

T. AMNELIUS.

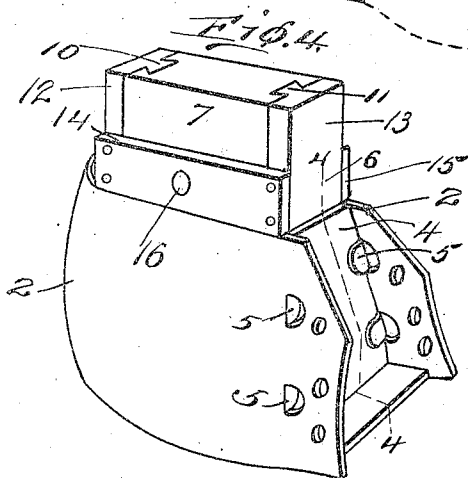
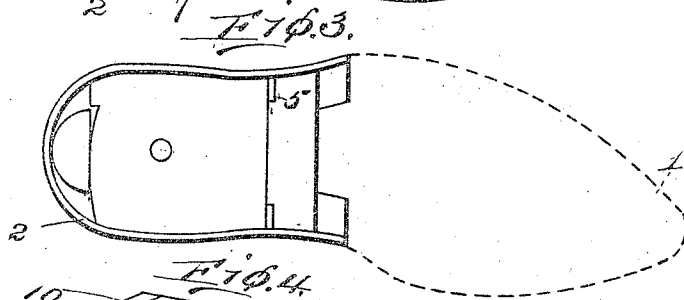
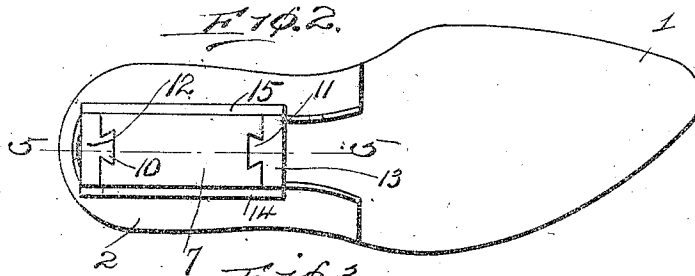
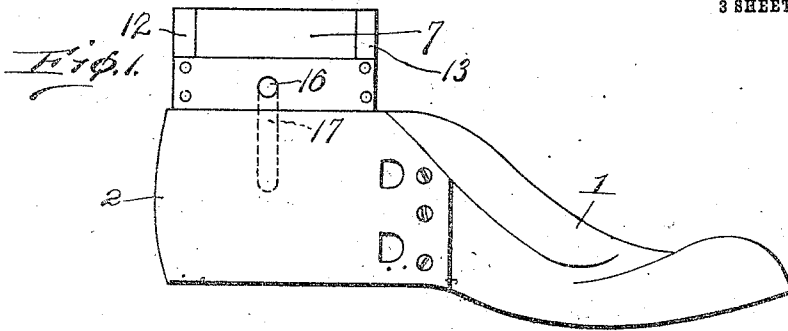
LAST.

APPLICATION FILED MAY 5, 1909.

937,982.

Patented Oct. 26, 1909.

3 SHEETS—SHEET 1.



Inventor

Theodore Amnelius

By *Wm. French Lawrence*
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Witnesses

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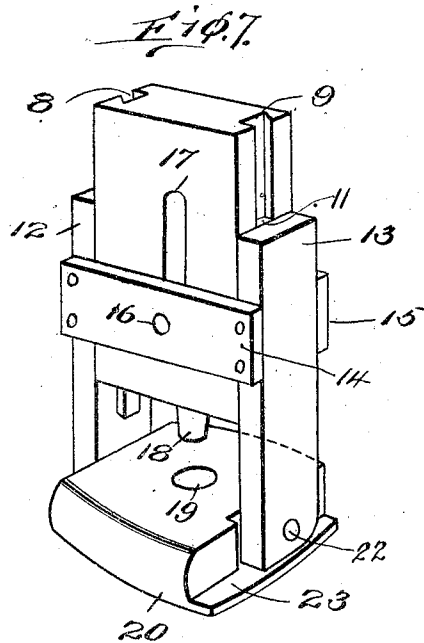
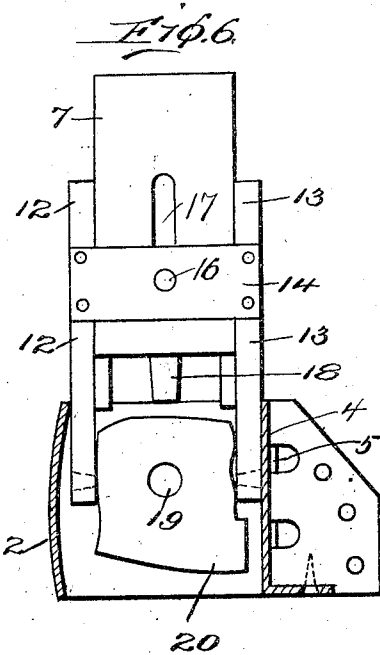
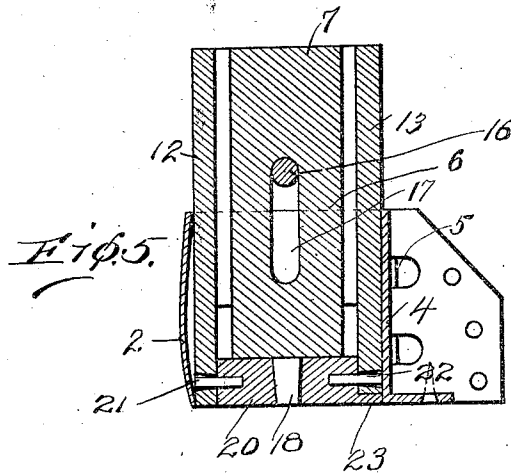
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APPLICATION FILED MAY 5, 1909.

Patented Oct. 26, 1909.

3 SHEETS—SHEET 2.

937,982.



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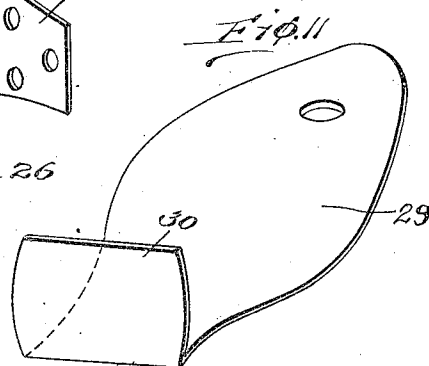
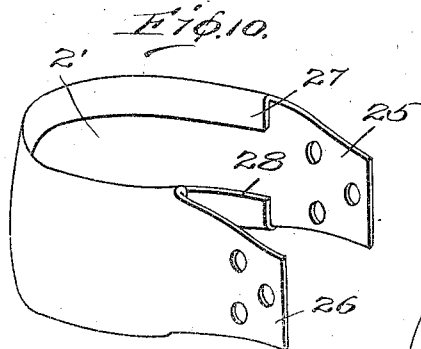
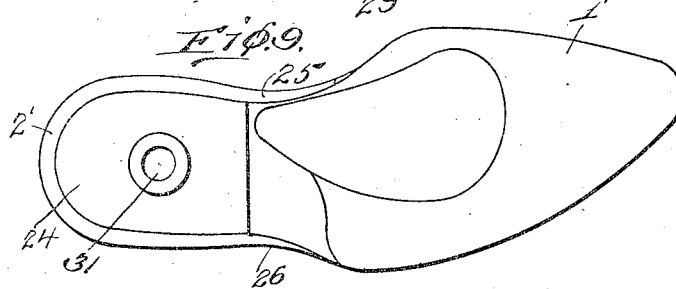
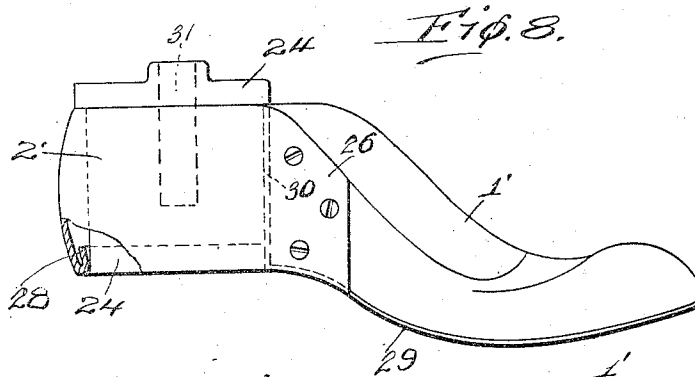
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Patented Oct. 26, 1909.

3 SHEETS—SHEET 3.

937,982.



Witnesses

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UNITED STATES PATENT OFFICE.

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LAST.

937,982.

Specification of Letters Patent.

Patented Oct. 26, 1909.

Application filed May 5, 1909. Serial No. 494,049.

To all whom it may concern:

Be it known that I, THEODORE AMNELIUS, a citizen of the United States, residing at South Framingham, in the county of Middlesex 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.

This invention relates to improvements in lasts, and means for holding the same in position, and particularly to lasts designed to remain in the shoe until the same is complete, and also to means for engaging the last and holding the same in proper position for the workmen.

The object in view is the arrangement of a last designed to remain in the shoe until completed, and means readily clamped to the last for supporting the same during working on the shoe.

Another object of the invention is the arrangement of a last having a hollowed out portion at the heel thereof or formed with a hollow shell for receiving a support that may be clamped thereto for supporting the last during work on the shoe carried thereby.

A still further object of the invention is the provision of a support formed with folding means in combination with a last for receiving the folding means of the support, whereby the last, together with the shoe carried thereby, may be held in position.

With these and other objects in view the invention comprises certain novel constructions, combinations and arrangement of parts as will be hereinafter more fully described and claimed.

In the accompanying drawings: Figure 1 is a side elevation of a last and support embodying the invention. Fig. 2 is a top plan view of the structure shown in Fig. 1. Fig. 3 is a bottom plan view of the structure shown in Fig. 1. Fig. 4 is a fragmentary perspective view of the rear or heel part of the last and supporting means connected therewith. Fig. 5 is a section through Fig. 2 approximately on line 5—5. Fig. 6 is a section through Fig. 4 approximately on line 4—4, the last being shown partially removed. Fig. 7 is a perspective view of the last supporting means. Fig. 8 is a side elevation of a slightly modified form of the

invention to that shown in Fig. 1. Fig. 9 is a top plan view of the structure shown in Fig. 8. Fig. 10 is a perspective view of the heel portion of the last. Fig. 11 is a perspective view of a lower plate arranged to engage the lower side of the sole and the end of the heel member.

Referring to the drawing by numeral, 1 is the toe of the last, the toe being preferably made from wood and secured to a heel piece or socket member 2 by any desired means, as for instance screws. A bottom plate 3 is preferably provided which extends for the full length of the shoe and may be either rigidly secured to toe portion 1 or loosely fitted thereto. The heel piece 2 is formed in the shape of the shoe designed to be placed on the last and is preferably constructed of sheet metal so as to form a hollow rear end or socket to the last. Ordinarily a plate 4 is also provided that is held in place by means of turned over members 5. Between plate 4 and the remaining part of the heel member 2 is a chamber formed by the heel member 2 and plate 4, into which is passed the last support 6. The last support 6 is formed with a supporting member 7 which is secured in any desired manner to any suitable support, and which is formed with ways 8 and 9 for accommodating tenons 10 and 11 on reciprocating members 12 and 13. The reciprocating members 12 and 13 are connected by bars 14 and 15 so as to act as an integral structure, and to form rigid supports for member 7 in its reciprocatory movement. A pin 16 passes from bar 14 to bar 15 through an aperture 17 in member 7 so as to limit the movement of members 12 and 13 in relation to member 7. The support 7 is formed with a projecting pin 18 which is designed to fit into an aperture 19 in a pivotally mounted heel member or plate 20. The heel plate or member 20 is pivotally mounted to the ends of members 12 and 13 and is arranged to move so as to extend in the same plane as supporting member 7 when the last is moved off the supporting member as shown in Fig. 6. The pivotal pins 21 and 22 of plate 20 are positioned off center so that any upward movement of the last form itself support 7 will cause the plate 20 to take the position shown in Fig. 6 which will permit the easy removal of the last and shoe carried thereby to be passed on to the next workman. Preferably

the pivotal pins 21 and 22 are fitted in beveled bearing apertures so as to allow for a slightly loose movement of plate 20 in connection with its carrying members 12 and 13. Plate 20 is designed to fit snugly the heel portion 2 and to form an anvil during the manufacture of the shoe. The reciprocating member 12 is formed rounded or arc shaped in order to fit the rear part of the heel member 2 and is arranged to have the lower end thereof engage the bottom edge of the opening. Reciprocating member 13 falls short of the bottom edge of plate 20 and is arranged to be positioned over a flange or extension 23. This is necessary as flange 23 is designed to take up space for the entire distance across the shoe.

In operation the shoe in the process of manufacture is placed upon the last over the toe portion 1 and also over the heel member 2. The toe portion 1 and heel member 2 form a complete last for holding the shoe in proper shape and may be placed upon support 6 and removed therefrom simply by forcing the heel member 2 down over the support and pulling the heel member 2 therefrom. When the heel member 2 has been removed from the support 6 the same is left in the position shown in Fig. 6 so that when the heel member 2 is again desired to be placed upon the support all that is necessary is to push downward or to telescope the heel member 2 over the end of the support which will cause plate 20 and surrounding parts to take the position shown in Figs. 5 and 7. This will form a firm support for the last but ready means for removal. In other words, all that is necessary is to force the last on the support by a direct push or pressure and the last is properly in position, or if it is desired to remove the last from the support all that is necessary is to give the last a pull away from the support.

In Figs. 8 to 11 inclusive will be seen a slightly modified form of the invention in which a toe piece 1' is provided similar to toe piece 1 and a heel member 2' forming a socket for receiving a plug 24. Plug 24 is designed to extend through heel member 2' until the end of the same is flush with the bottom edge of heel member 2'. Heel member 2' is secured to toe piece 1' by any desired means, as for instance screws passing through flanges 25 and 26. In constructing heel member 2' the same is formed with turned over edges 27 and 28 which act as braces for the heel member for firmly holding the same in shape. Associated with heel member 2' and toe piece 1' is a plate 29 that is adapted to fit over the sole portion of toe 1' and have a turned up end 30 engaging the end of the toe piece 1' and forming one wall of the housing into which plug 24 is positioned. Plug 24 is formed with a recess or opening 31 for being placed upon a sup-

port of any desired kind during work upon the shoe fitted upon the last. The last consists of plate 29, toe member 1' and heel member 2' and is designed to fit into a shoe and remain in the shoe until the shoe is entirely completed. However, during the manufacture of a shoe the same passes through a number of hands so that the plug 24 is very desirable in that the same may be placed in the heel member 2' and removed therefrom by each workman, as the shoe is being completed. In this connection the operation of the last is the same as the preferred form which is the easy application and removal of the last from its support without set screws, locks, or other attachments which must be operated independent of the movement of merely placing the last in position.

In the preferred structure the last comprises toe member 1, heel member 2 and plate 4. In the preferred structure it will be observed that the upper part of member 2 is restricted or much narrower than the lower part, while in the modified form the upper and lower parts of the heel member 2' are substantially equal. In the modified form it is necessary to have the upper and lower parts substantially equal in order to admit plug 24, while in the preferred form the upper part of member 2 may be any desired size and yet freely admit the support therein which is of a folding character.

What I claim is:

1. The combination with a support formed with sliding members, and a movable anvil, of a last formed with a hollowed-out heel portion for receiving the anvil and the sliding members for being held in position on the support.

2. The combination with a support formed with sliding members and a pivotally mounted anvil, of a last formed with a hollowed out heel portion for receiving said anvil and said sliding members for being held in position on said support thereby.

3. The combination with a support formed with sliding members, an anvil pivotally mounted on said sliding members, and means for locking said anvil when the last has been placed on said support, of a last formed with a hollowed out portion adapted to receive said anvil and the ends of said sliding members and to be held on said support thereby.

4. The combination with a rigidly mounted support, sliding guiding members mounted on said support, an anvil journaled on said sliding members, and a pin connected with said rigid support adapted to engage said anvil and hold the same against movement, of a last formed with a hollowed out portion for receiving said anvil and the ends of said sliding guiding members.

5. The combination with a support having sliding extensions, an anvil pivoted thereto

but arranged off-center, and means projecting from the support and engaging said anvil when the same has been fitted upon a last, of a last formed with a hollowed out portion for receiving said anvil and the ends of said sliding extensions and for being held in position thereby.

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

THEODORE AMNELIUS.

Witnesses:

ARTHUR L. LYTLE,
GEO. H. FARRAR.