No. 670,068. Patented Mar. 19, 1901.

J. TOURIGNY.

VENTILATED SHOE.

(Application filed Sept. 17, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

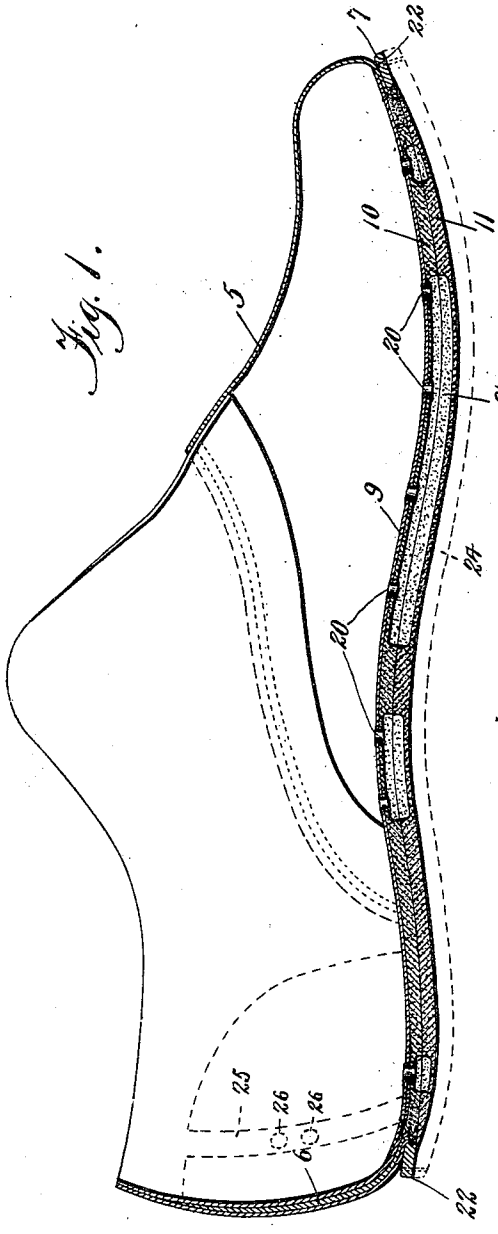
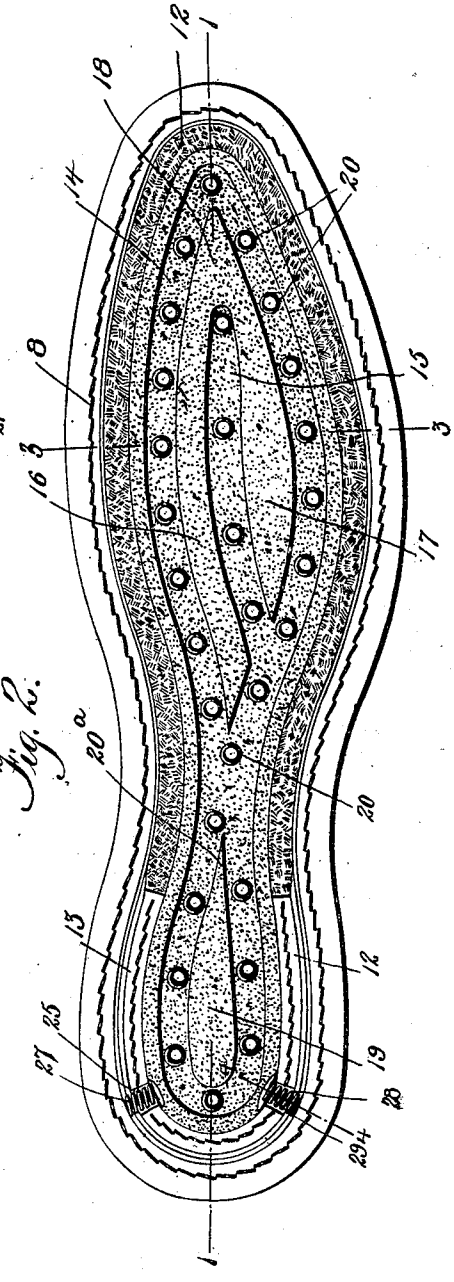


Fig. 2.



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Fig. 3.

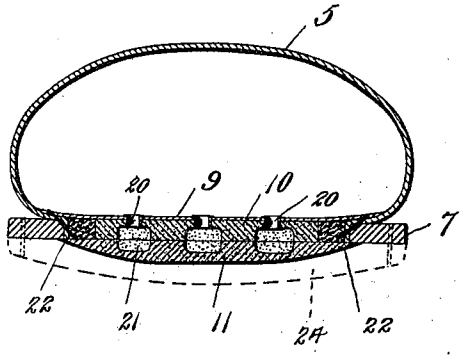
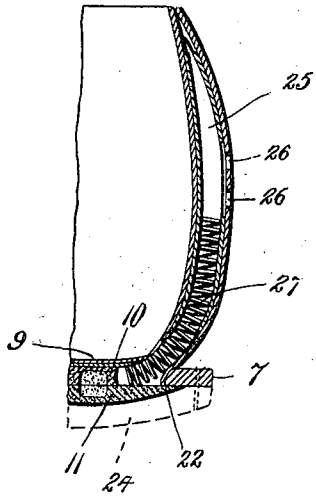


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN TOURIGNY, OF WINDSOR MILLS, CANADA.

VENTILATED SHOE.

SPECIFICATION forming part of Letters Patent No. 670,068, dated March 19, 1901.

Application filed September 17, 1900. Serial No. 30,233. (No model.)

To all whom it may concern:

Be it known that I, JOHN TOURIGNY, a subject of Her Majesty the Queen of Great Britain, residing at Windsor Mills, in the county of Richmond, Province of Quebec, Canada, have invented certain new and useful Improvements in Ventilated Shoes; and I do hereby declare that the following is 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.

My invention relates to improvements in ventilated shoes; and one object in view is to provide an improved construction by which I am able to combine a cork sole with the desirable ventilative features adapted to permit of the circulation of air through the bottom of a shoe, so as to overcome sweating of the wearer's feet and alleviate the hot uncomfortable feeling so frequently experienced in walking over heated asphalt pavements, along cinder paths of railway-tracks, &c.

Further objects and advantages of the invention will appear in the course of the subjoined description, and the novelty in the construction and arrangement of parts will be defined by the claims.

In the drawings hereto annexed and forming a part of this specification, Figure 1 is a longitudinal sectional elevation of one style of shoe embodying the features of my invention, the plane of the section being indicated by the dotted line 1 1 on Fig. 2. Fig. 2 is an inverted or bottom plan view of a ventilated shoe constructed in accordance with my improvements and showing one layer of the cork sole removed, so as to expose the channeled surface of the other cork-sole layer, which is permanently united to the shoe-upper. Fig. 3 is a vertical transverse section in the plane of the dotted line 3 3 on Fig. 2. Fig. 4 is an enlarged vertical section in the plane of the dotted line 4 4 on Fig. 2, taken through a part of the counter and the heel portion of the shoe.

The same numerals of reference denote corresponding parts in each of the several figures of the drawings.

The upper 5 of the improved shoe is similar in all ordinary respects to the well-known shoe of commerce, except that the heel or counter-stiffener 6 is constructed with means for insuring the passage of air to and from the cork sole, which forms one of the important features of my ventilated shoe. The upper 5 is united to the welt 7 by the row of stitches 8 continuously throughout the vamp, shank, and counter portion of said upper, as is usual, and in this connection it is desired to call attention to the fact that the lining 9 is united to the upper and to the welt by the same row of stitches which secures said welt and upper together.

The cork sole which I employ consists of two layers 10 11, which are provided in their opposing faces with complemental matching grooves that constitute the air-circulating channels through the improved cork sole, as will presently appear. The upper layer 10 of the cork sole is fashioned, as shown very clearly by Fig. 2, to conform to the shape or contour of the shoe, said cork-sole layer 10 being smaller than the space within the welt and the upper. This cork-sole layer 10 is placed in the shoe in the same plane, practically, as the welt and the edge of the upper united thereto, and as the layer 10 is somewhat smaller than the space within the channel it follows that a continuous channel is left between the opposing edges of the upper cork layer 10 and the welt. This continuous channel at the shank and the toe portions of the shoe is charged or filled compactly with an absorbent material of any suitable nature, as indicated at 12 in Fig. 2. The absorbing material or packing terminates at the counter portion of the shoe, so as to permit of the use of the solid filling 13 at the heel portion of the shoe, and such filling extends around the heel and from the shank at the points where the absorbent packing terminates.

The upper cork-sole layer 10 fills the bottom portion of the shoe along the heel, shank, and toe thereof, and in the under surface of this layer 10 is formed the main groove 14 and the auxiliary groove 15. In the fabrication of the cork layer 10 one surface thereof is so channeled as to leave the partitions 16 17, which are connected at their front ends, as at 18, said partitions lying underneath the ball and toe portions of the shoe. A partition 19 is also left in the under surface of the cork layer 10, at the heel portion thereof, said partition being pointed, as at 20^a, and ex-

tending into the shank portion of the cork layer. The main groove 14 extends continuously along both edges of the layer 10, so as to lie outside of the partitions 16, 17, and 19; but the auxiliary channel 15 extends between the partitions 16 17, as clearly shown by Fig. 2.

The lining 9 and the upper cork layer 10 are united together by a plurality of eyelets 20, which open into the main and auxiliary channels of said sole, as shown by Figs. 1 and 2, whereby the eyelets serve to attach the layer 10 and the lining 9 firmly together and also provide a multiplicity of ports or openings which establish communication between the shoe-chamber and the sole throughout the length and width of the shoe.

The lower layer 11 of the cork sole is formed in its upper surface with the grooves 21, arranged similar to the grooves in the under surface of the top layer, and said grooves of the under layer are arranged to register with the grooves of the top layer for the purpose of forming the circulation-channels in the cork sole of the shoe. Said under layer is, furthermore, made somewhat larger than the upper layer, so that the layer 11 will underlap, as at 22 in Figs. 1, 3, and 4, the welt of the shoe. Said under cork layer 11 may be united to the upper cork layer or to the shoe-welt by any preferred means; but, if desired, this under cork layer may be held in place simply by interposing it between the outer sole 24 (indicated by dotted lines in Figs. 1, 3, and 4) and the layer 11 and welt 7, the parts 7 24 being stitched or otherwise united in any preferred way. Of course the under layer 11 of the cork sole extends from the toe to the heel of the shoe.

To provide for the ingress of air to the main circulation-channel 14 of the cork sole, I have formed the counter-stiffener 6 with a vertical channel 25 on one side thereof, said channel 25 extending through the counter and stiffener, so that this lower portion will communicate with the main channel 14 at one side of the heel portion of the shoe. In the shoe-counter is formed one or more inlet-ports 26, which open into the upper portion of the channel 25, and to prevent the channel 25 from collapsing I have placed therein the reinforcement 27, which is in the form of a coiled wire loosely fitted in the lower portion of said inlet-channel 25 and extending from one port 26 into a part of the channel 14 and the cork sole. The resiliency and elasticity afforded by the coiled-wire reinforcement acts to distend the walls of the channel 25 and prevent their collapse under pressure of the foot or during the usage of the shoe, and thus the communication from the outside air to the channels in the cork sole is kept open. The exhaust-channel 28 is also formed in the counter, its position being indicated in Fig. 2, from which it will be seen that said exhaust-channel is formed in the opposite side portion of the counter from the inlet-channel 25. This exhaust-channel is also in communication with the main channel 14, and it has communication with the outer atmosphere through a suitable port. (Not shown.) The walls of the exhaust-channel 28 are prevented from collapsing by a coiled-wire reinforcement 29, (see Fig. 2,) as in the inlet-channel, as will be readily understood.

From the foregoing description, taken in connection with the drawings, it will be seen that I have provided an improved shoe which combines in one structure the desirable features of ventilative means and a cork sole. The employment of the cork sole prevents water from soaking through the shoe-bottom and wetting the feet of the wearer, while the provision of the ventilative channels in the cork sole itself secures a desirable circulation of air into the shoe, which air circulation carries off the heat and moisture due to perspiration of the feet and at the same time supplies cool air to the shoe, which contributes to the comfort of the wearer. The parts are simple in construction, they are protected from injury, and they can be manufactured cheaply.

Although I prefer to employ cork as the material for making the two layers 10 11, I may employ other material under some circumstances from which to manufacture the two parts of the inside shoe-sole.

The absorbent filling or packing 12, which I prefer to employ, consists of material made of paper-pulp and commonly known in the trade as "driers." This particular material is employed by me in the shoe between the welt and the upper layer of the cork sole for the purpose of absorbing any moisture which may penetrate through the thin fabric lining 9, whereby the improved cork-sole shoe is furnished with a medium directly next to the foot which is adapted to absorb perspiration, and thereby contribute to the hygienic properties of the shoe.

Changes within the scope of the appended claims may be made in the form and proportion of some of the parts, while their essential features are retained and the spirit of the invention is embodied. Hence I do not desire to be limited to the precise form of all the parts as shown, reserving the right to vary therefrom.

Having thus described my invention, what I claim as new is—

1. A ventilated shoe, provided with a two-part inner sole having matching grooves formed in their opposing surfaces and forming a longitudinal air-circulation channel, said shoe also provided with an inlet to the circulation-channel and an exhaust-outlet therefrom substantially as and for the purposes described.

2. In a ventilated shoe, provided with a two-part cork sole, the members of said sole having matching grooves formed in their oppos-

ing faces, and the lower layer or member of said cork sole overlapping the shoe-welt, substantially as described.

3. In a ventilated shoe, a cork sole consisting of two parts having matching grooves formed in their opposing faces, and a lining united to the upper layer of said sole by eyelets which form a plurality of ports, substantially as described.

4. In a ventilated shoe, a two-part cork sole consisting of an upper layer provided with the main and auxiliary channels separated by the partitions 16, 17 and 19, and a lower layer which is applied against said channeled face of the upper layer and overlaps the shoe-welt, substantially as described.

5. In a ventilated shoe, a two-part cork sole provided in the opposing faces of its members with the coincident grooves forming the air-circulating channels, a lining fitted to the upper face of the upper layer, and eyelets connecting said upper layer and the wall of the lining together; the lower layer of the cork sole arranged to overlap the shoe-welt, substantially as described.

6. In a ventilated shoe, the combination with a welt, of a two-part cork sole having its members provided with matching grooves in their opposing faces, the upper sole member being fitted within the welt to leave an intervening space between the opposing edges of the parts, and the lower sole member overlapping said welt, and a packing or filling in the surrounding space between said upper sole member and the welt, substantially as described.

7. In a ventilated shoe, the combination with a welt, and a channeled sole, of an absorbent packing between said welt and sole, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JOHN TOURIGNY.

Witnesses:

MINNIE BRODERICK,

NAPOLÉON ROUSSEAU.