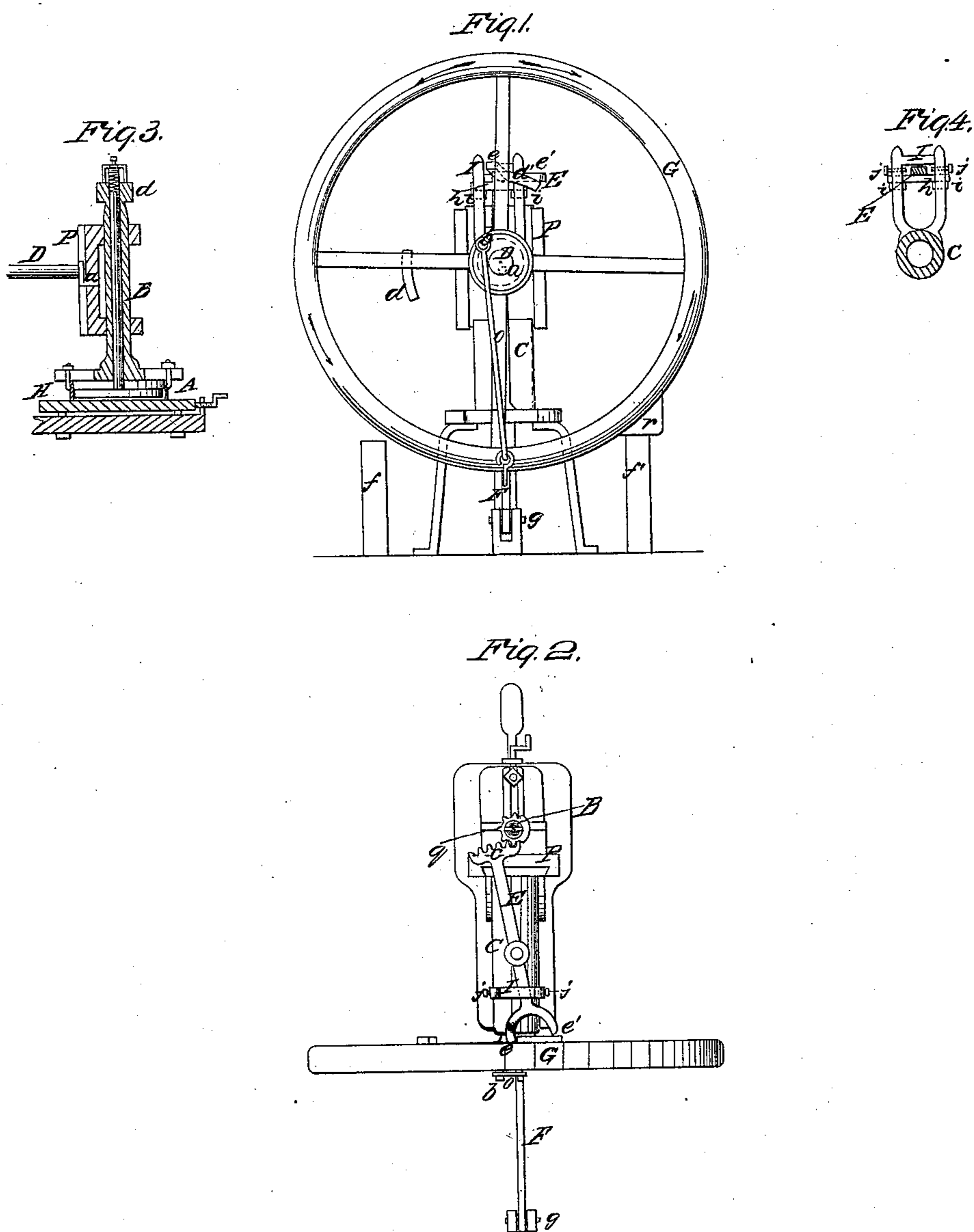


J. W. Hatch,
Cutting Leather,
No 13,875, *Patented Dec. 4, 1855.*



UNITED STATES PATENT OFFICE.

JESSE W. HATCH, OF ROCHESTER, NEW YORK.

MACHINE FOR CUTTING OUT BOOT AND SHOE SOLES.

Specification of Letters Patent No. 13,875, dated December 4, 1855.

To all whom it may concern:

Be it known that I, JESSE W. HATCH, of Rochester, in the county of Monroe and State of New York, have invented certain
5 new and useful Improvements in Machines for Cutting Out Leather, Cloth, India-Rubber, and other Substances; and I do hereby declare that the following is a full, clear,
10 and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a back view of a machine constructed according to my invention for cutting out soles for shoes or boots. Fig. 2, is
15 a top view of the same. Fig. 3, is a vertical section of the cutter and its appendages. Fig. 4, is a detached sectional view which will be hereinafter explained.

20 Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in certain improvements in the patented machine of J. W. Hatch and H. Churchill, and the principal
25 object of these improvements is to enable the machine to be driven and operated entirely by one person, and thus to remedy the inconvenience of Hatch and Churchill's machine which where power is not used requires one person to drive it and another to
30 supply it with material and remove the cut articles.

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

In this machine the cutter, A, which is of the character of what is known as a gun punch, is attached to a vertical shaft or stock, B, which is provided with journals
40 to work in suitable bearings in a slide, P, working in vertical guides in the framing, C, of the machine; and it receives the vertical rectilinear motion necessary to produce its cutting action from an eccentric pin *a*,
45 see Figs. 1, and 3, on a horizontal shaft, D, acting on the slide, P. It derives the semi-rotary motion which is given for the purpose of reversing its position after every cut for the prevention of waste, from a horizontal lever, E, on the top of the machine
50 which has a toothed sector *c*, at its front end gearing with a pinion or sector, *g*, on the top part of the shaft or stock. In all these respects it resembles the machine of Hatch and Churchill's, but instead of a continuous
55 rotary movement derived from a crank or

pulley at the back as in that machine, the shaft in this machine makes only about three fourths of a revolution in opposite directions alternately, the said movement being
60 produced by a treadle, F, which is a lever of the first order with its fulcrum, *g*, at the rear end secured to the floor or to a suitable bed plate, said treadle being connected by a
65 rod *o*, with a wrist, *b*, at the back of the fly wheel, G, of the shaft, D. The extent of this movement is indicated by the wrist, *b*, being represented in two positions in Fig. 1. While the machine is at rest, the wrist
70 is always held in one of these two positions by a weight, *v*, attached to or cast on the fly wheel the said weight resting upon one of
75 two fixed standards *f*, *f'*. In either of these conditions of the wheel and wrist the treadle is of course raised. The operator stands in front of the machine in a convenient position for placing the pieces of leather or
80 other material in a proper manner upon the table, H, for the action of the cutter and when he depresses the treadle by his foot he moves the wheel far enough to bring the
85 weight *v*, over the center of the shaft, D, but the momentum the weight has acquired in moving to that point carries it past the center and there the pressure of the foot being
90 taken from the treadle it descends by the force of gravity until it reaches the other standard thus completing the movement of the wheel. This movement of the wheel
95 brings down the cutter and raises it again and just before its termination it moves the lever E, to reverse the position of the cutter by the action of one of two projections *d*, *d'*,
100 upon one of the prongs *e*, *e'*, of a fork on the rear end of the lever. The prongs *e*, *e'*, of the fork are at different elevations and the projections *d*, *d'*, at different distances from the shaft, D, to correspond with the
105 elevation of the prongs *e*, *e'*, so that when the wheel moves in the direction of the black arrow shown in Fig. 1, the projection *d*, may pass under the higher prong *e*, and strike the lower prong, *e'*, thus throwing the lever to the position shown in Fig. 2,
110 but that when the wheel moves in the direction of the red arrow the projection, *d*, may pass over the lower prong, *e'*, and strike the higher prong, *e*, thus throwing the lever to the position the reverse of that shown in Fig. 2. The movements thus given to the lever take place just before the weight comes in contact with the standards *f*, *f'*,

and is just sufficient to give half a revolution to the punch shaft.

Instead of the square on the head of the shaft working against a bar in front of the framing to keep the cutter shaft from turning back too soon, I employ the friction of a bar, *h*, best shown in Fig. 1, which is applied in a yoke, *I*, on the top of the framing between the top of the yoke *I*, and the bar *h*, the lever, *E*, works snugly and the bar is forced up against the lever to produce the necessary friction by two india rubber springs *i*, *i*, one at each end. Stop screws *j*, *j*, are also applied to the yoke *I*, to stop and regulate the movement of the lever.

The spring discharging plate, *j*, in the center of the cutter is applied in this machine somewhat differently to Hatch and Churchills, being attached to a rod *k*, pass-

ing entirely through the cutter shaft and having a spring *l*, applied at the top of the shaft as shown in Fig. 3.

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

1. The projections *d*, *d'*, at different distances on the face of the wheel, and the fork *e*, *e*, on the sector lever *E*, having its prongs at different elevations combined and operating substantially as herein set forth.

2. The application of the spring friction bar *h*, to the yoke *I*, for preventing the return of the sector lever before the proper time, in the manner specified.

JESSE W. HATCH.

Witnesses:

D. M. KAY,
N. JONES.