

(No Model.)

H. W. MOBBS & A. LEWIS.

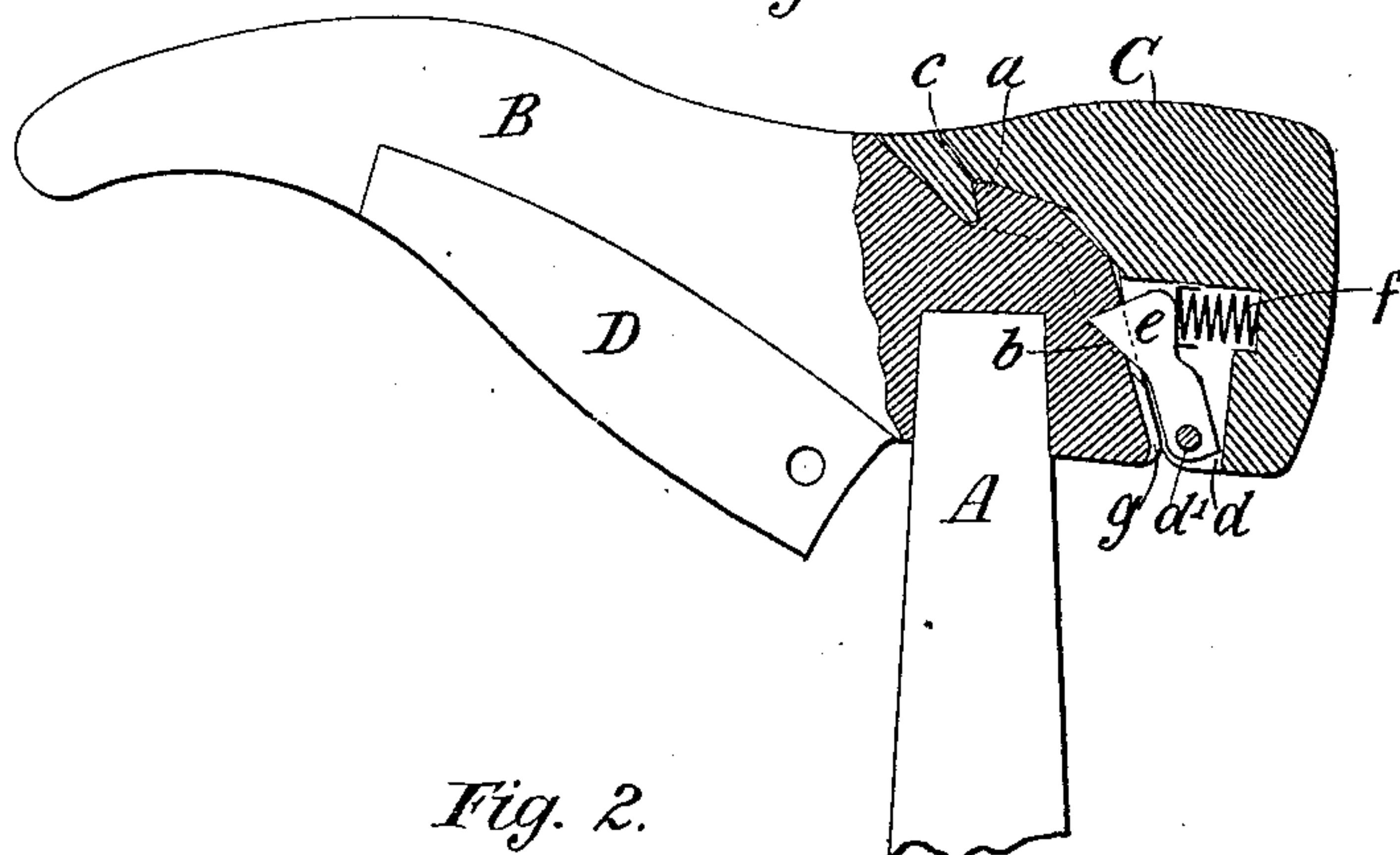
2 Sheets—Sheet 1.

LAST FOR BOOTS OR SHOES.

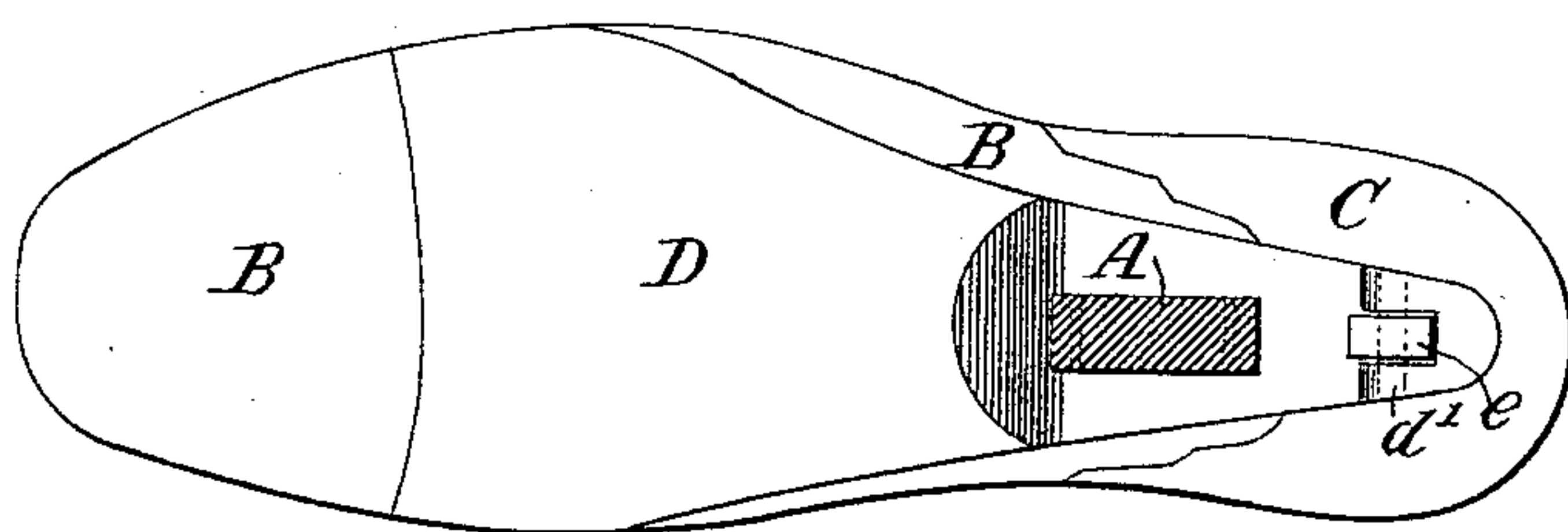
No. 336,339.

Patented Feb. 16, 1886.

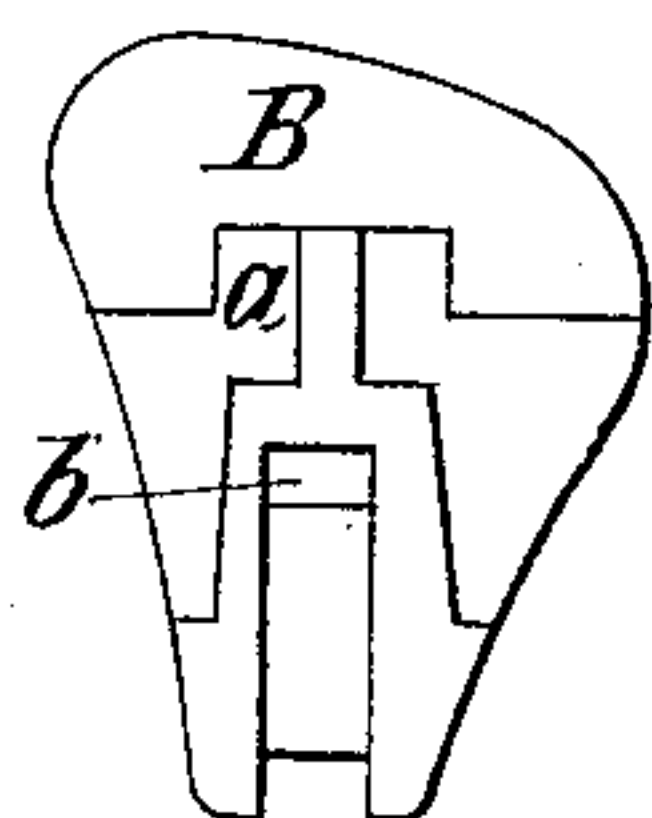
*Fig. 1.*



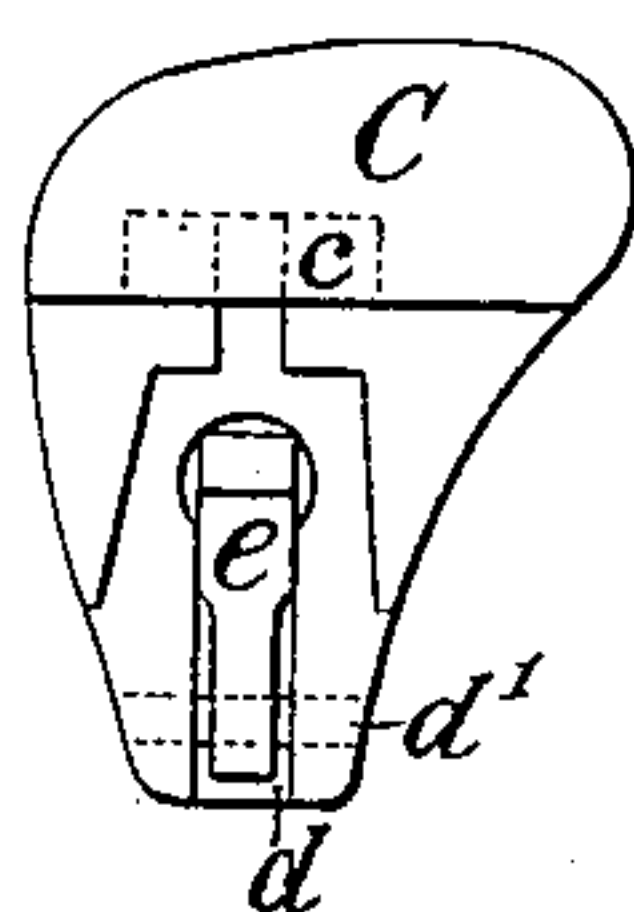
*Fig. 2.*



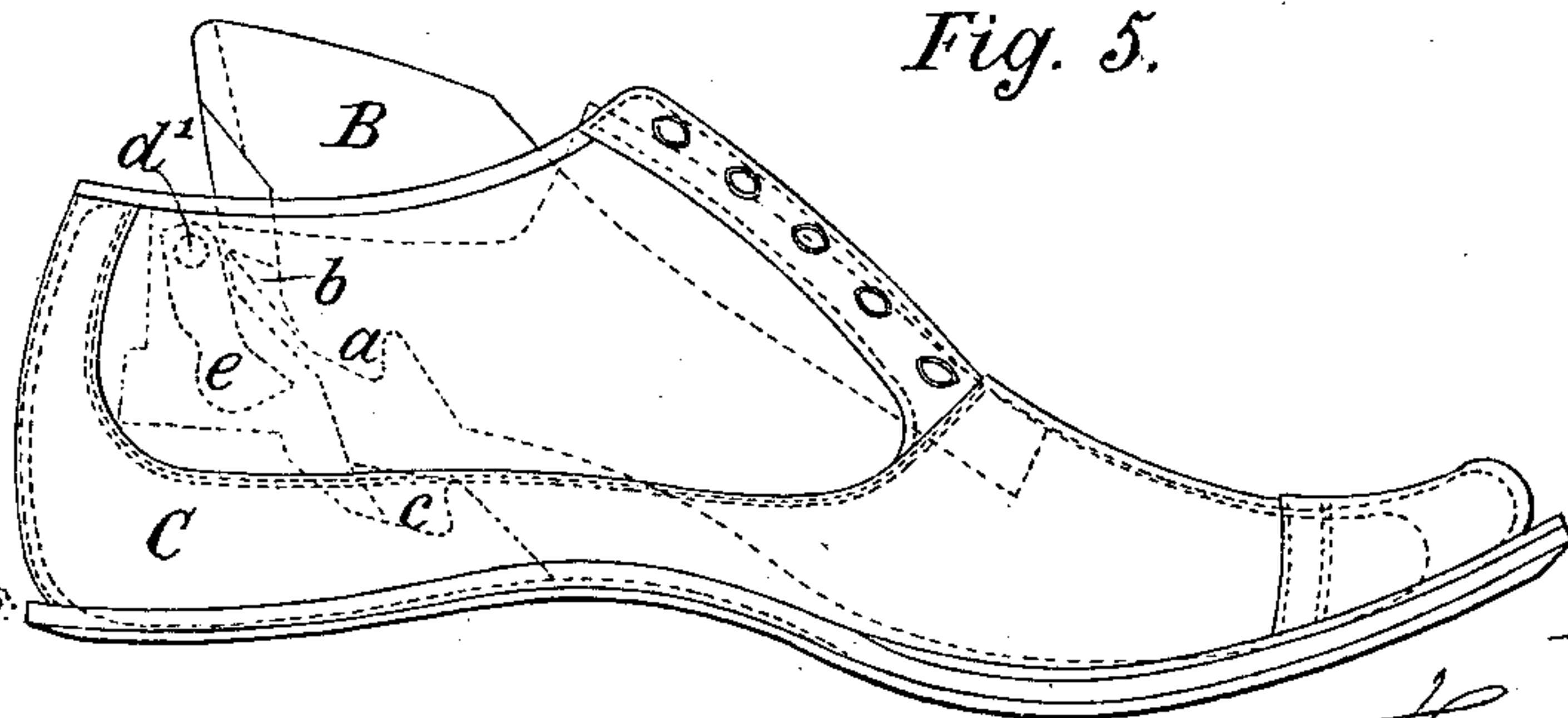
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



Witnesses:

O. Sundgren  
Emil Carter

Inventors:

Harry W. Mobbs  
Alfred Lewis  
by their attorneys  
Brown & Hall

(No Model.)

H. W. MOBBS & A. LEWIS.

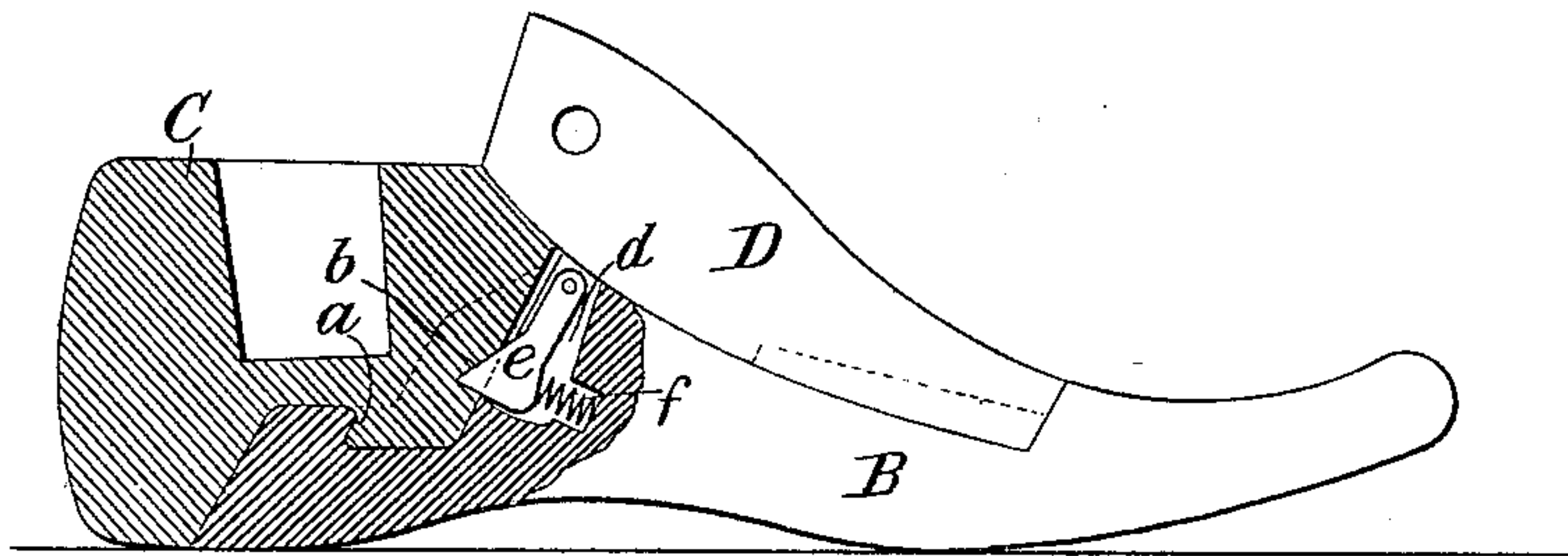
2 Sheets—Sheet 2.

LAST FOR BOOTS OR SHOES.

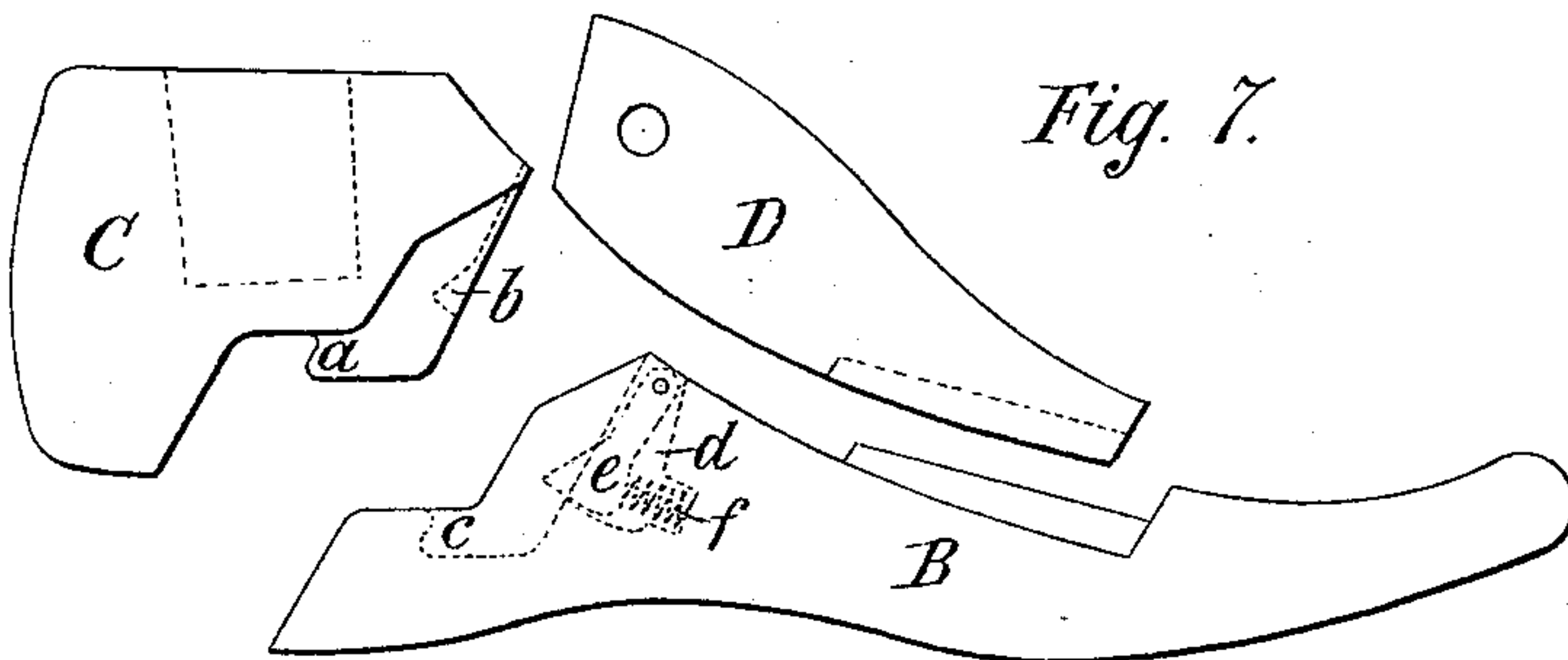
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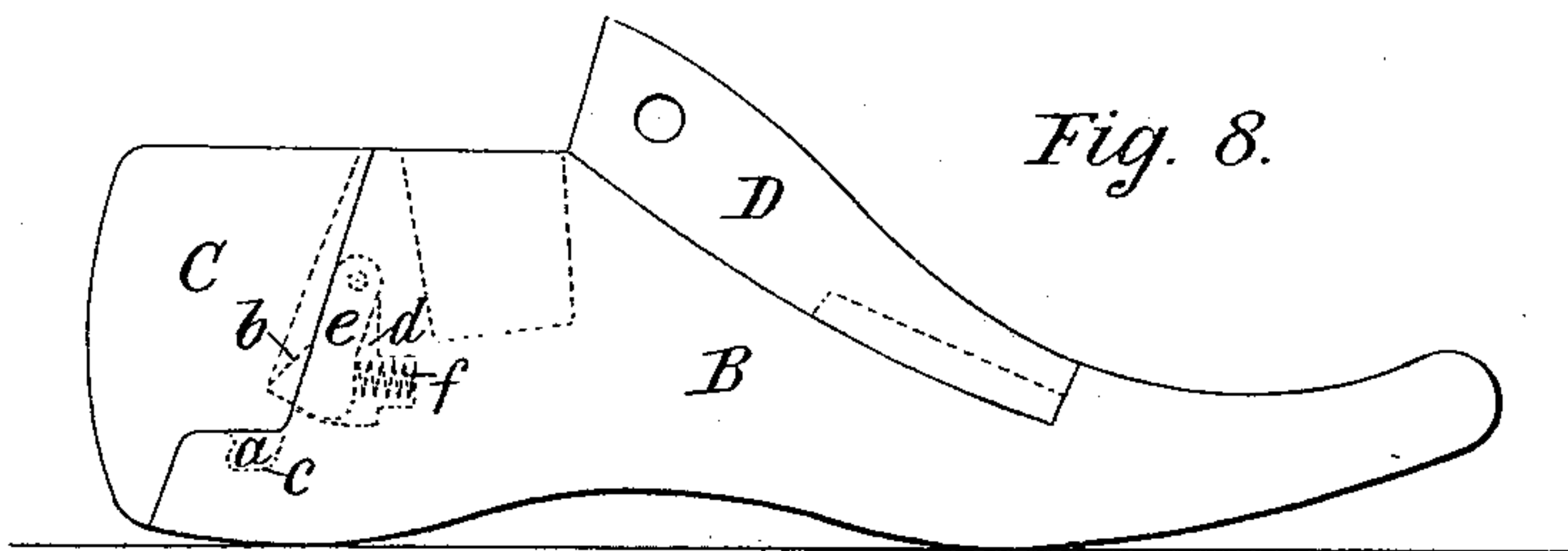
*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



*Witnesses:*

*Chas. Sundgren*

*Emil Hertel*

*Inventors:*

*Harry W. Mobbs*  
*Alfred Lewis*  
*by their attorneys*  
*Brown & Ball*



# UNITED STATES PATENT OFFICE.

HARRY WILLIAM MOBBS AND ALFRED LEWIS, OF KETTERING, COUNTY OF NORTHAMPTON, ENGLAND.

## LAST FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 336,339, dated February 16, 1886.

Application filed November 23, 1885. Serial No. 183,650. (No model.)

*To all whom it may concern:*

Be it known that we, HARRY WILLIAM MOBBS and ALFRED LEWIS, both of Kettering, in the county of Northampton, England, have invented certain new and useful Improvements in Lasts for Boots, of which the following is a specification.

This invention relates more particularly to lasts which are used in the manufacture of boots and shoes by machinery; but it is also applicable to lasts for hand-made boots and shoes. The ordinary last used for machine-made boots consists of metal, and is placed upside down on a post, which is fitted into a socket in a table or in any other suitable position. During the manufacture of the boot the last is subjected to much hammering, and it is therefore necessary that the foot portion of the last should be very solid. For this reason that portion is generally made in one piece, the instep portion or block (which is generally made of wood) only being removable to allow for the boot being taken off the last when completed. In the natural foot the length from the toe to the heel is greater than from the toe to the back of the foot above the heel, and the heel is much wider than the part of the foot above the heel. Great difficulty is therefore experienced in removing the boot from the last, causing not only much loss of time, which is a considerable item in the manufacture, but also greatly straining or even bursting the upper seams, and often breaking the sole at the waist.

Now the object of this invention is so to construct the last that these difficulties may be overcome. To this end the last is formed in two parts, which are so arranged that they will lock together, and when so locked will admit of the hammering and other operations taking place, and that they will also be capable of ready detachment when it is desired to take the partly-formed or finished boot off the last and of ready replacement in the boot for further operations or finishing.

In the accompanying drawings, Figure 1, Sheet I, is an elevation, partly in section, taken on the center line of Fig. 2, of the improved last. In this figure the last is shown fitted onto the post and in the inverted posi-

tion ready for working. Fig. 2 is a plan view of the improved last. Fig. 3 is a view of the rear face of the foot portion; and Fig. 4 is a view of the corresponding face of the heel portion. Fig. 5 shows an Oxford shoe with the last partly withdrawn. Figs. 6, 7, and 8, Sheet II, show certain modifications in the external form of the two parts of the last.

A is the post, which is secured to a table or in any other convenient manner to receive the last. B is the foot portion of the last, and C the heel-piece. D is the removable wood block or instep-piece, which is a usual feature in all lasts, and forms no part of the present invention. It may be mentioned that this block may be dispensed with in some forms of lasts constructed according to this invention, and especially is this the case in lasts for low shoes. The adjoining faces of the parts B and C are formed on the bevel or inclined at a greater or less angle in either direction, as may be preferred, which will admit of the parts B or C, when unlocked, sliding rearward or forward, as the case may be, when being drawn out of the boot, and thus provide for the facile removal of the last. The parts B and C will be cast in any convenient manner, care being taken that the two adjoining faces are perfectly true. In Sheet I this bevel or incline is shown as made in the direction from the heel downward toward the toe, (see Fig. 5,) in which case to effect the withdrawal of the last from the boot or shoe the foot portion B must be first removed. In Sheet II this incline or bevel is made in the contrary direction, so that the heel portion must be first withdrawn. The rear face of the part B is formed with a hooked portion, *a*, and a recess, *b*, and the corresponding face of the part C is formed with a recess, *c*, to receive the hooked portion *a* of the part B, and with a recess, *d*, in which is pivoted at *d'* a catch, *e*. This catch *e* is pressed outward by a spring, *f*, of any suitable construction, and is intended to engage in the recess *b* of the part B. Thus the two parts B and C will be effectually locked together, and can only be separated by inserting a key at *g* to push back the catch *e*. The insertion of the key will not only push back the catch *e*, but by reason of the inclined face of



B will raise that part, so as to clear the catch when the key is withdrawn, and thus permit of the separation of the two parts of the last. When the catch is unlocked the part B can be  
 5 readily drawn out of the shoe by sliding up the inclined face of the part C, which remains in the heel of the shoe, as shown in Fig. 5, to be subsequently removed. In like manner the parts B and C may be replaced in the shoe  
 10 when required, the order being reversed.

In Sheet II, Fig. 6 is a side view, partly in section, of a modification in the form of the last, the positions of the various locking parts being reversed, and Fig. 7 shows the parts B,  
 15 C, and D detached. In this modification the heel-piece C is provided with a socket to receive the post A.

Fig. 8 shows a slight modification of the last modification, the socket for the post A being  
 20 in the part B of the last. In the modifications care must be taken that the length of the foot portion shall be such that this portion will readily come out of the boot when the heel-piece is removed. In the smaller sizes of last  
 25 a wrought-iron or steel shank carrier or stud, which will take into a socket formed on the post A to receive it, may be cast into the body of the last. The parts B and C when locked together will form a solid last of sufficient  
 30 strength to resist any strain likely to be put upon it during the making of a boot or shoe. It may be here remarked that it is not intended to be confined to the exact form of catch as herein shown to effect the locking of the parts  
 35 B and C together, as other well-known mechanical means for effecting this object may be employed; neither is it intended to confine the invention to metal lasts, as it is equally applicable to wooden lasts.

40 In the forms of last shown at Figs. 1 and 8 it will be seen that the removable block D is not absolutely necessary, as before referred to.

Among the disadvantages which will be avoided by the use of the improved last may be mentioned that there will be no risk of 45 breaking the waists or the stiffness in removing the last; neither will there be burst vamps or torn golosh-quarters, loops will not be pulled out nor top bands ripped; neither will there be any torn linings, as it will be 50 quite unnecessary to use force to get the last out of the boot, all which disadvantages entail loss of money, labor, and material, as boots and shoes thus strained have to be repaired, and can then only be sold as damaged 55 goods. The saving of time to the maker in being able to withdraw the last and replace it, as required, at various stages of the manufacture without difficulty is enormous, while a perfect fit may be guaranteed, as there need be no 60 "foul leather" (or fullness) at the top of the heel, such as is necessary under ordinary circumstances to allow space to get the last out of the boot or shoe.

We claim—

65 A boot last constructed substantially as shown and described—that is to say, with a foot-piece, B, and a heel-piece, C, the said pieces B and C being formed with inclined faces, and provided the one with a hooked portion, *a*, and a recess, *b*, and the other with a recess, *c*, to receive the hooked portion *a*, and a catch, *e*, to enter the recess *b*, said catch being pivoted in a recess and pressed outward by a spring, as set forth. 70

HARRY WILLIAM MOBBS.  
 ALFRED LEWIS.

Witnesses:

H. K. WHITE,  
 J. HODGES,

Both of 61 Bream's Buildings, Chancery Lane,  
 London.