

Oct. 28, 1947.

L. J. BAZZONI

2,429,591

SHOEMAKING

Original Filed March 20, 1945 2 Sheets-Sheet 1

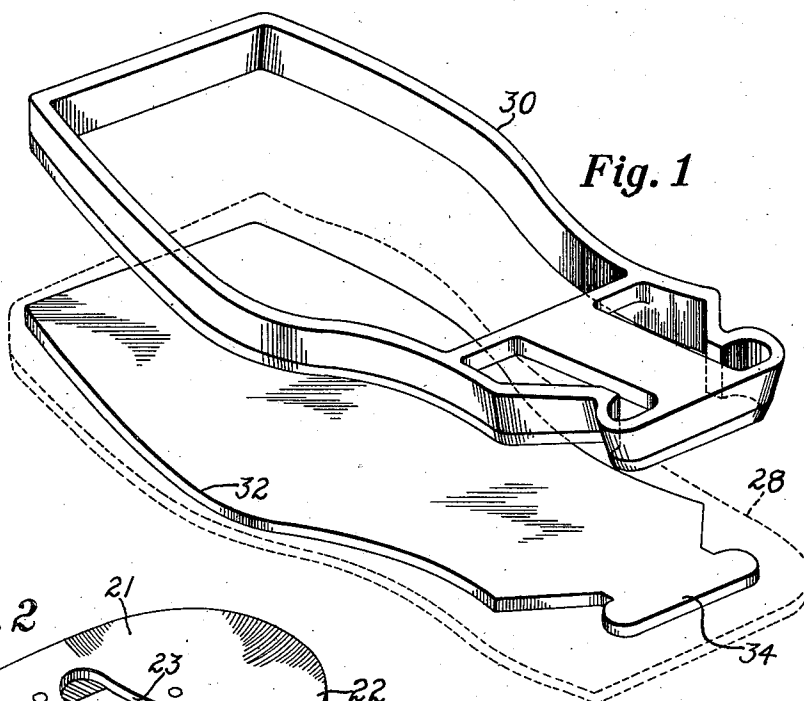


Fig. 1

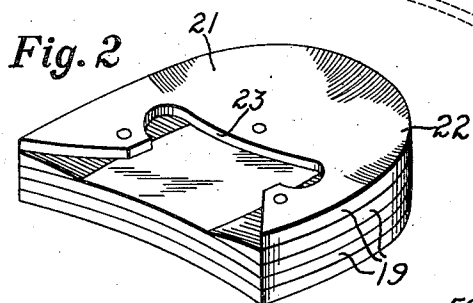


Fig. 2

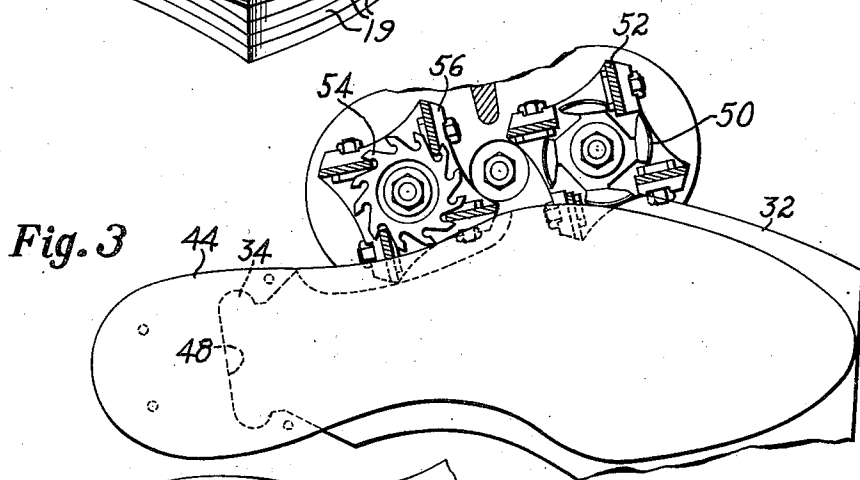


Fig. 3

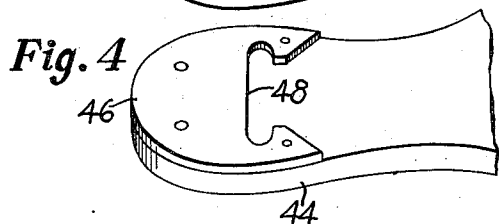


Fig. 4

Inventor

Lewis J. Bazzoni

By His Attorney

Wm. J. Carey

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L. J. BAZZONI

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Fig 5

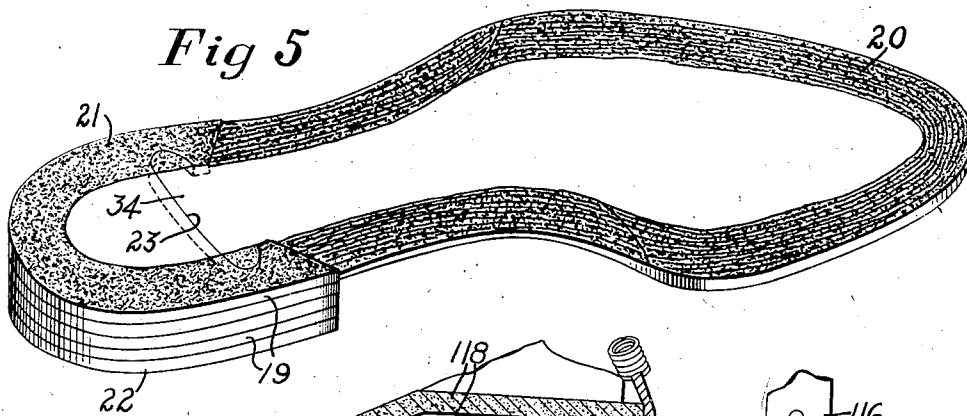


Fig. 6

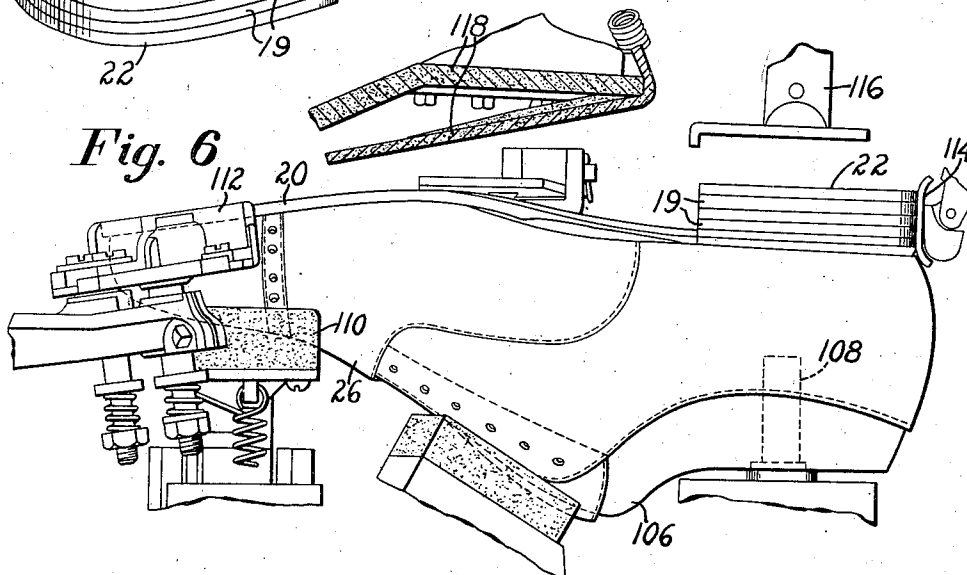
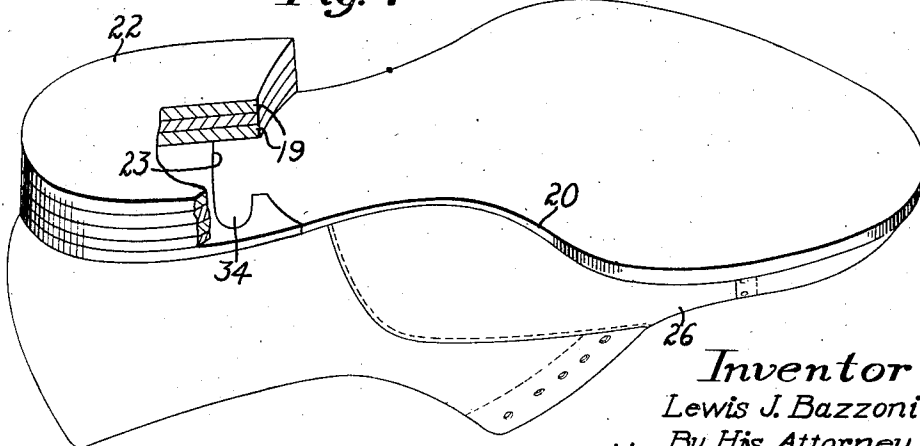


Fig. 7



Inventor
Lewis J. Bazzoni
By His Attorney

Wm. J. Bazzoni

UNITED STATES PATENT OFFICE

2,429,591

SHOEMAKING

Lewis J. Bazzoni, Swampscott, Mass., assignor to
United Shoe Machinery Corporation, Flemington,
N. J., a corporation of New Jersey

Original application March 20, 1945, Serial No.
583,734. Divided and this application July 13,
1946, Serial No. 683,484

2 Claims. (Cl. 12-146)

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This invention relates to improvements in shoe-making, and more particularly to the manufacture of prefinished, unattached outsoles.

As explained in application for United States Letters Patent Serial No. 583,734, filed March 20, 1945, in my name of which the present application is a division and which application has matured as Patent No. 2,417,042 of March 11, 1947, in the manufacture of men's shoes it is customary to attach to the bottom of a shoe an outsole which extends the full length of the shoe, said outsole being rounded and finished to the proper size and shape, in accordance with the size and shape of the shoe, after its attachment to the shoe. The best grain leather is usually used in the manufacture of outsoles. Such outsoles are expensive, especially when they are "full size" and accordingly are somewhat longer than the shoes to which they are to be attached. Moreover, to finish the outsole after its attachment to the shoe consumes considerable time and requires the services of skilled operators and is thus much more expensive than the finishing of the outsole in the stock fitting room before attachment to the shoe.

Objects of the present invention are to reduce the cost of men's shoes and to conserve costly and scarce leather. With the above objects in view a short outsole and a built-up heel for a man's shoe are prefinished separately, the rear end of the outsole having a heel-seat tab which is complementary to and fits in interlocking relation with a recess formed in the breast and attaching face of the base lift of the heel, the prefinished outsole and heel then being assembled in interlocking relation and applied as a unit to the shoe.

In order to insure that the prefinished outsole shall fit the bottom of the shoe when its heel-seat tab is interfitted with the prefinished heel positioned upon the shoe, such outsole in accordance with a feature of the present invention, is produced by providing a block outsole having a heel-seat tab which is substantially complementary to a recess in a heel with which it is arranged to fit interlockingly, causing the heel-seat tab to register in interlocking relation in a recess which is formed in an outsole rounding pattern and is substantially identical with the recess in the heel, and trimming and finishing the outsole thus positioned to the shape of said pattern.

By providing short outsoles, the cost of the shoe is materially reduced as compared with the cost of a shoe having a full length outsole. Moreover, the limited supply of expensive grain leather may be used for making a greater number of

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shoes than can be made when full size outsoles are used. By practicing applicant's method hereinafter described in detail, short outsoles may be quickly and effectively prefinished and assembled in interlocking relation with built-up heels such as above referred to ready to be applied to the shoe. Such method may be practiced by unskilled help with much greater production than when the corresponding operations are performed by skilled help after attachment of the outsole to the shoe, with the result that considerable saving in the making of the shoe is effected.

The invention will now be described with reference to the accompanying drawings, in which
Fig. 1 shows in perspective a die and a block outsole which has been cut from a piece of leather by the die and is provided with a heel-seat tab;

Fig. 2 shows a built up leather heel having in the forward end of its attaching face a reentrant recess which is substantially complementary to the tab formed on the block outsole;

Fig. 3 shows the block outsole illustrated in Fig. 1 clamped to an outsole rounding pattern and being operated upon by a machine disclosed in United States Letters Patent No. 2,078,981, granted May 4, 1937, on an application filed in the name of Ernest W. Stacey;

Fig. 4 is a perspective view showing the rear portion of the outsole receiving side of the pattern illustrated in Fig. 3;

Fig. 5 is a perspective view showing the prefinished heel of Fig. 2 and the outsole, after it has been operated upon by the machine disclosed in Patent No. 2,078,981, assembled in interlocking relation ready for attachment to a shoe;

Fig. 6 shows the assembled heel and outsole of Fig. 5 in the process of being attached to a shoe bottom by the use of a machine similar to the machine disclosed in United States Letters Patent No. 2,384,003, granted September 4, 1945, on an application filed in my name; and

Fig. 7 shows in perspective the shoe after the heel and the outsole have been attached to it, portions of the heel being broken away to show the interlocking of the heel and the outsole.

The invention is illustrated with reference to forming separately a prefinished outsole 20 (Figs. 5, 6 and 7) and a prefinished heel 22 (Fig. 2) and applying the outsole and the heel assembled in interlocking relation to a shoe 26.

The heel 22 comprises a plurality of lifts 19 and has at its forward end of its attaching face 21 a reentrant recess 23 in which fits a tab 34 of the prefinished outsole 20, the construction and arrangement being such that when the assem-

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bled heel and outsole are in interfitting relation such assembly will fit the bottom of the shoe 26 and can be cemented or otherwise attached thereto without any further trimming or other finishing operations.

The method of making the heel 22 is fully disclosed and claimed in my parent application Serial No. 583,734 and accordingly need not be disclosed in detail herein.

In order to provide the prefinished outsole 20, there is formed from a piece of grain leather 28 (Fig. 1) by the use of a die 30 a short block outsole 32 (Figs. 1 and 3) having the heel-seat tab 34 which may be described as being of T-shaped outline and which in the finished shoe, as above explained, fits in interlocking relation in the reentrant recess 23 formed in the breast end of the attaching face 21 of the prefinished heel.

The outsole 20 is finished to a predetermined shape, in accordance with the size and style of the shoe in which it is to be incorporated, by utilizing the heel-seat tab 34 to position the block outsole 32 on an outsole rounding pattern 44 (Figs. 3 and 4) such as is used in the machine which is disclosed in said Patent No. 2,078,981 and in which the block outsole is shank reduced, trimmed and finished to an outline similar to that of the pattern and otherwise prepared for subsequent attachment to the bottom of the shoe by adhesive. The sole rounding pattern 44 comprises a template plate or jig 46 (Fig. 4) in which is formed a reentrant recess 48 substantially identical in size and shape with the recess 23 formed in the heel, the block outsole 32 being positioned lengthwise and widthwise upon the pattern 44 by the registering of its heel-seat 34 in the recess 48.

The machine disclosed in said Patent No. 2,078,981 comprises a rotary cutter 50 (Fig. 3) for trimming the block outsole 32 to a rough outline, a shank reducing and roughing cutter 52, a cutter 54 for trimming the block outsole to a smooth outline, and a cutter 56 for operating upon the margin of the forepart of the shoe to form a combined beveling and roughing cut. Since the construction and operation of the machine is fully disclosed in said Patent No. 2,078,981, it need only be stated that the outsole positioned upon and secured to the pattern 44 is moved past the various cutters which follow the contour of the pattern as the block outsole 32 is moved past said cutters, the outsole being trimmed to a predetermined outline and the shank and forepart of the outsole being roughened and reduced by the machine, as illustrated in Fig. 5.

The assembled prefinished heel 22 and outsole 20 may be effectively attached to the bottom of

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the shoe 26 by the use of a machine such as disclosed in said Letters Patent No. 2,384,003, said machine being slightly modified to accommodate men's shoes. A last 106 (Fig. 6) upon which the

shoe 26 is mounted is placed upon a last spindle 108, the toe of the shoe resting upon a pad 110 and being centralized by gages 112. After cement has been applied to the shoe bottom and to roughened portions of the upper surfaces of the assembled heel and outsole, said heel and outsole are applied as a unit to the shoe, the heel being positioned upon the heel-seat portion of the shoe by the assistance of a gage 114 and the outsole being positioned upon the shoe by the assistance of the toe gages 112. In attaching the assembled outsole 20 and heel 22 to the shoe, pressure is first applied against the heel 22 and the forepart of the outsole by a clamp 116 and a pad 118, respectively, the pad thereafter being moved to apply pressure against the shank portion of the outsole, such further movement of the pad serving when necessary to conform the shank portion of the outsole to the shank portion of the shoe bottom. The shoe with the interlocking outsole 20 and heel 22 attached to it will appear as illustrated in Fig. 7, the heel and outsole being constructed and arranged to stand up under usage as well as outsoles and heels made in accordance with the conventional practice referred to above. If desirable, after the heel has been cemented to the shoe it may be further secured to the shoe by inside or outside nailing.

Having described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. That improvement in methods of making outsoles which comprises providing a block outsole having a heel-seat tab which is substantially complementary to a recess in a heel with which it is arranged to fit interlockingly, causing the heel seat tab to register in interlocking relation in a recess which is formed in an outsole rounding pattern and is substantially identical with the recess in the heel, and trimming and finishing the outsole thus positioned to the shape of said pattern.

2. That improvement in methods of shoemaking which comprises forming from leather or like material a short block outsole having a heel-seat tab, positioning said block outsole upon a pattern by causing the heel-seat tab to register in a jig of said pattern, and trimming and finishing the block outsole to a shape similar to that of said pattern.

LEWIS J. BAZZONI.