

Bettes & Parker,

Boot Trees,

N^o 24,787.

Patented July 19, 1859.

Fig. 3.

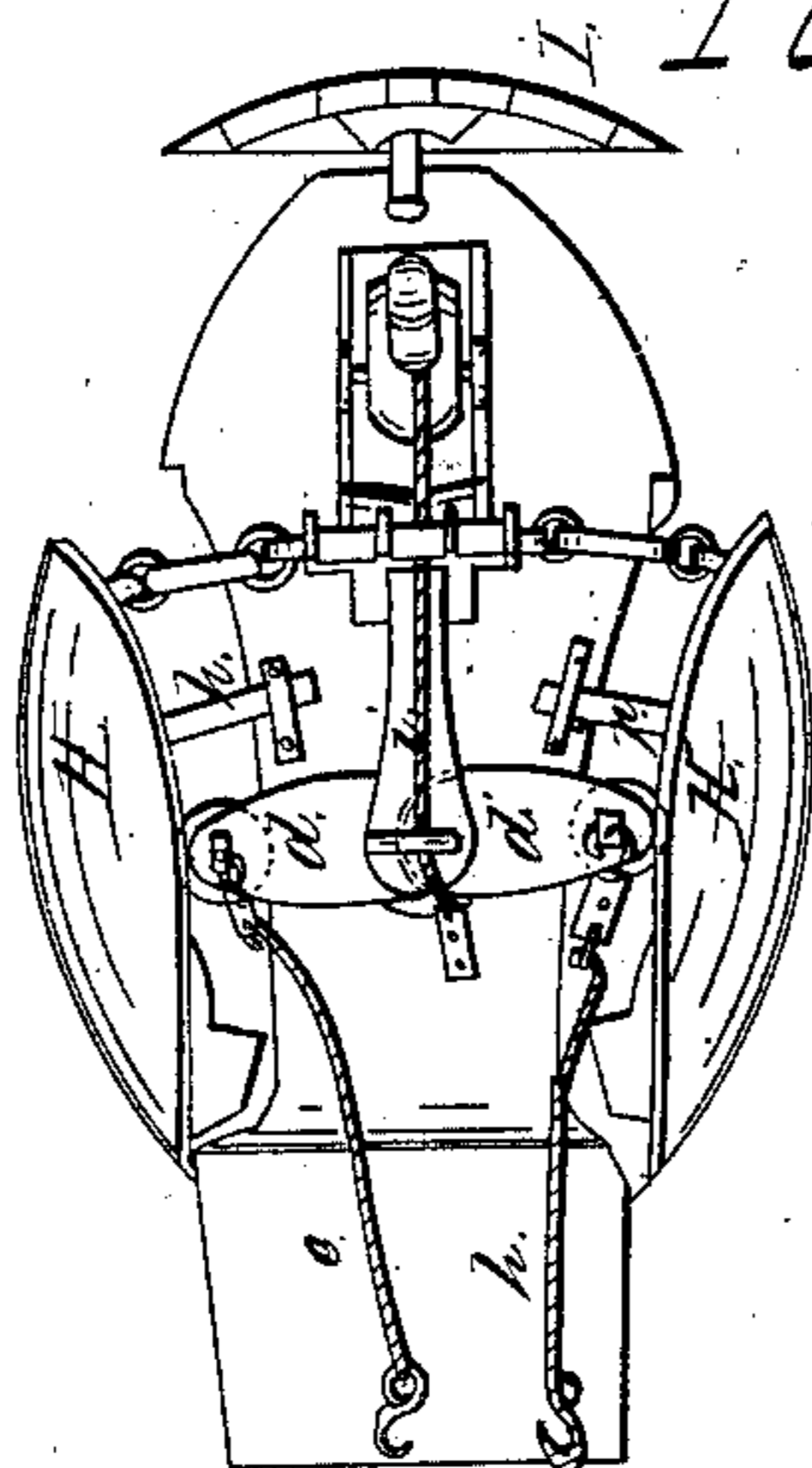


Fig. 2.

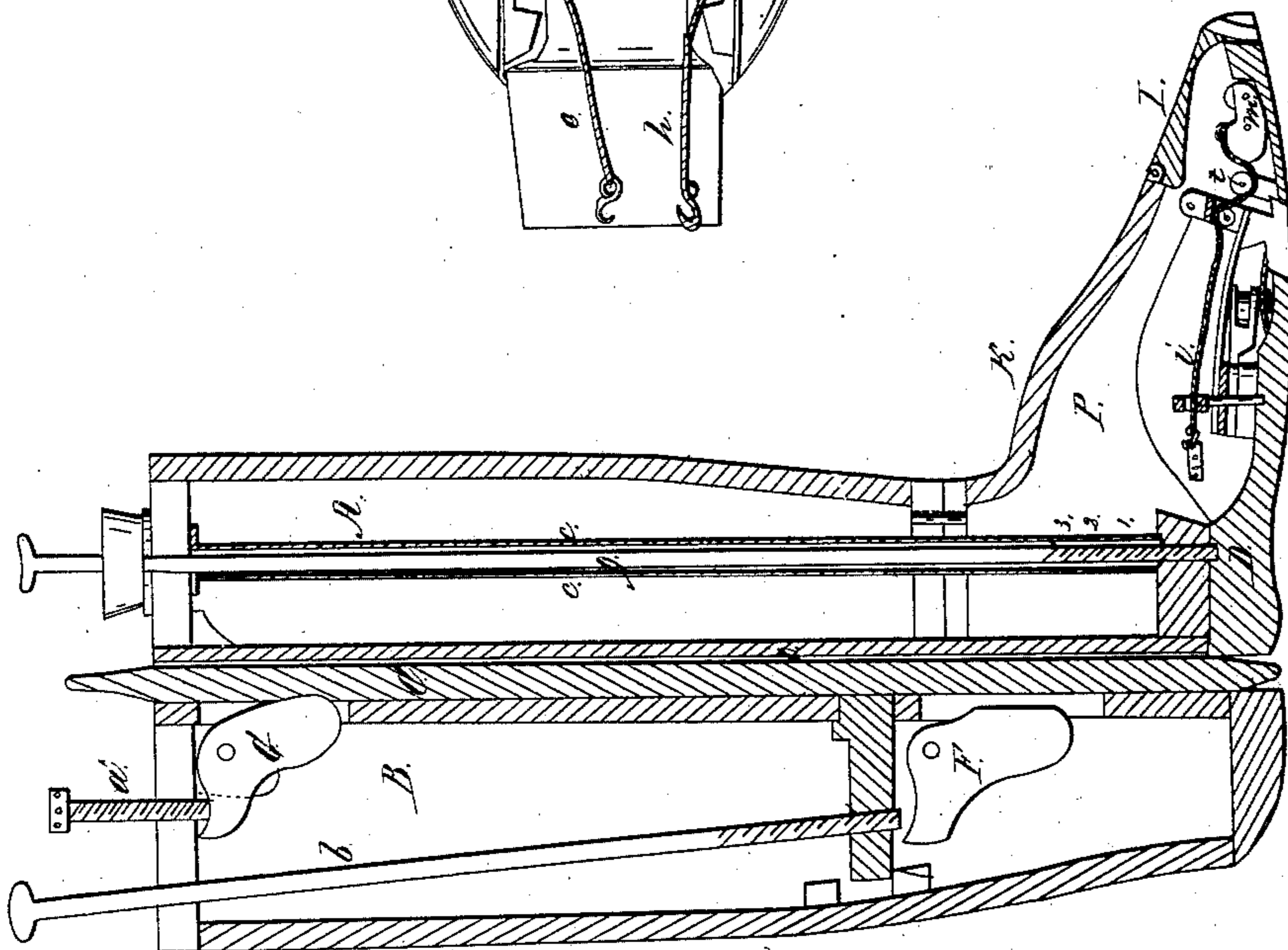
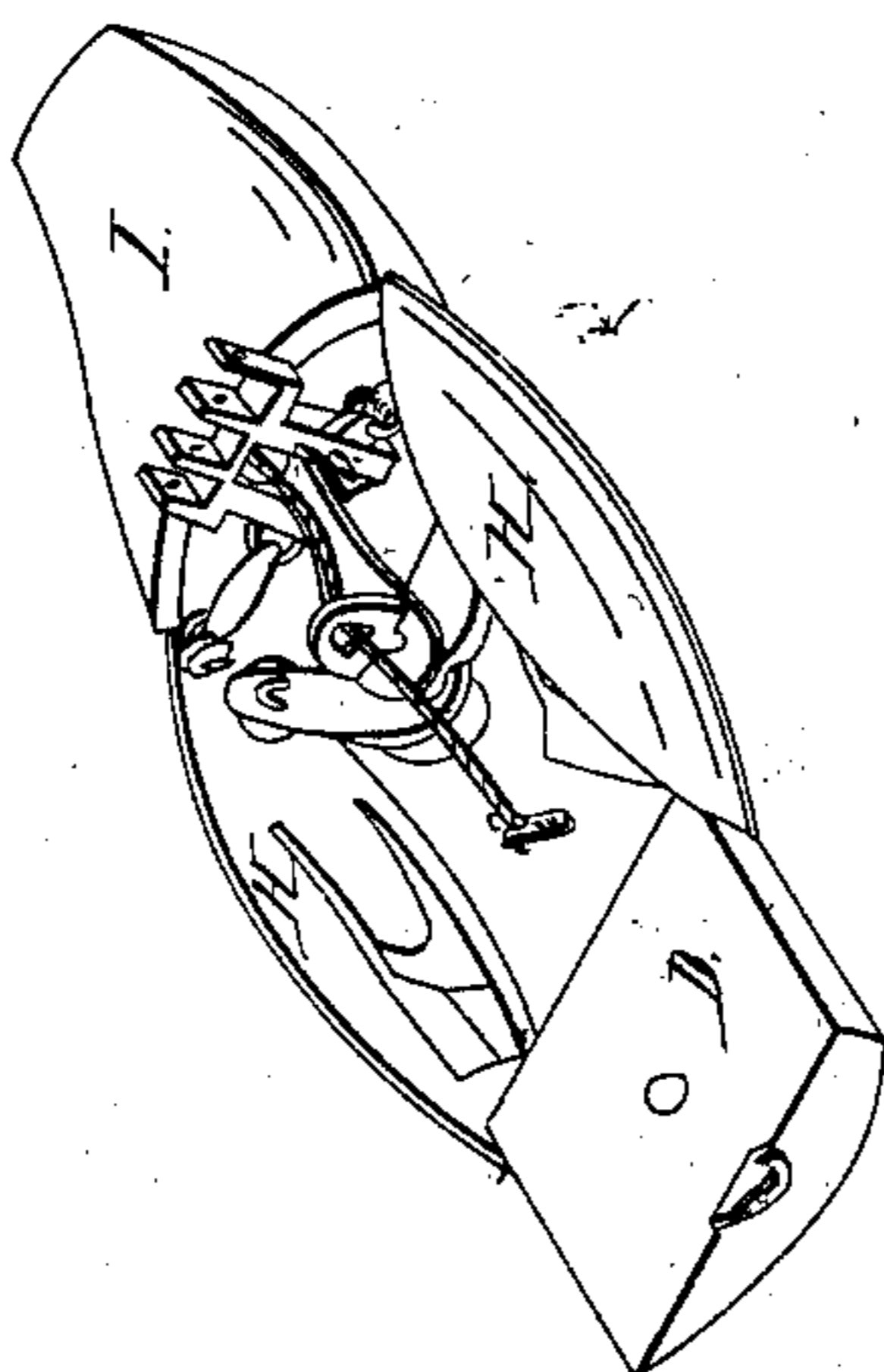


Fig. 1.



*Witnesses,
H. H. Hawley
J. C. Phillips*

*Inventor,
Amos H. Bettes
S. W. Parker*

UNITED STATES PATENT OFFICE.

W. H. BETTES AND J. H. PARKER, OF KOKOMO, INDIANA.

BOOT-TREE.

Specification of Letters Patent No. 24,787, dated July 19, 1859.

To all whom it may concern:

Be it known that we, W. H. BETTES and J. H. PARKER, of Kokomo, in the county of Howard and State of Indiana, have invented certain new and useful Improvements in Expanding Boot and Shoe Trees; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing and the letters of reference marked thereon.

The nature of our invention consists in expanding the toe, instep, and sides—all simultaneously—by the arrangement of such devices as will be hereinafter fully set forth.

To enable others skilled in the art to make and use our invention we will describe its construction and operation.

Figure (1) is a perspective. Fig. (2) is a side elevation. Fig. (3) is a top view.

Our machine consists of four distinctive parts, A representing the front portion of the leg, (B) the hinder part, (C) the slide and (D) the foot. Said foot (D) is subdivided into four pieces (I) representing the top part of the toe, and is attached to the front end of main piece (D) by a short cord of india rubber, as may be fully seen in Fig. (3). Under toe (I) is a small block (*m*) pivoted in a recess in the bottom of (D), so that it will oscillate freely. In the top of said block (*m*) is also pivoted a pulley, as shown in Fig. (2). To block (*m*) is attached cord (*i*) which passes down under roller (*x*) Fig. (2), and up over the roller pivoted in frame *f*, as represented in Fig. (1). To the end of said cord a hook is attached, the object of which will hereafter be more fully seen.

(H H) are the side pieces, which are pivoted at their rear ends to (D). Their front ends are connected to frame (*f*) by short cords of india rubber, as fully shown in Fig. (3). Said cords are for the purpose of allowing side pieces (H H) to expand and forcing them back to their natural position.

(*p p*) are merely supporters or guides to pieces (H H).

(*a a*) are two levers located in the center of the sole or main piece (D). Said levers are of equal length and have a bolt passing through them, at one end, which secures them to piece (D) and also allows free action, in the opposite end of said levers. (*d d*) are rollers, which roll against the side pieces (H H). The natural position of these levers are shown in Fig. (1). Fig. (3) rep-

resents them operating side pieces (H H). Near the end of said levers where the rollers are located are attached cords with hooks at their opposite ends. Said cords are represented in Fig. 3 by the letters (*e* and *h*).

(A) represents the front portion of the leg and (P) the instep, which parts are connected by the tongued slide (O) shown in sectional lines in Fig. (2).

(*g*) is a screw shaft which passes down through the center of (A) and rests upon main piece or sole (D). By this device the instep is expanded.

(*c*) is a sleeve which is slipped over screw shaft (*g*) and extends downward to a line parallel with the toe, as fully shown in Fig. (2). Near the lower end of said sleeve are three small holes in a perpendicular line, as shown by the figures (1, 2, 3,) in Fig. (2). In these holes the hooks which are attached to cords (*i e h*) are placed, so that it will be fully seen that when the sleeve (*c*) is turned it will wind these cords around it and consequently expand the side pieces (H H) and toe piece (I). The sleeve (*c*) is provided at the top with a ratchet wheel to prevent it from unwinding—or to retain the cords at any degree of tension which may be desired. The ratchet is secured to the top of front piece (A).

(C) is a slide, which is provided with a tongue on one side and a groove on the other.

(B) is the hinder portion or reverse part of the leg. Said part is so hollowed out that it will admit of levers (G and F) being pivoted near its top and bottom.

(*a*) and (*c*) are screws or screw shafts which rest upon levers F and G. Said screws extend up above the top of the leg and by turning them from the peculiar shape of the levers F and G which is fully shown in Fig. (2) the leg is expanded. Thus by our arrangement we are enabled to stretch the toe, instep, sides, and leg without removing the machine from the boot to complete the different operations.

The operation of our machine is as follows: The front portion of the leg A, instep P and sole D being all properly adjusted, we place them in the boot or shoe, as the case may be. If a boot, we then insert the reverse part (B) and slip the slide (C) between. Then by turning the screw shaft (*g*) we expand the instep. The sleeve (*c*) being turned will in like manner expand the

toe and sides. Should the leg also require stretching, it may be easily effected by operating the levers F and G, by means of screws (a) and (c). Removing the front part A, we readily convert our expanding tree into an ordinary last. It will be observed that on the sides and toe are small plugs. This is designed to show that when cast two or three holes should be made in these places in order that pieces of leather may be tacked on, and thus accommodate our boot tree to the prominent parts of the human foot.

Having thus fully described our invention what we claim as new and desire to secure by Letters Patent is—

1. The employment of the sleeve, c, in

connection with the screw shaft g, the two being arranged and operating substantially as set forth.

2. The arrangement of the cords, e, h, and i, with the levers d, d', and m, substantially in the manner and for the purpose set forth.

3. The combination of the instep K, side pieces H H', and toe piece I, when the whole are so arranged and constructed that they will operate simultaneously substantially as and for the purpose described.

WM. H. BETTES.

J. H. PARKER.

Witnesses:

T. C. PHILIPS,

H. B. HAVENS.