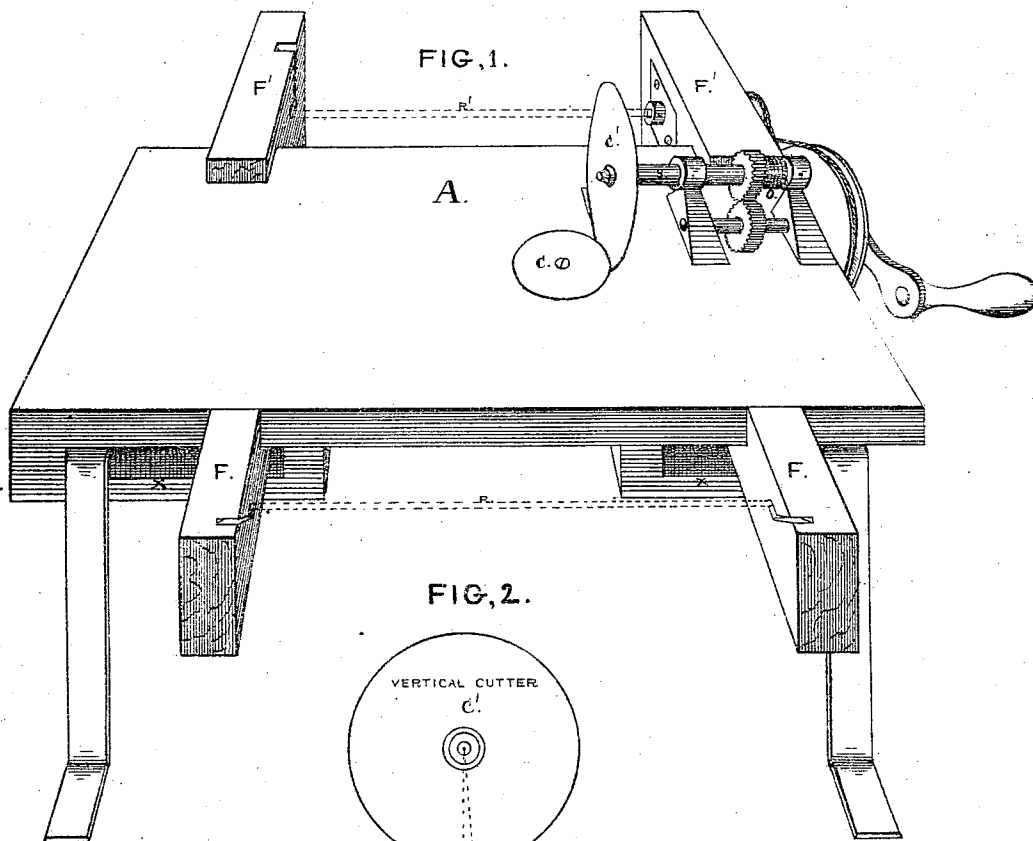


W. G. AYRES & S. L. COLE.

Paper Trimming Machine.

No. 123,605.

Patented Feb. 13, 1872.



Witnesses
James P. McLean
Anne S. McLean

Wm. G. Ayres
S. L. Cole
Inventors

UNITED STATES PATENT OFFICE.

WILLIAM G. AYRES AND SETH L. COLE, OF BROOKLYN, NEW YORK, ASSIGN-
ORS TO HENRY A. SNOWDEN, OF SAME PLACE.

IMPROVEMENT IN PAPER-TRIMMING MACHINES.

Specification forming part of Letters Patent No. 123,605, dated February 13, 1872.

To all whom it may concern:

Be it known that we, WILLIAM G. AYRES and SETH L. COLE, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Combining and Arranging two Revolving Circular Cutters or Knives, revolving at right angles to each other, for the purpose of cutting paper, leather, sheet metal, or other material; and we hereby declare the following to be a full, clear, and exact description of the combined mechanical construction and arrangement of the said circular knives as applied for cutting purposes; and in order that the public may fully understand the nature of our said joint invention, and those skilled in the mechanic arts to construct and operate the same, we will describe it as follows, to wit:

Figure 1 is a perspective drawing of a machine employed for trimming wall-paper by means of our improved combination of revolving knives C and C', which perform the double function of feeding as well as cutting the paper as it passes over the table A. 1 and 2 are the bearings of the shaft 3, upon which the vertical revolving cutter C' is hung in such a manner that its vertical plane impinges against the revolving edge of the horizontal circular cutter or plate C, so as to produce a drawing as well as a revolving shear-cut of the paper or other material that may be placed upon the flat surface of the rotating plate C, which is let into the table or bench A upon a pivot or anti-friction roller, or any other device that will allow the circular plate knife C to revolve freely upon its vertical axis, when operated by the impinging cutter C', whose vertical edge is held firmly against the horizontal edge of the cutter C by means of a spiral spring, o, when used for cutting paper; but for cutting either leather or sheet metal, we would employ a set-screw or any other device that would hold the vertical knife C' more firmly against the point of impingement upon the cutter C to produce a more powerful drawing shear-cut which may be necessary for such purposes. F F are two projecting arms that may be horizontally moved to the right or to the left in the slots X X, under the front edge of the bench or table A. The back ends of these arms are secured together by a metal bar, which is also slotted, so as to reciprocate horizontal-

ly upon a pin or screw on the under side of the table A in such a manner that the bar forms a part of and moves with the arms F F, which constitute the bearings of the roller or shaft R. F' F' are two stationary arms which form the bearings of the back roller R', which is made to unship, to remove the roll of paper after trimming the same. One end of this rod or roller R' is made square, to fit into the revolving socket N, which is operated by means of the same power that rotates the vertical cutter C', or otherwise. Fig. 2 is a front elevation of the revolving knife C', and an oblique top view of the flat smooth surface of the horizontal cutter C. The angle of impingement is shown by the dotted line to be less than at Fig. 1. These knives may be arranged upon any suitable table, bench, or block for cutting either leather, sheet metal, or other material, and may be operated by any suitable power, such as hydrostatic, pneumatic, steam, or hand power, and arranged with any suitable gearing for the purpose specified. The horizontal revolving knife C carries either the paper, leather, sheet metal, (or any other thin material which is capable of being cut,) in contact with the cutting-edges of both cutters, C and C', as fast as they are able to cut the same, in either a curve or right line; and our arrangement of two revolving cutters placed at right angles to each other, so that the cutting-edge of the vertical knife will impinge against the horizontal side of the cutting-edge of the revolving cutter C, (in a greater or less degree, as may be required,) we believe to be of great mechanical utility.

What we claim as new, and desire to protect by Letters Patent of the United States, is—

In the combination of the horizontal and vertical cutters C and C', we claim the arrangement of the horizontal cutter C, as described, so that its edge impinges against the side of the vertical cutter C', substantially as above set forth.

In testimony whereof we hereunto subscribe our names in the presence of two witnesses.

WM. G. AYRES.
SETH L. COLE.

Witnesses:

JAMES P. McLEAN,
J. RITCHIE McLEAN.