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(54) **INCLINATION ADJUSTING DEVICE FOR A DESK**

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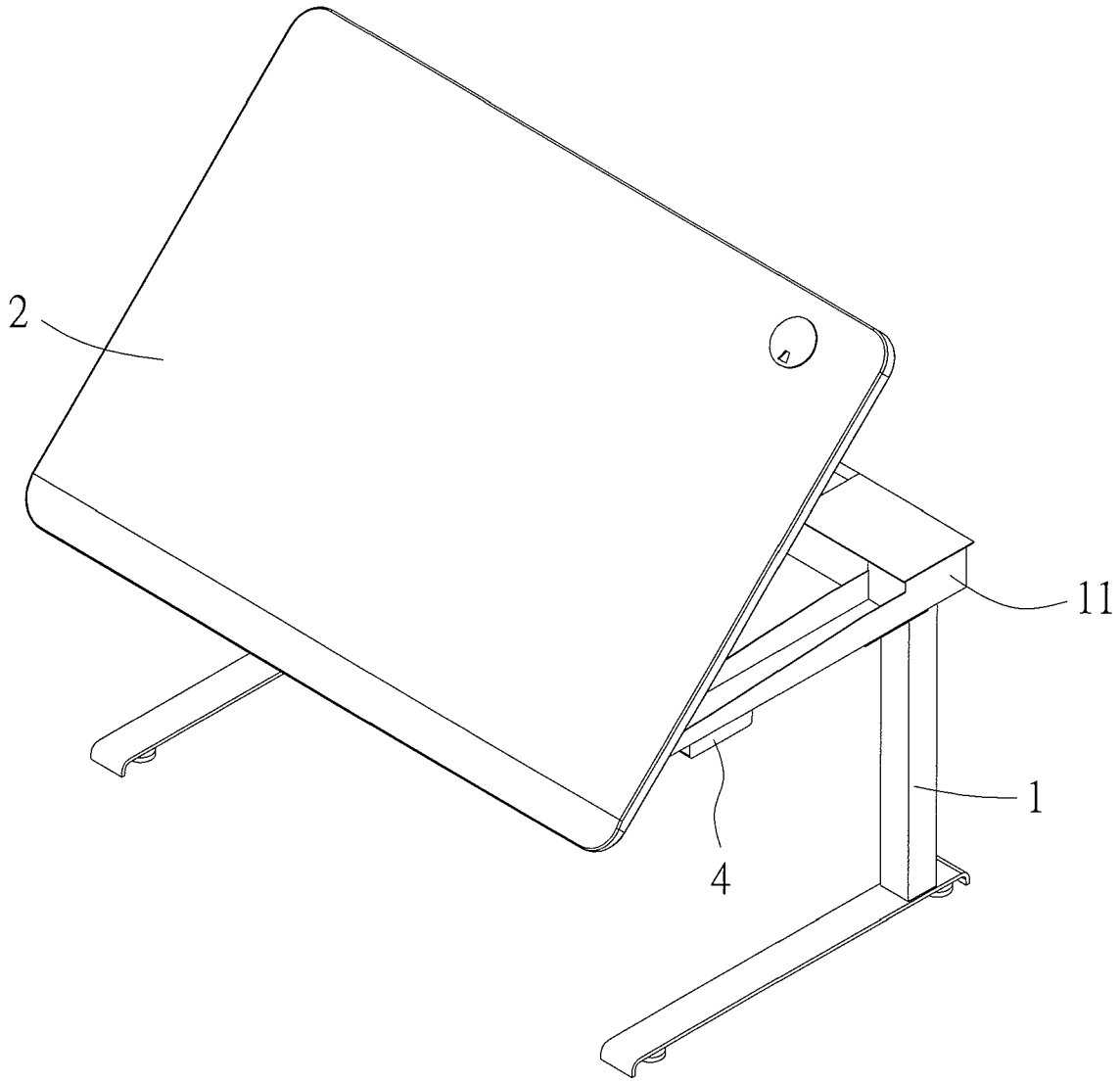
(57) **ABSTRACT**

An inclination adjusting device for a desk contains: two support feet, a top board, and at least two movable cylinders. The two support feet are formed in an inverted U shape, and between the two support feet is defined a holding portion. The top board has a larger area and is fixed above the two support feet connected with the holding portion. The at least two movable cylinders are defined between a bottom of the top board and the holding portion, and the at least two movable cylinders are rotatably connected with the bottom of the top board and the holding portion and tilt.



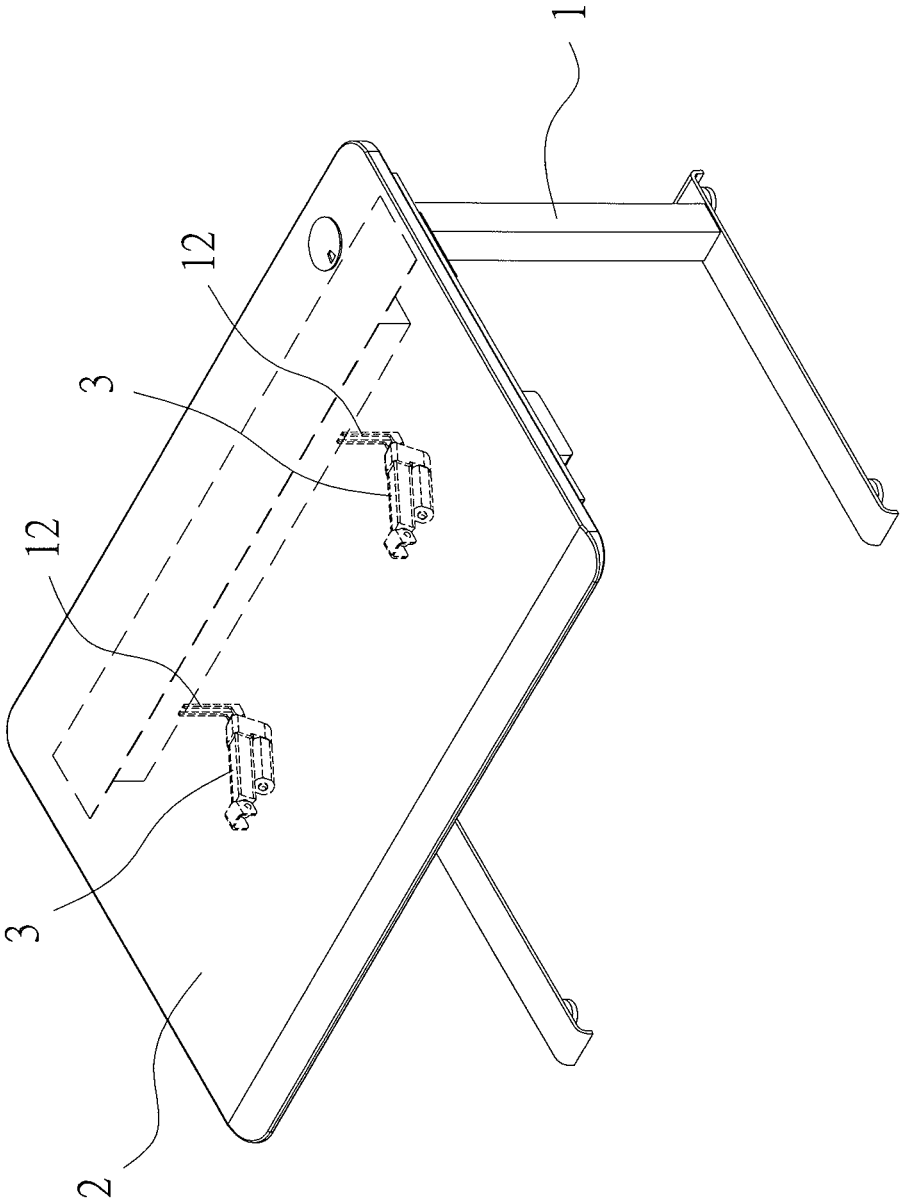


FIG. 1

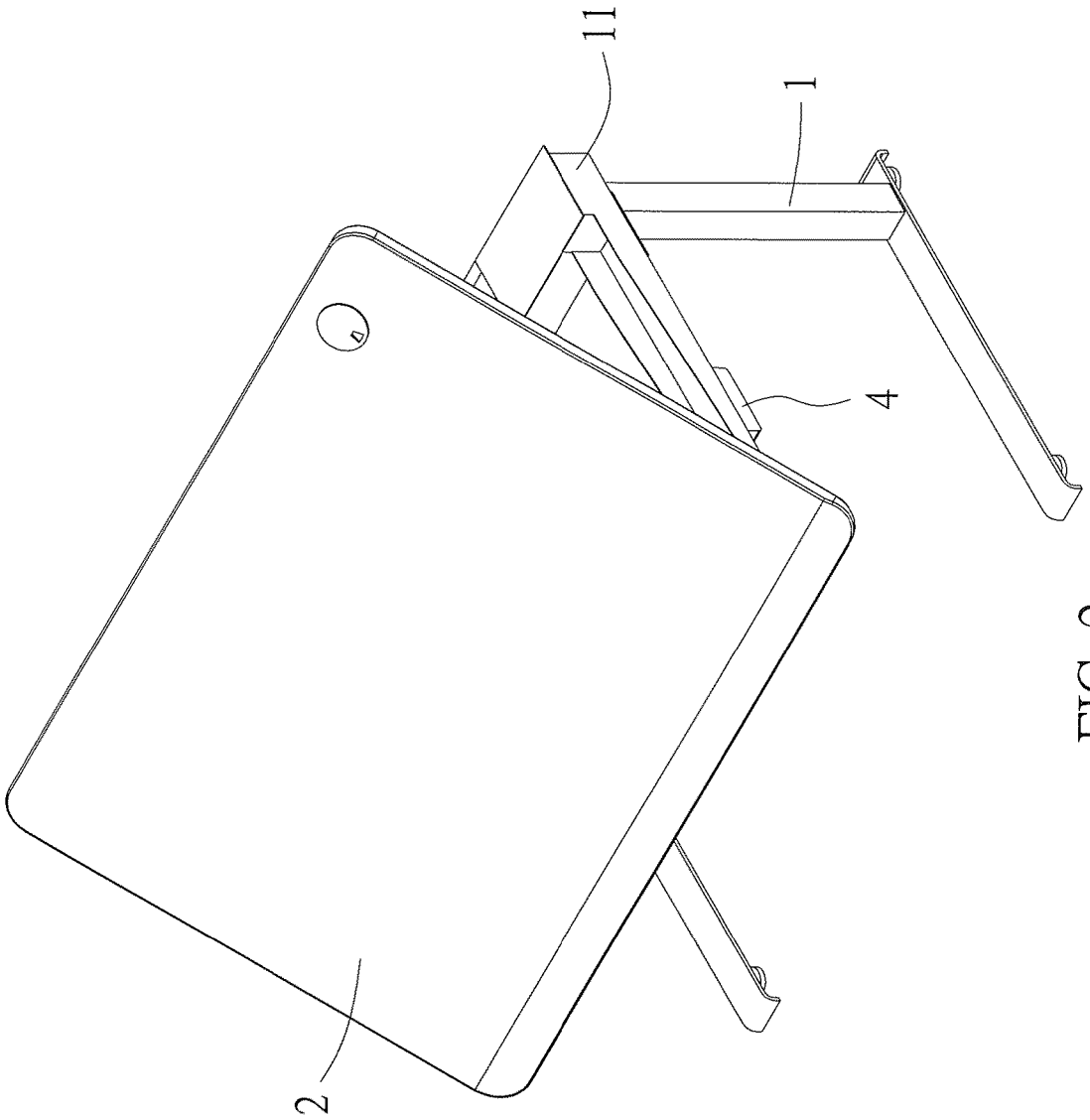


FIG. 2

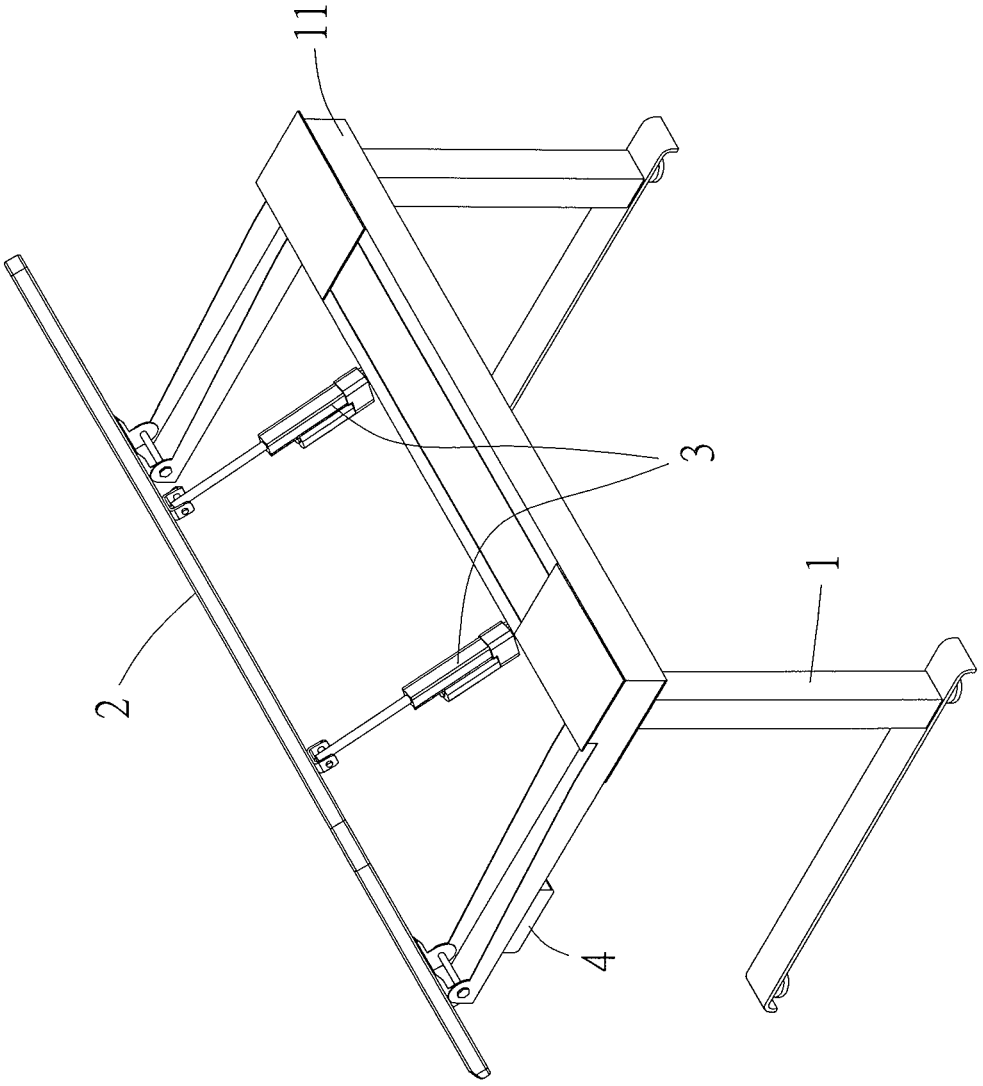


FIG. 3

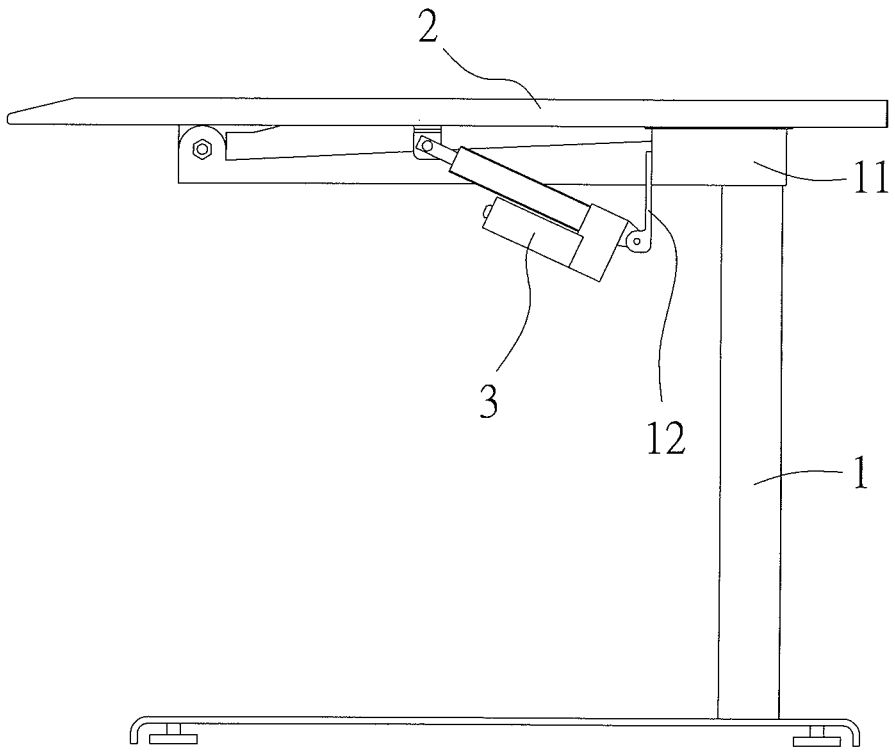


FIG. 4

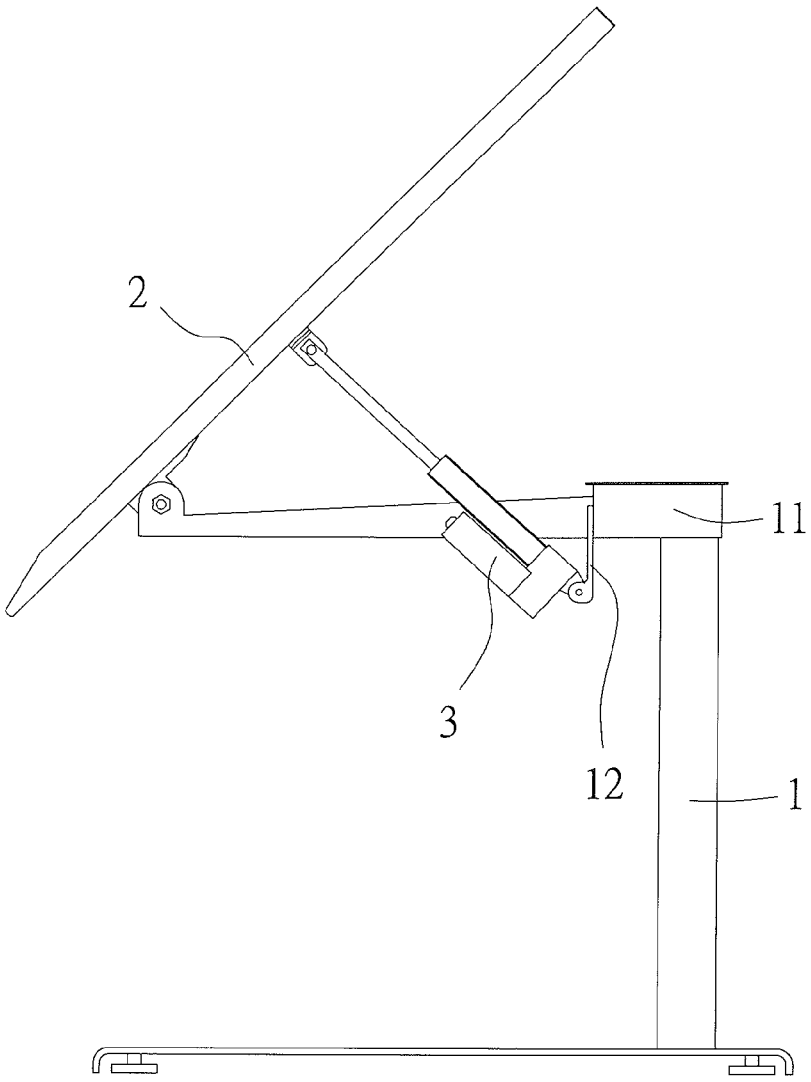


FIG. 5

INCLINATION ADJUSTING DEVICE FOR A DESK

[0001] This application is a Continuation-in-Part of application Ser. No. 15/092,874, filed Apr. 7, 2016.

BACKGROUND OF THE INVENTION

Field of the Invention

[0002] The present invention relates to an inclination adjusting device for a desk, and more particularly to the inclination adjusting device which has a top board of a large size and mates with at least two movable cylinders, hence the top board is adjusted to tilt at an angle stably.

Description of the Prior Art

[0003] An inclination adjusting device for a desk is disclosed in TW Publication No. M512962 and contains a support foot having a holding portion, a top board rotatably connected with a front end of the holding portion, at least one movable cylinder, wherein a first end of the at least one movable cylinder rotatably is connected with a bottom of the holding portion, and a second end of the at least one movable cylinder is rotatably coupled with a predetermined position of a bottom of the top board. The inclination adjusting device adjusts the top board toward a tilted angle based on using requirements, but the top board is too long to be supported by the support foot securely, thus causing vibration to the top board and the desk.

[0004] The present invention has arisen to mitigate and/or obviate the afore-described disadvantages.

SUMMARY OF THE INVENTION

[0005] The primary objective of the present invention is to provide an inclination adjusting device for a desk which adjusts a top board of a large size to a tilted angle stably by using at least two movable cylinders.

[0006] To obtain above-mentioned objectives an inclination adjusting device for a desk provided by the present invention contains: two support feet, a top board, and at least two movable cylinders.

[0007] The two support feet are formed in an inverted U shape, and between the two support feet is defined a holding portion. The top board has a larger area and is fixed above the two support feet connected with the holding portion. The at least two movable cylinders are defined between a bottom of the top board and the holding portion, and the at least two movable cylinders are rotatably connected with the bottom of the top board and the holding portion and tilt.

[0008] The holding portion has an adjustment protrusion arranged on a peripheral side of a bottom thereof and is electrically connected with each of the two movable cylinders so that each movable cylinder is driven to move.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. **1** is a perspective view showing the assembly of an inclination adjusting device for a desk according to a preferred embodiment of the present invention.

[0010] FIG. **2** is a perspective view showing the operation of the inclination adjusting device for the desk according to the preferred embodiment of the present invention.

[0011] FIG. **3** is another perspective view showing the operation of the inclination adjusting device for the desk according to the preferred embodiment of the present invention.

[0012] FIG. **4** is a side plane view showing the assembly of the inclination adjusting device for the desk according to the preferred embodiment of the present invention.

[0013] FIG. **5** is a side plane view showing the operation of the inclination adjusting device for the desk according to the preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0014] The present invention will be clearer from the following description when viewed together with the accompanying drawings, which show, for purpose of illustrations only, a preferred embodiment in accordance with the present invention.

[0015] With reference to FIGS. **1** to **3**, an inclination adjusting device for a desk according to a preferred embodiment of the present invention comprises: two support feet **1**, a top board **2**, at least two movable cylinders **3**.

[0016] Each of the two support feet **1** includes a holding portion **11** formed in an inverted U shape.

[0017] The top board **2** has a larger area and is fixed on the holding portion **11**, wherein each of two sides of a bottom of the top board **2** is rotatably connected with two ends of the holding portion **11** of each support foot **1**.

[0018] Each of the at least two movable cylinders **3** has a first end rotatably connected with the holding portion **11**, and each movable cylinder **3** has a second end rotatably coupled at a predetermined position of the bottom of the top board **2**. A high difference of the holding portion **11** forms between the bottom of the top board **2** and a bottom of the holding portion **11** so that each movable cylinder **3** is obliquely fixed.

[0019] The holding portion **11** has an adjustment protrusion **4** arranged on a peripheral side of the bottom thereof and is electrically connected with each movable cylinder **3** so that each movable cylinder **3** is driven to move.

[0020] Between each movable cylinder **3** and the holding portion **11** is defined an extension **12**.

[0021] As shown in FIGS. **4** and **5**, in operation, a user adjusts a using angle based on using requirements so as to start the adjustment protrusion **4** to control a movement of each movable cylinder **3** (in this embodiment, two movable cylinders are provided). When the two movable cylinders **3** extend forward, an tilted angle acts because of a rotatable connection of their front and rear ends and a high difference, and the two movable cylinders **3** are rotatably coupled with one end of the bottom of the holding portion **11** so as to rotate upwardly along the tilted angle, and an upper operation urges an upper movement of the top board **2**, and the top board **2** tilts at an angle by using a center of two end points of a rotatable connection of the holding portion **11**. Thereafter, a moving length of each movable cylinder **3** depends on the tilted angle of the top board **2**, hence the user adjusts the angle of the desk stably. As putting the top board **2** flatly, the adjustment protrusion **4** is started once more to control each movable cylinder **3** to move with the adjustment protrusion **4**, and each movable cylinder **3** retracts inwardly to drive the top board **2** to move downwardly along the center until the top board **2** is located on a flat plane. The top board **2** is comprised of a flat sheet or at least one flat sheet.

[0022] Thereby, the top board of the desk is adjusted easily, stably, and safely.

[0023] While various embodiments in accordance with the present invention have been shown and described, it is clear to those skilled in the art that further embodiments may be made without departing from the scope of the present invention.

1. An inclination adjusting device for a desk comprising:

two support feet formed in an inverted U shape and arranged in an equidistant distance, with each support foot including an upper cantilever beam including a free end and a connected end connected to an upright, with between the connected ends of the two support feet being defined a holding portion;

a top board having a larger area and being fixed above the two support feet, with the top board rotatably coupled to the free ends of the two support feet spaced from the holding portion, with the free and connected ends of the two support feet located spaced inwardly of the top board;

at least two movable cylinders defined between a bottom of the top board and the holding portion, wherein the at least two movable cylinders are rotatably connected with the bottom of the top board intermediate the free ends of the two support feet and the holding portion; and

extensions extending from the holding portion away from the upper cantilever beams, spaced from and intermediate the two support feet, and spaced inwardly of the top board, with the at least two movable cylinders rotatably connected with the extensions spaced from the holding portion and the upper cantilever beams, with the top board movable by the at least two movable cylinders between a flat position abutting with the holding portion and a tilt position spaced from the holding portion.

2. The inclination adjusting device for the desk as claimed in claim **1**, wherein the holding portion has an adjustment protrusion electrically connected with each movable cylinder.

3. (canceled)

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