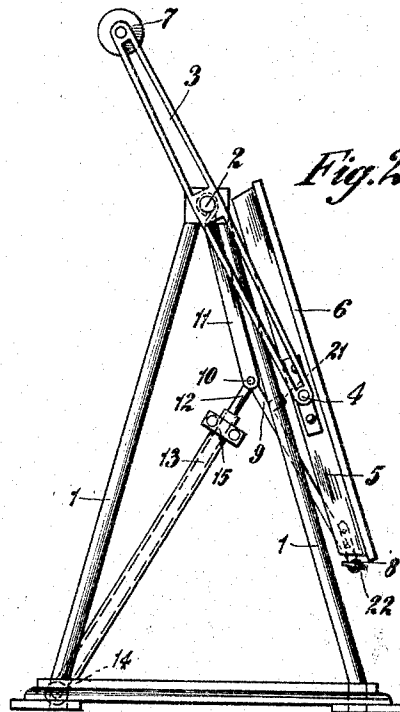
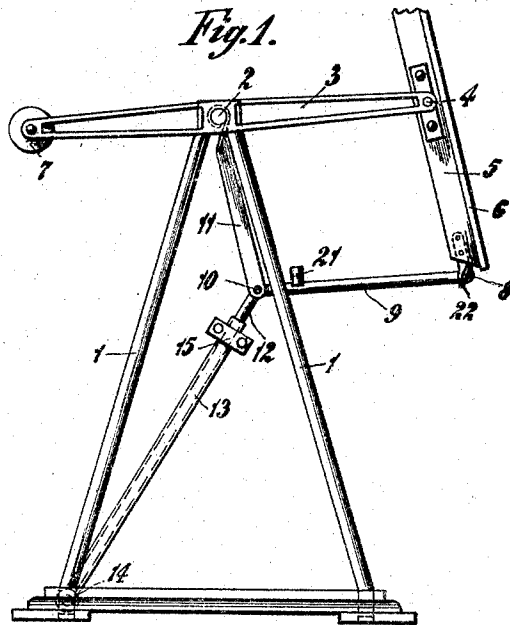


E. R. KOECHLIN.
DRAWING TABLE.
APPLICATION FILED FEB. 4, 1918.

1,303,683.

Patented May 13, 1919.

2 SHEETS—SHEET 1.



Inventor:
Emile Raymond Koechlin
per H. W. Plucker
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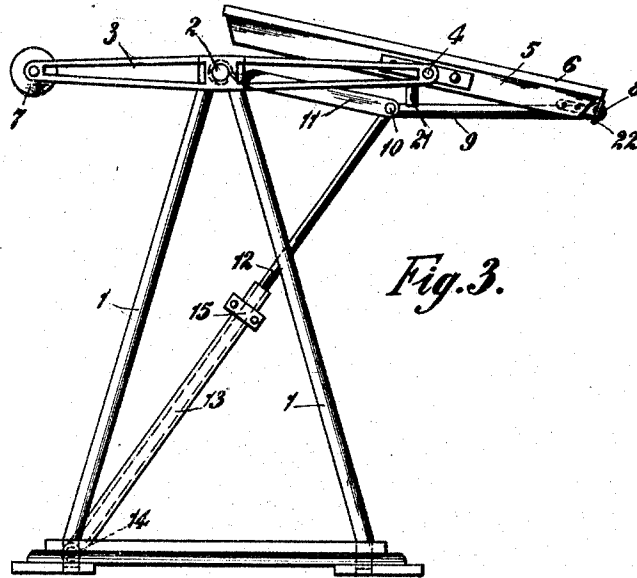


Fig. 3.

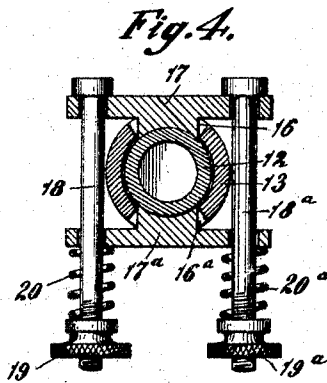


Fig. 4.

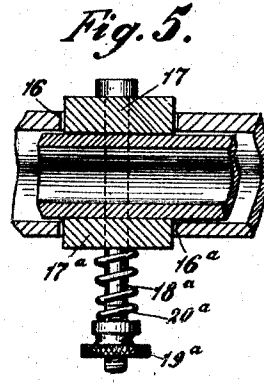


Fig. 5.

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UNITED STATES PATENT OFFICE.

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DRAWING-TABLE.

1,303,683.

Specification of Letters Patent.

Patented May 13, 1919.

Application filed February 4, 1918. Serial No. 215,344.

To all whom it may concern:

Be it known that I, EMILE RAYMOND KOECHLIN, residing at Amsterdam, the Netherlands, have invented certain new and useful Improvements in Drawing-Tables, of which the following is a specification.

The drawing table according to this invention is characterized by the fact that the drawing board is connected with two adjacent joints of a parallelogram guide (or of a plurality of such guides) the third joint of which forms a fixed fulcrum and is connected with the drawing board by a link which extends beyond said fulcrum and is provided with a counterweight for counterbalancing the drawing board, whereas the fourth joint of the guide is hinged on a member whose movements are counteracted by a preferably adjustable friction device, in such a manner that the drawing board is steady in any position of the guide.

An embodiment of the invention is illustrated in side elevation in three different positions in Figures 1, 2 and 3 of the annexed drawings, Figs. 4 and 5 showing two cross sections of a friction device adapted to hold the guide in each position.

The drawing table shown in Figs. 1, 2 and 3 comprises a support 1 at the top of which is provided a lever 3 formed as a beam and pivotally mounted on a shaft 2. The end 4 of this lever is connected with the clamp 5 of the drawing board 6, the other end being connected with a counterweight 7. The clamp 5 is further connected at a point 8 with a link 9, which in turn is connected by means of a hinged joint 10 and link 11 with the shaft 2, in such a manner that the points 2, 4, 8 and 10 form a parallelogram.

The joint 10 of the parallelogram guide 2, 4, 8, 10 is connected with a rod 12 slidable in a tube 13 which is pivotally connected at a point 14 with the support 1 so that it is rotatable in a vertical plane. The sliding motion of the rod 12 within the tube 13 is counteracted in both directions by a friction device 15, shown in detail in Figs. 4 and 5. The outer tube 13 is provided with two diametrically located openings 16, 16^a through which pass brake shoes 17, 17^a respectively adapted to exert a pressure upon the rod (or tube) 12. The brake shoes 17, 17^a may be pressed on the rod 12 by means of bolts 18, 18^a and nuts 19, 19^a; preferably helical springs 20, 20^a are provided around

the bolts 18, 18^a between the nuts 19, 19^a and the brake shoe 17^a, whereby the pressure exerted on the rod 12 by the brake shoes may more easily be adjusted.

If the nuts 19, 19^a are properly tightened, the joint 10 can not be displaced unless the draftsman exerts upon the drawing board a pressure which is considerably greater than that which occurs under normal circumstances. On the other hand a slight pressure will cause the drawing board 6 to be displaced parallel with itself; owing to the counterweight 7 and the inevitable friction in the joints of the parallelogram guide the drawing board will be sufficiently steady in each of its positions.

If the draftsman desires to change the angular position of the drawing board, he only has to firmly take hold of the board and exert on same a pressure in the required direction, whereby the rod 12 slides through the desired distance within the tube 13 against the frictional resistance of the friction device 15; consequently the joint 10 moves along a circle the center of which is in 2, and the angular position of the board is changed.

It follows from the above that the draftsman may obtain any desired position of the board without having to take his hands off the board and without having to tighten or to loosen nuts or the like, besides, the drawing board is steady in any of its positions.

In order to prevent the four joints of the parallelogram from moving into one straight line, which would mean a center position of the link mechanism, preferably a positive stop 21 is provided on the link 9, the said stop preventing any further movement of the parallelogram guide toward the center position shortly before said position is reached, see Fig. 3.

As the steadiness of the board might in the long run be interfered with by wear and tear in the bearings, a wing nut 22 may be provided at one of the angle joints of the parallelogram guide, said nut, when tightened, firmly coupling the links constituting the parallelogram; such a nut, however, is not essential.

What I claim as my invention is:

1. In a drawing table, a drawing board, an articulated parallelogram having two adjacent joints connected to said board, a fixed pivot forming the third joint and a movable pivot forming the fourth joint of the par-

allelógram a counterweight connected to the side of the parallelogram uniting said board and fixed pivot, a sliding member carrying said movable pivot, and a friction device 5 controlling the movements of said member.

2. In a drawing table, a drawing board, an articulated parallelogram having two adjacent joints connected to said board, a fixed pivot forming the third joint and a movable 10 pivot forming the fourth joint of the parallelogram, the side of the parallelogram uniting said board and fixed pivot comprising a lever extending beyond said fixed pivot, a counterweight connected to the part 15 of said lever remote from said board, a sliding member carrying said movable pivot, and an adjustable friction device controlling the movements of said member.

3. In a drawing table, a drawing board,

an articulated parallelogram having two 20 adjacent joints connected to said board, a fixed pivot forming the third joint and a movable pivot forming the fourth joint of the parallelogram, a counterweight connected to the side of the parallelogram 25 uniting said board and fixed pivot, a tubular guide member mounted for swinging movement in a vertical plane, a rod slidably mounted in said tube, said rod carrying said movable pivot, and a spring friction device controlling the movements of 30 said rod in said tube.

In testimony whereof I have affixed my signature in presence of two witnesses.

EMILE RAYMOND KOECHLIN.

Witnesses:

D. KLEIJN,

M. ALVARADO.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."