H. A. SNOWDEN.

Improvement in Machines for Cutting Paper, Leather, and other thin Substances.

No. 131,378. Patented Sep. 17, 1872.

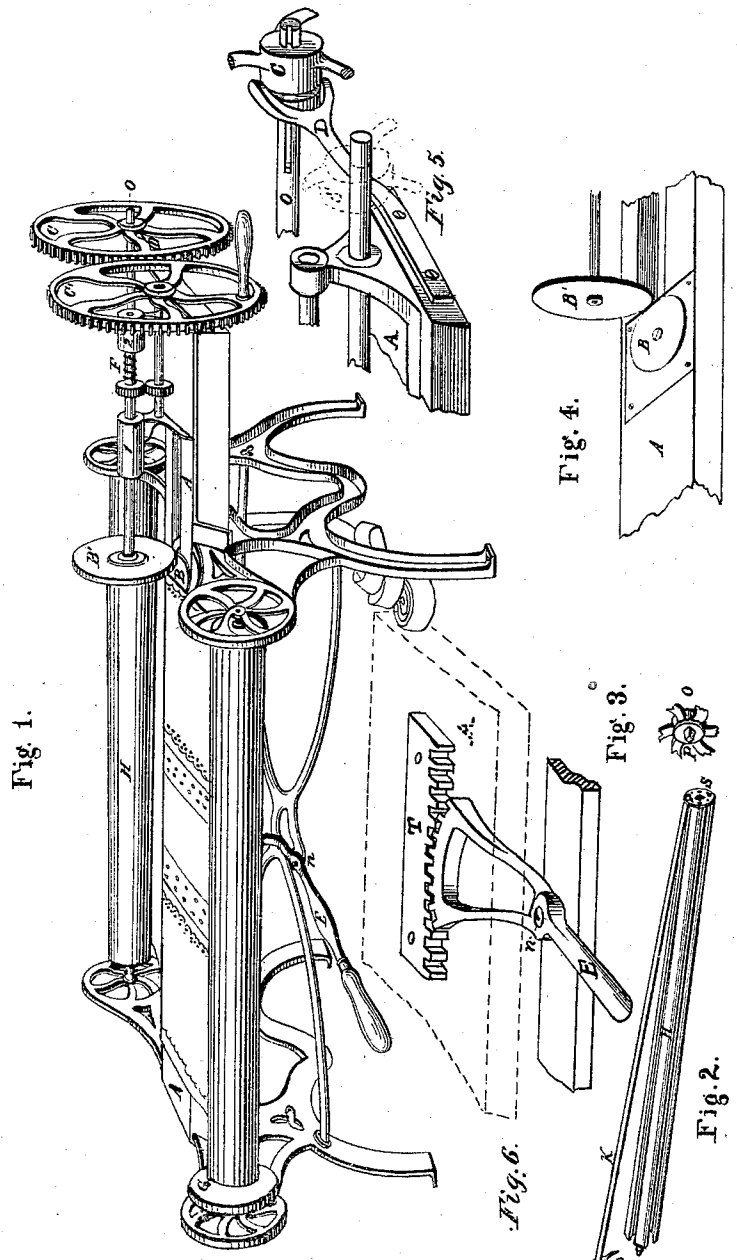

Fig. 1.

Fig. 4.

Fig. 3.

Fig. 2.

Fig. 5.

Fig. 6.

WITNESSES:

John Gibson
James P. McLean

INVENTOR:

Henry A. Snowden

UNITED STATES PATENT OFFICE.

HENRY A. SNOWDEN, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN MACHINES FOR CUTTING PAPER, LEATHER, AND OTHER THIN SUBSTANCES.

Specification forming part of Letters Patent No. **131,378**, dated September 17, 1872.

To all whom it may concern:

Be it known that I, HENRY A. SNOWDEN, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Mechanical Combination of Devices for Cutting Thin Substances, such as paper, leather, thin sheet metal, or other material requiring to be trimmed or cut into uniform curved or straight strips of different widths; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, which is lettered to correspond with and form a part of the specification.

In order that the public may fully understand the nature of my invention, and in what manner the same is to be constructed, I will describe it as follows, to wit:

Figure 1 is a perspective drawing of my improved combination of the reciprocating bed A provided with a horizontal cutter, B, let into the top of the same; also, the vertical adjustable cutter B′ upon its bearings 1 and 2, which are also secured to and form a part of the longitudinal movable bed A, which is moved to either the right or left by means of the lever E, which operates upon its fulcrum *n*, and having its back end fashioned of a segment of a ratchet or cog wheel that will mesh into corresponding cogs upon a straight horizontal bar, secured to and forming a part of the under side of the reciprocating bed A to operate the said bed to suit the different widths of sheet metal, leather, bordering for walls, &c., or for other purposes. C is a small ratchet or gear wheel, which is held on a line with the driving-wheel C′ by means of a rigid pronged arm, D, which is secured to the end of the movable horizontal bed A, and provided with vertical pins in the ends of the prongs at the back ends of the bar D, which fits into a groove made to receive them, upon either end of the hub of the small gear-wheel C, which hub is provided with a longitudinal rib or projection upon the inside thereof to fit into a slot (running lengthwise) in the axle or arm O, upon which the wheel C is adjusted backward and forward by the combined movement of the arms D and bed A, so as to be always on a line with the end of the movable bed A, and in gear with the driving-wheel C′ by means of its elongated axis O.

Fig. 3 is an oblique left-hand end view of the shaft or axis O, which is provided with a square projecting shank, P, that fits into the square socket S, in the end of the wooden-grooved roller H, Fig. 2, which is provided with longitudinal grooves running the entire length of the roller H to receive the end of the roll of paper, leather, or cloth, which may be secured by a rod, K, with prong to set into the grooves of the rollers or other device to prevent the material from unwinding during the process of trimming or cutting. This roller is not required for cutting thin sheet metal or irregular forms of any kind, as cardboard; and where leather, cloth, or metal are to be trimmed I use a stiffer spring, F, or a set-screw to adjust and hold the side of the vertical cutter B′ firmly against the revolving edge of the horizontal cutter B.

Fig. 4 is a perspective view of the arrangement of the cutters B and B′ upon the movable bed A.

Fig. 5 represents the end of the table A, to which the pronged arm D is attached for the purpose of moving the gear C in unison with the gear C′, mounted on the table A.

Fig. 6 represents the under side of a portion of the table A, to which the rack T is attached and also the cogged head-lever E for moving the table from side to side.

I am aware that Wm. G. Ayres and Seth L. Cole have obtained Letters Patent numbered 118,423; also patent numbered 123,605; and dated, respectively, on the 29th day of August, 1871, and 13th day of February, 1872; and, whereas, by virtue of three assignments, the two first bearing date May 24, 1871, and recorded June 21, 1871, in Liber N, 14, on pages 62 and 63 of Transfers of Patents, on file in the United States Patent Office, the third assignment bearing date the 25th day of November, 1871, and recorded in Liber T, 14, on page 432, of Transfers of Patents in the United States Patent Office, I obtained all the right, title, and interest in and to the above-named patented inventions from the said Ayres and Cole for cutting and trimming paper, leather, sheet metal, or other material, as secured to them by virtue of the above-referred to Letters Patent.

I find from experiment that neither of the above-patented machines will accomplish the

work in a perfect workmanlike manner, as arranged, set forth, and claimed in the specifications; but by combining a portion of each of the above devices with certain novel devices for adjusting the movable knife-bed A, and for adjusting and holding the driving-gears on a right line with each other, so as to change the position of the knives B and B′, without throwing the ratchet C out of gear, for cutting any thin material into different widths or forms, and the slotted axle O, which is provided with a rectangular shank, P, to hold and operate the roller H, constitutes the combination claimed in this application; hence the novelty of my invention consists in combining the guiding-arm D, grooved shaft or axis O, cogged-lever E, socket in the grooved roller H, rectangular shank P, all arranged to operate the table A, and the vertical lapping cutters B B′, for cutting leather, paper, thin sheet metal, &c.; therefore

What I claim as my new and useful combination is—

The arrangement and use of the pronged arm D to guide the wheel C longitudinally upon the grooved shaft O, lever E, socket S in grooved roller H, and rectangular shank P, all combined for operating the reciprocating knife-bed A, and vertical lapping cutters B B′ for cutting thin substances, substantially in the manner and for the purpose set forth.

In testimony whereof I hereunto subscribe my name in the presence of two witnesses.

HENRY A. SNOWDEN.

Witnesses:
JAMES P. MCLEAN,
JOHN GIBSON.