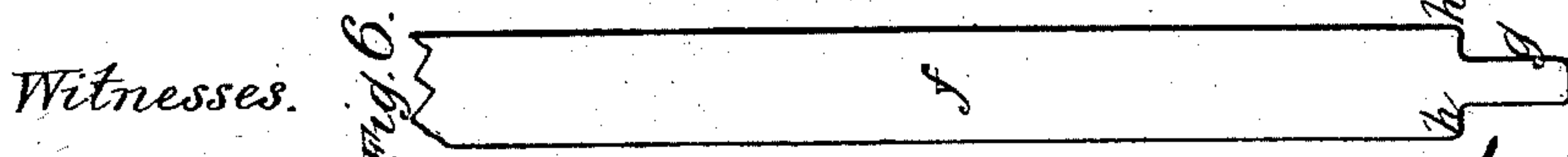
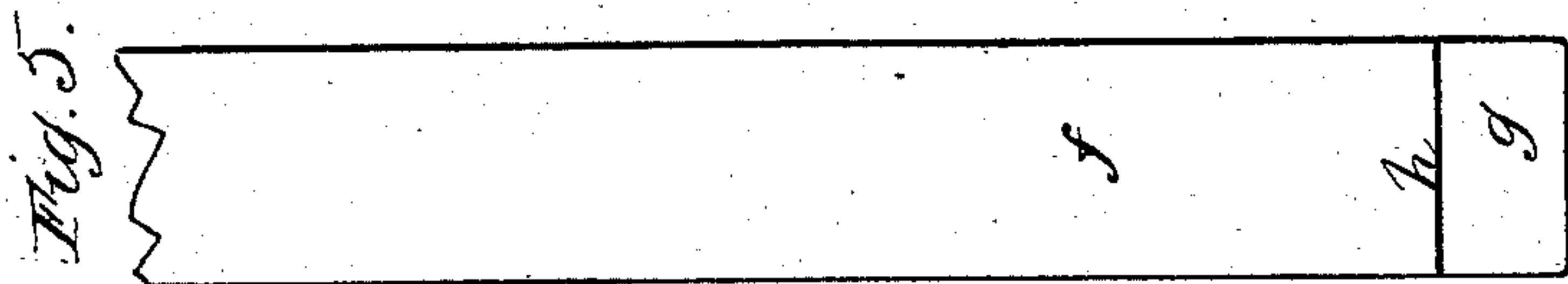
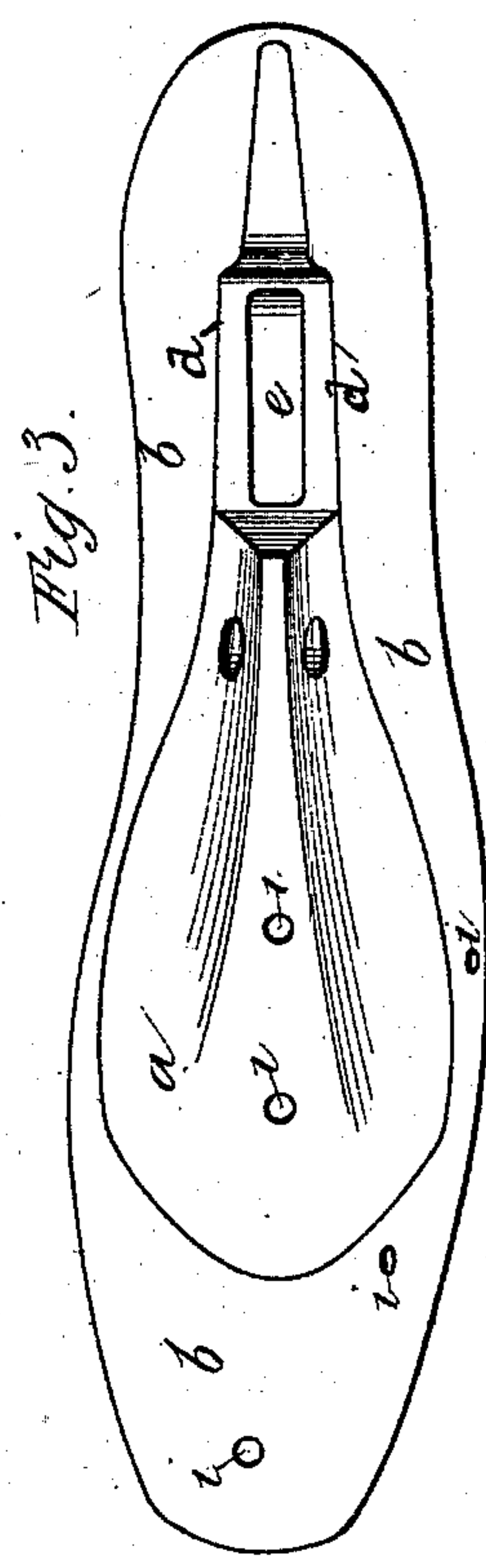
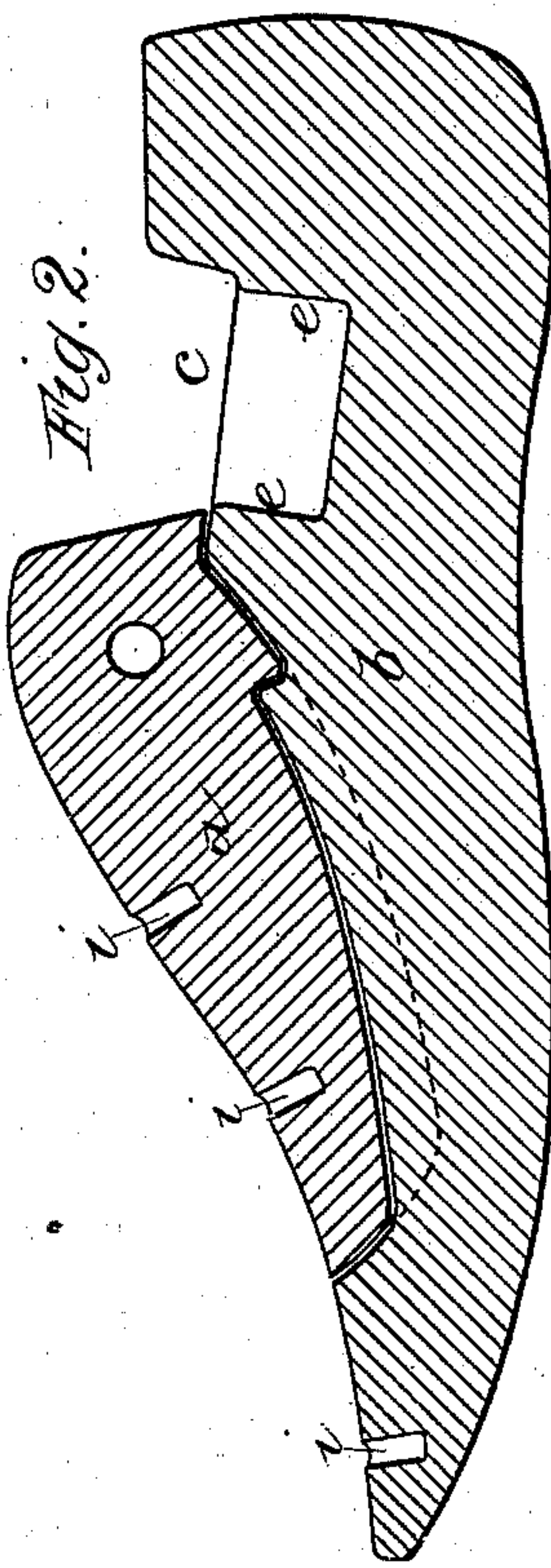
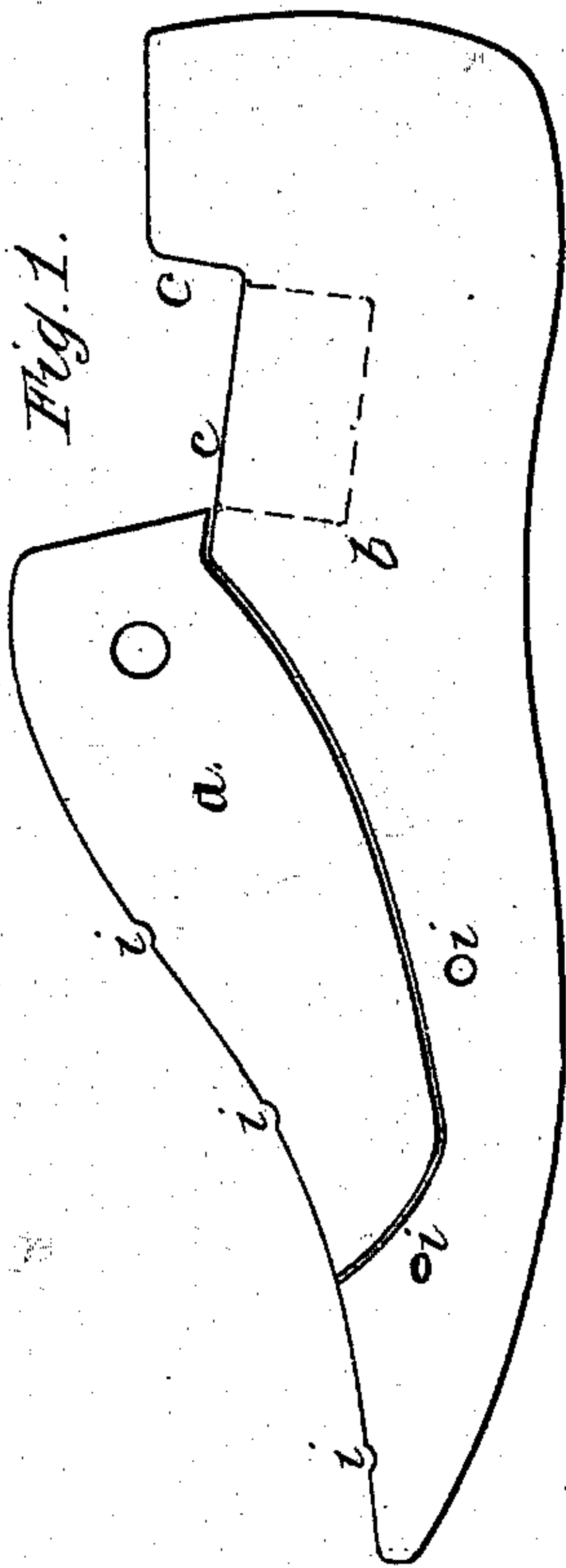
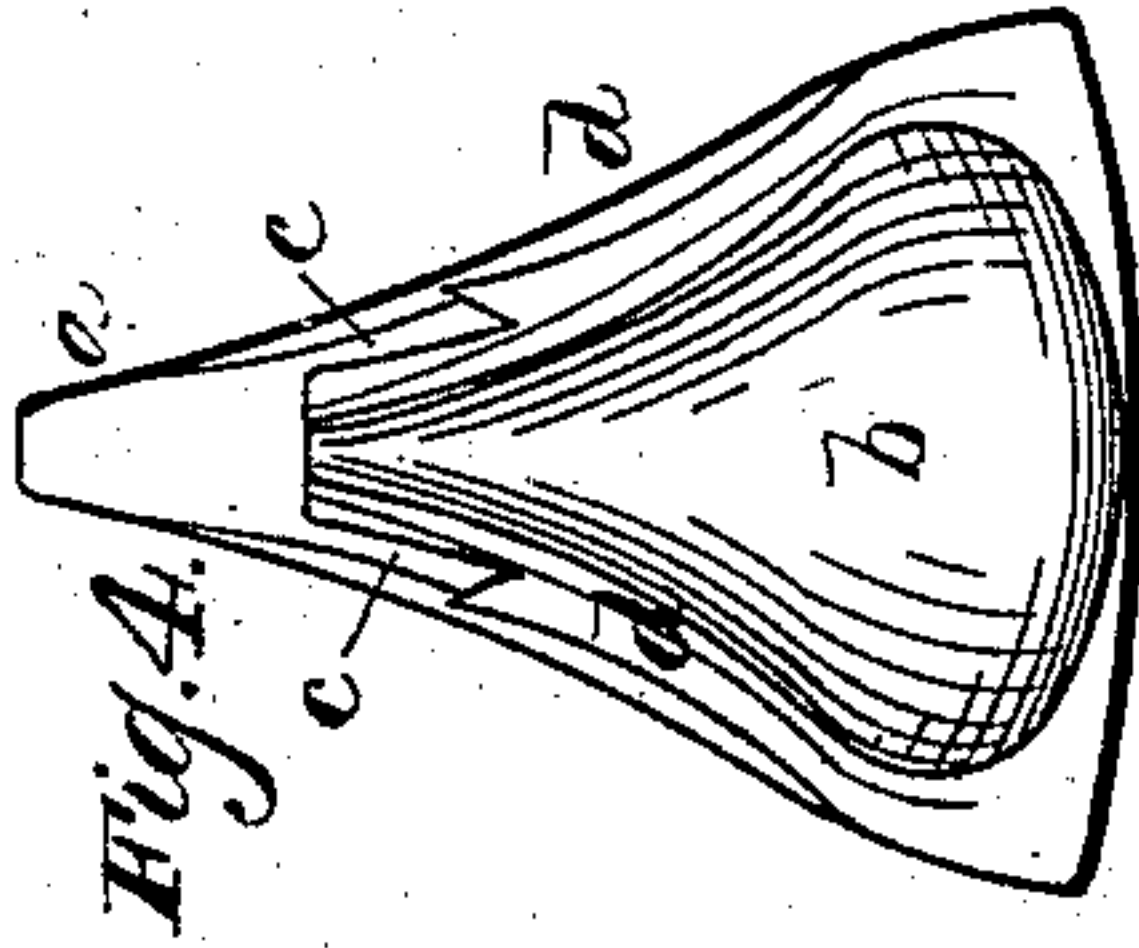


(No Model.)

J MARKIE.
METAL LAST.

No. 272,143.

Patented Feb. 13, 1883.



Witnesses.

Willis B. Magruder.
lev. Toulon

Inventor.

James Markie
by
John J. Malsted & Son,
his Attys.

UNITED STATES PATENT OFFICE.

JAMES MARKIE, OF LONDON, ENGLAND.

METAL LAST.

SPECIFICATION forming part of Letters Patent No. 272,143, dated February 13, 1883.

Application filed November 11, 1882. (No model.) Patented in England March 17, 1882, No. 1,298.

To all whom it may concern:

Be it known that I, JAMES MARKIE, a subject of the Queen of Great Britain, and residing at London, England, have invented new and useful Improvements in Metal Lasts, (for which I have obtained a patent in Great Britain, No. 1,298, bearing date March 17, 1882, and sealed September 12, 1882,) of which the following is a specification.

10 This invention relates to improvements in the construction of metal lasts employed in the manufacture of boots and shoes, the object of the improvements being to enable a better shape and fit to be given to boots and
15 shoes than can be obtained by the use of the present lasts.

In carrying out the invention I form the last in two parts, as hitherto; but I cut away the upper part of the last at a certain distance
20 from the heel, and this allows of the sides of the last at this part being tapered to a greater extent than hitherto without lessening the strength of the last. In the surface of the cut-away part I form a slot, and the lower end of
25 the upright is formed with a tenon which fits into the said slot, the shoulders of the upright resting on the surface of the cut-away part of the last; or the said shoulders may be dispensed with.

30 In order to enable my invention to be better understood, I will proceed to describe the same by reference to the accompanying drawings, in which—

35 Figure 1 is a side elevation, Fig. 2 a central longitudinal section, Fig. 3 a plan, and Fig. 4 an end view, of a metal last constructed according to my improvements.

Similar letters in all the figures represent similar parts.

40 *a* and *b* are the two parts, respectively, of the last. *c* is the cut-away portion of the part

b. *d* are the sides of the last tapered, as shown in Fig. 4, to a greater extent than hitherto. *e* is the slot formed in the surface of the cut-away part *c*. *f* is the upright shown in detached side and end elevations at Figs. 5 and 45 6. *g* is the tenon formed on the upright, and which fits into the slot *e*. *h* are the shoulders, which rest on the surface of the cut-away part *c* of the last; or the said shoulders *h* may be 50 dispensed with.

By the employment of a last of this construction boots and shoes can be lasted or made by the aid of less skilled labor than is required for lasting or making boots on the 55 ordinary lasts, and boots and shoes so made will, from the peculiar construction of the last, give a more perfect grip round the heel and ankle of the wearer.

My improved lasts are also not so liable to 60 breakage as the ordinary construction of last, and are much lighter and easier for the workmen to handle.

Holes *i*, of suitable size, may be formed in different parts of the last, as required, to allow of adapting to the last pieces of leather 65 or the like, whereby irregularities in the shape of a person's foot may be provided for, or the height of the instep be raised.

Having thus described my said invention 70 and the best means I am acquainted with for carrying the same into effect, what I claim is—

The improved metal sectional last *a b* described, having its sides *d* tapered, as and for the purpose shown and set forth, and having 75 in the part *b* the slot *e*, formed in the cut-away part *c*.

J. MARKIE.

Witnesses:

J. P. REDFERN,
W. C. FREEMAN.