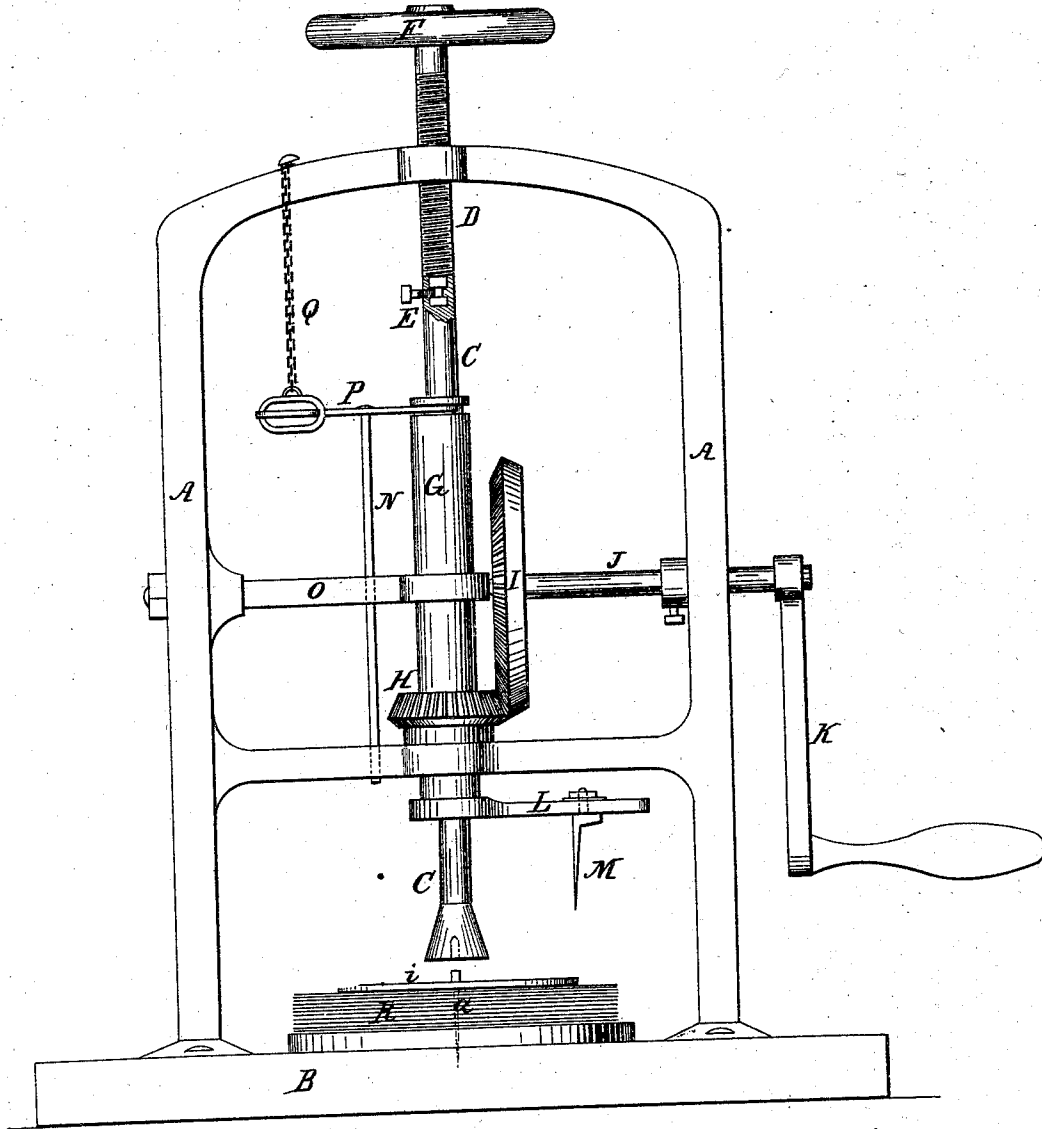


J. J. Butler.

Paper Cutting Mach.

N^o 60,341.

Patented Dec. 11, 1866.



Witnesses.

J. A. Jackson.
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ROTARY CUTTING MACHINE.

JAMES J. BUTLER, OF CINCINNATI, OHIO.

Letters Patent No. 60,341, dated December 11, 1866.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES J. BUTLER, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented a new and Improved Rotary Cutting Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification.

The object of this invention is to construct a machine by which discs of any material may be cut rapidly, and in the most perfect manner.

My invention consists in providing an iron frame, secured to a suitable foundation or base, in which are located and attached two hollow mandrels, one running within the other, and driven by suitable gear wheels, so as to rotate the mandrel and cutter that is attached to an arm that is secured to an outer mandrel, by which discs of any size may be cut in the most perfect manner.

My invention is peculiarly adapted to paper box manufacturers, and especially for paper collar boxes, as the end may be cut to any required size, and in the most accurate manner.

To enable others, skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The figure represents a side elevation of my improved rotary cutting machine.

Letters of like name and kind refer to like parts in the figure.

A represents an upright frame, made of iron or other proper material and dimensions, and secured firmly to a suitable base or foundation, B, of such a character so that the whole machine is portable. C is a mandrel made of iron, or other metal, that is placed in the cross-pieces of the frame, A. Upon the bottom of this mandrel, C, is a flange that is designed to be pressed down upon the work for the purpose of holding it in its position while it is subjected to the action of the cutters. The said mandrel, C, is operated and made to move up and down by means of the screw, D, which is connected to the end of the mandrel by a slot and set-screw, as shown at E. F is a hand-wheel, located and secured upon the upper end of the screw, D, for the purpose of giving leverage and power for working the screw. G is a tube or hollow mandrel through which the mandrel, C, passes longitudinally from end to end, and is also located in an upright position, and runs in suitable bearings in the cross-pieces of the frame, A. Upon this mandrel, G, is a bevelled pinion-wheel, H, that meshes into a corresponding spur-wheel, I, which is secured upon the shaft, J, which runs in bearings in the frame, A. Upon the outer end of the shaft, J, is the crank, K, by which the machine is operated. L is the cutter bar, that is secured to the lower end of the mandrel, G. This cutter bar is provided with a slot in which is placed the knife or cutter, M, the object of which is that the cutter may be moved in toward the mandrel or out, as may be desired, for the purpose of varying the size of the discs to be cut. N is a guide rod that moves up and down in lower cross-piece of the frame, A, and the arm, O, that projects out from the frame. Upon the top of this rod, N, is a curved bar, P, that extends and connects with the mandrel, G, by a slot in the upper end of the said mandrel. The mandrel, G, is held in an elevated position by means of a loop in the end of the jack-chain or cord, Q, the other end from the loop being fastened to the top cross-piece of the frame, A. R is a base or platform on which the material is placed when designed to be cut.

The operation of my machine is easy and perfect, and consists in placing the material upon the base or platform, R, and turning down the screw, D, by the hand-wheel, F, which acts upon the mandrel, C, which presses down the material and holds it firm upon the base, R; then by turning the crank, K, puts the rotary cutter in motion through the medium of the spur-wheel, I. The loop is disengaged from the curved lever, P, the cutter and mandrel are allowed to feed down through the pinion, H, (which is loose upon the mandrel, G,) until the material is cut through.

It will be observed that to prevent the pinion, H, from turning on the mandrel, G, a key-seat is cut longitudinally from end to end upon the said mandrel, in which fits a key made in the eye of the pinion, so that the mandrel is allowed to move free through the eye of the pinion and still made to rotate in the same manner as the pinion.

It will also be observed that when thick material is cut, the needle, a, in the disc, z, may be dispensed with, and is only needed when labels are to be cut. But this disc and needle are essential to my invention, and are

peculiarly adapted to cutting labels of circular form, as for shoe blacking and other boxes of similar form, and that this machine can be made to work in a horizontal position as well as upright.

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

1. The rotary knife or cutter M, and arm L, in combination with the mandrels C and G, for the purposes and substantially as described.

2. I claim the bevel gearing attached to a crank for driving the mandrels to which the cutter or knife is attached, substantially and for the purpose set forth.

3. I claim the upright screw D, in connection with the mandrel pressing on the disc E, or material, substantially as herein shown or described.

JAMES J. BUTLER.

Witnesses:

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