

FOOT GAGE.

944,937.

Fig. 1.

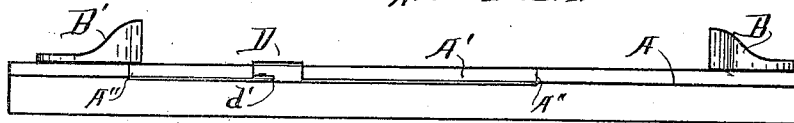


Fig. 2.

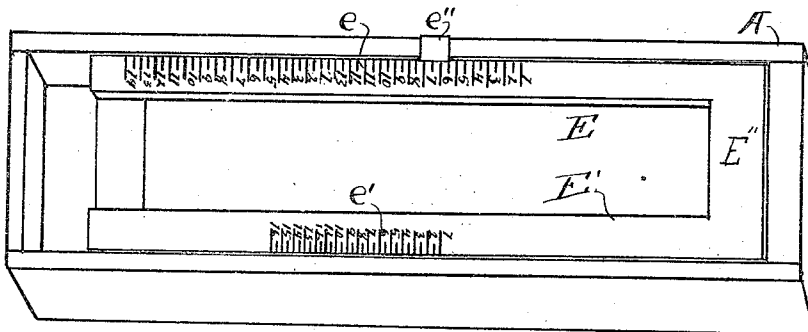


Fig. 3.

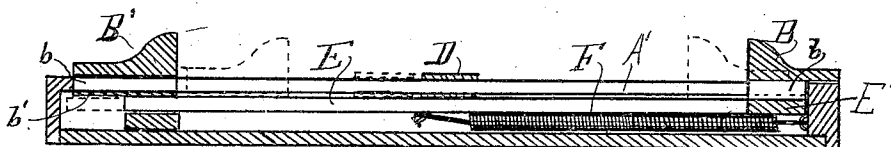


Fig. 4.



Fig. 5.

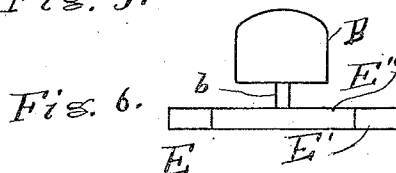


Fig. 6.

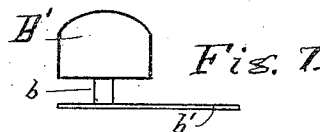


Fig. 7.

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UNITED STATES PATENT OFFICE.

EBENEZER S. BEDFORD, OF GRAND RAPIDS, MICHIGAN.

FOOT-GAGE.

944,937.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed February 15, 1909. Serial No. 478,104.

To all whom it may concern:

Be it known that I, EBENEZER S. BEDFORD, a subject of King Edward of England, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Foot-Gages, of which the following is a specification.

My invention relates to improvements in gages for measuring the feet of prospective shoe purchasers, and its objects are: first, to provide a means whereby the correct measurement of the foot may be taken. Second, to provide a means whereby the heel gage may be adjusted to the position of the foot after the foot has been placed on the surface of the gage without moving the foot. Third, to provide a means whereby the exact position of the ball of the foot is located, relative to the heel, and, fourth, to provide a means whereby the exact length of the heel to ball, ball to toe and heel to toe may be taken at one operation and without inconvenience to the purchaser. I attain these objects by the mechanism illustrated in the accompanying drawing, in which—

Figure 1 is a plan of the gage complete. Fig. 2 is a side elevation of the same. Fig. 3 is a perspective of the same with the cover removed. Fig. 4 is a longitudinal section on the line 4—4 of Fig. 1. Fig. 5 is a perspective of the link that registers the distance of the ball of the foot from the heel. Fig. 6 is a front elevation of the heel gage and its support, and Fig. 7 is a like view of the toe gage.

Similar letters refer to similar parts throughout the several views.

This gage consists of the frame or box, A, over which is placed a cover, A', which is provided with a slot, *a*, that extends nearly its entire length and is designed to form a guide and passage-way for the necks or guides *b b* and D', and is cut away at each side, for a short distance, as at A'', to expose the length-of-foot scale *e*, and the length-of-foot-ball scale *e'*.

The heel gage B is secured, by means of the neck *b*, to the cross piece or head E'', which has two parallel arms E and E' projecting therefrom, on one of which is imprinted the length-of-foot scale *e*, indicating the length of children's shoes from 1 to 13, and the length of adult's shoes in sizes up to 14, and on the other is imprinted a scale of figures ranging from 1 to 16, as indicating

the relative position of the ball of the foot with the heel. These arms and the heel gage form a slide that may be drawn to the left, or toward the toe gage B', by drawing upon the hand piece *e''*, to draw the heel gage against the heel of the foot after it has been placed upon the foot gage for measurement, and the slide and heel gage are drawn back to normal position by any available spring, as, for instance, that shown at F in Fig. 4.

D represents the gage for locating the relative position of the ball of the foot, and it is provided with an opening, *d d*, at each end, which register with the depressions *a' a'* in the top A' and are designed to receive the ball of the foot, or the rounded joint formation at the union of the big toe with the foot bone, and it has, at one end, an index finger *d'* that registers the position of the ball of the foot on the index or scale *e'*. The movement of this gage longitudinally of the foot gage may be greatly facilitated by means of the guide D', to which it may be securely fastened and arranged so that the latter may be easily moved in the slot *a* in the top of the foot gage.

To use this gage, the foot is placed upon the top A' with the ball of the foot in one of the openings *d*, according to which foot is to be measured, thus, if the right foot is to be measured the ball is placed in the left hand, or lower, opening, and if the left foot, the ball of the foot is placed in the right hand opening. The salesman then takes hold of the hand piece *e''* and draws it to the left until the heel gage strikes the back of the heel, when the finger *d'* will register the position of the ball of the foot on the dial or scale *e'*. The salesman then moves the toe gage B' forward until it strikes the end of the large toe, when the finger or slide *b'* will indicate the length of the foot, or, rather, the size of shoe required, upon the scale *e*, after which the hand piece *e''* is released and the spring F will draw the heel gage B back and release the foot so it may be removed.

It is essential that the gage or slide for measuring to the ball of the foot, be made adjustable. First, so that it may be adjusted to any size of foot, and, second, it is found that feet of the same general measurement are seldom of like measurement to the ball, thus, with two feet, both measuring for a number six shoe, one may have the ball located at 8 on the scale and the other one

at 11 or 12. For children's feet this is not so necessary as children's feet are usually as symmetrical as any portion of the body, but as they grow up and acquire a desire to wear as small a shoe as possible, regardless of comfort or health, the feet are frequently badly pinched and distorted out of shape and it is necessary to make measurements accordingly, and, as the ball of the foot is the portion usually distorted, the measurement at this point becomes doubly important, hence the great necessity of providing a foot gage that will make both measurements correctly so that a shoe may be fitted to wear with comfort and, at the same time, be sufficiently shapely to meet the vain-pride of the wearer.

What I claim as new, and desire to secure by Letters Patent of the United States, is:

1. In a foot gage, a box, a cover to said box having a central longitudinal slot and the edges cut away, parallel arms within the box, connected at one end and arranged to slide longitudinally of the box, a spring to draw the arms to normal position, a heel gage secured to the connecting end of said arms and having a neck arranged to slide freely in the slot in the top, a scale upon one of said arms for registering the length of the foot and a scale on the other arm in position to register the length to the ball of the foot, said scales readable where the sides of the cover are cut away, an adjustable slide for gaging the ball of the foot, and an adjustable toe gage.

2. In a foot gage, a box, a cover to said box having a longitudinal slot and the edges cut away for a space, longitudinally adjustable arms within the box, connected at one end, a heel gage having a neck passing through the slot in the cover and attached to the adjustable arms, an adjustable toe gage

having an index finger b' , a slide having openings to engage the ball of a foot, an index finger thereon, and index scales on the arms in position to be made to register with the several index fingers.

3. In a foot gage, a box, longitudinally adjustable arms within the box, having scales of foot sizes thereon, a cover over the box, having a central longitudinal slot and the edges cut away over the foot scales, a heel gage longitudinally adjustable with the arms, a toe gage longitudinally adjustable on the cover, a finger attached thereto in position to register with the foot scale on the arms, and guides registering in the slot to guide the gages.

4. In a foot gage, a box, a cover on said box having a longitudinal central slot, a heel gage and a toe gage and a gage for the ball of the foot, all adjustable in said slot and having index fingers and measuring scales, said fingers made to register with said measuring scales to indicate the length of the foot.

5. In a foot gage, a box, a cover on said box having a longitudinal slot, a heel gage, an adjustable toe gage, a slide having openings for measuring the distance from the heel gage to the ball of the foot, scales for registering the length of the foot and of the ball of the foot from the heel gage, and fingers on the toe gage and the ball of the foot slide to register with the scales to register the length of foot and the length of the ball of the foot from the heel gage.

Signed at Grand Rapids Michigan February 10th 1909.

EBENEZER S. BEDFORD.

In presence of—
I. J. CILLEY,
E. J. NOBLE.