

Aug. 12, 1941.

J. ZIMMER

2,252,450

SWIMMING SHOE

Filed Dec. 8, 1939

2 Sheets-Sheet 1

Fig. 1.

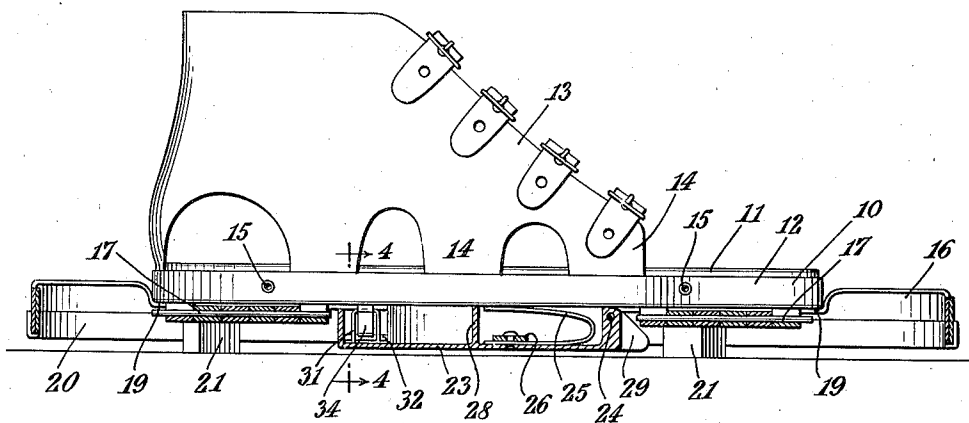
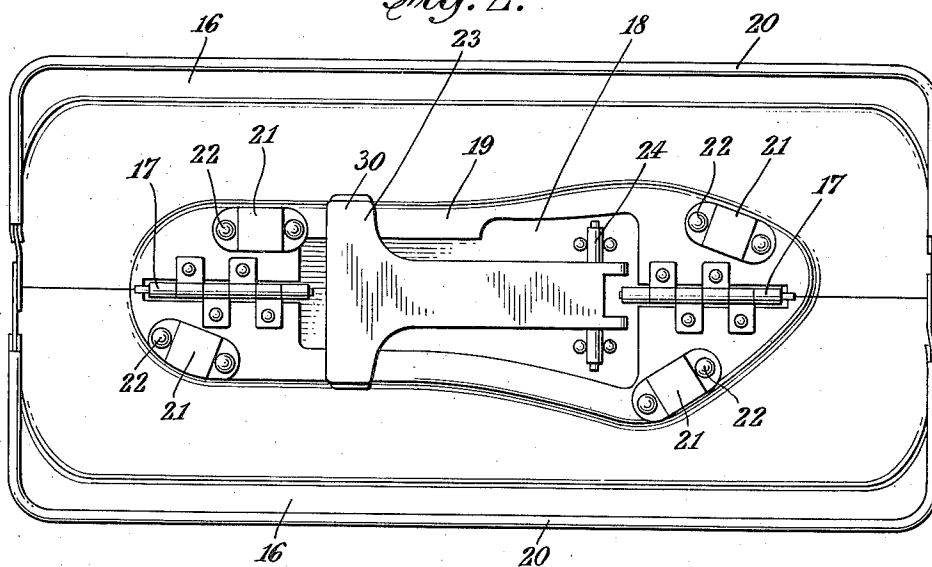


Fig. 2.



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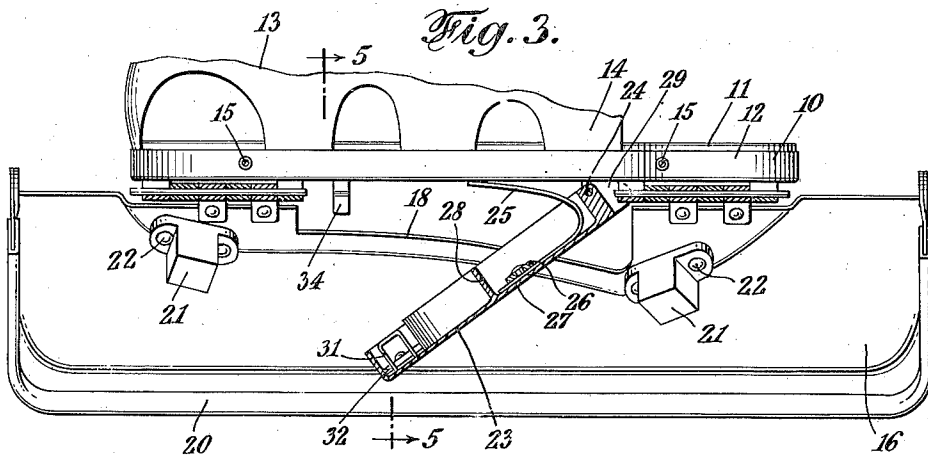
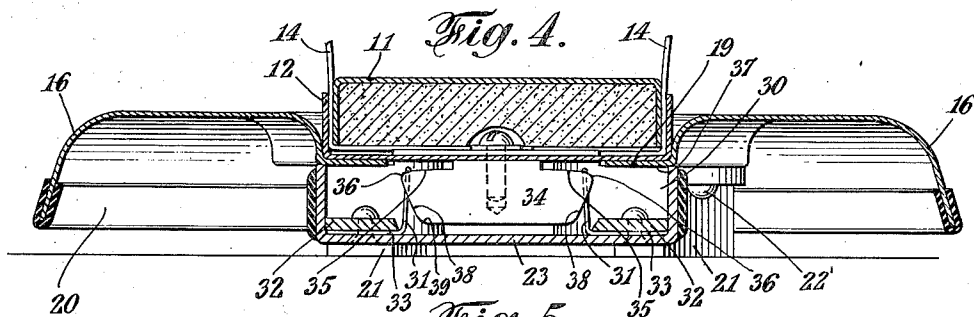
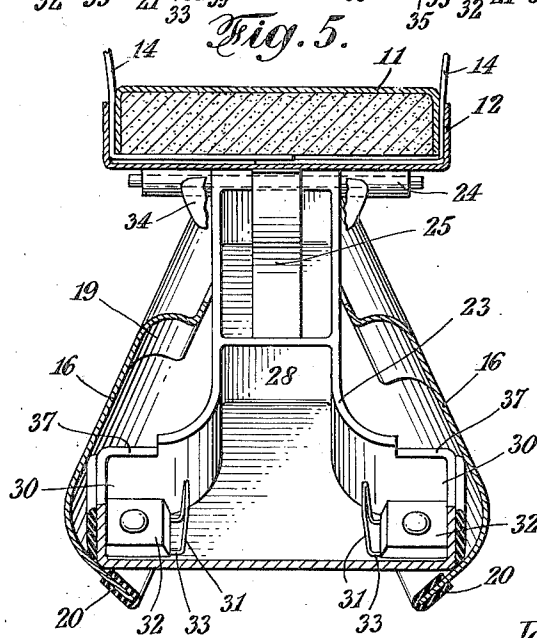
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2 Sheets-Sheet 2



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2,252,450

SWIMMING SHOE

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6 Claims. (Cl. 9—21)

This invention relates to new and useful improvements in swimming shoes operated by means of wings, which latter are connected to the shoes proper, and the specific object of my invention is to provide, in this connection, an automatic locking device for said wings.

In order to clarify the specification throughout, the term swimming shoe is intended to include a back and forward movable wing-system, whereby to support a person in deep water, and enable him to swim or walk with perfect ease and safety.

Thus the principal object of this invention is to provide a locking mechanism, which, when applied to a swimming shoe, will enable a person to walk on land without any specific operating means used, while the locking mechanism will operate automatically, as soon as a person leaves the solid ground and enters the water, as in this latter instance, when the water presses upon the upper surface of the wings, the locking device will be released, and with the latter the wings proper.

Another object of my invention is to obtain a simple, but fool-proof, construction relative to my locking device, whereby to prevent sand or mud from entering into any joints of the device, thereby avoiding any impairment in the proper functioning of the lock proper.

Another object of my invention is to provide a locking member strong enough to secure the wings in a horizontal position relative to the shoe proper, and which, when a person steps on solid ground, will automatically lock said wings to the shoe, without any other operating means.

With the above and other objects in view, this invention consists of the novel features of construction, combination, and arrangement of parts, hereinafter fully described, claimed and illustrated in the accompanying drawings forming part of this specification, and in which similar characters of reference indicate corresponding parts in all views, and in which:

Figure 1 is a transverse side elevational view of my invention, partly in section.

Figure 2 is a plan bottom view of the same.

Figure 3 shows a view, partly in elevation and partly in section, of the swimming shoe, with the locking member in open position.

Figure 4 is a transverse sectional view taken on the line 4—4 in Figure 1; while

Figure 5 is a transverse sectional view taken on the line 5—5 in Figure 3.

Referring to the drawings, and more particularly to Figure 1, in detail, 10 indicates a swim-

ming shoe, which has the shape substantially of a foot, and which comprises a top part 11, and a bottom part 12 riveted, or screwed on to the former, as shown at 15.

A shoe cover 13 is connected to the swimming shoe 10, as the straps 14 of said shoe cover are securely held between the top part 11 and the bottom part 12.

Wings 16, 16 are hinged to the bottom part 12, as shown at 17. The wings are formed with cut-away portions 18, 18 in the center thereof, as shown in Figure 2, while said wings upon each side are made with depressions 19, 19 of a shape to fit the bottom part 12 of the shoe, when aligned with the latter, that is, when the wings are in a locked position, as may also be seen in Figure 2.

The wings are provided with a rubber band 20 around the edges thereof, in order to prevent injury to other bathers, or swimmers. Said wings have upon their lower surfaces fixedly arranged somewhat square lumps or projections 21 riveted to said wings, as shown at 22, and serving as foot rests, when the shoes are used for walking. Said foot rests extend slightly beyond, or below the locking member 23, thereby protecting the latter in walking.

The locking member 23, which is of a substantially T shaped form, is hingedly secured to the bottom part 12, as shown at 24; said locking member is hollow inside, except for the transverse wall 28, shown in Figure 3.

A spring 25 has one end resting against the bottom part 12 and the other end secured within the locking member by means of a clasp, as shown at 26.

The locking member is at one end formed with a slanting end portion 29, whereby said locking member, when opened and actuated by the spring 25, will be in a position, as shown in Figure 3.

The locking member is within its hollow extensions 30, 30 formed with hooks 31, 31 substantially rectangular in shape and secured to said extensions by means of riveted lugs 32 arranged over the bent end portions 33 of said hooks.

To the bottom part 12 is fixedly secured a lug 34; said lug, which is of a substantial width, is upon its upper side towards its end portions formed with very slightly downwardly slanting surfaces 35, and with corners 36 that are very slightly rounded, so that the locking member 23 will spring open, when a pressure is exerted up-

on the extensions 30, 30 thereof, by the collapsible wing portions 16, 16.

It must in this connection be noted that the said extensions 30, 30 are formed upon their upper outer ends with small cut-away portions 37, 37 adapted to receive and fit when in closed position depressed portions 19, 19 of the said wings 16, 16.

The lug 34 is formed with slanting side portions 38, 38, slightly rounded at the bottom, as at 39, thereby permitting the locking member 23 to easily get into locked position, in which the hooks 31, 31 will engage the said lug 34 and especially the upper portions 35, 35 of the latter.

It will thus be obvious that by a sufficient pressure upon the upper surface of the wings 16, 16 the latter will, in turn, exert a pressure upon the extensions 30, 30 of the locking member 23, with the result that the hooks 31, 31 will become disengaged from the lug member 34, and the wings 16, 16 consequently collapse as shown in Figure 5.

It is obvious that changes may be made in the form, construction and arrangement of the several parts, as shown, within the scope of the appended claims, without departing from the spirit of the invention, and I do not, therefore, wish to limit myself to the exact construction and arrangement shown and described herein.

What I claim as new, and desire to secure by Letters Patent of the United States, is:

1. In a device of the class described, a swimming shoe, wings connected to the latter, and a locking member cooperating with the wings, said locking member comprising a lug fixedly secured to the bottom of the shoe, a substantially T-shaped, hollow member pivotally attached to the latter, and means disposed within said T-shaped

member and adapted to engage said lug, whereby to lock the wings in a horizontal position.

2. A device, as claimed in claim 1, and wherein a rubber band is mounted upon the outer edges of the wings.

3. In a device of the class described, a swimming shoe, wings connected to the latter, and a locking member cooperating with the wings, said locking member comprising a lug fixedly secured to the bottom of the shoe, a substantially T-shaped, hollow member pivotally attached to the latter, a spring having one end supported by the bottom of the shoe and the other end secured within the T-shaped member, and hooks disposed within said T-shaped member and adapted to engage said lug.

4. In a device, as claimed in claim 3, and wherein said lug is formed with slightly downwardly slanting inner end portions, and slightly rounded corners, substantially as and for the purpose set forth.

5. In a device, as claimed in claim 3, and wherein the T-shaped member is formed with reduced portions upon the inner surface thereof.

6. A swimming shoe, wings hingedly connected to the latter, and an automatically operated locking system cooperating with said wings, said locking system comprising a T-shaped hollow member hingedly connected to the bottom of the shoe, a spring adapted to actuate said T-shaped member, said spring having one end resting against the bottom of the shoe and the other end disposed within the T-shaped member, and a clasp for securing said spring to the T-shaped member, a lug disposed underneath the shoe, and means arranged within the T-shaped member and adapted to engage said lug, substantially as and for the purpose set forth.

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