E. J. TOWNE.

PARALLEL RULERS.

No. 187,330. Patented Feb. 13, 1877.

Fig. 1.

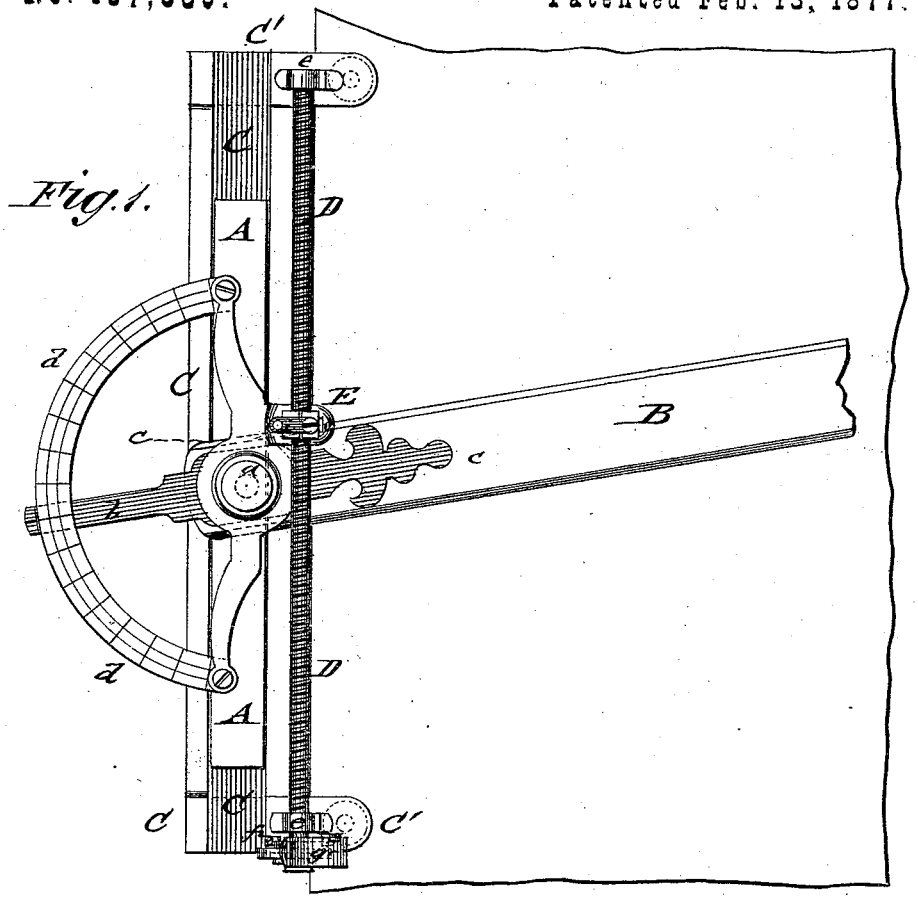


Fig. 2.

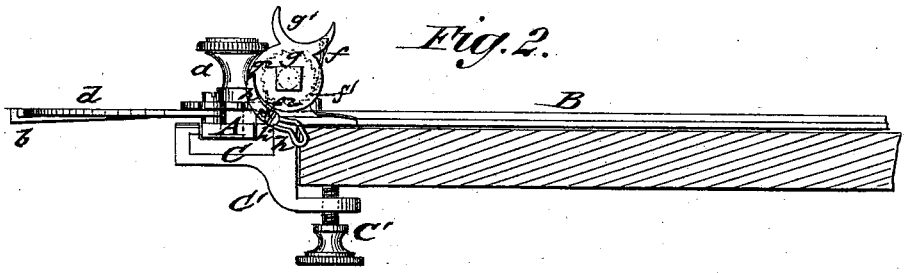
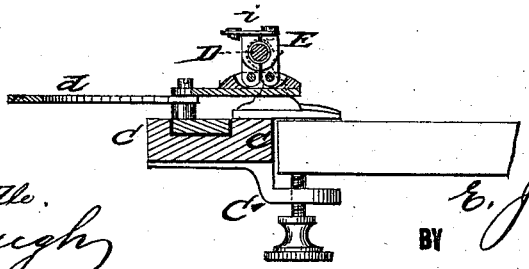


Fig. 3



WITNESSES:

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UNITED STATES PATENT OFFICE.

EUGENE J. TOWNE, OF NORTH DANA, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND J. W. GOODMAN, OF SAME PLACE.

IMPROVEMENT IN PARALLEL RULERS.

Specification forming part of Letters Patent No. **187,330**, dated February 13, 1877; application filed December 23, 1876.

To all whom it may concern:

Be it known that I, EUGENE J. TOWNE, of North Dana, in the county of Worcester and State of Massachusetts, have invented a new and Improved T-Square, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view of my improved T-square, and Figs. 2 and 3 are, respectively, an end view and a vertical transverse section of the same on line *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The invention relates to an improved T-square that combines the advantage of a common and bevel square with a parallel ruler admitting parallel shading at any position of the blade in a convenient, quick, and accurate manner, and the invention consists of a T-square with adjustable blade, sliding by its head in a recessed guide-piece attached to the drawing-board. The guide-piece carries in end-brackets a longitudinal screw-shaft that is operated by a thumb-rest, ratchet, and pawl, and an adjustable stop device, so as to move the blade by a split locking-nut at equal distances for parallel ruling.

In the drawing, A represents the head, and B the blade, of my improved T-square, which is capable of adjustment to any angle by the clamp-screw *a*, indicator *b*, and a graduated protractor, *d*, attached to the head. The head A is moved into any position in a grooved guide-piece, C, that is attached by end-clamps and fastening-screws C′ to one side of the drawing-board. The clamps C′ are provided at the top parts with brackets, *e*, which carry a screw-shaft, D, that is turned by means of a spring-pawl, *f*, attached to a loosely-turning disk, *g*, with thumb-rest g^1, the pawl engaging a ratchet, f^1, keyed fast to the screw-shaft, and being retained in opposite direction by a check-pawl, f^2. A projecting shoulder, g^2, of disk *g* forms contact with a curved and slotted stop, *h*, that is adjusted by a set-screw, h^1, at the end of the clamp C′, and defines, in connection with the clamp, the extent of swinging motion of the thumb-piece, and thereby the degree of rotation of the screw-shaft. The T-square is attached to the screw-shaft D by a split nut, E, whose semi-sections are hinged to a support of the head A, and closed to the screw-shaft by a spring-catch, *i*.

The turning of the screw-shaft by the thumb-rest produces the parallel motion of the T-square with a greater or less distance between the lines, by the action of the split nut, and admits thereby the quick and accurate parallel ruling with the T-square. By opening the nut and throwing the hinged sections clear of the screw-shaft the T-square may be used in the customary manner, and at any angle to the head.

The attachment forms a simple mechanism for parallel shading, and is operated by one hand, while the drawing-pen is held in the other hand for drawing the parallel lines in quick manner, and at any required distance from each other.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. The combination of a guided and adjustable T-square having a split nut, attached to the head with a screw-shaft and revolving mechanism, operated by the thumb to produce the parallel motion of the blade, substantially in the manner and for the purpose set forth.

2. The combination of a revolving screw-shaft, D, having fast end-ratchet with a loosely-swinging thumb-rest, spring-pawl, and check-pawl, substantially as specified.

3. The combination of the swinging ratchet thumb-rest, having projecting shoulder, with a slotted adjustable stop-piece and set-screw to regulate extent of rotation of screw-shaft, substantially as set forth.

4. The combination of the revolving screw-shaft with a split nut, attached to head of the T square, the nut being made of hinged and spring-locked sections to be attached or detached from screw-shaft, as required for the purpose set forth.

EUGENE J. TOWNE.

Witnesses:

ALPHEUS J. NYE,

ALLEN W. GOODMAN.