(No Model.) 3 Sheets—Sheet 1.

T. C. HENLEY.

DRAWING BOARD OR TABLE.

No. 397,427. Patented Feb. 5, 1889.

Fig. 1.

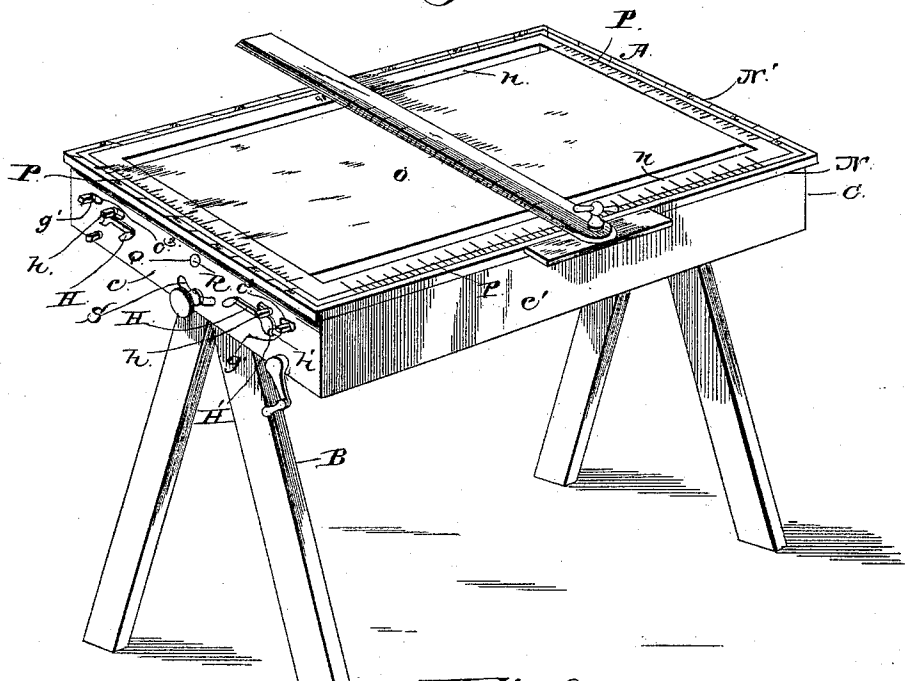
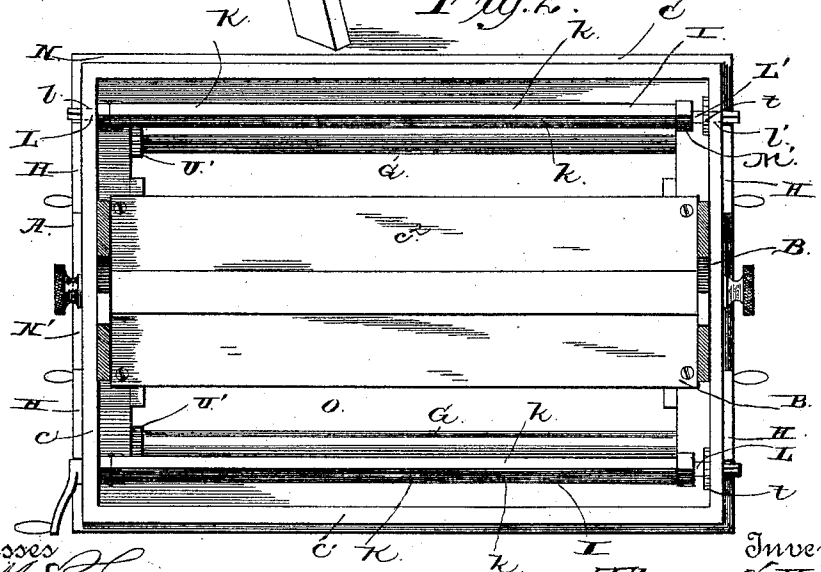


Fig. 2.



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(No Model.) 3 Sheets—Sheet 2.

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Fig. 3

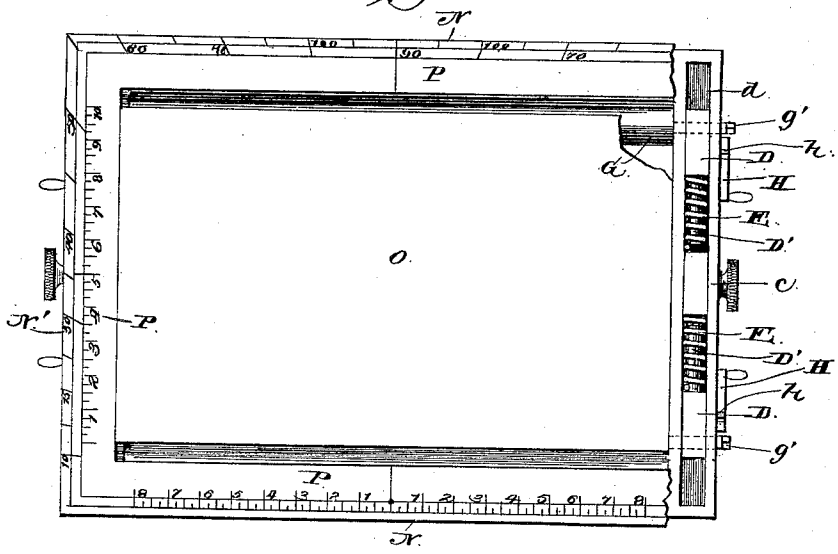


Fig. 4.

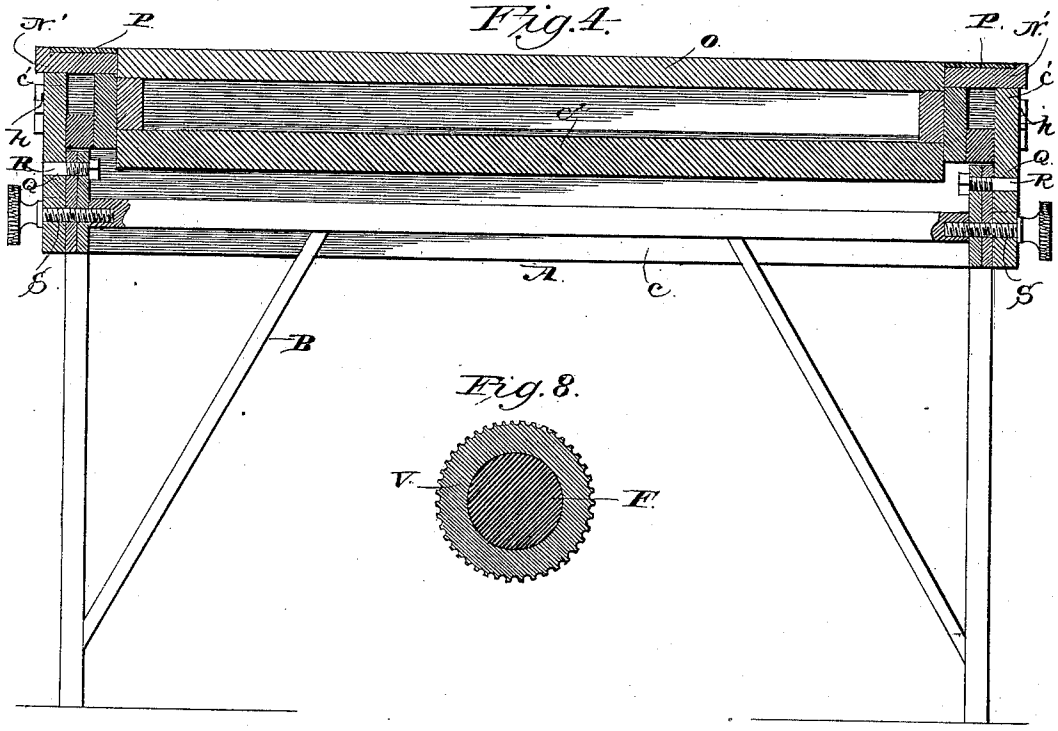


Fig. 8.

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Fig. 5.

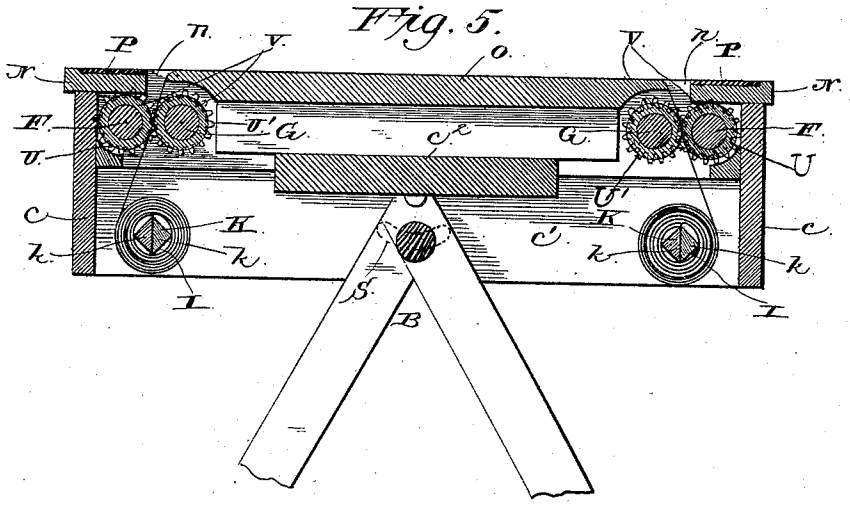


Fig. 6.

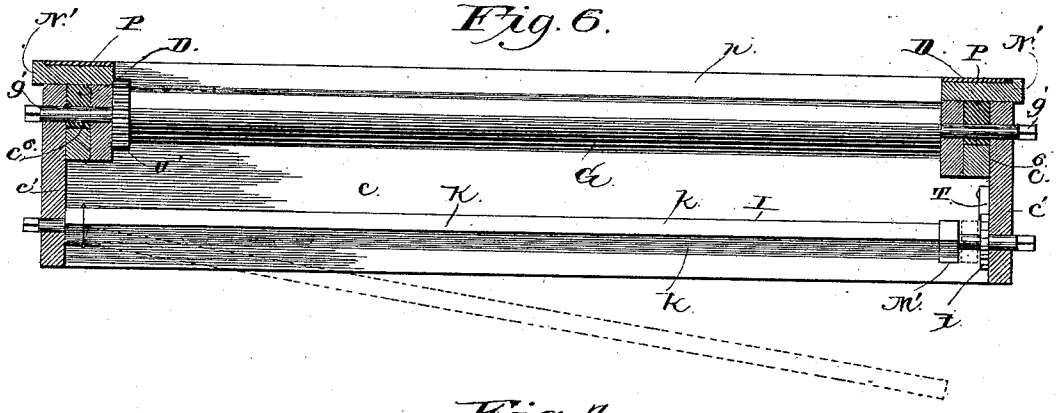
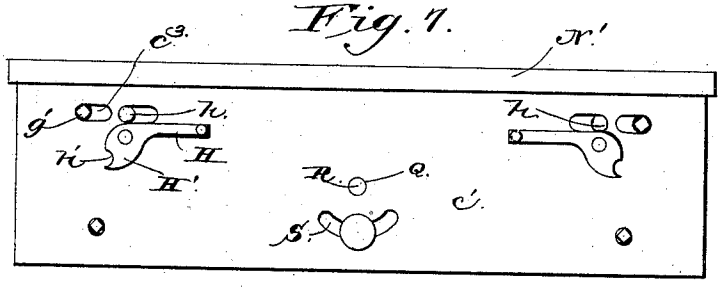


Fig. 7.



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UNITED STATES PATENT OFFICE.

THOMAS CHALKLEY HENLEY, OF RANDLEMAN, NORTH CAROLINA.

DRAWING BOARD OR TABLE.

SPECIFICATION forming part of Letters Patent No. 397,427, dated February 5, 1889.

Application filed July 27, 1888. Serial No. 281,169. (No model.)

To all whom it may concern:

Be it known that I, THOMAS CHALKLEY HENLEY, a citizen of the United States, residing at Randleman, in the county of Randolph and State of North Carolina, have invented a new and useful Improvement in Combination Drawing Boards or Tables, of which the following is a specification.

My invention relates to improvements in combination drawing boards or tables; and it consists in a certain novel construction and combination of devices, fully set forth hereinafter in connection with the drawings, and specifically pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a drawing-table embodying my improvements, showing a T-square arranged thereon. Fig. 2 is a bottom plan view of the top of the table. Fig. 3 is a top plan view of the same partly broken away. Fig. 4 is a central longitudinal sectional view of the table. Fig. 5 is a central transverse sectional view of the top. Fig. 6 is a longitudinal sectional view taken adjacent to the split roller to show the construction and operation of the same. Fig. 7 is an end view of the top of the table. Fig. 8 is a detail transverse section of one of the covered rollers.

Referring by letter to the drawings, A designates the top of the improved table, which is mounted on a suitable support or trestle, B; and it consists, mainly, of the rectangular frame C, comprising the end bars, *c c*, and the side bars, *c' c'*, which is braced to prevent it from twisting by the longitudinal cleat or board c^2, which is fixed at its ends to the end bars.

The end bars are provided at their upper edges with the longitudinal slots or grooves *d d*, in which are arranged the sliding blocks D D, and spiral springs E E are located between the inner ends of the said grooves or slots and the inner ends of the said blocks to normally hold the latter pressed outward. The blocks are provided on their inner ends with reduced extensions D', which extend through the springs.

F F designate the outer stationary rollers, which are provided at their ends with trunnions mounted in suitable bearings in the end bars of the frame C adjacent to the side bars, and G G represent similar rollers, which are provided with trunnions *g' g'*, which extend through small slots c^3 in the end bars, and are mounted in bearings c^6 in the sliding blocks E, whereby the movable rollers G G are normally pressed toward the stationary rollers F. The trunnions *g'* of the rollers G are extended through slots in the outer sides of the grooves or slots *d*, and are provided with squared outer ends, whereby a key may be applied, as shown in Figs. 1 and 2, to turn the roller. The outer sides of the sliding blocks are provided with studs or pins *h h*, which operate in suitable slots in the end bars, and H H represent cam-levers, which are pivoted on the end bars and are adapted to bear against the said studs or pins to repress the sliding blocks against the strength of their springs. The heads H' of the said cam-levers are provided with notches *h'*, which engage the studs or pins when the sliding blocks are repressed to hold them in this position.

I I represent storage-rollers or reels, which are mounted in the end bars beneath the rollers F G, and they are each constructed as follows: K designates the body of the roller, which is split longitudinally to form the separable halves *k k*, and the said halves are hinged at one end of the frame to a suitable spindle, L, which is mounted in a bearing, *l*, in the adjacent end bar of the frame. The opposite or free ends of the said halves are arranged in contact with a similar spindle, L', which is mounted in a bearing, *l'*, in the adjacent end bar of the frame, and the ends of the halves are held in position in contact with the spindle L' by means of a collar, M', which is adapted to be slipped outward to disengage the ends of the halves when it is desired to remove the storage-roller.

The upper edges of the side and end bars of the frame are covered with the edging or trimming strips N N', preferably of hard wood or metal, and between the said strips and flush with their upper sides is arranged the drawing or face board O. The edges of this drawing or face board are removed from the inner edges of the side strips, N, sufficiently to form narrow slots *n n*, the object of which will be described. The upper side of this drawing or face board forms the drawing-surface on which the paper, linen, or other mate-

rial is placed, and the upper sides of the edging-strips are provided with shallow grooves, in which are arranged thin metallic or ivory plates P P, on which are inscribed the inches and fractions of an inch, as on a rule, commencing at the center of the board and extending toward both ends. To supply the purposes of a protractor, the said plates are further inscribed with inclined lines, (converging toward a point at the center of the lower side strip,) which are designated by figures indicating the angles, whereby a surveyor, architect, &c., may lay off any desired angle by simply aligning the blade of a loose-headed T-square with the proper lines on the said plates and then moving the same to the desired point. The T-square which I employ with this table is also inscribed with inches and fractions thereof in such a manner that when the square is laid on the table-top the first mark thereon corresponds with the edge of the drawing or face-board, and consequently also corresponds with the marking of the plates which are affixed to the side strips.

The end bars of the frame are provided with bearings Q Q, which are mounted on suitable spindles R R on the ends of the trestle or support, whereby the top of the table may be arranged at any desired inclination and the said end bars are further provided below the bearings with the curved slots S S, through which pass the clamping thumb-screws which engage in suitable sockets in the trestle or support.

The operation of the device is as follows: It is frequently desirable to make drawings upon rolls of paper without dividing the same; but much inconvenience is experienced on account of the completed and unused portions of the roll being in the way. In the improved table this inconvenience is overcome, as will be seen.

One end of the roll is engaged between the separable halves of one of the split rollers, and thereby tightly held, after which the paper is rolled on the said roller. The other end of the paper is now carried up between the outer and inner rollers, F G, and through the adjacent slot *n*, then extended across the upper side of the drawing or face board and through the other slot, then carried between the adjacent sides of the rollers F G on the other side of the frame, and engaged between the sections of the split roller thereunder. The slots *n n* between the face-board and the side strips allow the paper to be carried down to the rollers, and the side strips protect the edges of the paper and prevent it from being soiled by the T-square or the body of the operator.

I am aware that storage-rollers have been heretofore used; but it is usual to carry the paper over the edge of the board thereto, and therefore, being unprotected, the paper is soiled at the point where it doubles over the edge.

The ends of the split rollers are provided with ratchet-wheels *t*, which are engaged by suitable pawls, T T, to prevent the rollers from turning backward and relieving the strain on the paper, and the ends of the rollers F and G are provided with meshing gear-wheels U U′, respectively, which cause the said rollers to turn simultaneously, except when thrown out of gear by means of the cam-levers. When gear-wheels are not employed to connect the rollers and cause them to rotate simultaneously, the positive rotation of one of the rollers is depended upon to rotate the other; but this is objectionable, because if thin or delicate paper is used it is liable to be torn if both rollers do not rotate exactly together.

It will be seen that by this arrangement any desired tension may be placed upon the paper, and the necessity for the use of thumb-tacks (which are ordinarily employed to hold the paper in place) is entirely obviated.

The rolls F and G are preferably provided with sleeves V of corrugated or smooth white rubber which prevent the paper from slipping between the rollers, and are not liable to soil the paper.

Having described my invention, I claim—

1. The drawing-board comprising the rectangular frame C, having side and end strips, and the face-board arranged in the said frame and separated at its side edges from the side strips to form slots *n n*, in combination with stationary rollers F, journaled in the end strips beneath the board, the sliding spring-actuated blocks sliding in grooves in the end strips, the rollers G, journaled in the said blocks and normally held in contact with the stationary rollers, and cam-levers H, adapted to engage studs or projections on the sliding blocks to press them back, substantially as specified.

2. The drawing-board provided near its side edges with longitudinal slots *n n*, through which to pass the ends of the drawing-paper, in combination with stationary rollers F, journaled beneath the board parallel with the slots *n*, the sliding spring-actuated blocks D, normally pressed toward the said rollers, the rollers G, mounted in the said blocks and geared to the rollers F, whereby they rotate simultaneously therewith, and cams H, adapted to engage studs or projections on the sliding blocks to press the latter back and disengage the said rollers, substantially as specified.

3. The drawing-board provided near its side edges with slots *n*, in combination with the relatively-adjustable rollers F G, arranged below the said slots and geared together, and the corrugated rubber sleeves V, surrounding the said rollers, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

THOMAS CHALKLEY HENLEY.

Witnesses:

J. W. CAUSEY,

W. F. CAUSEY.