

C. C. EATON.
SHOE.
APPLICATION FILED JUNE 20, 1913.

1,103,914.

Patented July 14, 1914.

Fig. 1.

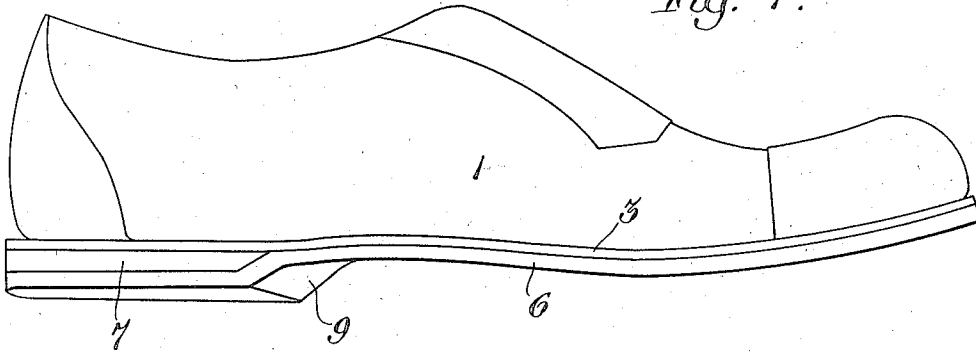


Fig. 2.

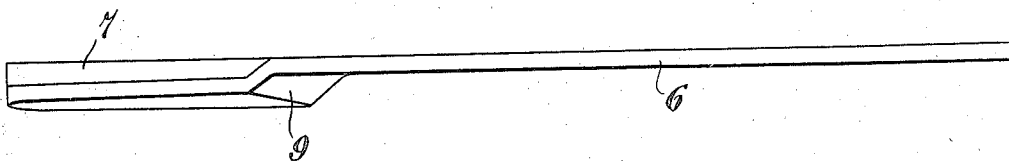


Fig. 3.

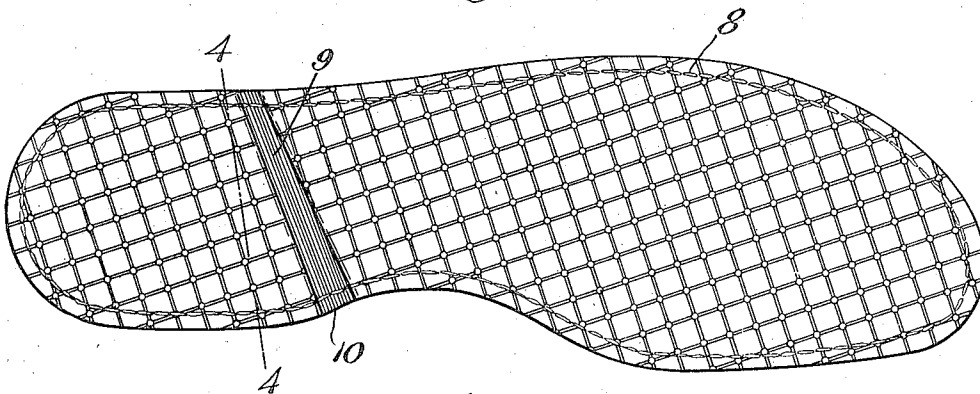
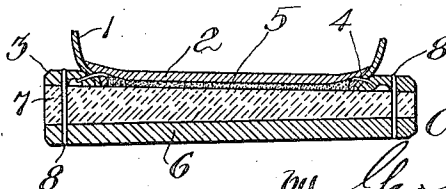


Fig. 4.



Witnesses
Edward Maxwell
James R. Hodder.

Inventor:
C. Chester Eaton.

by Geo. S. Maxwell,
Attorney.

UNITED STATES PATENT OFFICE.

CHARLES CHESTER EATON, OF BROCKTON, MASSACHUSETTS, ASSIGNOR TO C. A. EATON COMPANY, OF BROCKTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

SHOE.

1,103,914.

Specification of Letters Patent.

Patented July 14, 1914.

Application filed June 20, 1913. Serial No. 774,828.

To all whom it may concern:

Be it known that I, CHARLES CHESTER EATON, a citizen of the United States, and resident of Brockton, county of Plymouth, State of Massachusetts, have invented an Improvement in Shoes, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to boots and shoes, and to a modified type of spring heel shoe which is preferably made by my novel process, as described and claimed in my copending application Serial No. 772,984, filed June 11, 1913.

As spring heel shoes have heretofore been made, it has been customary to "spring" the sole around one or more heel lifts to constitute the heel, and in order to make such a shoe it has been usually found desirable to cut, split, or otherwise reduce the thickness of the outsole at the heel breast to facilitate the springing of the sole around the heel lift. This construction has resulted unsatisfactorily in reducing the thickness of the wearing capacity of the outsole at the heel portion. Furthermore, the spring heel type of shoe has usually been found suitable only for use in making children's and infants' footwear, but the improved type of spring heel shoe of my invention is adapted for adult footwear. By the novel process described in my copending application above identified, wherein the outsole is molded to conform to the final position it occupies in a completed shoe, the entire thickness of the outsole is utilized for wearing throughout the entire length, including the heel and heel breast. Furthermore, such molding condenses the sole and adds to its wearing capacity.

My present improved shoe comprises a spring heel shoe which is also a cushion heel shoe, and its construction provides a shoe of extreme flexibility; of welt construction throughout both forepart and heel part; without a tack or nail anywhere within the shoe; and which also includes arch supporting and orthopedic features.

An important feature of the present shoe, as also explained in my copending application above mentioned, is that the molding of the outer sole acts to effectually condense the leather, to increase the wearing qualities

thereof, and to afford a firm and hardened tread surface. By the formation of corrugations which are indented in the tread surface of the sole during this molding, the leather fiber is still further compacted and condensed, thus affording an anti-slipping device on the sole, which will not be worn off as quickly as if the molding was dispensed with.

Further features of the invention, novel combinations of parts, and details of construction, will be hereinafter more fully pointed out and claimed.

In the drawings, illustrating an athletic orthopedic shoe made by my improved process, Figure 1 is a side view of such a shoe; Fig. 2 is a view of the outer sole after it is molded, and with the cushion heel lift applied thereto; Fig. 3 is a view of the bottom of the sole after it is molded and corrugated; and Fig. 4 is a view in cross section on the line 4-4 of Fig. 3.

The shoe upper is indicated at 1, a usual type of oxford or low shoe being shown, the upper 1 being united to a channel insole 2 and a welt 3 by in-seam stitching 4, as illustrated in Fig. 4. It will be understood that the welt groove or channel in the insole 2 is cut entirely around the heel in order to allow for the stitching of the welt 3 entirely around the heel also, a stitched heel seat being thus provided in contra-distinction to the usual nailed heel seat. A suitable filling 5 may be applied to both forepart and heel part of the shoe, and the outsole 6, together with the cushion heel lift 7, which have been molded and cemented together as above explained, and constituting a combined heel and sole, are then applied to the shoe and the outsole stitching 8 is put in through the welt 3, the sole 6 and around the heel portion through the cushion lift 7, also uniting the sole, heel lift and welt firmly together.

The shoe made by my improved process is of extreme flexibility, as well as of the cushion heel type, said cushion being secured without nails, and, in fact, the entire shoe is completed by my process without a nail or tack being left in it. The cushion heel lift 7 may be of any suitable thickness desired, and while preferably of rubber or rubber-composition, may be of other yielding and resilient material. The outsole stitching 8 which secures the cushion heel 7 to the shoe permits the cushion to yield and be flexed

without any restraint and without affecting the holding of the stitches. In the shoe herein illustrated it will be seen that the heel breast 9 is preferably formed at an angle having the forwardly extended and thicker portion at the arch side 10 of the shoe thus causing the insole of a shoe to fit up snugly under the arch of the foot, and provide an arch supporting, as well as orthopedic, construction.

Preferably I make the shoe of the type herein shown without a shank stiffener or the like rigid means, although such a stiffener could be employed if desired. My improved process, therefore, enables a cushion heel shoe to be made of the spring heel type, suitable for adult wear, and furthermore provides an extremely flexible shoe and without a nail or tack in its entire construction. Furthermore, by molding the outer sole, as explained, I secure the advantages of the full limit of thickness and wearing capability of the outer sole, both at the heel breast 9 and throughout the entire extent of the heel. This is of great importance, as heretofore it has been customary to cut the heel portion of a spring heel shoe at the heel breast and to decrease the wearing thickness of the sole at this point.

By employing a welt construction around the heel, the shoe can be readily repaired and the cushion heel lift 7 can be replaced, should it wear out before the outer sole. By having the cushion lift, however, thus protected between the outsole and the heel of the shoe, its wearing capacity is greatly lengthened and the full capacity of its yield or resilience is left unimpaired.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A spring heel shoe, having, in combination, an upper, an insole, a welt secured to said upper and insole, and extending around the entire periphery of the shoe bottom, a molded outsole secured to said welt, said outsole having its heel portion offset below the level of the adjacent end of the shank portion to form a recess for a heel lift, the portion of the sole connecting said shank portion with said heel portion gradually increasing in depth from the outer side of the shank to the inner side thereof, and a heel lift secured in said recess of such dimensions that the upper surface of said lift is substantially flush with the upper surface of said shank along their contacting edges.

2. A spring heel shoe having, in combination, an upper, an insole, a welt secured to the upper and insole and extending around the entire periphery of the shoe bottom, a molded outsole having anti-slipping corrugations

molded therein, having its heel portion offset below the level of the adjacent end of the shank portion to form a recess of greater depth at one side of the sole than at the other, and having its heel breast inclined forwardly from the side of the recess of lesser depth to the side thereof of greater depth, and a cushion heel lift secured in said recess of such dimensions as to fill said recess, said outsole and heel lift being secured to said welt by outsole stitching.

3. A shoe having an upper, an insole, a welt secured to said upper and insole and extending entirely around the periphery of the shoe bottom, an outsole having its heel portion inclined transversely of the shoe to form a recess between said heel portion and the level of the adjacent end of the shank portion of the sole of greater depth at one side of the sole than at the other, and a cushion heel lift in the form of a wedge secured in said recess, the thick end of said wedge lying in the deep portion of said recess at one side of the sole and the thin end lying in the shallow portion of said recess at the other side of the sole.

4. A shoe having an upper, an insole, a welt secured to said upper and insole and extending entirely around the periphery of the shoe bottom, a molded leather outsole having its heel portion inclined transversely to the heel of the shoe to form a recess of greater depth on one side than the other, a cushion wedge heel lift of correspondingly increased thickness on one side interposed between the sole and heel, and stitching uniting the welt, wedge heel lift, and outsole together.

5. A shoe having a leather outer sole molded along the tread surface thereof, and condensed by intersecting depressions indented in the tread face during the molding operation and forming a plurality of flat tread spaces between said depressions.

6. A shoe having a leather outer sole molded along the tread face thereof to form both a heel tread face and a forepart tread face, provided with a plurality of intersecting indentations in both said tread faces formed during the molding operation and constituting condensed portions of the sole along the lines of such indentations and spaced flat tread surfaces between said indentations, whereby an antislipping tread face on a leather sole for both heel and forepart is provided.

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

C. CHESTER EATON.

Witnesses:

GEO. W. COBB,
JOHN W. SMITH.