Oct. 22, 1935. E. J. BLISS 2,018,631

TOE GAUGING DEVICE FOR SHOE FITTING

Filed March 2, 1934

Fig. 1.

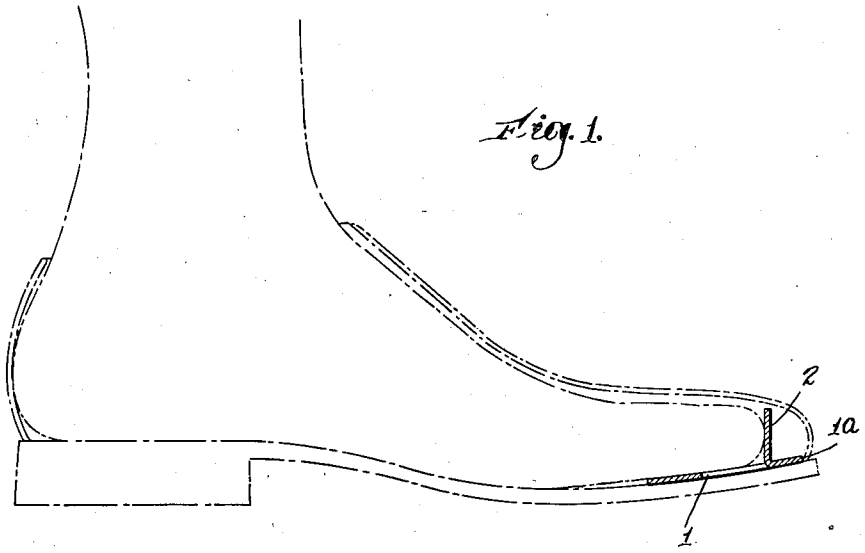


Fig. 3.

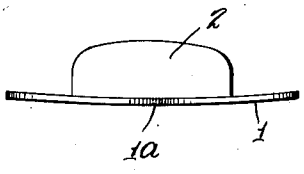
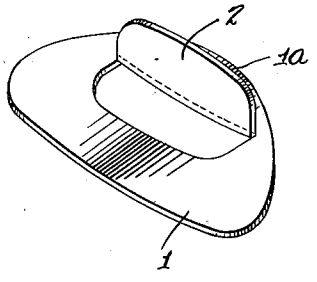


Fig. 2.



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TOE GAUGING DEVICE FOR SHOE FITTING

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4 Claims. (Cl. 33—3)

This invention relates to the fitting of shoes for the purpose of selecting from the stock on hand shoes of appropriate size to correctly fit the foot of a prospective customer.

Experience has shown that there is a very high percentage of the public wearing shoes that are in reality too short to afford proper clearance between the tip of the toe and the tip of the toe cap of the shoe and this results in serious and oftentimes permanent distortion of, and injury to, the foot of the customer.

In my Letters Patent of the United States No. 1,317,681 dated October 7, 1919, I disclosed a length gauge comprising a flexible blade corresponding to each size length and half size length measurements of shoes, to whose forward end was secured a toe block arranged to intervene between the tip of the toe and the tip of a shoe corresponding in length to the length of the blade. While this device served to give warning as to the deficiency of clearance space between the tip of the toe and that of the toe cap of the shoe, there was required a complete set or range of gauges corresponding to each of the length sizes and half sizes and, furthermore, a gauge of this type, that was considerably shorter than the inside length of the shoe to be tried on, might be held rearwardly of its forward possible limit of movement by the pressure of the rear part of the foot on the underneath blade, so that through careless or negligent handling of the gauge the toe of the inserted foot might form contact with the rear of the gauge block even when the gauge block was some distance back of the toe into which it was supposed to fit.

The present invention is intended to provide a toe gauging element which shall be applicable to shoes of substantially different lengths and constructed so that there is no danger of its being pinched under the rear part of the foot to prevent complete movement into the toe cap, since when this toe gauge is dropped into the shoe, the toe of which is held downwardly, it not only assumes the position in the extreme tip of the toe cap but is so formed that the insertion of the foot acts, through the big toe, to push the device forward into the extreme tip portion of the toe part of the shoe.

In the accompanying drawing I have illustrated the construction of this improved toe gauge, in which

Fig. 1 is a side elevation in central cross section showing the positioning of the toe gauge in the extreme tip of the toe part of the shoe and its relation to the tip of the great toe of an inserted foot, both the shoe and the foot being shown in dotted lines.

Fig. 2 is a perspective view of the toe gauge removed from the shoe.

Fig. 3 is a rear elevation of the toe gauge.

The device may be made of any suitable material but I prefer, for reasons of convenience and economy, to make the device of pressed metal such as steel, brass or the like.

As shown the device is made from a single piece of metal, whose forward edge is convexly curved, as shown at 1a, to approximately correspond to the inside curvature of the toe portion of a shoe. At a distance which may vary one length size, namely, one-third inch, to several length sizes, there is formed an upturned lip 2, which may be struck out of the sheet metal plate 1 and is of sufficient vertical width to gauge against the tip of the great toe, while at the same time not being too high to prevent its insertion into the extreme forward part of the toe of the shoe.

Preferably, the plate 1 is transversely curved, as shown in Fig. 3, to just a sufficient degree to correspond substantially with the inside surface of the shoe bottom at this point. It will of course be understood that several of these toe plates may be provided, having different lengths of set-back from the front edge of the plate 1 according to the amount of clearance that may be desired, usually varying from one and a half to as high as four length sizes.

Whatever may be the practice in different localities or different stores when the customer is to be fitted the appropriate toe gauge is selected and dropped, tip first, into the toe of the shoe. The foot is then inserted and, as the big toe slides along the bottom of the shoe, it tends to push the device ahead of it if it has not already reached the forward limit of its movement and then the toe slides over the rearward portion of the plate to gauging position. As the weight of the person preferably rests on the ball portion of the foot, when making the selection there is no discomfort by reason of the toe overlying the rear portion of the gauge. If, when the foot has been fully inserted, the toe forms contact with the upstanding lip or contact member of the device it is an indication of insufficient clearance and therefore a somewhat longer shoe should be tried on. Except for making provision for different lengths of clearance or extension between the tip of the toe of the foot and the tip of the shoe, a single toe gauge may be used for a considerable range of sizes of shoes.

The device is one that can be readily carried in the pocket so that the customer may, if desired, carry his own toe gauge having the desired amount of clearance or extension when selecting his own shoes. This of course would hardly be practicable with the type of toe gauge shown in my former patent, since each gauge of that type should preferably correspond precisely to the length of shoe that is to be tried on, whereas the present device is dimensioned to have its rear edge some distance forward of the ball of the foot and overlapped only by the forward portion of the toe to secure the described action.

What I claim is:

1. A toe gauge for shoe fitting embracing a plate having a convexly curved forward edge approximately corresponding to the interior curvature of the toe of the shoe and terminating at its rear substantially in advance of the ball of the foot when in its gauging position, said plate being provided rearwardly of said forward edge with an upstanding gauging lip extending transversely of the shoe axis in opposition to the tip of the toe of an inserted foot.

2. A toe gauge for shoe fitting embracing a plate adapted to rest upon the upper surface of a shoe bottom and having a convexly curved forward edge adapting it to be pushed into the extreme tip portion of a shoe and having its rear end terminating substantially in advance of the ball of the foot when in its gauging position, said plate being provided intermediate of its forward and rear edges with an upstanding tip adapted to form a gauge opposed to the toe of an inserted foot to indicate insufficient length of the shoe for the foot being fitted.

3. A toe gauge for shoe fitting embracing an integral member formed of pressed metal having its front edge convexly curved to be fitted into the extreme toe portion of a shoe and having its medial portion struck up to form a transverse upstanding lip at a predetermined distance rearwardly of the forward edge of the plate to form engagement with the tip of the toe of an inserted foot to indicate thereby insufficient clearance space for such foot in the shoe.

4. A toe gauge for shoe fitting embracing a plate having a convexly curved forward edge adapted for insertion into the extreme tip portion of the toe and having a transverse rear edge arranged to lie across that portion of the interior of the shoe bottom that subtends the great toe of an inserted foot so as to overlap but terminate beneath said toe, the medial portion of said gauge being struck up to form an upstanding lip in opposition to the tip of the inserted toe at a predetermined distance rearwardly of its front edge.

ELMER J. BLISS.