

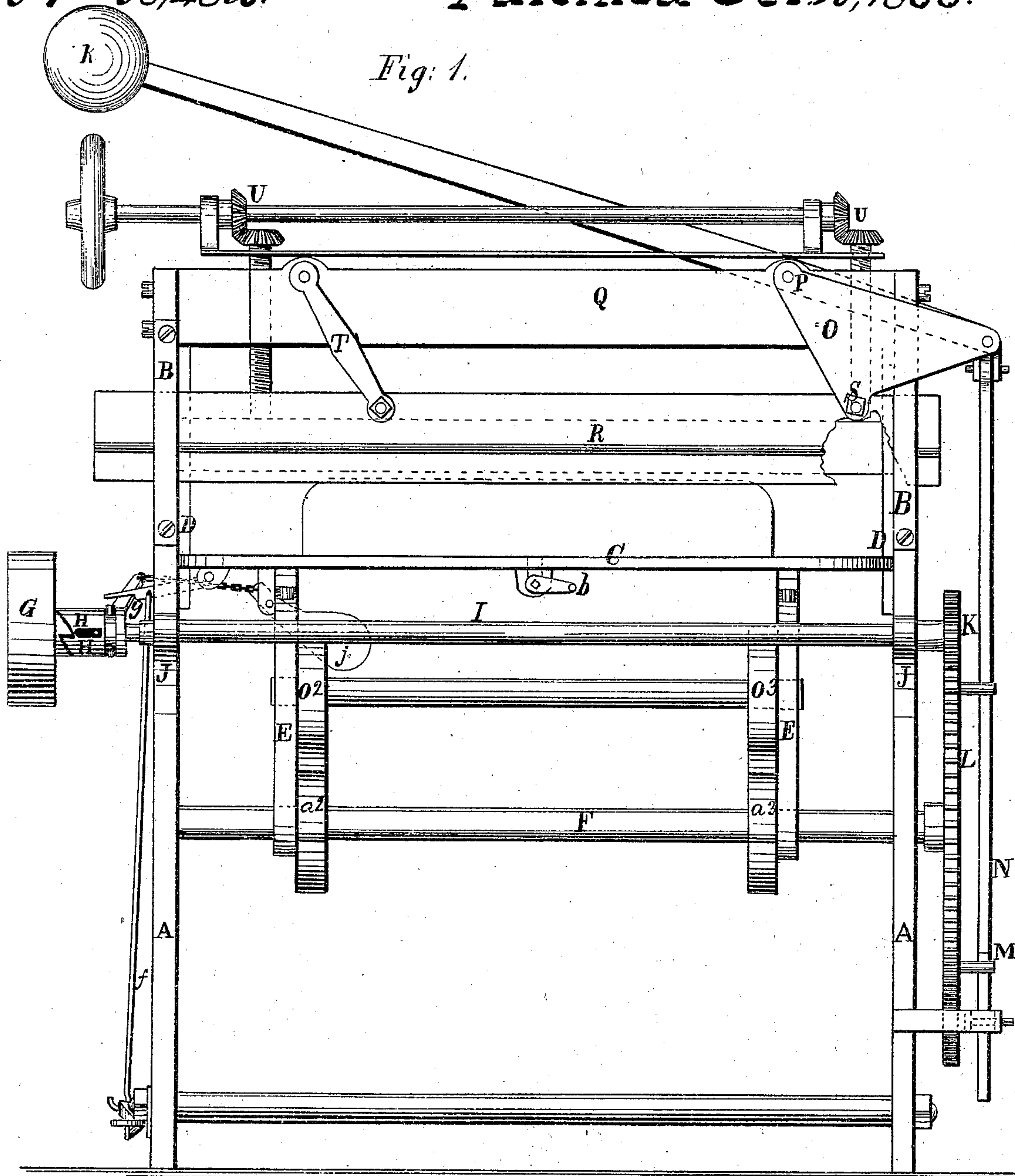
M. Riehl Sheet 1.2 Sheets

Paper Cutting Mach.

N^o 58,482.

Patented Oct. 2, 1866.

Fig. 1.



Witnesses
F. A. Jackson
Jas. A. Service

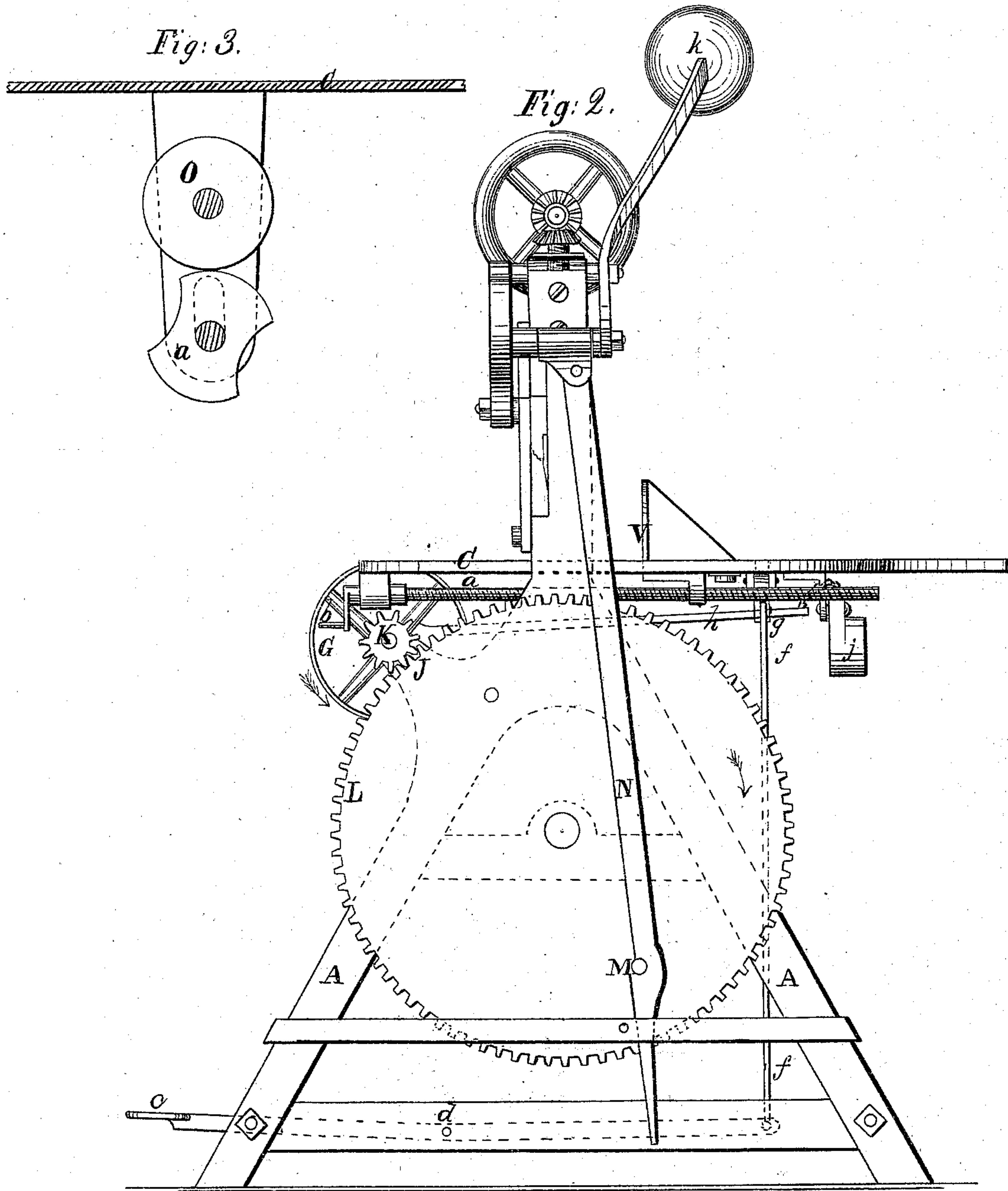
Inventor
Michael Riehl
Per Wmms
Attorney

M. Riehl. Sheet 2, 2 Sheets.

Paper Cutting Mach.

N^o 58,482.

Patented Oct. 2, 1866.



Witnesses

F. A. Jackson

Geo. A. Service

Inventor

Michael Riehl

Per W. M. M. Co.
Attorneys

UNITED STATES PATENT OFFICE.

MICHAEL RIEHL, OF PHILADELPHIA, PENNSYLVANIA.

BOOK-BINDERS' PAPER-CUTTER.

Specification forming part of Letters Patent No. 58,482, dated October 2, 1866.

To all whom it may concern:

Be it known that I, MICHAEL RIEHL, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Paper-Cutter for Book-Binders; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification.

The nature and object of my invention are to provide a cutter for book-binders by which the paper may be pressed and cut simultaneously, and is so constructed that the instant the knife ceases to cut, or has passed through, the press is slacked and the book is released at once from the press.

It more definitely consists in the peculiar construction of a cam by which the platform is raised, upon which the book is placed when cut.

It also consists in the peculiar manner by which motion is given to the cutter, by means of a lever and pintle.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure 1 is a side elevation of my improved paper-cutter. Fig. 2 is an end elevation of the same.

Letters of like name and kind refer to like parts in each of the figures.

A represents the frame of my improved paper-cutter, which may be made of metal, and is composed of four inclined braces with suitable cross-ties. At each end of the said frame A and at its apex extend up pieces B B, in which is placed the cutter, and in which it works.

C is the table or platform which extends from end to end of the frame A, and is provided with slots, one at each end, which work over the gibs D D. The said table C is also secured to slotted brackets E E, located underneath the table, with the shaft F passing through the slots in the said brackets E E.

G is a band-wheel provided with a clutch, H, both of which are upon the outer end of the shaft I. This shaft I runs in bearings located in the arms J J, which extend out from the frame A. On the end opposite from the band-wheel G upon the shaft I is a driving

pinion-wheel, K, which corresponds and meshes into the large toothed wheel L, which is rigidly secured to the shaft F, which passes through the slots in the brackets E E and runs in proper bearings in the frame A. This wheel L is provided with pintles, which project from its side, which engage in the notch M, provided for this purpose in the pendent lever N, the said pendent lever being connected by a joint to the lever O, which has a fulcrum at P in the top bar, Q, which is secured to the top pieces, B B, in the frame A. This elbow-lever O is also attached to the cutter P by a pivot-bolt, S.

The end of the cutter opposite from the elbow-lever O is attached to a stirrup, T, which, together with the elbow-lever O, supports and works the cutter.

At the top of the cross-piece Q are attached bevel-gears V V upon screw-shafts, for the purpose of elevating and lowering the cutter, so as to accommodate it to the thickness of the book to be cut.

V is a gage which is adjusted in any desired position by means of the set-screw *a*, which is turned by the crank *b*.

c is a treadle hung upon the pivot-bolt *d*, as seen in dotted lines, Fig. 2. The rear end of this treadle *c* is connected to a standard-rod, *f*, by a joint which connects at the upper end to a pawl, *g*, which works upon the lever *h*.

The said lever *h* is connected by lugs with the clutch H and extends back, and the rear end connected to a jack-chain, which is connected to a tilting weight, *j*.

To the pendent lever N is attached a counter weight or balance, *k*.

The operation of my improved paper-cutter is simple, rapid, and perfect; and it consists simply in attaching any of the well-known powers to the band-wheel G and setting the gage V as desired by means of the set-screw *a* and crank *b*. The foot is then placed upon the treadle *c*, which is pressed gently down, which engages the clutch H, which puts in motion the pinion K, which imparts motion to the large toothed wheel L, provided with the pintles, which at every semi-revolution engages the notch in the pendent lever N, which is connected to the elbow-lever O, which is also connected with the cutter R. Now, the action of the pintle engaging in the lever

draws down the cutter to just such a point at every turn by the pendent lever striking against a pin, and the pintles are disengaged, when, by the action of the counter-balance k , the knife or cutter is again raised.

It will be observed that upon the shaft F are two cams, $a^2 a^3$, of peculiar construction, against which the wheels $o^2 o^3$ work. These cams are formed by cutting out of the periphery of the wheels a circle precisely corresponding with the periphery of the wheels o^2 and o^3 , so that as the wheels o^2 and o^3 rise out of the cam it raises the table C and presses the paper against the cutter, and at the instant the cutter gets through the wheels enter the cam and the table falls down, and at the same time the cutter is elevated and the book or paper released, making it one of the most accurate paper-cutting machines now in use, doing its work with the greatest precision and in the most rapid manner.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The wheel L , provided with pintles, in combination with the pendent lever N and elbow-lever O and counter-balance k , substantially as and for the purposes described.

2. The cams a^2 and a^3 , in combination with the wheels $o^2 o^3$ and table C , for the purposes and substantially as described.

3. A paper-cutting machine by which the paper is pressed by the action of the table rising against the cutter, and so constructed that when the cutter has passed through the paper the table and cutter instantly recede from each other, for the purposes and substantially as herein described.

MICHAEL RIEHL.

Witnesses:

ADAM FALLER,

CHARLES GRAMER.