

(No Model.)

F. W. DAVENPORT.  
DRAFTSMAN'S SECTION RULER.

No. 351,366.

Patented Oct. 26, 1886.

Fig. 1

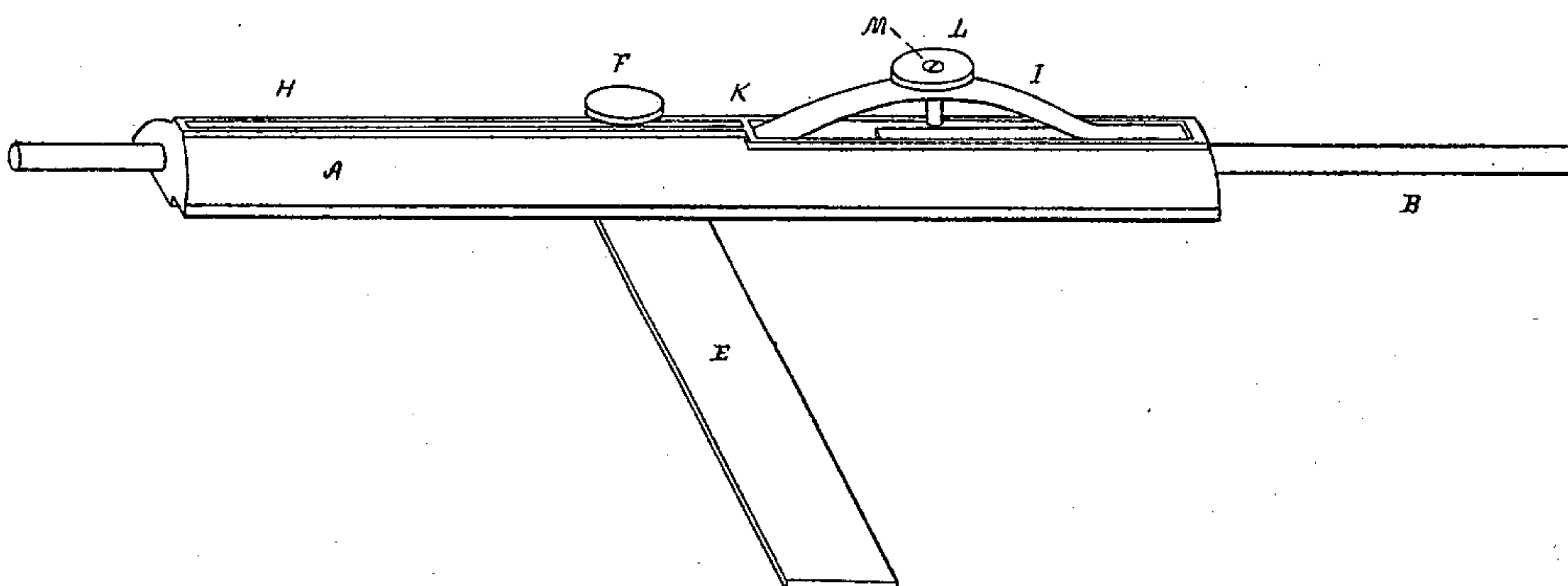


Fig. 2

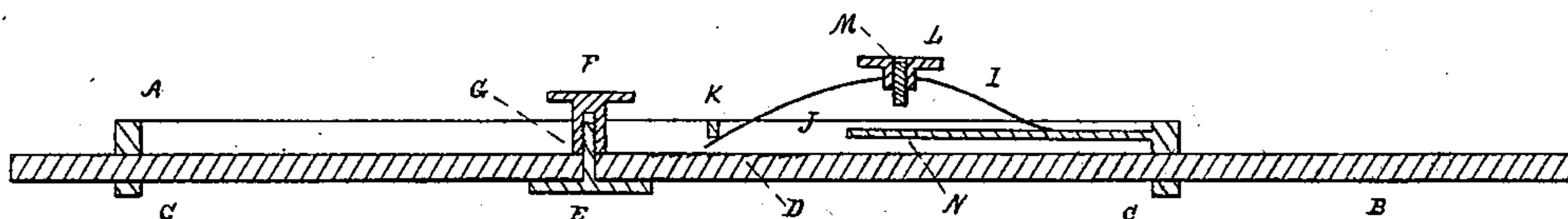
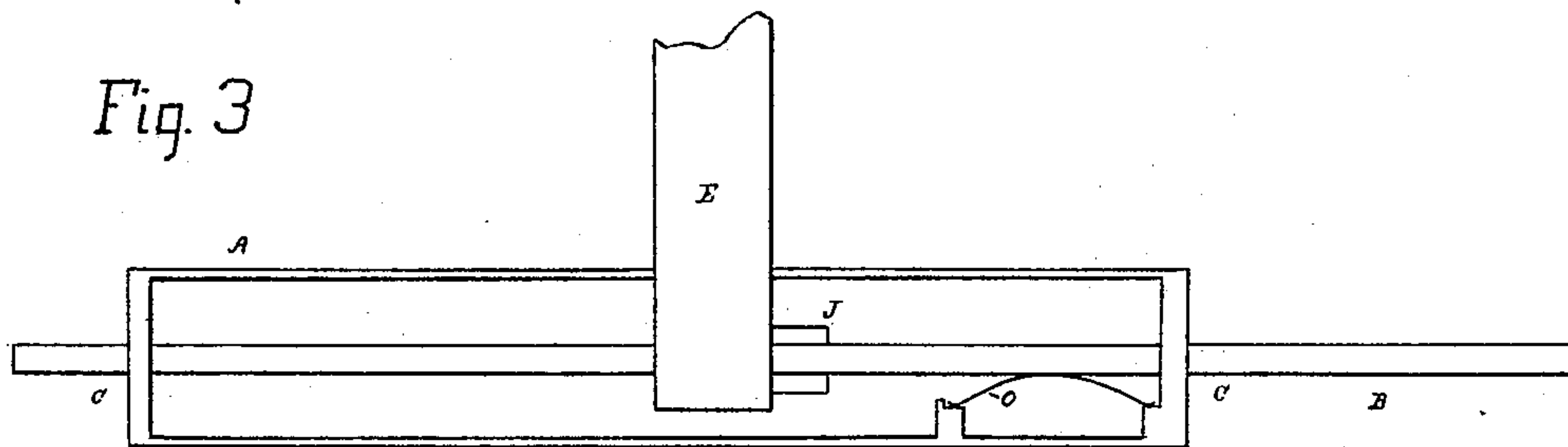


Fig. 3



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## DRAFTSMAN'S SECTION-RULER.

SPECIFICATION forming part of Letters Patent No. 351,366, dated October 26, 1886.

Application filed January 9, 1886. Serial No. 188,105. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK W. DAVENPORT, of the city and county of Providence, State of Rhode Island, have invented certain  
5 new and useful Improvements in Draftsmen's Section-Rulers; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this  
10 specification.

This invention relates to draftsmen's tools for spacing and ruling parallel lines accurately and rapidly.

Figure 1 is a perspective view of the tool.  
15 Fig. 2 is a longitudinal section of the same, and Fig. 3 is a bottom view.

A represents a base piece or casing, which is preferably hollowed underneath to receive the sliding bar B, which has its bearings at  
20 C C. This bar is provided at D with ratchet-teeth.

E is a ruler, which is clamped to said bar by the thumb-nut F, engaging a screw-rod secured to the ruler, and passing through  
25 a hole in bar B, as shown at G, Fig. 2. A slot is provided in the casing at H for the thumb-nut F to travel in, so that its head may be always accessible. It will be seen that this clamping arrangement allows the ruler to be  
30 secured at any angle to the bar B.

I is a flat spring, one end of which is rigidly secured to the casing. The other end passes downward through an aperture, J, in the casing and acts as a pawl upon the ratchet-teeth of bar B. In its normal state it does  
35 not engage said teeth, but presses lightly against the bar K of the casing, as shown in Fig. 2.

L is a thumb-piece for operating the instrument. It is secured to the spring-pawl I, and provided with a set-screw, M, which serves as an adjustable stop by reason of its lower end striking the part N of the casing. Said  
40 screw may be used to take up wear in the working parts and keep them in accurate adjustment. It may also be set for moving the ruler the distance between two or more teeth on bar B by a single movement of the thumb-piece.

50 O, Fig. 3, is a friction-spring inserted between the sliding bar B and the casing, and

serves to prevent said bar from sliding too easily.

The operation of the tool is as follows: Having placed it in position on the drawing, 55 the thumb-piece L is pressed down, causing the spring-pawl to enter one of the ratchet-teeth of bar B, and push it, with its attached ruler, forward a distance which will be determined by the adjustment of the set- 60 screw M. When the thumb-piece is released, it will return to its normal position. The bar B, with the ruler, being securely held by the friction-spring O, a line can now be drawn along the ruler and the operation repeated. 65 It will be seen that when the ruler is clamped at right angles to bar B and the set-screw is adjusted to take but one tooth at a time the ruled lines on the drawing will necessarily be of the exact distance apart as the teeth on the 70 sliding bar, and by pressing twice or three times upon the thumb-piece the distance between the lines will be increased by a corresponding number of teeth. Now, if the ruler, instead of being clamped at right angles to 75 the bar, be given any other angle, the lines will be brought closer together, as the greater the angle the closer the lines. The operator is thus enabled to quickly and easily adjust the tool for any width of ruling. When the 80 ruler has traveled to the end of the casing, it can be returned to the starting-point by pushing in the end of bar B.

The advantages of this instrument are its simplicity of construction and the rapidity 85 and accuracy of its work.

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

1. A base-piece provided with a straight 90 ratchet-bar and a sliding ruler, in combination with a pawl, said pawl moving the ruler forward by direct action upon the ratchet-bar,

2. A base-piece provided with a sliding ruler, a pawl and straight ratchet-bar for op- 95 erating as a thumb-piece to move the ruler forward by direct action, and an adjustable stop for controlling the action of said thumb-piece.

3. A base-piece provided with a sliding 100 ruler, a friction device for preventing too easy movement of said ruler, and a pawl and

straight ratchet-bar for moving the ruler forward by direct action.

4. A base-piece provided with a sliding ruler, a friction device for preventing too easy  
5 movement of said ruler, a pawl and straight ratchet-bar acting as a thumb-piece to move the ruler forward by direct action, and an ad-

justable stop for controlling the action of said thumb-piece.

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