T. BERGNER.

Drawing-Board.

No. 195,915. Patented Oct. 9, 1877.

*Fig. 1.*

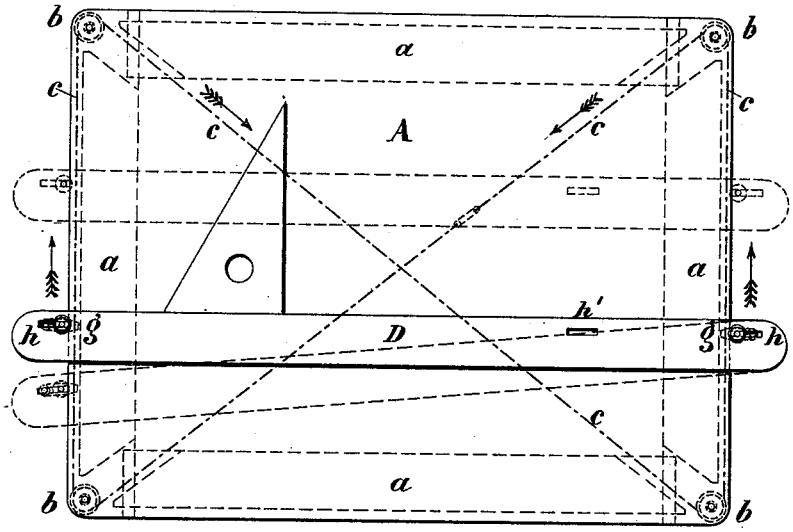



*Fig. 2.*

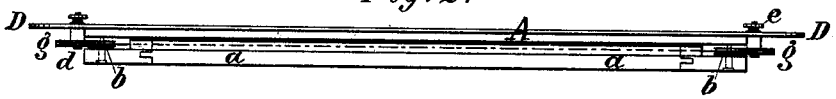



*Fig. 3.*

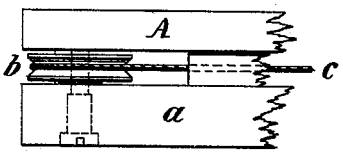



*Fig. 5.*

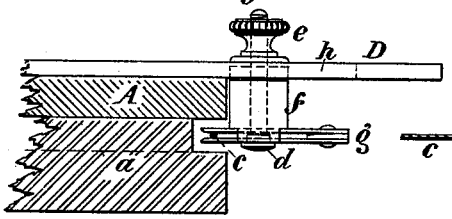



*Fig. 6.*

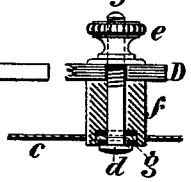



*Fig. 4.*

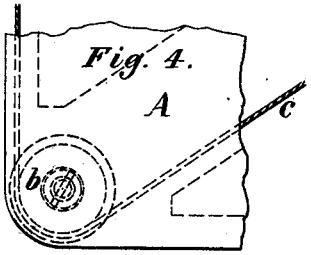
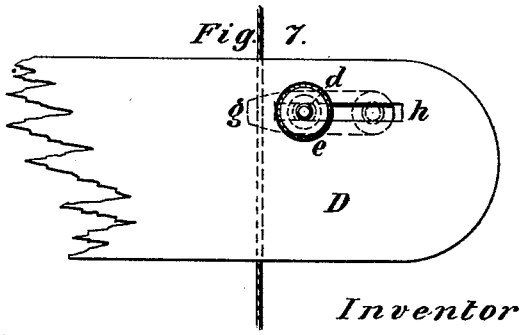



*Fig. 7.*




Witnesses:

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# UNITED STATES PATENT OFFICE.

THEODORE BERGNER, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN DRAWING-BOARDS.

Specification forming part of Letters Patent No. **195,915**, dated October 9, 1877; application filed April 16, 1877.

*To all whom it may concern:*

Be it known that I, THEODORE BERGNER, of the city of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Drawing-Boards, which improvement is fully set forth in the following specification and accompanying drawing, in which—

Figure 1 is a plan of my improved drawing-board. Fig. 2 is a side elevation of the same. Figs. 3 and 4 are detached views of one of the four cord-pulleys, showing their arrangement in the corners of the board. Figs. 5, 6, and 7 are detached views showing the arrangement of the ruler and its fastenings to the cord.

The object of my invention is to provide a drawing-board with a more perfect device than the ordinary T-square for drawing parallel lines with absolute accuracy, and to make the action of this parallel ruling device independent of the edges of the drawing-board, upon the degree of truth of which the function of the T-square depends.

I accomplish this object in the following manner: The drawing-board, which I make, by preference, of a thin slab of wood, A, secured upon a rectangular open frame, *a*, is in each corner provided with a small grooved pulley, *b b*. An endless cord, *c*, is stretched over these four grooved pulleys, in the manner clearly shown in Fig. 1 of the drawing. By thus crossing this cord *c* underneath the slab A the two portions of the cord running parallel with two opposite edges of the board are made to move in the same direction; or, in other words, if the portion of the cord on the right-hand side of Fig. 1 be moved a distance of one inch upward in the direction of its arrow, the left-hand portion of the cord must move the same distance in the same upward direction, as indicated by its arrow. This equal amount and direction of movement of the cord *c* at opposite sides of the board I impart to the blade or parallel ruler D by securing the ends of the latter to the cord in the manner shown in Figs. 5, 6, and 7, and herein next fully described. The ruler D carries at each end, at its under side, by means of a screw, *d*, and milled nut *e*, the cylindrical block *f* and the elastic metal clamp *g*. The jaws of this clamp are open at the end next to the board, and, when tightened in this position, take a firm hold of the cord, in the manner clearly indicated at Fig. 5. This tightening of the clamps *g*, by means of screw *d* and nut *e*, secures at the same time the block *f* firmly to the ruler D. On the other hand, the release of clamp *g* also loosens the block *f* from the ruler and permits its outward withdrawal in the slot *h*, so as to liberate the cord entirely from the clamps *g g* when it is desired to detach the ruler from the board.

It will be seen from the foregoing that when the opposite ends of the ruler are secured to the cord a perfectly parallel motion is obtained, and that this accurate parallelism is in no wise dependent upon the condition of the board, which may be considerably out of truth without in the least impairing the functions of the cord *c* and ruler D. With this parallel movement of the ruler may be combined a certain amount of obliquity of its position upon the board, as indicated in dotted lines at D′, Fig. 1. Any required degree of inclination of the ruler in either direction can be given, and correctly maintained, by securing its two clamps, *g g*, to the cord *c* at such relative points as will produce the desired angular position of the ruling edge.

It will also be readily understood that the endless cord *c* may be drawn around the pulleys in a reverse direction, thus bringing its parallel portions in line with the two long sides of board A, so that the ruler D may be placed and moved at right angles to the direction shown. For this purpose a third slot, *h′*, is provided in the ruler, allowing the clamps *g g* to be brought to their proper relative position.

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

The ruler D, cord *c*, clamps *g g*, and pulleys *b b*, when combined with and arranged in relation to a drawing-board, in the manner and for the purpose set forth.

THEODORE BERGNER.

Witnesses:

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