

March 10, 1953

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2,630,801

CORRECTIVE SPLINT FOR DEFORMED FEET

Filed Oct. 30, 1950

2 SHEETS—SHEET 1

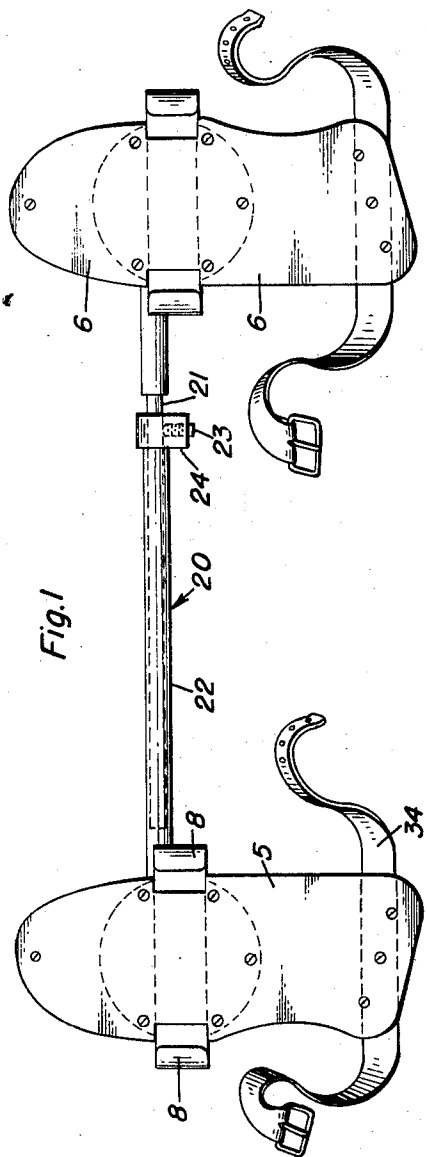


Fig. 1

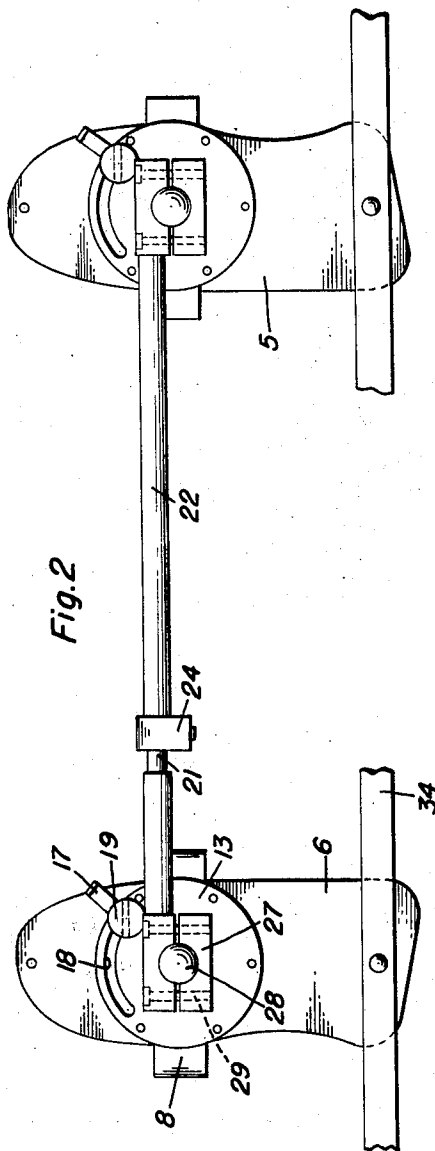


Fig. 2

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2 SHEETS—SHEET 2

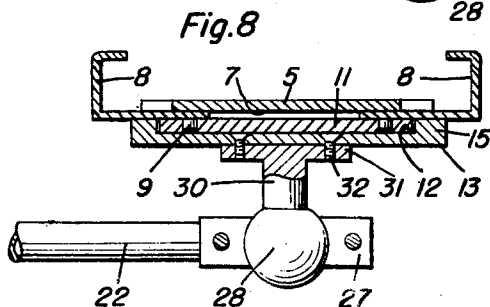
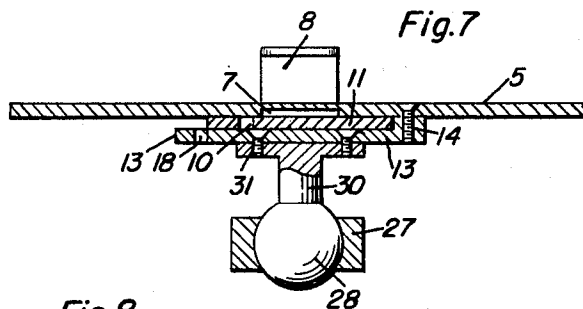
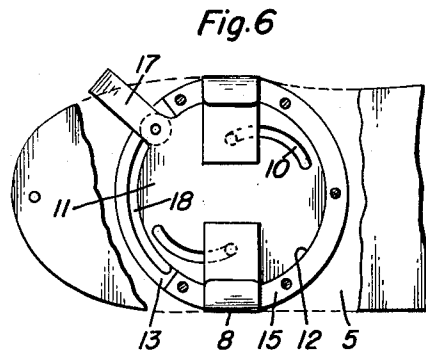
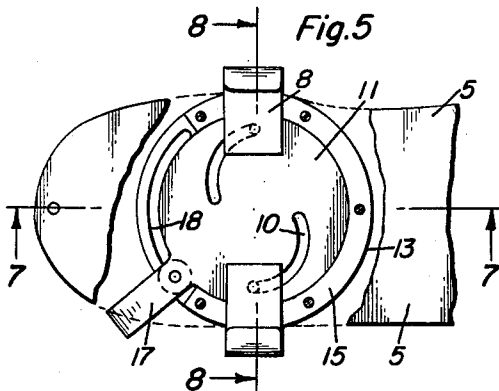
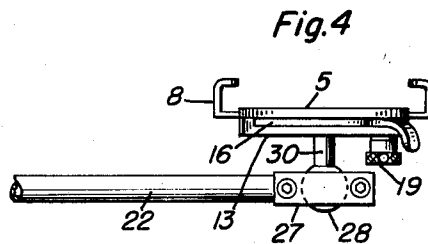
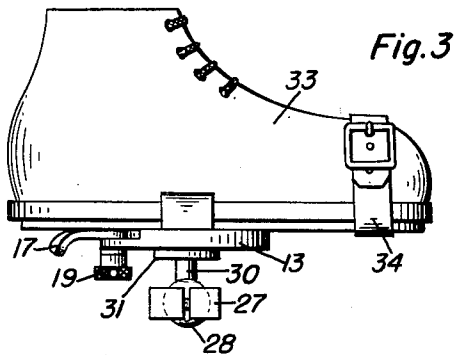
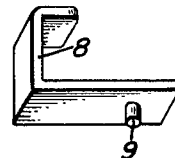


Fig. 9



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UNITED STATES PATENT OFFICE

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CORRECTIVE SPLINT FOR DEFORMED FEET

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Application October 30, 1950, Serial No. 192,844

2 Claims. (Cl. 128—80)

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The present invention relates to new and useful improvements in splints and more particularly to a corrective splint for the treatment of clubfoot.

An important object of the invention is to provide a splint for each foot with means connecting the splints to each other in adjusted position and wherein each splint may be universally adjusted independently of the other on the connecting means.

Another object is to provide a foot plate with adjustable shoe clamping means to firmly clamp shoes of various sizes on the plate.

A further object is to provide the foot plates with interchangeable shoe clamping means and foot holding tapes whereby the plates may be secured directly to the feet of infants not yet wearing shoes.

A still further object is to provide a device of this character of simple and practical construction, which is efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a top plan view;

Figure 2 is a bottom plan view;

Figure 3 is a side elevational view;

Figure 4 is an end elevational view of one of the foot plates;

Figure 5 is an enlarged fragmentary bottom plan view of the shoe clamping means shown in open position;

Figure 6 is a similar view showing the shoe clamping means in closed position;

Figure 7 is an enlarged longitudinal sectional view taken on a line 7—7 of Figure 5;

Figure 8 is an enlarged transverse sectional view taken on a line 8—8 of Figure 5; and

Figure 9 is a perspective view of one of the shoe clamps.

Referring now to the drawings in detail, wherein for the purpose of illustration we have disclosed a preferred embodiment of our invention, the numerals 5 and 6 designate a pair of foot plates of duplicate construction, except for a variation in shape to provide a right and a left plate, and accordingly a detailed description of one will suffice for both.

Each foot plate is formed at its underside with

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a transverse groove 7 to slidably receive a pair of shoe clamps 8 for inward and outward sliding movement at the sides of the plate and each clamp is provided at its bottom with a pin 9 sliding in eccentric or cam slots 10 in a cam disk 11 rotatable in a recess 12 in the upper surface of a supporting plate 13 attached to the underside of the foot plate by screws 14. Recess 12 provides a rim 15 at the edge of plate 13 which is interrupted at one side to form a circumferential slot 16 between the foot and supporting plates to receive a lever 17 projecting radially from the periphery of cam disk 11. An arcuate slot 18 is formed in supporting plate 13 and lever 17 is tapped to receive a set screw 19 working in slot 18 and tightened against supporting plate 13 to hold the lever and cam disk 11 in adjusted position.

The pair of foot plates 5 and 6 are connected to each other by an extensible bar 20 composed of a rod 21 and a tube 22 telescoping on the rod and secured in adjusted position by a set screw 23 in a head 24 at the end of the tube.

The rod 21 and tube 22 project outwardly from sectional sockets 27 in each of which a ball 28 is clamped in swivelly adjusted position by set screws 29. The ball is formed at the lower end of a stem 30 having an attaching plate 31 for securing to the underside of supporting plate 13 by screws 32.

In the operation of the device, the shoe 33 of a deformed foot is clamped on each foot plate 5 and 6 by the clamps 8 which engage the sides of the shoe sole adjacent the arch. The clamps are moved inwardly and outwardly by swinging lever 17 which turns cam disk 11 and the cam slots 10 in the cam disk and pins 9 on the clamps actuate the clamps. The shoe may also be held by a strap 34 attached to the toe of the foot plate and strapped to the toe of the shoe.

The foot plates and shoes are adjusted with respect to each other by means of the balls 28 and sockets 27 to adjust the angle of the feet being treated and the feet may also be adjusted relative to each other by the extensible bar 20.

In the case of infants, the foot plates 5 and 6 may be attached directly to the feet by removing clamps 8 and inserting a strap (not shown) in transverse groove 7.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in this

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art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even through there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. In a foot splint, a pair of foot plates, shoe clamping means at the underside of the foot plates, and means connecting the foot plates to each other and comprising a ball attached to the underside of the shoe clamping means, an extensible bar, and a two-part socket at each outer end of the bar, one of said parts being integral with the bar, and fastening means connecting the two parts of the socket to each other in swivelly adjusted position to the ball.

2. In a foot splint, a pair of foot plates, shoe-clamping means on said foot plates, an attaching plate secured to the under-surface of each foot plate, a stem depending from each attaching plate, the free end of each stem terminating

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in a ball, an extensible bar interconnecting said foot plates, two-part socket members on the outer ends of said bar receiving said balls for clamping the foot plates in adjusted positions, one part of each socket member being integral with its associated bar, the other part of each socket member being separable from its associated bar, and set screws adjustably connecting the parts of each socket member to one another to frictionally clamp the ball therein against movement.

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