

M. BROCK.
SHOE.

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1,030,563.

Patented June 25, 1912.

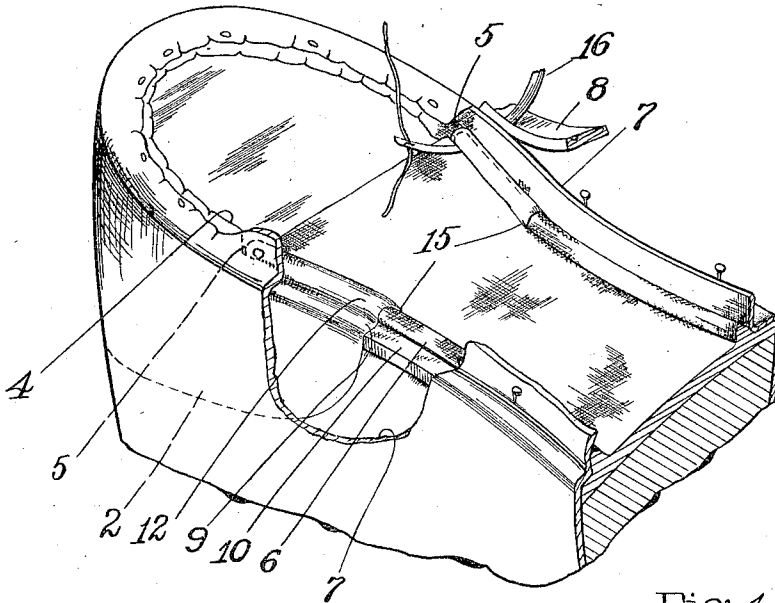


Fig. 1.

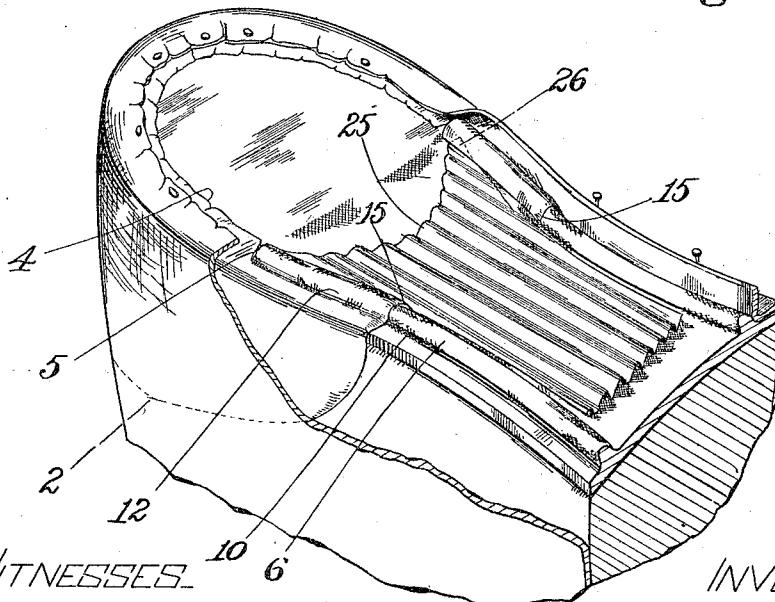


Fig. 2.

WITNESSES.
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SHOE.

1,030,563.

Specification of Letters Patent.

Patented June 25, 1912.

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To all whom it may concern:

Be it known that I, MATTHIAS BROCK, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Shoes, of which the following description, in connection with the accompanying sheet of drawings, is a specification, like reference characters on the drawings indicating like parts.

This invention relates to boots and shoes and particularly to stiffeners for the heel and toe.

The invention will be described with reference to heel stiffeners for which it is especially important and its application to toe stiffeners will be apparent.

In the manufacture of the shoe the upper with its linings and stiffenings is assembled upon a last having an innersole mounted on the bottom and a tack is driven through the upper and heel stiffener into the innersole at the extreme rear end of the shoe bottom. Another tack is inserted in the rear end face of the shoe, this tack being driven through the upper and stiffener into the last and serving to fix the relation of these portions of the shoe to the height of the last. When the heel of the shoe comes to be lasted, after the pulling-over and the side lasting operations, it is usually found that the wings of the heel stiffener have to be pulled up to the proper relation to the last bottom. One reason for this condition is that heel stiffeners are formed or shaped to cause the shoe, particularly an Oxford shoe, to hug the rear end face of the foot closely and until the ends of the stiffener wings are fastened there is nothing to hold the stiffener in the relation to the last necessary for securing the required result in the finished shoe. In all machine lasting this step of pulling up the stiffener ends is a troublesome one because it requires special attention and frequently involves the use of hand pincers which the workman has to pick up for this particular purpose.

A very important feature of this invention consists in providing a stiffener with means to hold it in its proper relation to the shoe bottom. In the illustrated embodiment of this invention the stiffener is provided with a retainer in the form of a claw or the like on each wing to engage with a cooperating portion of the innersole. This

"claw," so called for designation, herein takes the form of a molded portion of the stiffener flange which is shaped to engage over and inside of the lip of the innersole.

Figure 1 is a perspective view of a shoe having a heel stiffener embodying this invention; Fig. 2 is a modification.

The stiffener 2 comprises a body portion to embrace the heel of the last and an inturned flange 4 to overlie the margin of the heel seat or bottom of the last. This flange has a slit 5 at about the location of the rear end of the innersole lip or rib 6 to which the upper 7 and welt 8 are to be secured in the inseam sewing operation. From this slit forwardly along each wing of the stiffener the flange is molded to comprise a narrow flange 9 to lie upon the feather 10 of the innersole and an upstanding lip 12 to lie against the outer face of the innersole rib. This lip has its upper edge turned over inwardly and downwardly to form a claw or retaining member 15 to engage over and at the inner side of the innersole rib.

As I am advised a retaining member on a heel or toe stiffener is new in the art. By its use the wings of the heel stiffener are retained in assembled relation to the innersole lips. They do not require to be straightened up preparatory to heel seat lasting and it is not necessary in all cases to drive as many lasting tacks as heretofore were required for holding both the upper and the stiffener in position for the inseam sewing mechanism herein represented by the needle 16.

In the use of this invention the innersole, upper, linings and stiffenings will be arranged upon the last in the usual manner, the stiffener having been previously molded into the described shape. The shoe may then be thrust as usual backwardly into the assembling machine, for which a full description may be found in British specification No. 20010/05.

In a modification which appears in Fig. 2 one of the stiffener wings is connected by its flange and the claw 15 with a shank stiffening member 25. This shank stiffener comprises a corrugated construction to give it the required inflexible characteristics and is laterally compressible to adapt it to variations in the width of the shanks of different shoes. The shank stiffener, because of its connection with the heel stiffener, may be

used without tacking to the innersole. If desired the outer edge of the shank stiffener may be arranged to interlock under the edge of the adjacent claw 15 as indicated at 26.

5 Having explained the nature of this invention, I claim as new and desire to secure by Letters Patent of the United States:

1. A heel stiffener having a flange to overlie the feather of an innersole and a claw 10 to engage over a rib of the innersole.

2. A shoe end stiffener having wings each of which is provided with means for embracing a rib of an innersole for attaching the stiffener to the innersole.

15 3. A shoe end stiffener having wings each of which is provided with a claw to hook over a rib of an innersole to hold the wings from spreading.

4. A shoe end stiffener having wings each 20 of which is provided with a narrow flange formed with an upstanding lip 12 and an inwardly and downwardly directed member 15 to engage with a rib of an innersole.

5. A heel stiffener having wings each of 25 which is provided with a flange, and a shank stiffener, the said heel stiffener and the shank stiffener being attached together in normal relation to one another, and the flange of one wing of the heel stiffener being 30 formed with an innersole rib engaging member.

6. A heel stiffener having wings each of which is provided with a flange, the flange 35 of one wing being formed with an innersole rib embracing claw and being extended inwardly from said claw to form a shank stiffener.

7. A heel stiffener having wings each of which is provided with a flange, the flange 40 of one wing being formed with an innersole

rib engaging member and with a lateral extension forming a shank stiffener.

8. A heel stiffener having wings each of which is provided with a flange, the flange 45 of one wing being formed with a shank stiffener and the flange of the other wing being formed to engage a free edge of the shank stiffener.

9. A shoe stiffener having an inturned flange formed with a claw shaped to engage 50 over and inside of a rib of an innersole.

10. A shoe stiffener having a narrow flange formed with an upstanding lip and an inwardly and downwardly directed retaining 55 member to engage a rib of an innersole.

11. A shoe stiffener having a flange projecting inwardly from one edge, said flange being formed with an upstanding lip and an inwardly and downwardly directed retaining 60 member adapted by engagement with an insole rib to hold the stiffener against lateral displacement to retain it in its proper relation to the shoe bottom.

12. A shoe stiffener having a flange formed 65 to embrace an upstanding rib of an innersole.

13. A shoe stiffener having wings each of which is provided with a narrow flange 70 formed with an upstanding lip and an inwardly and downwardly directed innersole rib engaging retaining member.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MATTHIAS BROCK.

Witnesses:

EVERETT W. VARNEY,

ARTHUR L. RUSSELL.