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S. A. EDDINS

SHOE AND PROCESS OF MAKING THE SAME

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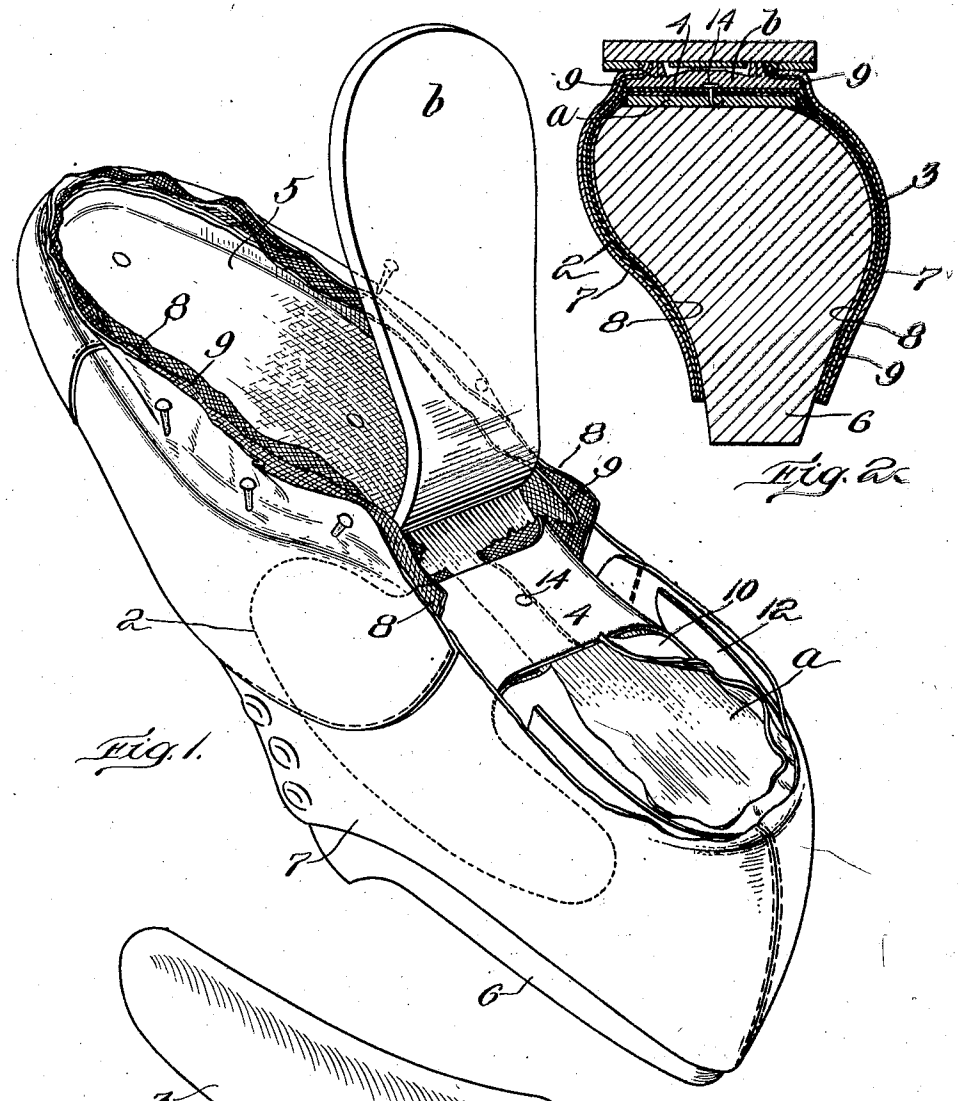



Fig. 1.




Fig. 2.

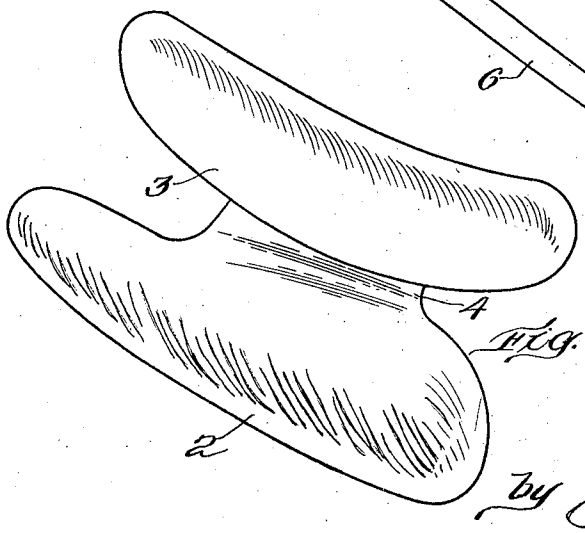



Fig. 3.

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# UNITED STATES PATENT OFFICE.

SEXTUS A. EDDINS, OF QUINCY, MASSACHUSETTS, ASSIGNOR TO CORDO-HYDE CO., A COPARTNERSHIP CONSISTING OF FRANCIS HANNIGAN, OF BRAINTREE, MASSACHUSETTS, AND SEXTUS A. EDDINS, OF QUINCY, MASSACHUSETTS.

## SHOE AND PROCESS OF MAKING THE SAME.

Application filed March 24, 1924. Serial No. 701,285.

This invention relates to shoes and to processes of manufacturing shoes.

In a copending application filed of even date herewith, Serial No. 701,284, I have described and claimed a novel device for supporting the upper of a shoe at opposite sides thereof for the purpose of reducing the tendency of the upper to sag or become misshapen, and to enable it to retain its smooth fit and stylish appearance for a much longer period than otherwise would be possible. This device is intended especially for use in women's low cut shoes such as oxfords, pumps, strap pumps, and similar styles. In all of these shoes the portions of the upper adjacent to the top of the shoe tend to stretch and sag after a relatively short period of wear, thus giving the shoe an unattractive appearance. The device above mentioned is designed to support these parts of the upper and it tends to preserve the neat and dressy appearance which the shoe originally presents.

The present invention deals with the problem of building this supporting device into the shoe, more particularly a welt shoe, and it aims to improve both the shoe constructions and also the processes of manufacturing shoes with a view to incorporating such a support in a shoe in an economical and entirely satisfactory manner.

The nature of the invention will be readily understood from the following description when read in connection wtih the accompanying drawings, and the novel features will be particularly pointed out in the appended claims.

Referring now to the drawings,

Figure 1 is a perspective view of a shoe in the process of manufacture showing certain of the steps in the method devised by this invention;

Fig. 2 is a transverse, cross-sectional view of the shoe shown in Fig. 1; and

Fig. 3 is a perspective view of the shoe supporting device.

For a complete description of the construction and functions of the supporting device shown in the drawings, reference should be made to my copending application above designated. For the purposes of the present invention it may be stated that this device is made of some thin, stiff, resilient sheet material, such as sheet celluloid having a thickness of, say, twenty thousandths of an inch, or thereabouts. The device comprises two wings 2 and 3 connected by a bridge 4, the wings being of such shape and extent as to reinforce and support the upper of the shoe throughout the greater part of the region between the shank and forepart at opposite sides of the shoe. The bridge connects the lower edges of the wings and preferably is formed integral with them. Preferably, also, the bridge is shouldered or creased at its opposite sides so as to fit snugly over the corresponding edges of the insole of the shoe.

In manufacturing a shoe according to the process at present preferred, an insole 5 is first prepared by splitting it from the heel end forward through the shank, so as to provide an inner or upper section *a* and an outer or lower section *b*. This insole is then tacked on the bottom of a last 6, and the other parts of the shoe are assembled on the last in the usual manner. These parts will include an upper 7 and a lining therefor. In the shoe shown the lining is made double through the forepart and includes cloth pieces 8 and 9, and the innermost of these cloth sections is stitched to a leather lining 10 for the heel portion of the shoe. The usual counter stiffener 12 is located between the upper and the lining at the heel end of the shoe.

After these parts have been assembled the forepart of the shoe is lasted, as shown in Fig. 1. Next the lower section *b* of the insole is turned up and the lining in the shank portion of the shoe is pulled over the upper section *a* of the insole and secured in substantially its final position. This securing operation may be performed simply by pasting or cementing the lining to the insole, or the opposite edges of the lining may be sewed or "whipped" together. Next the wings 2 and 3 of the supporting device are slipped into the shoe between the lining and the upper and the bridge 4 is pressed down on the outer surface of the insole section *a*, or, more correctly, on the surface of the lining 8 which has been pulled over and secured to the portion *a* of the insole. The bridge is

secured in this position by a tack 14. Preferably the anvil plate on the last is extended forward into the shank so that the point of the tack 14 will be clinched against this plate when the tack is driven through the insole.

The lining both in front of and behind the bridge is now cut far enough to permit the outer section *b* of the insole to be turned down into its normal position while leaving the lining projecting upwardly around the edge of the insole section *b*. If desired, this cutting operation may be performed before the lining is cemented to the insole, as above described, or before the assembling operation. After the outer section *b* of the insole has been turned down it should be tacked or cemented to the heel seat portion of the inner section *a*, and the lasting operation may then be completed. The lasting of the heel seat will result in securing the two sections of the insole firmly together. The shoe may then be welted and the other making operations performed in accordance with the usual practice.

As soon as the outer section of the insole has been turned back into its final position, the fact that the insole is split, or that there is a supporting or reinforcing device in the shoe, need be no longer considered, and the remaining manufacturing operations on the shoe can be carried on just as though no supporting device were used in the shoe. The insole need only be split far enough forward to allow the placing of the supporting device in the proper position.

The wings 2 and 3 of the device are molded to the shape of the last on which the shoe is made, so that the outline of these wings will not be seen in the finished shoe. The wings will, however, perform the function of supporting the upper in its original position and thus preserve the smooth fit and stylish appearance of the shoe much longer than otherwise would be the case.

It will be evident from the foregoing description that the present invention provides a shoe construction and a process of manufacturing shoes which permits the incorporation of a supporting device in the shoe at only a trifling increase in the expense of manufacture and with a minimum of change in the ordinary commercial manufacturing processes. No change in the machinery ordinarily employed in the manufacturing processes is required by this invention.

Having thus described my invention, what I desire to claim as new is:

1. A shoe including an insole, an upper secured to said insole, a lining for said upper, and a support for said upper comprising two wings of thin, stiff, resilient sheet material fitting between the lining and upper of the shoe and supporting the upper in the region between the heel and forepart at opposite sides of the shoe, said support including a bridge connecting the lower edges of said wings with the bridge lying under the portion of the insole on which the foot bears in the shank portion of the shoe.

2. A shoe including an insole, an upper secured to said insole, a lining for said upper, and a support for the upper comprising two wings of thin, stiff, resilient sheet material, said wings fitting between the lining and upper of the shoe in the region between the heel and forepart at opposite sides of the shoe and tending to hold the upper in its original shape, and a bridge connecting the lower edges of said wings and extending under the portion of the insole on which the foot bears in the shank of the shoe, said bridge being shouldered at its opposite sides to fit snugly over the corresponding edges of the insole.

3. A shoe including an insole, an upper secured to said insole, a lining for said upper, and a support for the upper of said shoe, said support comprising two wings of thin, stiff, resilient sheet material fitting between the lining and upper of the shoe at opposite sides thereof and tending to hold the upper in its original shape, each of said wings extending from a point in the wide portion of the heel forward to a point near the junction of the shank and forepart, and extending from adjacent to the edge of the insole up to a point opposite the upper part of the shoe, and a bridge connecting the lower edges of said wings and integral with them, said bridge extending under the part of the insole on which the foot bears in the shank of the shoe, each of said wings extending forward for a substantial distance beyond their point of connection with the bridge.

4. In a shoe, the combination of an insole, an upper secured to said insole, a lining for said upper, the shank portion of said insole being divided into upper and lower sections, and a support for the upper of the shoe comprising two wings located between the lining and upper at opposite sides of the shoe, and a bridge connecting the lower edges of said wings and located between the sections of said insole.

5. In a shoe, the combination of an insole, an upper secured to said insole, a lining for said upper, the shank portion of said insole being divided into upper and lower sections, and a support for the upper of the shoe comprising two wings of thin, stiff, resilient, sheet material fitting between the lining and upper of the shoe and supporting the upper in the region between the heel and forepart at opposite sides of the shoe, said support including a bridge connecting the lower edges of said wings and holding them in their operative positions, said bridge being located between the sections of said insole.

6. In a shoe, the combination of an insole, an upper secured to said insole, a lining for said upper, the shank portion of said insole being divided into upper and lower sections, the lining in the shank portion of the shoe being secured between said upper and lower sections of the insole, and a support for the upper of the shoe comprising two wings of thin, stiff, resilient sheet material fitting between the lining and upper of the shoe and supporting the upper in the region between the heel and forepart at opposite sides of the shoe, said support including a bridge connecting the lower edges of said wings and located between the sections of said insole.

7. That improvement in the process of manufacturing shoes, which consists in providing an insole having the shank portion thereof divided into upper and lower sections; assembling the parts of a shoe, including said insole and the upper and lining, on a last; providing a support for the upper of a shoe having wings and a bridge connecting said wings; inserting the wings of said support between said upper and lining at opposite sides of the last with the bridge overlying the upper section of said insole; fastening the lower section of said insole in place; and then completing the manufacture of the shoe in any suitable manner.

8. That improvement in the process of manufacturing shoes, which consists in providing an insole which is split from its heel end substantially through the shank portion thereof to provide upper and lower insole sections; assembling said insole with the upper and lining of a shoe on a last; providing an upper supporting device including two wings and a bridge connecting them; turning up the lower section of said insole; inserting the wings of said supporting device between said upper and lining at opposite sides of the last with said bridge lying on the upper section of the insole; turning the lower section of said insole down into its normal position and fastening it in said position; and then completing the manufacture of the shoe in any suitable manner.

9. That improvement in the process of manufacturing shoes, which consists in providing an insole which is split from its heel end substantially through the shank portion thereof to provide upper and lower insole sections; assembling said insole with the upper and linging of a shoe on a last; providing an upper supporting device including two wings and a bridge connecting them; turning up the lower section of said insole; securing the lining on the shank portion of the inner section of the insole in substantially its final position; inserting the wings of said supporting device between said upper and lining at opposite sides of the last with the bridge lying across the upper section of said insole; securing said bridge in said position, turning the lower section of the insole down into its normal position and fastening it there; and then completing the manufacture of the shoe in any suitable manner.

SEXTUS A. EDDINS.