

C. W. L. MONTAGUE.  
Paper Cutting Machines.

No. 122,844.

Patented Jan. 16, 1872.

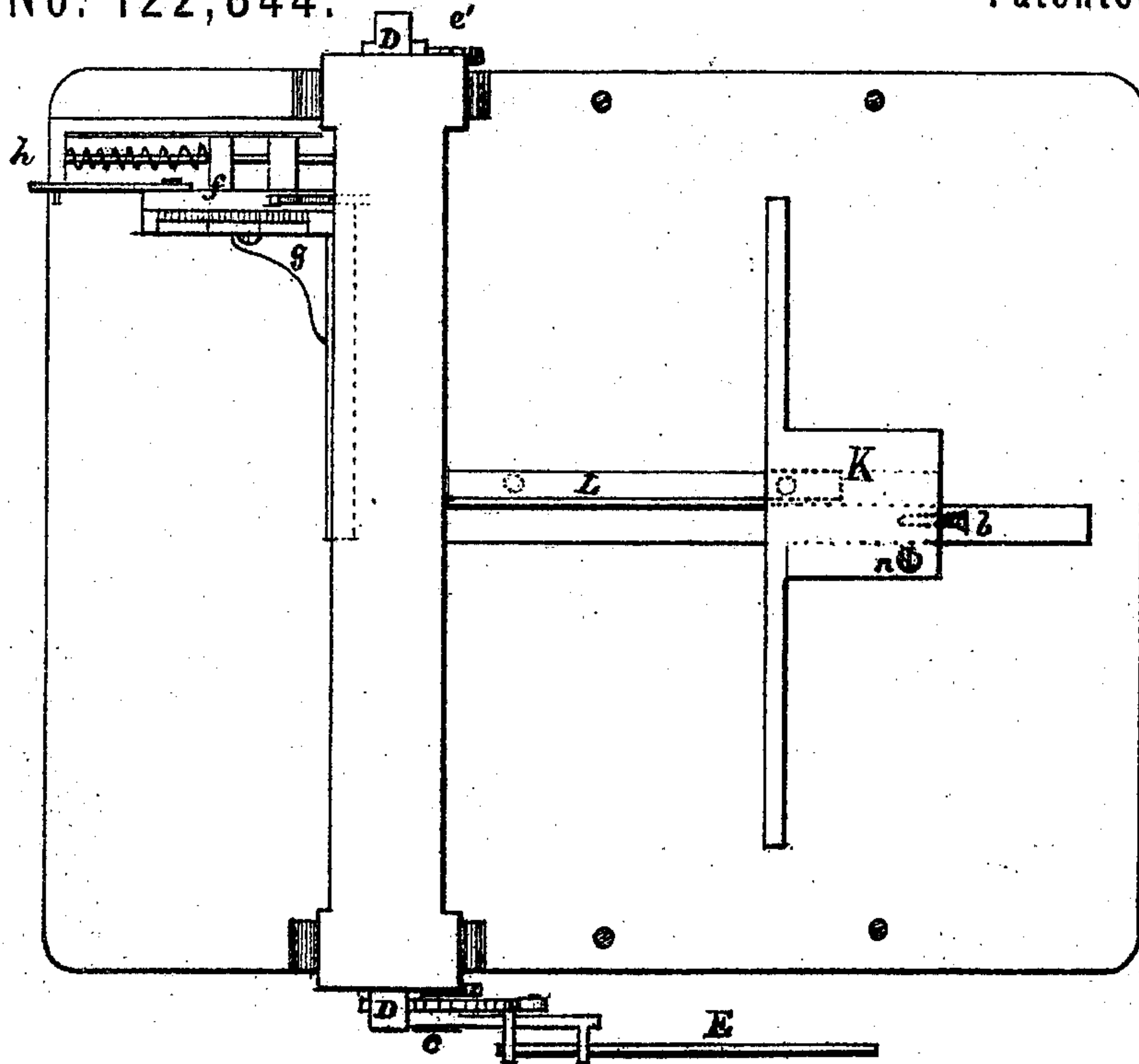


Fig 2.

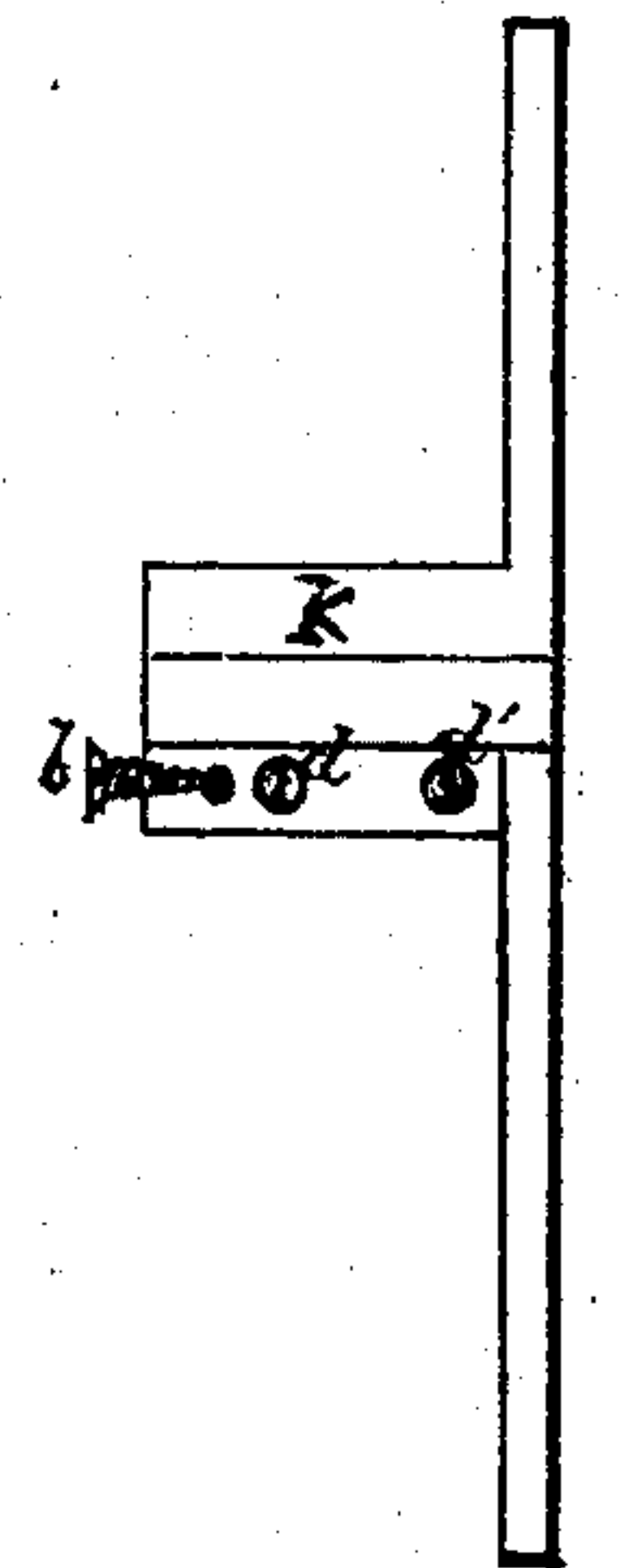


Fig 3.

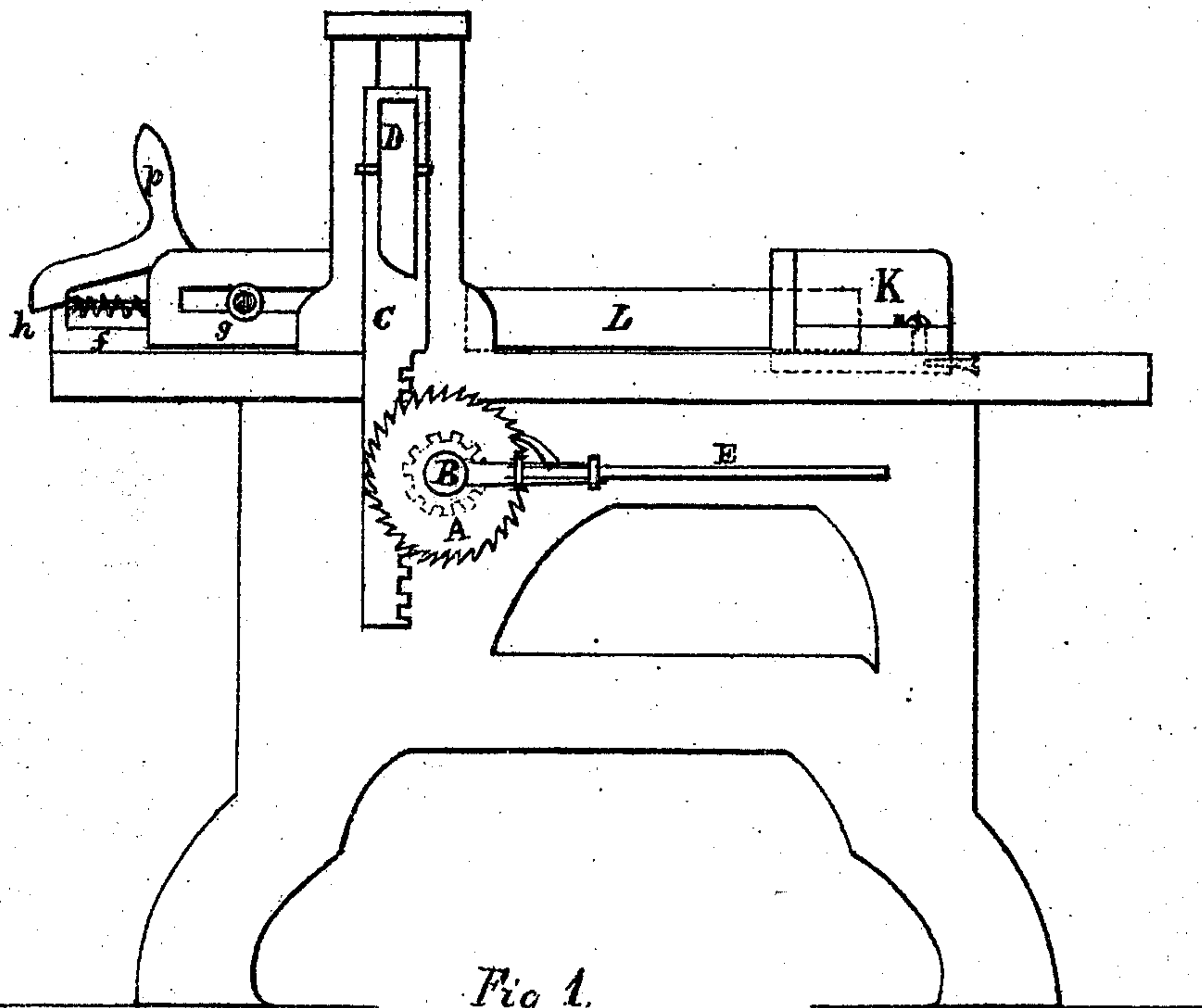


Fig 1.

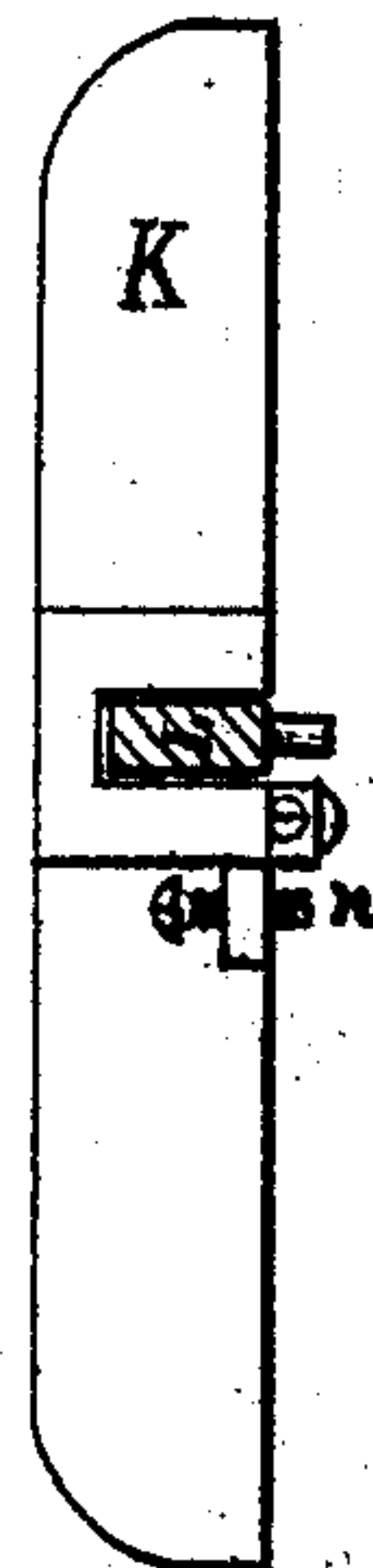


Fig 4.

Witnesses,

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Inventor,

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN PAPER-CUTTING MACHINES.

Specification forming part of Letters Patent No. 122,844, dated January 16, 1872.

I, CHARLES W. L. MONTAGUE, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Paper-Cutting Machines, of which the following is a specification:

Figure 1 is a side elevation of a machine embodying my invention. Fig. 2 is a plan of same. Fig. 3 and Fig. 4 illustrate the back gauge.

The same letters refer to the same parts in all the figures.

The manner by which power is obtained and imparted to the knife in forcing it through the paper is first described. It consists of a toothed ratchet-wheel, A, fastened to the shaft B. On each end of this shaft a pinion-gear works in racks *c c'*. These racks are attached to the knife-bar D. Attached to the toothed ratchet-wheel is a lever, E, which slides from the center of said wheel outward for the purpose of providing greater or less power in cutting paper, according to the nature of the work, which lever can be moved toward the center to be out of the way of the operator or for the purpose of balancing its weight.

The first part of my invention relates to the peculiar construction of the gauge K and squaring-bar L, by which the bar may be used in the center of the gauge, when required, or at either side of the same, the transposition and means of holding it in the positions desired being the pins in said bar and corresponding pin-holes in center and at the sides of the table. A recess or slot is made at or near the center of the gauge, which allows it to slide over the bar, preserving a surface on each side of the bar, which is square with the gauge and knife, and by means of which the operator can more conveniently square his work, or can at the same time use each side of the bar to square the work, and thereby cut two jobs at the same time, greatly facilitating the squaring and cutting of narrow strips of paper, and also of books and pamphlets, where two edges may be trimmed at the same time by the means alluded to.

The second part of my invention relates to the means of adjusting the gauge K to an exact parallel with the knife, and also the means for giving the face of the gauge the proper angle, in combination with the table of the

machine, to secure an accurate and exact vertical cut through the work. It consists of a shoe fastened to gauge K by screws *d* and *d'* in such manner that the shoe may be moved in order to render the surface of the gauge parallel with the knife, there being a slot in the shoe for one of the screws. The shoe is also slitted at one end, and is provided with a taper screw, *b*, by advancing which the shoe is expanded and the wear of the shoe in moving back and forth in the table is compensated or taken up. Gauge K is also provided with screw *n*, by means of which such angle with the table can be obtained as to secure a perfectly even vertical cut through the work.

The third part of my invention relates to a device for gauging in front or on the beveled side of the knife; and consists of the square *g*, attached to the movable bar *f*, the latter being held in position by means of a coil-spring, *h*. The passage of the knife downward forces the part of the paper on the beveled side of the knife outward, and the gauge is also forced correspondingly away from the knife by the bevel on the knife-bar, or by other suitable means, and when it has reached the extreme of its motion it may be detained, when the knife rises, by means of the latch *p* attached to bar *f*, as seen in Fig. 1, or may be permitted to return as the knife-bar is raised. The same results may be obtained by means of suitable apparatus operated by hand or foot; but I consider an automatic movement more desirable. On the edge of the square *g* are affixed regular spaces to indicate the measure at which the gauge is set. The object of this gauge is to provide means for more accurate cutting of very narrow strips of paper, for which the use of the back gauge K is impracticable, as the clamp or binder which fastens the work during the operation of cutting intervenes and prevents the use of the gauge K at very short distances from the knife.

The manner of operating my machine will illustrate the advantages obtained by means of these devices. The knife being raised, (which can be done by the right hand by means of the ratchet-wheel A,) the operator, having two parcels of paper to cut, places the bar L in the center of the gauge and uses both bar and gauge to secure the squareness and accuracy



of the work, the gauge being brought forward to the desired position. Having clamped or fastened the paper to the table, (no clamp is shown in the model and drawing; clamping may be obtained in any well-known manner,) the knife is first dropped to the paper by means of the ratchet-wheel. The operator then draws out the lever E to such length as may be desired to furnish power proportionate to the work to be cut, and the dog attached to the lever falling into a tooth in the ratchet-wheel, he is enabled to force the knife through the paper. If the operator has to cut paper into narrow strips he attaches the square *g* to the bar *f* and gauges the work by means of it instead of the gauge K. As the knife descends the square *g* is forced away from the knife, allowing the bevel of the knife to crowd or throw out the strip, which is cut without disarranging the rest of the paper, from which

successive similar cuts may be made without "beating up" or rearranging the paper.

Having described the nature and advantages of the foregoing improvements in paper-cutting machines, what I claim, and desire to have secured by Letters Patent, is—

1. The transposable squaring-bar L, in combination with the gauge K, for the purpose and substantially in the manner described.

2. The shoe attached to gauge K, in combination with screws *d* and *d'*, for adjusting the gauge parallel with the knife.

3. The yielding and adjustable front gauge, for the purpose and substantially in the manner described.

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Witnesses:

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