J. ELDERKIN.

CHANNEL FLAP OPENER AND MOISTENER.

APPLICATION FILED APR. 15, 1907.

1,015,729.

Patented Jan. 23, 1912.

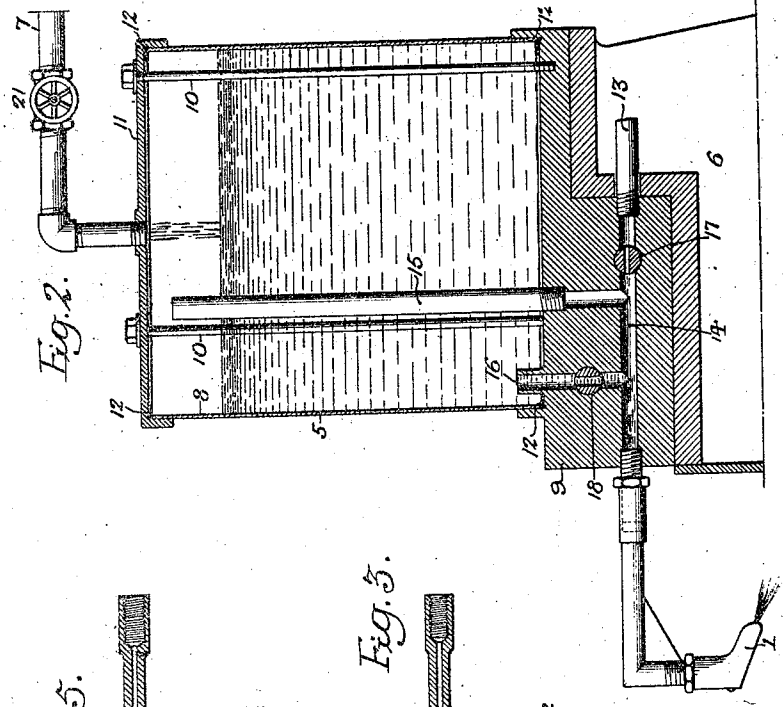

Fig. 2.

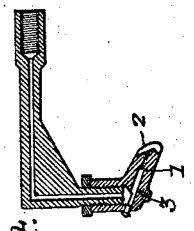

Fig. 4.

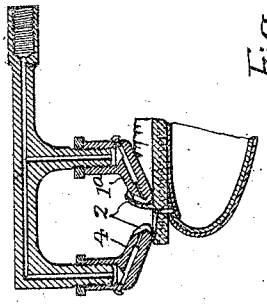

Fig. 5.

Fig. 3.

Fig. 1.

Witnesses:-

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UNITED STATES PATENT OFFICE.

JOHN ELDERKIN, OF PHILADELPHIA, PENNSYLVANIA.

CHANNEL-FLAP OPENER AND MOISTENER.

1,015,729. Specification of Letters Patent. Patented Jan. 23, 1912.

Application filed April 15, 1907. Serial No. 368,344.

To all whom it may concern:

Be it known that I, JOHN ELDERKIN, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented an Improved Channel-Flap Opener and Moistener, of which the following is a specification.

My invention relates to mechanism designed to prepare the soles of shoes for leveling after the same have been sewed; the object of my invention being to provide means for wetting the channel flap after cement has been applied thereto in order that said flap may be rendered sufficiently flexible or soft to properly fold back in its proper place upon the sole and be secured by the cement provided on the inner surface of the same, under the action of the leveling machine.

My invention is fully disclosed in the accompanying drawings, in which: Figure 1, is a perspective view of an apparatus embodying my invention; Fig. 2, is a sectional view of the same, and Figs. 3, 4 and 5, are sectional views of different forms of nozzles for engagement with the work, adapted to discharge suitable liquid under pressure against the same.

In the manufacture of that class of shoes in which the sole is channeled to receive the stitches, a flap of leather is turned up in the channeling operation which must be afterward pressed down and secured to the sole under a leveling operation in finishing the shoe. In order to accomplish this satisfactorily, it is necessary to wet or dampen the flap turned up in the channeling operation, in order that it may be turned over and flattened down. The usual practice has been to wet the entire sole. This is objectionable, however, as it necessitates the wetting of the cement as well, and in many instances discolors the uppers and soles. With the use of my invention I only wet the channel flap and insure a neater and more satisfactory result, avoiding all possibility of staining soles or uppers of the most delicate goods. The use of my invention also advances the work with much greater rapidity, as heretofore the soles of the shoes were wet through and it was necessary to set them aside for from five to ten hours before the next operation. By the use of my invention, however, the shoe is ready for leveling immediately after the spraying and flap lifting operation, and a great saving of time and labor is thereby effected.

In carrying out my invention, I provide a nozzle 1 having an aperture 2 through which a fine spray of water under pressure is delivered against the flap, in the manner shown in Fig. 1; the end of the nozzle being so shaped as to lift the flap as the spray is being delivered thereto. This nozzle is shown in section in Fig. 3, and is vertically notched or grooved in the manner indicated to facilitate the passage of spray. The operator holds a shoe in his hand, and beginning at the point indicated in Fig. 1, turns the shoe until all portions of the flap have been brought under the influence of the spray. The nozzle is so shaped and the work is so carried out that the spray engages only the rear surface of the flap and consequently there is no danger of staining the surface of the sole lying between the flap. After this dampening operation, the operator pushes down to a certain extent the hitherto raised flap and the shoe is then passed to the leveling machine where the pressure applied is sufficient to cause the dampened flap to be firmly caught and held by the cement on the under surface of the same.

In the manufacture of certain grades of shoes, it may be desirable to wet the entire surface of the sole, and for this purpose I provide a nozzle of the type shown in Fig. 4, having a supplemental aperture 3 at the rear of the main aperture; through which supplemental aperture spray will be delivered over the surface of the sole lying between the upturned flap, and by this means the wetting of the sole may be effected uniformly. In some instances, also, it may be desirable to apply a fine spray to the cemented surface of the flap to assist in softening the cement preparatory to securing the flap in place, and for this purpose a structure of the type illustrated in Fig. 5 may be employed, in which two nozzles are shown arranged to discharge toward each other; the usual nozzle being shown at 1^a, while the supplemental nozzle is shown at 4. When applied to the shoe, this structure will effect the wetting of both sides of the flap.

The nozzle shown in Fig. 4, and the pair

of nozzles shown in Fig. 5, are notched in a manner similar to the nozzle shown in Fig. 3.

For the purpose of providing the necessary liquid to effect this spraying action, I provide a tank 5 mounted upon a suitable support 6, to which tank water or other desired fluid is supplied by a pipe 7. In the present instance, this tank comprises a glass cylinder 8, held to a base 9 by means of suitable bolts 10 passing through a cover 11 and entering said base; the joints between the base and cover being closed by means of suitable gaskets 12. Fluid under pressure, such as air or steam, is directed by a pipe 13 to a through opening 14 formed in the base 9, and such pressure may enter the water-holding tank 5 through a pipe 15 so as to discharge water therefrom through an outlet 16. A portion of the air passing into the through opening 14 finds its way beyond the pipe 15, and engaging the water discharging through the outlet 16 delivers the same to the nozzle from which it is ejected in the form of spray. Controlling the delivery of air and water, are valves 17 and 18 operated by suitable hand wheels 19 and 20 respectively. The water pipe is also provided with a valve 21, which is usually slightly open as to permit water to enter the tank 5 as fast as it is discharged.

I do not herein claim the process involved in the use of my invention; the same forming the subject-matter of an application filed by me on the 26th day of December, 1911, under Serial No. 667,628.

I claim:

1. The combination of a tool having a substantially wedge-shaped end for lifting the channel flap of a shoe sole, said tool being apertured for the passage of liquid and forming a spray nozzle, a source of liquid supply, and means for delivering a supply of air under pressure to discharge said liquid from the nozzle in the form of spray, said nozzle having its substantially wedge-shaped end grooved vertically in line with its aperture to facilitate the spraying action when said nozzle is pressed against the channel flap to raise the same.

2. The combination of a tool shaped to lift the channel flap of shoe soles, said tool having a plurality of diverging apertures for the passage of liquid, a source of liquid supply, and means for discharging liquid from said tool in the form of spray whereby it is directed upon the flap and sole of the shoe.

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

JOHN ELDERKIN.

Witnesses:
MURRAY C. BOYER,
JOS. H. KLEIN.