M. F. BROGAN.

SHOE.

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1,412,838. Patented Apr. 18, 1922.

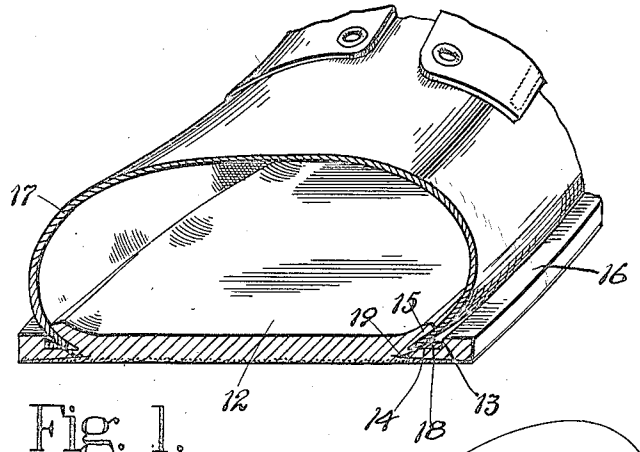


Fig. 1.

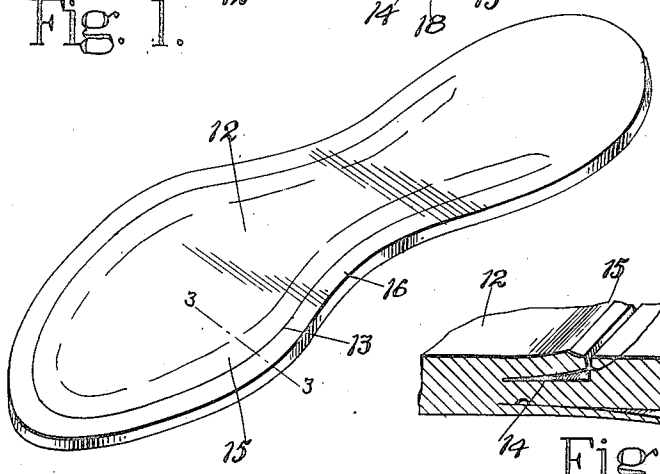


Fig. 2.

Fig. 3.

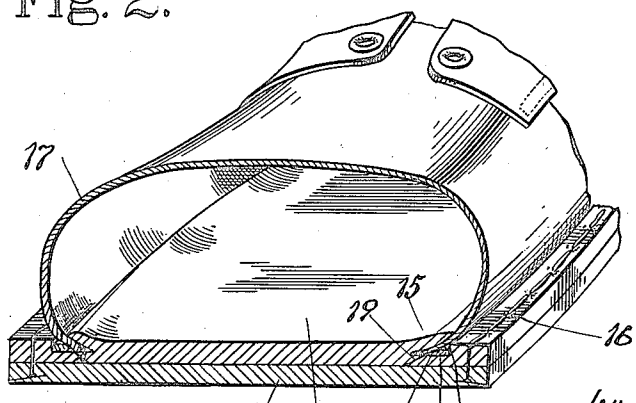


Fig. 4.

INVENTOR.
Michael F. Brogan
By his Attorney
Nelson M. Howard

UNITED STATES PATENT OFFICE.

MICHAEL F. BROGAN, OF LAWRENCE, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY CORPORATION, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SHOE.

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To all whom it may concern:

Be it known that I, MICHAEL F. BROGAN, a citizen of the United States, residing at Lawrence, in the county of Essex and State of Massachusetts, have invented certain Improvements in Shoes, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to shoes and particularly to that type of shoe in which the sole is attached to an outturned marginal portion of the upper commonly termed a "stitchdown." In making shoes of this type it is usual to turn outwardly the margin of the upper and secure it temporarily to the flat upper face of a sole, then to superpose a welt strip upon the outturned margin or flange and to stitch through the welt, the flange of the upper, and the margin of the sole. The edge of a shoe thus made presents to view the edge of the sole to which is added the thickness of the upper and the welt, the result being a heavy and a clumsy looking edge. Moreover, if a lined upper is used the edge of the lining appears at the edge of the sole and the lining being of different material from the other materials constituting the shoe edge, it is difficult to finish it so that it will correspond to the rest of the sole edge. Furthermore, the welt being positioned above the plane of the inner face of the sole tends to reduce the apparent height of the toe and thus detracts from the attractive appearance of the shoe.

One of the objects of the present invention is to provide a shoe of this type which will have the neat and trim appearance of a turn shoe as well as all the other desirable qualities of a turn shoe, while avoiding the difficult operation of turning the shoe.

A further object of the invention is to provide a shoe which will have the attractive appearance and other desirable qualities of a welt shoe while avoiding the use of a welt and reducing the amount of sewing thread employed since the absence of the welt lessens the required length of the thread and thread strands.

With these and other objects in view, the invention comprises a shoe having an outturned flange of the upper fitting and substantially filling a channel in the sole and secured therein with the outer edge of the flange abutting a vertical wall of the channel.

Another object of the invention is to provide a stitchdown shoe having the upper so connected with the sole as to conceal both the connecting means and the edge of the flange of the upper. To this end the invention consists in providing the upper surface of the sole with a channel having a substantially vertical portion at a distance from the edge of the sole equal to the width of the sole edge extension and a horizontal portion extending inwardly from the vertical portion to provide an upwardly displaceable lip, and in securing in such channel an outwardly creased portion of the upper with the crease fitting under the lip and with the outer edge of the upper abutting the outer vertical wall of the channel. Preferably the upper is bent outwardly by the pressure of the channel lip so as to contact with the uppper edge of the vertical portion of the channel so that the stitches or other attaching means will be entirely concealed. This construction enables the edge extension to be made as narrow as desired, the shoe being thus given the appearance of a turn shoe. This shoe, while possessing all the advantages of a turn shoe, including extreme ease and flexibility, has in addition an absolutely smooth sole surface for engagement of the foot without the necessity of providing a lining or slip sole.

Another object of the invention is to provide a stitch-down shoe the upper surface of the sole edge extension of which presents a smooth finished surface without employing a welt. In obtaining this object the channel for the outturned flange of the upper is formed in the grain side of the sole, thereby enabling the upper surface of the extension to be highly finished. In this embodiment of the invention it is preferable to enhance the wearing qualities of the shoe by attaching an outer layer of leather or other wear resisting material to the sole, for instance, by attaching said outer layer to the shoe by sewing through the edge extension and the outer layer. When thus constructed the shoe has the appearance of a close edge welt shoe and possesses many other desirable qualities of that type of shoe including easy repairability. Moreover, a very material economy is effected by saving the cost of the welt.

In the drawings,

Fig. 1 is a sectional perspective view illustrating a shoe manufactured according to my invention;

Fig. 2 is a perspective view of a sole prepared for attachment to the upper;

Fig. 3 represents a section on line 3—3 of Fig. 2, on a larger scale; and

Fig. 4 is a view similar to Fig. 1 but representing an additional element.

The sole 12 is formed with a channel having a vertical portion to provide a shoulder 13 a distance in from the outer edge of the sole equal to the width of the sole edge extension, the horizontal portion 14 of the channel extending inwardly from said vertical portion, thereby forming a flap 15.

This formation of the sole leaves the sole edge extension 16 of the same thickness as the rest of the sole. In practice the channel is preferably formed in the grain side of the sole, thereby leaving the upper surface of the extension 16 in condition to receive a high finish.

The shoe upper 17 having an outturned flange 18 is fitted into the channel and secured in place by stitches 19 or other suitable fastenings. When the fastenings are stitches, it is possible to use a straight needle sewing machine.

In the manufacture of the shoe the channel is formed in the sole blank at such distance inwardly from the edge of the blank as to define the desired width of the sole edge extension, and then the edge of the shoe upper is secured in said channel by suitable mechanism such as a sewing machine, the assembling being so effected that the outturned flange of the upper fits and substantially fills the channel under the flap 15, the outer edge of said flange abutting the shoulder 13. Since the edge of the flange 18 of the upper is inside of and close to the shoulder 13, said edge is concealed. This leaves the sole edge extension solid from top to bottom, so that there is no opportunity for the passage of moisture such as is permitted by many welt shoes. The crease or fold of the upper is held so tightly between the flap 15 and the bottom of the channel as to form a practically water-tight joint. The flap 15 holds the upper out against the upper edge of the shoulder 13 so as to conceal the upper securing means. The width of the edge extension from the shoulder 13 to the outer edge face of the sole may be made as narrow as desired to give the shoe a neat and trim appearance. It is to be understood that the edge of the upper may be trimmed to shape so it will fit the channel of the sole, before the parts are united, or may be trimmed after connection of the parts or in conjunction with the uniting operation.

As has been explained, it is preferable that a shoe manufactured as described shall have the grain side of the sole uppermost. Since this would leave the flesh side for the wearing surface of the sole it is sometimes desirable to increase the durability of the shoe by covering the flesh surface of the sole 12 by an outer layer such as indicated at 20 in Fig. 4. This layer, if of leather, has its grain side below, so that the compound sole as an entirety comprises the layers 12 and 20, and when both are made of leather their flesh sides are in contact. When a shoe is constructed as illustrated in Fig. 4, the sole edge extension 16 furnishes the same means for connecting the outer layer 20 in place, as is usually afforded by the welt of a welt shoe. Therefore, such a shoe as illustrated in Fig. 4 is easy to repair when it is desired to apply a tap sole.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A shoe comprising a sole channeled on its upper face to provide at the width of the sole extension from the edge of the edge face of the sole a vertical wall, an upper disposed in such channel, a line of stitches in said channel holding the upper in the channel to the sole, and a lip on the sole inside the shoe arranged to press the upper outwardly and downwardly into engagement with the upper edge of said vertical wall.

2. A shoe comprising a sole channeled on its upper face to provide at the width of the sole extension from the edge of the face of the sole a vertical wall, an upper disposed in such channel with its edge abutting said wall, a line of stitches in said channel holding the upper in the channel to the sole, and a lip on the sole inside the shoe arranged to press the upper outwardly and downwardly into engagement with the upper edge of said vertical wall to hide the stitches.

3. A shoe comprising a sole having a channel extending vertically downward from its top face and horizontally inwardly to form a flap, an upper having an outwardly directed flange disposed under the flap with its outer edge located adjacent to the vertical wall of the channel and the portion of the upper above the flange held upon the flange by the overlying channel flap, and means to secure the flange to the sole.

4. A shoe comprising a sole having a channel extending vertically downward from its top face and horizontally inwardly to form a flap, and an upper having an outwardly directed flange disposed under the flap with its outer edge located adjacent to the vertical wall of the channel and secured to the sole, the portion of the upper above the flange lying against the upper edge of the vertical channel.

5. A shoe comprising an upper formed with an outturned flange, and a sole provided with a substantially horizontal channel the outer edge of which terminates in an upright shoulder, the outturned flange of the upper fitting said channel with the outer edge of the flange abutting said shoulder.

6. A shoe having its sole provided with a channel having a substantially vertical portion at a distance from the edge of the sole to define the width of the sole edge extension, the upper of the shoe having an outturned flange secured in said channel with the outer edge of said flange abutting the outer vertical wall of said channel.

7. A shoe comprising a sole having a channel cut in from its grain side, said channel having a substantially vertical wall at a distance from the edge of the sole to define the width of the sole edge extension and having a substantially horizontal portion extending inwardly from said vertical wall, the upper of the shoe having an outturned flange secured in said channel with the edge of said flange abutting the outer wall of the channel.

8. A shoe comprising a sole consisting of two layers, the upper layer having a channel formed to present a shoulder at a distance from the edge of the sole to define the width of the sole edge extension, the two layers being secured together outside of said shoulder, and the upper having an outturned flange fitting the channel in the upper layer of the sole with the outer edge of said flange abutting said shoulder.

In testimony whereof I have signed my name to this specification.

MICHAEL F. BROGAN.