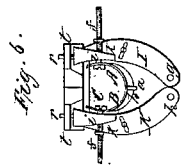
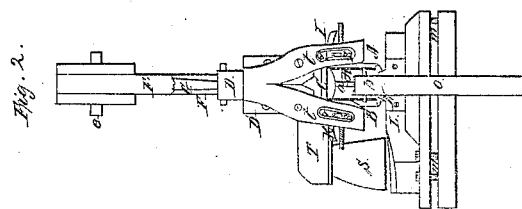
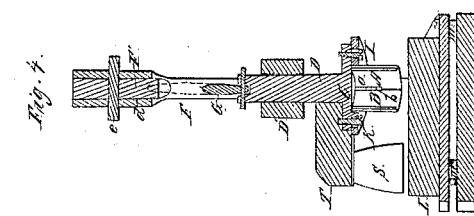
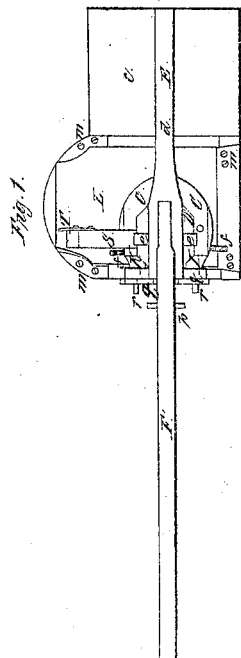
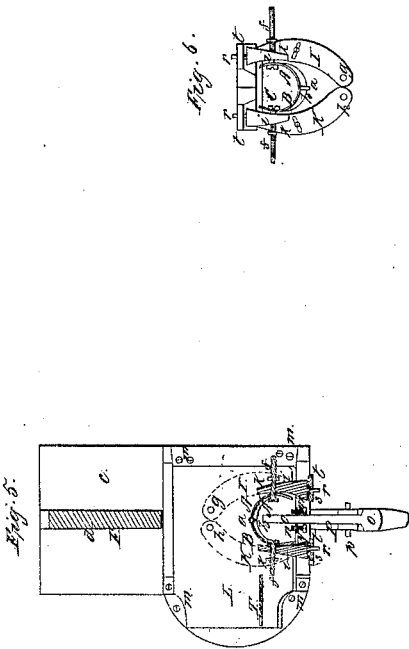


P. SHAW.
MACHINE FOR CUTTING BOOT HEELS, &c.

No. 6,095.

Patented Feb. 6, 1849.



UNITED STATES PATENT OFFICE.

PHILANDER SHAW. OF EAST ABINGTON. MASSACHUSETTS.

CUTTING BOOT-HEELS.

Specification of Letters Patent No. 6,095, dated February 6, 1849.

To all whom it may concern:

Be it known that I, PHILANDER SHAW, of East Abington, in the county of Plymouth and State of Massachusetts, have invented
5 a new and useful or Improved Machine for Cutting Heels of Boots, Shoes, &c., from Leather; and I do hereby declare that the same is fully described and represented in the following specification and accompanying
10 drawings.

Of the said drawings, Figure 1, denotes a top view of my said machine. Fig. 2, is a side elevation of it. Fig. 3, a front elevation of it. Fig. 4, a vertical cross section
15 of it. Fig. 5, is a horizontal section of the expansive cutters and certain adjacent parts, the same being made to exhibit the adjusting screws or contrivances applied to the cutters to increase or decrease their distance
20 apart. Fig. 6, is an underside view of the said cutters, and their expansion bars or levers.

The cutters A, B, are composed of two sheets or thin pieces of metal curved respectively to an arc of ninety degrees, or thereabouts, as seen in Fig. 5. They are hinged
25 together at their rear ends as seen at *a*, are placed vertically or nearly so, and are made with their lower edges as sharp cutting
30 edges. In depth they (the cutters) are somewhat greater than the entire depth of a heel to be cut or formed by them. The joint pin *b*, of their hinge is attached to and projects from a platen or plate C, which is
35 affixed to a vertical slide D, supported by a box D', applied to a horizontal arm E, extending from the main frame F, of the machine, the said main frame being constructed of a horizontal tablet or plate *c*,
40 and a large curved standard or upright post *d*, raised on the said tablet, and shaped as seen in the drawings.

The cutters and platen should have some suitable contrivance applied to them for
45 forcing them downward, and raising them upward at proper times; that which I employ being a hand lever F', which is jointed to the front and upper end of the post *d*, in such manner as to be capable, when the
50 hand is applied to the outer end of it, of being elevated and depressed. Between the fulcrum *e*, of the said lever, and the outer end of it, the lever is jointed to the upper end of a pitman G, which at its lower end
55 is jointed to the slide D. By application of his hand to the outer end of the lever, an

individual may raise or depress the same and the cutters at his pleasure.

Each of the cutters at its front end is connected by an adjusting screw *f*, to the
60 front end or part of one of two expansion bars or levers I, K, both of which are placed directly under and against the platen, and at their rear ends are respectively jointed to it by pins or screws *g*, *h*, on which they
65 move as fulcra.

The screw *f*, of each cutter simply passes through the cutter, but is not screwed into it, but is screwed into a projection *i*, of the adjacent lever I, or K. Through said projection I, another screw *k*, is screwed, and
70 is made to abut against the cutter. The said two screws of each cutter are adjusting screws, their object being to enable a person to set or adapt the cutters for cutting
75 a heel of any desirable width on the front or chord side.

The heel being composed of several pieces or thicknesses of sole leather laid on one another, is, while being cut or shaped by the
80 cutters, placed and supported on a bed L, arranged directly over the tablet *c*, and affixed thereto by adjusting screws *m*, *n*, &c. which admit of either the elevation or depression of the bed, or inclination of it, in such manner and to such extent as circumstances may
85 require. The upper surface of the said bed where the heel is to be placed on it, is an inclined plane, as seen in the drawings. On or near the front edge of it, it has a ledge
90 N, raised above it, two or more set screws *m'*, *n*, being made to pass through and screw into the said ledge. The front edge of the heel rests against the ends of these screws,
95 while the heel is being cut the screws serving as, and being intended for stops to enable a person to readily place the leather in a correct position to be operated on by the cutters.

A bent lever O, which plays in a vertical
100 plane, and on a fulcrum pin *p*, extending through a strut P, is so arranged that one arm, (viz, its horizontal arm,) shall extend into the space between the cutters and over the leather to be cut. The object of the
105 said lever O, is to enable the person who operates the machine, to confine the leather in place on the bed before and during the performance of the cutting operation, or descent of the cutters. This he does by lay-
110 ing hold of the outer arm of the lever, and lifting the same so as to force the inner or

upper arm down upon the leather previously placed on the bed.

A pin or stud *r*, is made to project from the outer end of each of the levers I, K, and
 5 to pass through a curved slot *s*, made in or through one of two stationary plates *t*, *t*, projecting down from the front end of the arm E. The slots *s*, *s*, are so formed as to
 10 cause the two levers, when they and the platen are made to descend, and during their descent, to gradually open asunder, and thereby at the same time to cause the
 15 cutters to depart from one another at their front ends in such manner as to produce slanting or inclined cuts through the leather, and such as will correspond to the
 20 shape required for the heel; it being understood that a heel from where it is joined to the sole, to that part which rests on the ground, tapers downward or is gradually
 25 made somewhat less in size. Now in cutting a heel by my machine that face or part of it which is to be placed on or against, and confined to the sole, is made to rest on
 30 the inclined bed of the machine, the face which is to come in contact with the ground when the heel is affixed to the shoe or boot, being uppermost and the first to receive the
 35 cutting action of the cutters. The inclination of the bed causes a series of layers of leather placed on it and one above and on the other to have a corresponding inclination. Consequently when the cutters descend, as they are made to do so in a vertical direction, or one making an acute angle with the upper surface of the bed, they pass through the leather in such manner as to give to the back of the heel its necessary
 40 dimunition, or gradual reduction of size,

corresponding to that which the heel is to receive at its sides. 40

A knife S, may be fixed to an arm T, made to project from the platen, the said knife having its lower edge, or that directly
 45 above the bed, a cutting edge. The bed may be made level where the knife cuts, and in front of the knife, the object of the same and the knife being to enable a person to cut leather into pieces of suitable size for the heels to be formed by the cutters. 50

What I claim as my invention is—

1. A combination composed of the following elements: viz, the inclined plane or bed, the curved cutters and machinery for
 55 depressing them, and expanding or separating them during their descent, the whole being constructed and made to operate substantially as specified; not meaning to confine each or any member of the said combination, to the exact form, shape, or construction, as described and exhibited, while
 60 it may be possible to vary the same without any substantial change of the whole combination, but to employ any machinery which may be considered a mechanical equivalent 65 for such member.

2. And in combination with the bed and cutters, I claim the bent lever O, or any mechanical equivalent, the same being for
 70 the purpose as herein before explained.

In testimony whereof I have hereto set my signature this twelfth day of July A. D. 1848.

PHILANDER SHAW.

Witnesses:

HARVEY TORREY,
 JAMES H. TORREY.