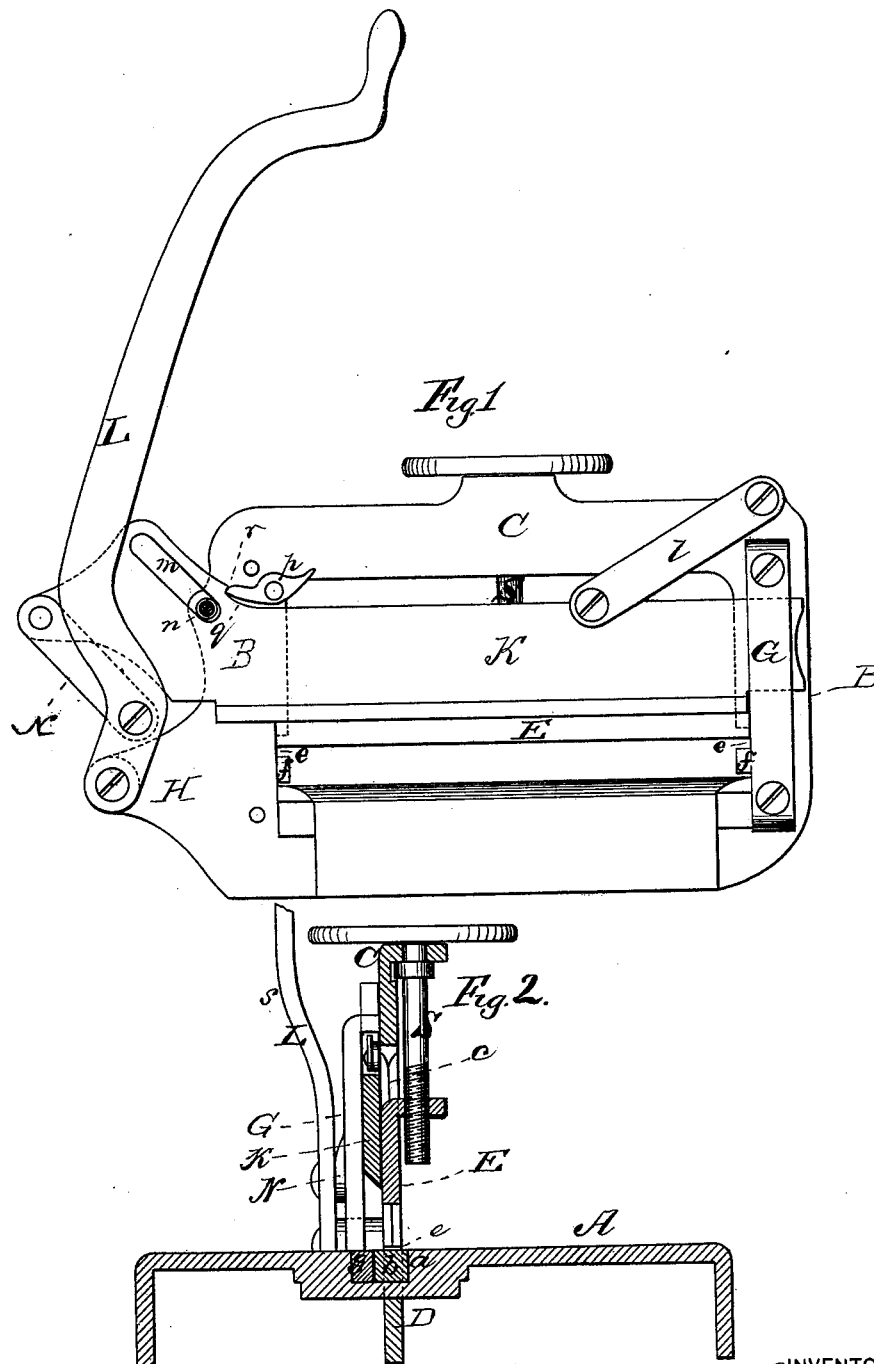


E. L. MILLER.  
Lever Paper-Cutting Machine.

No. 220,856.

Patented Oct. 21, 1879.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

EDWARD L. MILLER, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN LEVER PAPER-CUTTING MACHINES.

Specification forming part of Letters Patent No. **220,856**, dated October 21, 1879; application filed March 29, 1879.

*To all whom it may concern:*

Be it known that I, EDWARD L. MILLER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and valuable Improvement in Lever Paper-Cutting Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my lever paper-cutting machine, and Fig. 2 is a transverse section of the same.

This invention has relation to lever paper-cutting machines.

The nature of the invention consists in the construction and novel arrangements of parts, as hereinafter shown and described.

In the accompanying drawings, the letter A designates the base or bed, which may be cast in one piece with the uprights B and arch C, a flange, D, in the plane of the uprights, and connecting the same, usually being cast under the bed, beneath the longitudinal depression or seat *a* for the cutting-block *b*. This seat is laterally wider than is necessary for the cutting-block, its margin on one side being somewhat removed from the plane of the uprights and clamp.

The uprights are formed with V-shaped guiding edges or ways *c*, which engage with corresponding sliding edges of the clamp E, which is operated by a screw, S, or other device. The ways *c* of the upright guides B are provided with blanks or spaces *e*, whereof the upper is of less extent than the lower one, the latter being about equal in depth to the block-seat *a*. Between these blanks or notches is a portion, *f*, of the guiding-edge *c* of the upright, which forms a shoulder which serves to hold the cutting-block down to its plane when slipped laterally into place. After this block has been introduced, it is braced and secured by the introduction of a filling-strip, *g*, which is let into the seat alongside the cutting-block. By this arrangement the cutting-block can be usually changed when necessary.

The sliding edges of the clamp are provided

with spaces and projections which correspond with the portions *f* and spaces *e* of the ways of the uprights, and serve to allow the clamp to be engaged with the upright guides before the cutting-block is introduced.

The knife-guides G are bolted to the main frame parallel with the uprights B. The knife K is hung at one end upon an oblique connecting-bar, *l*, which is pivoted to the frame by its upper end. The other end of the knife is formed with an oblique slot, *m*, which works upon a stud or roller, *n*, of the frame, and serves, when the knife is depressed, to give it an oblique drawing cut.

The upper edge of the knife is provided with a catch, *r*, to engage with a pawl, *p*, pivoted to the frame, when the knife is fully raised, and hold the latter from descending until the pawl is released. The pawl is weighted at the engaging end, which slides on the oblique edge *q* of the knife-back, and comes into engagement automatically with the catch at the base of this inclination *q*.

The lever L is pivoted to a lug or stud, H, of the frame, in line with the bed, and is connected to the end of the knife by means of a short connecting-link, N. The lever, in its general direction, extends across the bed parallel with the knife-bar, and is of somewhat peculiar formation, being bent outward in its central portion, as indicated at *s*, while its pivotal and handle ends are in the same horizontal plane, or nearly so, when the lever is fully depressed.

This paper-cutting machine is composed of a less number of working pieces than is usual in lever-cutters, and therefore the cost of the manufacture is materially lessened and friction reduced, while the general construction is such as to insure the great strength required in a machine of this character. The machine is also very compact, the lever and knife-bar being connected simply by a very short link, which can be made light, and yet entirely firm and strong. As the lever is set in a plane parallel with and close to the knife-bar, the tendency to twisting is avoided, and there is no straining. Its position also enables the operator to get all possible power from it, and its shape enables the operator to bring it in finishing the cut to a horizontal position

directly over the table, and yet clear of the pile of paper or work. During its entire motion it is most favorably placed for the exertion of the weight and strength of the operator.

The shape of the lever admits of the adoption of the simple link-connection above described.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with the frame A, the lever L, pivoted thereto, and the knife K, hav-

ing an oblique slot, *m*, working on a stud or roller, *n*, of said frame, of the connecting-link N, pivoted to said lever and knife, and the link *l*, pivoted to arch C, as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

EDWARD L. MILLER.

Witnesses:

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ALLEN H. GANGEWER.