

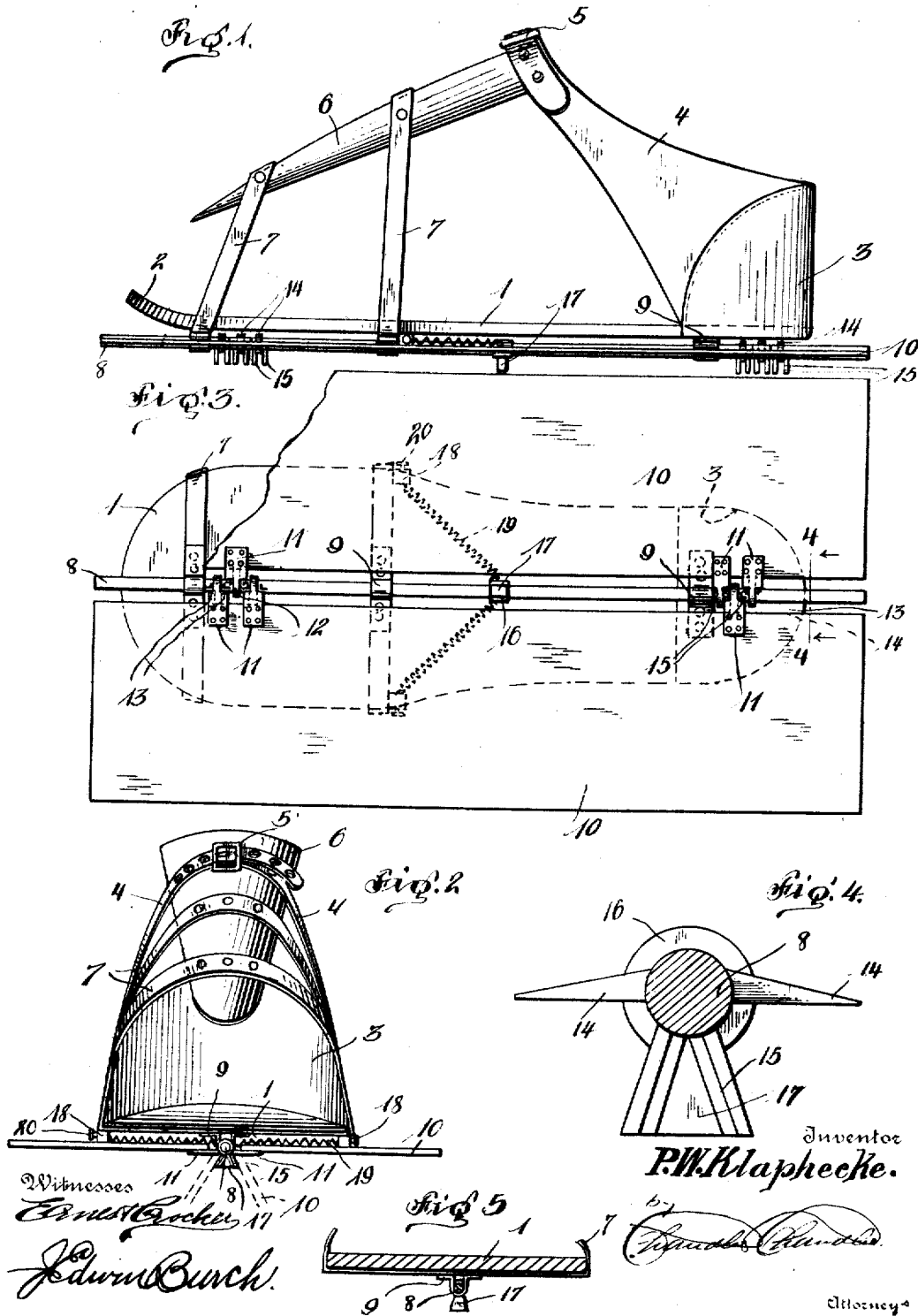
P. W. KLAPHECKE

SWIMMING SHOE.

APPLICATION FILED MAR. 30, 1911.

1,013,403.

Patented Jan. 2, 1912.



UNITED STATES PATENT OFFICE.

PAUL W. KLAPHECKE, OF ELLICOTT CITY, MARYLAND.

SWIMMING-SHOE.

1,013,403.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed March 30, 1911. Serial No. 617,924.

To all whom it may concern:

Be it known that I, PAUL W. KLAPHECKE, a citizen of the United States, residing at Ellicott City, in the county of Howard, State of Maryland, have invented certain new and useful Improvements in Swimming-Shoes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to swimming shoes and the object of the invention is to provide a novel device of this character which comprises a receiving member for the foot having a rigid sole and a pair of wings pivotally mounted longitudinally of the sole and adapted to spread upon the operative stroke of the foot and to fold upon the inoperative stroke of the foot, thereby offering little resistance in the inoperative stroke and increasing the displacement of water upon the operative stroke thus facilitating the swimming operation.

A further object of the invention is to provide novel means for securing the sole to the foot of the wearer, such means also forming attaching means for a pivot rod beneath the sole and to which the wings are secured for operative action.

A further object of the invention is to pivot the wings to the rod in a novel manner and to provide means for limiting the spreading of the wings.

A still further object is to provide novel means for limiting the movement of the wings to a folding position, such means serving the double function of providing for the attachment of springs for normally holding the wings in their extended position, thus increasing the resistance offered by returning the wings to such position independent of their action upon the water.

The invention consists of certain other combinations and arrangements of parts, as will be hereinafter more fully described and clearly specified in the appended claims.

In the drawings:—Figure 1 is a side elevation of my improved swimming shoe. Fig. 2 is an end elevation of the shoe looking toward the toe. Fig. 3 is an underside view of the shoe with the wings in an extended position, one of the wings being broken away to show the means for securing the rod to the underside of the sole. Fig. 4 is a sectional view taken on the line

4—4 of Fig. 3, and looking in the direction indicated by the arrows, the parts being enlarged. Fig. 5 is a detail sectional view of the sole and attached rod and also showing the means for limiting the movements of the wings.

Referring to the drawings in detail, there is shown a sole member 1 which is constructed preferably of wood and has its toe portion extended upward as shown at 2 to conform to the foot of the wearer and also having a heel member 3 for retaining the foot in position. Straps 4 are secured to the heel retaining member 3 and are adjustably connected by the usual buckle and perforations as shown at 5 to permit adjustment to different persons, said strap 4 which is provided with the buckle having a shield strip 6 extending forwardly therefrom so as to evenly distribute the pressure upon the foot at the instep, such portions being preferably constructed of soft leather. Extending over the strip 6 and beneath the sole 1 are the leather strips 7 which form securing means, in connection with the heel member 3 which also extends beneath the sole 1, for a rod 8 which is disposed centrally and longitudinally of the sole 1 and projects beyond the toe and heel thereof as is clearly shown in the drawings.

It is very obvious that the sole and attaching means are in the form of a sandal and are thus capable of being readily attached to the feet but when in position will be positively held thereon and against accidental removal, it being apparent that the rod 8 may also be secured to the sole by metallic clips 9 if desired and as more clearly shown in Fig. 5 of the drawings. The oppositely disposed wings 10 are provided with perforated ears 11 upon their inner edges which pivotally engage the rod 8 so that said wings may have proper movement in spreading and folding when moved upon their operative and inoperative strokes and I have preferably shown two of such ears secured to one of the wings for receiving a single ear carried by the other wing. Each of the ears 11 is reduced to form the attaching rings 12 thus providing shoulders 13 at each side thereof for a purpose to be hereinafter made apparent.

In order to limit the movements of the wings in their spreading and folding positions. I provide a series of lugs 14 which are extended in opposite directions as shown in

Figs. 3 and 4 of the drawings beneath the sole 1 so that as the wings are moved to a spreaded position upon the operative stroke, said wings will engage the projections and thus arrest the movement thereof. In order to limit the movement of the wings in their folded position, lugs 15 are provided upon the rod 8 so as to limit the movement of the wings less than 45° as shown in dotted lines in Fig. 2 of the drawings. This is accomplished by engagement of said lugs 15 with the shoulders 13 formed upon the ears 11 and in order to further assist in limiting such movement, a central collar 16 is secured to the rod 8 and provided with a dove-tailed extension 17 which is engaged by the wings. Apertured projections 18 are also secured to the undersides of the wings 10 through which the outer ends of coiled springs 19 are secured by set screws 20 or otherwise, the inner ends of the springs being secured to the collar 16 so that said wings will be normally held in an open position. The springs are capable of adjustment to regulate the tension of the springs by the provision of the set screws 20 and it will be seen that these springs 19 normally tend to extend the wings and thus assist in their movement upon the operative stroke independent of the action of the water.

From the foregoing description it will be apparent that the relative displacement made and the resistance offered, are advantageously increased to facilitate the swimming operation and as the parts of the shoe which are constructed of heavy material are such as to be buoyed up by the sole member the tendency of the shoe to sink in the water is prevented and the weight thereof diminished, thus offering no resistance in swimming. By reason of the stop members employed, the movements of the wings in their extended and folded position is greatly facilitated and also assisted by the coiled springs connecting the wings to its pivotal rod.

It will also be apparent that the apertured projections 18 abut the undersurface of the

sole 1 when the wings are moved to an extended position, thus holding the wings in a common plane and preventing engagement of the springs 19 with the sole.

I claim:—

1. A swimming shoe comprising a sandal member having a sole, a rod pivotally secured beneath the sole, attaching means for the sandal to secure said rod to the sole, wings, perforated ears carried by the wings and pivotally engaging with the rod, oppositely disposed projections on the rod to limit the movement of the wings in an extended position, similar lugs formed upon the rod and extending downwardly to limit the movement of the wings in a folded position, a collar also carried by the rod, apertured projections secured to the upper faces of the wings, springs secured to the collar and engaged through said apertures, set screws to adjust said springs through the apertures, and a projection carried by the collar to further assist in limiting the movement of the wings to a folded position.

2. In a swimming shoe, a sole, attaching straps for the sole, a rod upon the undersurface of the sole, said straps serving as attaching means therefor, wings pivotally connected to the rod and extending in opposite directions, means for limiting the movement of the wings to an extended position, means for limiting the movements of the wings to a folded position, a collar secured to the rod and having an integral lug to further assist in limiting the movement of the wings to a folded position, apertured lugs secured to the upper faces of the wings and adapted to engage the sole to space said wings therefrom, and resilient means secured to the apertured lugs and collar to hold said wings extended.

In testimony whereof, I affix my signature, in presence of two witnesses.

PAUL W. KLAPHECKE.

Witnesses:

OLIVER W. CUMMINGS,
CHAS. D. W. REID.