

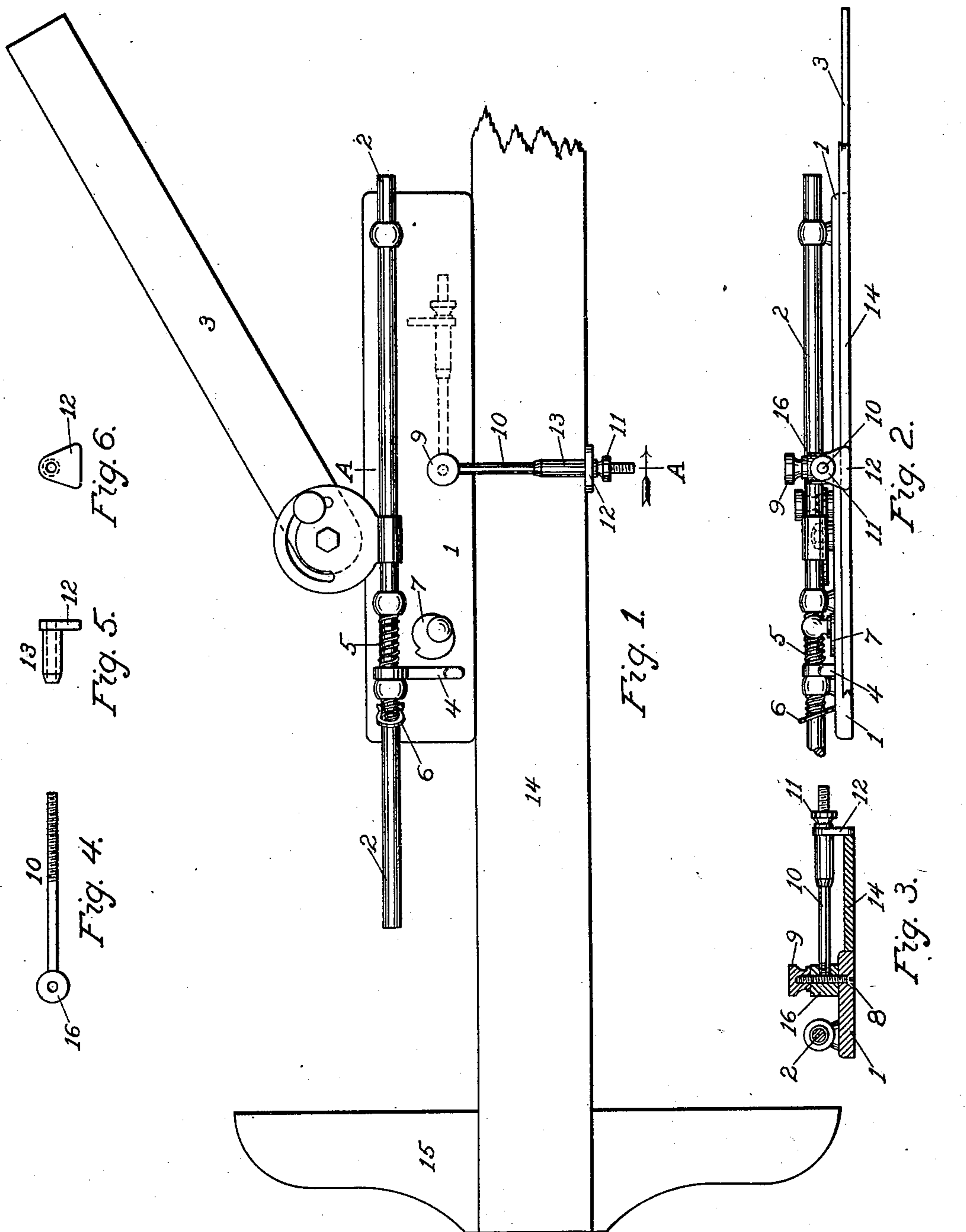
No. 669,239.

Patented Mar. 5, 1901.

H. H. HILL.
SECTION LINER FOR DRAFTSMEN'S USE.

(Application filed Sept. 24, 1900.)

(No Model.)



WITNESSES:

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HORACE H. HILL, OF CAMBRIDGE, MASSACHUSETTS.

SECTION-LINER FOR DRAFTSMEN'S USE.

SPECIFICATION forming part of Letters Patent No. 669,239, dated March 5, 1901.

Application filed September 24, 1900. Serial No. 30,915. (No model.)

To all whom it may concern:

Be it known that I, HORACE H. HILL, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Section-Liners for Draftsmen's Use, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to section-liners for draftsmen's use, is an improvement upon the instrument shown and described in the Letters Patent No. 455,779, issued July 14, 1891, and it consists in certain novel features of construction, arrangement, and combination of parts, which will be readily understood by reference to the description of the accompanying drawings and to the claims here-to appended and in which my invention is clearly pointed out.

Figure 1 of the drawings is a plan of a section-liner and a T-square, illustrating my invention. Fig. 2 is an elevation of the same with portions of the T-square broken away. Fig. 3 is a section on line A A on Fig. 1. Fig. 4 is a plan of the clamp-rod. Figs. 5 and 6 are, respectively, a side elevation and a front elevation of the clamping-jaw.

Section-liners of the class in which the adjustable angularly-arranged ruling-blade is mounted upon a rod intermittently movable endwise in bearings set in a normally-fixed bed, on the same general principle as the device shown and described in the before-cited Letters Patent, are now in common use, said bed being provided with a plurality of sharp-pointed spurs projecting from its under side, which enter the paper upon which the section-lining is to be done for the purpose of holding said bed in a fixed position while the ruler-blade is being moved step by step. This method of maintaining the body of the instrument in a normally-fixed position I have found by practical experience in the use of such an instrument to be objectionable on account of the liability of injury to the surface of the paper by said points, and the object of my present invention is to obviate this objection, and to this end I provide the section-liner with a clamping device by which the bed of the instrument may be clamped in a normally-fixed position to the edge of the blade of a T-square, as shown in the accom-

panying drawings, in which 1 represents the base plate or bed of a section-liner, 2 the end-wise movable rod, 3 the angularly-arranged ruling-blade, 4 the lever for intermittently moving said rod in one direction, 5 the spring for returning said lever to its normal position, 6 the locking-clamp for preventing backward movement of said rod, and 7 the eccentric gage for regulating the length of each movement of the rod 2 and the ruler-blade 3, all of which are of well-known construction and not of my invention.

The base plate or bed 1 has pivoted thereto, at or near the middle of its length, by means of the pivot-screw 8 and the clamping-nut 9, the rod 10, the free end of which has formed thereon a male screw-thread of sufficient length to permit of considerable adjustment of the clamping-nut 11, and said rod has fitted thereon and movable endwise thereof the clamping-jaw 12, provided with the long sleeve-like hub 13, which incloses a portion of the threaded section of the rod 10 and extends to the unthreaded portion of said rod.

The lower portion of the clamping-jaw 12 bears against the outer edge of the blade 14 of a T-square, provided with the head 15 of any well-known construction, said jaw being pressed firmly against said blade by the nut 11, so as to clamp said bed-plate 1 firmly to said blade 14 in a fixed position relative thereto.

The operation of my invention is as follows: The T-square is placed upon the drawing-board with its head 15 in contact with the left-hand edge of said board. The bed-plate 1 of the section-liner is placed in contact with one edge of the blade 14 at the proper distance from the head 15 to bring the upper or outer edge of the ruler-blade 3 in the desired position for beginning the section-lining, when the section-lining of all the parts within the range of the movement of the rod 2 and requiring lines at the angle at which said blade 3 is set may be drawn, the T-square being held firmly in position, with the edge of its head in close contact with the edge of the drawing-board, the operation of the lever 4 assisting very much in accomplishing this result. For lines at different angles the blade 3 is moved about its pivotal connection to the desired angle in a well-known manner. When

portions of the drawing are to be section-lined that are at such a position relative to the left-hand edge of the drawing-board that they cannot be covered by the section-liner 5 in the position shown in the drawings, by simply slackening the nut 11 the bed-plate 1 may be moved along the blade 14 toward or from the head 15 and be again clamped in the desired position, or the T-square may be placed 10 with its head against the front edge of the drawing-board and be moved toward or from the left end of the drawing-board.

When it is desired to pack the instrument for transportation or otherwise, the clamping-rod 10 is moved about its pivotal connection 15 to the bed 1 into a position above said bed, as indicated in dotted lines in Fig. 1.

The rod 10 has formed upon or secured to its pivotal end the hub 16, through which the 20 pivot-screw 8 passes, as shown in Fig. 3.

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

1. The combination with a section-liner comprising a bed-plate, a pivoted blade supported by and movable endwise of said bed-plate, and means for imparting to said blade uniform intermittent movements in the direction of the length of said bed-plate, of a rod secured by one end to the bed-plate of 30 said section-liner, extending at right angles therefrom, and having its opposite end screw-threaded; a clamping-jaw provided with a

sleeve-like hub fitted to and movable endwise of said rod; and a clamping-nut fitted to the threaded end of said rod, and adapted to force 35 said jaw into firm contact with the edge of the blade of a T-square, whereby the bed-plate of said section-liner may be firmly clamped to said square-blade in a fixed position, and at the same time the blade of the 40 section-liner is free to be intermittently moved in the direction of the length of the blade of the T-square.

2. In combination with a section-liner of the class described, the rod 10, provided with 45 the hub 16 and pivoted to the bed-plate of said section-liner, and having its free or movable end threaded; a clamping-jaw provided with a sleeve-like hub fitted to and movable endwise of said rod 10; and a clamping-nut 50 fitted to the threaded end of said rod and adapted to force said jaw into firm contact with the blade of a T-square and thus clamp the bed-plate of said section-liner to said square-blade in a normally-fixed but adjust- 55 able position.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 22d day of September, A. D. 1900.

HORACE H. HILL.

Witnesses:

N. C. LOMBARD,

JAMES A. WOODBURY.