

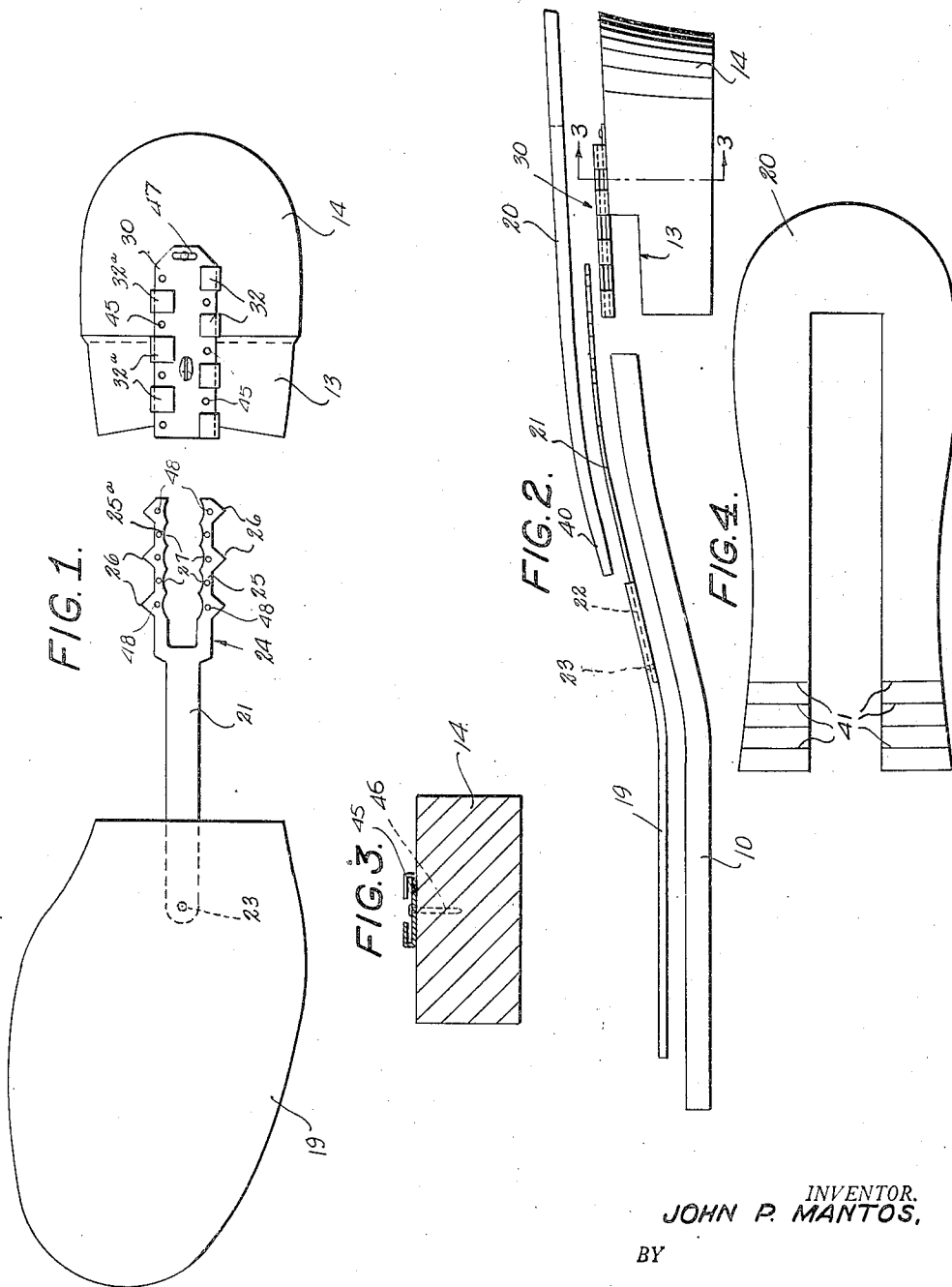
Feb. 14, 1950

J. P. MANTOS
SHOE CONSTRUCTION

2,497,175

Filed March 2, 1948

2 Sheets-Sheet 1



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FIG. 5.

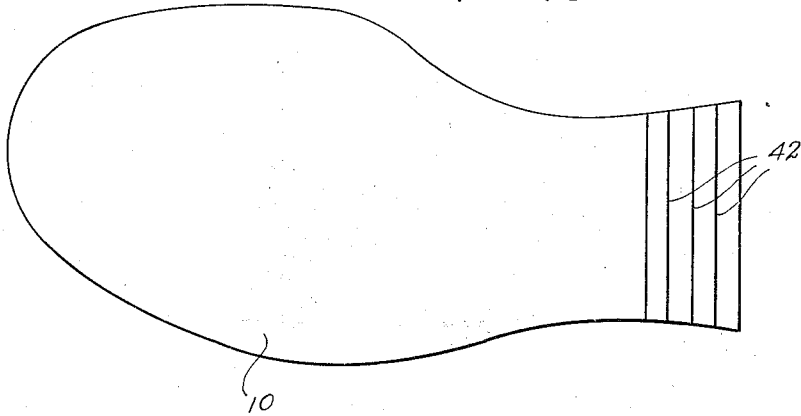


FIG. 6.

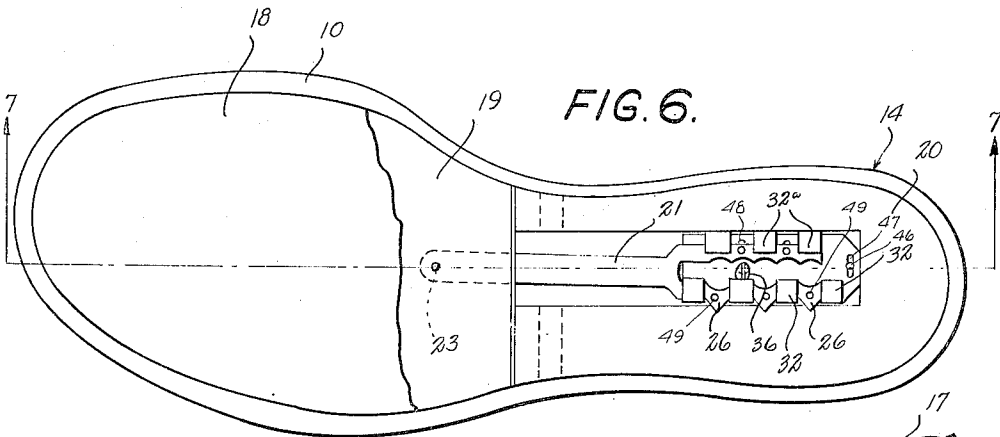


FIG. 7.

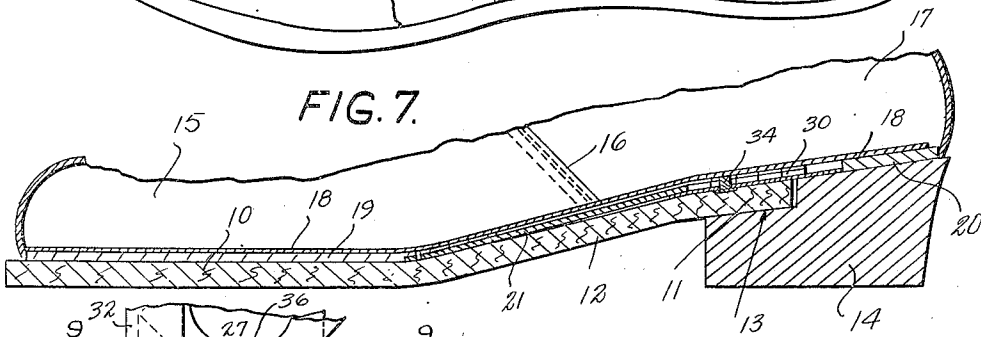


FIG. 8.

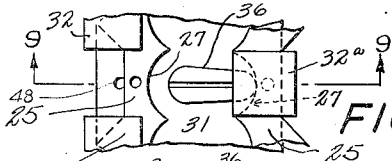
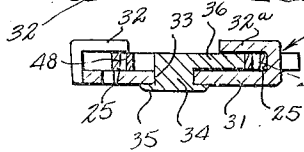


FIG. 9.



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SHOE CONSTRUCTION

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2 Claims. (Cl. 36—2.5)

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This invention relates to shoe constructions.

An object of the invention is the provision of shoe formed of the two main sections which are adapted to be joined together by an especially formed means so that the sections may be fitted to a foot and adjusted for the proper size before the shoe has been assembled completely, the construction being such that heels of different widths may be assembled with the fronts of shoes of varying widths to accommodate the feet of an individual.

A further object of the invention is the provision of a shoe construction in which a plurality of sections of varying widths of master sizes are delivered to dealers so that the sections or parts may be assembled into a completed shoe after the sections have been fitted to the feet of the buyer, the sections including specially designed heels, outer soles and inner soles with cooperating connecting shanks and sheaths for the heels and inner soles, indicators being applied to certain of the sections for designating master sizes with the indicators cooperating to disclose variations in said sizes.

This invention will be best understood from a consideration of the following detailed description, in view of the accompanying drawings forming part of the specification, nevertheless, it is to be understood that the invention is not confined to the disclosure, being susceptible of such changes and modifications which shall define no material departure from the salient features of the invention as expressed in the appended claims.

In the drawings:

Figure 1 is a bottom plan view of an inner sole and heel shown in spaced relation with my connecting elements for the heel and sole in inoperative positions,

Figure 2 is a side view of an inner and outer sole, a heel, rear inner sole and connecting means, all of the elements being shown in detached relation,

Figure 3 is a transverse vertical section taken along the line 3—3 of Figure 2,

Figure 4 is a plan view of the rear inner sole,

Figure 5 is a plan view of the outer sole showing indicators for designating various shoe sizes,

Figure 6 is a top plan view of the soles and heel connected together,

Figure 7 is a longitudinal vertical section taken along the line 7—7 of Figure 6,

Figure 8 is an enlarged fragmentary plan view of one end of a shank attached in a sheath, and

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Figure 9 is an enlarged fragmentary vertical section taken along the line 9—9 of Figure 8.

Referring more particularly to the drawings 10 designates an outer sole which has the inner end 11 of the instep portion 12 received by a cut-out portion 13 of a heel 14. The front portion 15 of the shoe is joined by a seam 16 to the heel portion 17 of the shoe (Figure 7). A thin finishing strip 18 is applied on the top of a forward inner sole 19 and a rear inner sole 20.

A narrow metal shank 21 has one end received by a groove 22 (Figure 2) in the under face of the inner sole 19 near the heel-adjacent end of the latter by a rivet or other suitable fastener 23 and extends rearwardly of said rearward end of the inner sole. The rear free end of this shank is in the form of a fork 24 (Figure 1) and the tines 25 and 25a of said fork are provided with spaced-apart, pointed lugs or serrations 26 along the outer edges. The inner opposite edges of the tines have contiguous, rounded indentations 27 therein.

A sheath or connector 30 is mounted on the upper face of the heel with a portion extending over the cut-out portion 13 of the heel. Said connector is formed of a flat strip or metal plate 31 having spaced intumed tongues 32 along the side edges of the strip and disposed in parallel relation with the body of the strip. These tongues are relatively staggered at opposite sides of the sheath 30 so that each tongue on one side of the sheath is opposite a space between two tongues on the opposite side except for the end tongues, and the tongues are spaced apart a distance to receive the serrations 26 therebetween. A passage 33 is formed in the strip to receive a stud 34 which has a flange 35 at the under face of the strip and a radial finger 36 formed on the stud and overlies the upper face of the strip, this finger being movable over the upper face of the strip (Figures 8 and 9).

It will be noted from Figure 4 that the rear inner sole 20 is U-shaped from straddling the connector 30 and the enclosed fork 24. The free ends of the arms of the U-shaped member are sheared off at 40 and provided with four parallel lines or indicators 41 which cooperate with a similar number of lines or indicators 42 on the outer sole 10 for a purpose which will be explained presently.

The sections or parts are manufactured in all widths of master sizes only, thereby eliminating the intermediate sizes. The master sizes selected for women's shoes will be approximately from 2 to 12, inclusive, in the even numbers while the

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sizes of the men's shoes will be from 5 to 15, inclusive, in the odd numbers. The retail dealers will receive the shoes in sections from the manufacturer and these sections are not assembled until the correct measurements have been made by the salesmen. The shoes are then assembled by workmen in the shop of the dealer.

This method not only provides the customer with a pair of shoes that have been properly fitted to feet while taking care of the differences between the pair of feet of said customer, but will reduce the space required to store great numbers of pairs of shoes at the dealers while eliminating the necessity of manufacturing a large number of sizes and reducing the number of patterns and dies for the manufacturer.

Before describing the method of assembling the various parts into a finished product it is to be borne in mind that the markings or lines 41 on the rear inner sole 20 and the lines 42 on the outer sole 10 are spaced one-sixth of an inch apart and designate portions of the soles which must be cut-off, when necessary, to give the proper size to the shoe. For example, if a standard size of 8A is selected, the portions of the soles 10 and 20 may be cut-off at the first line of each sole for reducing the size to 7½B. By cutting off portions at the second line the size is reduced to 7C while removing portions at the third or fourth lines reduces the sizes respectively to 6½D or 6E. In other words, each shoe before it is assembled may be converted into any one of four sizes in length with various heel width and front width combinations.

The U-shaped-member or fork 24 combines with the connector 30 for providing half sizes in the following manner. During the assembling of the various elements of the shoe, the fork is inserted into the connector 30 with the tines 25 riding on the body 31 of the connector after said connector has been nailed at 46 (Figure 3) to the upper face of the heel 14 in the proper position. The triangularly-shaped lugs or serrations 26 along the edges of the tines 25 and 25a are adapted to be received between either the in-turned tongues 32 or 32a on the adjacent edge of the strip or plate 31 of the connector. It will be noted from Figure 6, that the tongues 32 on one edge of the strip are disposed in alternation with the tongues 32a at the other edge of the strip so that the tongues 32a will cover the lugs 26 on the other tine 25a when the finger 36 on the stud 34 (Figure 6) has been turned to the left to move the fork sideways relative to the sheath. On the other hand, when said finger is turned to the right (Figures 8 and 9) the pointed lugs or teeth 26 on the tine 25a will pass between the tongues 32a for shifting the fork 24 farther into the sheath to reduce the size of the shoe.

The combined elements of the connector 30 and the fork 24 are particularly helpful in varying the master sizes enumerated above. For example, if the master size is 8A and the free end of the finger 36 on the stud 34 is locked with one of the corrugations 27 of the tine or prong 25 (Figure 6) the whole size 8A or 7C would be retained. If on the other hand, the finger is turned to a position which is diametrically opposite that shown in Figure 6, the finger 36 will lock with a corrugation on prong 25a (Figure 8) and produce the half size, as 7½B or 6½D. A staple or nail is driven through a prong and the connector for fixing the shank and connector against movement. It will be noted that when the finger is shifted from one prong 25 to the other prong

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25a, the pointed lugs 26 on the prong 25a will be received between a pair of the tongues 32a which are displaced outwardly towards the outer end of the connector 30 so that the prongs are shifted outwardly one-sixth of an inch, thereby shortening the distance between the inner end of the inner sole and the inner end of the heel 14. The widths of the flanges 24 and 24a and widths of the spaces between said flanges are all one-sixth of an inch. The widths of the corrugations are also one-sixth of an inch.

In order to expedite the work of the dealers, the uppers 15 are attached in the usual manner to the outer soles 10 and inner soles 19 by the manufacturer to form a complete unit. In the same manner, the upper 17 is attached to the heel 14 in a well-known manner to form the second unit. After the proper fitting has been determined the dealer will connect the two units by the stitching 16.

The rear end of the connector body 31 is provided with an elongated transverse slot 47 which received the nail 46 for securing the connector to the heel 14. This body is also provided with a plurality of openings 45 along the side edges thereof adapted to be aligned with openings 48 formed in the tines 25 and 25a, so that nails 49 may be driven through certain of the aligned openings for securing the tines to the body 31 and also to the heel 14 (Figure 6). The openings 45 in the body of the connector and the openings 48 in the tines are spaced one-sixth of an inch apart.

What I claim:

1. A shoe construction comprising an outer sole, an inner sole superimposed upon said outer sole and secured thereto, a heel having a recess at its breast receiving the rear-end portion of said outer sole, a shank secured at one end to said inner sole adjacent the rearward end of the latter and extending rearwardly of said outer sole, said shank being bifurcated near its rearward end to provide a pair of spaced-apart prongs, and each of said prongs having a series of spaced-apart, outwardly-projecting serrations along its outer edge and a series of contiguous indentations along its inner edge, a sheath secured to the upper face of said heel and slidably receiving said prongs, a radial finger pivoted on said sheath in position to lie between said prongs, said finger being engageable in any selected one of said indentations to move said prongs laterally of said sheath at the corresponding longitudinal position of said prongs relative to said sheath, and locking means on said sheath engageable with the serrations on the prong having the indentation with which said finger is engaged to lock said prongs against longitudinal movement relative to said sheath.

2. A shoe construction comprising an outer sole, an inner sole superimposed upon said outer sole and secured thereto, a heel having a recess at its breast receiving the rear-end portion of said outer sole, a shank secured at one end to said inner sole adjacent the rearward end of the latter and extending rearwardly of said outer sole, said shank being bifurcated near its rearward end to provide a pair of spaced-apart prongs, each of said prongs having a series of spaced-apart, outwardly-projecting serrations along its outer edge and a series of contiguous indentations along its inner edge, a sheath secured to the upper face of said heel slidably receiving said prongs, a radial finger pivoted on said sheath in position to lie between said prongs, said finger being engageable in any selected one

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of said indentations to move said prongs laterally of said sheath at the corresponding longitudinal position of said prongs relative to said sheath, and locking means on said sheath engageable with the serrations on said prongs to lock said prongs against longitudinal movement relative to said sheath upon relative lateral movement of said prongs and said sheath, said locking means comprising tongues along each edge of said sheath spaced apart to receive said serrations therebetween, the tongues along one edge of said sheath being staggered relative to the tongues along the opposite edge so that said prongs have a different longitudinal position relative to said sheath when said serrations are engaged with the tongues at one side of said sheath than when the serrations are engaged with the tongues at the opposite side of the sheath.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,009,684	Affronte	July 30, 1935
2,112,052	Smith	Mar. 22, 1938

FOREIGN PATENTS

Number	Country	Date
174,665	Germany	Sept. 13, 1906
465,968	Great Britain	May 20, 1937
689,263	France	May 26, 1930