

No. 806,850.

PATENTED DEC. 12, 1905.

L. SOMMAR.
DRAWING BOARD.

APPLICATION FILED JUNE 16, 1905.

Fig. 2.

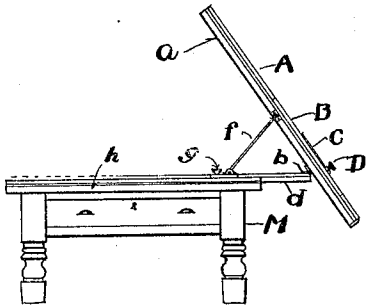


Fig. 1.

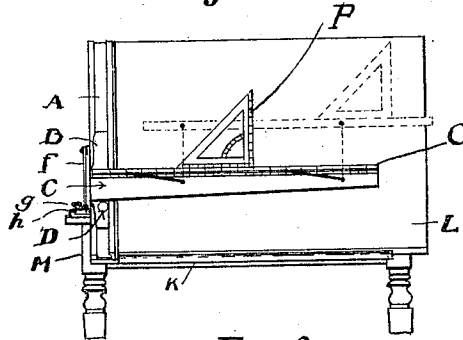


Fig. 3.

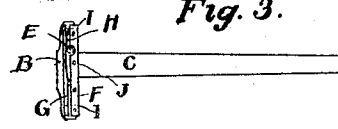


Fig. 4.

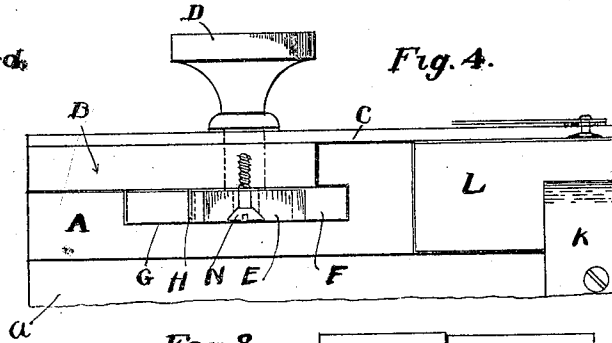


Fig. 8.

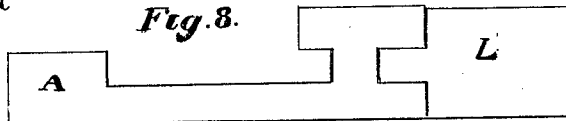


Fig. 5.

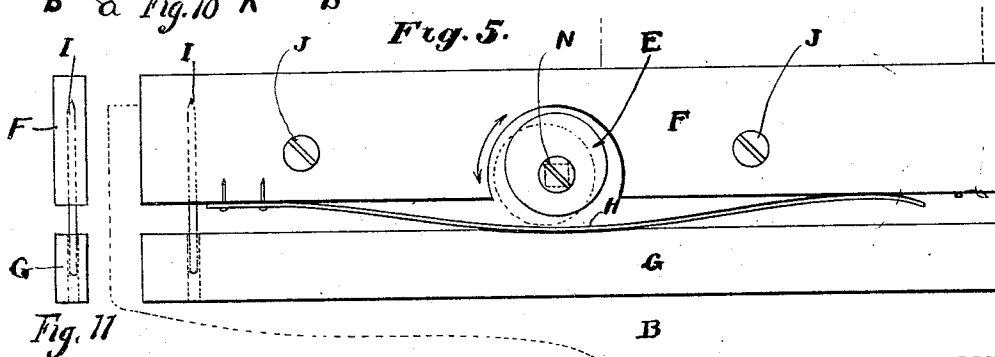
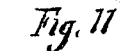


Fig. 11



WITNESSES :

W.B. Doremus

Margaret A. Sommer.

INVENTOR

Lewis Sommer

BY

BY
Lawrence J. Bur
(ATTORNEY.

ATTORNEY.

UNITED STATES PATENT OFFICE.

LEWIS SOMMAR, OF GERMANTOWN, PENNSYLVANIA.

DRAWING-BOARD.

No. 806,850.

Specification of Letters Patent.

Patented Dec. 12, 1905.

Application filed June 16, 1905. Serial No. 265,621.

To all whom it may concern:

Be it known that I, LEWIS SOMMAR, a citizen of the United States, residing at Germantown, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Drawing-Boards, of which the following is a specification.

My invention relates to drawing-boards; and my object is, first, to provide a means whereby the board may be readily adjusted at any desired angle, and, secondly, a means whereby the T-square may be mounted upon and adjusted relatively to such board. These objects I accomplish by the means set forth in the following specification and shown in the accompanying drawings, in which—

Figure 1 is a front view in perspective of the table, the drawing-board mounted thereon, and the T-square adjustably attached to said board. Fig. 2 is a view in side elevation of the parts shown in Fig. 1. Fig. 3 is a view of the under side of the T-square, showing the means whereby its head is rendered adjustable in the groove of the drawing-board. Fig. 4 is a sectional view showing, on a larger scale, the means for adjusting the head of the T-square in the groove. Fig. 5 is a view in plan of the under side of the head of the T-square, showing the locking device. Fig. 6 is a view in plan of the frame upon which the drawing-board frame is mounted. Fig. 7 is a view in plan of the drawing-board frame, showing the grooved strip in the side thereof. Fig. 8 is a sectional view of said grooved strip attached directly to a drawing-board. Fig. 9 is a view in end elevation of Fig. 6. Fig. 10 is a view in end elevation of Fig. 7. Fig. 11 is an end view of Fig. 5.

The construction of my improved drawing-board is as follows: Upon an ordinary drawing-table, Fig. 2, is mounted the sliding frame *d*, Fig. 6, adapted to slide in grooved or L-shaped guide-pieces secured to the top of said table. The sliding frame *d* is stiffened by the cross-braces *e*, Fig. 6. The under side of the drawing-board frame *a*, Fig. 7, is hinged or pivoted to the sliding frame *d*, as shown at *b*, Fig. 2. At one or both sides of the drawing-board frame *a* is provided a rod *f*, Fig. 2, the other end of which is pivotally connected to a base *g*, adapted to slide in suitable grooving in the side pieces of the sliding frame and furnished with a set-screw or similar locking device, whereby said base may be secured at any desired point in said grooving, as shown in Figs. 2 and 6.

By the means above described the drawing-board frame *a* may not only be inclined at any desired angle with the horizontal, but the drawing-board frame and sliding frame may be drawn out, so as to clear the edge of the table *M*, when so desired, as shown in Fig. 2. Furthermore, the guide-pieces in which the sliding frame *d* moves and by which it is secured to the table *M* may themselves be made attachable and removable at will in any well-known manner, thus enabling the table-top to be put to any other ordinary uses.

Having thus set forth the manner in which the drawing-board frame, with its drawing-board, is adjustably mounted upon the table, it remains to describe the means whereby the T-square is adjustably mounted upon the drawing-board frame. The side of the drawing-board frame *a*, Fig. 7, is provided with the grooved strip *A*. (Shown in cross-section in Figs. 4 and 8.) In Fig. 4 it will be seen that the elevation of the right-hand side of the grooved strip *A*, attached to the drawing-board frame *a*, equals the thickness of the drawing-board *L* when in position upon the frame, and in practice the thickness of the drawing-boards used upon said frame should substantially equal the thickness or elevation of the right-hand side of the grooved strip *A*. A strip *K* should be secured to the lower edge of the drawing-board frame *a*, as shown in Figs. 1 and 4, projecting above the surface of said frame in order to retain the drawing-board *L* in place when the frame is inclined, as shown in Fig. 2. It is to be noted that this drawing-board frame is adapted to receive any ordinary drawing-board and permits the immediate interchange of one board for another.

In the grooved strip *A* is mounted the head *B* of the T-square *C*, Fig. 1, adapted to slide to and fro therein. This head is formed in three parts, as shown in Fig. 4, the upper piece *B*, to which is attached the body or ruling edge *C* of the T-square, and the two lower parts *F* and *G*, located in the groove of the strip *A*. The arrangement of these lower parts *F* and *G* is shown in plan in Fig. 5. The part *F* is furnished at either end with a pin *I*, secured therein and extending horizontally into a hole bored in the face of the part *G*, allowing the latter to slide to and fro upon said pins. The parts *F* and *G* when in position in the groove of the drawing-board frame are pushed apart and to a bearing against the

sides of said groove by the expansion of the spring H, attached to the part F. The part F is secured to the upper part B of the head by the screws J or in any other suitable manner.

The expansive action of the spring H, Fig. 5, may be itself sufficient to maintain the head of the T-square at any desired position in the grooved strip A, its effectiveness for such purpose being measured by the strength of said spring; but in the ordinary use of a T-square, as well as in its use in connection with certain auxiliary devices hereinafter more particularly described, it is essential that a means be provided whereby when the head of the T-square has been adjusted to the desired position in the slot or groove in the side of the drawing-board frame it may be effectively secured therein beyond any possibility of shifting. This means is furnished in my invention by the locking device shown in Figs. 4 and 5. In Fig. 4 the stem of the thumb-piece D passes down through the upper portion B of the T-square head and is capable of a semirotation therein. To the lower end of the stem of said thumb-piece is secured the cam E, adapted to rotate in a semicircular recess in the lower part F of the T-square-head, as shown in Fig. 5. To lock the head at any desired point in the groove, a semirotation of the thumb-piece D, Fig. 4, brings the cam E into a tight bearing against the spring H and lower part G. This position of the cam is indicated by the dotted lines in Fig. 5. The necessary result of such movement is to thrust apart the two halves F and G, bringing said parts to a firm bearing against the side walls of the groove and maintaining the T-square securely in the desired position.

To the blade of the T-square is attached the ruler O, Fig. 1, adjustably connected thereto in such a manner as to form, with the T-square-blade, a pair of parallel rulers. The triangle P may be employed as an auxiliary to the T-square-blade and ruler O. The use of these devices as auxiliaries to the T-square obviates the necessity for a continual shifting or readjustment of the latter. Under the arrangement of parts shown in Fig. 1 it is only necessary to bring the T-square approximately to the desired position, using the parallel ruler O for all work within the limit of movement of the latter.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination, a table, a sliding frame mounted thereon, a drawing-board frame hinged to said sliding frame, and means for supporting said drawing-board frame at any desired angle with said sliding frame, said means consisting of a rod, one end of which is pivotally connected to said drawing-board frame, the other end being pivotally con-

nected to a base mounted and adjustable in a groove in said sliding frame, substantially as described.

2. In combination, a grooved drawing-board, a T-square, the head of which is formed in two relatively movable parts mounted and adapted to slide in said groove, and means, consisting of a cam, spring and thumb-nut, for locking said T-square head in said groove, substantially as described.

3. In combination, a drawing-board frame furnished with a grooved strip extending above the level of said frame, a drawing-board, level, when in position upon said drawing-board frame, with said grooved strip, a T-square, the head of which is formed in relatively movable portions mounted and adapted to move in said grooved strip, and means for locking said head at any desired point in said grooved strip, said means consisting of the thumb-nut D and cam E, a semirotation of the latter being adapted to wedge the movable portions of said T-square head in the groove in said strip, substantially as described.

4. In combination, a drawing-board frame furnished with a grooved strip, a T-square, the head of which is formed in relatively movable portions adapted to move in said grooved strip, and means for locking said T-square head in said groove, said means consisting of a cam, the semirotation of which forces the parts of said T-square head against the sides of said groove, substantially as described.

5. In combination, a drawing-board frame one side of which is furnished with a groove, a T-square head mounted therein and formed in two parts adjustable relatively to each other, and means for locking said head in said groove by wedging said parts against the sides thereof, said means consisting of the spring H and cam E, substantially as described.

6. In combination, a table, a sliding frame mounted thereon, a grooved drawing-board frame hinged to said sliding frame, means for supporting said drawing-board frame at any angle with said sliding frame, said means consisting of a support one end of which is attached to said drawing-board frame and the other adjustably mounted in a groove in said sliding frame, a T-square, the head of which is formed in relatively movable portions mounted and adapted to move in the groove in said drawing-board frame, and means for locking said T-square head in said groove, said means consisting of a spring, and a cam, the semirotation of which wedges said relatively movable portions of said T-square head against the sides of said groove, substantially as described.

7. In combination, a table, a sliding frame mounted thereon, a grooved drawing-board

frame hinged to said sliding frame, means for supporting said drawing-board frame at any angle with said sliding frame, said means consisting of a support one end of which is 5 attached to said drawing-board frame and the other adjustably mounted in a groove in said sliding frame, a T-square, the head of which is formed in relatively movable portions mounted and adapted to move in the groove in said drawing-board frame, the ruler O adjustably attached to the blade of said T-square, and means for locking said T-square head in said groove, said means consisting of a spring, and a cam, the semirotation of which wedge the relatively movable portions of said T-square head against the

sides of said groove, substantially as described.

8. In combination, a drawing-board furnished on one side with a groove, a T-square 20 head mounted therein and formed in two parts adjustable relatively to each other, and means for locking said head in said groove by wedging said parts against the sides thereof, said means consisting of the spring H and 25 cam E, substantially as described.

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

LEWIS SOMMAR.

Witnesses:

MARGARET A. SOMMAR,
LAWRENCE J. BUR.