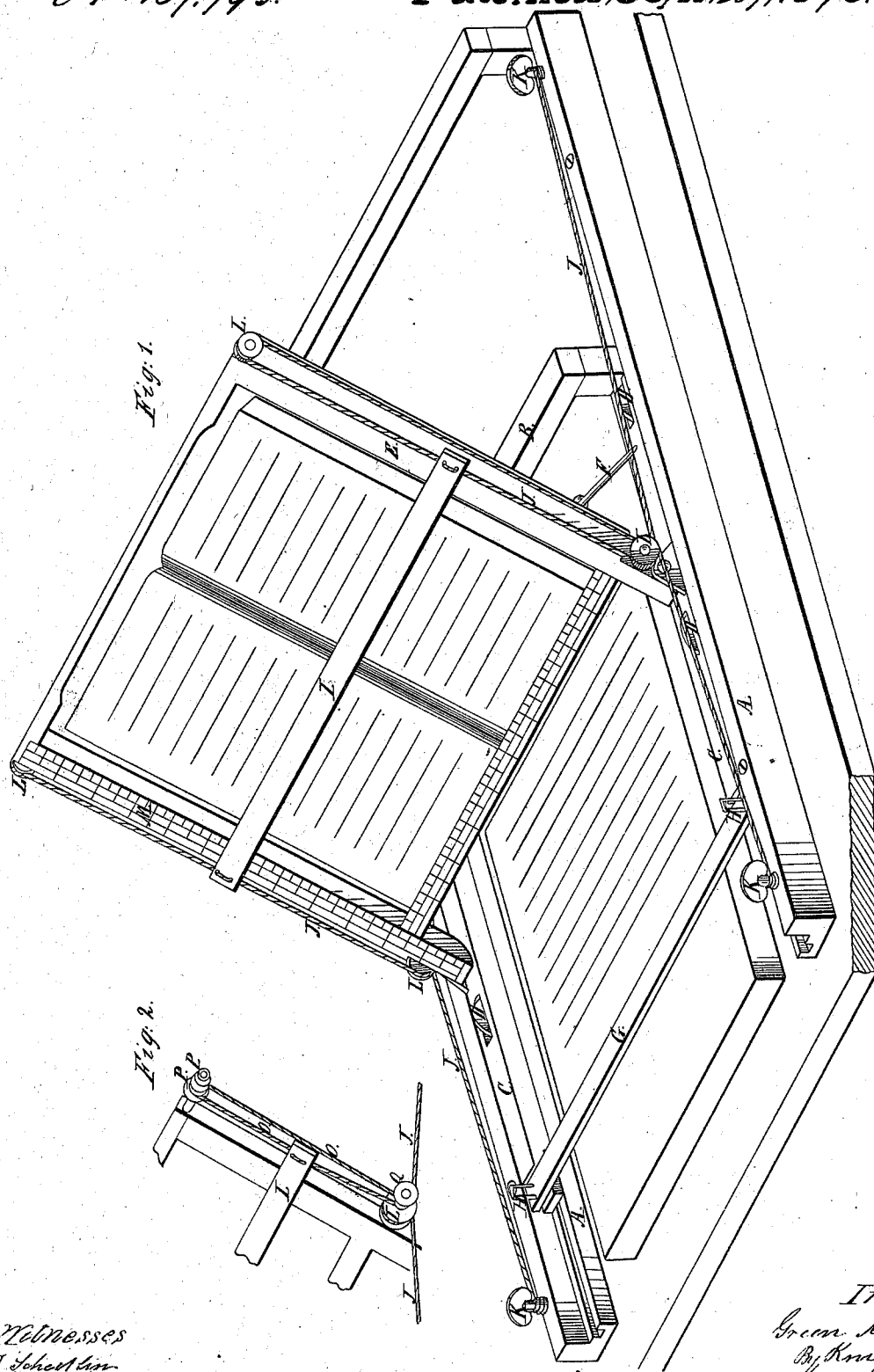


G. McHenry.
Copying & Ruling Mach.
No 107,795. Patented Sept. 27, 1870.



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GREEN McHENRY, OF LOUISA, KENTUCKY.

Letters Patent No. 107,795, dated September 27, 1870.

IMPROVEMENT IN MACHINES FOR RULING AND COPYING.

The Schedule referred to in these Letters Patent and making part of the same.

I, GREEN McHENRY, of Louisa, in the county of Lawrence and State of Kentucky, have invented a new and improved Guide and Gauge for Copying, Ruling, and other purposes, of which the following is a specification.

Nature and Objects of the Invention.

The apparatus which is the subject of my invention is constructed with a base-frame, within which may be placed the paper on which any matter is to be copied from a book, or from another manuscript.

The said book or manuscript is held in convenient position by a second frame supported on a carriage sliding within the first, and provided with a bar passing across the page, and moved, through the medium of connections hereinafter described, by the motion of said carriage.

A flat bar, extending from side to side of the carriage across the paper being written upon, affords convenient means of shifting the carriage and the guide-bar from time to time, as the work progresses.

The lower transverse bar, which is attached to the sliding carriage, serves as a ruler, when required, and, for distinction will be termed the "ruler-bar."

A graduated scale, over which the upper guide-bar moves, affords a gauge for ruling lines accurately at any distance, by means of the ruler-bar, and a horizontal scale upon the lower part of the movable frame may serve as a gauge for vertical ruling.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of the apparatus, as arranged for operation.

Figure 2 is a diagram illustrating a modification in the arrangement of the cords and pulleys, for the purpose of graduating the relative movement of the guide-bar, as may be required.

General Description.

The stationary frame may consist of two rails, A A, connected by one or more transverse beams, B, and suitably grooved, to form ways for the carriage C, which runs therein upon wheels D D.

The book or copy-frame E is hinged to the carriage C, and supported at any convenient angle by braces F.

G is the ruler-bar, reaching across the front of the carriage, and held by pins or staples H H, upon which it may slide freely up and down, so as to rest upon the surface of a body of paper of any thickness.

I is the guide-bar, attached at its ends to cords J J, the ends of which are fixed to pins K K, near the ends of the rails A A.

The said cords, passing around pulleys L L' at the upper and lower parts of the carriage, carry the guide-bar down, as the carriage is drawn forward, and move it up, as the carriage is moved backward. This arrangement is shown in fig. 1.

As there represented, the motion of the guide-bar I down or up the face of the book-frame will be precisely equal to any motion imparted to the carriage C.

The scale M, therefore, which accurately gauges the motion of the bar I, serves thereby as a gauge for the position and movement of the ruler-bar G.

The horizontal scale N is useful in vertical ruling to find the center or other desired part of the paper, or for ruling marginal or other vertical lines, at any desired distances from the edges, or at equal distances on different sheets.

In fig. 2 is shown a modified arrangement of the cords, by which I am enabled to impart a less relative motion to the guide-bar I, under a given movement of the carriage C, or to graduate said relative movements, as may be desired. In this case, the primary cords J J pass around the pulleys L at the lower edge of the book-frame, without passing to its upper edge.

The guide-bar is then attached to secondary cords O O, which are endless, and pass around idle pulleys P P, above and around pulleys Q Q, attached to the pulleys L, and of smaller diameter than said pulleys.

By forming the pulleys Q with a number of grooves or sheaves, of successively smaller diameter, and having a similar plurality of graduated sheaves on the upper pulleys P P, or any other device to maintain the tension of the cords, the relative movement of the bar I can be regulated as desired.

Operation.

A book or manuscript being placed within the copy-frame E, and the paper to be written on between the rails A A beneath the ruler-bar G, the latter is drawn forward with the carriage, to which it is attached, until the guide-bar I comes under the first line. When this is copied, it is moved again to the extent of another line.

The bar I thus forms a constant guide to aid the eye in following the matter to be copied, and as the writing proceeds down the page, the carriage follows it.

The manner of using the device for ruling has already been made clear.

Claims.

I claim as my invention—

1. The carriage O and copy-frame E, operating in connection, substantially as herein set forth.
2. The sliding guide-bar I, operating in connection with the copy-frame E, in substantially the manner described.
3. The combination of the sliding bars G and I, with their connections, substantially as described.

4. The combination of the ruler-bar G, carriage O, frame E, cords J, bar I, and gauge or scale M, substantially as shown.

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