

UNITED STATES PATENT OFFICE.

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DRAFTING APPLIANCE.

1,064,878.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH D. C. YOUNG, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Drafting Appliances; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in drafting appliances, and more particularly to perspective delineators,—one object of the invention being to provide simple and efficient devices whereby the operator can, with the use of a T-square and a plan of the proposed structure of which it is desired to make a perspective view, accurately determine the position of the perpendicular lines of the perspective.

A further object is to provide simple means for determining the positions and angles of the transverse lines of the perspective, with relation to the vanishing points.

A further object is to construct the appliances in such manner that they can be made to lie compactly when not in use.

With these and other objects in view, the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view illustrating the application of my improvements; Fig. 2 is a plan view; Fig. 3 is a sectional view, and Fig. 4 is a sectional view illustrating certain modifications.

1 represents a drawing board, at respective sides of which, bars 2, 3, are located and adjustably supported by means of pairs of rods 4, 4, which have sliding movement through notches in cleats 5 secured to the bottom of the board. The bars 2, 3, can be held at any desired adjustment with respect to the side edges of the board, by means of clamping screws 6. Each bar 2—3 is provided with two pins 7—7 with which the pivoted wings 8—8 of a blade 9 cooperate for the purpose of determining the angles and positions of the transverse lines of the perspective with respect to the vanishing points,—said devices constituting a centrolinead. In order that the proper angle between wings 8—8 can be accurately determined without necessity for making calcu-

lations to accomplish such result, I provide graduations 9 so that the device can be immediately set for use. In the drawing the device is set for a distance of five feet. The distance between the pins 7—7 is always constant and may be considered to be twelve inches. This distance represents the long chord in the formula upon which the calculations are usually made, for the purpose of arriving at the proper angles for the transverse converging lines of the perspective. When the wings 8—8 shall have been properly adjusted, they will be secured in position by means of a suitable clamping screw 10.

Slides 11—11 are mounted at the side edges of the board 1, and are connected by a transverse bar 12 disposed under said board,—clamping screws 13 being employed for connecting said bar to the slides and for securing the latter in any position to which they may be adjusted. Located over the board 1 and disposed between the slides, is a frame 14 hinged at one edge to said slides,—the hinge connectings being such that the frame can be secured by means of thumb nuts 15, in any position to which it may be moved. The side bars of the frame 14 are provided in their inner faces with grooves for the reception of a comparatively thin vertically adjustable board 16 to receive a drawing representing a plan of the structure to be reproduced in perspective on a sheet mounted on the board 1.

A standard 17 is secured to the upper bar of the frame 14, and is provided near its upper end with a pin 18 which represents the sight point. In order that this sight point can be readily adjusted to different positions as circumstances may require, the standard 17 is provided with an elongated slot 19 through which a clamping screw 20 passes and enters the upper bar of the frame.

An upright straight-edge 21 is held in contact with the sheet of drawing on the board 16, by means of flexible strips 22, attached to the latter and this straight-edge is maintained in engagement with the sight pin 18 by means of a weight 24 connected with the upper end of the straight-edge by means of a flexible device, such as a cord 25. A pin 26 projects from the lower end of the straight-edge 21 and has movable connection with the blade of a T-square 27. Such movable connection may be effected, by means of a grooved strip on the blade 27, or

a cross-bar 28 may be adjustably attached to said blade and provided with a socket 29 to receive the pin 26, as shown in Fig. 4. Instead of providing a weighted cord construction for maintaining the straight-edge 21 in proper relation to the pin 18, as above described, the straight edge 21 may be provided with an elongated slot 28^a for the passage of said pin 18, as shown in Fig. 4.

In the operation of the appliances for locating the perpendicular lines of the perspective with sufficient accuracy for all practical purposes, the frame 14 will be so adjusted that the board 16 will be disposed in a vertical position, the straight edge 21 being caused to pass vertically across the drawing of the plan of the structure, on said vertical board, and the pin at the lower end of said straight edge being caused to engage the blade of the T-square 27.

It will be understood that with the construction above described, the operator can, by moving the T-square 27 over the board 1, cause a movement of the straight-edge 21 to various points of the plan on the board 16, and in this way the perpendicular lines to be made on the sheet on the board 1, with the use of the T-square, may be determined quickly and with sufficient accuracy for practical purposes, by the position of the vertical straight-edge on the plan view of the structure, supported on the vertical board 16.

With the use of my improvements, the plan view of the structure can be located in close proximity to the work while making a perspective view of the same structure, and in determining the position of the perpendicular lines of the perspective, the operator need only to watch the straight edge 21 on the plan when he moves the T-square,—the position of the straight edge on the plan controlling the correct position of the T-square with sufficient accuracy for practical purposes. When not in use, the frame 14 with the board 16 and standard 17 can be folded compactly over the board 1 and the bars—2—3 can be moved closely against the side edges of the board 1.

Various slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope and hence I do not wish to restrict myself to the precise details herein set forth.

Having fully described my invention what I claim as new and desire to secure by Letters-Patent, is:—

1. Perspective delineating appliances comprising a drawing board, centro-linead devices associated therewith, a vertical support for a plan drawing, a T-square movable on the drawing board and an upright straight edge movable over the plan drawing, said straight edge cooperating with and movable by said T-square.

2. In perspective delineating appliances, the combination with a drawing board and centro-linead devices associated therewith, of an upright support for a plan drawing, a standard adjustably secured to said upright support and provided with a pin representing a sight point, a T-square movable over the drawing board, and a straight edge movable over the plan drawing on said upright support, said straight edge cooperating with the sight pin on the standard, and also cooperating with and movable by said T-square.

3. In perspective delineating appliances, the combination with a drawing board, of an upright support for a plan drawing, devices adjustably connecting said upright support with the drawing board, a sight pin carried by said upright support, a T-square movable over the drawing board, and a straight edge movable over the plan drawing on the upright support, said straight edge cooperating with the sight pin and with the T-square and movable by the latter.

4. In perspective delineating appliances, the combination with a drawing board, and slides movable at side edges thereof, of an upright support for a plan drawing, attached to said slides, a standard adjustably secured to and projecting above said upright support, said standard carrying a sight pin, a T-square movable over the drawing board, an upright straight edge cooperating with the sight pin and provided at its lower end with a pin cooperating with the T-square, whereby movement of the T-square over the drawing board will cause movement of the straight edge over the plan drawing on the upright support.

5. In perspective delineating appliances, the combination with a drawing board, and a T-square movable over the same, of an upright support for a plan drawing disposed above the drawing board, a sight pin carried by the upright support, an upright straight-edge passing over the front of the upright support, said straight edge provided at its lower end with a pin cooperating with the T-square, and flexible strips attached to said vertical support for retaining the upright straight-edge close to the plan drawing on the upright support.

6. In perspective delineating appliances, the combination with a drawing board, and slides at side edges thereof, of a frame hinged to said slides and adapted to be disposed in an upright position over said board, a board supported by said frame for the reception of a plan drawing, a sight pin carried by said frame, an upright straight edge extending past the front of said frame and board therein and cooperating with the sight pin, and a T-square movable over the drawing board and cooperating with the upright straight edge to move the latter.

7. In perspective delineating appliances,
the combination with a drawing board, and
a T-square movable over the same, of an
upright support for a plan drawing, a
5 standard projecting upwardly from said
upright support and provided with a sight
pin, an upright straight edge passing over
the front of the upright support and co-
operating at its lower end with said T-
10 square, the upper portion of said straight
edge having sliding contact with the sight

pin, and a weighted cord connected with
said straight edge for maintaining contact
of the latter with the sight pin.

In testimony whereof, I have signed this 15
specification in the presence of two sub-
scribing witnesses.

JOSEPH D. C. YOUNG.

Witnesses:

E. T. STEVENSON,
L. B. HILLS.

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