

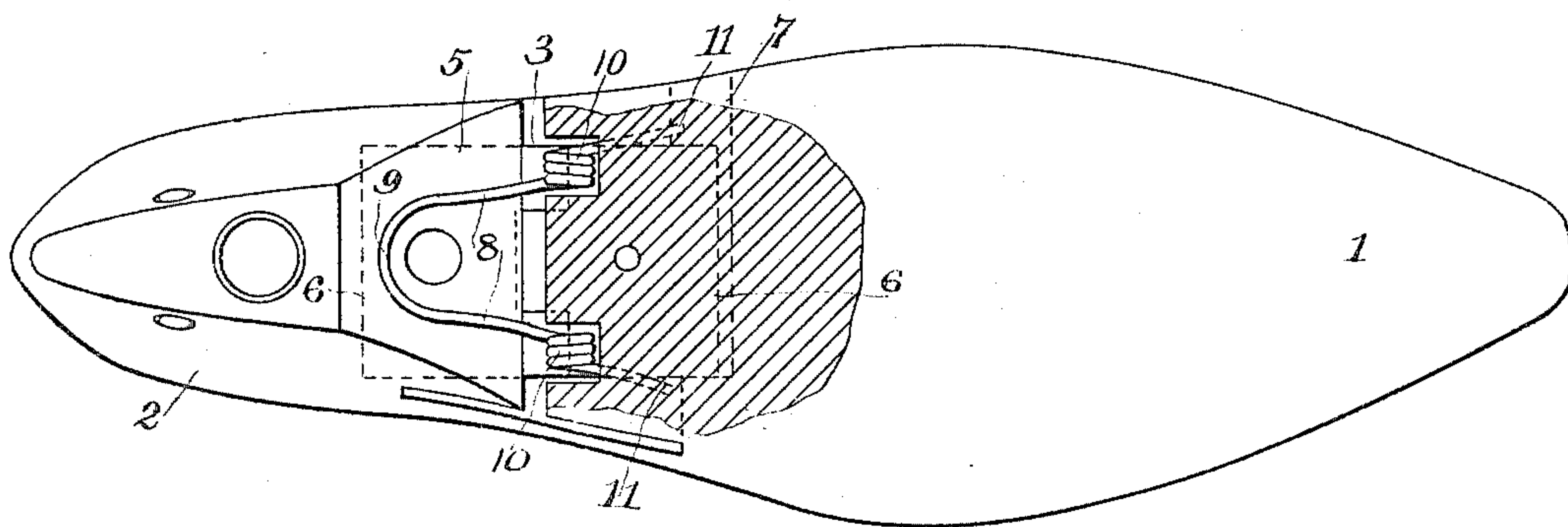
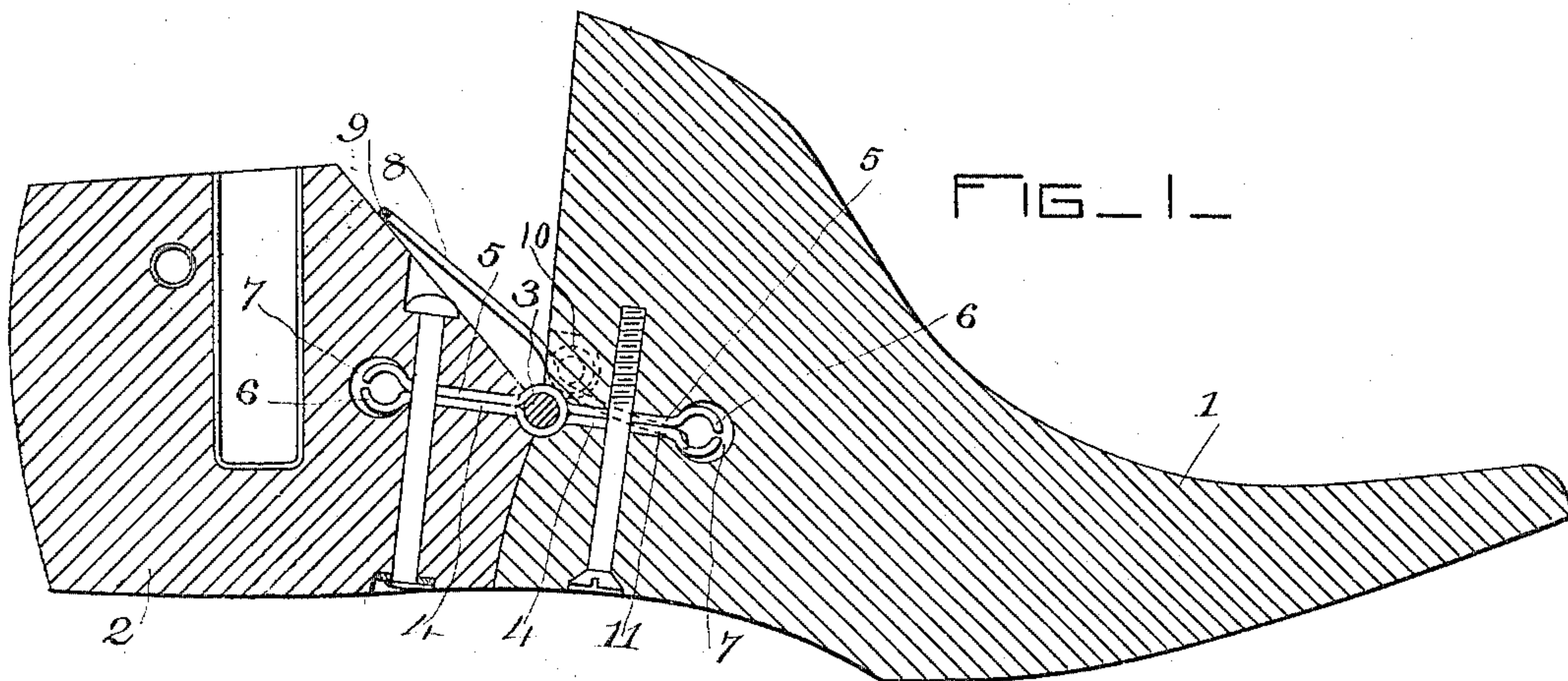
No. 640,361.

Patented Jan. 2, 1900.

W. H. BUTTERICK.
LAST.

(Application filed Oct. 31, 1898.)

(No Model.)



WITNESSES

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INVENTOR

William H. Butterick,
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UNITED STATES PATENT OFFICE.

WILLIAM H. BUTTERICK, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THOMAS W. GARDINER, TRUSTEE, OF SAME PLACE.

LAST.

SPECIFICATION forming part of Letters Patent No. 640,361, dated January 2, 1900.

Application filed October 31, 1898. Serial No. 695,089. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BUTTERICK, a subject of the Queen of England, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Lasts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to sectional lasts for use in the manufacture or display of boots and shoes, and more particularly to a sectional last in which the sections are hinged together or articulated in such manner that one of the sections may be turned with relation to the other section to shorten the last, and thus facilitate its introduction into and its removal from a shoe without subjecting the upper of the shoe to undue longitudinal tearing or ripping strains.

The object of the present invention is to so construct an articulated sectional last that it will quickly assume its operative position in the shoe and be effectually maintained in such position while in the shoe without danger of becoming accidentally displaced while the shoe is being put through the various steps of its manufacture.

To the above end the present invention consists of the last which will now be described and claimed.

The present invention is illustrated in the accompanying drawings, in which—

Figure 1 shows in longitudinal vertical section a last embodying the invention; and Fig. 2 shows a top plan view of the last shown in Fig. 1, a portion of the fore part being broken away to show the construction.

Similar reference-numerals will be used throughout the specification and drawings to designate corresponding parts.

In the drawings, 1 indicates the fore part, and 2 the heel part, of a sectional last united at 3 by a hinge, the leaves 4 of which are received in laterally-extending slots or recesses 5, which extend from side to side of the last. The leaves 4 are provided with rounded enlargements or anchors 6, which fit into substantially cylindrical bearings 7 at the inner ends of the slots 5. The last, as above de-

scribed, is well known to the trade and in practice the heel part 2 may be turned upward and forward about the point 3, whereby the last is shortened and may be readily inserted in the shoe or removed therefrom.

It is the intention of the makers of articulated lasts, as above described, to so place the hinge 3 above the bottom of the last that the longitudinal strain of the upper of the shoe on the last from toe to heel will be so distributed above and below such hinge that the meeting faces of the sections of the last below the hinge will be brought together and the last held in operative position in the shoe by the pressure of the upper thereon. It has been found in practice, however, that these lasts while generally capable of maintaining their operative position in the shoe are liable when the shoe is undergoing some processes in its manufacture, such as operating upon the sole of the shoe with the sole turned uppermost, to become displaced by the accidental turning of the fore part about the hinge 3. In order to prevent such accidental displacement of the last from its operative position while in the shoe, the last of the drawings is provided with a spring which acts on the heel portion 2 in such manner as to normally cause the heel portion to be turned downward and backward about the hinge 3, (as the last is shown in Fig. 1,) and thus bring the meeting faces of the last-sections below the hinge in contact and the last in operative position. The spring may be of any preferred form and arrangement and secured to bear upon the heel portion in any suitable manner; but in the drawings is illustrated a convenient form of spring for this purpose, which will now be described. The spring is shown at 8, and consists of a suitable length of spring-wire bent into a bail 9, spring-coils 10, and anchoring ends 11, which ends are securely fastened in the fore part 1 of the last, with the bail 9 resting on the inclined face of the heel portion 2, the coils 10 being received in seats or recesses 12, formed in the rear face of the fore part 1 of the last just above the hinge 3, whereby they will not interfere with the turning upward of the heel portion 2 of the last. The above arrangement is such that the bail 9 of the spring 8 bears upon the inclined face of

the heel portion 2 of the last and holds it down in the position shown in Fig. 1, effectually preventing the accidental upward movement thereof.

5 I am aware that it has been proposed to provide articulated lasts of the type here shown with a pivoted or swinging brace or bar; but such devices have to be manipulated while the last is in the shoe and cannot always be
10 successfully accomplished, and such devices to a great extent prevent the full upward movement of the heel part of the last. In the present invention the spring while greatly assisting in the downward and backward move-
15 ment of the heel part of the last to bring it in operative position acts to effectually hold it in position during all of the processes of manufacturing the shoe.

Having thus described the construction and
20 mode of operation of my invention, I claim as new and desire to protect by Letters Patent of the United States—

1. An articulated sectional hinged last, comprising a fore part and a heel part united by
25 a hinge having its pintle between the parts, one of the parts being provided with a recess above the hinge, a wire spring having an elastic coil located in said recess, one end of the coil being secured in the part provided with
30 the recess, and the other end of the coil extending upwardly and bearing against the oppositely-disposed face of the other part of the last above the pintle, thus cooperating with the hinge to press together the abutting
35 faces of the two parts of the last below the hinge to maintain the parts of the last in operative position with relation to each other, substantially as described.

2. An articulated sectional hinged last, comprising a fore part and a heel part united by
40 a hinge having its pintle between the two parts and above the bottom of the last, one of the parts of the last being provided with recesses above the hinge, and a wire spring having two elastic coils located in the said re-
45 cesses, one of the ends of each coil being secured to the part provided with the recesses and holding the elastic coils in said recesses, the other ends of the two coils being integral and forming a bail extending upward from
50 the coils and pressing against the oppositely-disposed face of the other part of the last above the pintle, thus cooperating with the hinge to press together the abutting faces of the two parts of the last below the hinge, sub-
55 stantially as described.

3. An articulated sectional hinged last, comprising a fore part and a heel part united by a hinge having its pintle above the normal
60 line of pressure tending to collapse the last when it is in a shoe, the two parts of the last being separated above the hinge by a V-shaped space, a spring anchored in one part of the last above the hinge and pressing against the
65 other part of the last above the hinge, thus cooperating with the hinge to press together the abutting faces of the last below the hinge and maintain the last in operative position, substantially as described.

In testimony whereof I affix my signature
70 in presence of two witnesses.

WILLIAM H. BUTTERICK.

Witnesses:

LEVI CUNNINGHAM,
HORACE VAN EVEREN.