March 20, 1928.

1,663,328

F. ARNOLD

SWIMMING DEVICE

Filed March 23, 1927

Fig. 1.

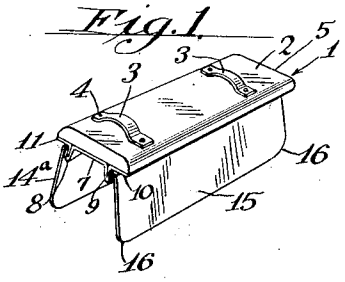


Fig. 2.

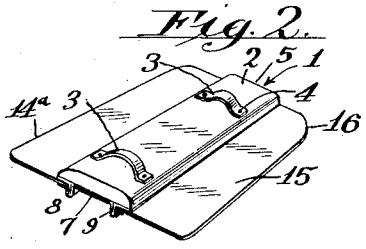


Fig. 3.

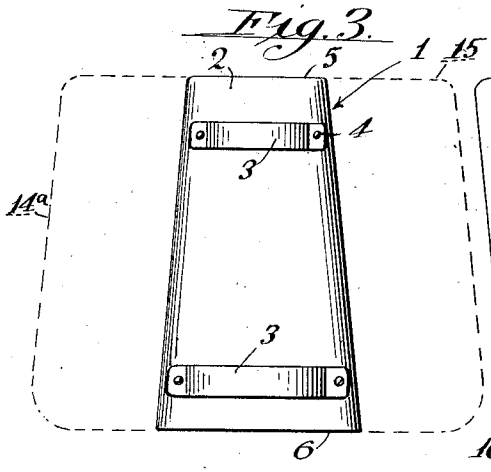


Fig. 4.

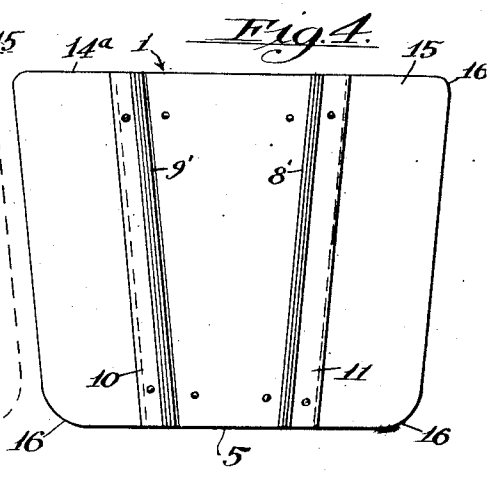


Fig. 5.

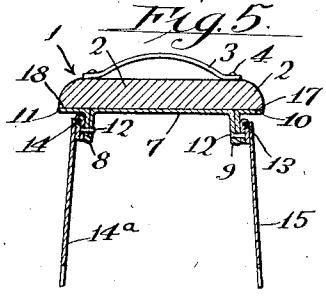
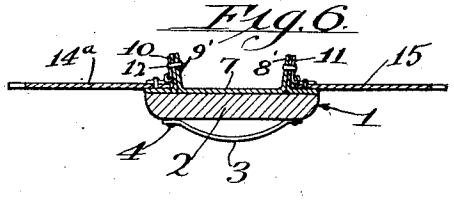


Fig. 6.



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UNITED STATES PATENT OFFICE.

FELIX ARNOLD, OF SANTA BARBARA, CALIFORNIA.

SWIMMING DEVICE.

Application filed March 23, 1927. Serial No. 177,543.

This invention relates to swimmers' paddles, and it is an object of this invention to provide a device which will enable a swimmer to propel himself in the water with comparatively great rapidity.

Another object of this invention is to provide a device which has a handle that is fastened to a swimmer's hand, and a pair of pivoted paddles are formed thereon which are collapsible and which afford comparatively great resistance to the water as the swimmer is making his advanced stroke, but offer little resistance to the water as the swimmer is making his return stroke.

A still further object of this invention is to provide a device which is extremely simple in its construction, efficient in its operation and which can be manufactured at a very nominal cost, and which is well adapted to perform the services required of it.

In manufacturing the combination device, while the various elements thereof may be constructed in any suitable manner and of any suitable material, yet it is preferable to form the same from sheet-metal stampings on account of the cheapness, lightness and strength of the latter; but irrespective of these details in manufacturing, the essential features of the invention are always preserved.

The essential features of the invention involved in the carrying out of the objects indicated are susceptible to modification, but a preferred embodiment of the invention is shown in the accompanying drawings, in which:

Figure 1 is a perspective view of my improved swimmers' paddle showing a preferred form of the same in the position that it normally assumes when the swimmer is making his return stroke.

Figure 2 is a similar perspective view of a swimmer's paddle showing the same in the position it occupies when the swimmer is making his advanced stroke,

Figure 3 is a top plan view of the device when assuming this latter position.

Figure 4 is a bottom plan view of the showing in Figure 3.

Figure 5 is a sectional view of a slightly modified form of the device taken in one position.

Figure 6 is a sectional view of the same device taken in another position that it may assume.

With these and many other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts, which will hereinafter be more fully described, illustrated, and claimed.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout, a form of the novel swimmer's paddle is represented as an entirety at 1, and comprises a back 2 having suitable straps 3 fastened thereto by means of rivets, screws or the like 4. This back may be formed in any suitable manner and of any suitable material, but it is preferable to form the same of wood on account of the lightness of the same. The back is slightly tapered to provide a narrow end 5 and a side end 6, to accommodate the shape of the human hand. Fastened to the under side of this back is a channel piece 7 having lateral flanges 8 and 9 diverging slightly. This channel piece 7 has a width slightly less than the width of the back 2, but is also tapered. A pair of angle pieces 10 and 11 are bolted or riveted or otherwise fastened to the channel piece 7 by suitable means 12, and have one side of the same extending flush with the under face of the back 2. Suitable hinges 13 and 14 are secured to the inner face of one flange of the angle pieces 10 and 11, and to these hinges are secured a pair of paddles 14^a and 15, which paddles are preferably rectangular in shape and have rounded edges 16.

The few parts above described, constitute in essence one particular form of my invention. In actual operation, a pair of these paddles are inserted upon the hands of the swimmer, and as he makes his progressive stroke in the water, the paddles 14^a and 15 fly outwardly to offer greater resistance to the water, and their outward movement is limited by the shoulders provided by the angle flanges 17 and 18 on the angle pieces 10 and 11 respectively. Upon making his return stroke the paddles are collapsed, and the straps of the hinge abut and prevent the paddles from collapsing further, and thus cause injury to the arms of the swimmer. The rounded edges 16 further prevent injury to the arms of the user as is apparent.

In the modified form shown in Figures 1 and 2, the arrangement of parts is similar, and in these figures the same characters of reference with their respective suffixes, des-

ignate similar parts throughout. The angle pieces 10 and 11 and the channel piece 7 have been formed of an integral sheet of metal stamped to provide the diverging, upstanding, reverse flanges 8′ and 9′, and the device operates in the same efficient manner as the device shown in Figures 5 and 6.

I do not desire to limit myself to the exact arrangement of parts, for various modifications are anticipated under the terms of the appended claims.

It will be understood that various changes in the detail of construction may be made without departing from the spirit or scope of the invention as defined by the appended claims.

I claim:

1. A swimming paddle comprising in combination a back adapted to be attached to a limb of the user, said back being wedge-shaped, a channel piece attached to said back, said channel piece being narrower than said back, angle pieces disposed against said channel pieces and against said back, and a pair of paddles pivoted within said angle pieces for swinging movement.

2. A swimming paddle comprising in combination a back which is attachable to the hand of the user, a U-shaped channel piece secured to said back centrally thereof, said channel piece being narrower in width than said back, angle pieces disposed against said channel piece and against said back, strap hinges passing within said channel pieces, and paddles secured to said strap hinges, whereby the sides of said channel pieces will limit the forward and rearward movement of said paddles.

3. A swimming paddle comprising in combination a back substantially trapezoidal in shape, a U-shaped, trapezoidal channel piece secured to said back centrally thereof, acute angle pieces having one side disposed against said channel piece and the other side against said back, strap hinges fastened to said channel pieces, and substantially rectangular paddles secured to said strap hinges for pivotal motion within said angle pieces, to be limited in their forward and rearward movement, and to assume a diverging position when in their rearward position as and for the purpose specified.

4. A swimming paddle comprising a back adapted to be attached to a limb of the user, a channel-shaped piece secured to said back centrally thereof, said channel-shaped piece being narrower than the width of the back strap hinges connected to the outstanding portions of the channel-shaped piece, and paddles secured to said strap hinges whereby the paddles may assume positions in planes approximately perpendicular to the back or parallel thereto and have their movements limited between these positions.

5. A swimming paddle comprising a back adapted to be attached to a limb of the user, angle pieces secured to the back adjacent its side edges, strap hinges secured to said angle pieces and paddles secured to said strap hinges, said paddles being adapted to assume positions in planes approximately perpendicular to the back or parallel thereto and having their movements limited between these positions.

In testimony whereof I have signed my name to this specification.

FELIX ARNOLD.