

Sept. 20, 1960

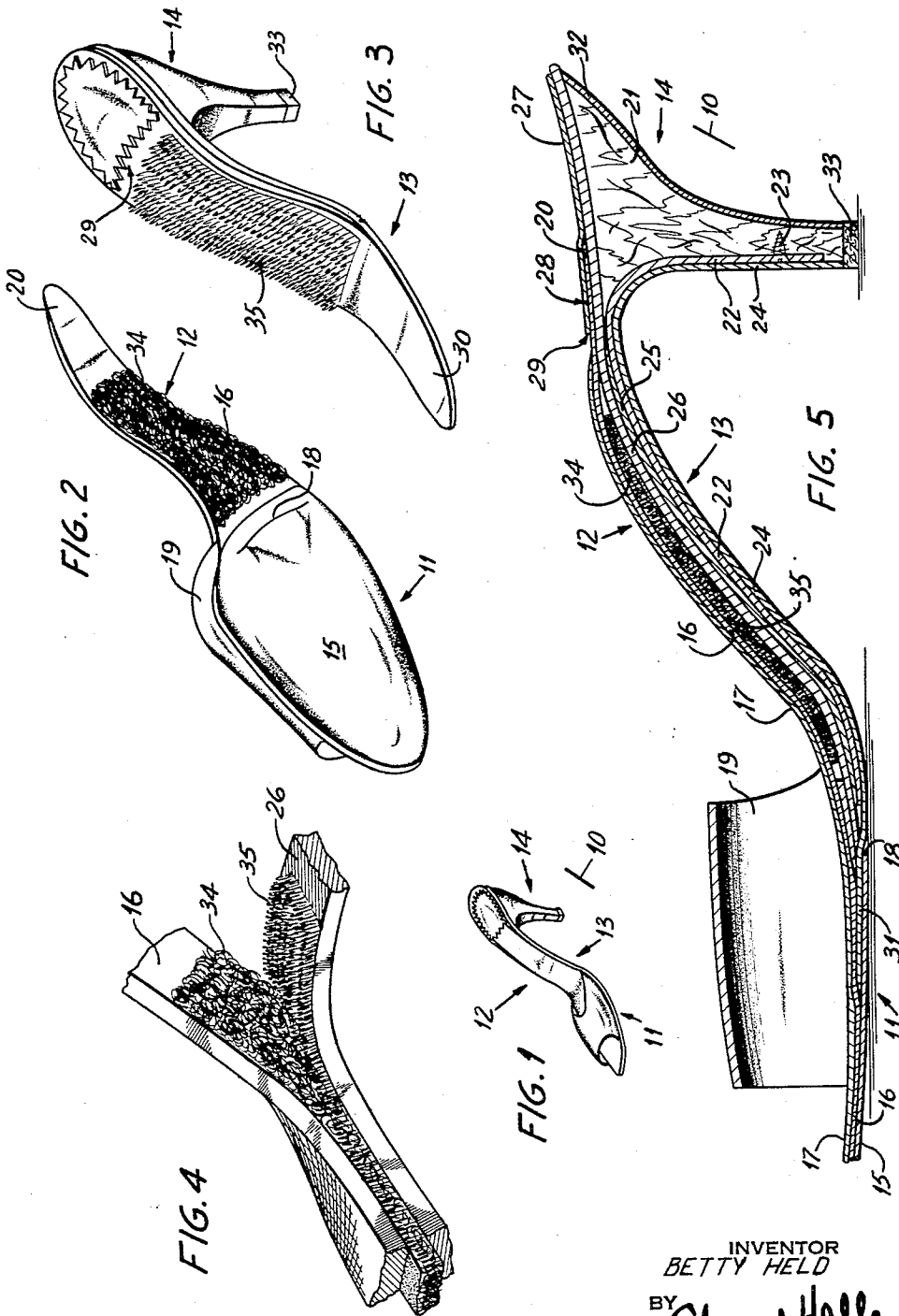
B. HELD

2,952,925

SHOE CONSTRUCTION WITH ADJUSTABLE SHANK PORTIONS

Filed Oct. 2, 1958

2 Sheets-Sheet 1



INVENTOR
BETTY HELD
BY *Edward Haller*
ATTORNEY

Sept. 20, 1960

B. HELD

2,952,925

SHOE CONSTRUCTION WITH ADJUSTABLE SHANK PORTIONS

Filed Oct. 2, 1958

2 Sheets-Sheet 2

FIG. 6

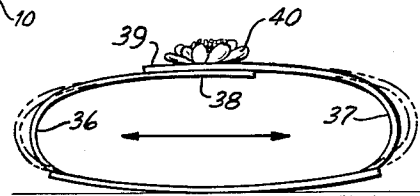
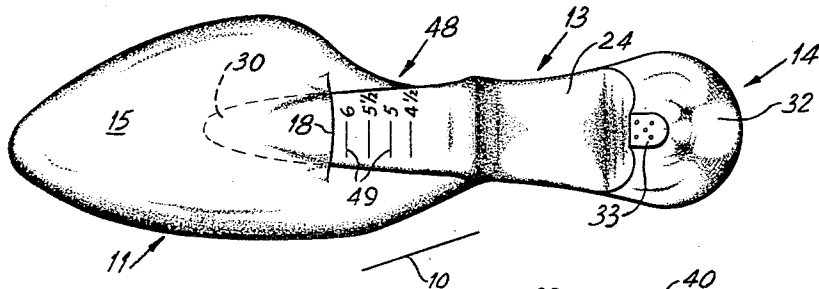


FIG. 8

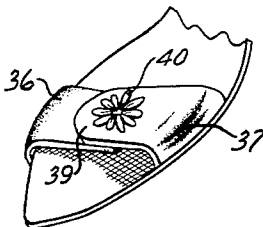


FIG. 7

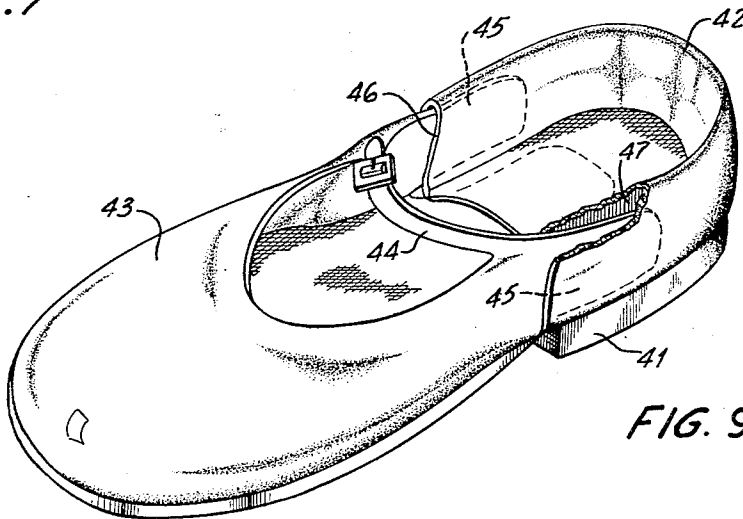


FIG. 9

INVENTOR
BETTY HELD
BY *Edward Halle*
ATTORNEY

1

2,952,925

CONSTRUCTION WITH ADJUSTABLE SHANK PORTIONS

Betty Held, New York, N.Y.
(14 W. Elm St., Chicago 10, Ill.)

Filed Oct. 2, 1958, Ser. No. 764,834

7 Claims. (Cl. 36-2.5)

This invention relates to shoe constructions, and more particularly to adjustable shoes.

My invention is concerned primarily with shoes that may be adjusted for length by varying the length of the shank and which also may be adjusted for width by providing uppers of stretch type material.

It is well known that adjustable shoes may be made by providing various types of shanks which are adjustable for the length of the shoe and by other means. Prior to my invention, these means were usually mechanical types of fastening means which involved cumbersome and bulky portions placed in sliding engagement and fastened by means of screws, rivets and/or other metallic parts. As a result, the adjustable shoes were neither practical nor comfortable, nor could they be made in accordance with the dictates of prevailing fashions. The present invention seeks to overcome the above objections by providing a simple construction in a basic shoe having a toe portion, an adjustable shank portion, and a heel portion in which the adjustment at the shank between the toe and heel portion is made without the use of metallic parts and with materials more compatible with usual types of material used in shoe construction.

It is a further object of my invention to provide such a shoe construction which is adjustable for width.

It is another object of my invention to provide an adjustable shoe construction wherein the adjustment is made by means which are compact and positive.

Another object of my invention is to provide such an adjustable shoe construction which may be made to conform with various styles which may be in vogue from time to time.

It is also an object of my invention to provide an adjustable shoe where toe and heel portions may be separated and readjusted simply and easily so that a shoe may be varied by providing different types of toe portions and heel portions and so that a given adjustable shoe may easily be adjusted to be worn by different persons with different foot sizes.

Another object of my invention is to provide an adjustable shoe for children which may be easily readjusted for the foot size of a child as its foot grows larger.

Further objections and advantages will appear in the specification hereinbelow.

My invention will best be understood from a consideration of the following detailed specification in view of the accompanying drawings forming a part thereof. Nevertheless, it is to be understood that the invention is not confined to this disclosure and may be varied to suit many styles of shoes for men, women and children, without materially departing from the salient features of the invention as expressed in the appended claims.

In the drawings: Fig. 1 is a perspective view of my shoe; Fig. 2 is an enlarged perspective view showing the toe portion and the bottom of the upper shank of my shoe; Fig. 3 is another perspective view showing the top of the lower shank and heel portion of my shoe; Fig. 4

2

is a perspective detail of the adjusting means for the length of the shank of my shoe; Fig. 5 is a further enlarged cross-sectional view of a side elevation; Fig. 6 is a bottom plan view of a modified form of my invention showing size indicating lines on the bottom of the lower shank of my shoe; Fig. 7 is a portion of the toe of another modified form of my shoe having an expandible upper for width adjustment; Fig. 8 is a front elevational view of the form of toe portion shown in Fig. 7 with dotted lines to show the expanding adjustment, and Fig. 9 is another modified form of my shoe in a style for children, having an adjustable upper, the features of which are shown in a partial cutaway by means of dotted lines as well as an adjustable shank, as shown in dotted lines. Reference numeral 10 represents the complete shoe which comprises a toe portion 11, an upper shank 12, a lower shank 13 and a heel portion 14.

The various portions of my shoe may be made in any manner known to the art.

In the first form of shoe shown, as represented in Figs. 1 through 6, the toe portion 11 which is made together with the upper shank 12; has an outer sole 15, a midsole 16, and an inner sole 17. The outer sole has a slit 18. The toe portion is finished by having an upper 19 which I prefer to make of a stretch type of material such as stretch nylon or stretch satin or similar material. The type of stretch material that I refer to is well known in the trade and may be used for stretch socks and other garments where it is desired. The end of the upper shank 12 is finished in the form of a tongue or tab 20.

The heel portion 14 and lower shank 13 of my shoe is comprised of a usual type of wooden heel 21 having a steel shank support 22 attached by means of a screw 23; an outer sole 24, under the steel shanks support 22; an insert 25 over the steel shank support 22; a midsole 26 and a heel pad 27. The sock lining 27 is placed over the midsole 26 in such a manner that there will be a space 28 and an opening 29 so that the tab 20 of the upper shank 12 may be slidably inserted through the opening 29 and into the space 28 between the midsole 26 and the heel pad 27. The lower shank 13 has a tongue or tab 30 at its forward end, which is adapted to be inserted into the slit 18 and slid forward into a space 31 provided between the sole 15 and the midsole 16 of the toe portion 11.

The heel pad 27 is mounted on top of the rear of the midsole 26. In mounting the heel pad 27, a space 28 is left between the heel pad 27 and the midsole 26. This space 28 has a narrow opening 29 which is in the form of a slit. This space 28 is provided for by fastening the heel pad 27 only at its outer edges by means of cement or stitches or in any other manner well known to the art. The opening 29 occurs between the forward portion of the heel pad 27, and the midsole 26 because the forward portion of the heel pad 27 is left uncemented or unstitched to the midsole. Thus, the tab 20 which may be integral with the upper shank 12 may be inserted through the opening 29 into the space 28. The tab 30 which may be integral with the lower shank 13 may also be inserted through the slit 18 into the space 31 which is provided between the sole 15 and the midsole 16 of the toe portion 11. The space 31 is provided in the same manner and construction as the space 28. The heel 21 may be finished off by a covering of material or leather 32 and a leather tip 33.

The various portions of my shoe as described, are made of leather or other suitable material well known to the art and are fastened together by means of the usual adhesives or stitching also well known to the art.

I provide means for both attaching and adjusting the toe portion 11 and upper shank 12 to the lower shank 13 and heel portion 14 by using a material such as that de-

scribed and disclosed in United States Letters Patent No. 2,717,437, granted September 13, 1955, on application of George de Mestral. The material described in the mentioned patent to De Mestral, and which I shall hereinafter refer to as the "gripping material" has a female portion 34 which is bonded by adhesive or stitched to the bottom of the midsole 16 of the upper shank 12 and the male portion 35 is either bonded or stitched to the upper portion of the midsole 26 of the lower shank 13. When an area of the male portion 35 is mated to the female portion 34, the portions 35 and 34 will adhere to each other with a degree of permanence sufficient to maintain the upper and lower shank portions 12 and 13 of my shoe 10 in attachment in cooperation with the tabs 20 and 30 the slit 18 and the opening 29. Nevertheless, the upper shank 12 and the lower shank 13 may be easily parted by manually separating same so that the toe 11 and the upper shank 12 may be separated from the lower shank 13 and heel portion 14 for purposes of adjustment or changing toes 11 or heels 14. The action of the male portion 35 and the female portion 34 of the gripping material and the construction of the said gripping material is fully disclosed in the aforementioned application of De Mestral.

When the shoe 10 is adjusted for the median length the male and female gripping materials 35 and 34 will be in corresponding facing relationship. When the shoe 10 is then made either longer or shorter it becomes apparent that the ends of materials 34 and 35 will overlap and a portion of each material will mate; with the balance of each piece of material resting against the opposite shank, 12 or 13, respectively.

The male portion 35 may be called a "material engaging material," and the female portion 34 may be called a "material adapted to be engaged by a material engaging material."

It will readily be seen that by merely placing the mentioned parts together, the shoe may be adjusted to any given size within the range of length of the components, and I have found that once adjusted, the shoe will remain in adjustment when worn until such time as it is removed from the foot of the wearer and the component parts separated manually in the manner described above.

In addition to the adjustment for length, the shoe as illustrated in Figs. 1 through 5, is adjustable for width because the material of the upper 19 is made of stretch material which will conform to the shape of the wearer's foot.

In another form of my invention shown in Figs. 7 and 8, automatic adjustment and compensation for width of the wearer's foot may be provided by an expansion upper comprising overlapping portions of leather, fabric, plastic or rubber 36 and 37. The material used should be yieldable and yet have sufficient strength and rigidity to hold the wearer's foot in position in the toe portion 11 of the shoe 10. Materials such as leather, fabric, plastic or rubber, mentioned above, may have sufficient strength and rigidity for this purpose. However, any specific material which may be used for the manufacture of articles of clothing and which may be stiffened by shellac or other stiffener, or by providing a wire frame therefor in any manner known to the art, may be used. One portion of the upper 36 is either sewn or bonded to the side of the toe portion 11 so that its upper end 38 will extend between, over and beyond the center line of the shoe sole. The other portion of the upper 37 has an end 39 which extends, up, over and beyond the center portion of the shoe and overlaps a substantial portion of the end 38 of the other portion of the upper 36. Because of the relative rigidity of the material used, both portions of the upper 36 and 37 will overlap each other and unless pressure is exerted from within, will take a normal position as shown by the solid lines in Fig. 8. If a foot wider than the normal width of the upper portions 36 and 37 is inserted, because of the yieldable quality

of the material, they will spread and take a wider position as shown in the dotted line portions of Fig. 8.

I may also provide, if desired, a bow, imitation flower or other ornament 40.

In another form of my invention shown in Fig. 9, the construction of the toe, upper shank, lower shank and heel portions is substantially similar to the construction of these elements in the form of invention shown in Figs. 1 through 5. In the style of the shoe in Fig. 9 however, a flat heel 41 is substituted for the high heel 21. The construction of its uppers 42 and 43 is also different in this respect. Instead of having a stretch material, the uppers 42 and 43 are made of the usual leathers used in the construction of uppers for children's shoes. I have provided a strap 44 for purposes of style. However, this is not essential to this form of the invention. The upper 43 has tongues or tabs 45 located at each side thereof which are designed to fit into slots 46 which in turn are provided adjacent to spaces 47 at the sides of the rear upper 43. Thus, when the adjustment for length is made through the shank portion of the shoe, the upper portion may be shortened or lengthened as the toe and heel portions are moved towards and away from each other. I may also provide gripping material on the tabs 45 and within the spaces 47 to serve as an adjustable fastening in the same manner as I have provided for the upper shank 12 and lower shank 13 of my adjustable shoe.

I have also provided, if desired, a size indicator means 48 which can be located at the bottom of the outer sole 24 of the lower shank 13. The size indicator 48 comprises numbered lines 49 which are read in conjunction with that part of the outer sole 15 of the toe portion 11 which forms the slit 18. In other words, the size indicator 48 can be so calibrated that when the numbered line thus is lined up with slot 18, the size of the shoe will conform to a normal size six shoe.

Another feature of my invention is that it can be designed in several universal size ranges for infants, children and adolescents, as well as for other persons. This makes it possible to sell various types of clothing outfits, including shoes, as packaged units. For example, ladies' robes, loungewear, lingerie and beach attire, with matching slippers or shoes, can be sold in a packaged unit, without the necessity of carrying separate packages for all of the various sized shoes needed for the different sizes of robes, loungewear, lingerie and beach attire. All that the dealer need stock in his store would be the usual sizes of robes, loungewear, lingerie and beach attire and by the means of my invention, the manufacturer could provide a universally sized shoe for each given size of the clothing article.

My invention could also be utilized for providing a readily available supply of shoes in different sizes without the necessity of carrying a large stock, at places such as gift shops, boutique departments, hotels, railroad stations and airports so that travellers could be serviced during hours when regular shoe stores are closed.

Another advantage of my invention is that an adjustable shoe which is readily adjustable, can be made larger during such periods of time as the wearer might have a temporary swollen foot condition or foot injury.

Still another advantage is that persons who might have one foot larger than the other, can be easily fitted with shoes without having them made to order.

I therefore desire to be protected within the scope of the claims below, and

I claim:

1. A shoe having separate upper and lower shank portions, one of the said shank portions being connected with the toe portion of the shoe and the other of said shank portions being connected with the heel portion of the shoe, with one of said shank portions comprising a material having threads of a synthetic resin material with portions of said threads being in the form of ma-

5

terial-engaging means including hook-shaped sections, and the other of said shank portions comprising a material having thread-like portions adapted to be engaged by the material engaging means; whereby when the separate upper and lower shank portions are fitted together the material-engaging means of one of the said shank portions will engage the thread-like portions adapted to be engaged thereby of the other of said shank portions and the said portions will be retained in releasably secured engagement; and in which said releasably secured engagement of the said shank portions may be made in different positions to provide for a combination of said shank portions resulting in a shoe of different lengths.

2. A shoe as defined in claim 1 in which each of the shank portions has a tab on an end and in which the toe and heel portions have slotted portions respectively adapted to receive the mentioned tab included in the other portions.

3. A shoe, as defined in claim 1 having an upper, a portion of which is made of a stretch type material.

4. A shoe, as defined in claim 1, having the upper comprising overlapping portions of resilient materials.

5. A shoe, as defined in claim 1, having an adjustable upper.

6. A shoe having separate upper and lower shank portions, one of said shank portions being connected with the toe portion of the shoe and the other of said shank portions being connected with the heel portion of the shoe, with one of said shank portions comprising a material having threads of a synthetic resin material with portions of said threads being in the form of material-engaging means including hook-shaped sections, and the other of said shank portions comprising a material hav-

6

ing thread-like portions adapted to be engaged by the material engaging means; whereby when the separate upper and lower shank portions are fitted together the material-engaging means of one of the said shank portions will engage the thread-like portions adapted to be engaged thereby of the other of the said shank portions and the said portions will be retained in releasably secured engagement; and in which said releasably secured engagement of the said shank portions may be made in different positions to provide for a combination of said shank portions resulting in a shoe of different lengths; said toe having an upper with at least one tab extending rearwardly therefrom, and said heel having an upper with at least one space adapted to receive a tab extending rearwardly from the upper of the toe.

7. An adjustable shoe as defined in claim 6 in which the said tab extending from the upper of the toe portion is adjustably secured within the space in the upper of the heel portion by means of a combination of materials, comprising the last one of said combination of materials having material-engaging means including hook-shaped sections.

References Cited in the file of this patent

UNITED STATES PATENTS

4,497	Vetter -----	May 2, 1846
2,717,437	De Mestral -----	Sept. 13, 1955

FOREIGN PATENTS

674,292	Great Britain -----	June 18, 1952
797,027	France -----	Feb. 3, 1936
1,026,809	France -----	Feb. 11, 1953