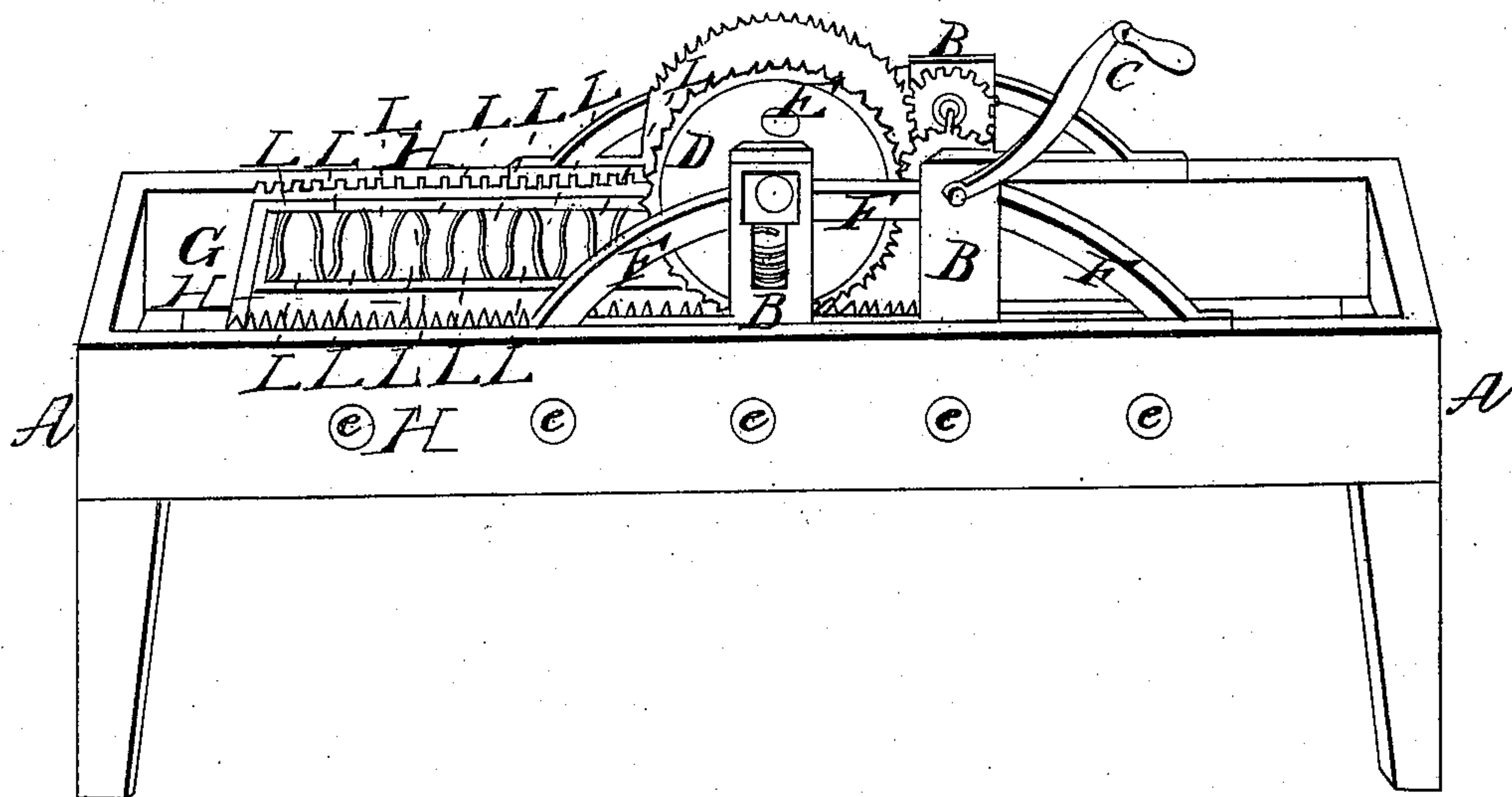


*L. N. Leland,*  
*Cutting Leather,*  
*N<sup>o</sup> 416, Patented Sept. 28, 1837.*



# UNITED STATES PATENT OFFICE.

LEVI N. LELAND, OF GRAFTON, MASSACHUSETTS.

## MACHINE FOR CUTTING LEATHER.

Specification of Letters Patent No. 416, dated September 28, 1837.

*To all whom it may concern:*

Be it known that I, LEVI N. LELAND, of Grafton, in the county of Worcester and Commonwealth of Massachusetts, have invented a new and useful Machine to be Called "Leland's Patent Leather Cutter," and that the following is a true, full, and exact description of the same, referring to the drawings hereunto annexed.

10 The machine is designed to be set in a frame A, A, in the drawing, which presents a side view of the frame and machine, which view, owing to the great simplicity of the parts of the machine, is deemed sufficient  
15 for a full understanding thereof. This frame may be made of wood or castings according to the kind of work to be done and power applied.

20 B, B, are upright posts set into the frame, which sustain the arbors.

C, is a crank attached to the end of the arbor, to which the power is applied, and which gives the first motion. At each end of this arbor is affixed a small gearing, 25 which, by means of a corresponding gearing at each end of the cylinder D, communicates motion to the whole machine. The gearing in the drawings and model accompanying these specifications, are single, 30 that is one gearing at each end of the arbors. For the purpose of increasing the power of the machine, this gearing may be doubled, that is by having a like set outside of the posts, and which may be of different dimensions. 35 The large cylinder, D, is sustained by the post B, and a corresponding post on the other side of the machine. In these posts is inserted a sliding box, in the center of which is the end of the arbor to the large 40 cylinder. This box is designed to slide up and down, and is regulated by the screw E, and by a spiral spring underneath the same. By means of this screw the cylinder may be elevated or depressed at pleasure.

45 F, F, F, are bars sustaining the posts and there are corresponding bars on the opposite side of the machine.

The gearing of the cylinder, which may be varied in different ways for increasing 50 power, communicates motion to the carriage G. Upon each side of this carriage are the racks H, H, which receive a horizontal motion from the gearing of the cylinder, and the carriage to which these racks are fastened, receives the same motion. This carriage rests and moves upon the rolls I, I, I,

I, I. In this carriage is placed the slide H, which receives the same motion with the carriage. The carriage is made so large as to receive slides of different dimensions, according to the kind of work which is to be 60 done. In the slide are inserted the knives with their edges upward. These knives may be made of different forms and dimensions, according to the pattern to be cut, and may 65 be elevated or depressed, and otherwise regulated by means of screws in the sides of the slide. That is to say, the knife is elevated or depressed by means of a screw in the underside of the slide; the end of the 70 screw presses up or elevates the knife and then by reversing the motion of the screw, the knife follows it down, and thus the knives may be so adjusted as to present a perfectly even and horizontal surface upon 75 which the leather rests.

The ends of the knives as they are inserted in the slide, are let into a groove in a piece of brass or other metal, and this piece of metal admits of a lateral motion upon 80 the slide. From this piece of metal which thus receives the knife, there projects a screw through a mortise in the side of the slide, upon the end of which screws are nuts as represented by L, L, &c. This mortise is 85 long enough to give all the lateral motion to the knives that may be desired, and by means of turning the nuts at the ends of the screws, the knives may be made fast at any point you wish, and thus the width of the 90 pattern to be cut may be regulated at pleasure. All which fully appears from the model herewith presented at the Patent Office. The frame, posts, cylinder, carriage and slide, may be of wood or metal, according to the power to be applied and the kind of work to be done. 95

Motion is given to the whole machine, by applying the power of whatever kind to the crank C. This causes the cylinder D, to revolve, and at the same time the carriage with the slide in it receive a horizontal motion and pass directly under the cylinder, and the leather is placed between the cylinder and the edge of the knives, and thus the 100 patterns are cut, and drop underneath the machine. 105

The more particular application of this machine had in view by the inventor, is to the cutting of soles for shoes and boots, but 110 it may be applied with equal advantage to the cutting of any other patterns of leather,



paper or cloth, and the inventor claims a right, and the benefit of such application accordingly.

To illustrate the operation of the machine for the particular purpose above referred to, take a strip of sole leather of a width equal to the desired length of the sole to be cut. This strip of leather is placed smooth upon the upper surface of the carriage and slide. The crank C, is turned. This carries the carriage and slide, with the leather resting upon its surface, and upon the edges of the knives, directly under the cylinder D. The cylinder presses the leather down upon the edge of the knives, cutting out a piece of leather of the precise pattern of the knives. These pieces of

leather pass down between the knives, and thus the work is done, and the machine ready to receive another strip of leather.

The whole machine described in the foregoing specifications, so far as I am advised is new, but

What I claim as my invention, and desire to secure by Letters Patent, is—

The cylinder in connection with the carriage under it, the slide placed in the carriage, and the knives inserted in the slide, and the mode of regulating them as particularly set forth in the specifications.

LEVI N. LELAND.

Witnesses:

R. P. LELAND,  
U. S. BARTON.