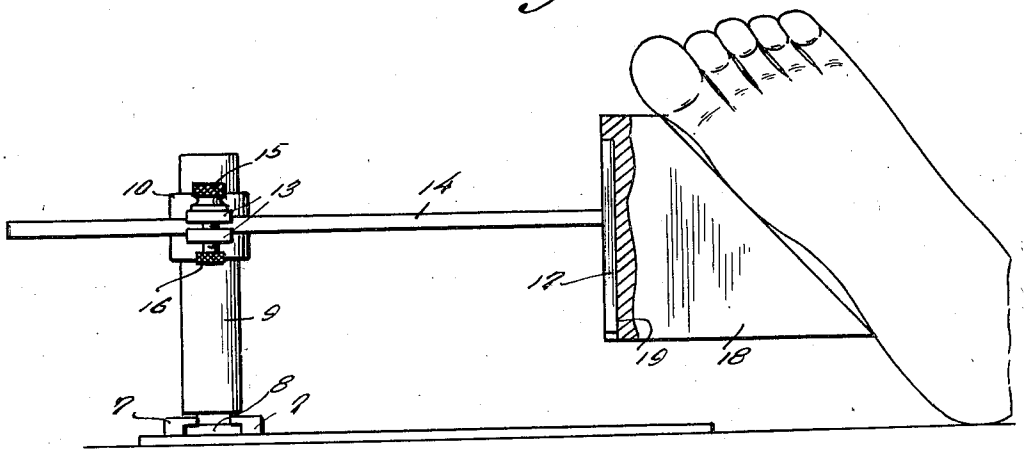
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ADJUSTABLE SUPPORT

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Fig. 1.



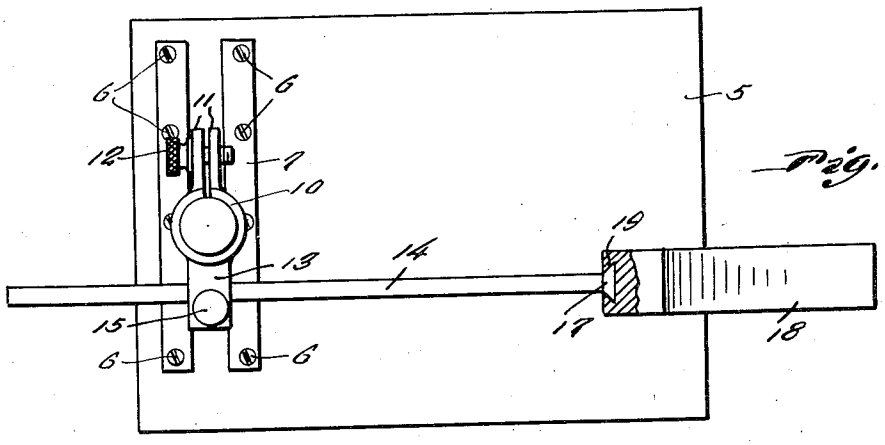


Fig. 2.

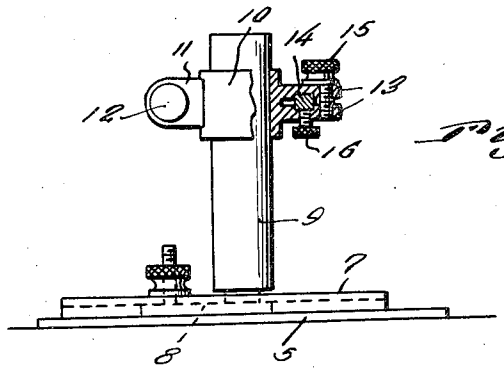


Fig. 3.

Inventor

John D. Piotrowski

By Clarence O'Brien and Hyman Berman

Attorneys

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Fig. 4.

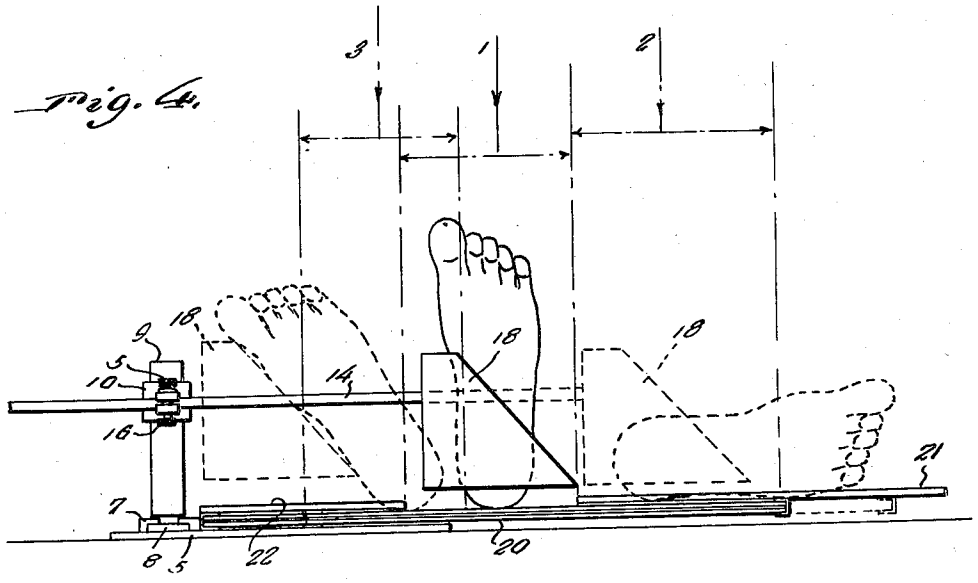
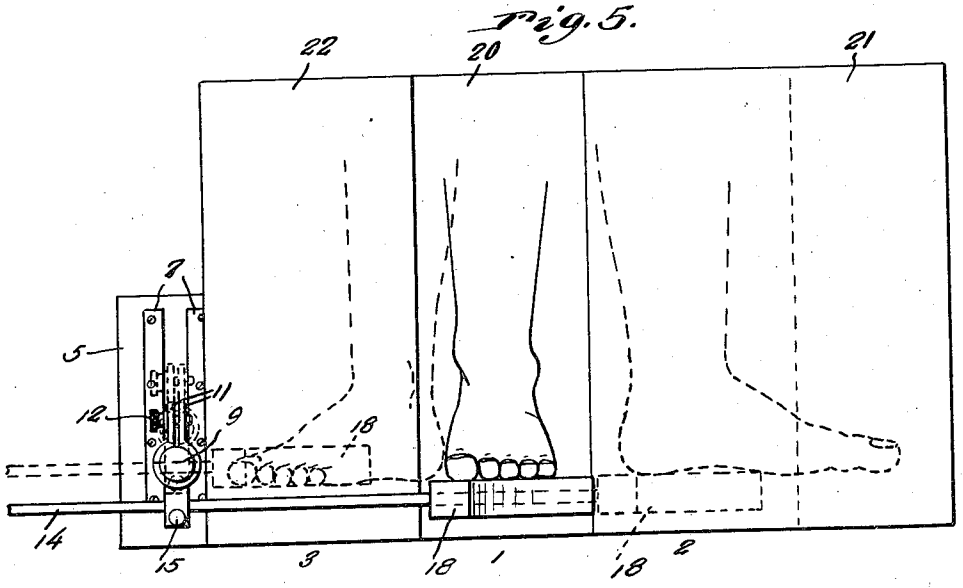


Fig. 5.



Inventor

J. D. Piotrowski

By Clarence A. O'Brien and Hyman Berman

Attorneys

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ADJUSTABLE SUPPORT

John D. Piotrowski, Elizabeth, N. J.

Application June 20, 1938, Serial No. 214,853

3 Claims. (Cl. 250—50)

This invention relates, generally, to X-ray photography; and the invention has reference more particularly, to a novel adjustable support for supporting the foot at the ankle in a manner to facilitate the taking of oblique X-ray views of the ankle.

At the present time in the regular anterio-posterior and the lateral views frequently fractures of the distal end of the fibula are not visualized on the X-ray pictures due to an overlapping of the tibia and the os calcis obstructing the distal end of the fibula from view.

An object of the present invention is the provision of a device whereby the ankle is supported so that such fractures as above referred to will clearly show on the X-ray pictures.

The invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings wherein:—

Figure 1 is a side elevational view of the invention with certain parts broken away and shown in section,

Figure 2 is a top plan view of the device,

Figure 3 is a view taken at right angles to Figure 1 with certain parts broken away and shown in section.

Figures 4 and 5 are views illustrating the application and advantages of the invention.

Referring to the drawings by reference numerals it will be seen that the support, in accordance with the present invention, and in the preferred embodiment thereof, comprises a suitable base 5 which adjacent one end thereof has secured thereto by screws or other fastening elements 6 spaced parallel guide strips 7 that extend transversely of the base.

Slidably accommodated between the guides 7 is a slide block 8 secured at the desired position of adjustment by a set screw carried thereby and from which rises a supporting post 9. Fitted about the supporting post 9 is a split clamp 10 that at the ends formed by the split is equipped with integral apertured lugs 11 that accommodate a screw 12 through the medium of which the clamp is contracted about the post 9 and thereby secured at the desired position of vertical adjustment on the post.

The clamp 10 has projecting from the side thereof diametrically opposite to the lugs 11 a pair of upper and lower clamping jaws 13 which are normally urged toward one another into clamping engagement with a supporting bar 14 through the medium of a screw 15 threadedly engaged therewith.

The bar or rod 14 is adjustable transversely with respect to the jaws 13 and is secured at the desired position of adjustment through the medium of a set screw 16 that is threadedly engaged with the lower jaw 13 and is adapted to be threaded home into binding engagement with the bar 14.

The bar 14 as shown extends longitudinally of the base 5 and is provided on one end thereof with a perpendicular mortise head 17.

Adapted to be detachably mounted on the head-equipped end of the bar 14 is a substantially triangular supporting block 18 that at one edge thereof is provided with a mortise groove 19 that conformably accommodates the head 17 in a manner to quickly detachably secure the supporting block perpendicularly on the head-equipped end of the bar 14.

With the block 18 thus mounted on the bar 14 it will be seen that the inclined edge of the block is positioned so as to permit the foot of the patient to rest thereon in a manner shown in Figure 1, that is with the side of the foot in contact with the edge of the block 18.

As will be appreciated it will be necessary that the block 18 be formed of material as will not throw a shadow on the exposed X-ray film. In actual practice a block of soft wood, such as white pine, has been found excellent for this purpose.

As shown in Figure 1 in actual practice when the patient lying in the prone or in the supine position places the foot on the block it will lay evenly thereon and without any angulation of the X-ray tube the fibula is thrown out so that the entire fibula is visualized including the distal end.

It will also be apparent that the device is susceptible to maximum adjustment, the supporting block 18 being positioned at any point laterally of the longitudinal center of the base 5 by shifting the post or standard 9 transversely of the post. Also the block 18 may be positioned as desired at any point longitudinally with reference to the length of the base 5 by shifting the bar 14 relative to the jaws 13; while the height of the block 18 may be adjusted by shifting the clamp 10 to the desired position of vertical adjustment on the post 9.

Among the advantages of an invention of this character when used for the purpose designed is that when the cassette is placed on the base 5 three views of the ankle can be made on one film without moving the cassette. In this connection it will be understood that the rod 14 and supporting block 18 are used as an immobilizing de-

vice eliminating the use of sand bags, the desired adjustment for supporting the foot in the desired position being accomplished in the manner above explained.

Also the use of this device as a safety factor will be appreciated when it is understood that through the medium of this device the ankle is so supported as to enable oblique views of the ankle to be taken without necessitating the holding of the ankle or foot by the hand, a practice that is dangerous on the hand due to excessive exposure thereof to the X-ray, resulting often in X-ray burns.

The above enumerated advantages will be best appreciated from the following:—

Referring to Figures 4 and 5 it will be seen that in actual practice the base **5** is placed beneath one end of the cassette **20**. The first X-ray will generally be taken with the foot of the patient, as shown, perpendicular and with the sole of the foot in contact with one of the vertical sides of the block **18** as shown. When the X-ray, with the foot in this position, is being taken end sections of the X-ray film are protected by screens **21**- **22**.

The next view would in all probability be taken with the foot in the horizontal position shown at the right in Figures 4 and 5, and with the sole of the foot in contact with the vertical side of the block **18**. When taking this view screen **22** is dispensed with and screen **21**, which is approximately twice the width of screen **22** is positioned on the cassette **20** for the purpose of covering such area of the film as will not be used in taking this second X-ray.

The third X-ray of the foot will be taken with the foot resting, as shown at the left of Figures 4 and 5, and as also shown in Figure 1, on the inclined edge of the block, the block **18** in this instance thus serving to so support the foot that without any angulation of the X-ray tube the fibula is thrown out so that the entire fibula is visualized including the distal end. When taking this third X-ray, it will be understood that screen **22** will also be placed over the cassette **20** so as to black out the portion of the film not being used in the taking of this third X-ray.

It is thought that a clear understanding of the construction, utility, advantages, and manner of use of the invention will be had by those skilled in the art without a more detailed description.

Having thus described the invention what is claimed as new is:—

1. A support for holding the ankle in a position to facilitate the taking of X-ray views thereof, said support embodying a base on which a cassette is adapted to be placed, a post rising from the base, a clamp carried by the post, a rod passing through the clamp which adjustably holds the rod in parallel position with the base and a block of material through which the rays will pass, said block having one end connected to an end of the rod and its other end sloping downwardly and outwardly from the top edge of the block to the lower edge thereof, said sloping edge forming a rest for a foot and one face of the block being flat and adapted to be engaged by the foot when the foot is not engaging the sloping edge.

2. In a device of the character described, a base, a supporting post disposed perpendicular to the base, means supporting the post on the base for adjustment transversely of the base, a clamp embracing the post and provided with means for securing the clamp at the desired position of vertical adjustment on the post, a bar carried by the clamp, and extending therefrom in parallelism to the base, and a triangular foot-supporting block on one end of said bar.

3. In a device of the character described, a base, a supporting post disposed perpendicular to the base, means supporting the post on the base for adjustment transversely of the base, a clamp embracing the post and provided with means for securing the clamp at the desired position of vertical adjustment on the post, a bar carried by the clamp and extending therefrom in parallelism to the base, and a triangular foot-supporting block on one end of said bar, said bar and said block provided with interengaging means for detachably connecting the block with said bar.

JOHN D. PIOTROWSKI.