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## UNITED STATES PATENT OFFICE.

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DEVICE FOR STRAIGHTENING DEFORMED OR CLUB FEET.

1,301,491.

Specification of Letters Patent. Patented Apr. 22, 1919. Application filed April 30, 1918. Serial No. 231,641.

To all whom it may concern:

Be it known that I, GUSTAVE A. NELSON, a citizen of the United States of America, residing at Galloway, in the county of Mara-5 thon and State of Wisconsin, have invented new and useful Improvements in Devices

for Straightening Deformed or Club Feet, of which the following is a specification. The present invention comprehends gen-

10 erally improvements in that class of inventions known as surgery and more particularly relates to a device for straightening deformed or club feet.

As the primary aim and object this in-15 vention contemplates the provision of a device of the above mentioned character designed to be attached to the leg and deformed foot of a small child or infant and worn inside of the shoe and stocking with-

20 out inconveniencing the wearer for assuring the straightening of the deformed foot. It is an additional object of this invention to provide a device of the above mentioned character wherein the construction
25 is novel in form and is capable of being

- readily attached to the leg and the foot when the latter is in its unnatural position and subsequently adjusted to maintain the deformed foot in a desired position.
- 30 More particularly the present invention embraces the provision of a device of the above mentioned character wherein a supporting and attaching member or lever is employed in conjunction with an adjustable
- 35 foot engaging member for assuring of the straightening of the deformed foot of an infant or small child.

It is the more specific object of this invention to provide improved means for at-40 taching the device in position.

Among the other aims and objects of this invention may be recited the provision of a device of the character described with a view to compactness, and in which the num-45 ber of parts are few, the construction simple

and the cost of production low and the efficiency high.

Other improvements and novel details in the construction and arrangement of the 50 various parts of the apparatus will be brought out more in detail in the description to follow, which for a clear understanding of the invention should be considered in connection with the accompanying draw-55 ings forming a part hereof, and wherein is disclosed for the purpose of illustration a convenient and satisfactory embodiment of the invention. It is to be noted in this connection that minor changes may be made without departing from the principle of 60 operation of the various parts.

The invention is clearly illustrated in the accompanying drawings, in which:---

Figure  $\overline{1}$  is a perspective view of the device applied.

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Fig. 2 is a vertical section thereof, and Fig. 3 is a horizontal view of the invention.

Similar characters of reference are employed in all of the above described views 70 to indicate corresponding parts.

Referring now, more particularly, to the accompanying drawings there is provided a main lever 1 which is desirably formed from a piece of relatively narrow and flat resilient 75 metal. This lever is designed to be movably arranged in a loop 2 carried by an arcuate clip 3 which in turn carries a pad 4 for a purpose that will hereinafter become apparent. Pivotally connected by means of a 80 rivet 5 to the lower end of the short portion 6 of the lever is a foot engaging brace indicated in its entirety by the numeral 7. This brace consists of an arcuate heel engaging portion 8 and a bendable foot straightening 85 portion 9. Carried by the upper end of the leg portion 10 of the lever 1 is a padded clip 11.

In using the device the foot engaging member is placed against the outside of the 90 foot when the foot is in its unnatural position while the front part of the foot is moved toward a natural position to the extent of pressure a child is able to withstand whereupon the foot is held against the foot 95 straightening portion 9 of the member 7 by means of bands 12 and 13 formed of pieces of adhesive tape. The clip 3 is now secured to the outer side of the leg at a point slightly above the ankle joint by means of bands 14 100 formed also of strips of adhesive tape. Finally the clip 11 is secured to the upper por-tion of the leg slightly below the knee by means of a band 15 formed of a piece of adhesive tape. The device is now left in 105 this position for about a week after which it may be removed and a new adjustment made by forcing the long portion 10 of the lever outwardly or forwardly consequently exerting an additional pressure on the lower por- 110 tion 6 to move the latter farther toward the left and maintaining the foot in close relation with the foot engaging member 7. Of course, if desired a padding 16 may be connected to the padded clip between the clip and the leg to assure of the maintenance of 5 the lever 1 in the desired position of adjustment. Also when desired the foot straightening portion 9 of the member 7 may before applying the bands be bent outwardly from the side of the foot with the hands to assure
10 of the turning of an inwardly curved club foot outwardly. Inasmuch as the member 7 is pivotally connected to the lever free movement of the foot at the ankle joint is permitted. Likewise by reason of the peculiar

 <sup>15</sup> construction it is apparent that the device may be worn inside of stockings and shoes without inconveniencing the wearer.

It is believed in view of the foregoing description that a further detailed description of the invention is entirely unnecessary. Likewise the advantages of the invention will be readily apparent.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limited sense. It is also to be understood that the language used in the following claims is intended to cover all the generic

and specific features of the invention which as a matter of language might be said to fall 35 therebetween.

Having thus fully described the invention what is claimed and desired to be secured by Letters Patent is:

1. A device of the character described in-40 cluding an attaching pad, a lever movably connected to the pad, a foot engaging member pivotally connected to the lower end of the lever, means for clamping the member to a foot, means for securing the pad to the 45 leg of the wearer and means for connecting the upper end of the lever to the leg of the wearer.

2. A device for straightening club feet consisting of an attaching pad, a loop carried thereby, a lever movably mounted in the loop said lever being formed from a piece of resilient metal, a foot engaging member pivotally connected to the lower portion of the lever and embodying a curved heel engaging portion and a bendable foot straightening portion, bands for connecting the foot straightening portion of the foot engaging member to the foot, means for connecting the pad to the leg at a point above the ankle joint and means for connecting the upper end of the lever to the upper portion of the leg of the wearer.

In testimony whereof he affixes his signa-

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ture.