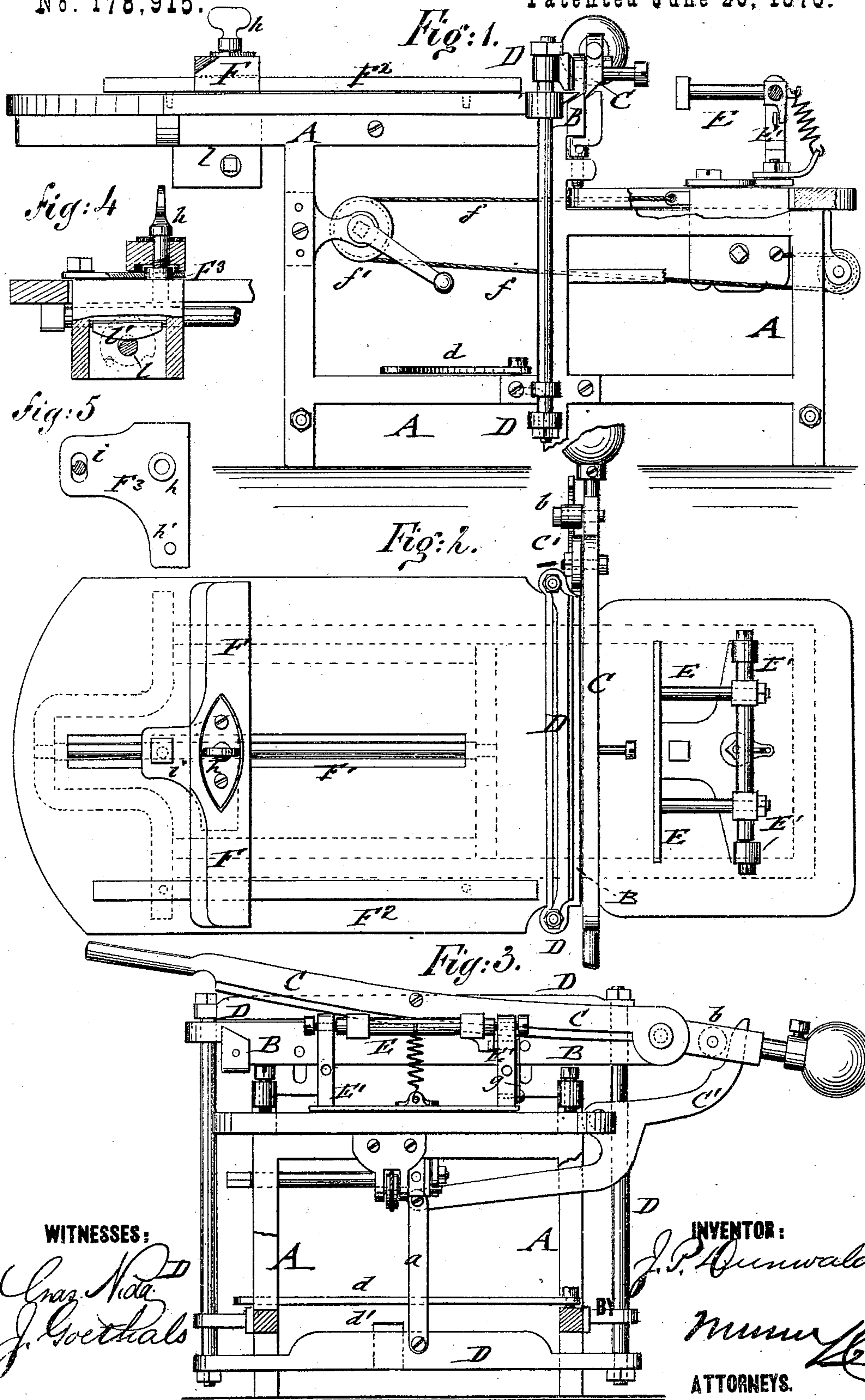


J. P. DUNWALD.
PAPER-CUTTING MACHINE.

No. 178,915.

Patented June 20, 1876.



WITNESSES:

Craz. Nida
J. Goethals

INVENTOR:

J. P. Dunwald

ATTORNEYS.

Munn & Co.

UNITED STATES PATENT OFFICE.

JOHN P. DUNWALD, OF NEW YORK, N. Y.

IMPROVEMENT IN PAPER-CUTTING MACHINES.

Specification forming part of Letters Patent No. **178,915**, dated June 20, 1876; application filed April 10, 1876.

To all whom it may concern:

Be it known that I, JOHN P. DUNWALD, of the city, county, and State of New York, have invented a new and Improved Paper-Cutting Machine, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation of my improved paper-cutting machine; Fig. 2, a top view; Fig. 3, an end view, and Figs. 4 and 5 are a detail section and top view of gage and set-plate.

Similar letters of reference indicate corresponding parts.

My invention relates to an improved paper-cutting machine of considerable power, and of convenient adjustment and operation; and it consists, mainly, of the combination of the swinging and balanced cutting-knife with the clamping mechanism of an adjustable cutting-gage and of a sliding feed or set gage of special construction.

In the drawing, A represents the supporting-frame of my improved paper-cutting machine, which is provided, in the customary manner, with a stationary knife, B, and a swinging knife, C. A vertically-sliding clamping-frame, D, with lateral leather-faced top bar, is raised by the action of the swinging knife C, or a curved arm, C', that is pivoted to the side of frame A, and connected by its lower downward-extending arm, with a pivot-link, *a*, to the middle part of the lower cross-bar of the clamping-frame D. The weighted rear arm of the swinging cutting-knife C runs by means of a friction-roller, *b*, along the curved arm C', so as to bear on the same and raise the clamping-frame, when the knife is carried in upward direction, while releasing the arm C', when the knife is brought down for cutting, so that the clamping-frame by its own weight is applied to the paper to retain the same firmly in thick or thin layers for the action of the knife.

The pressure of the clamping-frame on the friction-roller of the cutting-knife holds the knife in inclined position ready for convenient use without requiring the entire throwing up of the knife, as heretofore.

The clamping-frame may be retained in raised position by a bottom piece, *d*, that en-

gages a lug, *d'*, or the lower cross-bar of the frame, in which case the knife swings free of the action of the clamping-frame.

The width of the paper to be cut is regulated by means of an adjustable gage, E, which is arranged in suitable standards, E', in front of the knives, and carried to or from the same along guide-slot and rod of a table, below the feed-table, by means of a wire rope, *f*, that is wound on a drum or roller, *f'*, and attached to the front and rear ends of the standards or frame, to be carried, by the turning of the drum in either direction, nearer or closer to the knives, as required. When the gage-piece is at the position required it is clamped by a lateral cam-shaft and clamp-piece to a guide-rod under the table, to be retained in rigid position for the gaging of the paper. When a larger width for the paper to be cut off is required than that admitted by the gage-piece E, the same may be swung back on the standards by releasing a lock-spring, *g*. The paper is set to the knives on the upper table by means of a gage, F, that is guided along central slot and bottom rod F¹, and along a side piece, F², set by pins into the table.

The lateral gage-piece F is secured by a set-screw, *h*, and pin *h'*, to a sliding plate, F³, (shown in Fig. 5,) and adjusted to run exactly at the angle of ninety degrees to the fixed side guide F² by a rear slot and set-screw, *i*, of the set-plate F³. The gage F may be secured in fixed position by a lateral cam-shaft, *l*, and friction-plate *l'*, clamped to the guide-rod F¹ in similar manner as gage E, as shown in detail in Fig. 4.

The upper feed or set gage F may be detached entirely, as well as the side guide-piece, when the same is not required, or when the paper is to be cut at different angles.

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

1. The combination, in a paper-cutting machine, of the curved pivoted arm C' and the swinging and balanced cutting-knife C, having a friction-roller, *b*, with the vertically-sliding paper-clamping frame D and link *a*, as and for the purpose set forth.

2. The combination of the swinging cut-off

gage with a lock-spring at the side standard, to be released for use of wider gage, as specified.

3. In paper-cutting machines, the combination of a sliding and adjustable gage-piece, guided centrally and at the side with a set-plate and clamping mechanism applied to guide-rod, substantially as specified.

4. The combination of a lateral gage-piece, F, clamp-screw *h*, and pin *h'*, with the sliding set-plate F³, having rear slot and clamp-screw, as and for the purpose set forth.

JOHN P. DUNWALD.

Witnesses:

PAUL GOEPEL,

ALEX. F. ROBERTS.