(No Model.) 3 Sheets—Sheet 1.

D. D. HUYETT.

DRAWING BOARD.

No. 386,072. Patented July 10, 1888.

Fig. 1.

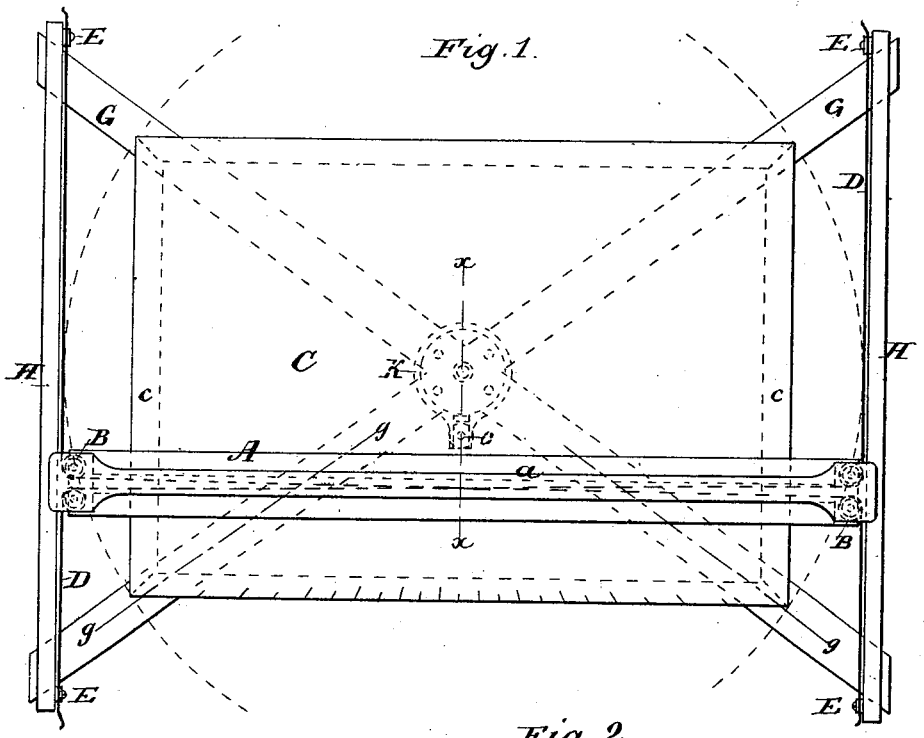


Fig. 2.

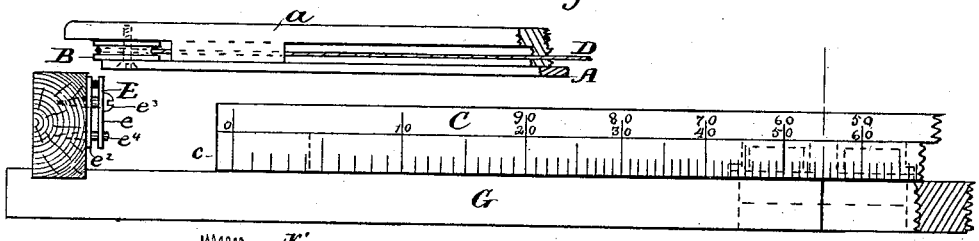


Fig. 3.

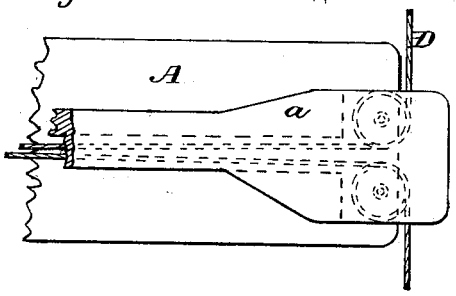
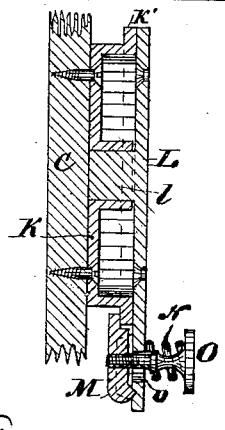


Fig. 4



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(No Model.) 3 Sheets—Sheet 2.

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Fig. 5.

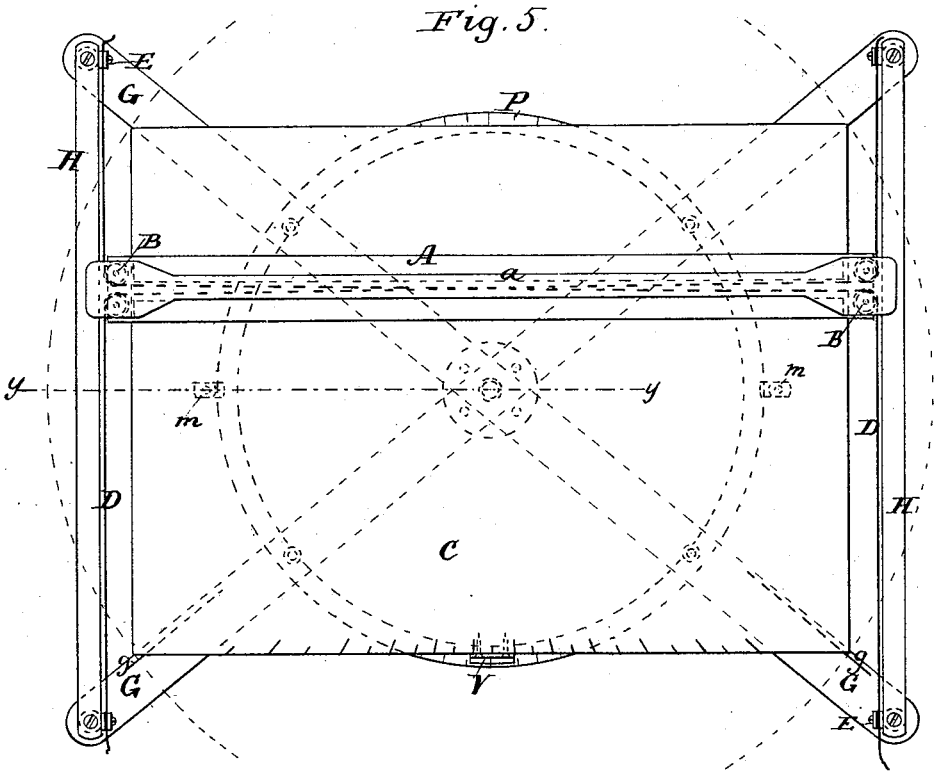

Fig. 6.

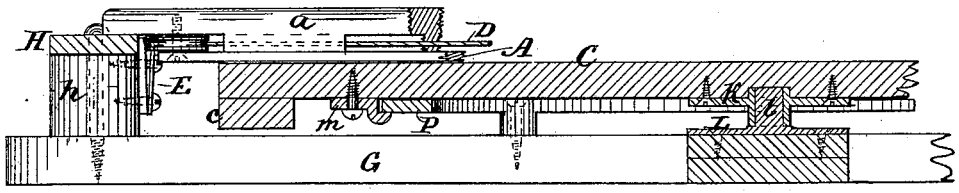

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Fig. 9

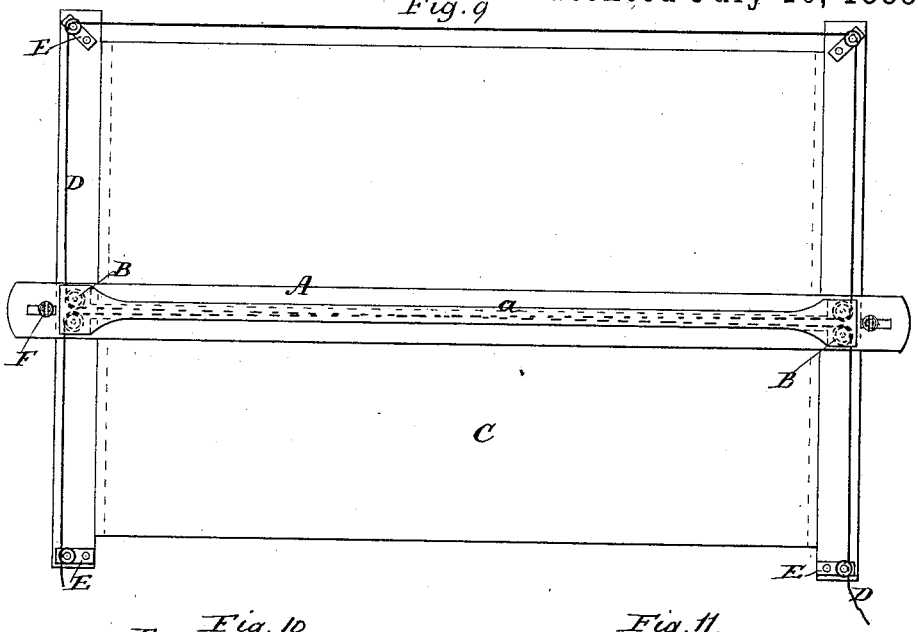


Fig. 10.

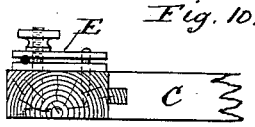


Fig. 11.

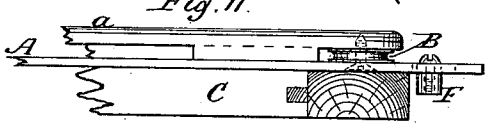


Fig. 7.

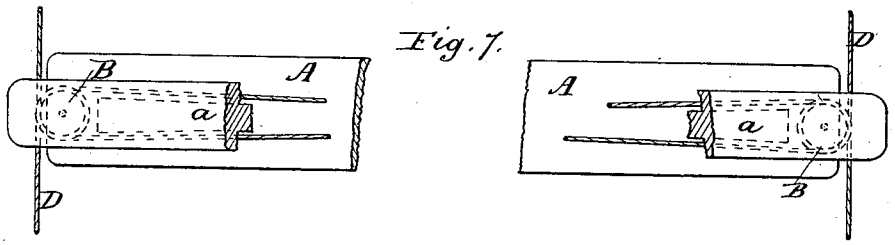
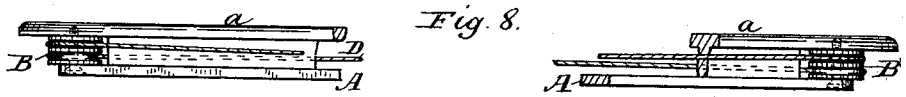


Fig. 8.



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UNITED STATES PATENT OFFICE.

DANIEL D. HUYETT, OF WAYNESBOROUGH, PENNSYLVANIA.

DRAWING-BOARD.

SPECIFICATION forming part of Letters Patent No. 386,072, dated July 10, 1888.

Application filed February 27, 1888. Serial No. 265,317. (No model.)

To all whom it may concern:

Be it known that I, DANIEL D. HUYETT, a citizen of the United States of America, residing at Waynesborough, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in Drawing-Boards, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in drawing-boards upon which a ruler is controlled partly by cords passing around pulleys pivoted to said board; and the objects of my improvements are, first, to permit the guiding of the ruler independently of the edge of the drawing-board; second, to permit the board to be pivotally connected to a frame carrying the ruler and the cord or cords by which the ruler is controlled. I attain these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 represents a plan view of a pivoted drawing-board, its supporting-frame, and a ruler constructed in accordance with my invention. Fig. 2 is a front elevation of a portion of the board, its supporting-frame, and ruler, the latter being raised up from its working position. Fig. 3 is a plan view, on an enlarged scale, of one end of the ruler. Fig. 4 is a sectional view on line *x x* of Fig. 1 of the pivot of the board and its clamping device. Fig. 5 represents in plan view a slightly-modified form of supporting-frame and clamp for the drawing-board with a protractor secured thereto. Fig. 6 is a vertical section on line *y y* of Fig. 5, showing a portion of the drawing-board and supporting-frame. Fig. 7 is a plan view of a modified form of ruler having a double-groove pulley or two pulleys on the same shaft at each end, in place of having said pulleys side by side, as in the other figures. Fig. 8 is a side elevation of the same ruler and pulleys. Fig. 9 is a plan view of the improved ruler attached to an ordinary drawing-board. Fig. 10 is a sectional view of one end of said board, showing one of the cord-clamps in elevation. Fig. 11 is a sectional view of one end of said board with a portion of the ruler in elevation.

In said drawings, A represents a ruler having mounted thereon near each extremity a pair of grooved pulleys, B, either side by side on independent pivot-pins or one above the other upon the same pin. The ruler rests upon the drawing-board C, and around each of the pulleys B passes a cord or cords, D, that extend lengthwise of the ruler and are protected by a handle bar, *a*, secured to the top of said ruler. The bar *a* is gained out or recessed on its under side to allow the cords to cross each other thereunder. The board C in Fig. 1 is pivotally connected to the frame G, which is preferably formed of two bars crossing each other in their center in the form of the letter **X**, to allow the draftsman free access to the sides of the board. This frame G is strengthened and stiffened by having the ends of its bars united by parallel bars H, that project above the plane of the face of the board C sufficiently to form guides for the pulleys B, and thus prevent the ruler A from having an unnecessary amount of end-play. It will be noticed that when the ruler is moved up and down upon the board all the pulleys will roll on the cords in the same direction, so that when they touch either one of the guide-bars H it offers no frictional resistance, but is simply a backing for the cord. The ends of said cord are secured to the parallel bars H by means of clamps E, consisting, preferably, of two small plates, *e e²*, between which the cord is received, and said plates are retained connected to the bars H by means of a screw, *e³*, and a steady-pin, *e⁴*, passing through said plates. A single cord may be used, as shown in Fig. 9; but I prefer to use two, as shown in Figs. 1 and 5, to permit better access to the board from the sides.

The drawing-board, if of small size, may be made of a central thin slab of soft wood secured by screws to the inclosing-frame *c*, (shown by dotted lines in Fig. 1;) but for large boards the central portion may be secured to the inclosing-frame by turn-buttons or by other well-known means, so that if the frame is provided with a scale of degrees their size will not be affected by any expansion or contraction of the central board.

To pivot the drawing-board to its supporting-frame, said board is provided in its central portion, as shown in Fig. 4, with a plate, K, secured to the bottom thereof, and said plate has a central socket to receive the pintle *l* of a plate, L, screwed to the top of the frame G, and a circular flange, K′, by which it is re-

tained connected to the plate L by means of a frictional clamping-block, M. The latter is adjustably secured by means of a thumb-screw passing through a slot, *o*, in the plate L, and a coil-spring, N, upon the stem of said screw.

The thickness of the board C and its flanged plate K is a little less than the thickness of the frame or battens *c*, to allow the drawing-board to be laid and rest evenly on a table when removed from the frame G, as it is sometimes desirable to use it as an upright drawing-board. The bars H in Fig. 1 are sufficiently far apart to permit the board to be revolved without having its corners come in contact with said bars. The board has its edge provided with a scale of degrees from zero to ninety degrees, running from left to right and from right to left, and the frame G has marked thereon two guide-lines, *g*, diverging from the center.

In the modified form shown in Figs. 5 and 6 the bars H are placed closer together and elevated above the frame G by means of blocks *h*, so as to permit the corners of the board to pass under them. To the edge of said board is secured a vernier, V, and to the top of the frame G is secured a protractor, P, the periphery of which passes under the vernier, and is also received by guiding-buttons *m*, secured to the under side of the board, that retain said board and the frame G adjustably connected.

In Figs. 9 and 11 the ruler is shown provided adjacent to its ends with guide-rolls F, in addition to its guide-cord and pulleys, to limit its end motion by bearing against the edge of the board or its end bars.

Having now fully described my invention, I claim—

1. The combination of a ruler, a drawing-board, and a cord having its ends clamped or fixed and passing around pulleys secured to said ruler near its ends, substantially as and for the purpose described.

2. The combination of a drawing-board, a ruler having a pair of pulleys secured near each end, and a cord having fixed ends and passing lengthwise of said ruler, substantially as and for the purpose described.

3. The combination of a frame carrying a ruler, and a cord, with a drawing-board pivotally connected to said frame, for the purpose described.

4. The combination of a frame, a drawing-board pivotally connected to said frame, a ruler carried thereby, and a cord connecting the ruler and frame, for the purpose described.

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

DANIEL D. HUYETT.

Witnesses:

D. B. RUSSELL,

ALF. N. RUSSELL.