

C. Buffum.

Applying an Inner Sole to a Last.
N^o 76048

Patented Mar. 31, 1868.

Fig. 1.

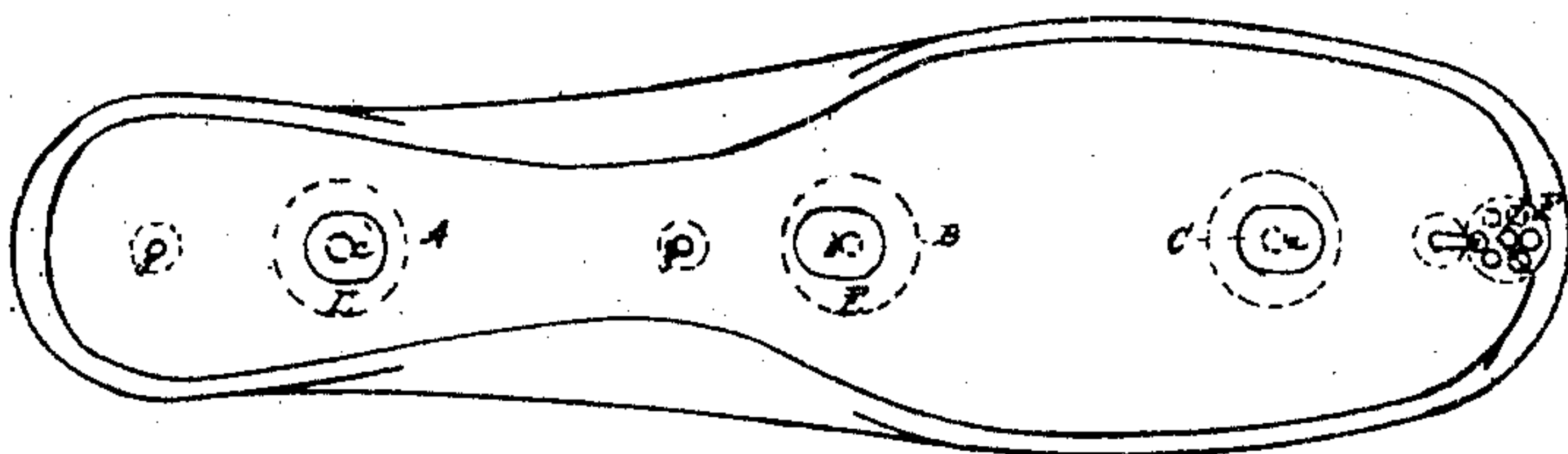
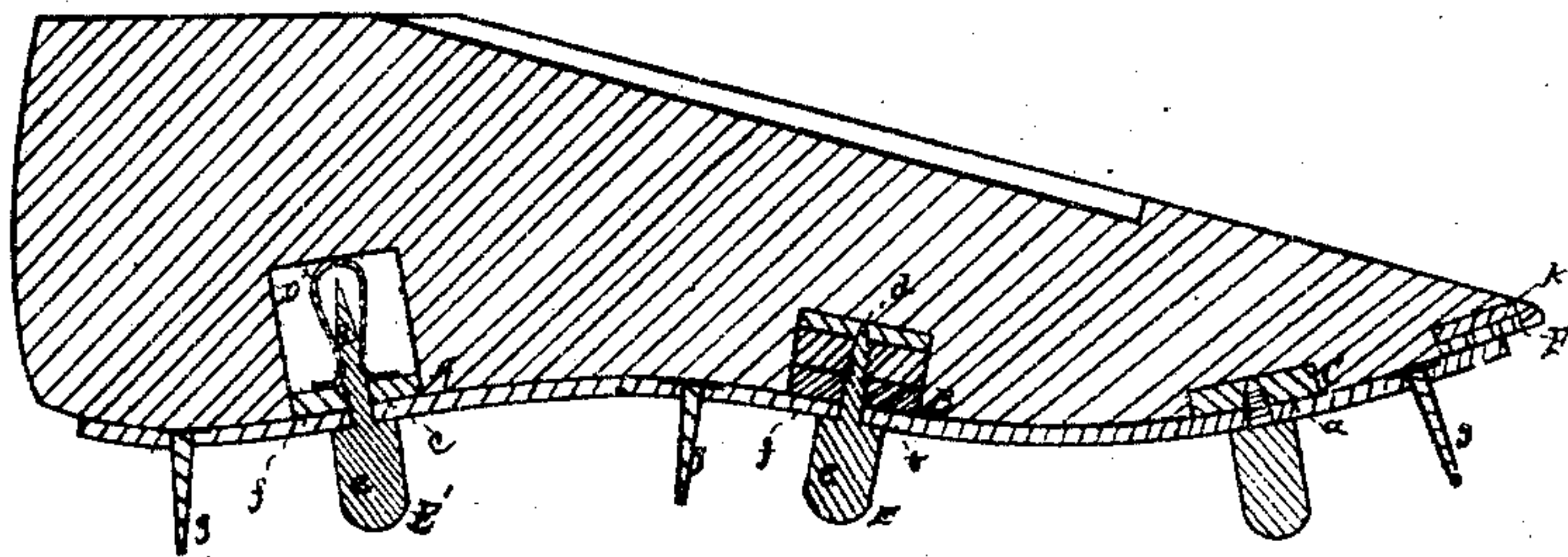


Fig. 2.



Inventor.

Witnesses.

S. R. Piper.
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by his attorney.
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United States Patent Office.

CHARLES BUFFUM, OF LYNN, MASSACHUSETTS.

Letters Patent No. 76,048, dated March 31, 1868.

IMPROVED APPLICATION OF AN INNER SOLE TO A LAST.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL PERSONS TO WHOM THESE PRESENTS MAY COME:

Be it known that I, CHARLES BUFFUM, of Lynn, in the county of Essex, and State of Massachusetts, have made a new and useful invention having reference to the Application of an Inner Sole to a Last; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is an under side view, and

Figure 2 a longitudinal section of a last having an inner sole and my invention applied to it.

The purpose of my invention is to enable a person to readily effect the centralizing of the insole with respect to the sole of the last, that is, so as to bring the periphery of the insole into parallelism with that of the sole of the last, such being designed especially for facilitating the carrying out of the invention for which Letters Patent, No. 46,299, were granted, February 7, 1865, to Joseph B. Johnson and myself.

My invention consists in the combination of sole-centralizing mechanism or devices with the last.

I am aware that preparatory to lasting an upper of a shoe, it is common to fasten the insole to the last, by means of nails or tacks driven through the sole and into the bottom of the last. This, however, requires the sole to be first carefully centralized on the last by the eye of a workman. My invention not only effects this centralization of the sole, but its necessary fixation to the last, with little or no particular care on the part of the operative.

Each of the soles, preparatory to being applied to the last, is to have three or any other suitable number of holes made through it in its medial line, running longitudinally through it, the distances of the holes apart corresponding to the distances apart of the metallic sockets of the last, so that when the sole is applied to the bottom of the last, fastening-pins inserted in the holes of the sole may also be made to enter the sockets.

These sockets are shown at *a b c*, in figs. 1 and 2, as made through metallic plates *A B C*, inserted in or fixed to the bottom of the last. I sometimes make the last with a metallic plate to cover its entire bottom, in which case the socket-holes would extend through it. Within the last, and below either plate, there may be a spring, *D* or *D'*, which may be a disk of India rubber, perforated at its centre, as shown at *o*, or it may be a jawed-spring formed of metal, as shown at *D'*. The pins to go through the sole and into the sockets and springs are shown at *E E'*, each consisting of a pointed shank, *d*, and a head, *e*, arranged as represented. Where the shank is to be grasped by the spring, it is grooved as shown at *f*, the groove going entirely around the shank. The spring, by grasping the shank at its groove, holds the pin in place in its socket with due tenacity.

Instead of the spring and groove, the pin may have a male screw cut on it to enter and screw into a corresponding female screw cut in the socket-plate, such being as shown with respect to the plate *C*, and its pin.

Prior to the application of the sole to the last, the pins *g g g* are to be inserted through it, the purpose of such pins being represented in the patent aforesaid.

I also fix on the toe part of the sole of the last a plate, *F*, furnished with a series of holes or sockets, and having a disk or plate of India rubber, *k*, arranged underneath it. This plate, with its rubber plate, is for securing the two parts of the upper to an insole after the said toe part may have been turned down upon the insole, and preparatory to the connection of the upper to the pins, and the drawing it upon the sole and last, by a lacing-thread, in manner as represented in the aforesaid patent. Such fastening of the toe part of the upper down is accomplished by a pin like the pin *E*, although having a shorter shank.

By the use of pins, sockets, and nails, as above, we can last a shoe to be made on the McKay sewing-machine, so as to leave no insole at all, or we can leave a thin sole of leather, paper, or other material, and can sew outside the insole, or through it in the ordinary way, or we can have one, two, three, or any required number of outer soles, and this with a very small margin of upper, no lasting-tacks being required, and the mode of lasting being cheaper than in any other way heretofore adopted.

The advantages to be derived from the invention are, that it will reduce the cost of shoes made on the McKay sewing-machine, by enabling the manufacturers to use a smaller upper, and to employ girls more extensively as lasters. It will also multiply the production of the McKay sewing-machine, because it perfects a process for lasting shoes, by which a shoe can be made in the machine without an inner sole, or with one of

little cost, both of which will be great gain, as the lighter the insole, the stronger and more durable will be the sewing.

The general intention of my invention or improvement is to perfect the process for lasting a shoe by thread, as described in the aforesaid patent, by still further cheapening and simplifying it, and by attaining absolute accuracy in laying on the outer sole, preparatory to sewing it to the upper. By attaching the sole to the last by the pins E E', instead of the common way, viz, by tack, we secure mathematical certainty of having the insole, the outer sole, the upper, and the last, always in right positions, and in due relation to each other, whereas, heretofore, such has been dependent on the skill and care of the laster. Another very great advantage is, that we do away entirely with the use of lasting-tacks, the employment of which is a trouble and an annoyance to the public, now complained of more than ever before, the disuse of which has been earnestly sought for, thus far in vain. It also, in connection with the patent alluded to above, furnishes the means of making, by the McKay machine, the finest of ladies' kid single-soled slippers, or the cheapest single-soled shoe now made by hand.

I claim, in combination with a last, devices substantially as described, or their equivalents, for centralizing and holding a sole to the last, the same consisting of the sockets and their springs, and the pins therefor.

I also claim the arrangement of the holding-socket and its spring, at the toe of the bottom of a last, so as to enable a person, by means of a pin, as described, to secure the upper of a shoe to an insole by passing the pin through the upper and into the socket and spring, as set forth.

I also claim the mechanism or combination for holding the sole to the last, such consisting of the grooved and headed pin, the socketed plate, and the plate of rubber or the jawed spring, the whole being substantially as set forth.

CHARLES BUFFUM.

Witnesses:

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