

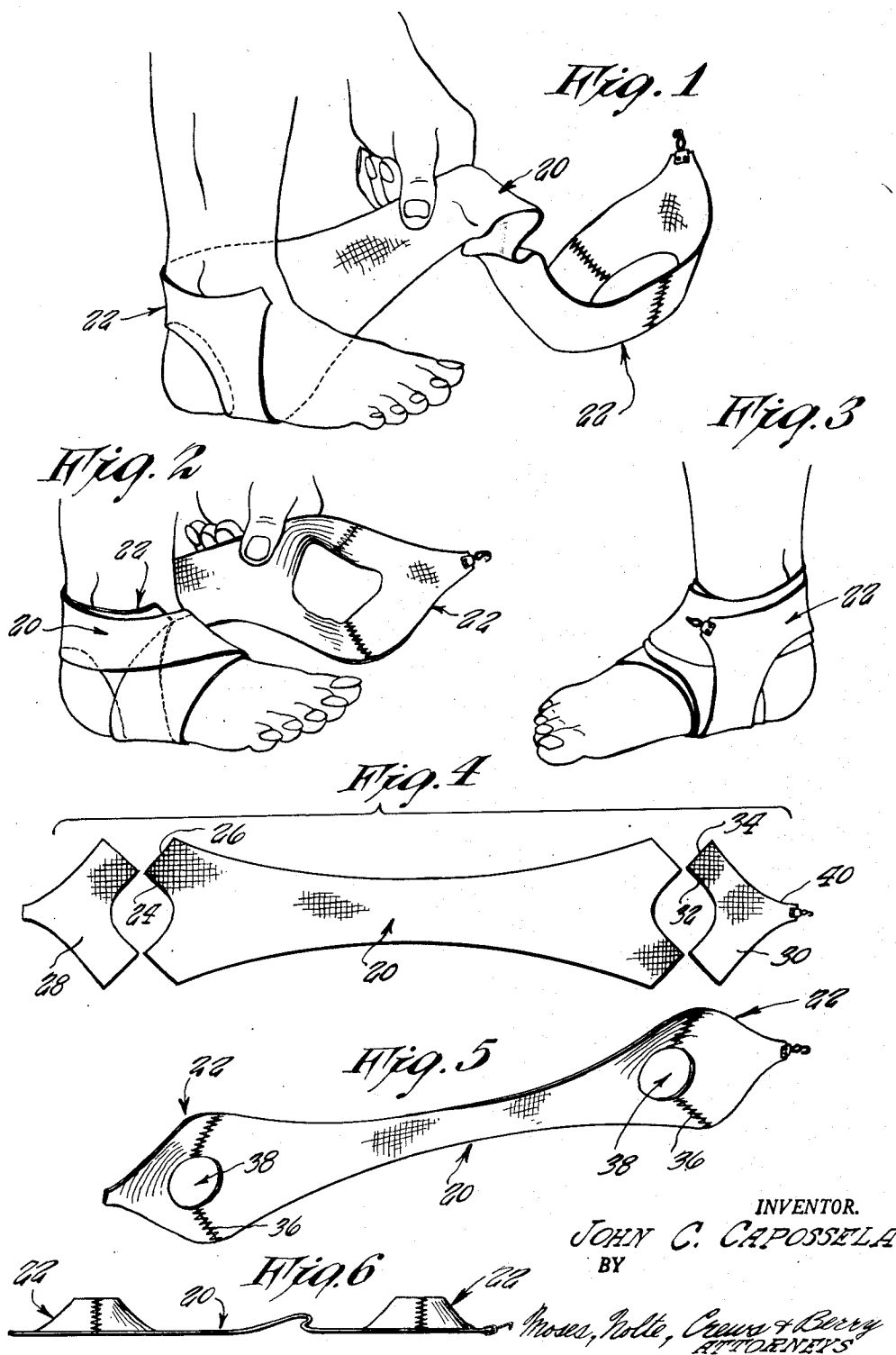
July 14, 1953

J. C. CAPOSSELA
ANKLE AND FOOT SUPPORT

2,645,222

Filed March 1, 1952

2 Sheets-Sheet 1



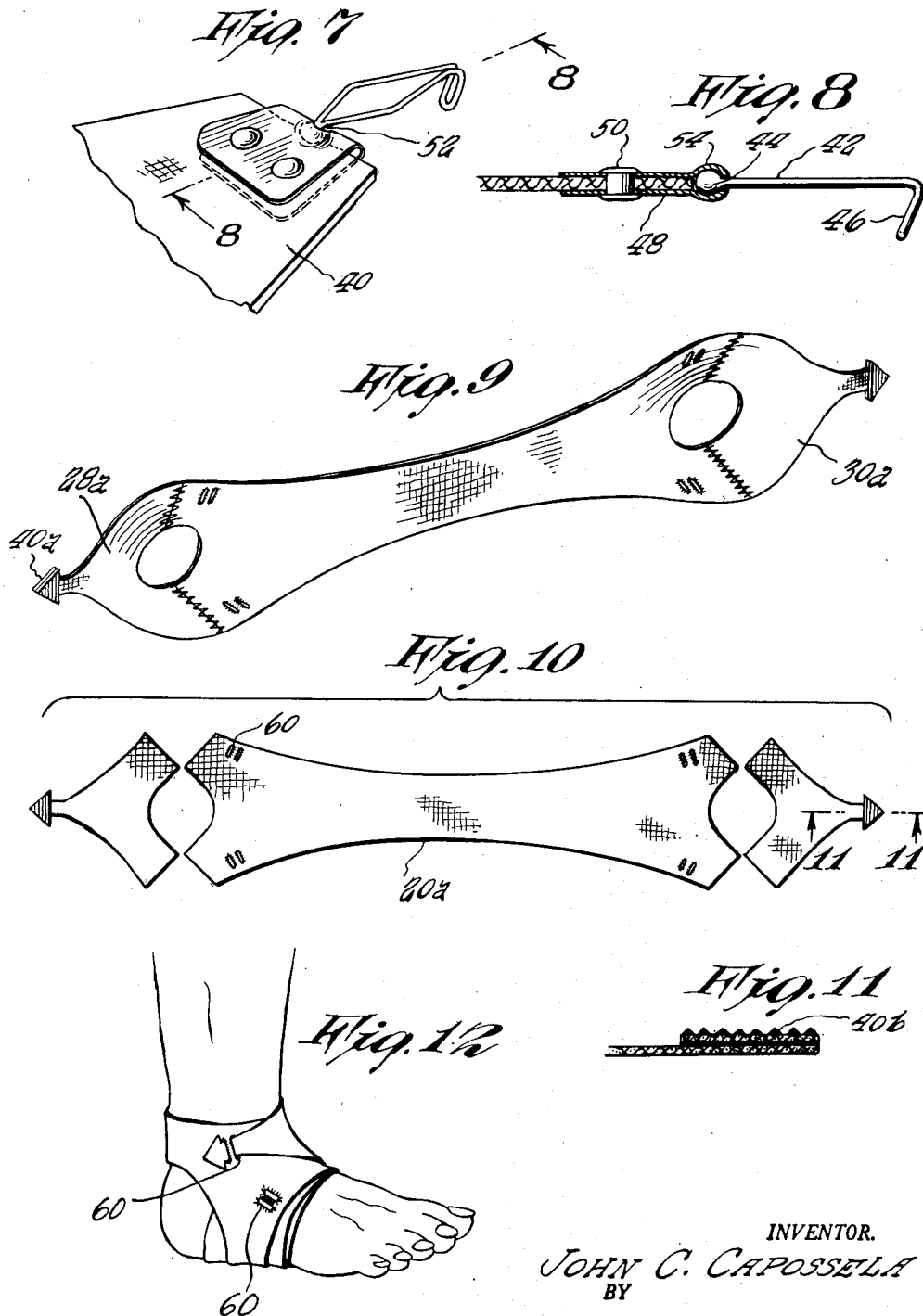
July 14, 1953

J. C. CAPOSSELA
ANKLE AND FOOT SUPPORT

2,645,222

Filed March 1, 1952

2 Sheets-Sheet 2



INVENTOR.
JOHN C. CAPOSSELA
BY
Moses, Holt, Cawes & Berry
ATTORNEYS

UNITED STATES PATENT OFFICE

2,645,222

ANKLE AND FOOT SUPPORT

John C. Capossela, North Tarrytown, N. Y.

Application March 1, 1952, Serial No. 274,364

9 Claims. (Cl. 128—166)

1

This invention relates to anatomical supporters or bandages and particularly to a construction of bandage or supporter adapted to be wrapped around the foot and ankle in multiple layers so as to support and bind the ankle and arch and instep of the foot. The bandage or supporter is shaped and contoured so as to fit the ankle and foot most advantageously and is provided at each end with a recessed portion for engagement over the heel so as to insure the proper location of the bandage on the ankle and foot and prevent displacement of the same therefrom. The construction also provides for ease and rapidity of application.

The object of the invention is to provide a support or bandage for the ankle and foot which is easy to apply, effective in use, and retains its position. The bandage or supporter of this invention may be utilized advantageously either as a protective support to prevent injury to the ankle or foot, or for application where the ankle or foot or both are broken, displaced or sprained.

The invention finds particular utility as a preventive supporter for use by paratroopers, or others, whose feet and ankles are subject to severe or unusual shocks or strain.

In the accompanying drawings which show certain preferred embodiments of my invention:

Figure 1 is a perspective view showing the first step in the application of one form of the supporter to a foot and ankle;

Figure 2 is a view similar to Fig. 1 showing the supporter almost fully applied;

Figure 3 is a view showing the supporter fully applied and in attached position about a foot and ankle;

Figure 4 is a plan view showing three portions of flat material which may be assembled to form a preferred form of the supporter;

Figure 5 is a perspective view showing the supporter after the parts have been assembled;

Figure 6 is a side elevation of the supporter shown in Fig. 5;

Figure 7 is a perspective view of one end of the supporter showing one form of swivel attaching hook secured thereto;

Figure 8 is a longitudinal section on line 8—8 of Fig. 7;

Figure 9 is a perspective view of a modified form of supporter;

Figure 10 is a view in plan showing the three elements of which the supporter shown in Fig. 9 may be made;

2

Figure 11 is a section on line 11—11 of Fig. 10; and

Figure 12 is a perspective view showing the form of supporter illustrated in Fig. 9 applied to an ankle and foot.

Referring to the drawings in detail, the supporter comprises a central bandage or wrap-around part 20 having a heel engaging recess or pocket portion 22 at each end thereof. In use one of the heel engaging pockets is fitted over the heel and the bandage is then wrapped around the ankle and foot one or more times and the second heel engaging pocket is then fitted over the heel and then secured in any suitable manner, whereupon the supporter or bandage supports both the ankle and foot and is firmly held in place by the engagement of the heel with the two heel engaging pockets, as illustrated in Fig. 3.

Referring to the form of the invention shown in Figures 1 and 6 in more detail, it will be seen that the center portion 20 of the bandage comprises a strip or bandage section of flexible material long enough to wrap around the ankle and arch of the foot one or more times, and preferably somewhat narrower at the center than near the ends. In each end of the strip of material is a cut-out or notch 24. At each side of the notch the end of the strip or bandage section is sloped backwardly away from the end of the strip at an angle of about 45° as indicated at 26. Two small pieces of flexible material 28 and 30 are provided, each of which is formed at one end with a notch or cut-out 32 and with sloping surfaces 34. The surfaces 26 and 34 are then brought together and secured in any suitable manner, as by stitching 36, cementing or otherwise, which gives the ends of the supporter a contoured form producing the heel pockets 22 at the bottoms of which are heel openings 38, formed by the cut-outs 24 and 32. The contoured pockets with the holes 38 in the bottom are important for proper engagement with the heel. Obviously, instead of forming the supporter out of three pieces as described, the corresponding heel engaging formations could be produced by other means such as weaving or molding. The appearance of such a supporter would be the same as illustrated, except that no seams would be visible.

The material used for making the supporter can be any suitable flexible material possessing characteristics enabling it to be wound around the foot and ankle properly and of sufficient strength to give the necessary support. Preferably a two-way stretch woven fabric material is

3

utilized, although an elastic plastic material would be very suitable, or the supporter might be made out of flexible leather or of rubber.

The main section 20 of the supporter preferably has its longitudinal edges inwardly curved so that the strip is wider at the ends than at the center. This provides for the making of the heel pocket portions deep enough to cover the ankle protuberances and gives a better support for the ankle joint than can be obtained by the ordinary straight bandage. The curved edges of the central part of the supporter also enables the supporter to be fitted and wrapped most satisfactorily about the ankle and foot.

The end sections 28 and 30 of the supporter are preferably narrowed down and extended to form fastening tabs 40. The tab at the inner end is merely laid against the ankle as shown in Fig. 1; while the tab at the free end of the supporter may be secured to the part of the supporter wrapped around the ankle by any suitable means such as a pin or clasp. Preferably I mount a swivel hook over the tab which may be hooked into the fabric at the desired point to give the proper tension.

I have devised a novel hook construction for this purpose which is shown more particularly in Figs. 7 and 8. As I here illustrate, a bent wire loop 42 is formed so as to provide a ball-like head portion 44 at one end and a hook 46 at the other. A bent sheet metal retaining member 48 is provided which has two side portions between which the end of the tab 40 is received and which are clamped to the tab by suitable means such as rivets or eyelets 50. The bent member 48 has a hole 52 through its bent edge and is pressed out to form socket recesses 54 each side of the hole. Before the bent member 48 is attached to the tab the hook and shank portions of the wire member are passed through the hole 52, the ball end 44 of the member 42 being of too large a size to pass through the hole so that the hook member is retained by the bent sheet metal member, but may turn and swivel therein freely. This permits the hook member to fit flat against the bandage and enables the hook portion 46 to be readily engaged with the fabric so as to hold the end of the bandage in position. Any other suitable hook arrangement may be employed.

In Figs. 9, 10 and 11 I have shown a modification of my invention in which no pin or metal attaching hook is required. In accordance with this construction the end pieces 28a, 30a, of the supporter are each formed with an arrowhead shaped tab 40a which may be stiffened and reinforced by stitching a piece 40b thereon, Fig. 11, or in any other suitable manner.

Formed in the edges of the main member 20a of the supporter are slots 60 which may be engaged by the arrowheads when the supporter is in position, as indicated in Fig. 12, thereby locking the free end of the supporter. A plurality of slots 60 may be provided so as to permit of adjustment. This construction provides a bandage or supporter which is very flat and contains no metal which might possibly damage the user in case of an accident. This type of construction is particularly suitable as a protective supporter for paratroopers or the like.

While certain preferred embodiments of the invention have been illustrated and described in detail, it is to be understood that changes may be made therein and the invention embodied in other structures. It is not, therefore, the intention to limit the patent to the specific construction illustrated, but to cover the invention broad-

4

ly in whatever form its principle may be utilized. I claim:

1. An anatomical supporter for the ankle and foot comprising an elongated bandage section of flexible material of such length as to encircle both the ankle and foot, said supporter having a heel engaging pocket at each end thereof.

2. An anatomical supporter for the ankle and foot comprising an elongated bandage section of flexible material of such length as to encircle both the ankle and foot, said supporter having a heel engaging pocket at each end thereof, said pockets being concave so as to fit around a heel.

3. An anatomical supporter for the ankle and foot comprising an elongated bandage section of flexible material of such length as to encircle both the ankle and foot, said supporter having a heel engaging pocket at each end thereof, said pockets being concave so as to fit around a heel, there being a hole at the bottom of each of said pockets through which a part of the heel projects.

4. An anatomical supporter of flexible material for the ankle and foot comprising a central portion of such length as to wrap about the ankle and foot, said supporter having a portion at each end thereof provided with a hole big enough to receive a part of the heel protruding there-through.

5. An anatomical supporter of flexible material for the ankle and foot comprising an elongated bandage section of such length as to encircle both the ankle and foot, said supporter having a heel engaging pocket at each end thereof, said pockets being concave so as to fit around a heel, the supporter terminating in a fastening tab at at least one end thereof and a hook secured to said tab for engagement with a wound part of the bandage.

6. An anatomical supporter of flexible material for the ankle and foot comprising an elongated bandage section of such length as to encircle both the ankle and foot, said supporter having a heel engaging pocket at each end thereof, said pockets being concave so as to fit around a heel, the supporter terminating in a fastening tab at at least one end thereof and a fastener secured to said tab for engagement with a wound part of the bandage, said fastener including a clamping plate for attachment to the tab and a hook portion swiveled to said plate.

7. An anatomical supporter of flexible material for the ankle and foot comprising an elongated bandage section of such length as to encircle both the ankle and foot, said supporter having a heel engaging pocket at each end thereof, said pockets being concave so as to fit around a heel, the supporter terminating in a fastening tab at at least one end thereof, said tab terminating in an arrow-shaped reinforced head, the body of the bandage being provided with at least one slot for engagement with said arrow-shaped head.

8. An anatomical supporter of flexible material for the ankle and foot comprising an elongated bandage section of such length as to encircle both the ankle and foot, said bandage section having a cut-out formed in each end thereof, the material at the sides of the cut-outs sloping backwardly at angles away from the ends of the bandage section, and an end section attached to each end of the bandage section, said end sections having cut-outs registering with the cut-outs in ends of the bandage section, and having edges at each

5

side of the cut-outs sloping in opposite directions from the sloping edges of the adjacent bandage end, the sloping edges of the end sections being united to the end edges of the bandage section so as to form concave heel engaging pockets at each end of the supporter.

9. An anatomical supporter as claimed in claim 8 in which the supporter is made of two-way stretch elastic material.

JOHN C. CAPOSSELA.

10

6

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
2,369,210	Capossela	Feb. 13, 1945
2,539,170	Waite et al.	Jan. 23, 1951

FOREIGN PATENTS

Number	Country	Date
427,217	Great Britain	Apr. 17, 1935