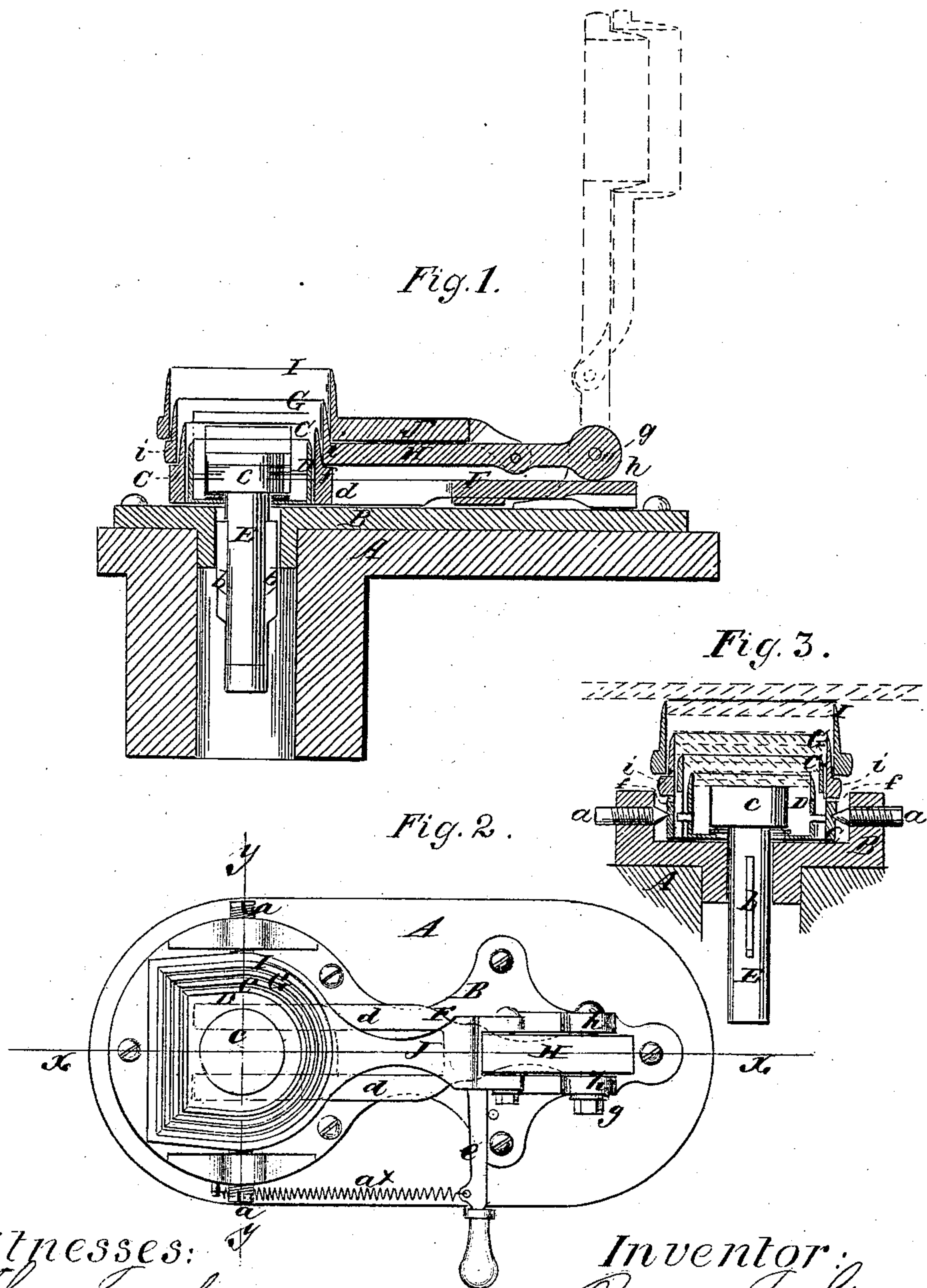


B. F. Goddard,

Heel Machine.

No. 70,992.

Patented Nov. 19, 1867.



Witnesses:
Thos. Insoche
W. Truwin

Inventor:
B. F. Goddard
Per. Munnell
Attorney

United States Patent Office.

BENJAMIN F. GODDARD, OF CHARLTON DEPOT, MASSACHUSETTS.

Letters Patent No. 70,992, dated November 19, 1867.

IMPROVED BOOT-HEEL CUTTER.

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, BENJAMIN F. GODDARD, of Charlton Depot, in the county of Worcester, and State of Massachusetts, have invented a new and improved Device for Cutting Boot and Shoe-Heels; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to a new and improved machine for cutting boot and shoe-heels, and is designed to save labor and stock in the production of that work.

The invention consists of a combination of dies or cutters of different sizes, arranged in such a manner that they may be manipulated or adjusted so that the several layers of leather composing a heel may be cut out to form a heel approximating to the desired shape, requiring but a trifling amount of trimming in order to finish it. In the accompanying sheet of drawings—

Figure 1 is a side sectional view of my invention taken in the line *x x*, fig. 2.

Figure 2, a plan or top view of the same.

Figure 3, a transverse vertical section of the same taken in the line *y y*, fig. 2.

Similar letters of reference indicate like parts.

A represents a base or stock on which the machine is secured, and B is a plate secured to A, and having a die or cutter, C, attached to it, and held in proper position by set-screws *a a*, (see fig. 3.) This die or cutter corresponds in shape to the pieces of leather to be cut, (see fig. 3.) D is a die or cutter similar to C, but smaller, that it may be fitted within C and work up and down therein. The die D has a rod, E, passing vertically and centrally through it, with a flange or feather, *b*, at two opposite sides. This rod E is provided with a head, *c*, at its upper end, which head is within the die D, as shown in figs. 1 and 3; and the rod is allowed to slide freely up and down, a space being allowed between the upper ends of the flanges or feathers *b* and the bottom of the head *c* of the rod, to allow the latter a certain degree of play without moving die D. F represents a slide which is fitted on the plate B, and has its outer or front part forked, the space between the prongs *d d* of the slide being sufficient to receive the rod E where the slide is shoved forward, which is done, when the die D is raised, by a spring, *a**, connected to an arm, *e*, of the slide, (see fig. 2.) The prongs *d d* of the slide F pass through holes in the rear of the die C. G is a die which is a trifle larger than the die C, so that the former may fit over the latter, and rest upon a shoulder, *f*, on the exterior of C, the upper cutting edge of G being above C, (see figs. 1 and 3.) The die G is at one end of an arm, H, the opposite end of which is secured by a bolt, *g*, between ears *h h* on plate B, so that G may be fitted over and raised free from die C, as desired. I is a die attached to or formed at one end of an arm, J, which is pivoted to the arm H of die G, and the die I may be fitted over die G and raised free from it, as desired, the die G being provided externally with a shoulder, *i*, for I to rest upon.*

The operation in cutting a heel is as follows: The dies G I are both raised and turned back out of the way, and the die D, if not up in the die C, is raised by shoving up the rod E, the slide F being then under it, by the spring *a**, as shown in red in fig. 1. The pieces of leather are then placed, one at a time, on die D, and cut by the blow of a wooden mallet. This is done until the die D, which is the smallest, is filled with the cut pieces, the lowest one resting on head *c* of the rod E. The slide F is then shoved back and the die D allowed to descend in die C, the bottom of D resting on the bottom of C. Pieces of leather are then placed on C and cut by the blows of a wooden mallet. When the die C is filled, which is a trifle larger than D, the die G is brought down over C, and that also filled with pieces of cut leather, and the die I is then brought down over G, and that also filled, and the several pieces or layers are then secured together by driving a nail down through the whole of them, the end of the nail being clinched on head *c*. The dies G I are then raised, and the heel forced out of the dies C D by raising the latter, the rod E being shoved up to effect this.

Owing to the difference in the size of the dies, the crude heel approximates in form very closely to a finished one, a very slight trimming only being required to complete it for the boot or shoe. The usual plan is to cut the pieces of leather all of the same size with one die or cutter, and then cut or shave them to the desired shape, which involves considerable labor, and much more stock is consumed than by my improvement.

The rod E may be operated through the medium of a treadle, if desired.

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

1. A device for cutting boot and shoe-heels, composed of a plurality of dies of different sizes, arranged to operate in the manner substantially as shown and described.
2. The rising and falling die D and rod E, arranged to operate in connection with the die C, substantially as and for the purpose set forth.
3. The slide F, in combination with the dies D C G I, arranged to operate substantially as and for the purpose specified.

BENJAMIN F. GODDARD.

Witnesses:

ALFRED E. FISKE,
GEORGE F. CUMMINS.