No. 896,488.

PATENTED AUG. 18, 1908.

G. VALIANT.

VENTILATED SHOE.

APPLICATION FILED JAN. 17, 1901.

2 SHEETS—SHEET 1.

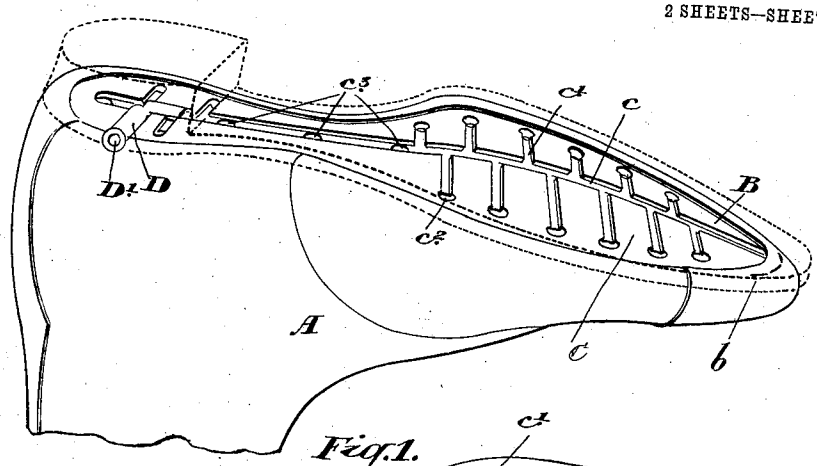


Fig. 1.

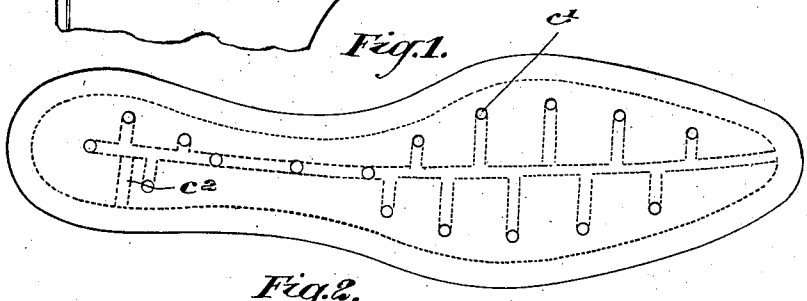


Fig. 2.

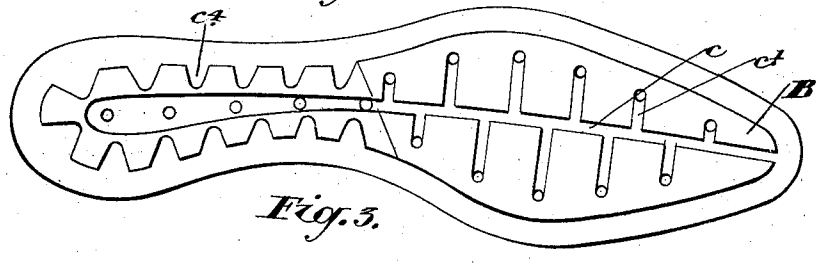


Fig. 3.

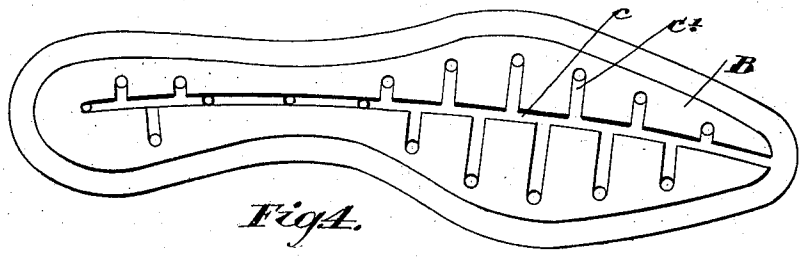


Fig. 4.

Witnesses
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2 SHEETS—SHEET 2.

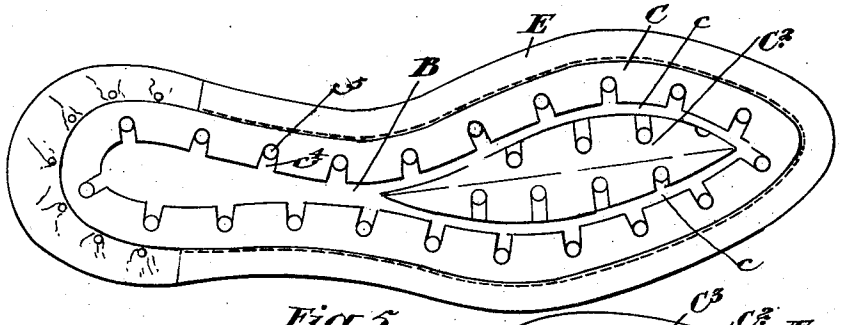


Fig. 5

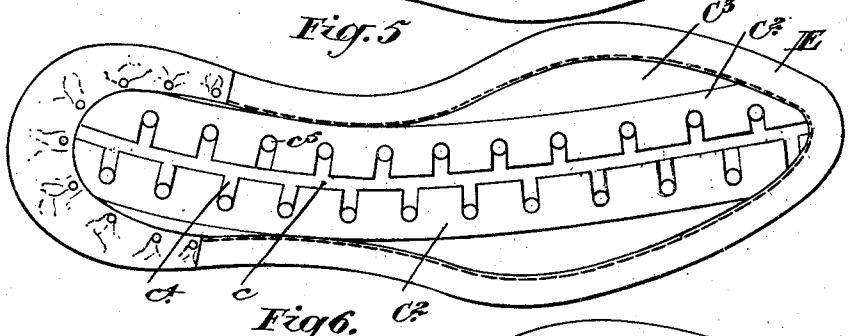


Fig. 6.

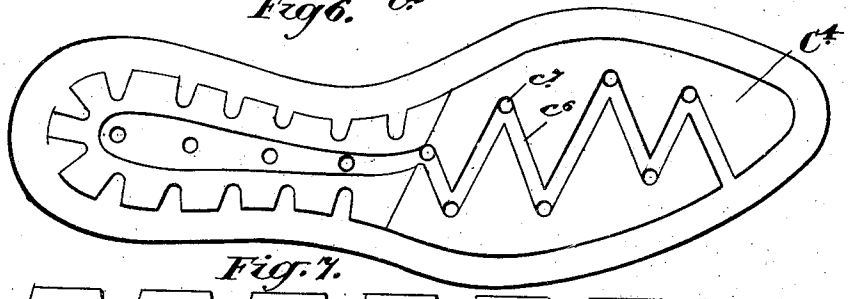


Fig. 7.

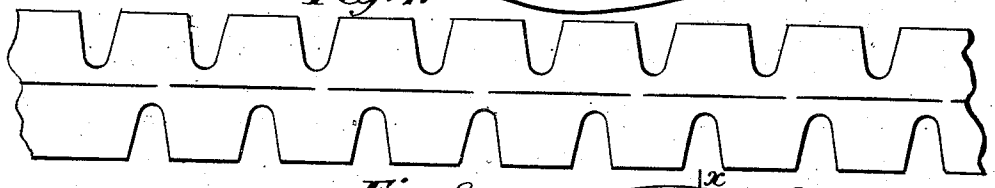


Fig. 8.

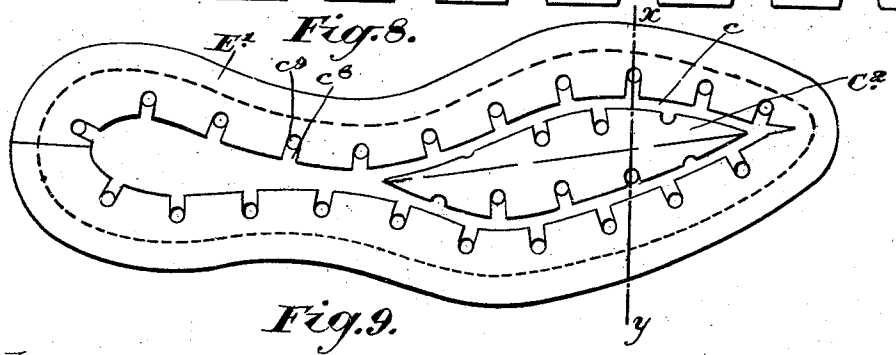


Fig. 9.

Witnesses.

H. G. Sawyer

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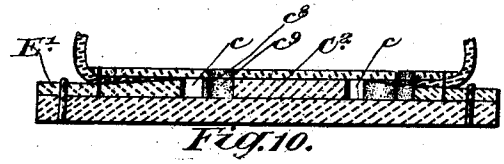


Fig. 10.

Inventor.

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by Stetson Gould & Co.

Attys

UNITED STATES PATENT OFFICE.

GEORGE VALIANT, OF TORONTO, ONTARIO, CANADA, ASSIGNOR TO MARGARET VALIANT, OF TORONTO, CANADA.

VENTILATED SHOE.

No. 896,488. Specification of Letters Patent. Patented Aug. 18, 1908.

Application filed January 17, 1901. Serial No. 43,649.

To all whom it may concern:

Be it known that I, GEORGE VALIANT, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, gentleman, have invented certain new and useful Improvements in Ventilated Shoes, of which the following is the specification.

My invention relates to improvements in ventilated shoes and the object of the invention is to devise a cheap and effective means of ventilating shoes, which will not materially interfere with the construction of the shoe, will do away with cutting grooves or otherwise deteriously affecting the inner sole or outer sole, will furnish reinforcements to light inner soles without adding to the stiffness thereof and will be of such a form as will prevent subsidence of the inner sole into the air ducts and yet will conform to the size and shape of the insole and when formed of rubber will produce a combined cushioned and ventilated shoe, and it consists essentially of a strip or strips provided with laterally extending channels, such strips being placed together in such a manner as to form main channels running through the central portion of the shoe between the inner and outer sole and back to an orifice preferably located in the heel provided with a suitable valve and closing plug, the ends of the lateral channel communicating through holes in the inner sole with the interior of the boot or shoe and the parts being otherwise constructed and arranged in detail as hereinafter more particularly explained.

Figure 1 is a perspective view of an ordinary McKay sewn lady's shoe showing my improved ventilating strip placed in position and turned at the heel and forming in the center a longitudinal channel. Fig. 2 is a plan view of Fig. 1, looking from the inside of the shoe. Fig. 3 is an adaptation of the strip showing the sole portion of the shoe with the notches on the inside, and heel and arch portions with the notches extending to the outside. Fig. 4 is a similar view of an adaptation of my strip used as an independent insole. Fig. 5 is a detail of a welted shoe showing my strip being utilized as a filling and forming two channels instead of one. Fig. 6 shows another adaptation of the strip. Fig. 7 is a detail of an alternative form with the heel portion formed by the notched strip. Fig. 8 is a detail of the strip for making my ventilating insole as run out in the machine with all the notches of equal length. Fig. 9 is a detail of the strip made wide enough to form not only the filling and ventilating channels but also the welt, and with the extra trimmed strip in the center to form a double channel. Fig. 10 is a section through x—y Fig. 9.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is the upper of the shoe and B the insole, which is suitably secured to the upper all around in the usual manner.

C are strips, which are preferably cemented but may be otherwise securely fastened to the insole within the turned-in edge of the upper. It will be noticed that the strips C are placed apart so as to form a central air duct c running practically throughout the shoe from heel to toe. In the strips C on each side are placed laterally extending channels c', the channels on one side of the duct c alternating in position with the channels on the opposite side. Such channels c' lead to holes c^2, which are pierced through the insole.

D is a tube which may be made of rubber or any suitable material and suitably inserted into a lateral passage-way c^2 in the strips C and D′ is a plug, which is designed to close the tube D, so as to prevent the ingress of moisture or water in wet weather. The usual sole is placed over the strips C and the turned-in edges of the upper are sewn in place in the usual manner so as to complete the shoe. In the channel c', however, I provide near the rear portion thereof further perforations c^2, which are pierced or extend through the insole.

In Fig. 2, which is a plan view from the inside of the shoe, will be seen how the perforations or holes are located at the end of the lateral passage-ways.

In Fig. 3 I utilize the strip shown in Fig. 8, so as to cheapen the method shown in Fig. 1.

In Fig. 4 I show practically the same form as that shown in Fig. 1, with the exception that I do not show any lateral passage-way C′ similar to that shown in Fig. 1, for the reason that this form is designed to be used as an independent insole for insertion in the shoe after it is completed.

In Figs. 3 and 4, the strip portions are connected to the bottom of the insole and it will of course be understood that these are bottom views showing prepared or completed insoles ready for lasting.

In Fig. 3 it will be noticed that I show two ways of using the strips, the detail of which is shown in Fig 8 with the exception that in Fig. 3 the notches are of unequal length in the sole portion.

In Fig. 5 I show the utilization of the strip shown in Fig. 8, with the lateral passage-ways c^4 leading to the perforations c^5 in the insole B. This is a welted shoe and the welt strip is shown by the letter E around the outside of the strip C^2.

It will be noticed that there is a double channel *c c* at the front portion of the shoe and a filling or strip C^2, such as shown in Fig. 8, is employed here being suitably cut into shape as to conform with the outer edges of the passage-way formed by the strips as shown in Fig. 8, divided for procuring additional ventilating holes and flexibility.

In Fig. 6 I show a welted shoe similar to Fig. 5, but with the central strips C^2 as shown in Fig. 8, such strips as shown in Fig. 8, being divided to form the strips and the lateral passage-ways c^4 being alternately arranged on each side of the central passage-ways *c*. The strips are arranged to extend through the center of the sole of the shoe and are suitably cemented to the insole and provided at the ball portion with filling pieces C^3 between the strips and the welt E, a cheaper form of Fig. 5.

In Fig. 7 I show the front portion of the shoe with a zigzag passage-way c^6 with perforations c^7 on the end of each lateral extension of the passage-way, such perforations extending through the insole. The strip C^4 in this form would be something like regular saw teeth in contour, and an alternative form of my invention.

In Fig. 9 I show the form shown in Fig. 8 applied as a combined welt and ventilating strip to a McKay sewn or nailed shoe, the welt E′ being combined with the central strips, which are provided with lateral passage-ways c^8 and perforations c^9 extending through the insole, the central filling similar to that shown in Fig. 5 is provided. The lateral passage-ways are preferably alternately arranged in position in relation to each other at the opposite sides of the passage-way *c*. In the forms shown in Figs. 5, 6, 7 and 9, I have not shown a lateral passage-way for providing communication with the outer air but it will of course be understood that such passage-ways will be preferably provided in all cases where the shoe is made up with my ventilating arrangement and it will also be understood that suitable plugs and valves therein for the closing of the air vent will be provided similar to that shown in Fig. 1, or of any other suitable construction in order to provide for the ingress and egress of the air.

It is my object throughout in providing a cheap and effective means of ventilating shoes, which will be flexible to form a cushion and do away with the cutting of grooves in the inner and outer soles, and furnishing reinforcements for light inner soles, without adding to the stiffness thereof and particularly to arrange the formation of the ventilating device so that it can be made very cheaply, and this it will be seen that I have accomplished by using strips, which can be run off in a machine of any desired length. The arrangement of the slots and air channels and the location of the holes overcome the usual difficulty found in other forms of ventilated shoes, for instance the slots are arranged to alternate at the junction with the main air duct or passage-way and this is an important desideratum as it prevents the pressing down of the insole into the channels and the consequent stopping of the air passage-ways and also of the liability of the insole to break in the course of wear across the grooves.

It will be seen that the holes are at the end of the lateral passage-ways and as the leather extends around the major portion of the hole a maximum support is given to the insole above the strips and around the hole. Any simple form of valve may be employed for admitting the air into the shoe although I do not wish to confine myself to any particular arrangement in this respect. The tube, however, may be inserted in the laterally extending hole and the plug or valve fitting therein left out until the shoe is finished when it may be inserted. It will thus be seen that there is no danger of any metal coming in contact with the cutting edges of the machinery tools used in manufacturing.

The arrangement I have shown of strip and insole may be made of leather or any other suitable material and the formation of the strip it will be understood will secure not only flexibility but ventilation and a durable insole. My invention is such a simple arrangement that it can be applied to any method of shoe making and does away with all cumbersome ventilating and skeleton middle soles, which of necessity cause undue stiffness of the shoe.

It will, of course, be understood that although I show perforations in the central channel through the major portion of its length, that such channels need not necessarily be perforated, in which case all danger of choking is avoided.

What I claim as my invention is:

1. In combination with a shoe, a combined ventilating and filling strip comprising a strip having recesses extending laterally from the edge thereof and through the strip from face to face, said recesses being left open to form channels for the passage of air.

2. In combination with a shoe and its insole having openings therein, a combined

ventilating and filling strip having laterally extending recesses in its edge, said recesses having their inner ends communicating with the openings in the insole.

3. In a shoe, the combination with the inner sole having perforations and the outer sole, of a strip placed between the inner and outer soles and divided in the center so as to form a channel, said strip having laterally extending recesses extending towards the edge of the sole from the channel and communicating with the perforations in the inner sole, said recesses extending through the strips from face to face, and an exit tube in the heel connected with the channel.

GEORGE VALIANT.

Witnesses:
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L. TRIMBLE.