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(54) Demonstration board

(57) A display board, of the type which comprises
-a base for support on a horizontal floor -a vertical pole (3,7) supported on the base
-a board (9) with a main display surface in a position with a vertical component,
-a binding element between the pole (3,7) and the board (9), arranged at an upper end of the pole (3) and which secures the board (9) in the aforesaid arrangement, characterized in that
the aforesaid binding element is a joint with a range of movement which permits the rotation of the board (9), from the aforesaid position to a horizontal position of the main display surface, the element having a stop mechanism or safety mechanism for locking the joint in the aforesaid horizontal position of the main surface.

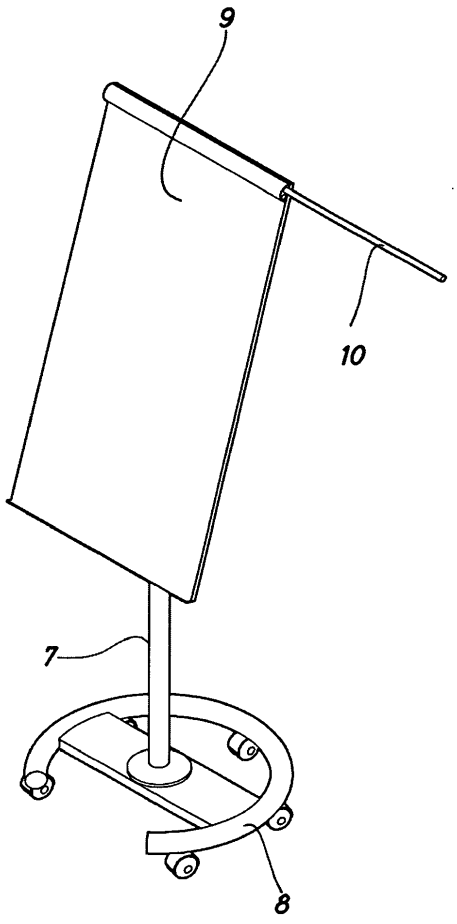

Fig.1

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Description

[0001] The present invention relates to furniture. More particularly to a display board.

[0002] A display board is a surface which serves as a support for displaying on it data or images intended for an audience. The classic example of a display board is a blackboard or a whiteboard which is placed at the head of the lecture rooms and on which a speaker can write for the audience by writing with a piece of chalk or a wipeable felt tip pen.

[0003] More particularly, the present invention refers to a type of display board which comprises:

- a base for support on a horizontal floor
- a vertical pole supported on the base
- a board with a main display surface in a position or arrangement with a vertical component (usually vertical or inclined by a few degrees with respect to the original), and
- a binding element between the pole and the board, arranged at an upper end of the pole and which secures the board in the aforesaid arrangement. The point of connection between pole and board is located in the upper half of the display board.

[0004] This type of display board is customarily used as a mobile display board. The main display surface is usually suitable for writing on it with a wipeable felt tip pen, or has a holding device for sheets on which to write, or both.

[0005] The aim of the present invention is to disclose a device of the aforesaid type with improved functional features.

[0006] In particular, the present invention consists of a display board, of the type which comprises

- a base for support on a horizontal floor
- a vertical pole supported on the base
- a board with a main display surface in an arrangement with a vertical component
- a binding element between the pole and the board arranged at an upper end of the pole which secures the board in the aforesaid arrangement

characterized in that

the aforesaid binding element is a joint with a range of movement which permits the rotation of the board, from the aforesaid position to a horizontal position of the main display surface, said element having a stop mechanism or safety mechanism for locking the joint in the aforesaid horizontal position of the main surface.

[0007] The display board of the present invention has the feature of being able to be transformed into a table.

[0008] As a consequence, this additionally solves a problem with this type of display board, its storage, since it takes up a considerable amount of space.

[0009] Preferably, the binding element is located in the geometric centre of the board.

[0010] The present invention also provides for the joint to be formed by an assembly of plates adjacent to one another and perpendicular to the board, which are traversed by a common axis and are fixed alternately to the pole or to the board.

[0011] More preferably, the pole is telescopic and the base has wheels.

[0012] In this way, the present invention discloses a display board or lecture board having a rotation system which allows it to be transformed from board to table or from table to board in order to increase the applications of the product according to the needs of the final consumer.

[0013] All in all, the device of the present invention is provided to be transformable in a secure and very practical manner. This aim is achieved by means of the rotation system which is located at the back of the board and preferably consists of two parts: one located on the writing surface and the other on the vertical support thereof. By means of the pressure between the wings present in these two main regions, the work surface can pass from the vertical to any desired inclination and also to a completely horizontal or table position.

[0014] The adjusting device of the preferred embodiments make it possible to adjust the inclination of the board and to obtain the desired angle very easily (by means of a simple handgrip which exerts the pressure on the above-mentioned system), safely (the system is fixed and guided at all times) and rapidly (a single actuation point).

[0015] For greater understanding thereof, some drawings of an embodiment of the display board of the present invention are appended by way of explanatory but non-limiting example.

Figure 1 shows a perspective view of an embodiment of the board according to the present invention.

Figure 2 is another perspective view, from a viewpoint behind the embodiment.

Figure 3 is a detail in perspective of the binding element between pole and board.

Figure 4 is another perspective view of the detail of Figure 3.

Figures 5 to 9 show the process of transformation of the board of Figures 1 to 4 into a table.

[0016] The device in the drawings allows a very marked feature on which the whole principle is based. It involves the articulation existing between the principal parts of the main display or work surface (in this case a whiteboard 9) and the vertical structure 3, 7, 8 in order to obtain a rotation between them, obtaining the desired inclination from being completely vertical to being completely horizontal. The binding element between the pole 3 and the main display board 9 is a joint which is formed by a part fixed on the melamine of the rear part of the board. This part consists of three metal lugs fixed to the

pole 3 which intercross with the corresponding lugs fixed to a connecting plate 2 for connection to the board 9. All in all, the metal lugs form an assembly of plates adjacent to one another which are fixed alternately to the pole 3, 7 or to the board 9.

[0017] The connection of the two parts is effected by means of a steel screw 6 which clamps two metal washers. The screw 6 passes through the central holes of the lugs and is screwed into a handgrip 4 at the other end.

[0018] The braking force is adjusted according to the force with which the braking handgrip 4 is rotated. In this way it is possible to obtain the desired adjustment with the desired force.

[0019] Looking at the drawings referred to, it will be observed that the device is constituted by an assembly of parts that can be coupled to one another.

[0020] The part 2 is formed by a metal plate with holes for screwing to the board 9 in its geometric centre, to which are connected three lugs welded perpendicularly to the plate 2. The lugs are circular plates which have a central hole in all of them through which passes the axis of rotation.

[0021] For their part, fixed to the topmost part of the pole 3 there are two lugs complementary to the previous ones and with similar features.

[0022] The connection of the these two assemblies creates a single block which enables it to be fixed by means of two washers 5 which receive the pressure from the handgrip 4 and the screw which acts as axis 6. In this way a joint is formed which permits the rotation of the board 9 with respect to the pole 3, 7.

[0023] The handgrip 4 allows the board to be fixed at the desired inclination without the need for independent tools.

[0024] All in all, with the invention there is obtained the transformation of a display board or lecture board into a horizontal work table, which comprises a metal plate 2 with three perpendicular metal plates or lugs which is fixed on the rear part of the work surface 9, on which they intercross with two welded metal lugs located on the upper end of the pole 3, creating an assembly joined by means of a screw 6 which acts as the axis of rotation. The axis of rotation 6 passes through the whole block referred to previously and is fixed by screwing a pressure handgrip 4 on the opposite end. In these cases, a pressure of the desired intensity on two washers 5 is exerted, which increase the braking, fixing the joint in the braked position. The pole of the equipment is telescopic, being therefore composed of two pole parts 3, 7 and a semicircular base with wheels.

[0025] The whiteboard 9 also comprises an element 10 for fixing onto it pads of sheets of paper.

[0026] Figures 5 to 9 show schematically the process of conversion of the board to a table of the example shown in Figures 1 to 4.

[0027] Although the invention has been described with respect to preferred exemplary embodiments, these should not be regarded as limiting the invention, which will be defined by the widest interpretation of the following claims.

Claims

1. A display board, of the type which comprises

   - a base for support on a horizontal floor
   - a vertical pole supported on the base
   - a board with a main display surface in a position with a vertical component,
   - a binding element between the pole and the board, arranged at an upper end of the pole and which secures the board in the aforesaid arrangement,

   characterized in that

   the aforesaid binding element is a joint with a range of movement which permits the rotation of the board, from the aforesaid position to a horizontal position of the main display surface, said element having a stop mechanism or safety mechanism for locking the joint in the aforesaid horizontal position of the main surface.

2. A board, according to claim 1, **characterized in that** the joint is constituted by an assembly of plates adjacent to one another and perpendicular to the board, and through which passes a common axis, the adjacent plates being fixed alternately to the pole or to the board.

3. A board, according to claim 2, **characterized in that** the stop mechanism or safety mechanism is a mechanism for gripping the plates in order to lock their relative movement about the axis.

4. A board, according to any one of claims 1 to 3, **characterized in that** the pole is telescopic.

5. A board, according to any one of claims 1 to 4, **characterized in that** the base has wheels.

6. A board, according to any one of claims 1 to 5, **characterized in that** the binding element is located in the geometric centre of the board.

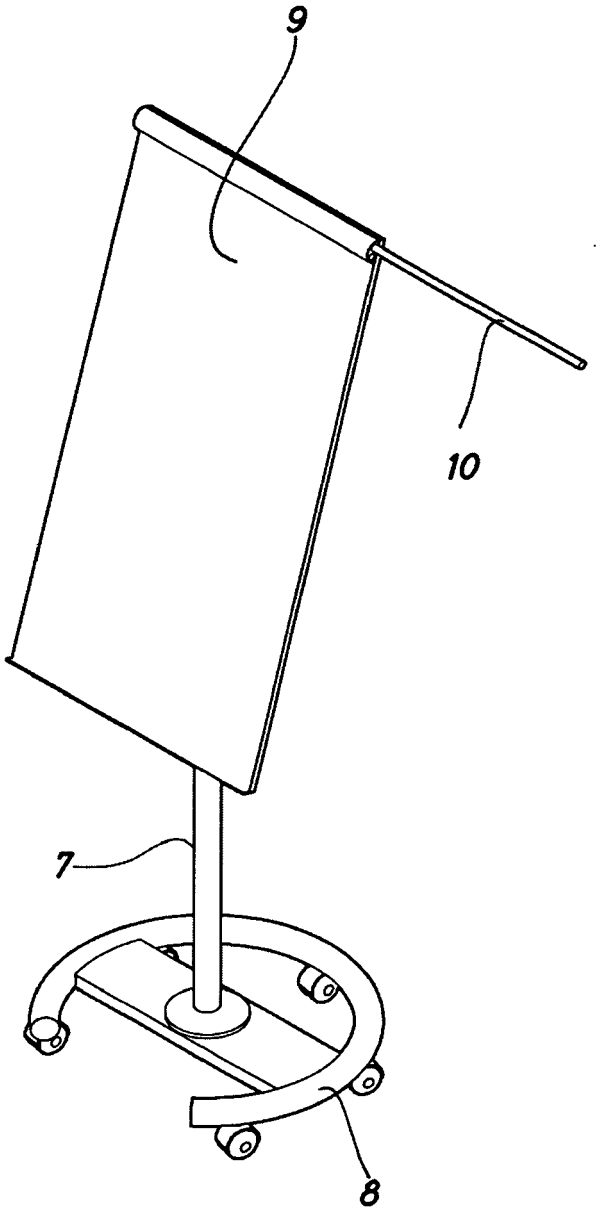

Fig.1

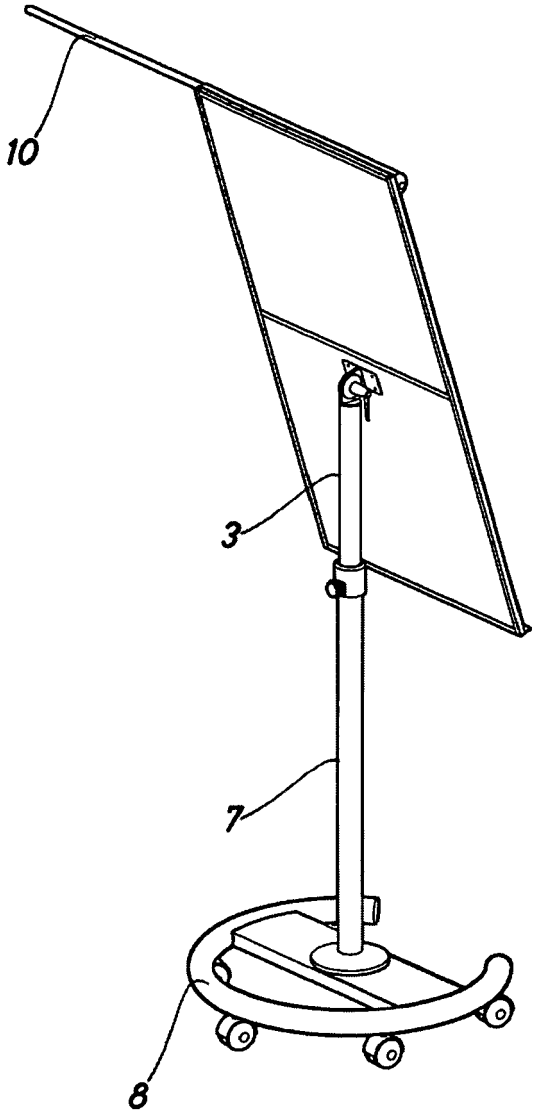

Fig.2

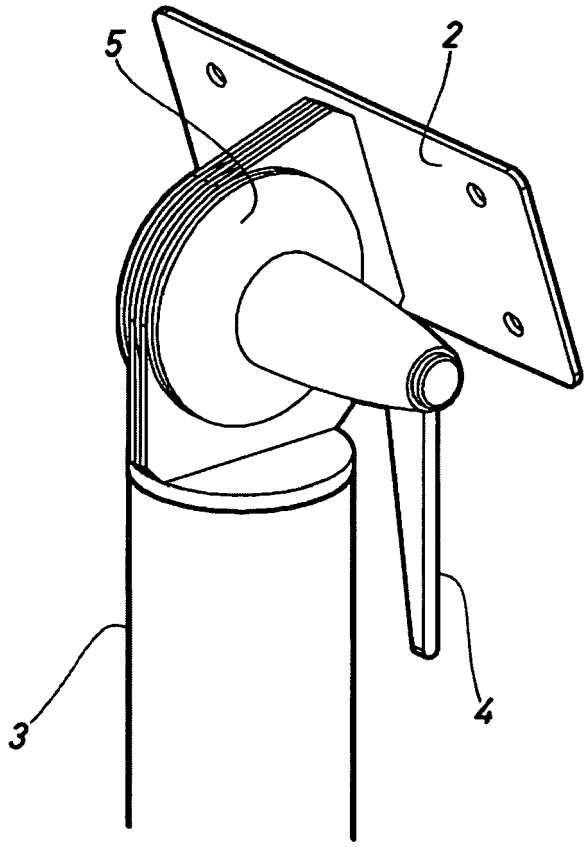

Fig.3

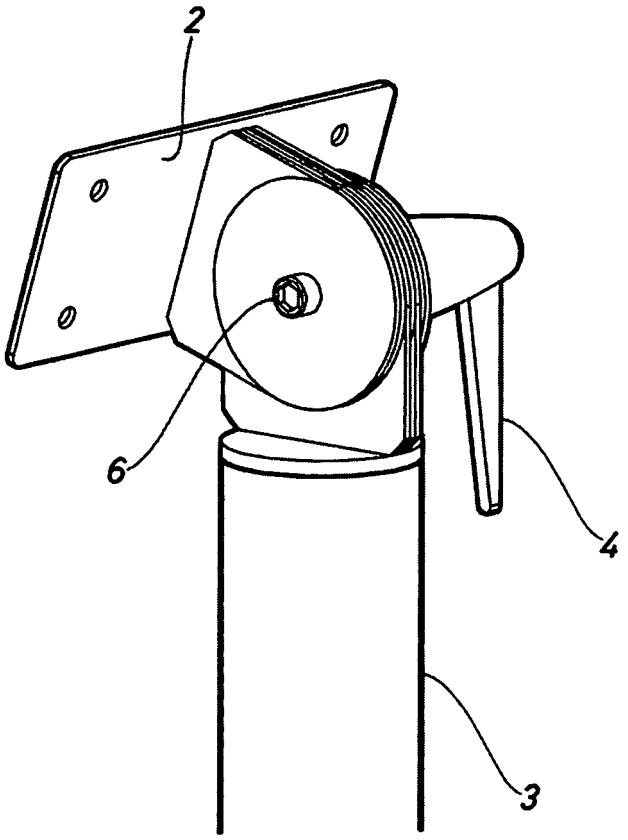

Fig. 4

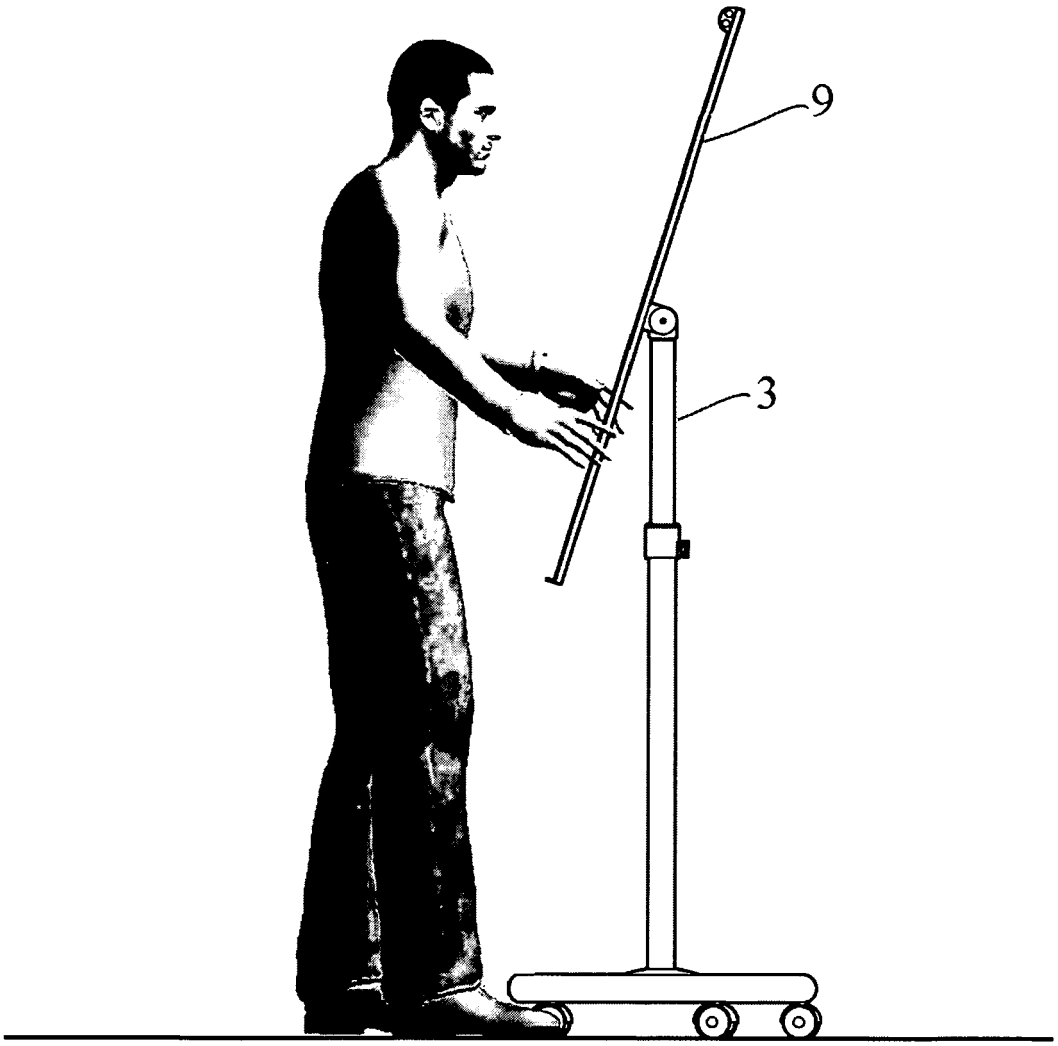

Fig.5

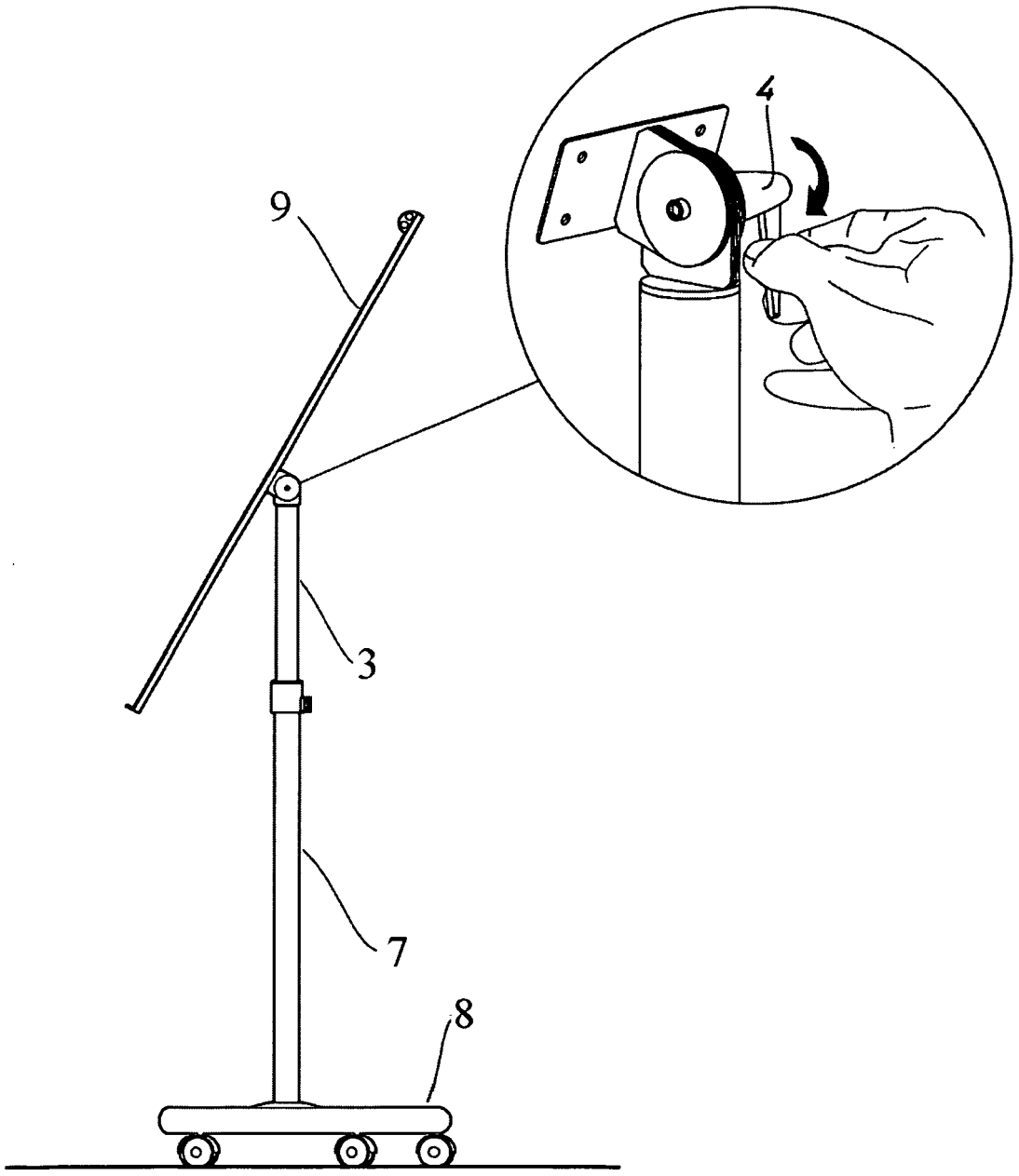

Fig.6

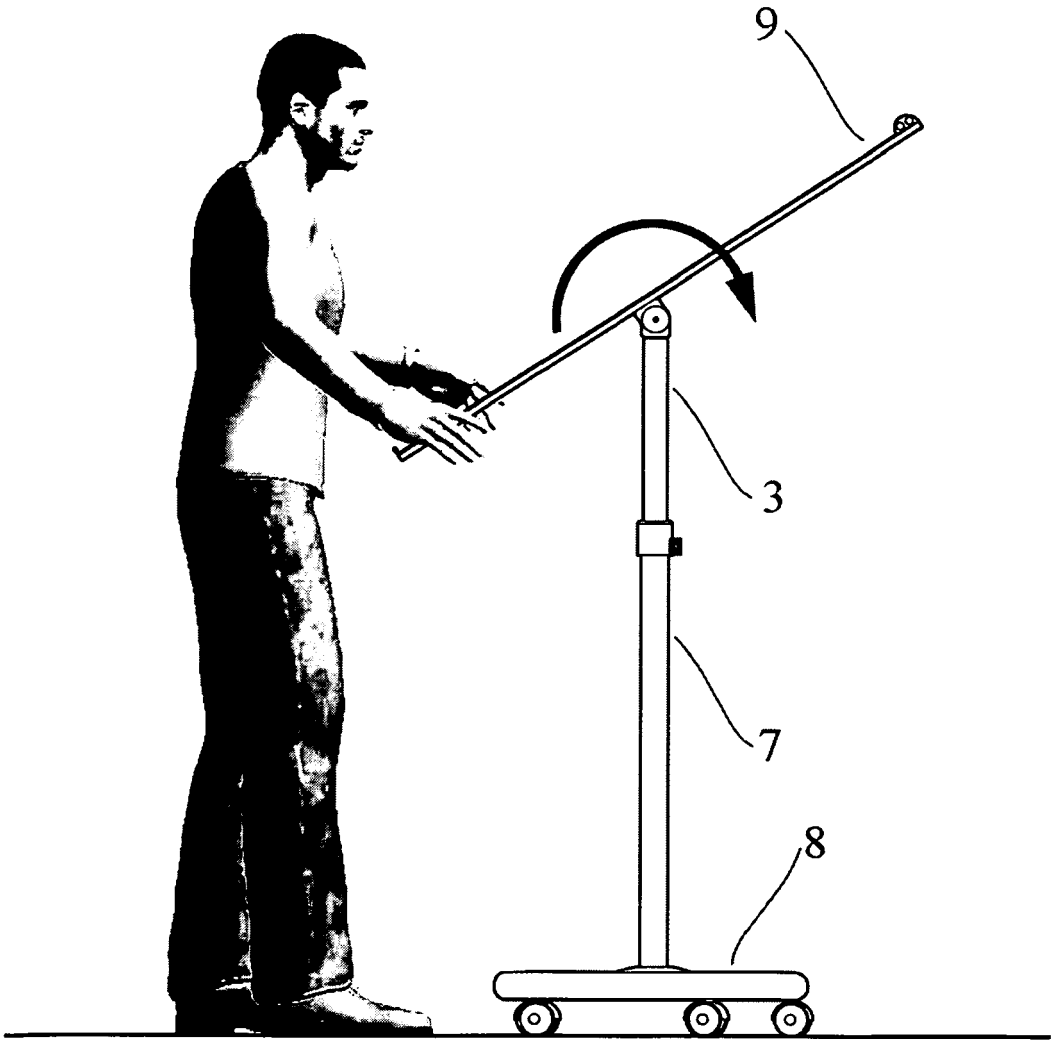

Fig. 7

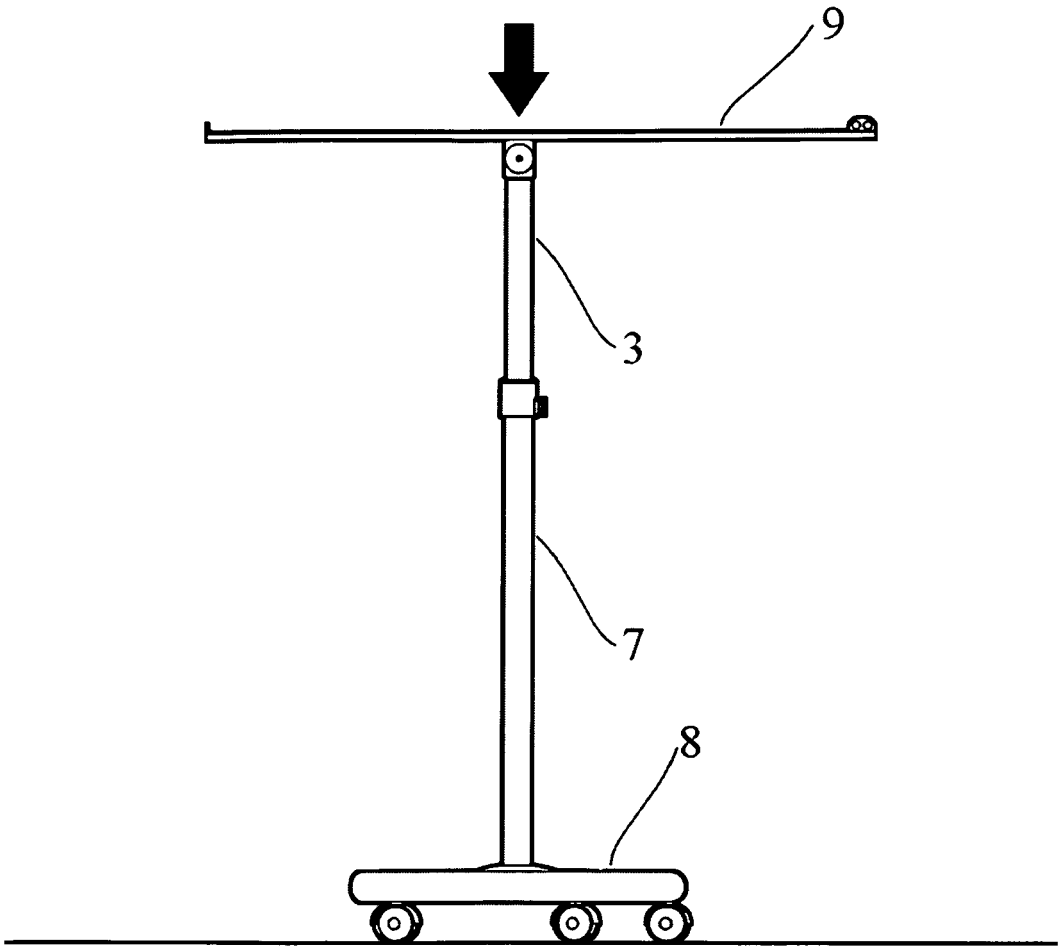

Fig.8

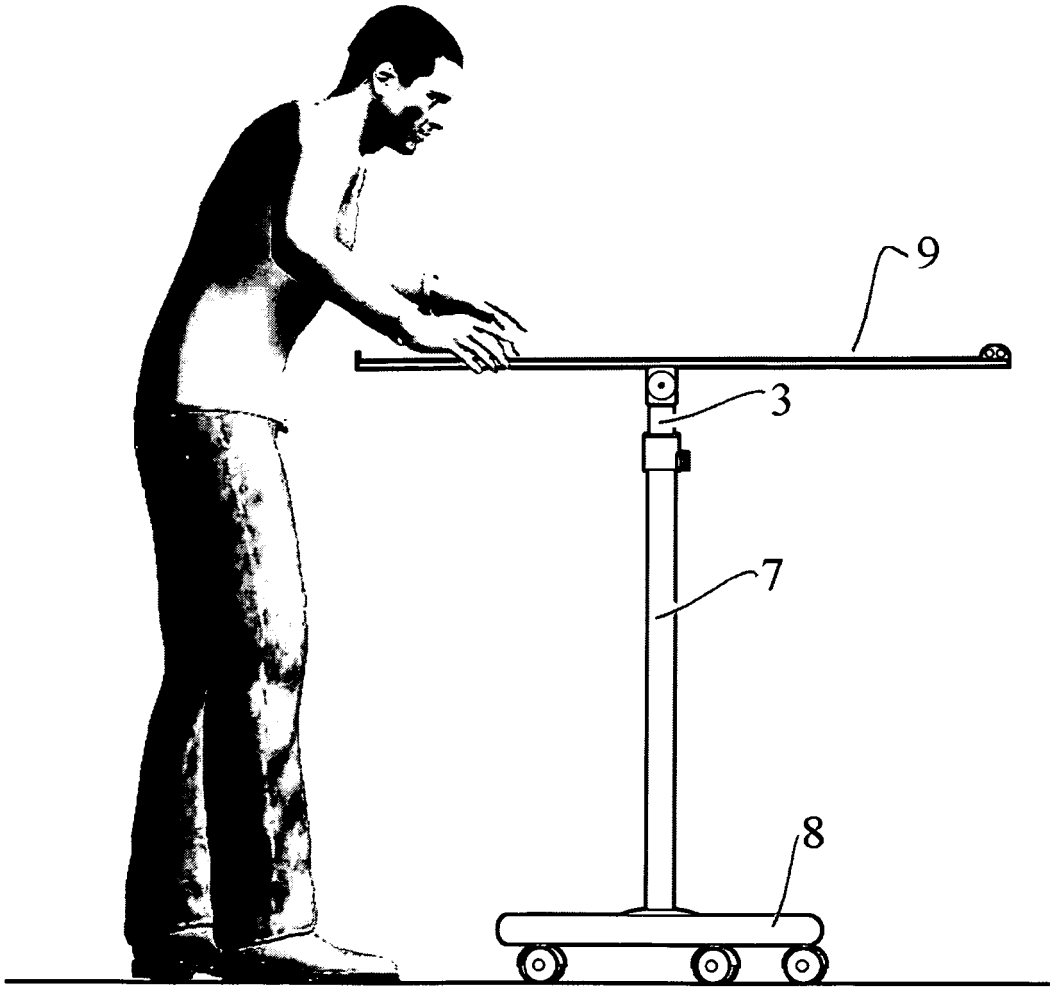

Fig.9

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EUROPEAN SEARCH REPORT

Application Number
EP 12 38 2075

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 4 165 856 A (WISEHEART KEITH H [US]) 28 August 1979 (1979-08-28) * column 2, line 42 - line 50; figures 1-2 * * column 3, line 31 - line 56 *	1,4-6	INV. A47B13/02 A47B97/04 A47B3/08
X	US 6 694 891 B1 (LAI HSIU-CHEN [TW]) 24 February 2004 (2004-02-24) * column 1, line 49 - column 2, line 55; figures 1-7 *	1,4,5	
X	FR 2 822 103 A1 (PENET PIERRE MARIE MARCEL [FR]) 20 September 2002 (2002-09-20) * page 7, line 14 - page 8, line 2; figures 1,2,5 *	1-6	
X	US 1 806 600 A (PAUL N. ELDERKIN) 26 May 1931 (1931-05-26) * sentence 45 - sentence 89; figures 1-4 *	1-6	

TECHNICAL FIELDS SEARCHED (IPC)

A47B
A47F
F16B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	2 October 2012	Vehrer, Zsolt

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 12 38 2075

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02-10-2012

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