C. Wells & H. Barth.

Paper Cutting Mach.

No. 49,018. Patented Jul. 25, 1865.

Fig 2

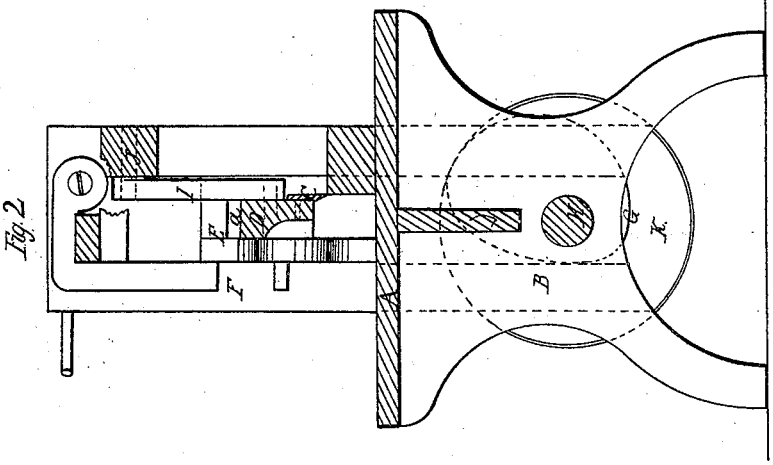
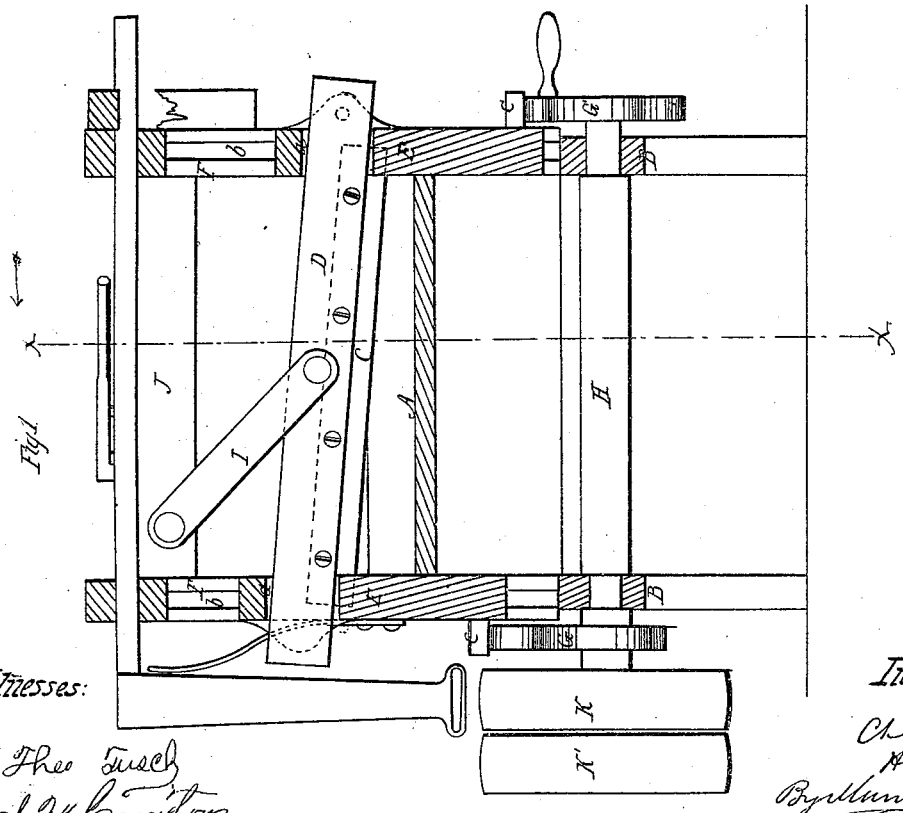


Fig 1



Witnesses:

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UNITED STATES PATENT OFFICE.

CHAS. WELLS AND HENRY BARTH, OF CINCINNATI, OHIO.

MACHINE FOR CUTTING PAPER.

Specification forming part of Letters Patent No. **49,018**, dated July 25, 1865.

To all whom it may concern:

Be it known that we, CHARLES WELLS and HENRY BARTH, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and Improved Machine for Cutting Paper, &c.; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a longitudinal vertical section of this invention. Fig. 2 is a transverse vertical section of the same.

Similar letters of reference indicate like parts.

This invention consists in giving to the knife a compound vibrating and oscillating motion by means of two cams acting on the ends of said knife and by a link connecting the same to a stationary bar in such a manner that the knife descends one end at a time and slides in a transverse direction as it descends, and that by these means a drawing motion is given to the knife as it passes through the paper or other material to be cut, and the operation of cutting is materially facilitated.

The paper or other material to be cut is placed upon the platform or table A, which rests upon legs B, the whole being made of cast-iron or any other suitable material, and after it (the paper) has been properly adjusted on said table the machine is set in motion.

C is the knife, which is connected to a head, D, the ends of which pass through slots *a* in rising and falling gates E. These gates slide up and down in suitable guide-grooves, *b*, in standards F, rising from the ends of the table A, and motion is imparted to them by means of cams G G′ acting on studs *c c′*, which project from the outer surfaces of the gates, as clearly shown in Fig. 1 of the drawings. The cams G G′ are mounted on the ends of a shaft, H, which has its bearings in the legs B, which support the platform A, and the position and shape of the cams are such that they allow the knife to descend one end at a time, as shown in Fig. 1 of the drawings.

The head D of the knife connects by a link, I, with the top cross-bar, J, connecting the standards F, as shown in Fig. 1 of the drawings. By means of this link a sliding motion is imparted to the knife as the same descends and a drawing cut is produced, whereby the cutting of the paper or other material is materially facilitated.

The shaft H is rotated by means of a belt running on a pulley, K, or by gear-wheels or any other suitable mechanism; or, if desired, motion may be imparted to it by a hand-crank. If a belt and pulley are used, a loose pulley, K′, is placed close to said pulley K, and a belt-shipper is so arranged that the belt is shifted automatically from the fast to the loose pulley as soon as the knife has descended to the platform and the operation of cutting is completed.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

Giving an oscillating motion to the knife C during the process of cutting by bringing its ends down one at a time alternately, whether the same is combined with the sliding motion as given by the link or not, or whether the motion is given by cams or any other equivalent means, substantially as herein described, so that the knife descends, one end at a time, in the direction of its cutting-edge, for the purpose set forth.

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