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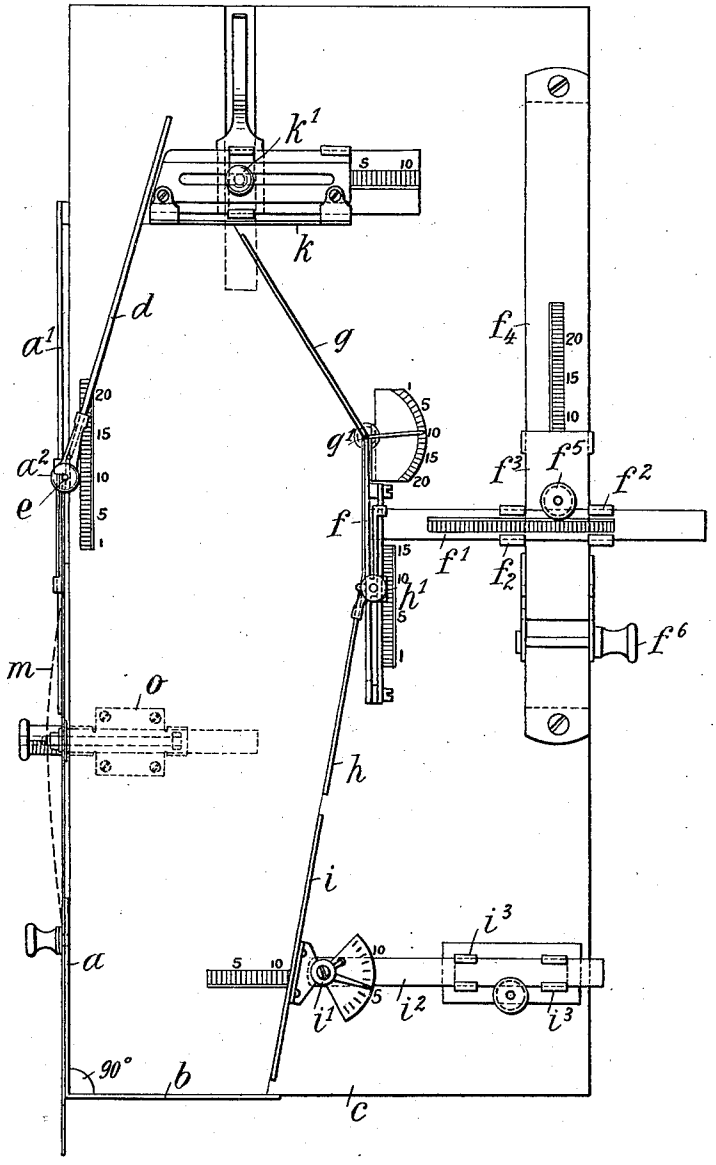
APPARATUS FOR DETERMINING THE SHAPE OF A FOOT.

APPLICATION FILED MAY 3, 1910.

996,910. Patented July 4, 1911.



Witnesses.

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APPARATUS FOR DETERMINING THE SHAPE OF A FOOT.

996,910. Specification of Letters Patent. Patented July 4, 1911.

Application filed May 3, 1910. Serial No. 559,201.

To all whom it may concern:

Be it known that I, WILHELM DÄUKER, a subject of the King of Prussia, German Empire, and a resident of Warsaw, Russia, have invented certain new and useful Improvements in Apparatus for Determining the Shape of a Foot, of which the following is a specification.

In making shoes and boots it has been heretofore the rule, besides measuring the circumference of the foot at different places, to determine its shape. This was done by placing the unshod foot on a sheet of paper and then drawing the outline of the foot with a pencil. With the help of the shape of the foot and of the different measurements taken the last for the shoe or boot was then either made or selected from the stock on hand and if necessary the lasts were adjusted to fit by means of leather-pieces laid on. It heretofore depended more or less on the skill of the shoemaker whether the shape was correctly drawn. As the foot is curved toward the sole, it depended entirely on how the pencil was held, when the lines were being drawn around the foot.

The object of the present invention is an apparatus for exactly determining the shape of the foot. The apparatus has also the great advantage of allowing of the registration in scales of the measurements taken. If, for instance, a shoe factory fabricates the different sizes of shoes and boots in accordance with these scales, it is sufficient to determine the shape of the customer's foot by means of the new apparatus in order to choose from the stock the exact size and shape needed, as all the stock is sorted according to the measurements taken by the new apparatus.

The accompanying drawing represents a plan view of a foot mapping apparatus embodying my invention

The apparatus consists of upright ledges (a) and (b) preferably of metal which are fixed on a foot-plate (c) at right angles to each other. The continuation (a_1) of the ledge (a) has a movable tongue (d) formed of a similar ledge which is pivoted at (e) by a vertical pin. This pivot can be moved back and forward along the ledge (a), and can be fixed in any position by a set-screw (a_2). Opposite the ledge (a_1) and parallel to it, a ledge (f) is arranged which can be moved parallel to itself and in its longitudinal direction. The parallel movement is effected by ledge (f') passing through guides (f_2). The longitudinal movement is effected by the plate (f_3) on guide (f_4). The fixing of ledge (f) is effected by set-screws (f_5) and (f_6).

The ledge (f) has a rotatable ledge (g) at its front end which stands upright on the foot-plate (c) the same as ledge (f) and turns on a pivot g_1 of ledge f. The latter has also at the rear end a rotatable ledge (h), the pivot (h') of which can however be moved back and forward on the ledge (f). An adjustable ledge (i) is arranged at the rear end of the apparatus opposite to ledge (a) and pivoted at (i_1) on the guide bar (i_2). The guide bar (i_2) passes through guides (i_3) so that ledge (i) can be moved to and from the ledge (a). The ledge (i) can at the same time be adjusted parallel to ledge (a) or at a certain angle to the same. Finally a ledge (k) is arranged opposite ledge (b) and shiftable parallel to ledge (b), which can besides be moved to and fro in its longitudinal direction. It can be fixed in any position by set screws (k_1).

The apparatus is used as follows: After the rotatable ledge (d) is moved to the left, the ledge (g) to the right, ledge (k) backward, the parallel shiftable ledge (f) as well as the ledge (i) back from the ledge (a), the right foot is placed on the foot-plate (c), so that the heel abuts against the ledge (b) and the inside of the foot is placed along the ledge (a—a_1). The pivot (e) of the tongue (d) on ledge (a), is then moved so that the pivot corresponds with the main joint of the big toe and the tongue (d) is turned toward the right until it touches the big toe. On the opposite side of the foot the ledge (f) is moved so far as to touch the foot and is then moved longitudinally until the pivot (g_1) of the tongue (g) corresponds with the end of the small toe. The tongue (g) is now turned toward the left until it touches the tops of the toes that is to say in direction to the big toe. The tongue (h) is turned so that it touches the ball of the foot, while the tongue (i) is so adjusted that it touches the outside of the heel. The ledge (k) is moved toward the ledge (b) until it touches the big toe. When the tongues or ledges have been adjusted to touch the foot in the described manner, they are secured in position by means of set screws and in this way determine the shape of the foot. The foot can now be removed.

If a sheet of paper is placed on the foot-plate before use, the shape can be drawn with pencil by following the lines of the ledges. It is then only necessary to round off the corners of the pattern in order to get an exact shape of the foot for making a properly fitting last. Scales are arranged on the foot-plate along the different movable tongues and ledges so that the shapes of the different feet can be noted by using the scales and one can at any time adjust the apparatus to the shape of any special foot.

The above described construction is intended for a normal right foot. The apparatus for the left foot can be made accordingly following this description. If the apparatus is needed for a flat-foot the device (o) shown in dotted lines in the drawings is to be used. An elastic band (m) is inserted in the ledges (a—a_1), which by means of any known device can be more or less bulged so that it fits the inside of the flat-foot. The shape of a flat-foot can consequently also be properly determined.

I claim:

Apparatus for determining the shape of a foot characterized by the fact that it consists of two ledges (a, a_1 and b) fixed on the foot-plate at right angles to each other; of a ledge (d) hinged to one (a, a_1) of these ledges; of a ledge (f) lying parallel to ledge (a) and shiftable in a longitudinal direction and also crosswise; of a ledge (g) hinged to ledge (f) and for a further ledge (h), the pivot (h_1) of which is movable along ledge (f); of a ledge (i) movable toward ledge (a, a_1) and adjustable at an angle to the same and of a ledge (k) movable parallel to ledge (b); scales being arranged underneath the rotatable and movable ledges so that, when the foot is placed on the foot-plate with the heel against ledge (b) and with the inside against ledges (a a_1), the other parts can be moved toward the foot forming together with the rigid ledges the shape of the foot and allowing of reading the measurements of the latter on the scales.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WILHELM DÄUKER.

Witnesses:
THOMAS MILES,
CYRILL TREDNID.