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F. G. HALL.

DRAFTING INSTRUMENT.

APPLICATION FILED FEB. 8, 1907.

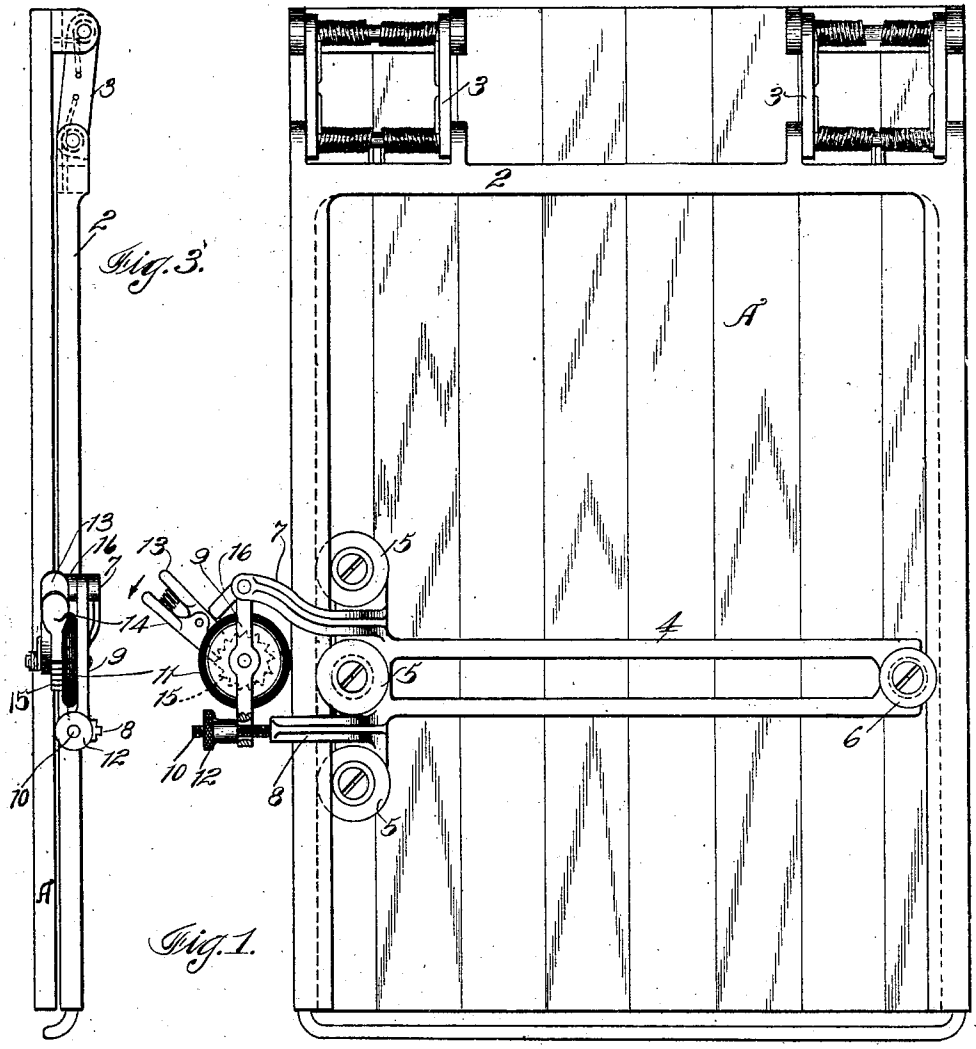


Fig. 3.

Fig. 1.

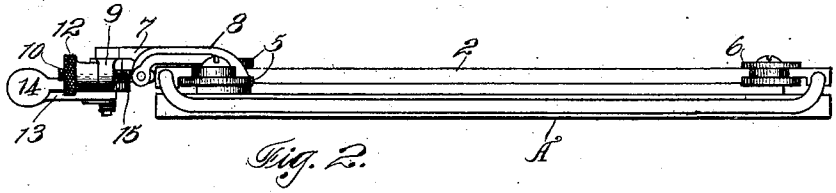


Fig. 2.

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DRAFTING INSTRUMENT.

No. 862,636 Specification of Letters Patent. Patented Aug. 6, 1907.

Application filed February 8, 1907. Serial No. 356,300.

To all whom it may concern:

Be it known that I, FRANK G. HALL, a citizen of the United States, residing at Riverside, in the county of Riverside and State of California, have invented new and useful Improvements in Drafting Instruments, of which the following is a specification.

My invention relates to drafting instruments and copyholders.

The object of the present invention is to provide a simple, practical device for drawing parallel lines at equal distances apart, or for use in holding copy for typist and others.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a plan view of the device. Fig. 2 is an end view; and Fig. 3 is a side elevation thereof.

A represents a back or flat board, or other suitable paper support.

2 is a frame hinged thereto by the double spring-pressed, toggle-jointed hinges 3.

The object of the frame is to clamp the paper to the back and to provide suitable parallel guides for the ruler or spacing bar 4. This ruler 4 is here shown in the form of a T with the arms of the T provided with the rollers 5 adapted to run on suitable tracks or in suitable guides in or on one side of frame 2, while the other end of the ruler is shown as provided with a single roller 6 running on a corresponding track on the opposite side of the frame 2.

The ruler carries two bracket arms 7—8 at its T-end, which bracket arms extend over and beyond the side of frame 2 and carry a mechanism for imparting a step by step movement to the ruler. This mechanism is here shown as follows: A lever 9 is fulcrumed at one end to bracket 7 and has the other end adjustable on the screw threaded stud 10, which latter is fixed to bracket 8. A small rubber tired roller 11 is journaled on lever 9 and is adapted to bear on the side of the guide frame 2 in opposition to the rollers 5. By suitably manipulating the nut 12 on the stud 10, the guide-bar on which the roller 11 runs may be made to press with greater or less force against the side of the guide frame 2, and so by clamping this side of the guide-frame tighter between the rollers 11 and 5 insure the perpendicularity of the ruler 4 with respect to the sides of the clamping frame. A spring-actuated lever 13 is fulcrumed to the pivot of roller 11 and carries a spring actuated pawl 14 engaging the teeth of ratchet wheel 15, which latter is fixedly secured to the roller. A stop 16 limits the backward oscillation of the lever 13.

Pulling on the lever 13 in the direction of the arrow, Fig. 1, the pawl 14 is made to act on the ratchet 15, turn the wheel 11, and by reason of the frictional contact of the rubber tire of the wheel with the side of the frame 2, the ruler 4 is made to advance a suitable distance across the sheet which is clamped beneath the frame 2. By giving a uniform oscillatory movement to the lever 13, a correspondingly uniform step by step movement is imparted to the ruler member 4.

The adjustable nut 12 has a two-fold function; first, to prevent the ruler wabbling; and, second by pressing the roller 11 tighter against the sides of the frame 2 a good grippage is assured of the roller on the frame, so that a uniform movement may be given to the ruler.

The advantage of using a rubber-tired roller as 11 in frictional contact with the guide, aside from the matter of economy of construction, is that the rubber wheel takes up any unevenness in the guide casting and preserves a uniformity of pressure on the guide.

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

1. In a spacing device, the combination of a back, a guide-member carried thereby, a ruler-member having rollers at one end engaging one side of said guide-member, another roller carried by the ruler and engageable with the opposite side of said guide-member and coöperating with the first-named rollers and slidably clamping said ruler to said guide-member.

2. In a spacing device, the combination of a back, a guide-member carried thereby, a ruler-member having rollers at one end engaging one side of said guide-member, another roller carried by the ruler and engageable with the opposite side of said guide-member and coöperating with the first-named rollers and slidably clamping said ruler to said guide-member, and means for giving the ruler a step by step movement.

3. In a spacing device, the combination of a back, a guide-member carried thereby, a ruler-member having rollers at one end engaging one side of said guide-member, another roller carried by the ruler and engageable with the opposite side of said guide-member and coöperating with the first-named rollers and slidably clamping said ruler to said guide-member, and means including a pawl and ratchet mechanism coöperating with said second-mentioned clamping-roller, to give said ruler a step by step movement.

4. The combination with a suitable paper support, of a guide-member thereon, a T-ruler having rollers on its cross-arm engaging said guide-member, a clamp roller engaging the opposite side of said guide-member in opposition to and disposed between the rollers on the cross-arm of the ruler, and means for varying the tension of said clamp-roller on said guide-member.

5. The combination with a suitable paper support, of a guide-member thereon, a T-ruler having rollers on its cross-arm engaging said guide-member, a clamp-roller engaging the opposite side of said guide-member in opposition to and disposed between the rollers on the cross-arm of the ruler, means for varying the tension of said clamp-roller on said guide-member, and means including pawl and ratchet mechanism operative on said clamp-roller to actuate the ruler.

6. The combination with a suitable paper support, of a guide-member thereon, a ruler having rollers at one end

engaging said guide-member, a clamp-roller carried by the ruler and operative in opposition to said first mentioned rollers to clamp said guide-member and hold the ruler in operative position, and means for operating the clamp roller to cause it to give the ruler a step by step movement.

7. The combination with a suitable paper support, a guide-member thereon, a ruler having rollers at one end engaging said guide-member, a clamp-roller carried by the ruler and operative in opposition to said first-mentioned rollers to clamp said guide-member and hold the ruler in operative position, means for operating the roller to cause it to give the ruler a step by step movement, and means for varying the pressure of said roller on said guide-member.

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

FRANK G. HALL.

Witnesses:
C. L. McFARLAND,
L. O. HARYNOT.