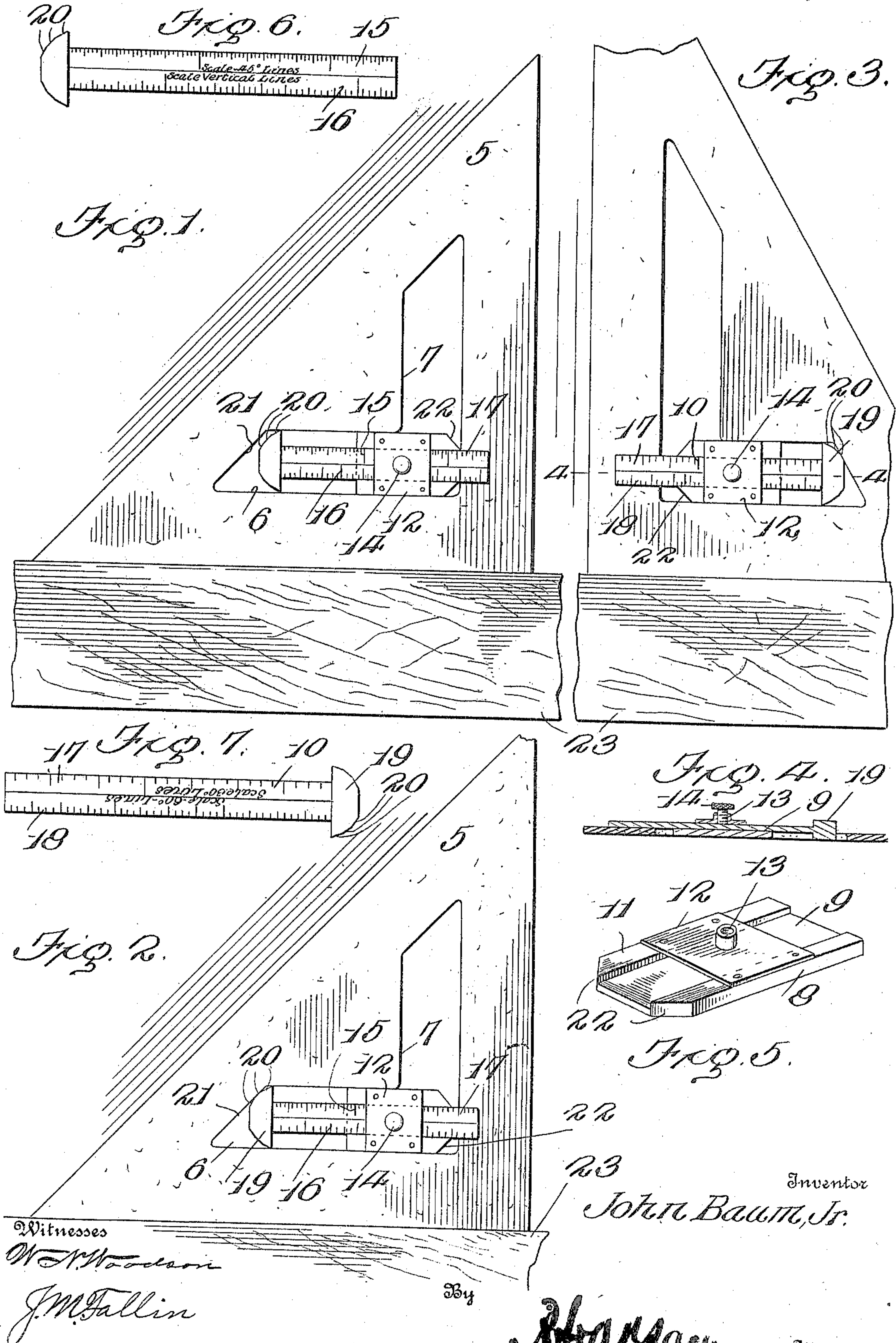


J. BAUM, JR.  
SECTIONAL LINER.

APPLICATION FILED APR. 27, 1909.

951,719.

Patented Mar. 8, 1910.





# UNITED STATES PATENT OFFICE.

JOHN BAUM, JR., OF EAST LIVERPOOL, OHIO.

## SECTIONAL LINER.

951,719.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed April 27, 1909. Serial No. 492,510.

*To all whom it may concern:*

Be it known that I, JOHN BAUM, Jr., citizen of the United States, residing at East Liverpool, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Sectional Liners, of which the following is a specification.

This invention relates to drafting implements and more particularly to a gage for properly spacing the section lines on a drawing.

The object of the invention is to provide a section liner including a gage adapted to enter a seating recess in a triangle or similar drafting instrument for controlling the sliding movement of said triangle, thereby to enable the draftsman to properly space the section lines and draw the same in parallel relation to each other.

A further object is to provide a gage including a body portion having a guiding groove formed therein for the reception of a sliding rule, the latter being graduated to inches and fractions thereof and provided with a terminal head for limiting the sliding movement of the triangle.

A further object is to provide a gage capable of being used with equally good results for drawing either oblique or vertically disposed section lines.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

For a full understanding of the invention and the merits thereof, and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a plan view of a section liner or gage constructed in accordance with my invention, showing the same in position on a triangle, the head of the rule being shown retracted to permit rearward sliding movement of the triangle. Fig. 2 is a similar view showing the head of the rule in engagement with the adjacent wall of the slot in the triangle and the latter in position for

drawing a section line. Fig. 3 is a plan view showing the position of the gage when the latter is used for making vertical section lines. Fig. 4 is a longitudinal sectional view taken on the line 4—4 of Fig. 3. Fig. 5 is a detail perspective view of the gage with the sliding rule detached. Fig. 6 is a plan view of one side of the sliding rule. Fig. 7 is a similar view looking at the other side of the rule.

Corresponding and like parts are referred to in the following specification and accompanying drawings by the same reference characters.

The improved section liner or gage forming the subject-matter of the present invention is principally designed for use on triangles and similar drafting instruments and by way of illustration is shown in position on a triangle 5 having its body portion formed with intersecting slots or recesses 6 and 7.

The device comprises a body portion 8 adapted to fit in either the recess 6 or 7 and provided with a longitudinally disposed guiding groove 9 for the reception of a sliding rule 10. Extending transversely across the body portion 8 and secured in any suitable manner to the flanges 11 of said body portion is a metal plate 12 having its central portion provided with a threaded boss 13 which receives a correspondingly threaded adjusting screw 14. The free end of the screw 14 extends through the boss 13 and is adapted to bear against the adjacent face of the rule 10 for securing the latter in adjusted position. One side of the rule 10 is provided with a plurality of scales 15 and 16, the scale 15 being graduated to inches and fractions thereof so as to enable the operator to draw obliquely disposed section lines with a forty-five degree triangle, and the lower scale 16 being also graduated and designed to be used in connection with the triangle when the latter is employed for making vertical section lines. The opposite face of the rule is also graduated to form spaced scales 17 and 18, one of which is graduated for use with a sixty degree triangle and the other for a thirty degree triangle. One end of the rule 10 is provided with a terminal head 19 having a plurality of angularly disposed faces 20 corresponding to thirty, forty-five and sixty degrees, respectively, so that the gage may be used in connection with different styles of triangles.



The end walls of the slots 6 and 7 of the forty-five degree triangle, shown in Fig. 1 of the drawing, are inclined or beveled at 21 for engagement with the angular face of the head 19 indicating the forty-five degree angle, the other angular faces of the head being adapted to engage the inclined walls of the slots or recesses formed in sixty and thirty degree angles, respectively, when the gage is attached to or used in connection with triangles of such a character. The rear ends of the flanges 11 are preferably inclined or beveled at 22 and are adapted to abut against the wall of the triangle at the juncture of the intersecting slots 6 and 7, so as to space the angular face of the head 19 from the adjacent inclined wall 21 of the slot 6 and thus permit the triangle to be moved rearwardly on the blade 23 of a T-square the distance between the angular face of the head 19 and said inclined wall 21, thereby to properly space the section lines and enable the operator to draw the same in spaced parallel relation to each other.

In using the device, the gage is positioned in either the recess 6 or 7 of the triangle and the rule 10 moved longitudinally until the head 19 of the rule bears against the adjacent inclined face 21 of said recess. The operator then loosens the screw 14 and slides the body portion 8 laterally until the terminals 22 of the flanges register with the proper graduations on the rule 10 corresponding to the desired width of the section line, after which the clamping screw 14 is rotated to lock the parts in adjusted position. With the parts thus adjusted as shown in Fig. 2 of the drawings, the draftsman is enabled to draw an oblique section line along the inclined edge of the triangle in the usual manner. The operator then places his thumb on the triangle below the gage with his first and second fingers disposed on opposite sides of the clamping screw 14, and moves the gage bodily and longitudinally within the recess 6 until the terminals 22 of the flanges 11 abut against the rear wall of the slot and in which position the head of the rule will be spaced from the forward inclined wall 21 of the slot 6 so that a rearward movement imparted to the triangle 5 will cause the latter to move the distance between the head 19 and wall 21, and thus properly position the active edge of the triangle to permit the draftsman to draw a second section line in spaced parallel relation to the first line, this operation being repeated until all of the section lines are formed. In order to draw vertical section lines, the triangle is reversed, as is best shown in Fig. 3 of the drawing and the operation before described repeated.

While the gage is shown and described in connection with a T-square it will of course be understood that the same may be used in

connection with any other drafting instrument employed for section lining drawings, without departing from the spirit of the invention.

Having thus described the invention, what is claimed as new is:

1. The combination with a triangle having intersecting recesses formed therein, the end walls of which are inclined, and a gage slidably mounted in one of said recesses and provided with a head having a plurality of angular faces, one of which is adapted to bear against the inclined wall of the adjacent recess.

2. In combination with a triangle having a recess formed therein, a gage seated in said recess and comprising a body portion having a seating groove, a graduated rule slidably mounted in the seating groove of the body portion constituting a portion of the gage, and a head on the rule having a plurality of angularly disposed faces adapted to bear against the inclined wall of the recess in the triangle for limiting the sliding movement of said triangle.

3. The combination of a triangle having a recess formed therein, a body portion seated in the recess and provided with a guiding groove defining oppositely disposed flanges the outer ends of which are beveled, a graduated rule seated in the groove of the body portion and provided with a terminal head arranged to engage the adjacent wall of the recess, a plate secured to the flanges and extending across the rule, and a clamping screw mounted in the plate and adapted to bear against the rule for locking the latter in adjusted position.

4. The combination of a triangle having a recess formed therein, one wall of which is inclined, a gage seated in said recess and including co-acting members movable relatively to each other, one of said members being graduated and provided with a terminal head having a plurality of angular faces and the other member being provided with means for clamping both members in fixed relation to each other, said members being movable simultaneously or independently within the recess of the triangle.

5. A section liner including a body portion having a longitudinally disposed groove formed therein, a rule slidably mounted in said groove and provided with a plurality of scales, and a head secured to one end of the rule and provided with a plurality of angularly disposed faces.

6. A section liner including a body portion having a longitudinally disposed guiding groove formed therein and defining oppositely disposed flanges one end of each of which is inclined, a rule slidably mounted in the groove of the body portion and graduated to form a plurality of scales, a head secured to one end of the rule and provided



with a plurality of angularly disposed faces,  
a plate connecting the flanges of the body  
portion and extending across one side of the  
rule, and a clamping screw threaded in the  
5 plate and adapted to bear against the adja-  
cent face of the rule for locking the latter  
in adjusted position.

7. The combination with a triangle having  
a recess provided with an inclined wall, and  
10 a gage slidably mounted in said recess and

provided with a head having a plurality of  
angular faces, one of which is adapted to  
bear against the inclined wall of said recess.

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

JOHN BAUM, JR. [L. s.]

Witnesses:

C. L. WILLIAMS,

G. E. DAVIDSON.