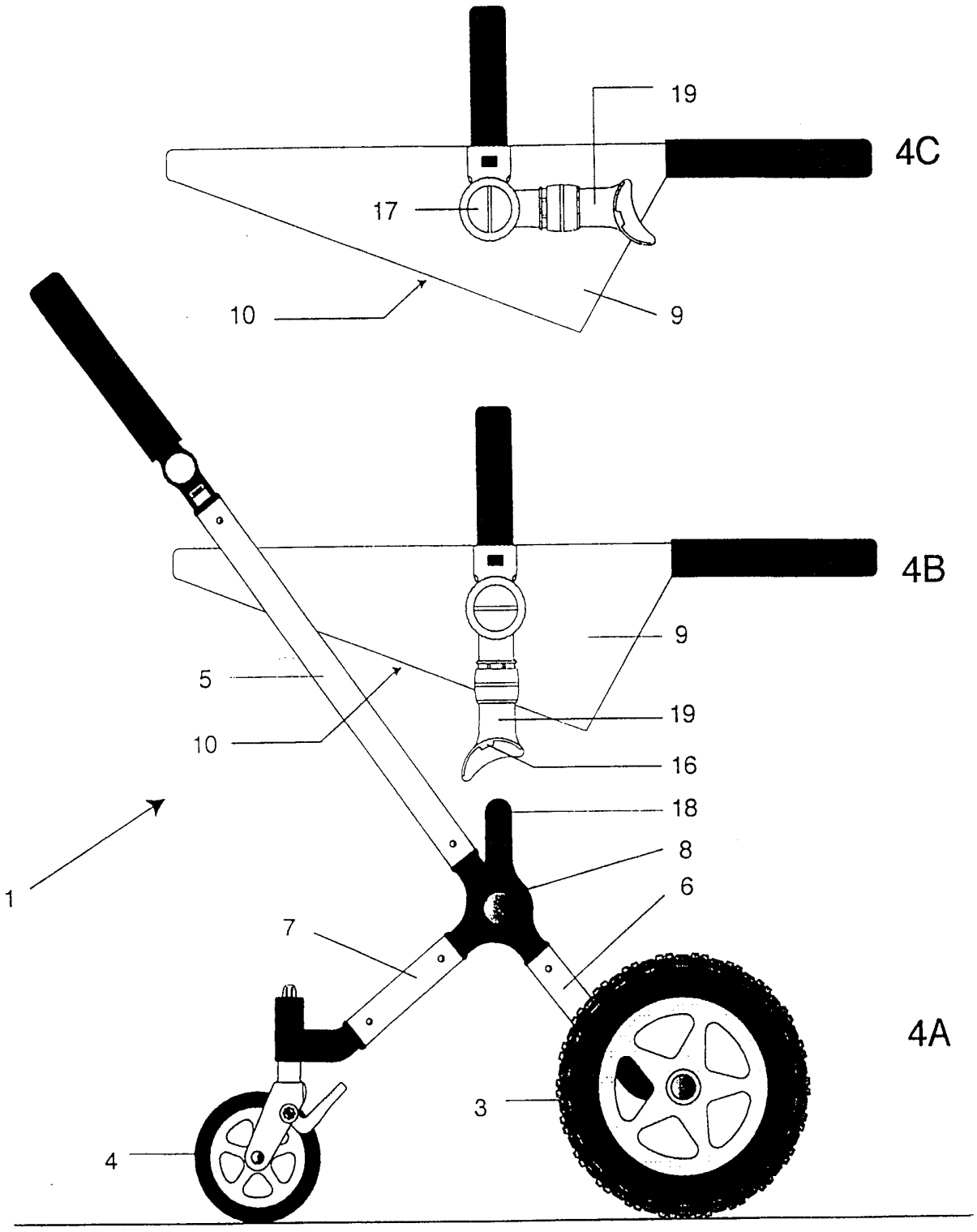

FIG 4

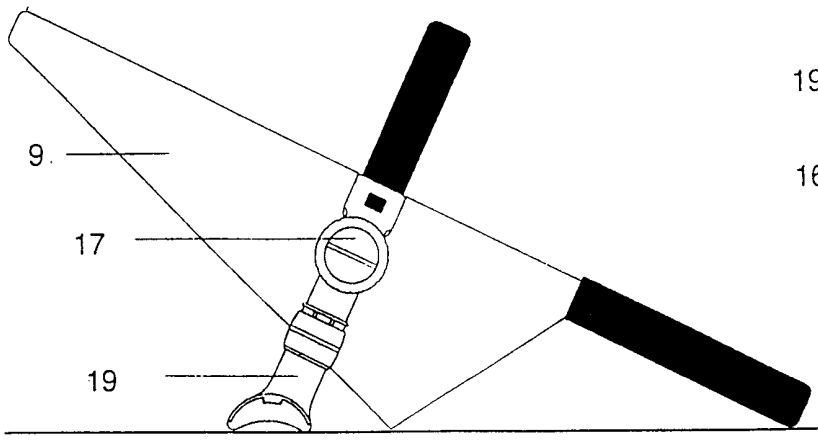

FIG. 5A

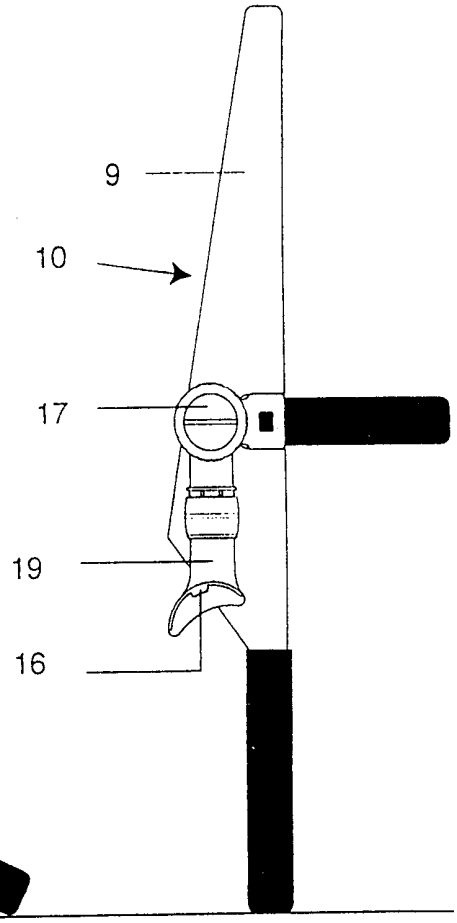

FIG. 5B

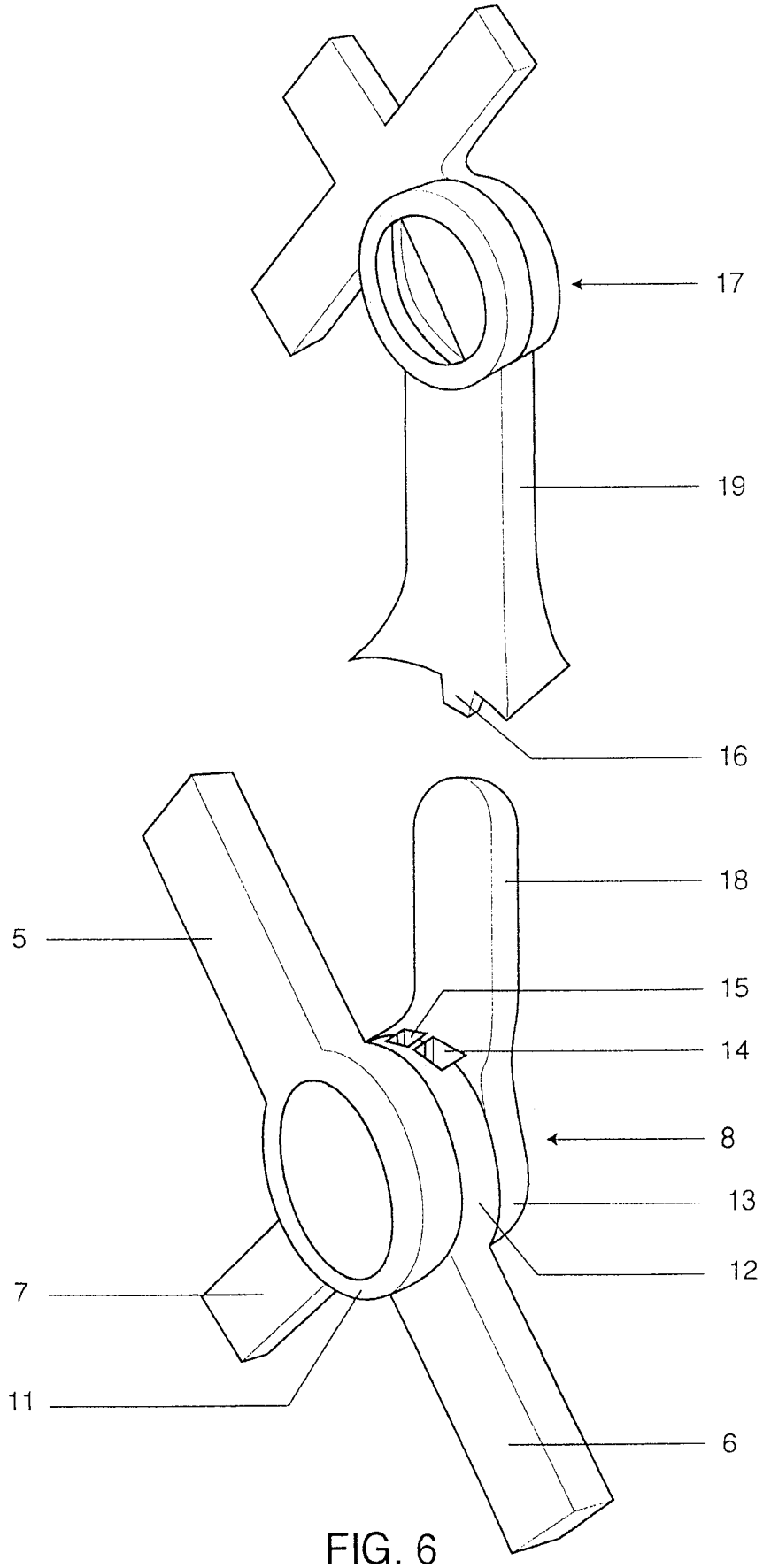

FIG. 6

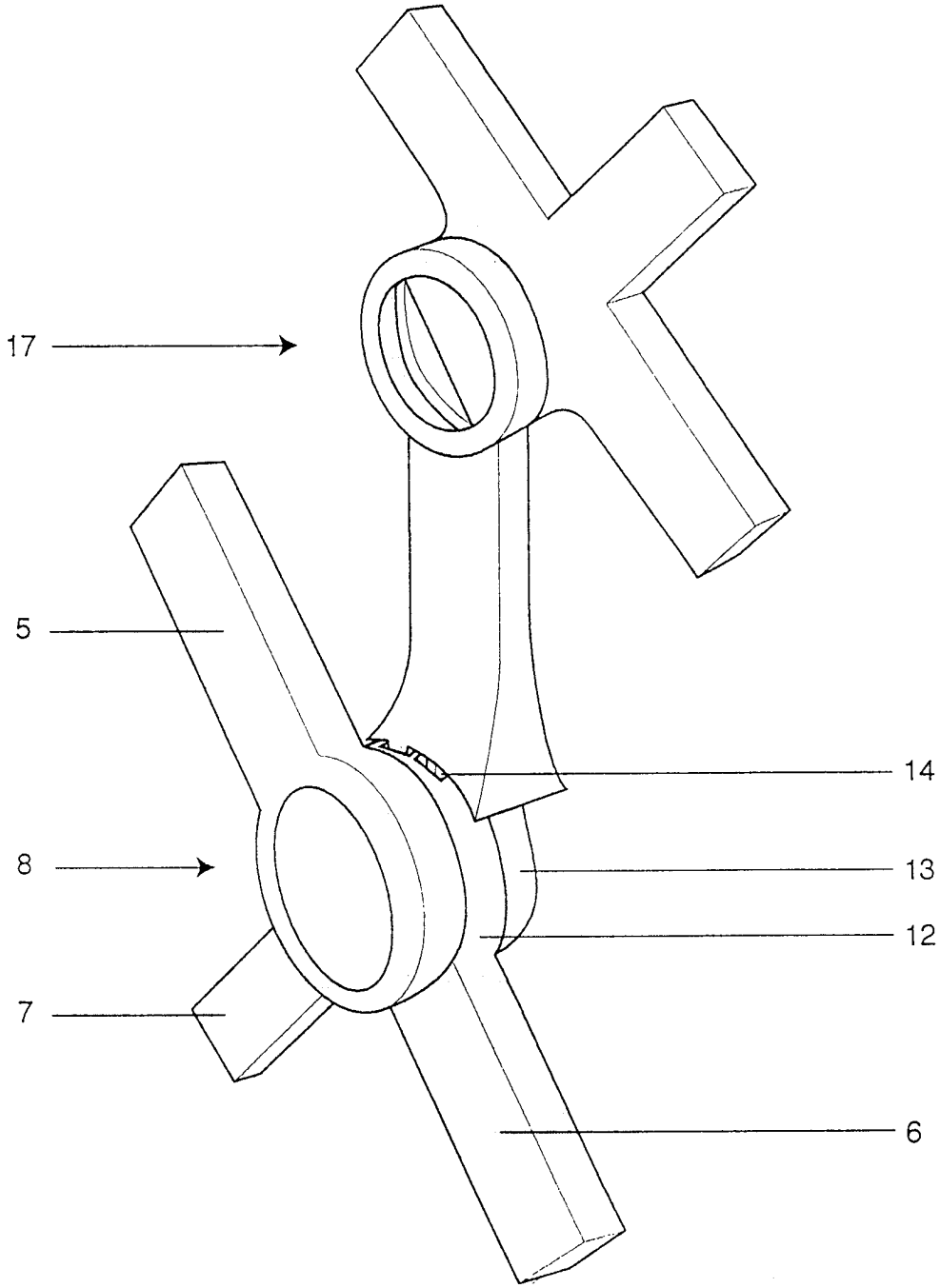

FIG. 7

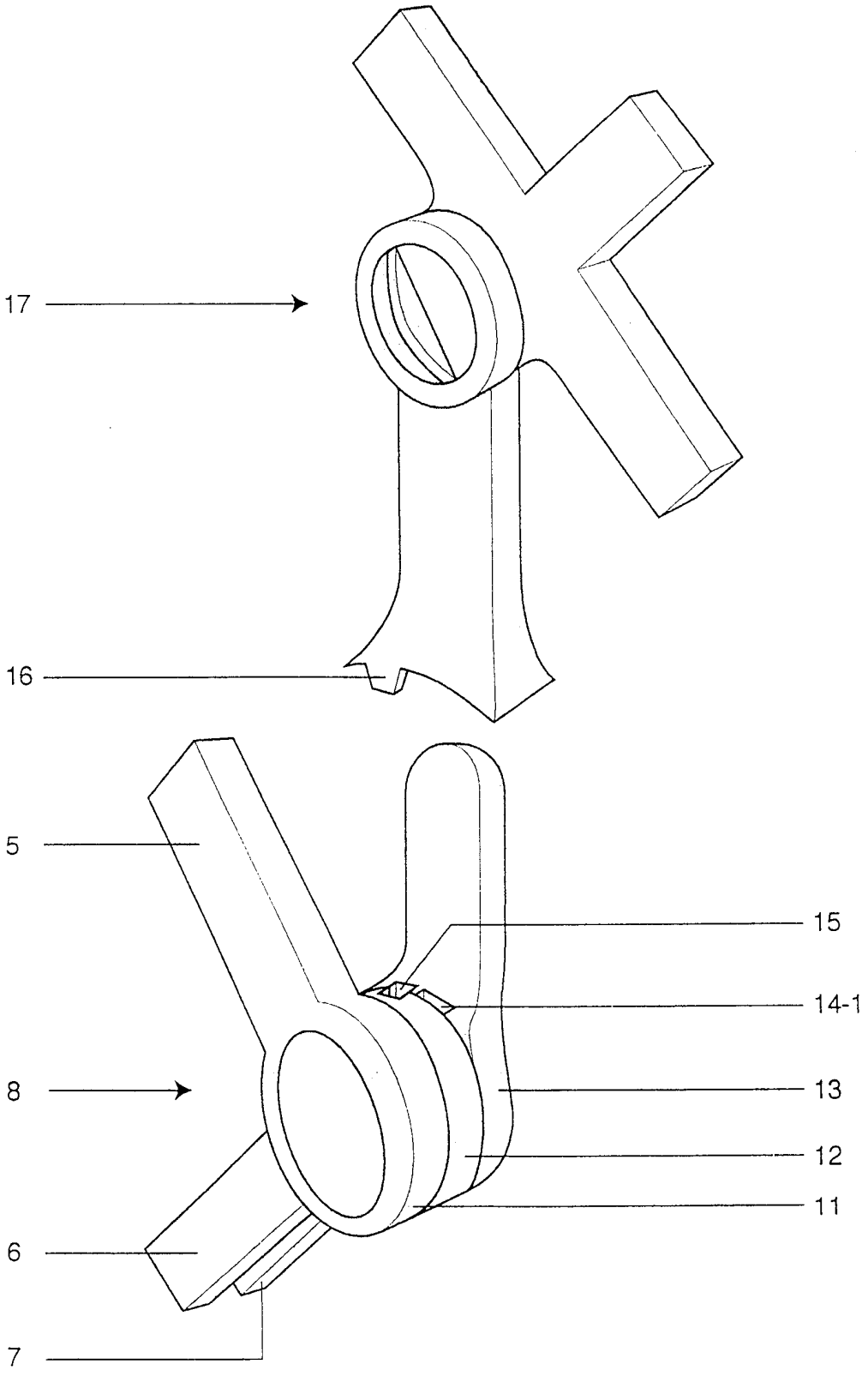

FIG. 8

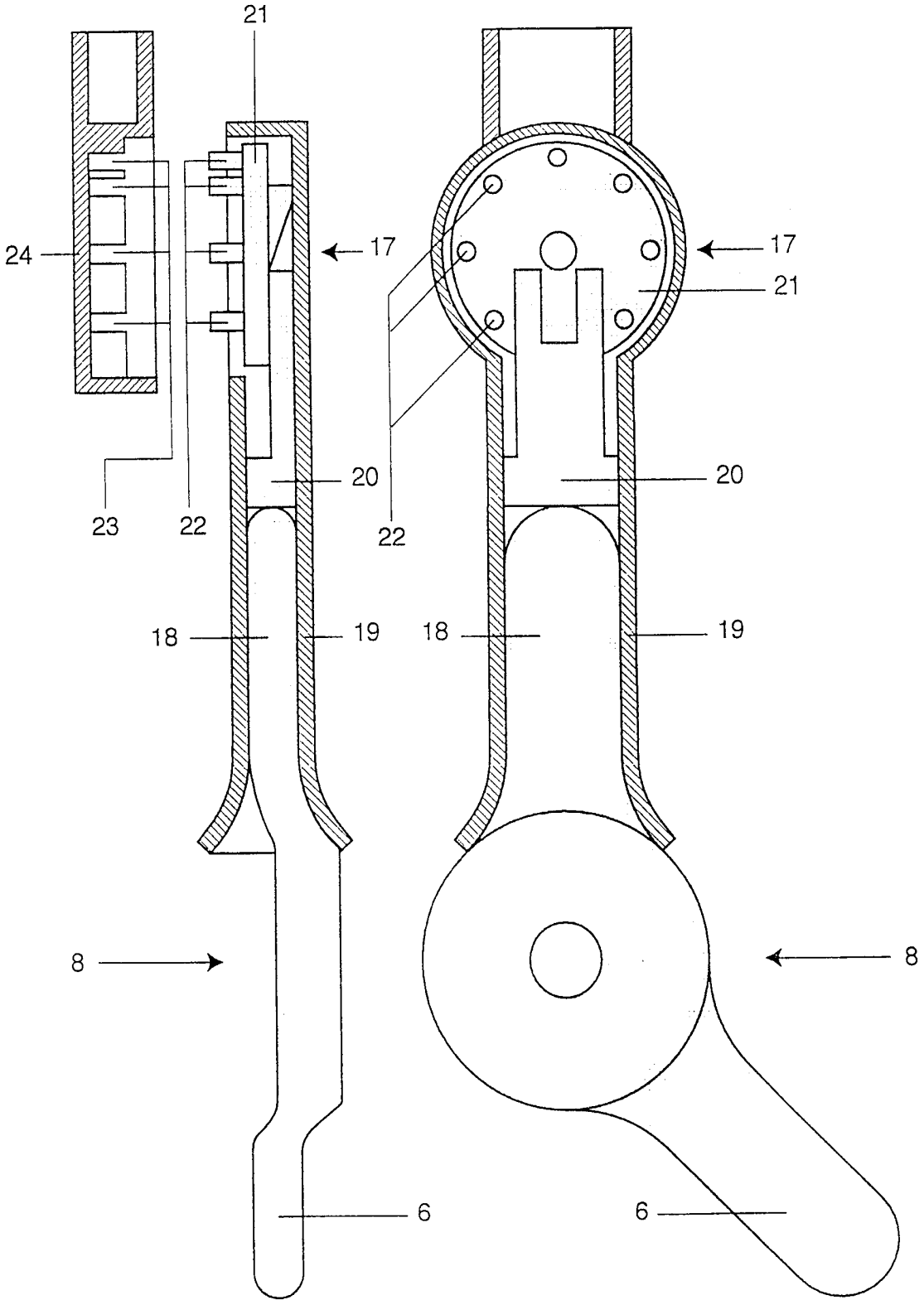

FIG. 9A FIG. 9B

INTERNATIONAL SEARCH REPORT

Inter ›nal Application No
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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B62B7/14

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 7 B62B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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☒ Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
16 November 1999	22/11/1999

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Information on patent family members

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