

(No Model.)

E. C. CLEAVES.
DRAWING TABLE.

3 Sheets—Sheet 1.

No. 266,099.

Patented Oct. 17, 1882.

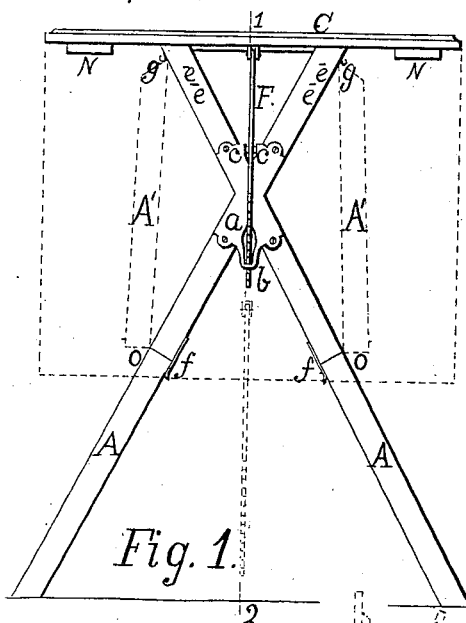


Fig. 1.

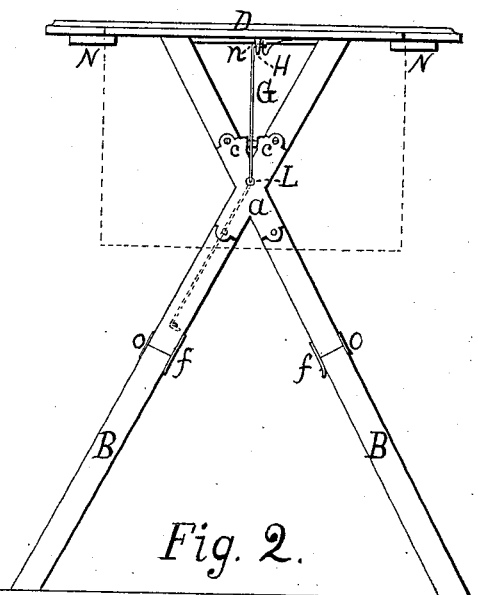


Fig. 2.

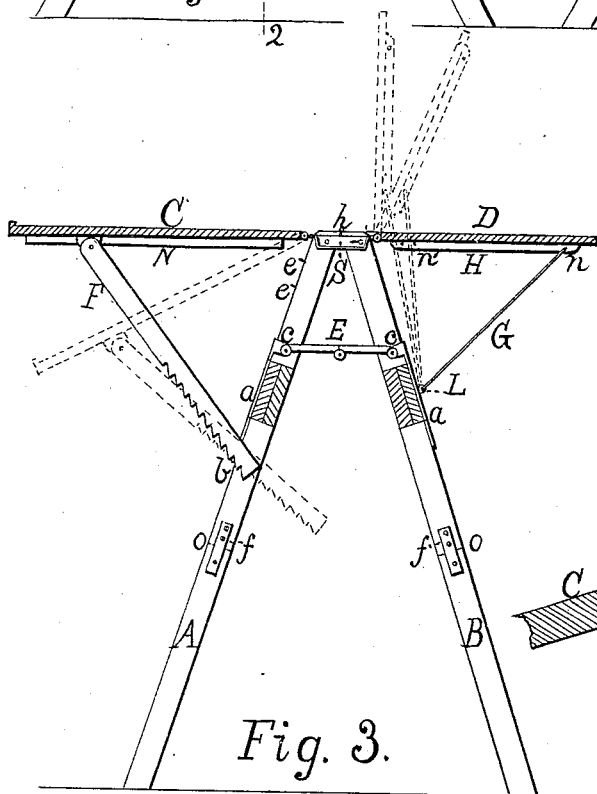


Fig. 3.

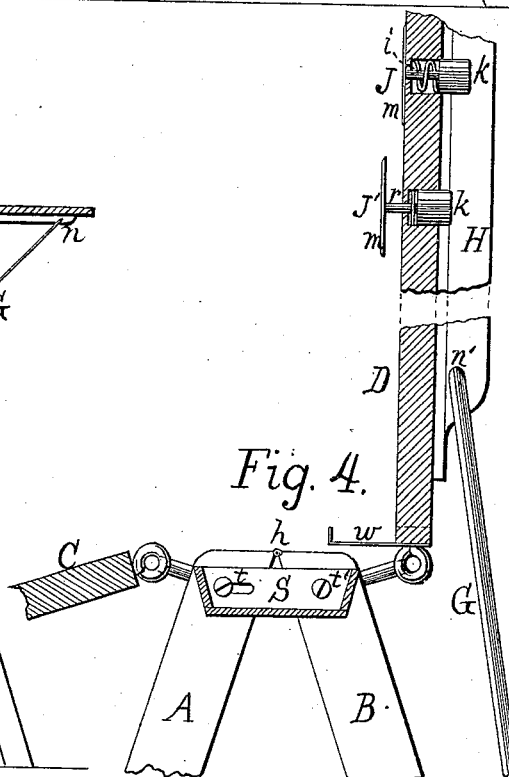


Fig. 4.

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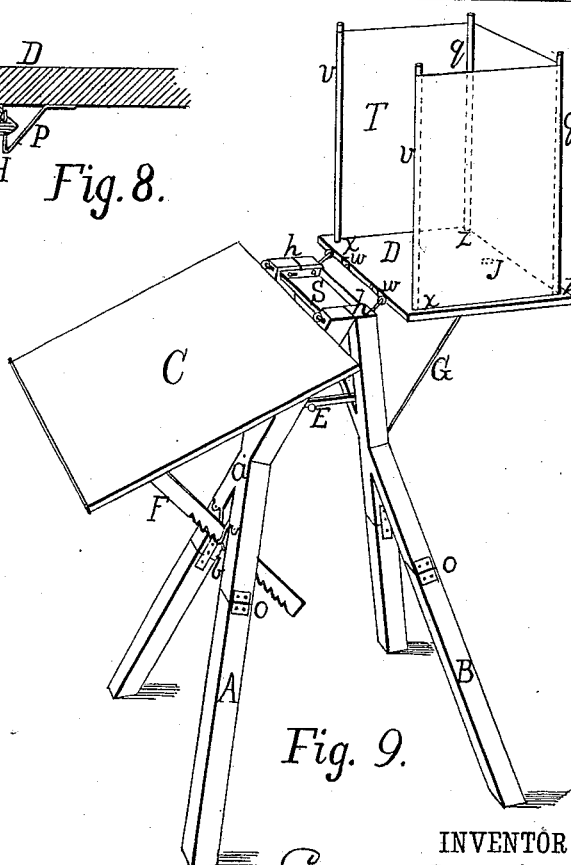
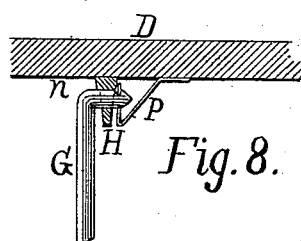
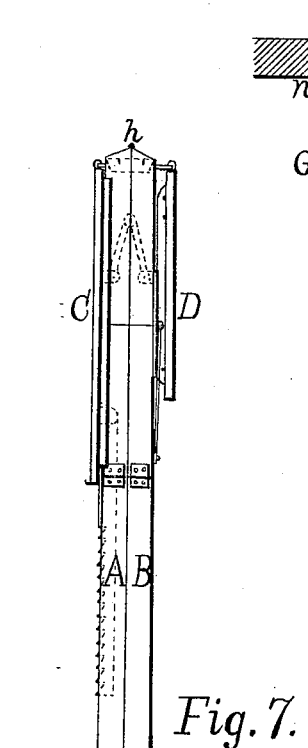
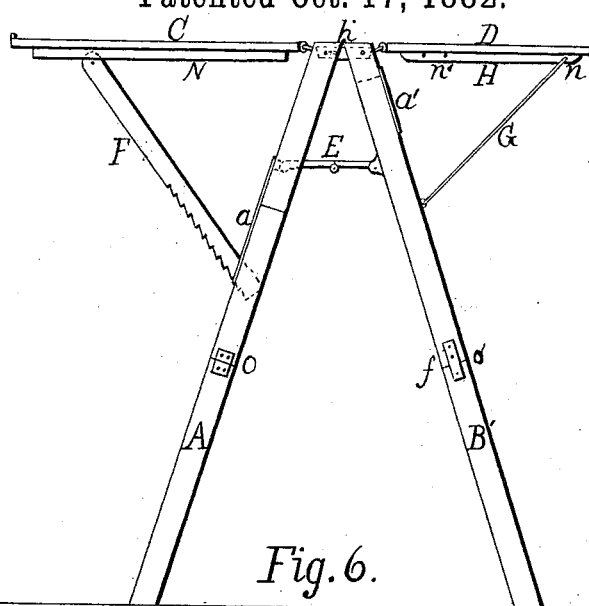
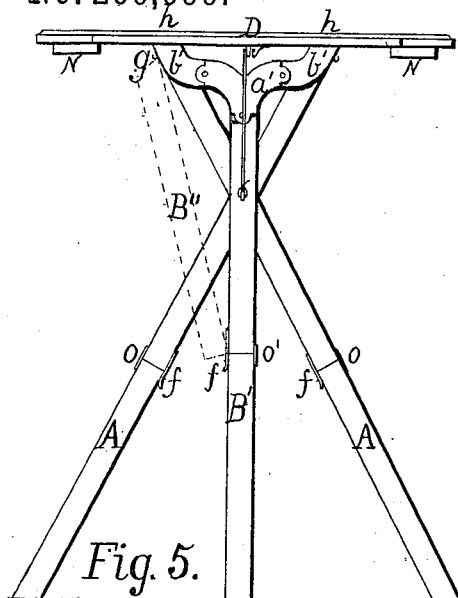
(No Model.)

3 Sheets—Sheet 2.

E. C. CLEAVES.
DRAWING TABLE.

No. 266,099.

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3 Sheets—Sheet 3

E. C. CLEAVES.
DRAWING TABLE.

No. 266,099.

Patented Oct. 17, 1882.

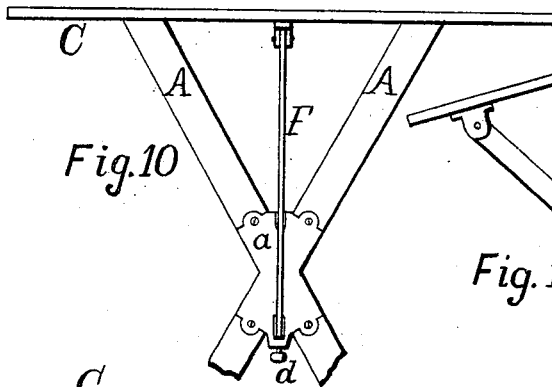


Fig. 10

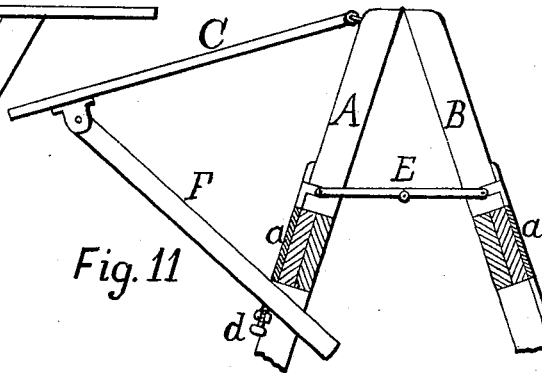


Fig. 11

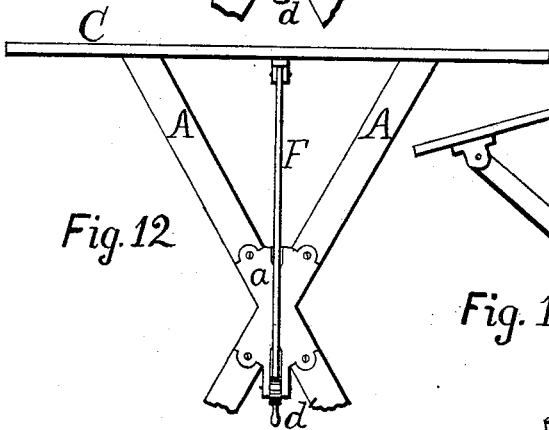


Fig. 12

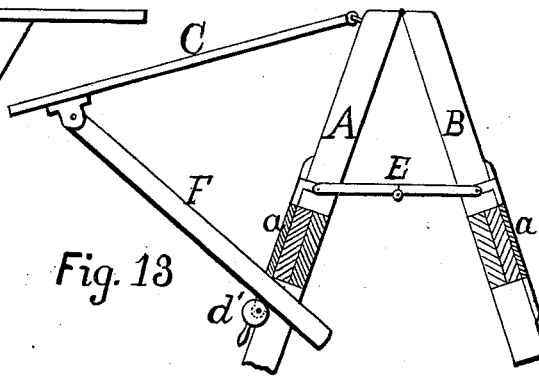


Fig. 13

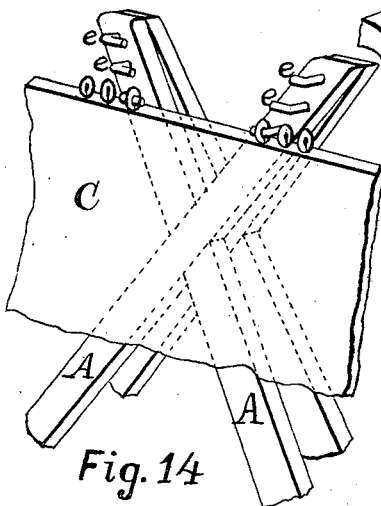


Fig. 14

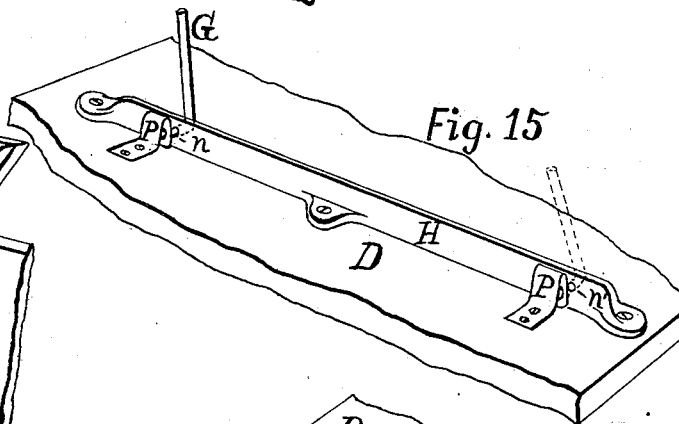


Fig. 15

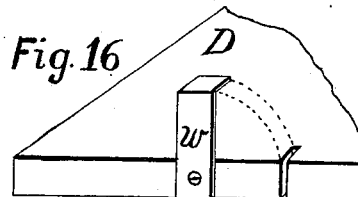


Fig. 16

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UNITED STATES PATENT OFFICE.

EDWIN C. CLEAVES, OF CORTLAND, NEW YORK.

DRAWING-TABLE.

SPECIFICATION forming part of Letters Patent No. 266,099, dated October 17, 1882.

Application filed February 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDWIN C. CLEAVES, a citizen of the United States, residing at Cortland, in the county of Cortland and State of New York, have invented certain new and useful Improvements in Drawing-Tables; 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, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a light and substantial table for drawing, writing, or studying purposes, and so constructed that when not in use it can be folded so as to occupy but little space, and which shall also combine the following important features: first, an adjustable top that can be used in a horizontal position or be readily inclined at any desired angle; second, a shelf or leaf that can be used for holding or supporting models, objects, or figures to be drawn, and be held securely in either a horizontal or vertical position; third, a screen that can be easily attached to the shelf and adjustable, so that the light may fall upon the objects from any side, as desired; fourth, a tray for holding drawing or writing materials. These objects may be attained by methods illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of the table; Fig. 2, a rear elevation; Fig. 3, a vertical section of the table on the line 1 2; Fig. 4, an enlarged view of a part of the upper portion of Fig. 3, showing the tray, the shelf in a vertical position, and the spring or clamp for holding in position the chart or figure to be drawn; Fig. 5, a rear view of the table, showing a modification in the legs as given in Fig. 2; Fig. 6, a side elevation of the table, as shown in Fig. 5; Fig. 7, a side view of the table as it appears when folded; Fig. 8, an enlarged view of a portion of the shelf, showing the method of securing the hook; Fig. 9, a perspective view of the table and screen. Figs. 10, 11, 12, 13, 14, 15, and 16 are detailed views of the construction of my device.

Similar letters refer to similar parts throughout the several views.

The front and back legs, A A B B, of the table are formed of two cross-pieces halved together, and strengthened by metallic plates *a a*, which are screwed onto the outside of the legs. The legs are hinged together at the top *h h*, and are prevented from opening too wide or from closing when in use by the toggle-joint E, the ends of which are held by a pin passing through the double ears *c c*, attached to the plates *a a*. In place of the rear legs, B B, a single leg, B', Fig. 5, with two arms, *b' b'*, at its upper extremity, can be substituted, if desired. The upper portion of the leg can be strengthened by the plate *a'*, the leg B' to be hinged with the legs A A at *h h*, and to be held in position by the toggle-joint E, which can be attached to the inner side of the leg B', Fig. 6.

The top C is kept from warping by means of the cleats N N, and is hinged at or near the upper extremities of the front legs, A A. Any hinge will answer, though the hook-and-eye is preferable on account of its simplicity and the ease of its application. The top is held in its position, either level or inclined, by a rod, F, one end of which is attached to the under side of the top and the other end, passing through the loop *b* at the lower extremity of the plate *a*, is secured by any of the common devices, as the set-screw, the eccentric, or, as shown in Figs. 1 and 3, by being notched and catching in the loop *b*. By having other hooks placed at different points, as at *eee e*, on the legs and eyes in corresponding positions in the edge of the top the height of the table can be easily changed.

The shelf D, which can be used for holding or supporting models or figures to be drawn, is hinged at or near the upper extremities of the back legs, B B. Across the under side of the shelf is a rib or cleat, H. The shelf is held in its different positions by the hook G, one end being fastened to the plate *a* at L and the other extremity hooking into the hole *n* or *n'* in the rib H, according as it is desired to bring the shelf into a horizontal or vertical position. To prevent the hook G from being accidentally unhooked from the shelf D, it can be secured

by means of the spring P, Fig. 8. The end of the hook G is notched and pointed, and after passing through the hole *n* or *n'* in the rib H it passes through a hole in the spring P, which catches in the notch at the end of the hook. Any spring, button, or catch that will secure the hook will answer the purpose. Attached to the front edge of the shelf are two or more thin metallic pieces, *w w*, Figs. 4 and 9, to be used, when the shelf is in a vertical position, as rests or supports for the cards or plates containing the figures to be copied. These supports have one edge turned up to form a lip to prevent the cards or plates from slipping off, and are attached to the shelf by screws or pins, which permit them to be turned, when not in use, so as to coincide with the edge of the shelf, the lip falling into a groove provided for that purpose.

The charts or figures to be drawn can be held in position by the spring-clamps J J', Fig. 4. The clamp consists of a thin metallic plate or disk, *m*, with a short stem, *v*, that passes through the shelf and is fastened to the thumb-piece *k*. The hole through which the stem passes is enlarged on the back side of the shelf to receive a spiral spring, *i*, and also the thumb-piece *k* when compressed, as in J'. By pressing on the thumb-piece *k* the disk *m* is raised from the shelf, so that the card or paper or whatever is to be held can be slipped under it, when, by removing the pressure, it will be held in position by the action of the spring *i*.

Serious difficulty is often experienced in drawing from models and objects, especially in studying them in various lights and shades, by reason of cross-lights, and the difficulty in causing the direct light to fall wholly upon one side of the object or objects to be shaded. To overcome this difficulty, an adjustable screen, T, Fig. 9, is provided, which can be readily attached to the corners of the shelf D. The screen may be made of cloth, paper, or any suitable material, and is fastened at the ends *v v* to wooden or metallic rods, which can be held in position by entering holes *xx* in the corners of the shelf. Similar rods, *qq*, detached from the screen, are placed at the corners *z z*, around which the screen passes, thus inclosing three sides of the shelf D. When desirable to inclose only two sides the rod *q* can be removed, and the rod *v* be placed in its position, the surplus screen to be wound around the rod *v*. By changing the position of the rods the light can be caused to fall from either side, as desired. Between the upper extremities of the legs A A B B, Figs. 4 and 9, is

placed a tray, S, for holding drawing or writing materials. The tray is attached at its ends by screws or pins *t t'* to the legs. The front or back pins or screws work in slots to allow the closing of the table. When not in use the table can be folded, as shown in Fig. 7, and for convenience in transportation, if desirable, the legs A A B B B' can be hinged at *o o o'*, and fastened by means of a spring or hook at *f*, when in use, and when folded be brought into the position of A' A' B'' (shown in Figs. 1 and 5) and held there by the springs or catches *g g* near the upper extremities of the legs.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A drawing, writing, and study table having hinge folding legs held apart by toggle-joint, said legs being adjustable, combined with the adjustable top and shelf, hinged at one edge, and supported respectively by the rods F and G, substantially as specified.

2. The combination, in a drawing-table, of the adjustable top C and rod F, the shelf D, screen, and rod G, substantially as and for the purpose specified.

3. A drawing, writing, and study table having hinge folding legs held apart by a toggle-joint, and the tray S, secured between said legs by means of pins or screws, combined with the adjustable hinged top and shelf, and the rods F and G, substantially as and for the purposes set forth.

4. The adjustable shelf D, having perforated lag H, combined with the hooked rod G and spring locking-rod P, as and for the purposes set forth.

5. In a drawing, writing, and study table, the combination of the adjustable folding legs, the shelf D, the hook G, and adjustable rest *w*, all substantially as and for the purposes set forth.

6. In a drawing, writing, or study table, the combination of the adjustable folding legs, the adjustable shelf D, the hook G, adjustable rest *w*, and clamp J, all substantially as and for the purposes set forth.

7. In a drawing, writing, or study table, the combination of the adjustable folding legs, the shelf D, the adjustable screen T, and movable rods *q v*, all substantially as and for the purposes set forth.

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

EDWIN C. CLEAVES.

Witnesses:

J. W. SUGGETT,

M. S. BIERCE.