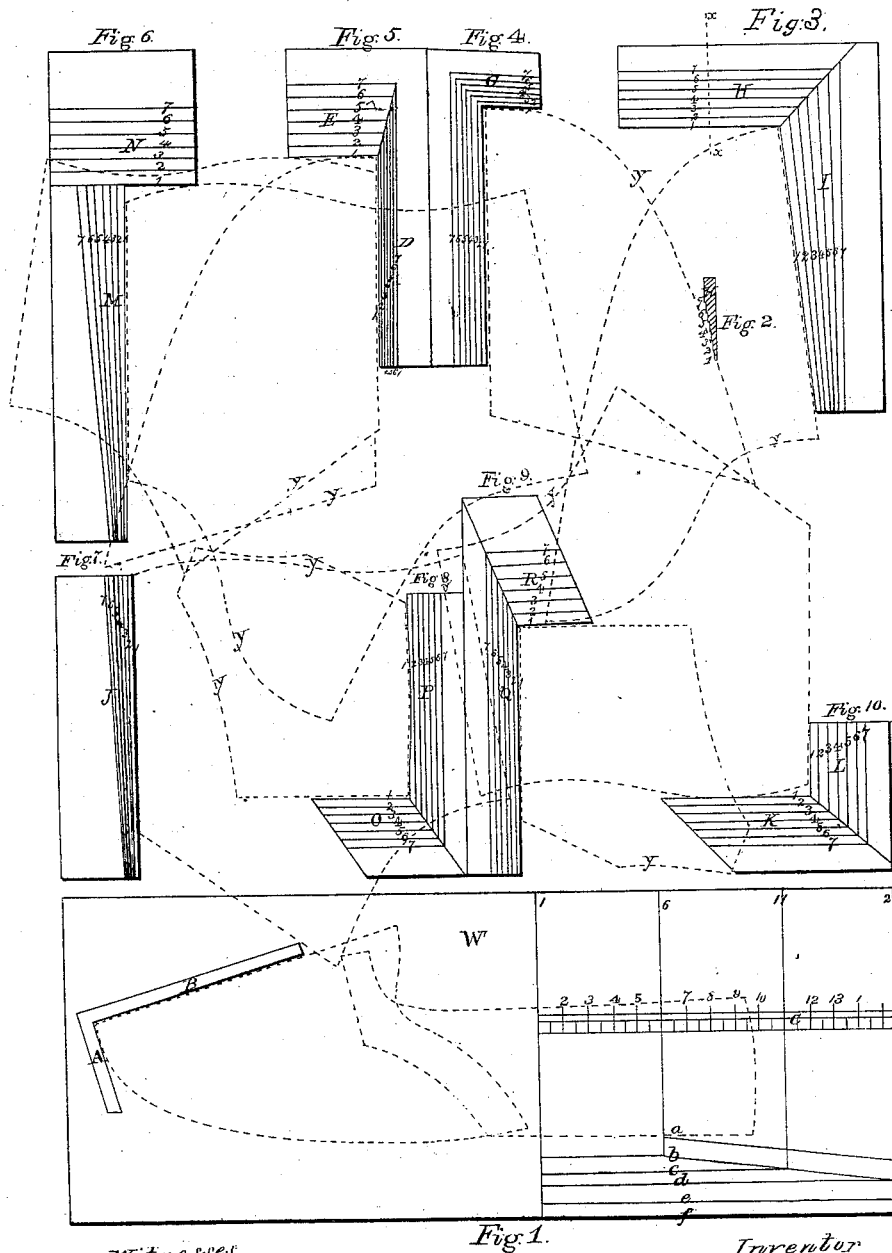


N. Silvester,
Shoe Pattern,

N^o 50,043,

Patented Sep. 19, 1865.



Witnesses

N. Ames.
Geo. H. Blake,

Fig. 1.

Inventor

Nathaniel Silvester

UNITED STATES PATENT OFFICE.

NATHANIEL SILVESTER, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN GRADUATING BOOT AND SHOE PATTERNS.

Specification forming part of Letters Patent No. 50,043, dated September 19, 1865.

To all whom it may concern:

Be it known that I, NATHANIEL SILVESTER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Grading Boot and Shoe Patterns; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan of the devices for gaging the sizes of patterns and giving the pitch or draft of a boot or shoe. Fig. 2 is a vertical section in the line *xx* of Fig. 3; and the remaining figures are plans of the different series of steps or graduators which I employ in making the different parts of boot and shoe patterns of various styles.

Like parts are indicated by the same letters and figures of reference in all the drawings.

The nature of my invention consists in the employment of a series of steps or graduators, the one raised above the other about the thickness of two thick sheets of paper, such as is commonly used for standard patterns, and having their vertical edges at such a distance apart as to correspond to the different sizes of boots and shoes, so that by placing the model of the smallest size against the first step and the paper for the next size upon it against the second step, and so on to as many numbers as are required, and then cutting through the whole, using the model for a guide, all the various sizes of patterns in their just proportions are obtained with the greatest accuracy and dispatch.

My invention further consists in a novel arrangement of devices for gaging the sizes of patterns and giving the pitch or draft of a boot or shoe.

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

W, Fig. 1, is a sheet or plate of brass, or other suitable material, whose surface is provided with the fixed arms A B, at right angles to each other, and about one-eighth of an inch (more or less) in thickness, and also with the graduated scale C, the graduations of which

(reckoning from the angle formed by the arms A B) correspond to the different sizes of boots and shoes, the lines *a b c d e f* being formed to determine the pitch or draft of the boot or shoe, the vamp and quarters of which are represented by the dotted lines.

Figs. 3, 4, 5, 6, 7, 8, 9, and 10 represent plans of a series of steps or graduators, of brass or other suitable material, the thickness of which is indicated by the vertical section, Fig. 2. These steps may be cut or planed out of a single piece of metal, or composed of separate sheets placed one above the other, the whole being confined in the required position to a suitable board or table by means of screws. The vertical edges of these steps are shaped and arranged, as represented in the drawings, so as to correspond to the different sizes and the just proportions of boot and shoe patterns for vamps and quarters.

The dotted lines in all the drawings represent the standard patterns for vamps and quarters, the lines marked *y* being the sides of the patterns which are to be used as guides for determining and cutting them in the order of the steps. Thus, to determine the length of vamps and quarters, I make use of the series of steps D and E, Fig. 5, placing the standard pattern against the steps 1 1, as represented by the dotted lines. To determine the next larger size, the paper is laid upon the standard against the steps 2 2, and the next size against the steps 3 3, and so on till all the required sizes have been reached. A knife is now slipped under the standard pattern, and the whole bunch is turned over without disarrangement, so as to bring the standard on top. The lines *y y* are now used as guides, by which all the other sizes are cut at a single operation.

To determine the width of a vamp, I make use of the series of steps F and G in a similar manner, using the line *y* as a guide for cutting the patterns that have been placed above the standard against the steps.

In Fig. 3 the steps I and H are used in a similar manner to determine the seam *y* of vamps. The steps M and N in Fig. 6 are used in a similar manner to determine the seams *y* of boot-quarters. The steps J in Fig. 7 are used to determine the heel-seams *y* of boot-

quarters. The steps K and L, Fig. 10, are used to determine the top and lace *y y* of boot-quarters. The steps O. P, Fig. 8, are used to determine the top *y* of brogan-quarters; and the steps Q R, Fig. 9, are used to determine the front seam, *y*, of the same.

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

1. The steps or gradutors, constructed and

arranged substantially as described, for the purpose of graduating boot and shoe patterns.

2. The combination and arrangement of the arms A B, graduated scale C, and graduations *a b c d e f*, or their equivalents, substantially as set forth, and for the purpose described.

NATHANIEL SILVESTER.

Witnesses:

N. AMES,

GEO. R. CLARKE.