

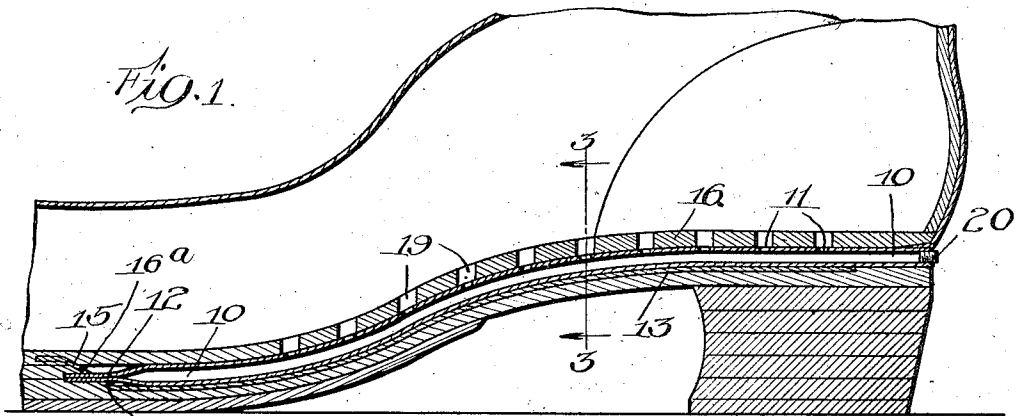
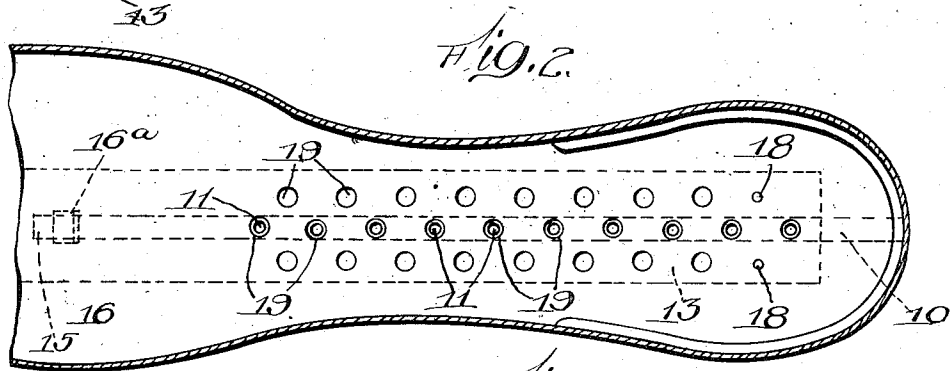
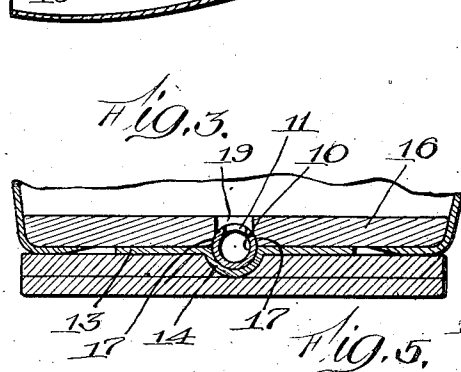
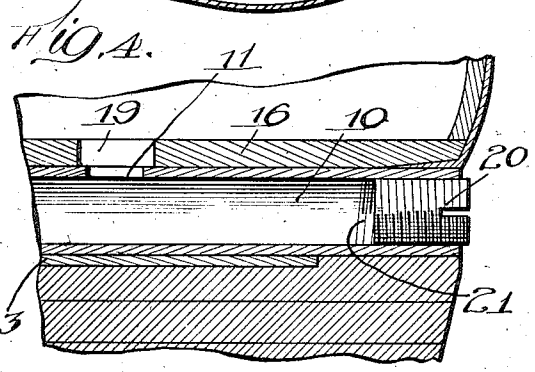
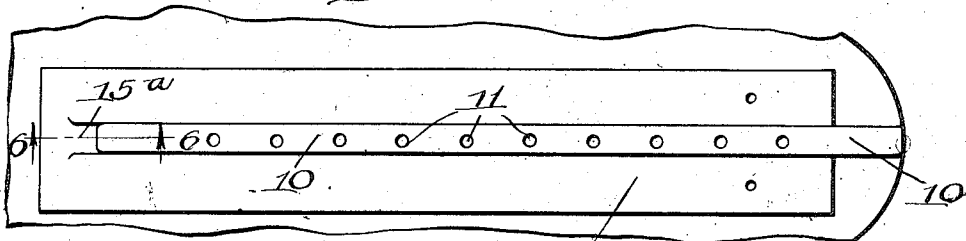
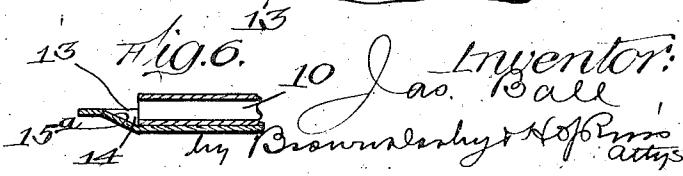
No. 853,386.

PATENTED MAY 14, 1907.

J. BALL.

COMBINED SHOE SHANK AND VENTILATOR.

APPLICATION FILED MAY 16, 1906.



Witnesses:
C. V. Doman
U. T. Bird.

Inventor:
Jas. Ball
By Brown & Sons
Attys

UNITED STATES PATENT OFFICE.

JAMES BALL, OF CHICAGO, ILLINOIS.

COMBINED SHOE SHANK AND VENTILATOR.

No. 853,336.

Specification of Letters Patent.

Patented May 14, 1907.

Application filed May 16, 1906. Serial No. 317,118.

To all whom it may concern:

Be it known that I, JAMES BALL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Combined Shoe Shank and Ventilator, of which the following is a full, clear, and exact specification.

This invention relates to improvements in a combined shoe shank and ventilator, and the object of the same is to provide an improved device of this character for strengthening and stiffening the shoe, and which will at the same time ventilate the shoe.

A further object is to provide an improved device of this character which may be inserted into the shoe while the same is being manufactured and which may be readily closed to prevent the entrance of moisture in wet weather.

A further object is to provide an improved device of this character which will be simple, light and strong in construction, cheap to manufacture and efficient in operation.

To the attainment of these ends and the accomplishment of other new and useful objects as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawing illustrating an exemplification of the invention, and in which;

Figure 1 is a longitudinal sectional view of a shoe constructed in accordance with the principles of this invention. Fig. 2 is a plan view of the insole showing the shoe upper in section. Fig. 3 is a sectional view on line 3—3 of Fig. 1. Fig. 4 is an enlarged detail sectional view of the rear portion of a shoe with this improvement applied thereto. Fig. 5 is a top plan view of a modified form of the invention. Fig. 6 is a sectional view on line 6—6 of Fig. 5.

Referring to the drawing and in which the same reference numerals designate similar parts throughout the several views, the numeral 10 designates a rigid tube of any suitable material such as metal or the like, of any desired size and configuration, but preferably round. This tube is provided with a plurality of apertures or openings 11 in the body portion and one end thereof is closed in any suitable manner such as by drawing the tube 55 and flattening the end as at 12. A strip of

any suitable material 13 such as metal or the like, is provided with a longitudinal groove or depressed portion 14 preferably located centrally thereof to receive the tube 10 and is of a depth substantially equal to one half of the diameter of the tube. The forward end of this plate preferably projects beyond the forward or closed end 12 of the tube, and is bent upward as at 15, and said upturned portion is provided with an aperture or slot 16^a through which the closed end 12 of the tube 10, passes and by means of which the forward end of the tube and the plate are secured together. The rear end of the tube preferably projects beyond the rear end of the plate 13. In the modification shown in Figs. 5 and 6 the tube is secured within the groove or depressed portion 14 of the plate 13 in any suitable manner such as solder or the like. The front end of the tube is open and terminates short of the end of the groove or depressed portion 14, which latter also terminates short of the front of the plate to form a front or deflecting wall 15^a. In each instance after the tube 10 and the plate 13 have been secured together they are bent to conform to the arch of the foot. A suitable insole 16 is preferably provided with a longitudinal depression or groove 17, in its lower face, located preferably at the center thereof, which extends from its rear end and terminates adjacent the point occupied by the ball of the foot. The plate 13 and tube 10 are placed adjacent the lower face of the insole with the upper or projecting portion of the tube standing within the groove or depressed portion 17. The extremity of the end 15 of the plate 13 is preferably embedded in the insole 16 and the plate is secured by any suitable means, such as tacks 18 or the like. The plate and tube are so located that the rear extremity of the tube terminates flush with the rear end of the insole 16. This insole is provided with a plurality of apertures 19 some of which are located above and register with the apertures 11 in the tube 10.

When the shoe is worn, the suction caused by the rising of the wearer's feet, when he walks, will draw or suck air into the exposed open end of the tube 10, and will pass through the apertures 11 therein and through the apertures 19, in the insole against the foot. When the foot is depressed the air thus drawn in will be discharged or forced out through the tube, thus causing a circulation

of air. In the modified form of the invention the air will also be discharged out of the front end of the tube and against the wall 15 which will deflect the same against the sole of the foot. In order to prevent moisture and water from being drawn into the tube on a wet day, a suitable cap or closure may be provided for the exposed end of the tube. This cap or closure may be of any suitable construction, but is preferably in the form of a screw plug 20, which is adapted to enter and engage threads 21 in the end of the tube. When it is desired to ventilate the shoe the cap or closure is removed.

15 With such an arrangement it will be seen that the usual steel shank may be dispensed with and this improvement substituted therefor which will stiffen and strengthen the shoe and at the same time permit the shoe to be properly ventilated. Furthermore the apertures in the tube and insole will always be maintained in a registering position.

It is to be understood that it is not desired to be limited to the exact details of construction or the arrangement of the several parts, as numerous changes may be made therein without departing from the spirit of the invention.

What is claimed as new is:

30 1. In a device of the class described, the combination of a plate provided with a longitudinal depressed portion or groove, a perforated tube seated within the groove or depressed portion and projecting above the face of the plate, means for securing the plate and tube together, said plate and tube being embedded in the sole of a shoe, said tube having communication with the outside

air, and an insole provided with perforations registering with the perforations in the tube. 40

2. In a device of the class described the combination of a plate provided with a longitudinal groove, a tube seated within the groove and projecting above the top of the plate, and provided with perforations above 45 the plate, an insole, provided with a groove in its under face adapted to receive the portion of the tube above the plate to permit the plate to engage the face of the insole, said insole being provided with perforations registering with the perforations in the tube, and means for securing the parts together. 50

3. In a device of the class described the combination of a plate provided with a longitudinal groove or depressed portion, terminating short of one end thereof to form an end wall, a tube having an open end seated within the groove and with its open end adjacent the wall, said tube projecting above the top of the plate and provided with perforations in the projecting portion, an insole, provided with a longitudinal groove to receive the projecting portion of the tube and having perforations adapted to register with the perforations in the tube and means for 65 securing said parts together, said tube having communication with the outside air.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 14th day of May A. D. 1906. 70

JAMES BALL.

Witnesses:

FRANCIS A. HOPKINS,
CHAS. H. SEEM.