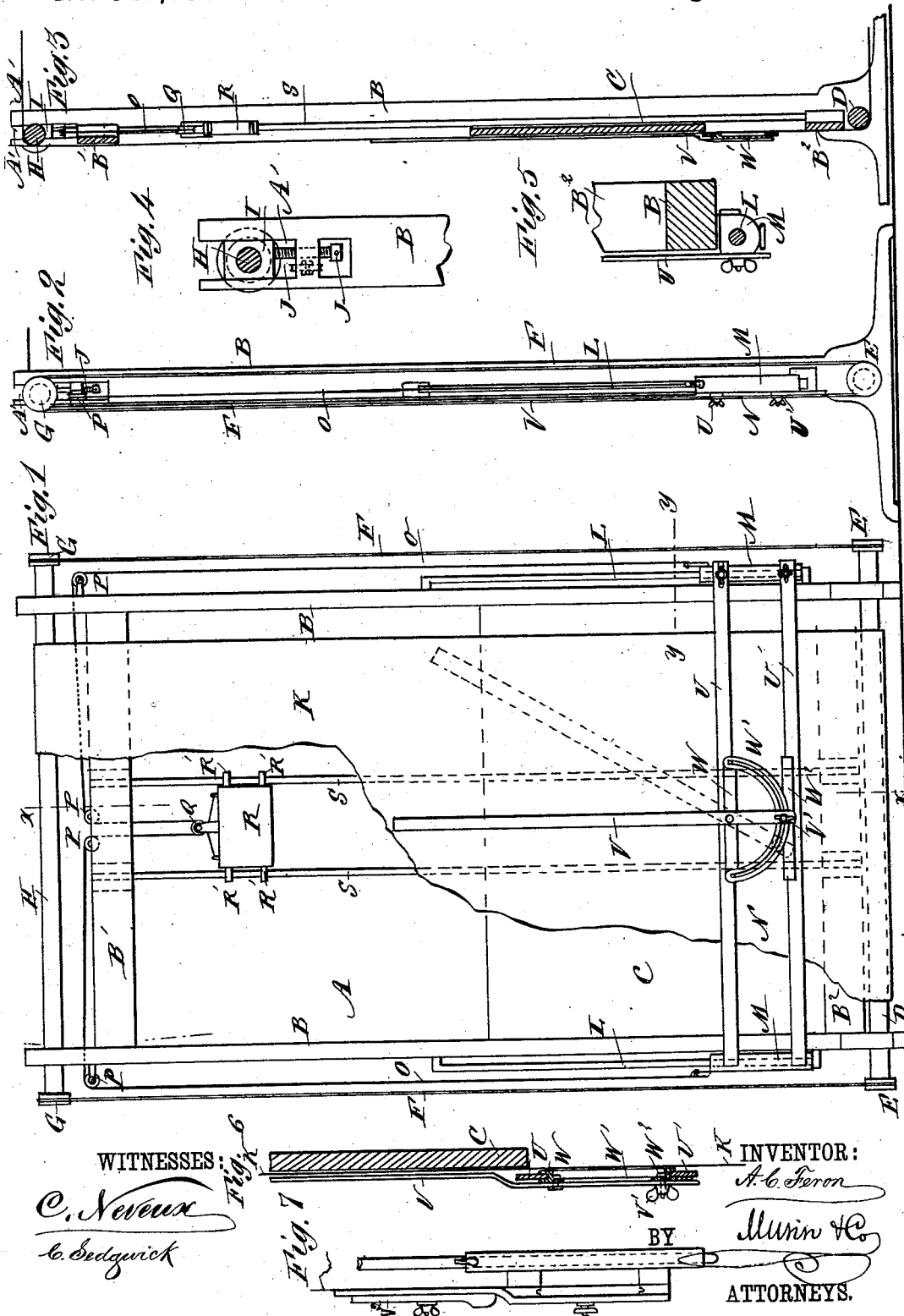


(No Model.)

A. C. FERON.  
DRAWING APPARATUS.

No. 347,099.

Patented Aug. 10, 1886.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## DRAWING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 347,099, dated August 10, 1886.

Application filed March 31, 1886. Serial No. 197,312. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR C. FÉRON, a citizen of France, residing in the city, county, and State of New York, have invented a new and Improved Drawing Apparatus, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved drawing apparatus which facilitates drawing and permits of the use of a large-sized drawing-paper.

The invention consists of a frame provided with a stationary drawing-board, of a movable counterbalanced T-square, and of rollers on which an endless sheet of drawing-paper is mounted.

The invention also consists of various parts and details and combinations of the same, hereinafter more fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of my improvement. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical cross-section of the same on the line  $xx$  of Fig. 1. Fig. 4 is a detail view of the roller-bearing. Fig. 5 is a sectional plan view on the line  $yy$  of Fig. 1. Fig. 6 is a sectional elevation of the T-square, and Fig. 7 is an end view of a modification of the T-square.

The main frame A is provided with the standards B B, which are connected with each other by the cross-bars B' and B<sup>2</sup>, and by the stationary drawing-board C, of convenient size. A roller, D, is mounted in the lower ends of the standards B B, and is provided on the ends with grooved pulleys E E, over each of which passes an endless cord or chain, F, which cords also pass over the grooved pulleys G G, attached to the ends of the roller H, mounted on the bearings I, each of the bearings being adjustable in a slot or recess, A', formed in the upper part of each standard B, by means of a set-screw J.

Over the rollers D and H is placed an endless sheet of drawing-paper, K, which also is in close contact with the front surface of the drawing-board C.

On the outer side of each standard B is fastened the guide-rod L, on which is mounted a slide, M, to which the T-square N is attached. To each slide M is secured, near its upper end, a cord or chain, O, which extends upward and passes over the guide-rollers P P, and thence downward and to the roller Q, secured to the counter-weight R, provided with lugs R', which slide on the upright rods S S, attached to the cross-bars B' B<sup>2</sup>. The T-square N slides in the two horizontal straight-edges or guides U and U', attached to the slides M and the swinging straight-edge V, pivoted to the arm W, sliding on the horizontal straight-edge or guide U, and connected by the slotted segment W', with the arm W<sup>2</sup> sliding on the straight-edge U'. The screw V' passes through the slot in the segment W', and through the lower end of the swinging guide or straight-edge V, and serves to hold the latter in either a vertical or inclined position in relation to the horizontal straight-edges U and U'.

Instead of using the pivoted straight-edge V and segment W', I may also connect the arms W and W<sup>2</sup> rigidly with each other by fastening the straight-edge V rigidly on the said arms W and W<sup>2</sup>, and I then pivot a second straight-edge, V<sup>2</sup>, on the straight-edge V, as shown in Fig. 7. The rigid straight-edge V then only serves to make vertical lines, while the other straight-edge, V<sup>2</sup>, serves to make angular lines.

The operation is as follows: A sheet of drawing-paper, K, is passed over the rollers D and H, and the ends are fastened together, so as to form an endless sheet of drawing-paper, which is held in a stretched position over the drawing-board C by adjusting the set-screws J against the bearings I of the upper roller, H. The operator can then work on the drawing-paper over the drawing-board C, with the help of the T-square N, which can be easily moved up and down on the guide-rods L with the assistance of the counter-balance. With the aid of the straight-edges U and U' the operator is enabled to draw horizontal lines, and with the swinging straight-edge V, which can be moved laterally on the straight-edges U and U', the operator can draw vertical or diagonal lines. The operator can, by pulling on either of the ropes O, move the paper up or down, as

required by the work to be done, and is thus enabled to make drawings on the drawing-paper K of considerable length without his moving from the drawing-board.

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

1. In a drawing apparatus, the combination of a frame, a drawing board attached to the same, two rollers, each having pulleys on each end and being mounted on the said frame, and endless cords passing over the said pulleys on the rollers, with a counterbalanced movable T-square, substantially as shown and described.

15 2. In a drawing apparatus, the frame A, the drawing-board C, and the guide-rods L, in combination with the slides M, the guides U and U', and the T-square N, substantially as shown and described.

20 3. In a drawing apparatus, the frame A, the drawing-board C, and the guide-rods L, in combination with the slides M, the guides U and U', the T-square N, the cords or chains O, attached to the slides M and passing over the pulleys P, and the counter-weight R, substantially as shown and described.

4. In a drawing apparatus, the frame A, the drawing-board C, the rollers D and H, over which is placed the endless sheet of drawing-paper, the cords or chains F, the pulleys E and G, attached to the rollers D and H, and the guide-rods L, in combination with the slides M, the guides U and U', the T-square N, the cords or chains O, attached to the slides M and passing over the pulleys P, and the counter-weight R, substantially as shown and described.

5. In a drawing apparatus, the frame A, the drawing-board C, the guide-rods L, the slides M, the cords or chains O, passing over the pulleys P, and the counter-weight R, attached to the ropes or chains O, in combination with the straight-edges U and U', the arms W and W', the slotted segment W', and the pivoted straight-edge V, adjustable on the slotted segment W' by a screw, V', substantially as shown and described.

ARTHUR C. FÉRON.

Witnesses:

I. GERMINET,

E. BARQNET.