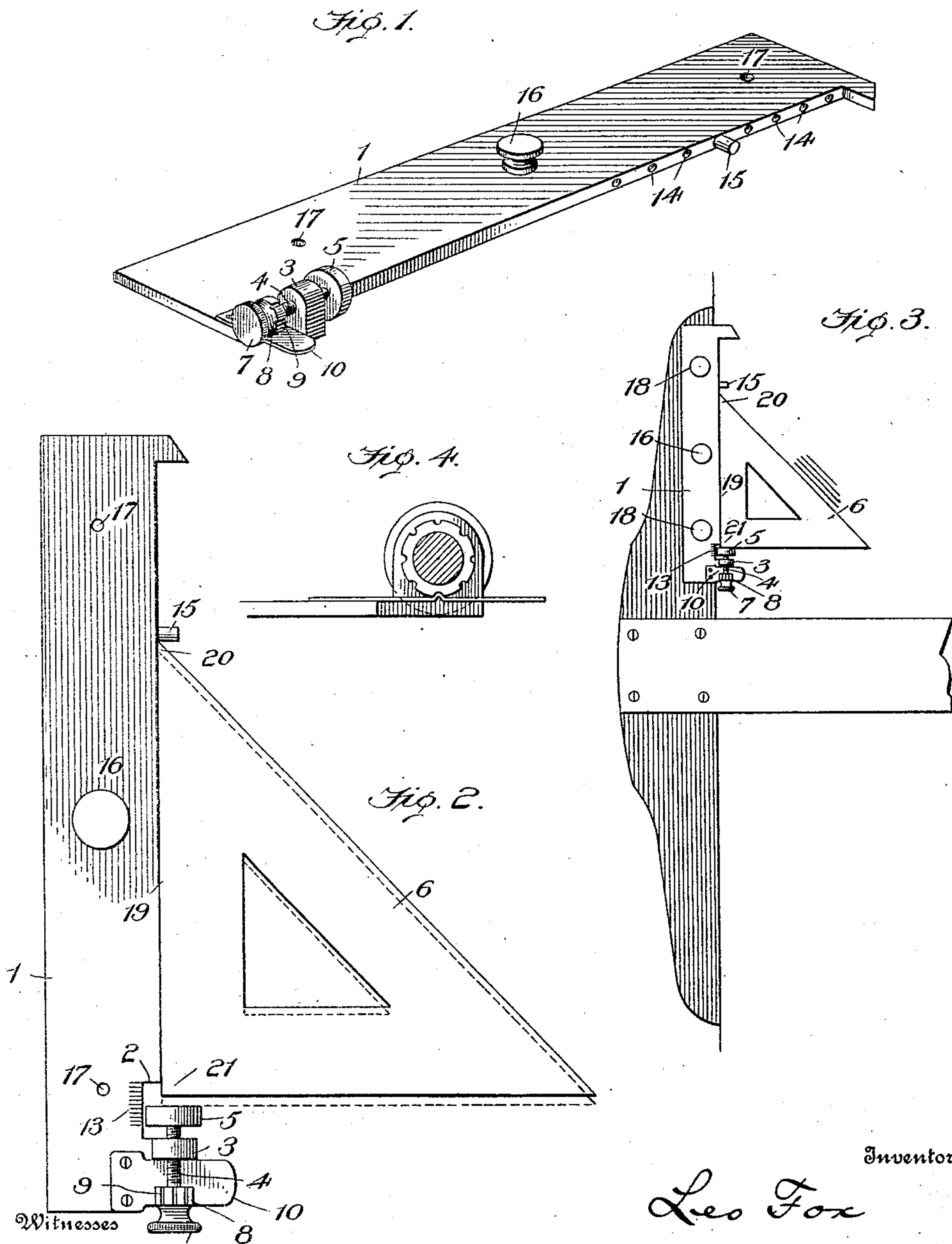


L. FOX.
RULER.

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910,523.

Patented Jan. 26, 1909.



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UNITED STATES PATENT OFFICE.

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RULER.

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To all whom it may concern:

Be it known that I, LEO FOX, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Rulers, of which the following is a specification.

My present invention relates to certain new and useful improvements in a combined ruler and section-liner adapted for use of draftsmen and engravers.

The invention has for its objects several more or less important features which will commend its use, among which may be mentioned its adaptability to triangles of different sizes; its simplicity in construction, and its cheapness of manufacture.

The invention is especially adapted for use as a section-liner to be used in connection with a triangle, and its construction is such that it may also be attached to a T-square.

In order to enable others to understand, make and use my said invention I will proceed to describe the same in detail, reference being had to the accompanying drawing, and will then set forth what I claim to be new.

Figure 1, is a perspective view of a combined ruler and section-liner made in accordance with the invention. Fig. 2, is a top plan view showing the device in use. Fig. 3, is a similar view showing the device attached to a T-square. Fig. 4 is a sectional view illustrating the operative relation between the detent and the grooved collar.

The device consists of a straight edge or ruler 1, having a cut-away portion 2, at one end and an upstanding lug or ear 3, adjacent said cut-away portion. Through a screw-threaded opening in said lug or ear passes a step-by-step adjustable screw-threaded rod or screw 4, having a disk or stop 5, at one end constituting a stop or abutment for a triangle 6, and at its opposite end said threaded rod is provided with a milled head 7, having a collar 8, provided on its periphery with a series of equidistant transversely arranged grooves 9. Coöperatively associated with the grooves 9, in the collar 8, is a yielding spring detent 10, that is secured to the ruler 1, as shown. The yielding spring is arranged to successively enter the grooves 9 in the collar as the latter is turned by the milled head 10, and thus acts as a temporary resistance against further turning movement of the

head and its rod 4, until the resistance of the spring is overcome.

The face of the ruler adjacent the cut-away portion 2, is provided with regularly spaced line graduations 13, the distance between any two of which is preferably equal to the feed movement of the threaded rod 4, and its disk 5, when said rod is rotated one complete revolution. These line-graduations 13, indicate the divisions between the section lines to be drawn, and it will be obvious that the disk may be adjusted with accuracy to cause the section lines to be regularly spaced equal to the space between any two or more of the line divisions, and when so adjusted it will be held in its adjusted position by means of the spring 10.

In order to enable the ruler or straight-edge to be employed as a section-liner to be used with triangles of different size it is necessary to have an abutment opposite and in line with the disk 5, and to provide for the same I form in the front edge of the ruler 1 opposite the disk 5, a plurality of equidistant threaded openings or sockets 14, into any one of which may be fitted a stud 15. By this construction if a small triangle is being used the stud 15, will be inserted in one of the openings 14, nearest the disk 5, while with a larger triangle the stud will be secured in one of the other openings farther removed from the disk.

I prefer to provide the upper face of the ruler 1, with an upwardly projecting knob or button 16, to be grasped by the fingers to facilitate movement of the device over the drawing when in use.

In some instances it is desirable to attach the section-liner directly to a T-square and to provide for such attachment I form openings 17, at opposite ends of the ruler 1, through which thumb tacks 18, or other fastening devices may be passed, all as more clearly shown in Fig. 3.

In using the device as a section liner, the stud 15, is first inserted in the proper aperture 14, depending upon the length of the edge 19, of the triangle that faces the front edge of the ruler 1, as shown in Fig. 2. The point or angle 20, of the triangle is then brought to bear against the stud and the face of the disk 5, adjusted toward or from the angle 21, of the triangle, as the case may be, until the space between these two points, namely,

disk 5, and angle 21, equals the desired space between the section lines to be drawn. The first section line is now drawn after which the triangle is first moved parallel with the straight edge until angle 21 abuts the disk 5, then the straight edge is moved in the same direction until the abutment or stud 15, abuts the point or angle 20, of the triangle, when it will be found that the triangle is in the proper position for the next section line to be drawn. The two parts are each thus successively moved after every section line is drawn and the result is that the lines must be regularly and equally spaced. To change or vary the distance between the section lines it is only necessary to rotate the threaded rod or screw 4, which will shift the position of the disk 5, toward or from the angle 21, of the triangle 6; and the space between these two points will determine the distance between the section-lines to be drawn.

What I claim is:—

1. An implement of the character described, comprising a straight-edge having an independent and adjustably mounted abutment at one edge, a recess within said edge an adjusting screw, a disk on one end of the screw fitting within said recess and a head and collar at the opposite end, said collar being provided with peripheral notches, and

a detent coöperating with said collar and notches to resist free turning movement of the screw.

2. An implement of the character described, comprising a straight-edge provided with a plurality of apertures in one edge, an independent stud adapted to be removably inserted in any of said apertures, and an adjusting screw at one end of the straight-edge.

3. An implement of the character described, comprising a ruler having a portion of its edge cut away at one end, an adjustable stop movable back and forth in said cut-away portion, and an abutment at the opposite end of the ruler.

4. An implement of the character described, comprising a ruler having a cut-away portion at one end, an adjusting screw carrying a stop-disk movable in said cut-away portion, a yielding detent for resisting free turning movement of said screw, and an abutment at the opposite end of the ruler.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LEO FOX.

Witnesses:

DANIEL DIRENZO,
WILLIAM BARBIERI.