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FOOT-MEASURING DEVICE

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8 Claims. (Cl. 33—3)

This invention relates to the art of fitting shoes and is more particularly intended to provide an ocular demonstration to the customer of the proper length of shoe that is appropriate to fit his or her foot.

One of the serious problems of retail shoe selling is to fit the customer with a pair of shoes that are of a size to properly accommodate the foot and that can be worn with subsequent comfort and absence of injury. Actual surveys covering large numbers of cases examined show that more than two-thirds of the persons examined were wearing shoes that were too short in length. Now, the wearing of too short shoes not only results in subsequent discomfort, but it is a prolific source of foot trouble such as bunions, enlarged joints and distortion, which seriously affect the efficiency and service of the feet. Moreover, very frequently the customer insists, in spite of the advice of an expert salesman, on having a shorter size of shoe than the actual foot measurements indicate.

It is the object of the present invention to provide a device which will demonstrate in a simple and obvious way to the customer that any given shoe of insufficient length is too short for him to wear. In general, the invention comprises an elevated heel supporting engaging member and attachable length-size gauges of thin flexible material, that will conform to the bottom contour of the foot standing on the device and that is provided at its forward end with a toe gauging stop or member for visibly demonstrating the expanded length of the foot when the weight is thrown on it in a walking or standing posture. Provision is also made for raising the height of the heel support to different levels to correspond with the height of the style of shoe that is desired. These and other features of the invention will be particularly described in the following specification and will be defined in the claims hereto annexed.

In the accompanying drawing I have illustrated a simple and convenient embodiment of the invention, in which

Fig. 1 is a plan view of the device assembled ready for gauging the length of the foot of a person standing with his heel gauging against the rear stop or gauge and elevated to the proper height above the level of the floor.

Fig. 2 is a sectional elevation of the device showing the outline of a foot being gauged thereby.

Fig. 3 is a side elevation of a shoe in which the foot of the customer is inserted on top of the thin

flexible toe gauge which has been previously inserted in the bottom of the shoe.

In the practice of the invention according to the form illustrated in the drawing, I provide a block or strip 1 from whose rear edge projects upwardly a stop member or heel gauge 6 and having a forward and downwardly curved shelf or extension 7 conforming somewhat to the arch of a foot.

To the rear edge of this heel support 1 are pivoted a series of blocks 2, 3, 4 and 5 of different vertical thicknesses, blocks of the same thickness being arranged in corresponding pairs at equal distances from the middle of the device. When any selected pair of blocks of the same height are swung into horizontal position beneath the heel seat, or supporting member 1, it gives a definite elevation to the heel corresponding to the height of heel of the shoes that the customer is trying on. As many different thicknesses of block may be used as may be thought desirable to cover the entire range of heights of heels carried in stock, so that the foot being measured will assume the same posture when the customer is standing on the measuring device as it will assume in a shoe of equal height of heel. This testing or gauging of the foot, when in the posture that it will assume in the shoe when the wearer is standing, is very important because the greater the height of heel the more the weight of the person is thrown forward onto the ball of the feet and the greater is the elongation or lengthwise expansion of the foot when supporting the weight in such a posture.

The heel seat member 1 is provided with a pair of aligned flat headed pins 10 and 11, which serve as means for attaching a series of graduated toe gauges 12 which are made of thin flexible material to permit them to conform to the contour of the sole of the foot and which also permit them to be inserted in the shoe selected for trial before it is tried on. Any convenient means may be employed for properly positioning the length or toe gauges 12, when attached to the heel member 1. As shown in the drawing, the rear end of the flexible gauge 12 is slotted to pass under the flat head of the tack 10, while at the appropriate distance forward the gauging strip is provided with a longitudinal slot 12^b with a medial enlargement that can be sprung over the head of the pin or tack 11, so that the length gauge is detachably secured to the elevated heel support always in the same relation to the back stop or heel gauge 6.

The forward end of the length gauge 12 is turned back and upward to form a stop 12^c at just the right distance from the heel gauge 6 to correspond to a definite standard length-size of a foot.

The side by side gauges 12 are preferably arranged with the shortest gauge at one end of the series and the longest gauge at the other end, each intermediate size and half size in length increments being represented by its own appropriate length gauge.

The customer making a trial stands with his heel against the back stop 6 and his toe reaching almost to, but not quite in contact with, the stop member 12^c of the appropriate length gauge. He can then see for himself just what the over-all length of his foot is when in the standing posture supporting his weight. It is then possible to disengage the particular length gauge member, that corresponds to the length of his foot, insert the same in the shoe to be tried on and then have the customer insert his foot over the gauge and stand erect with his weight supported by the foot in a posture similar to that assumed by the foot on the measuring or gauging device. Should the customer then insist on a shorter shoe, the length gauge corresponding to the length of that shorter shoe would be inserted in the shoe preparatory to trying on the shoe, and he will find that his toe strikes against the shorter toe gauge indicating clearly enough that the shoe selected by him is too short for him to wear. However, since the various gauges 12 are all dimensioned in length to fit in the corresponding sizes of shoes, it will usually suffice to get the accurate foot measure by having the customer stand on the gauging device until he finds the appropriate length gauge and then testing by inserting that identical length gauge in a shoe having the length indicated by the gauge.

Each individual gauge, in connection with the back stop or heel gauge, forms in effect a one-dimension size stick giving accurately the foot measurement, but it has this important advantage over the size stick in that, owing to its flexibility, it can be attached to the elevated heel support and will conform to the actual contour of the sole of the foot when in that position. Furthermore, the size stick is not adapted to gauge the foot when the customer is standing on the size stick, so that it takes no account of the extension of expansion in length of the foot when it is supporting the weight of the person, while the individual flexible gauges in conjunction with the fixed heel gauge 6 do precisely register according to this condition.

It will be seen, therefore, that when intelligently used this device accomplishes two purposes. It gives an ocular demonstration to the customer of the over-all length measurement of his foot in its extended or expanded condition when occupying the same posture that it will occupy in the shoes that he is about to purchase. In the second place, the detached length gauge or exact replica of it may be inserted in the shoe to test whether there is sufficient space beyond the tip of the toe of the foot and the tip end of the shoe. Therefore, both by ocular demonstration and by actual trial in the shoe, the customer must be convinced, even against his will, what size of shoe is proper for him to wear, whereas measurements by the usual size stick seldom convince a customer, who wants a short shoe, of his error.

What I claim is:

1. A foot measuring device embracing in its construction, an elevated heel supporting and heel gauging stop means, a flexible length gauging member of predetermined and known length attached at its rear end to said heel supporting means and adapted by its flexibility to follow the contour of the sole of the foot when the heel is elevated in gauging position, said length gauging member being provided at its front end with a stop for engaging the toe of the foot.
2. A foot measuring device embracing a raised heel supporting and heel gauging stop means, means for varying the elevation of the heel support, and a flexible length gauging member of fixed predetermined length-size secured to the heel portion of said support and provided at its forward end with a toe-gauging stop.
3. A foot measuring device embracing in its construction, a raised heel support having a heel-gauging stop and provided with a pair of aligned anchoring pins, a length measuring gauge formed to interlockingly engage with said pins and provided at its forward end with an upstanding toe-gauging stop.
4. A length-size foot measuring gauge embracing in its construction, a thin strip of flexible material provided at its rear end with a pin-receiving notch and at a distance in advance of its rear with a longitudinal slot having an enlargement for engaging a second pin and being provided at its forward end with an upraised toe-gauging stop.
5. A foot-measuring and testing device embracing in its construction, a raised heel-supporting and heel gauging stop member, a length-size gauge adapted to be attached thereto to project forwardly a fixed predetermined distance from the heel-gauging member, said length-size gauge comprising a thin flat elongated flexible strip attachable at its rear end to said heel support, and a raised toe-gauging member fixed to the forward end of said strip at a fixed length-size distance from the rear end thereof, said length-size gauge being capable, when inserted in a shoe, of testing the length of a superimposed foot inserted in said shoe.
6. A foot-measuring and testing device embracing in its construction, a raised heel-supporting and heel gauging stop member, means for elevating said member to different heights to correspond with the heel seat elevation of different styles of shoes and a length-size gauge adapted to be attached thereto to project forwardly a fixed predetermined distance from the heel-gauging member, said length-size gauge comprising a thin flat elongated flexible strip attachable at its rear end to said heel support, and a raised toe-gauging member fixed to the forward end of said strip at a fixed length-size distance from the rear end thereof, said length-size gauge being capable when inserted in a shoe of gauging a superimposed foot inserted in said shoe.
7. A foot-measuring device embracing in its construction, a raised heel-supporting and heel gauging stop member provided with blocks of different predetermined thickness arranged to be moved beneath said heel-support to increase the height thereof a predetermined distance, a length-size gauging member comprising a thin flat elongated flexible strip of predetermined length attached to said heel-supporting member in fixed relation thereto and extending forwardly a fixed distance from the heel-gauging member and adapted through its flexibility to follow the

contour of the bottom of a superimposed foot, said length-size gauging member having fixed to its forward end a raised toe-engaging member.

flexible material of known foot-size length provided at its forward end with a toe stop for engaging the tip of the toe, said strip being secured at its rear portion in predetermined relation to the heel stop and being adapted to follow the contour of the bottom of a superimposed foot when the heel of the foot rests upon said heel-supporting member in engagement with said heel stop.

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5	length-size of a foot in weight-supporting posture with the heel supported at a predetermined height above the level of the ball portion, embracing a heel-supporting member having a stop for engaging the back of the heel, a thin flat strip of	80
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50		125
55		130
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70		145
75		150