

(No Model.)

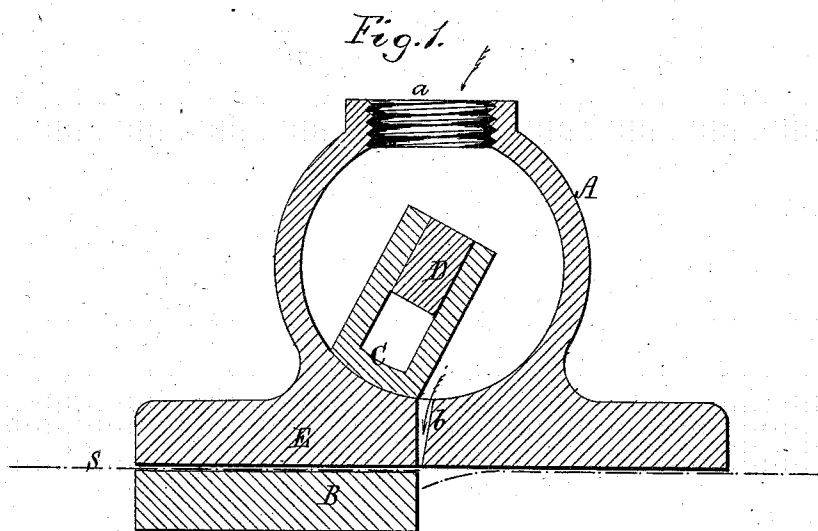
2 Sheets—Sheet 1.

G. MILES.

MECHANISM FOR CUTTING PAPER.

No. 289,923.

Patented Dec. 11, 1883.



Witnesses.
S. N. Piper
E. B. Pratt

Inventor.
George Miles.
by R. H. Eddy att'y.

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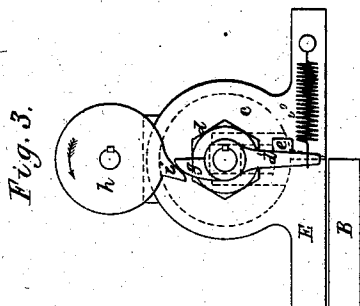
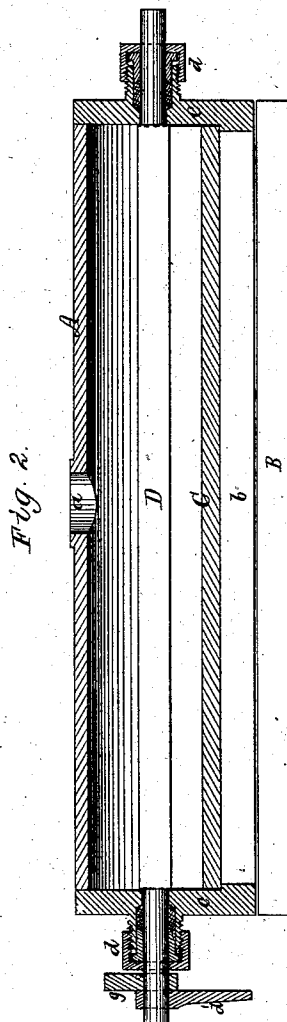
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UNITED STATES PATENT OFFICE.

GEORGE MILES, OF WELLESLEY HILLS, MASSACHUSETTS.

MECHANISM FOR CUTTING PAPER.

SPECIFICATION forming part of Letters Patent No. 289,923, dated December 11, 1883.

Application filed November 3, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MILES, of Wellesley Hills, in the county of Norfolk, of the State of Massachusetts, have invented a new and useful Improvement in Mechanism for Cutting Paper; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a vertical and transverse section, and Fig. 2 is a longitudinal section, of a paper-cutter embodying my invention, the nature of which is defined in the claim hereinafter presented. Fig. 3 is a view representing the mechanism for operating the valve of the paper-cutter.

In such drawings, A represents a hollow cylinder, provided at its upper part with an induct, *a*, and at its lower part with a narrow slot or educt, *b*. Below the latter, and at a short distance from it, is arranged a knife or bar, B, the cutting-edge of which is close to the said educt. Within the said hollow cylinder is a prismatic shaft, D, having journals to extend through the heads *c c* of the cylinder, and stuffing-boxes *d d*, adapted to such heads.

Fitting to the bore and heads of the cylinder, and adapted to slide on the prismatic shaft transversely thereof, is a valve, C, which, by suitable mechanism applied to one of the journals of the shaft D, is to be quickly moved, so as to uncover the opening *b*, and to be moved back to cover it, as occasion may require.

If, now, we suppose the cylinder to be charged with air under great pressure by means of an air-pump or other suitable device opening into the cylinder by its induct, and we also suppose a sheet, S, of paper to be interposed between the knife or bar B and the flat base E of the cylinder, and to extend across the educt *b*, the moment the valve is moved so as to open the educt air will rush through the latter against the paper and force it down against the cutting-edge of the bar or knife, and thereby cause the paper to be severed along and by such edge.

A knife arranged with its cutting-edge upward and directly underneath the educt will serve one purpose of the bar B. Such bar, besides answering to sever the paper, operates as a support to it while being cut or passing

along under the educt for the purpose of being severed.

Mechanism, as described, may be used with a power printing-press to sever or cut paper after having been printed thereby, and before its delivery from it by the fly of such press. The valve may be revolved or vibrated or moved in the cylinder, as occasion may require, for it to close and open the educt thereof.

The mechanism for moving the valve may be thus described: Extending down from one of the journals of the shaft D is a projection, *d'*, which, when the valve covers the opening *b*, abuts against another projection, *e*, extending from the cylinder-head, a spiral spring, *f*, applied to the projection *d'* and a projection from the base E, serving to close the valve or turn the shaft, so as to force the projection *d'* against the projection *e*. Furthermore, there extends upward from the said journal a cam or wiper, *g*, over which is a wheel, *h*, provided with a similar cam or wiper, *i*, extending from its periphery. This wheel is to be revolved at a proper speed and in a suitable direction to cause its cam *i* to be carried against and by the cam or wiper *g*, so as to cause the shaft D to be quickly turned for the valve to move and uncover the educt *b*, the spring *f* operating to immediately close the valve after the cam or wiper *i* may have passed over the cam or wiper *g*.

I do not claim in a machine for cutting paper by means of knives, one of which is stationary and the other movable, the employment of a bellows to produce a blast of air, to blow from either of the knives the paper after it may have been severed or cut by them, for with my invention the cutting of the paper is effected both by the blast of air and by the knife and bar on which the paper may be resting or supported.

I claim—

The paper-cutter, substantially as described, consisting of the single knife or bar B, the hollow cylinder A, with its induct *a*, educt *b*, and base E, and the valve C and its supporting and actuating shaft D, all being arranged and to operate essentially as set forth.

GEORGE MILES.

Witnesses:

R. H. EDDY,
E. B. PRATT.