F. T. TANNER.

ORTHOPEDIC APPLIANCE.

APPLICATION FILED JUNE 22, 1920.

1,373,211. Patented Mar. 29, 1921.

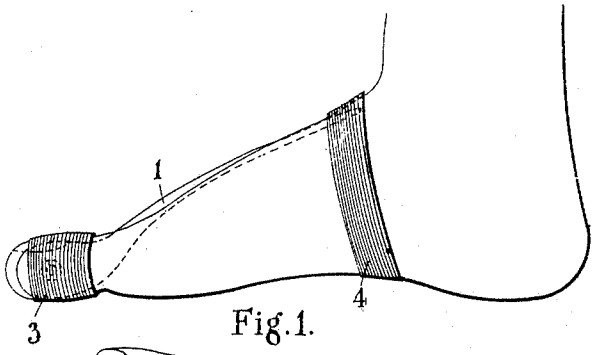


Fig.1.

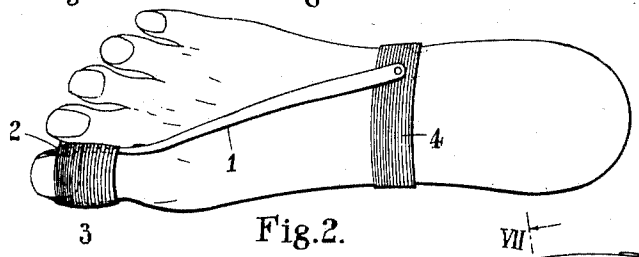


Fig.2.

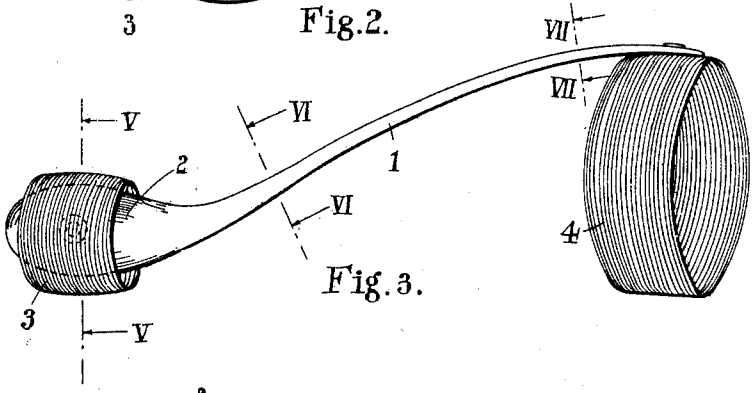


Fig.3.

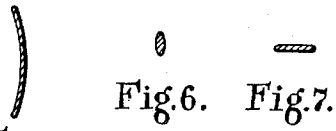


Fig.6.

Fig.7.

Fig.5.

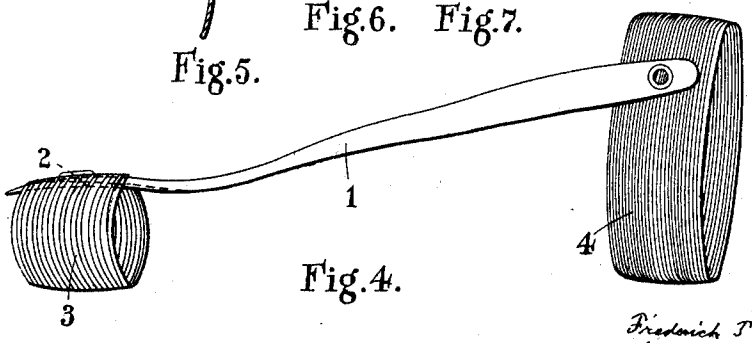


Fig.4.

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UNITED STATES PATENT OFFICE.

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ORTHOPEDIC APPLIANCE.

1,373,211. Specification of Letters Patent. Patented Mar. 29, 1921.

Application filed June 22, 1920. Serial No. 390,705.

To all whom it may concern:

Be it known that I, FREDERICK THOMAS TANNER, a subject of George V, King of Great Britain and Ireland, residing at 35 Tamworth road, Croydon, in the county of Surrey, England, have invented certain new and useful Improvements in or Relating to Orthopedic Appliances, of which the following is a specification.

This invention is for improvements in or relating to surgical instruments to be used for orthopedic purposes, and refers particularly to that class of instruments designed for the cure or relief of bunions.

One object of the invention is to provide an instrument that can be worn when the user is also wearing a boot or shoe without causing material inconvenience.

According to the present invention such an instrument comprises a rigid bar of such dimensions that it will extend, preferably somewhat obliquely, from near the middle of the instep over the top of the foot and longitudinally along to near the end of the great toe, the forward end of the bar being shaped to lie flat between the great toe and the adjacent toe, combined with means, resilient or otherwise, to hold the bar in position, as for example by holding the ends of the bar closely to the foot and the great toe respectively.

Preferably the bar is so shaped as to conform to the arch of the instep when it lies over that portion of the latter which slopes downwardly toward the outer edge of the foot.

A preferred construction of instrument according to the present invention will be now described, by way of example, with the aid of the accompanying drawings, in which:—

Figure 1 shows an elevation of a foot with the instrument applied, looking from the inner side of the foot.

Fig. 2 is a plan Fig. 1.

Fig. 3 shows the instrument by itself in the position it assumes when applied as in Fig. 1.

Fig. 4 is a plan of Fig. 3.

Fig. 5 is a section on the line V—V of Fig. 3.

Fig. 6 is a section on the line VI—VI of Fig. 3, and

Fig. 7 is a section on the line VII—VII of Fig. 3.

Like reference numerals indicate like parts in the several figures of the drawings.

The instrument, as shown more clearly in Figs. 2, 3 and 4, comprises a narrow rigid metal bar 1, enlarged as at 2 at one end and slightly curved in cross-section as shown in Fig. 5. The curvature is such that the enlarged end will fit comfortably the curve of the inner side of the great toe.

In its length the bar is curved or shaped in such a manner that the enlarged portion will fit snugly between the great toe and the adjacent toe and also so that the bar, as a whole, will lie smoothly and comfortably over the curve of the instep in the manner shown in Figs. 1 and 2, extending from the inner side of the great toe to a position near the top of the instep and slightly on the outer side thereof.

Thus the enlarged end should bear against the great toe near or in the region of its outer extremity and is steadied on or strapped to the toe by means of an elastic band 3 which is of such size as to embrace the toe without undue pressure, and is secured to the extremity 2.

At its other end the bar has secured to it a large elastic band 4 which is designed to embrace the foot. The tendency of the band 4 is to force that end of the bar to which it is secured down the outward slope of the instep and at the same time to swing the bar more obliquely across the foot and force the end of the great toe outwardly. The instrument may be fitted to the foot of the wearer and the tendency of the bar at all times is to exert outward pressure on the toe.

The section of the bar adjacent the enlarged end 2 is oval as shown in Fig. 6 and has its greater dimensions disposed vertically above the instep. Toward the other end the bar is flattened gradually to the section shown in Fig. 7 and near the inner end lies flat on the instep.

The bar is conveniently covered with rubber or other soft material for the comfort of the wearer. Such an instrument occupies little room and is effective in its curative properties whether or not a boot or other foot-wear is worn at the same time.

It is obvious that many modifications may be made in details of construction without departing from the spirit of the invention, and it will be understood that where the bar of the instrument has been described as rigid

it may, in some cases, only be rigid to the extent necessary to exert the desired pressure on the toe.

I claim:—

1. An instrument of the kind described comprising in combination a rigid bar of such length and so formed as to extend from near the middle of the instep over and longitudinally along the top of the foot to near the outer end of the great toe, said bar being shaped at its forward end to lie flat between the great toe and the next, and means to hold the bar in position on the foot and to tend to force the inner end down the outer slope of the instep, for the purpose described.

2. An instrument of the kind described comprising in combination a rigid bar of such length as to extend from near the middle of the instep over and longitudinally along the top of the foot to near the outer end of the great toe, said bar being curved so as to conform to the curve of the instep when it lies mainly over that portion of the instep sloping toward the outer edge of the foot, and shaped at its forward end to lie flat between the great toe and the next; and means to hold the bar in position on the foot and to tend to force the inner end down the outer slope of the instep for the purpose described.

3. An instrument of the kind described comprising in combination a rigid bar of such length and so formed as to extend from near the highest point of the arch of the instep over the top of the foot to near the outer end of the great toe, said bar being shaped at its forward end to lie flat between the great toe and the next, and means to hold the bar in position on the foot and to tend to force the inner end down the outer slope of the instep, for the purpose described.

4. An instrument of the kind described comprising in combination a rigid bar of such length and so formed as to extend from near the middle of the instep over the top of the foot to near the outer end of the great toe, said bar being shaped at its forward end to lie flat between the great toe and the next, and a yielding band to hold the inner end of the bar to the instep, for the purpose described.

5. An instrument of the kind described comprising in combination a rigid bar of such length and so formed as to extend from near the highest point of the arch of the instep over the top of the foot to near the outer end of the great toe, said bar being enlarged at its outer end and curved so as to bear smoothly against the inner surface of the great toe near its extremity, and means to hold the bar in position on the foot and to tend to force the inner end of the bar down the outer slope of the instep, for the purpose described.

6. An instrument of the kind described comprising in combination a rigid bar of such length and so formed as to extend from near the middle of the instep over the top of the foot to near the end of the great toe, said bar being shaped at its forward end to lie flat between the great toe and the next, and bands to hold the ends of the bar to the instep and the great toe respectively and to tend to force the inner end down the outer slope of the instep, for the purpose described.

In testimony whereof, I have signed my name to this specification in the presence of a subscribing witness.

FREDERICK THOMAS TANNER.

Witness:
H. T. P. GEE.