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(54) **FOLDABLE BASKETBALL STAND**

(57) A foldable basketball stand has at least one hoop on a rear end surface of a backboard on an upper half portion of a front frame. A middle portion of left/right front rod of the front frame has two first left/right joints respectively. Rear/front ends of a left-top rod and a left-bottom rod of a left frame are connected to a left-middle rod/the left-front rod respectively. Rear/front ends of a right-top rod and a right-bottom rod of a right frame are connected to a right-middle rod/the right-front rod respectively. Two ends of left/right supporting rod are connected to a middle portion of the left/right top rod and the left/right front rod respectively. An upper half portion of a rear frame has a stop portion. Left/right sides of the rear frame are connected to the left/right middle rods through left/right connecting rods respectively.

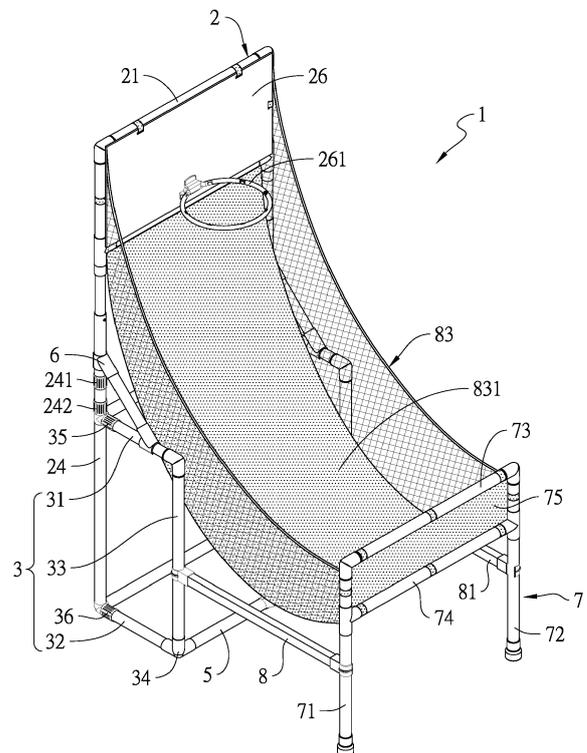


Fig. 1

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## Description

### Field of the invention

[0001] The present invention is related to a foldable basketball stand, especially a foldable basketball stand capable of quick disassembling and assembling, storage space saving, and easy to carry.

### Background of the invention

[0002] A conventional outdoor basketball stand usually is composed of a backboard having a hoop and a supporting stand. For a basketball stand of a shooting machine used indoors, in order to have sufficient support strength, the length of the support frame between the hoop and the shooter is divided into two stages, so that after the basketball thrown by the shooter touches the hoop or the backboard, the basketball can roll rearward and downward through an inclined net surface, allowing the shooter to shoot continuously.

### Summary of the invention

[0003] However, the above basketball stand is mainly fixed and assembled by several metal tubes and flat plates. The assembly process is slow. And the overall volume after assembled has been fixed. Due to the inconvenience of folding, it is not only inconvenient to carry but also occupies huge storage space. Accordingly, the present invention has developed a new design which may avoid the above described drawbacks, may take into account economic considerations. Therefore, the present invention then has been invented.

[0004] One object of the present invention is to provide a foldable basketball stand which can solve the problems of conventional basketball stand of slow assembly and disassembly speed and huge storage space occupied. The foldable basketball stand is a combination of the supporting rods and the connecting joints, which can achieve quick assembly and disassembly, and can effectively save storage space after disassembly and facilitate the carrying.

[0005] In order to achieve the purpose of the present invention, the present invention provides a foldable basketball stand which mainly comprises a front frame, a left frame, a right frame, and a rear frame. An upper half portion of the front frame has a backboard. A rear end surface of the backboard has at least one hoop. A middle portion of a left-front rod of the front frame has two first left joints arranged vertically at intervals. A middle portion of a right-front rod of the front frame has two first right joints symmetrical to the two first left joints. The left frame comprises a left-top rod, a left-bottom rod, and a left-middle rod. A middle portion of the left-top rod is connected to one end of a left supporting rod. The other end of the left supporting rod is connected to the left-front rod. A rear end of the left-top rod and a rear end of the left-

bottom rod are connected to the left-middle rod respectively. A front end of the left-top rod is in a relatively rotatable connection to the left-front rod through a first left adapter. A front end of the left-bottom rod is in a relatively rotatable connection to the left-front rod through a second left adapter. The right frame comprises a right-top rod, a right-bottom rod, and a right-middle rod. A middle portion of the right-top rod is connected to one end of a right supporting rod. The other end of the right supporting rod is connected to the right-front rod. A rear end of the right-top rod and a rear end of the right-bottom rod are connected to the right-middle rod respectively. A front end of the right-top rod is in a relatively rotatable connection to the right-front rod through a first right adapter. A front end of the right-bottom rod is in a relatively rotatable connection to the right-front rod through a second right adapter. An upper half portion of the rear frame has a stop portion. A left-rear rod of the rear frame is connected to a rear end of a left connecting rod. A front end of the left connecting rod is connected to the left-middle rod. A right-rear rod of the rear frame is connected to a rear end of a right connecting rod. A front end of the right connecting rod is connected to the right-middle rod.

[0006] In implantation, the present invention further comprises a middle connecting rod. A left end of the middle connecting rod is detachably connected to a bottom end of the left-middle rod through a left T-junction. A right end of the middle connecting rod is detachably connected to a bottom end of the right-middle rod through a right T-junction.

[0007] In implantation, an upper half portion of the rear frame further comprises an upper-top rod and a lower-top rod parallel to the upper-top rod. A left end of the upper-top rod and a left end of the lower-top rod are connected to the left-rear rod respectively. A right end of the upper-top rod and a right end of the lower-top rod are connected to the right-rear rod respectively.

[0008] In implantation, the present invention further comprises a supporting rod. A top end and a bottom end of the supporting rod are detachably connected to the lower-top rod and the middle connecting rod respectively.

[0009] In implantation, the present invention further comprises a net. The net is connected to an outer peripheral edge of the foldable basketball stand. An inclined net surface is formed between the front frame and the rear frame.

[0010] For further understanding the characteristics and effects of the present invention, some preferred embodiments referred to drawings are in detail described as follows.

### Brief description of drawings

#### [0011]

Figure 1 is a perspective view of a preferred embodiment of the present invention provided with net.

Figure 2 is a perspective view of the preferred em-

bodiment of the present invention.

Figure 3 is a schematic use state view of the preferred embodiment of the present invention in a to-be-bent state.

Figure 4 is a partial enlargement view of portion of Figure 3.

Figure 5 is a perspective view of the preferred embodiment of the present invention in a folded state.

### Detailed Descriptions of Preferred Embodiments

**[0012]** Please refer to Figures 1 and 2, which are preferred embodiments of a foldable basketball stand 1 of the present invention. The foldable basketball stand 1 mainly comprises a front frame 2, a left frame 3, a right frame 4, a middle connecting rod 5, a left supporting rod 6, a right supporting rod 61, a rear frame 7, a left connecting rod 8, a right connecting rod 81, a supporting rod 82, and a net 83. One end of the foldable basketball stand 1 having a backboard 26 is defined as a front end of the foldable basketball stand 1, while a position where a shooter stands distant from the backboard 26 is defined as a rear end of the foldable basketball stand 1. And a left end and a right end of the foldable basketball stand 1 are defined respectively, by the direction in which a shooter faces the backboard 26.

**[0013]** The front frame 2 is an upstanding quadrangular frame, which comprises a top rod 21, a bottom rod 22, a middle cross rod 23, a left-front rod 24, and a right-front rod 25. An upper half portion of the front frame 2 is provided with the backboard 26. A rear end surface of the backboard 26 has a hoop 261. In implementation, there may have two hoops 261 arranged horizontally at intervals on the rear end surface of the backboard 26. The left-front rod 24 has an upper portion, a middle portion, and a lower portion. Two first left joints 241, 242 are disposed on the left-front rod 24 between the upper portion and the middle portion and between the middle portion and the lower portion respectively. Similarly, the right-front rod 25 has an upper portion, a middle portion, and a lower portion. Two first right joints 251, 252 are disposed on the right-front rod 25 between the upper portion and the middle portion and between the middle portion and the lower portion respectively. The two first left joints 241, 242 and the two first right joints 251, 252 are arranged in a left-right symmetrical manner, so that the upper half portion of the front frame 2 is capable of being bent rearward and downward sequentially.

**[0014]** The left frame 3 is an upstanding rectangular frame, which comprises a left-top rod 31, a left-bottom rod 32 and a left-middle rod 33. A rear end of the left-top rod 31 is connected to a top end of the left-middle rod 33. A rear end of the left-bottom rod 32 is connected to a bottom end of the left-middle rod 33 through a left T-junction 34. Through a joint, a front end of the left-top rod 31 is connected to the middle portion of the left-front rod 24 below the two first left joints 241, 242. The joint serves as a first left adapter 35. In implantation, the first left

adapter 35 may also be a T-shape collar sleeved on the left-front rod 24. A front end of the left-bottom rod 32 is connected to a bottom end of the left-front rod 24 through another joint which serves as a second left adapter 36.

5 In implantation, the second left adapter 36 may also be a T-shape collar sleeved on the bottom end of the left-front rod 24, so that the left frame 3 is capable of being horizontally bent and rotated relative to the left-front rod 24. The left supporting rod 6 is a connecting rod arranged in an inclined manner. A bottom end and a top end of the left supporting rod 6 are C-shaped collars respectively. The bottom end of the left supporting rod 6 is sleeved on a middle portion of the left-top rod 31. The top end of the left supporting rod 6 is sleeved on the left-front rod 24 above the first left joint 241.

**[0015]** The right frame 4 is an upstanding rectangular frame. The right frame 4 and the left frame 3 are symmetrical with respect to the right side and the left side of the front frame 2. The right frame 4 comprises a right-top rod 41, a right-bottom rod 42, and a right-middle rod 43. A rear end of the right-top rod 41 is connected to a top end of the right-middle rod 43. A rear end of the right-bottom rod 42 is connected to a bottom end of the right-middle rod 43 through a right T-junction 44. Through a joint, a front end of the right-top rod 41 is connected to the middle portion of the right-front rod 25 below the two first right joints 251, 252. The joint serves as a first right adapter 45. In implantation, the first right adapter 45 may also be a T-shape collar sleeved on the right-front rod 25. A front end of the right-bottom rod 42 is connected to a bottom end of the right-front rod 25 through another joint which serves as a second right adapter 46. In implantation, the second right adapter 46 may also be a T-shape collar sleeved on the bottom end of the right-front rod 25, so that the right frame 4 is capable of being horizontally bent and rotated relative to the right-front rod 25. The right supporting rod 61 is a connecting rod arranged in an inclined manner. The right supporting rod 61 and the left supporting rod 6 are symmetrical with respect to the right side and the left side of the front frame 2. A bottom end and a top end of the right supporting rod 61 are C-shaped collars respectively. The bottom end of the right supporting rod 61 is sleeved on a middle portion of the right-top rod 41. The top end of the right supporting rod 61 is sleeved on the right-front rod 25 above the first right joint 251.

**[0016]** A left end of the middle connecting rod 5 is connected to the bottom end of the left-middle rod 33 through the left T-junction 34. A right end of the middle connecting rod 5 is connected to the bottom end of the right-middle rod 43 through the right T-junction 44. A length of the middle connecting rod 5 is slightly longer than a distance between a port of the left T-junction 34 and a port of the right T-junction 44, so that, by the left-right movement, the left end and the right end of the middle connecting rod 5 are detachably connected to the left-middle rod 33 and the right-middle rod 43 respectively.

**[0017]** The rear frame 7 is an upstanding rectangular

frame. The rear frame 7 comprises a left-rear rod 71, a right-rear rod 72, an upper-top rod 73, and a lower-top rod 74. A middle portion of the left-rear rod 71 is connected to a C-shaped collar of a front end of the left connecting rod 8. A C-shaped collar of a rear end of the left connecting rod 8 is connected to the left-middle rod 33. A middle portion of the right-rear rod 72 is connected to a C-shaped collar of a front end of the right connecting rod 81. A C-shaped collar of a rear end of the right connecting rod 81 is connected to the right-middle rod 43. The upper-top rod 73 and the lower-top rod 74 are parallel. A left end of the upper-top rod 73 is connected to a top end of the left-rear rod 71 through an elbow. A right end of the upper-top rod 73 is connected to a top end of the right-rear rod 72 through another elbow. A left end of the lower-top rod 74 is connected to the left-rear rod 71 through a T-shaped tube. A right end of the lower-top rod 74 is connected to the right-rear rod 72 through another T-shape tube. A top end and a bottom end of the supporting rod 82 are C-shaped collars respectively. The bottom end of the supporting rod 82 is detachably sleeved on a middle portion of the middle connecting rod 5. The top end of the supporting rod 82 is detachably sleeved on a middle portion of the lower-top rod 74.

**[0018]** The net 83 is connected to an outer peripheral edge of the foldable basketball stand 1 to form a block below the backboard 26 of the front frame 2 and the left side and the right side of the foldable basketball stand 1 respectively, and to form an inclined net surface 831 between the front frame 2 and the lower-top rod 74 of the rear frame 7. After the basketball thrown by the shooter touches the hoop 261 or the backboard 26, the basketball can roll rearward and downward. A stop portion 75 formed between the upper-top rod 73 and the lower-top rod 74 can stop the rolling of the basketball and store a plurality of basketballs.

**[0019]** Therefore, as shown in Figures 3~5, in present invention, by disassembling the rear frame 7, removing the left connecting rod 8, the right connecting rod 81, and the supporting rod 82, and then removing the middle connecting rod 5, the left supporting rod 6, and the right supporting rod 61, the left frame 3 and the right frame 4 can be rotated respectively, to be stacked in parallel onto a rear side of the front frame 2, while an upper half portion of the left-front rod 24 and an upper half portion of the right-front rod 25, can be bent rearward and downward sequentially, so that a height of the front frame 2 can be shortened, and the left frame 3 and the right frame 4 are covered.

**[0020]** In summary, as disclosed in the above description and attached drawings, the present invention can indeed achieve the intended object. It can provide a foldable basketball stand made by the combination of the supporting rods and connecting joints, which can achieve quick assembly and disassembly, and can effectively save storage space after disassembly and facilitate the carrying. It is new and can be put into industrial use.

**[0021]** Although the embodiments of the present in-

vention have been described in detail, many modifications and variations may be made by those skilled in the art from the teachings disclosed hereinabove. Therefore, it should be understood that any modification and variation equivalent to the spirit of the present invention be regarded to fall into the scope defined by the appended claims.

## 10 Claims

1. A foldable basketball stand, wherein one end of said foldable basketball stand having a backboard is defined as a front end of said foldable basketball stand, a position where a shooter stands distant from said backboard is defined as a rear end of said foldable basketball stand; and a left end and a right end of said foldable basketball stand are defined respectively, by a direction in which said shooter faces said backboard, said foldable basketball stand comprises:

a front frame having said backboard on an upper half portion of said front frame, wherein a rear end surface of said backboard has at least one hoop, a middle portion of a left-front rod of said front frame has two first left joints arranged vertically at intervals, a middle portion of a right-front rod of said front frame has two first right joints symmetrical to said two first left joints, so that said upper half portion of said front frame is capable of being bent rearward and downward sequentially;

a left frame, which comprises a left-top rod, a left-bottom rod, and a left-middle rod, wherein a middle portion of said left-top rod is connected to one end of a left supporting rod, the other end of said left supporting rod is connected to said left-front rod, a rear end of said left-top rod and a rear end of said left-bottom rod are connected to said left-middle rod respectively, wherein a front end of said left-top rod is in a relatively rotatable connection to said left-front rod through a first left adapter, a front end of said left-bottom rod is in a relatively rotatable connection to said left-front rod through a second left adapter, so that said left frame is capable of being horizontally bent and rotated relative to said left-front rod;

a right frame, which comprises a right-top rod, a right-bottom rod, and a right-middle rod, wherein a middle portion of said right-top rod is connected to one end of a right supporting rod, the other end of said right supporting rod is connected to said right-front rod, a rear end of said right-top rod and a rear end of said right-bottom rod are connected to said right-middle rod respectively, wherein a front end of said right-top

- rod is in a relatively rotatable connection to said right-front rod through a first right adapter, a front end of said right-bottom rod is in a relatively rotatable connection to said right-front rod through a second right adapter, so that said right frame is capable of being horizontally bent and rotated relative to said right-front rod; and a rear frame having a stop portion on an upper half portion of said rear frame, wherein a left-rear rod of said rear frame is connected to a rear end of a left connecting rod, a front end of said left connecting rod is connected to said left-middle rod, a right-rear rod of said rear frame is connected to a rear end of a right connecting rod, and a front end of said right connecting rod is connected to said right-middle rod.
2. The foldable basketball stand according to claim 1, further comprising a middle connecting rod, wherein a left end of said middle connecting rod is detachably connected to a bottom end of said left-middle rod through a left T-junction, a right end of said middle connecting rod is detachably connected to a bottom end of said right-middle rod through a right T-junction.
  3. The foldable basketball stand according to claim 2, further comprising a net, wherein said net is connected to an outer peripheral edge of said foldable basketball stand, and an inclined net surface is formed between said front frame and said rear frame.
  4. The foldable basketball stand according to claim 2, wherein said rear frame further comprises an upper-top rod and a lower-top rod parallel to said upper-top rod on an upper half portion of said rear frame, wherein a left end of said upper-top rod and a left end of said lower-top rod are connected to said left-rear rod respectively, wherein a right end of said upper-top rod and a right end of said lower-top rod are connected to said right-rear rod respectively.
  5. The foldable basketball stand according to claim 4, further comprising a net, wherein said net is connected to an outer peripheral edge of said foldable basketball stand, and an inclined net surface is formed between said front frame and said rear frame.
  6. The foldable basketball stand according to claim 4, further comprising a supporting rod, wherein a top end and a bottom end of said supporting rod are detachably connected to said lower-top rod and said middle connecting rod respectively.
  7. The foldable basketball stand according to claim 6, further comprising a net, wherein said net is connected to an outer peripheral edge of said foldable basketball stand, an inclined net surface is formed between said front frame and said rear frame.
  8. The foldable basketball stand according to claim 1, further comprising a net, wherein said net is connected to an outer peripheral edge of said foldable basketball stand, an inclined net surface is formed between said front frame and said rear frame.
  9. The foldable basketball stand according to claim 1, wherein said rear frame further comprises an upper-top rod and a lower-top rod parallel to said upper-top rod on an upper half portion of said rear frame, wherein a left end of said upper-top rod and a left end of said lower-top rod are connected to said left-rear rod respectively, wherein a right end of said upper-top rod and a right end of said lower-top rod are connected to said right-rear rod respectively.
  10. The foldable basketball stand according to claim 9, further comprising a net, wherein said net is connected to an outer peripheral edge of said foldable basketball stand, an inclined net surface is formed between said front frame and said rear frame.

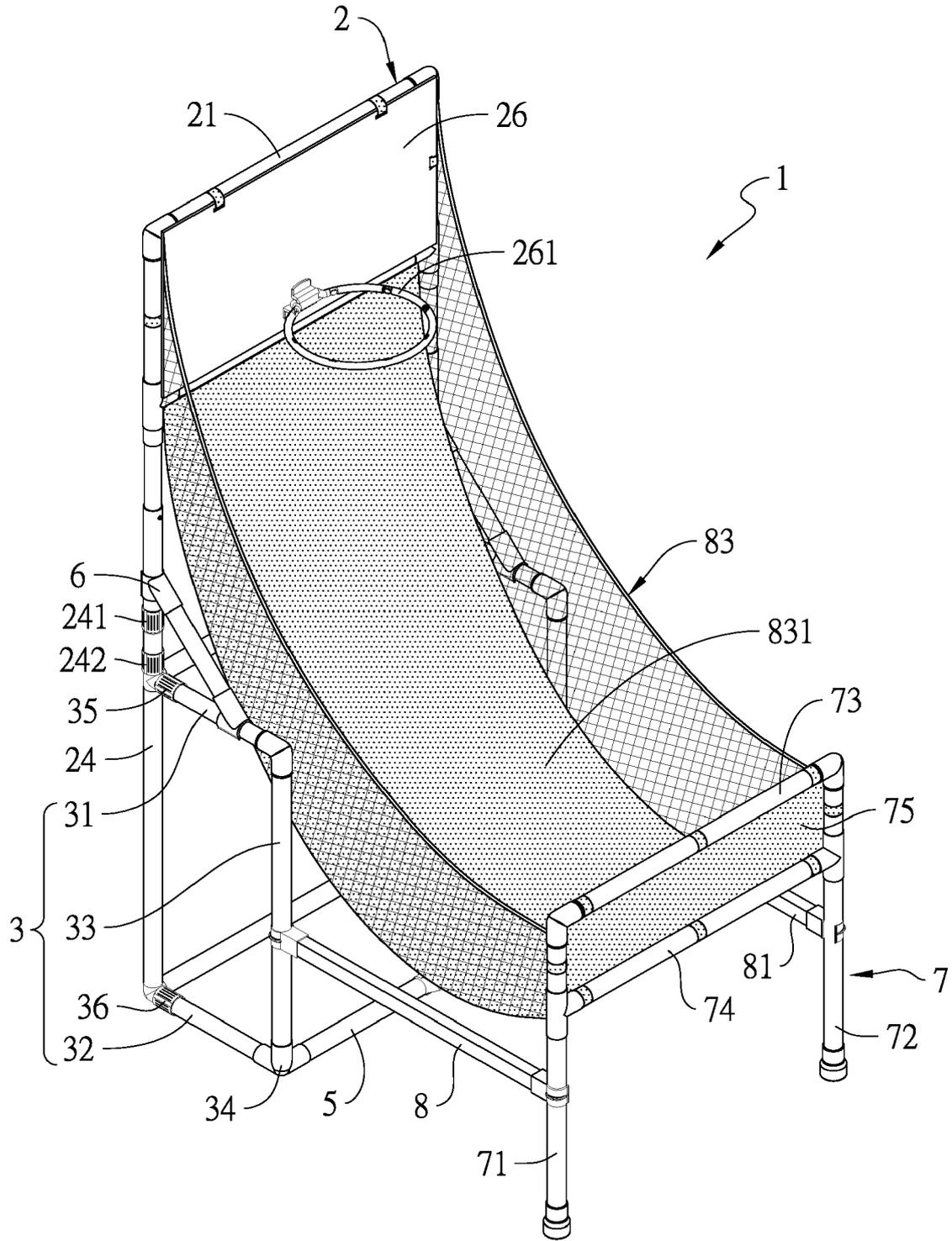


Fig. 1



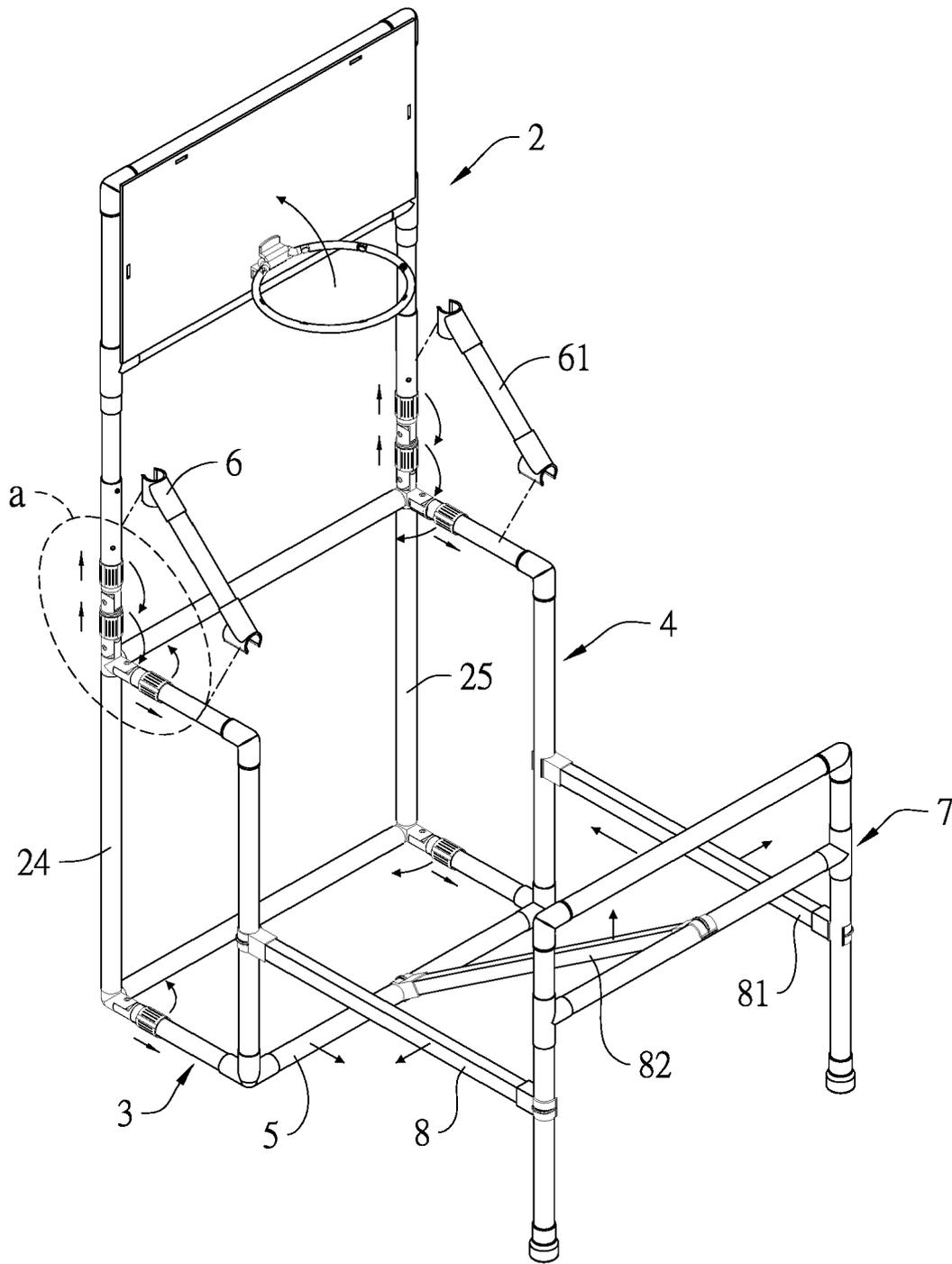


Fig. 3

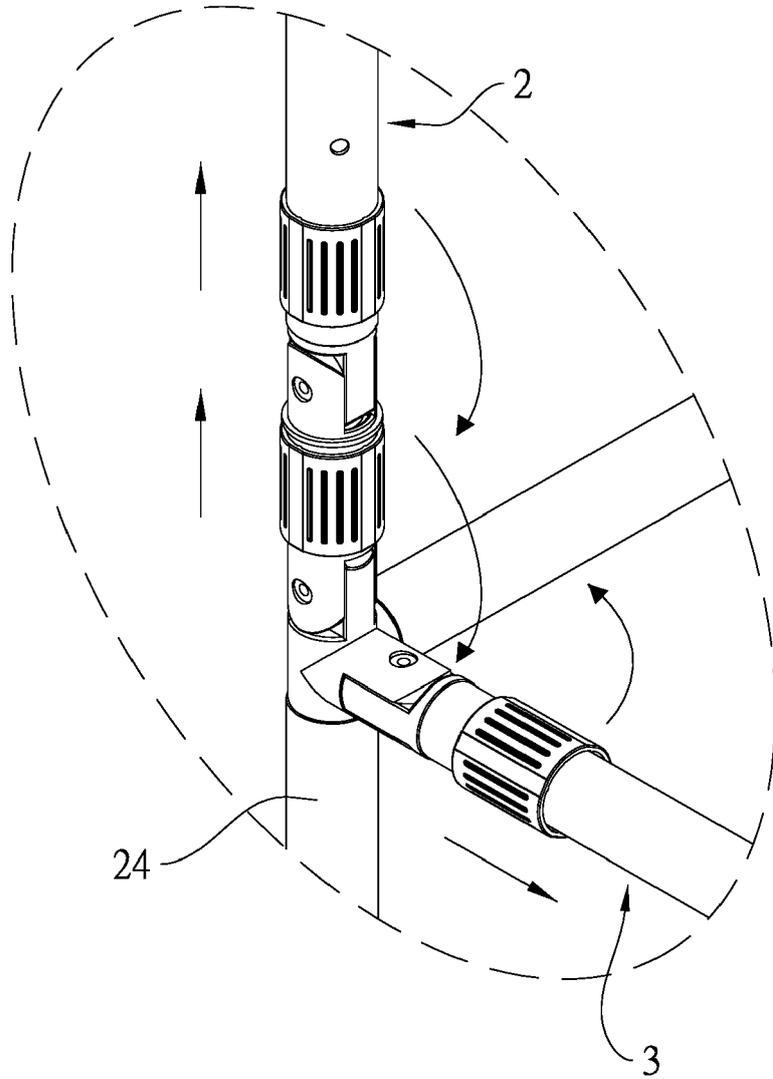


Fig. 4

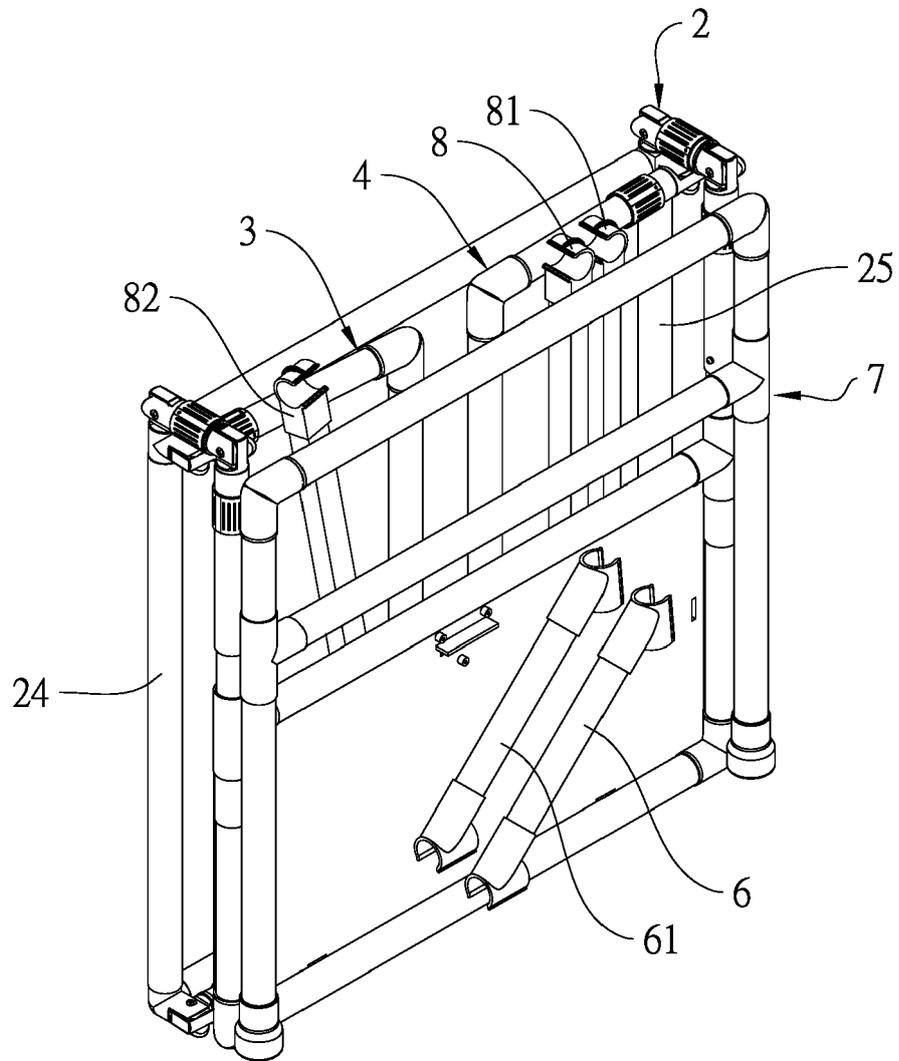


Fig. 5



EUROPEAN SEARCH REPORT

Application Number  
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 6 929 569 B1 (WANG CHENG-LIANG [TW]) 16 August 2005 (2005-08-16) * the whole document * -----	1,8-10	INV. A63B63/08 A63B69/00 A63B71/02
			TECHNICAL FIELDS SEARCHED (IPC)
			A63B
The present search report has been drawn up for all claims			
Place of search <b>Munich</b>		Date of completion of the search <b>16 October 2020</b>	Examiner <b>Tejada Biarge, Diego</b>
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6929569	B1	16-08-2005	NONE
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