

celluloid to angle.

No. 822,160.

PATENTED MAY 29, 1906.

C. S. SHILLING & A. L. LINK.
SECTION LINER.

APPLICATION FILED FEB. 26, 1906.

531,186 ³³/₁₁₀

961,719 "

(34) 509,290 "

See 23,938 (1903) (33) for overlapping of sliding elements on space adjuster.

Fig. 1.

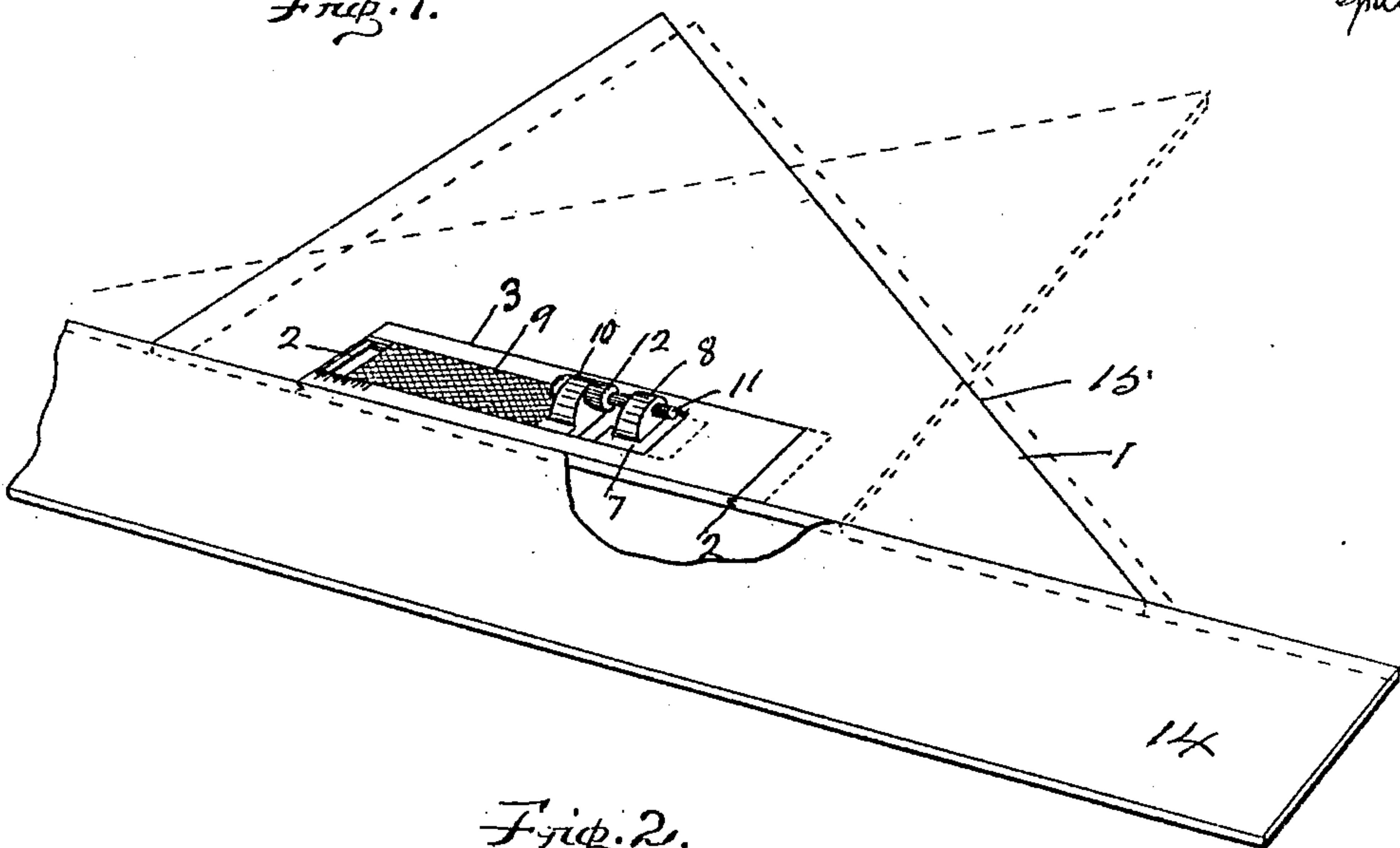


Fig. 2.

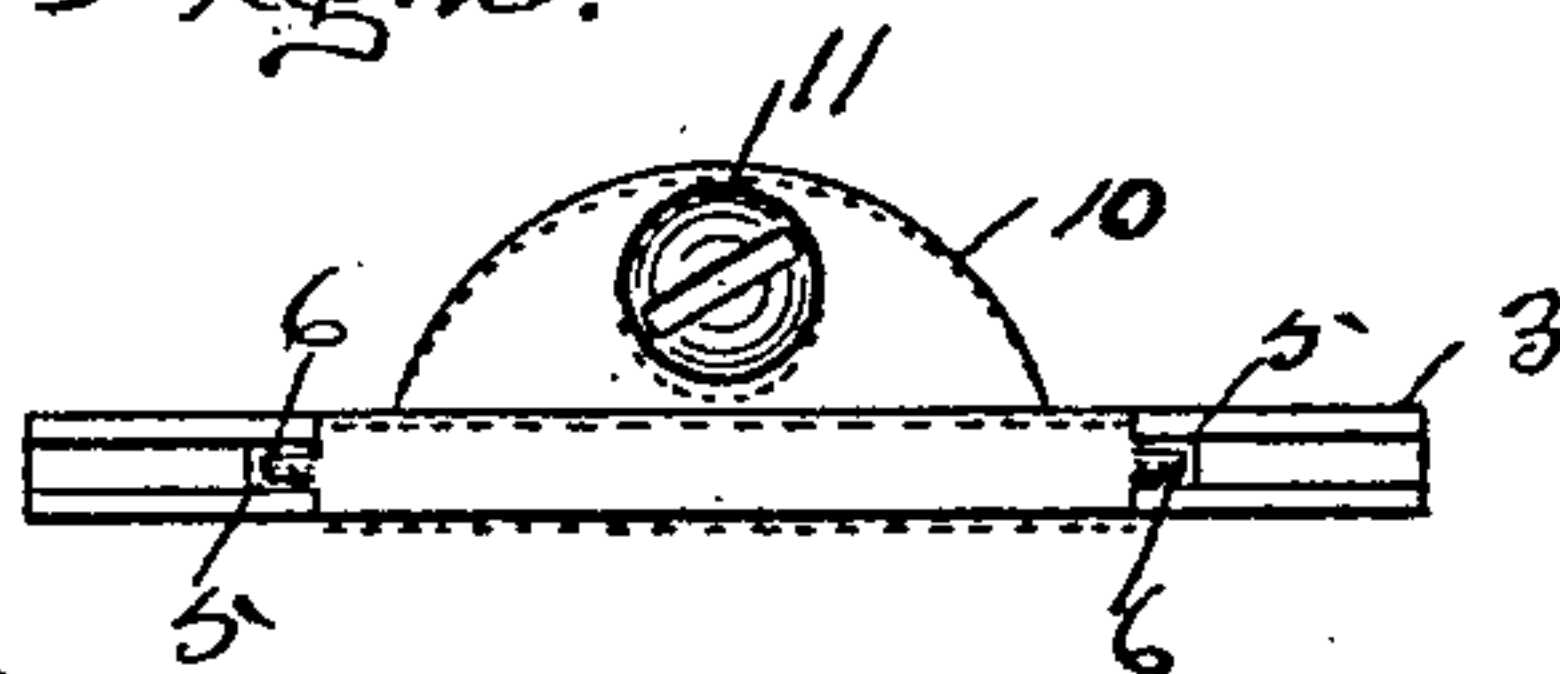
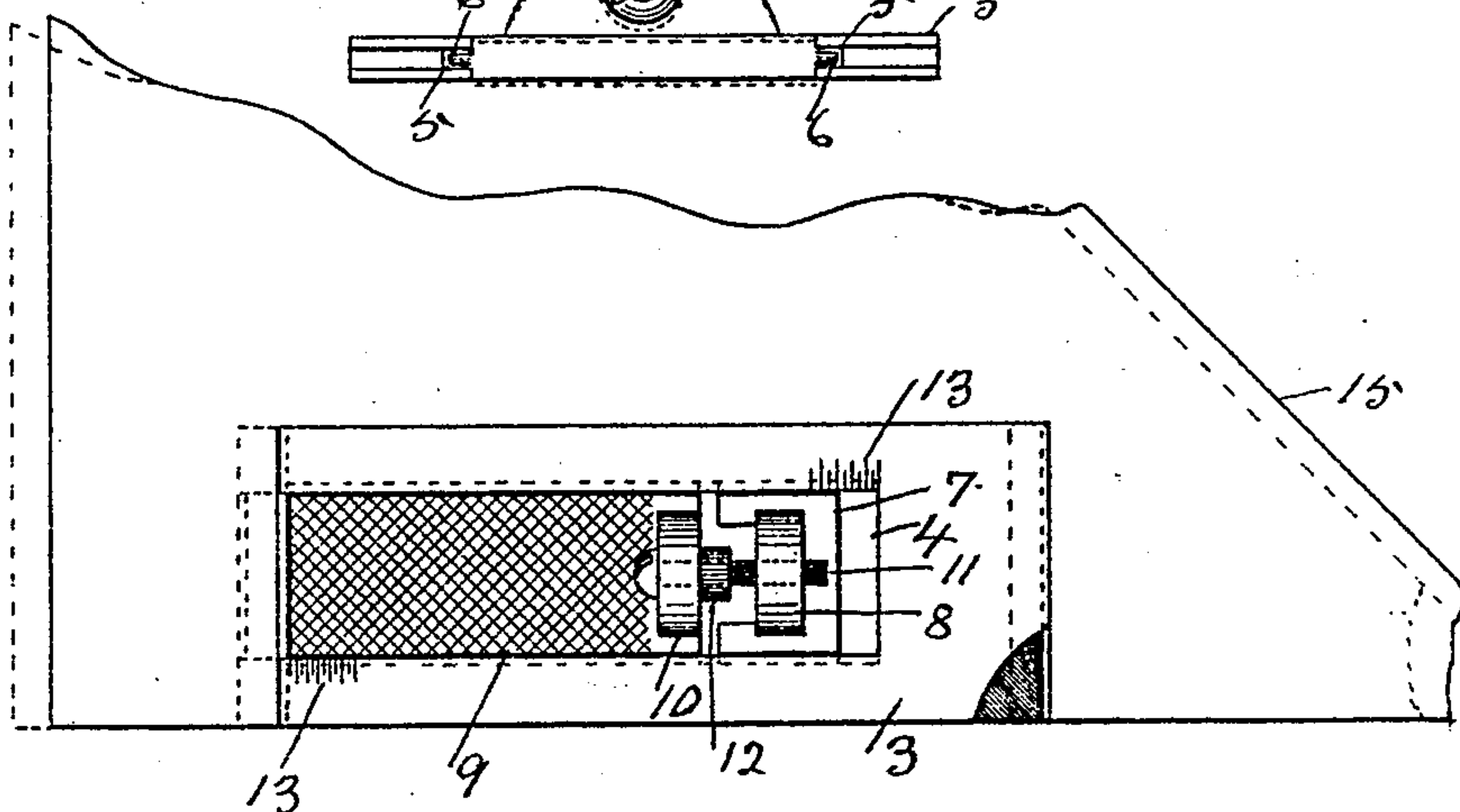


Fig. 3.



WITNESSES:

H. J. Burns
O. M. Mattler.

Carl S. Shilling
and
Alvin L. Link

INVENTORS

BY *Chapin & Denny*

THEIR ATTORNEYS.



UNITED STATES PATENT OFFICE.

CARL S. SHILLING AND ALVIA L. LINK, OF CHICAGO, ILLINOIS.

SECTION-LINER.

No. 822,160.

Specification of Letters Patent.

Patented May 29, 1906.

Application filed February 26, 1906. Serial No. 302,888.

To all whom it may concern:

Be it known that we, CARL S. SHILLING and ALVIA L. LINK, citizens of the United States, residing at Chicago, in the county of Cook, in the State of Illinois, have invented certain new and useful Improvements in Section-Liners; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to improvements in section-liners for the use of draftsmen.

The object of our present invention is to provide a comparatively cheap, simple, and convenient section-liner having a removable guide-plate whereby the triangle, with which our invention is associated, can be reversed at pleasure for use upon either side and adapted to secure a uniform space in sectioning.

Our invention consists of a metallic guide-plate having a central longitudinal slot in which is slidably mounted a two-part plate adjustably connected and adapted for a uniform measured longitudinal movement therein in spacing, the said guide-plate being removably mounted in the base of the triangle in which it is used.

The principal novel feature of our invention resides in the construction, operation, and coöperation of the removable guide-plate and adjustable spacing means.

Similar parts are indicated by similar reference-numerals in the accompanying drawings, in which—

Figure 1 is a perspective view of our invention in position for use in connection with a T-square, broken away in part, the reversed position of the triangle being indicated by dotted lines. Fig. 2 is an enlarged end view of the guide-plate, showing the manner of mounting the spacing means therein. Fig. 3 is a plan view of our invention in position in the base of a triangle, broken away in part, the space for which the spacing means is adjusted being shown in dotted outline.

The triangle 1 of the usual or other proper contour and dimensions, preferably made of celluloid, has a rectangular recess in its base, the ends of which recess are respectively provided with a transverse tenon 2. In this recess is removably mounted a metal guide-plate 3, preferably of aluminium, whose

transversely-mortised ends are adapted to loosely receive the respective tenons 2 of the guide-plate, and thereby retain the same in position in the said recess, as shown in Figs. 1 and 2. The guide-plate has a limited vertical play in the said recess, preferably of about one sixty-fourth of an inch, for the purpose hereinafter described.

The guide-plate 3 has a central longitudinal slot or recess 4 extending from one end nearly to the other end thereof, whose sides are provided with a longitudinal mortise 5, adapted to receive the respective longitudinal tenons 6, Fig. 2, of the two-part spacing means which is slidably and removably mounted therein. This spacing means consists of a short plate 7, having a surmounted transverse lug 8, provided with a central screw-threaded perforation, and a finger-plate 9, having a friction-surface upon its upper face and provided with a surmounted lug 10, having lateral screw-threaded perforation in register with the said perforation in the lug 8, in which perforations is arranged a screw 11, provided with a rigid milled nut 12 for operating the same.

The guide-plate 3 is provided at the upper right-hand corner and at the lower left-hand corner of the slot 4 with a scale 13, preferably graduated to the thirty-second of an inch to enable the operator to adjust the spacing means to accurately measure the desired width of space in cross-sectioning.

The operation and manner of employing our invention thus described is obvious and, briefly stated, as follows: The operator first spreads or separates the plates 7 and 9 by means of the adjusting-screw 11 until the distance between the outer end of the plate 7 and the adjacent end of the slot 4 is equal to the desired space between the section-lines. This adjustment can conveniently be effected either by inserting the point of a knife or other instrument in the slot in the head of the screw or by grasping the fixed nut 12 with the fingers. He next properly locates his T-square 14 in a well-understood manner, against the farther edge of which he rests the base of the triangle 1 in use, thereby securely preventing any displacement of the guide-plate 3. He then pushes the spacing means to the inner end of the slot 4 and holds the plate 9 firmly upon the drawing-paper by his first two fingers, which constantly remain upon the friction-surface in use. The inclined edge 15 of the triangle guides his draw-

ing-tool, and immediately after the formation of each cross-section line, referring now to Figs. 1 and 2, he slides the spacing means to the left to its full limit, or the distance of the desired space between the lines, after which he slides the triangle 1 its limit of movement to the left, which is necessarily the same as that of the plate 9. The before-mentioned play of the tenons 6 in the guiding-mortises 5 permits the free sliding movement of the triangle 1 and the guide-plate 3 when the spacing-plate 9 is held down firmly upon the paper without the least tendency toward binding therein. When it is desired to employ the triangle in the position shown in dotted outline in Fig. 1, with the inclined or ruling edge of the triangle to the left, the operator without disturbing the T-square simply removes the guide-plate, with its spacing means, inverts the triangle, and then replaces the guide-plate and spacing means in the relative position shown in Fig. 1, after which he consecutively slides the spacing means and the triangle to the right, as above described, instead of to the left.

It is obvious that our invention is thus cheap, simple, reliable, easily adjusted, and convenient in use and by means of the vertical play between the spacing-plates and the base-plate a perfect freedom of movement between these plates is secured when either one of them is firmly held upon the drawing-paper. Both sides of the plate 9 may be provided with a friction-surface, if desired, to

secure a better holding contact with the paper-surface.

Having thus described our invention and the manner of employing the same, what we desire to secure by Letters Patent is—

1. A section-liner consisting of a triangle; a longitudinally-slotted guide-plate removably mounted in the base of the triangle; a spacing means slidably mounted in the slot of the guide-plate and consisting of a pair of plates in horizontal alinement; and means for adjustably connecting the said plates, which have a limited vertical play in their bearings for the purpose described.

2. In a section-liner the combination of a triangle, a guide-plate removably mounted in the base of the triangle and having a longitudinal slot therein for the spacing means; a pair of spacing-plates in horizontal alinement slidably mounted in the said slot, and having a limited vertical play therein to permit a free sliding movement between the said plates and the guide-plate when either is held firmly upon the supporting-surface; and means for adjustably connecting the said spacing-plates.

Signed by us at Chicago, county of Cook, in the State of Illinois, this 21st day of February, A. D. 1906.

CARL S. SHILLING.
ALVIA L. LINK.

Witnesses:

Mrs. A. MILLER,
KATHLEEN J. GILLIAM.