Aug. 29, 1950 W. KLAASSEN 2,520,248

FOOT MEASURING DEVICE

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FIG. 1.

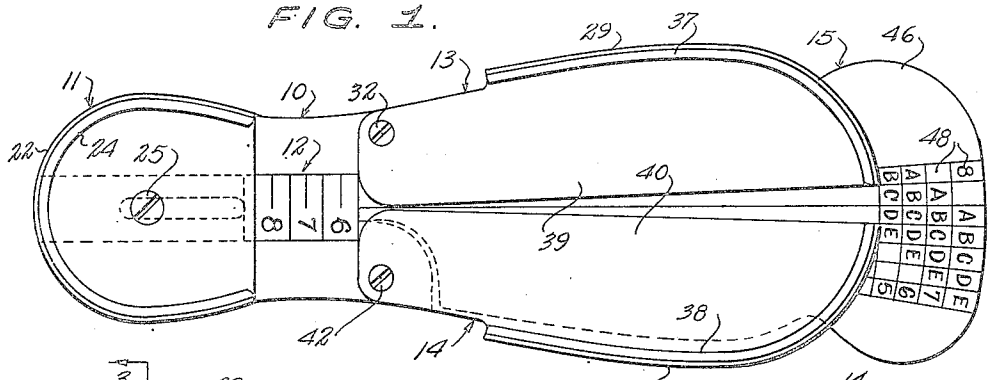



FIG. 2

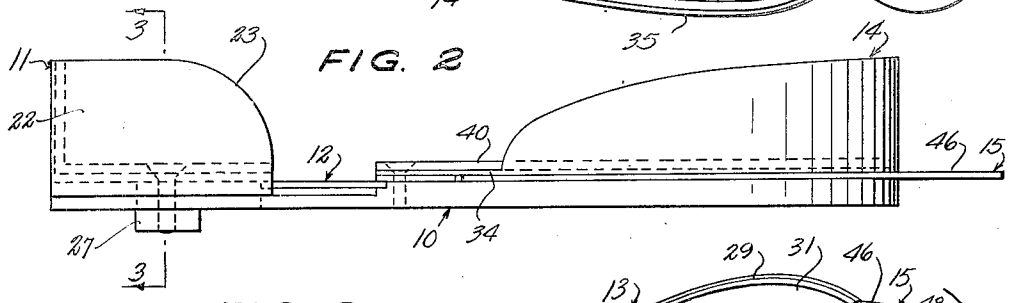



FIG. 3.

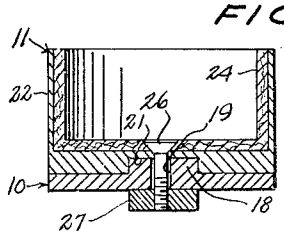



FIG. 4.




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## FOOT MEASURING DEVICE

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1 Claim. (Cl. 33—3)

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This invention relates to foot measuring devices for obtaining proper shoe sizes, and more particularly to an easily portable device for quickly obtaining the pertinent information as to proper length and width of shoes to be fitted.

It is among the objects of the invention to provide an improved foot measuring device of greatly simplified construction which can be held in one hand by a shoe salesman or other person interested in obtaining foot measurements and can be quickly and easily adjusted on a foot to provide the pertinent information as to width and length of shoes to be fitted, which, while particularly useful in fitting shoes for children, can be provided in different sizes to include the entire commercial range of shoe sizes and lasts, which simultaneously provides information as to both the length and width or last requirements of the shoes to be fitted, and which is extremely durable in construction, economical to manufacture, and neat and attractive in appearance.

Other objects and advantages will become apparent from a consideration of the following description and the appended claim in conjunction with the accompanying drawing, wherein:

Figure 1 is a top plan view of a foot measuring device illustrative of the invention;

Figure 2 is a side elevation of the device illustrated in Figure 1;

Figure 3 is a transverse cross-section on the line 3—3 of Figure 2; and

Figure 4 is an exploded, perspective view of the foot measuring device.

With continued reference to the drawing, the foot measuring device comprises, in general, an elongated sole or platform 10, a heel receptacle 11 slidably mounted on the platform 10 adjacent one end of the latter, a length gauge 12 secured to the platform and underlying the forward edge of the heel receptacle, a toe receptacle including two complementary, opposed wings 13 and 14 pivotally connected at their rearward ends to the platform 10 intermediate the length of the platform and at respectively-opposite sides of the longitudinal center line of the platform, and a width gauge 15 disposed between the toe receptacle wings 13 and 14 and the platform 10 and secured to one of the parts of the toe receptacle and slidably underlying the other part of such receptacle.

The sole or platform 10 is an elongated member having curved side edges and a general resemblance to a shoe sole. This member includes a toe portion 16 and a heel portion 17, the heel

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portion being recessed in its top surface at respectively-opposite sides of the longitudinal center line of the platform to provide a rib 18 extending longitudinally of the heel portion of the platform substantially symmetrical with the longitudinal center line of the platform. An elongated slot 19 extends through the ribbed portion of the platform intermediate the length of the rib 18 and extends longitudinally of the rib. Between the slot 19 and the toe portion 16 of the platform the rib 18 is recessed in its upper surface to receive the length gauge 12 which is a flat, elongated body of rectangular shape having on one face thereof spaced-apart lines and numbers for indicating the length of shoes to be fitted.

The heel receptacle 11 comprises a flat plate 20 having one straight end, the opposite end being arcuately curved, and side edges extending from the curved end to the straight end at respectively opposite ends of the straight-end edge and substantially perpendicular to this edge. This bottom plate 20 is provided with a groove 21 which extends longitudinally of the plate 20 substantially medially thereof and in the lower side of the plate to slidably receive the rib 18. A curved flange 22 extends along the side edges of the plate and around the curved end thereof and extending upwardly from the plate, the corners of this flange being rounded off, as indicated at 23, to give to the top edge of the flange a smooth contour. A suitable lining 24 is preferably provided within the flange 22 and over the upper surface of the plate 20.

An aperture 25 is provided through the plate 20 in position such that it is in alignment with the slot 19 when the rib 18 is received in the groove 21 of the heel receptacle, and a screw 26 extends through this aperture and through the slot 19 and projects below the bottom surface of the platform 10. A nut or bridge member 27 having a screw-threaded aperture therethrough is threaded onto the lower screw-threaded end of the screw 26 to clamp the heel receptacle 11 against the upper side of the platform 10 with sufficient force to provide a slight frictional resistance to movement of the heel receptacle longitudinally of the platform.

The toe receptacle part or wing 13 comprises an elongated, flat plate 28 having a substantially straight inner edge which lies approximately along the longitudinal center line of the platform 10 when the toe receptacle is in closed condition, and a curved outer edge, the curvature of which corresponds to the curvature of the side edges

of the toe portion 16 of the platform. A flange 29 extends along the curved outer edge of the plate 28 from the forward end of the straight, inner edge of the plate to a location spaced from the rear end of the outer edge of the plate, and is disposed substantially perpendicular to the plate. This flange is curved along its upper edge, adjacent its rearward end, as indicated at 30, so that no sharp corner is present at the rearward end of the flange. An aperture 31 is provided in the plate 28 near the rearward end and substantially at the outer, rearward corner of this plate, and a pivotal connector, such as the screw 32, extends through the aperture 30 and into a screw-threaded hole or well 33 provided in the platform 10 to pivotally secure the part 13 to the platform at a location near the end of the toe portion 16 of the platform adjacent the heel portion and spaced from the longitudinal center line of the platform.

The part or wing 14 of the toe receptacle is similar to the part 13, except for being oppositely arranged and includes an elongated, flat plate 34 having a substantially straight, inner edge which lies approximately along the longitudinal center line of the platform 10 and against the straight, inner edge of the plate 28 when the toe receptacle is in closed condition. The plate 34 has a curved, outer edge corresponding to the curvature of the respective side edge of the platform 10, and has along this curved, outer edge an upstanding flange 35 which extends from the forward end of the straight, inner edge of the plate 34 to a location on the outer edge of the plate spaced from the rearward end of the plate. This flange 35 is disposed substantially perpendicular to the plate 34, and has its outer edge curved at its rearward end, as indicated at 36, so that no sharp corner is present at the rearward end of the flange. Both flanges have substantially right-angular corners at their forward ends, as the two forward ends of the flanges come substantially together when the toe receptacle is in closed condition, so that the flanges 29 and 35 will extend around the forward portion of a foot placed in the measuring device.

The flanges 29 and 35 are preferably provided with suitable linings 37 and 38, and linings 39 and 40 are also preferably provided on the upper surfaces of the plates 28 and 34.

The plate 34 is provided, near its rear, outer corner, with an aperture 41 and a screw 42 extends through this aperture and into a screw-threaded well or hole 43 in the platform 10 to pivotally connect the toe receptacle part 14 to the platform at a location on the toe portion of the platform adjacent the heel portion and spaced from the longitudinal center line of the platform at the side of the center line opposite the connection between the platform and the toe receptacle wing 13.

A spacer plate 44 is secured to the under side of the plate 34 at the rear, outer corner of the plate 44, and is provided with an aperture registering with the aperture 41. This spacer plate 44 has a thickness substantially the same as the thickness of the width gauge plate 15 and has three edges, two of which are flush with the rear end and rear portion of the outer side edges of the plate 34, and the third of which is arcuately curved and is received in an arcuately-curved corner recess in the gauge plate 15.

The width gauge plate 15 is an elongated, flat plate having a major portion 45 shaped to correspond to the shape of the two plates 28 and 34 when these two plates are disposed with their straight, inner edges substantially in contact, and a rounded tab 46 at its outer end projecting forwardly beyond the parts 13 and 14 of the toe receptacle. This plate 15 is disposed between the two plates 28 and 34 and the upper surface of the toe portion 16 of the platform 10, and is permanently secured to the under side of one of the plates of the toe receptacle, for example, the plate 28, as illustrated, and is slidably received under the plate 34. The part of the width plate 15 extending laterally from the inner, straight edge of the plate 28 is provided with spaced-apart, rearwardly-converging lines 47 which cooperate with the inner, straight edge of the plate 34 to provide width-indicating marks, and the tab 46 extending forwardly beyond the two parts 13 and 14 of the toe receptacle has thereon indicia 48 aligned with the marks 47 so that when a line registering with the straight, inner edge of plate 34 is followed outwardly to the tab portion 46, the shoe width or last is properly indicated.



In using the foot measuring device, the heel of a foot to be measured is set into the heel receptacle 11 and, with the platform 10 held in the hand and the two parts 13 and 14 of the toe receptacle lightly compressed, the measuring device is moved so that the forward portion or ball of the foot is received between the flanges of the two parts of the toe receptacle, the heel receptacle being slid forwardly or rearwardly on the platform, as may be necessary, until the flanges 29 and 35 loosely encompass the forward portion of the foot and the toes. With the two flanges 29 and 35 held lightly against the respectively opposite sides of the ball of the foot, the width measurement is read off of the width-gauge plate 15 by noting the line 47 which coincides with the straight, inner edge of the plate 34. The measuring device is then removed from the foot and the position of the forward edge of the heel receptacle relative to the length-indicating-gauge 12 is then noted. This will give, directly, the proper size or length of the shoe. The indicia 48 are arranged in adjacent rows disposed consecutively outwardly of the tab 46 from the outer end of the toe receptacle, and each one of these rows corresponds to one of the size numbers on the length gauge 12. The length number on the length gauge at the forward edge of the heel receptacle is then found in the indicia group 48, and the width-indicating mark in the corresponding row and adjacent the line 47 which was previously noted, gives the proper width or last for the shoe. The length and width of the proper shoe size can thus be quickly determined by a single, simple operation of the foot measuring device.

The flanges 22, 29 and 35 have a sufficient height, so that they engage the heel and sides of the foot at the maximum outward extent of the foot to give a proper indication and, if desired, the foot measuring device may be placed on the floor or on a shoe-fitting stool, so that pressure can be applied to the foot, if desired.

In order to maintain the foot measuring device in the most compact and convenient form desirable, it is proposed to provide for each device only a limited range of shoe sizes, for example, not more than three or four consecutive sizes, and to provide the measuring devices in sets of devices of different sizes to cover the entire commercial range of shoe sizes. Of course, only a part of a set of such devices would be used by a merchant specializing in shoes within a

limited size range, such as children's shoes, whereas, an entire set would be useful in a large shoe store dealing in all sizes of shoes.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is, therefore, to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claim rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claim are, therefore, intended to be embraced therein.

What is claimed is:

A shoe measuring device comprising an elongated platform including a toe portion and a heel portion and having said heel portion recessed in its upper surface to provide a longitudinally-extending, medial rib and an elongated slot extending longitudinally of said rib intermediate the length thereof, a heel receptacle slidably mounted on said heel portion and having a longitudinally-extending groove receiving said rib, means extending from said heel receptacle through said slot and engaging said platform at the side thereof opposite said rib securing said heel receptacle to said platform, a length-indicating gauge on the upper side of said platform underlying the forward edge of said heel receptacle, an adjustable toe receptacle on the toe portion of said platform comprising two similar opposed parts each including a plate overlying approximately one-half of the toe portion of said platform and having a straight inner edge extending along the longitudinal center line of said platform when said toe receptacle is fully closed, a curved outer edge, and an upstanding flange along the curved outer edge thereof, means pivotally connecting said plates to said platform at the end of said platform toe portion adjacent said heel portion and at respectively opposite sides of the longitudinal center line of said platform, and a width-gauge plate secured to one of the two receptacle plates and projecting outwardly beyond the end of said one receptacle plate remote from the pivotal connection between said one plate and said platform, said width gauge plate underlying and cooperating with the other of said receptacle plates to indicate last widths measured by said receptacle plates.



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