Jan. 31, 1928. 1,657,454

F. E. BUCK

TOOL FOR FOOTWEAR FITTERS

Filed Oct. 21, 1927

Fig. 1.

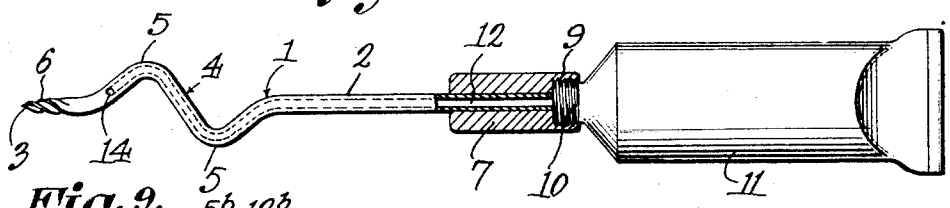


Fig. 9.



Fig. 2.

Fig. 3.

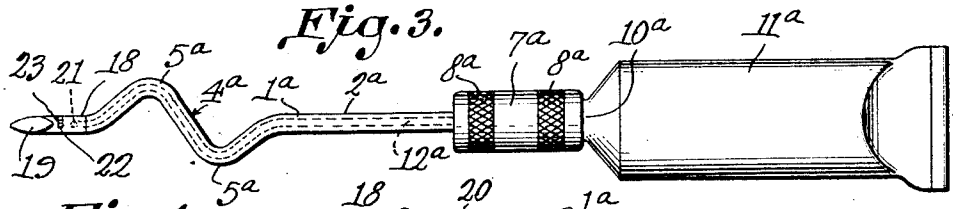


Fig. 4.

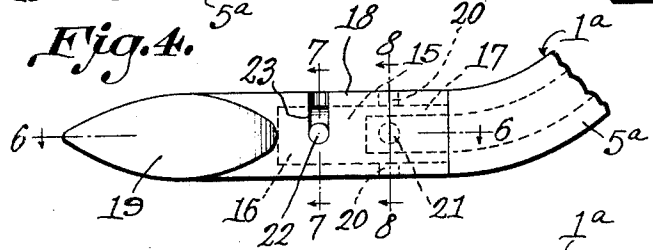


Fig. 7.

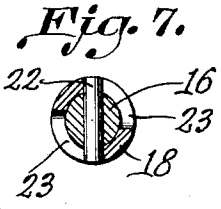


Fig. 5.

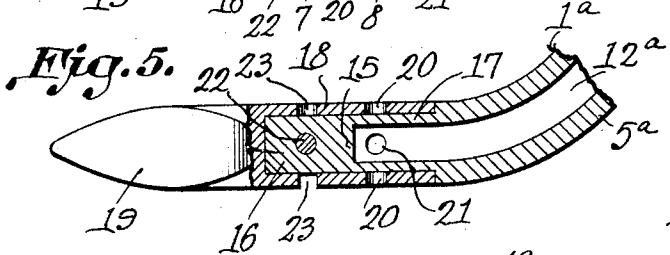


Fig. 8.

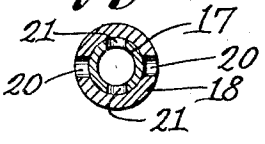
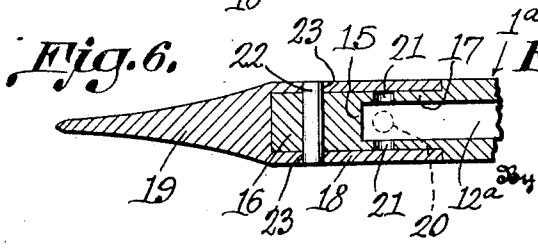


Fig. 6.



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UNITED STATES PATENT OFFICE.

FRANK E. BUCK, OF BALTIMORE, MARYLAND.

TOOL FOR FOOTWEAR FITTERS.

Application filed October 21, 1927. Serial No. 227,845.

This invention aims to provide a tool for footwear-fitters, the tool being adapted to be used to inject a substance of any kind into the soles, the linings, the counters, or any other part of a shoe, in order to prevent squeaking, to secure a water-proofing, to fill out any desired part of the shoe, where the shoe happens to be loose, to stretch or shape the shoe, to accommodate any part of the shoe to corns and bunions, or for any other purpose for which the device is adapted to be employed.

It is within the province of the disclosure, to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the drawings:—

Figure 1 shows in side elevation, a device constructed in accordance with the invention, parts being broken away and in section; Figure 2 is a plan wherein the structure is viewed at right angles to the showing of Figure 1; Figure 3 is a view like Figure 1, but showing a modified form of the invention; Figure 4 is a detail enlarged from Figure 3; Figure 5 is a view like Figure 4, parts, however, being in section; Figure 6 is a section on the line 6—6 of Figure 4; Figures 7 and 8 are cross sections taken, respectively, on the lines 7—7 and 8—8 of Figure 4; Figure 9 is a side elevation showing the shield or cap in place.

The device forming the subject matter of this application preferably is made of metal throughout and includes a nozzle which is denoted generally by the numeral 1. The nozzle 1 includes a straight body 2 and a pointed tip 3, the tip and the body being located in a common axis. The tip 3 and the body 2 are connected by a laterally extending portion 4 which, ordinarily, is of zig-zag form, including, as shown in Figure 1, loops or cranks 5 which project in opposite directions with respect to the axis in which the body 2 and the pointed tip 3 are located. Figure 2 makes it evident that the body 2 and the tip 3, together with the loops 5, are located in the same plane, and the nozzle, therefore, is not constructed like a cork screw. The tip 3 may be threaded as shown at 6, to facilitate the introduction of the tip into the shoe, but this detail is not insisted upon. The rear end of the body 2 of the nozzle 1 is mounted in a handle 7. The handle 7 is constructed in any desired way so that an operator can secure a good hold upon it, thereby to rotate the nozzle 1 on its axis. The handle 7 may be supplied with knurled bands 8, to enable the operator to acquire a firm hold on the handle, but any other expedient adapted to this end may be employed.

In the rear end of the handle 7 there is an enlarged recess 9 into which is removably threaded the neck 10 of a receptacle 11. The receptacle 11 has been shown in the form of a well known compressible dispensing tube, but any sort of receptacle may be employed, and the receptacle may be connected to the handle 7 otherwise than by the threading on the neck 10. The nozzle 1 is supplied with a bore 12 communicating with an outlet port 14. This outlet port 14 may be located wherever desired. In the present embodiment of the invention, but not necessarily, the outlet port is located some little distance to the rear of the tip 3, so that the tip 3 is solid, whereas practically all of that laterally extended portion 4 and the body 2 are of tubular construction.

In practical operation, the tool is held by means of the handle 14, and the tip 3 is worked in between the layers of the sole of a shoe, until the laterally extended portion 4 is between the layers of the shoe. Then, the tool may be given a slight rotation on its axis, and the loops or cranks 5 will open the sole of the shoe to form a cavity into which the contents of the receptacle 11 may be ejected, when the receptacle is compressed, the substance in the receptacle 11 moving through the bore 12, and out of the port 14. Attention is directed to the fact that the stitching at the edge of the sole of the shoe is disturbed but little, the opening in the stitching at the edge of the sole being of no greater cross section than the cross section of the straight body 2. The tool may be removed from between the layers of the sole, making no larger an opening than was required for the entrance of the tool. The substance inserted between the layers

of the sole may be used to prevent squeaking, or to secure a water-proofing of the sole. Although the tool has been mentioned for use in connection with the soles of shoes, it may be used in conjunction with the linings, the counters, or anywhere else upon a shoe. Not only can a water-proofing of the shoe be brought about, and the squeaking avoided, by the use of the device forming the subject matter of this application, but, as well, the shoe may be filled out to fit it to the foot, if the shoe is too loose. Again, by bringing about an injection of the proper material into the desired part of the shoe, the shoe may be stretched and shaped to accommodate corns, bunions, and the like. The foregoing are but a few of the many uses to which the device may be put in the hand of a shoe-fitter or other person. The article is strong, simple in construction, and inexpensive to manufacture.

Referring to Figures 3 to 8, inclusive, parts hereinbefore described have been marked by numerals used previously, with the suffix "a". The nozzle 1^a has a reduced end 15 including a solid part 16 and a tubular portion 17, and on the reduced end 15 of the nozzle is journalled for adjustment the cylindrical body 18 of a pointed and tapered tip 19 having outlet ports 20 adapted to be brought into registration without outlet ports 21 in the part 17 of the nozzle 1^a, when relative rotation between the tip 19 and the nozzle 1^a is brought about. A cross pin 22 is mounted in the solid part 16 of the nozzle 1^a and is adapted to move in transversely elongated slots 23 which are fashioned in the body 18 of the nozzle 19. The cross pin 22 and the slots 23 constitute interengaging elements whereby the tip 19 is held for rotation on the end of the nozzle 1^a. When the pin 22 is at one end of the slots 23, the ports 20 and 21 will be in registration, and when the cross pin is at the opposite ends of the slots, the ports 20 and 21 will be out of registration. The tip 19 is introduced into the shoe, with the ports 20 and 21 out of registration, and when the parts 5^a are operated to open the shoe, the tip 19 remains substantially stationary until the ports 20 and 21 are brought into registration, and then the substance in the receptacle 11^a may be forced out as and for the purpose hereinbefore described.

When the device is not in use, a cap 25 may be put on the tip 3 to cover the port 14, so that the port will not become clogged with dirt or harden material which is to be injected.

What is claimed is:—

1. A tool of the class described comprising a nozzle including a body, a tip, and a laterally extended part connecting the body and the tip and constituting means for spreading portions of an article of footwear when the tool is rotated on an axis, the nozzle having an outlet so located as to discharge within the area that is spread by the action of the laterally extended part of the nozzle.

2. A tool of the class described, comprising a nozzle including a body, a tip, and a laterally extended part connecting the body and the tip and constituting means for spreading portions of an article of footwear when the tool is rotated on an axis, the tip being rotatable on one end of the nozzle, and the tip and said end of the nozzle having ports which are brought into registration when the tip is rotated, the ports constituting an outlet discharging within the area that is spread by the action of the laterally extended part of the nozzle.

3. A tool of the class described comprising a nozzle including a body, a tip, and a laterally extended part connecting the body and the tip and constituting means for spreading portions of an article of footwear when the tool is rotated on an axis, the tip being rotatable on one end of the nozzle, said end of the nozzle and the tip having ports which are brought into registration when the tip is rotated, the ports constituting an outlet so located as to discharge within the area that is spread by the action of the laterally extended part of the nozzle, and interengaging elements on said end of the nozzle and on the tip, cooperating to hold the tip for rotation on the end of the nozzle and limiting the rotation of the tip to bring the ports into registration.

4. A tool of the class described comprising a nozzle including a body, a tip, and a laterally extended part connecting the body and the tip and constituting means for spreading portions of an article of footwear when the tool is rotated on an axis, the nozzle having an outlet so located as to discharge within the area that is spread by the action of said laterally extended part, the body and the tip being disposed in said axis, and said laterally extended part comprising loops extended in opposite directions with respect to said axis.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

FRANK E. BUCK.