Sept. 19, 1950

O. SCHLAUGH ET AL

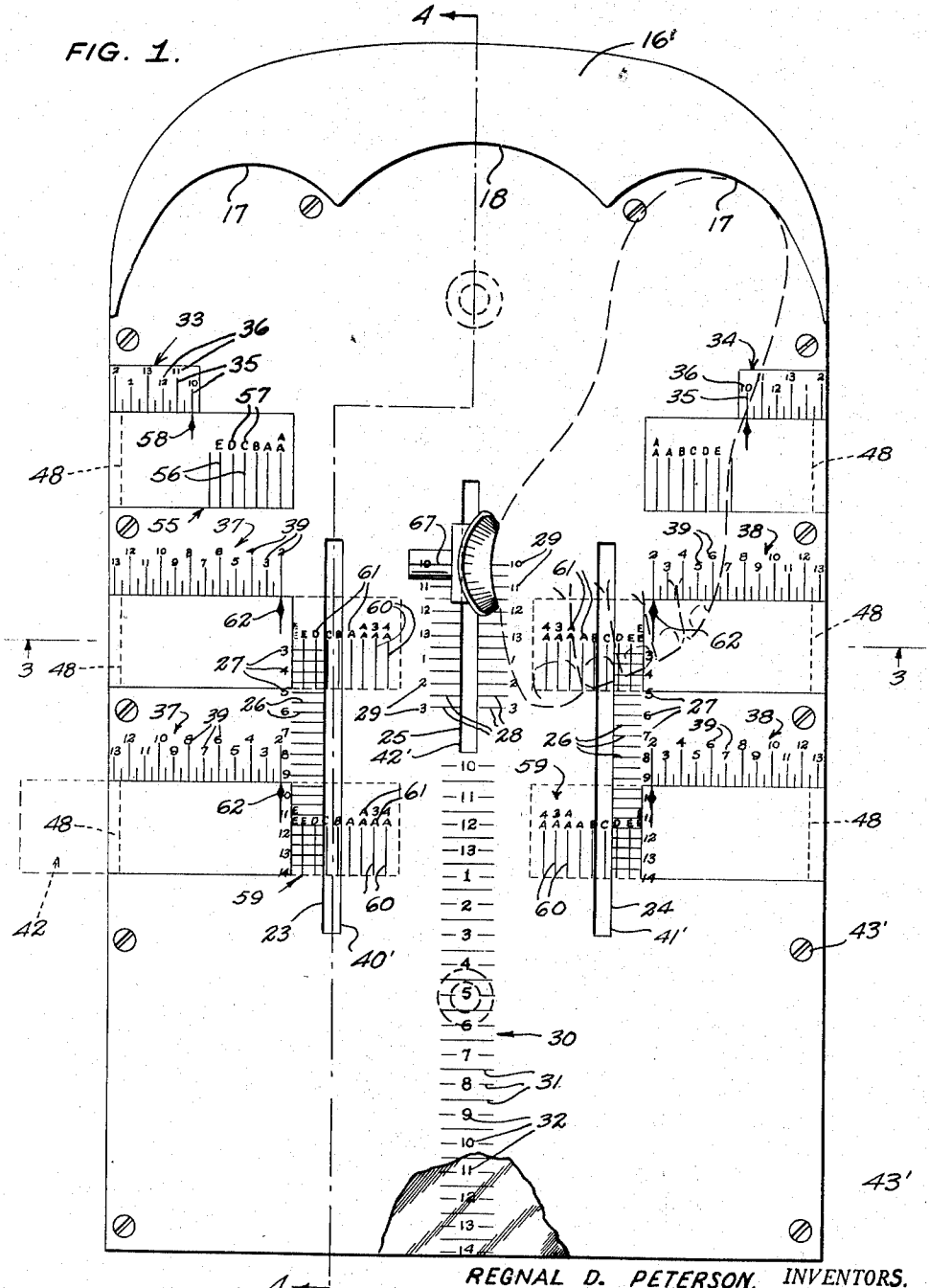
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FOOT MEASURING DEVICE FOR ADULT'S AND CHILDREN'S FEET

Filed Jan. 30, 1948

2 Sheets-Sheet 1

FIG. 1.



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2 Sheets-Sheet 2

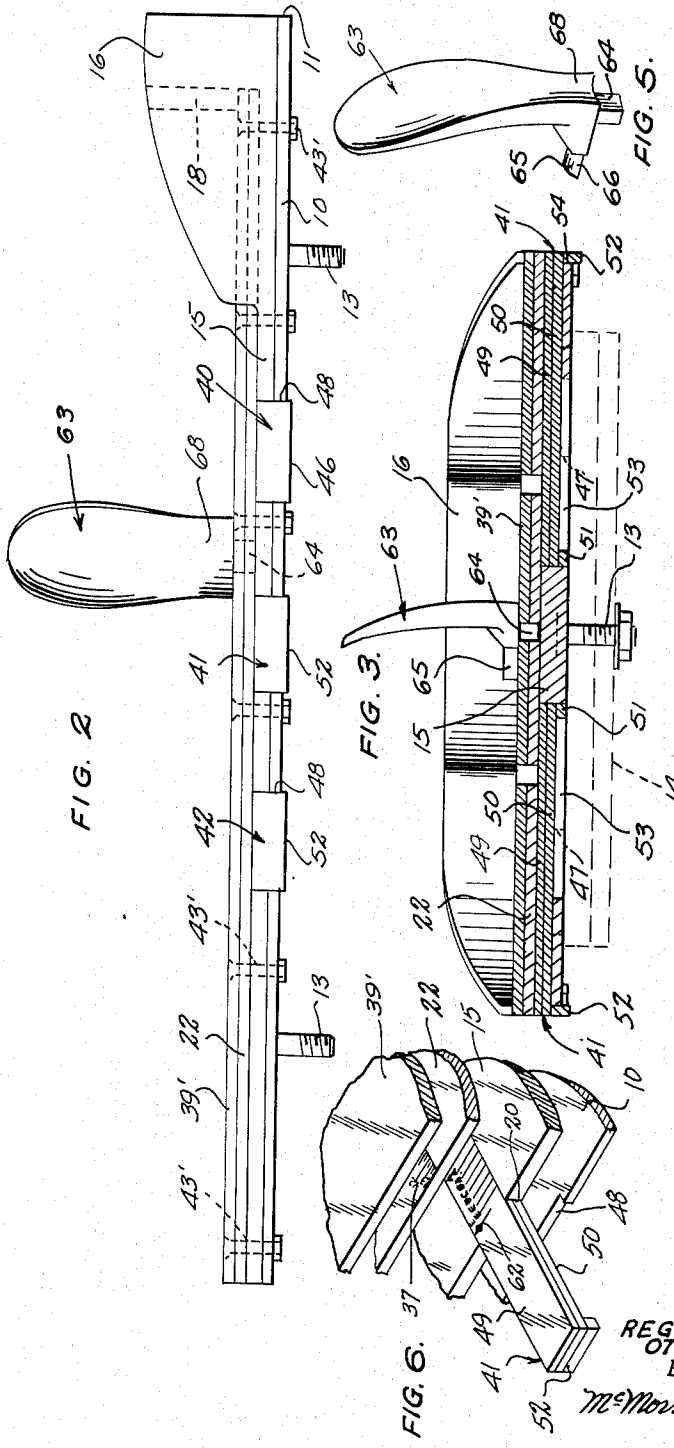


FIG. 2

FIG. 3.

FIG. 5.

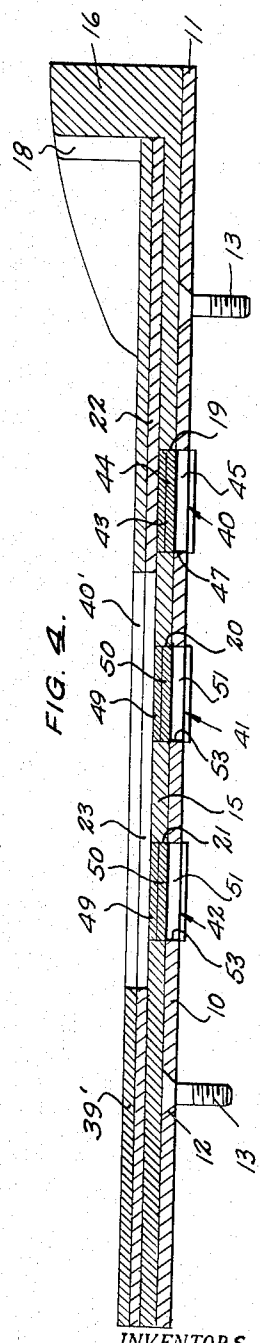


FIG. 4.

FIG. 6.

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FOOT MEASURING DEVICE FOR ADULTS' AND CHILDREN'S FEET

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3 Claims. (Cl. 33—3)

1

Our invention relates to a foot measuring device.

A primary object of the invention is to provide a foot measuring device, which is adapted to be attached to conventional fitting stools in retail shoe stores, and therefore providing measuring means which are always at hand.

A further object is to provide a foot measuring device which will indicate the size and last for the left and right feet of adults and children.

A further object is to provide a device of the above mentioned class which is attractive and neat in appearance, and which constitutes a unitary structure, the moveable parts of which cannot become detached and lost.

A still further object of the invention is to provide a foot measuring device which is simple and novel in construction, durable, and relatively inexpensive to manufacture.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a plan view of the foot measuring device.

Figure 2 is a side elevation of the same.

Figure 3 is a transverse vertical section taken on line 3—3 of Figure 1.

Figure 4 is a longitudinal vertical section taken on line 4—4 of Figure 1.

Figure 5 is a perspective view of a shoe horn indicator removed, and,

Figure 6 is a fragmentary exploded perspective view of the device.

In the drawings, where for the purpose of illustration is shown a preferred embodiment of the invention, the numeral 10 designates a bottom flat plate, which is generally rectangular and relatively thin, and preferably formed of suitable transparent plastic material. One end 11 of bottom plate 10 is curved, as shown. The bottom plate 10 has a pair of countersunk openings 12 near its opposite ends, and disposed at its transverse center, as shown. Mounting screws 13 have their heads disposed in the openings 12, and flush with or below the top surface of bottom plate 10. The screws 13 depend below the bottom plate 10, and serve to attach the device to the inclined foot rest portion 14 of a conventional fitting stool, as shown in Figure 3.

Mounted upon the bottom plate 10, and having its marginal edge conforming to the shape of

2

the bottom plate is a main plate 15, which is thicker than bottom plate 10, and also formed of transparent plastic material. At its end adjacent to curved end 11, the main plate 15 has an upstanding curved end or heel rest 16, integral therewith, and extending around the marginal edge of main plate 15, adjacent to curved end 11. The heel rest 16 is provided upon its inner surface with side heel positioning recesses 17, and a center heel positioning recess 18. Formed in the longitudinal edges of main plate 15 are oppositely arranged longitudinally spaced pairs of rectangular recesses or notches 19, 20, and 21. These notches extend laterally inwardly and terminate near the center portion of main plate 15. The notches 19 are longitudinally shorter than the notches 20 and 21, which are of equal length. All of the notches extend through the entire thickness of main plate 15. The pairs of notches 19, 20, and 21 are longitudinally equidistantly spaced, and the pair 19 are relatively near the heel rest 16, as shown. The pair of notches 21 are near the longitudinal center of main plate 15.

Mounted upon the main plate 15 is a flat scale plate 22, formed of transparent plastic material, and having a marginal edge which conforms to the shape of plates 10 and 15. The top side of scale plate 22 is adapted to have measuring scales printed or otherwise marked thereon. Formed in scale plate 22, and extending through the same are a pair of oppositely disposed parallel longitudinal outer slots 23 and 24, of equal length, and arranged equidistantly upon opposite sides of the longitudinal center line of scale plate 22. The outer slots 23 and 24 extend across both pairs of notches 20 and 21, near their inner ends, and are arranged at right angles to these notches. Both slots 23 and 24 extend beyond the outer sides of notches 20 and 21 for a short distance, as shown. Arranged at the transverse center of the scale plate 22, and parallel to slots 23 and 24 is a center short longitudinal slot 25, extending from near the transverse centers of notches 19 to near the transverse centers of notches 20. The slot 25 is equidistantly spaced from slots 23 and 24.

Printed or otherwise visibly marked upon scale plate 22, adjacent to the outer longitudinal edges of slots 23 and 24 are foot length measuring scales, including longitudinally equidistantly spaced lateral indicating lines 26, adjacent to the outer ends of which are printed length size numbers 27, preferably covering an adult shoe size range of from 3 to 14; inclusive. The size 3 numbers are toward the ends of slots 23 and 24

which are nearest to heel rest 16, and the size 14 numbers are disposed toward the opposite ends of such slots, as shown. The numbers 27 are read looking toward heel rest 16. Also printed upon scale plate 22 adjacent to the longitudinal edges of slot 25, are foot length measuring scales, including longitudinally equidistantly spaced length indicating lines 28, adjacent to the outer ends of which are printed length size numbers 29, preferably covering a child's shoe size range of from 10 to 3, as shown. The numbers 29 are read looking toward heel rest 16. The child size 10 numbers 29 are arranged near the end of slot 25 nearest to heel rest 16, and child size 3 numbers 29 are toward the end of slot 25 remote from heel rest 16. The words "child's right heel" and "child's left heel" are printed on scale plate 22, adjacent to heel recesses 17, as shown. The word "adults" is printed adjacent to heel recess 18. Printed upon scale plate 22 at the transverse center of the same, and extending longitudinally from the end of slot 25 remote from heel rest 16 to the end of the scale plate 22 remote from the heel rest, is a length size scale 30, readable by the customers' looking toward the end of the measuring device remote from heel rest 16. Scale 30 includes equidistantly spaced indicator lines 31 and length size numbers 32, as shown. Printed upon scale plate 22, adjacent to the longitudinal edges of notches 19 nearest to heel rest 16 are scales 33 and 34, including longitudinal indicator lines 35 and numbers 36, corresponding to the child size numbers 29. Similar scales 37 and 38 are printed upon scale plate 22 adjacent to the longitudinal edges of slots 20 and 21. Scales 37 and 38 include numbers 39 corresponding to adult length size numbers 27.

A top plate 39' is provided, and formed of transparent plastics material. This top plate 39' has longitudinal parallel slots 40', 41'. and 42' formed therein, and these slots register with slots 23, 24, and 25 of scale plate 22. The marginal edge of plate 39' conforms to the shape of the other plates 22, 15, and 10, and forms therewith, in assembly, a rigid unitary flat structure or foot rest. The top plate 39' is smooth, and free from upstanding projections. The plates 10, 15, 22, and 39' are rigidly secured together by means of screws 43', or the like, which have their heads arranged in countersunk openings in the top plate 39', so as not to project above the same. The top plate 39' is readily replaceable when it becomes marred or scratched.

Slideably mounted within the notches 19, 20, and 21 are pairs of rectangular width or shoe last indicating slides 40, 41, and 42, adapted to slide longitudinally in the notches. The pair of slides 40 are shorter than the pairs 41 and 42, corresponding to the lengths of the shorter notches 19. The slides 40 include top and bottom rectangular plates or sections 43 and 44 respectively; the bottom section 44 being provided with inner and outer depending tabs or flanges 45 and 46 at its opposite ends. The inner tabs 45 operate in rectangular slots 47 in bottom plate 10, directly beneath notches 19, and being of the same width. The slots 47 extend from the inner ends of notches 19 outwardly, past the longitudinal centers of such notches. The inner tabs 45 form stops to engage the outer ends of slots 47, so that the slides 40 cannot be disengaged from within notches 19. The outer tabs 46 engage in shallow notches 48 formed in bottom plate 10, adjacent to the outer ends of notches 19. When slides 40 are in their innermost positions, the tabs 46 enter shallow notches, and are flush with the longitudinal edges of bottom plate 10. Similarly, the slides 41 and 42 have upper and lower rectangular plates or sections 49 and 50, and the lower section 50 has inner and outer depending tabs 51 and 52 to slide in slots 53, formed in the bottom plate 10, beneath the notches 20 and 21. The slots 53 are the same width as notches 20 and 21, and they extend from the inner ends of such notches, outwardly, past the longitudinal centers of the same. The tabs 51 serve the same purpose as the tabs 45 on slides 40. The outer tabs 52 engage in shallow notches 54, formed in the longitudinal edges of bottom plate 10, adjacent to notches 20 and 21.

Conventional child's shoe width or last indicating scales 55 are printed upon the bottom surface of section 43 of slides 40. These scales 55 extend from the inner ends of slides 40 outwardly, and include spaced longitudinal indicator lines 56 and child's last letters 57. An arrow 58 is printed adjacent to the outermost last letter 57, of each scale 55, and such arrows are aligned with lines 35 of scales 33 and 34, when slides 40 are used. The sections 43 and 44 are secured together by means of a suitable transparent cement, or the like. Similar adult shoe last scales 59 are printed upon the bottom faces of sections 49 of slides 41 and 42. These scales 59 include lines 60 and last letters 61, and a printed arrow 62, to be aligned with the lines of scales 37 and 38. The sections 49 and 50 are also securely cemented together with transparent cement. The slides 40, 41, and 42 are formed of transparent plastic material.

A shoe horn indicator 63 is provided, and this indicator has a bottom depending lug 64 to slide in slots 23, 24, and 25. The indicator 63 also includes a horizontal laterally projecting arm 65 having a bottom flat surface 66 provided with a longitudinal scribe line 67. The shoe horn indicator 63 at its lower end is concave, as at 68, to form a socket to engage the big toe joint, as shown in Figure 1. The entire indicator 63 is made of transparent plastic material.

In use, the foot measuring device is attached to the inclined foot rest portion 14 of a fitting stool, as stated. The longitudinal edges of the device overhang the sides of portion 14 slightly, so that the slides 40, 41 and 42 can be manipulated conveniently. The outer tabs 46 and 52 facilitate pulling out the slides, and they extend slightly below the bottom plate 10, as shown. The indicator 63 is the only detachable part in the device, and this part serves the double purpose of a shoe horn and a foot length measuring indicator. The indicator 63 is adapted to slide in all of the slots 23, 24, and 25.

The device may be used to measure the left and right feet of adults and children, by simply moving the shoe horn indicator 63 to a different slot, and using a different width slide.

In order to measure a child's left foot, place the left heel in the recess 17, where the words "child's left foot" are printed. Place the indicator 63 in slot 25, with the concave portion 68 disposed toward the left foot, as shown in Figure 1. The concave portion 68 engages the ball or joint of the big toe, as shown. The scribe line 67 will align itself with or near one of the lines 28, and the adjacent length size number 29. This number is read, and the slide 40, adjacent to the left foot is pulled out, until the arrow 58

is aligned with the corresponding number **36** of the adjacent scale **34**. The last width or last letter **57** visible at the outer side of the foot is the width or last of the shoe required. The length size is the number beneath the scribe line **67**. It may be mentioned here that the arm **65** of shoe horn indicator **63** may be designed to magnify the numbers on the scales adjacent to slots **23**, **24**, and **25**, if desired. To measure a child's right foot, the heel thereof is placed in the opposite recess **17**, and indicator **63** is turned to the opposite side of slot **25**. The opposite slide **40** is used, and the arrow **58** thereof is aligned with the proper number **36** of scale **33**. The procedure is the same as in the case of the left foot.

For measuring adults' feet, the same procedure is followed, but the indicator is alternately used in slots **23** and **24**, for measuring the length of the right and left foot respectively. Either of the width slides **41** or **42** may be used for adults, depending upon which pair of slides is nearer to the widest part of the foot. If the slides **41** are nearer to the widest part of the foot, they are used, but if the slides **42** are nearer, they are used to measure the width or last. The scale **30** may be read by the customer, to see the size number of the shoe which he requires.

It is thus seen, that the foot measuring device is universal, in the sense that it will measure the length and width of adults' and children's feet.

It is to be understood that the form of the invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts may be resorted to, without departing from the spirit of the invention, or the scope of the subjoined claims.

Having thus described the invention, we claim:

1. A foot measuring device, comprising a bottom plate provided with a transverse slot terminating short of the longitudinal edge of the bottom plate, a main plate positioned upon the bottom plate and having a transverse notch in registration with the slot and extending through the longitudinal edge of the main plate, the main plate being provided at one end with an upstanding heel abutment, a transverse slide movably mounted within the transverse notch and engaging the bottom plate and held thereby against downward displacement from the notch, the slide having a depending projection operating within the slot to limit the movement of the slide, the slide being provided upon its upper face with a foot width measuring scale and an index mark, a transparent sheet secured to the upper face of the slide and covering the scale and index mark, a transparent scale plate mounted upon the upper face of the main plate and holding the slide against upward displacement from the notch, the transparent scale plate being provided upon its upper face with a longitudinal foot length measuring scale arranged opposite the heel abutment and provided with a longitudinal slot adjacent to and extending longitudinally of the longitudinal scale, the transparent scale plate also being provided upon its upper face with a transverse reference scale corresponding to the longitudinal scale and arranged adjacent to the slide for coaction with the index mark thereof, a transparent cover plate mounted upon the upper face of the scale plate to cover the scales formed upon its upper face and having a longitudinal slot in registration with the longitudinal slot in the scale plate, and an indicator having a part for movement in the longitudinal slots and an index mark to coact with the longitudinal scale.

2. A foot measuring device, comprising a bottom plate provided with a transverse slot terminating short of the longitudinal edge of the bottom plate, a main plate positioned upon the bottom plate and having a transverse notch in registration with the slot and extending through the longitudinal edge of the main plate, the main plate being provided at one end with an upstanding heel abutment, a transverse slide movably mounted within the transverse notch and engaging the bottom plate and held thereby against downward displacement from the notch, the slide having a depending projection operating within the slot to limit the movement of the slide, the slide being provided upon its upper face with a foot width measuring scale and an index mark, a transparent scale plate mounted upon the upper face of the main plate and holding the slide against upward displacement from the notch, the transparent scale plate being provided upon its upper face with a longitudinal foot length measuring scale arranged opposite the heel abutment and provided with a longitudinal slot adjacent to and extending longitudinally of the longitudinal scale, the transparent scale plate also being provided upon its upper face with a transverse reference scale corresponding to the longitudinal scale and arranged adjacent to the slide for coaction with the index mark thereof, a transparent cover plate mounted upon the upper face of the scale plate to cover the scales formed upon its upper face and having a longitudinal slot in registration with the longitudinal slot in the scale plate, and an indicator having a part for movement in the longitudinal slots and an index mark to coact with the longitudinal scale.

3. A foot measuring device, comprising a bottom plate provided with a transverse slot having its opposite ends terminating short of the longitudinal edges of the bottom plate, a main plate mounted upon the upper face of the bottom plate and having a transverse notch extending through its upper and lower faces, the inner portion of the notch registering with the slot and extending through one longitudinal edge of the main plate, the main plate being provided at one end with an upstanding heel abutment, a transverse slide shiftably mounted within the transverse notch and engaging the bottom plate laterally outwardly of the slot and held by the bottom plate against downward displacement from the notch, the slide having depending tabs near its opposite ends, the inner tab operating in the slot to limit the inward and outward shifting of the slide, the outer tab projecting below the bottom plate adjacent to one longitudinal edge thereof to facilitate manipulation of the slide, the slide being provided upon its upper face with a foot width measuring scale and an index mark, a transparent sheet mounted upon the upper face of the slide and covering the scale and index mark, a transparent scale plate mounted upon the upper face of the main plate and holding the slide against upward displacement from the notch, the transparent scale plate being provided upon its upper face with a longitudinal foot length measuring scale arranged opposite the heel abutment and provided with a longitudinal slot adjacent to and extending longitudinally of the longitudinal scale, the transparent scale plate also being provided upon its upper face with a transverse reference scale corresponding to the longitudinal scale and arranged adjacent to one longitudinal edge of the slide for coaction with the index mark thereof, a transparent

cover plate mounted upon the upper face of the scale plate to cover the scales upon its upper face and having a longitudinal slot in registration with the longitudinal slot in the scale plate, and a movable indicator including a depending lug for sliding engagement in the longitudinal slots and having an upstanding abutment portion to engage the ball joint of the foot, the indicator having an index mark to coact with the longitudinal scale.

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