Dec. 9, 1952 F. LOISELLE 2,620,495

SWIMMING AID DEVICE

Filed Jan. 29, 1949

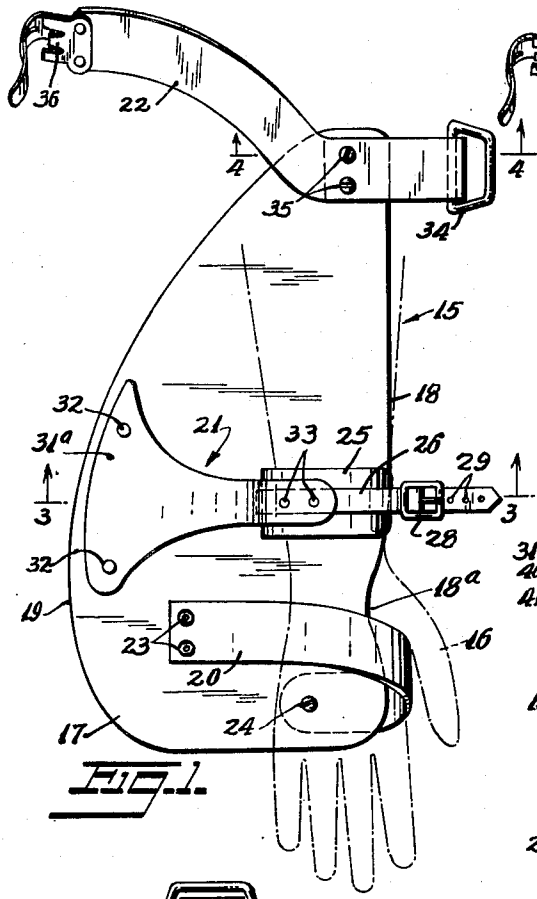


FIG. 1.

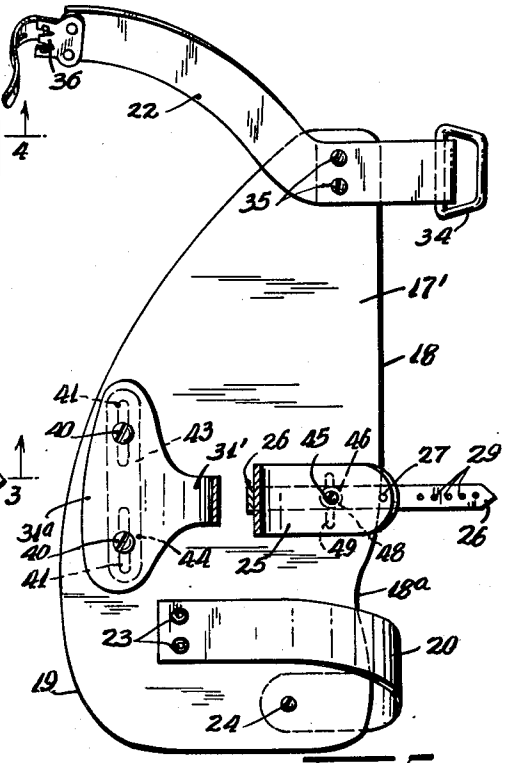


FIG. 6.

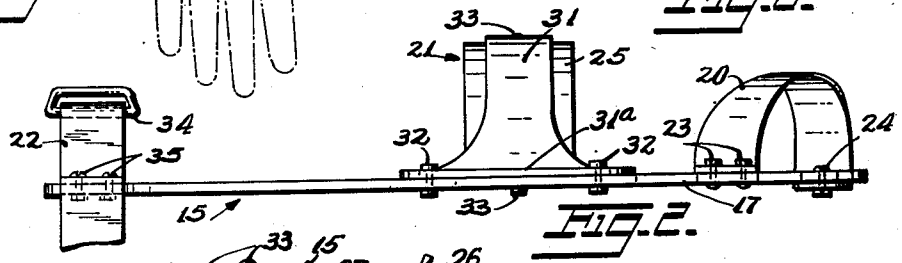


FIG. 2.

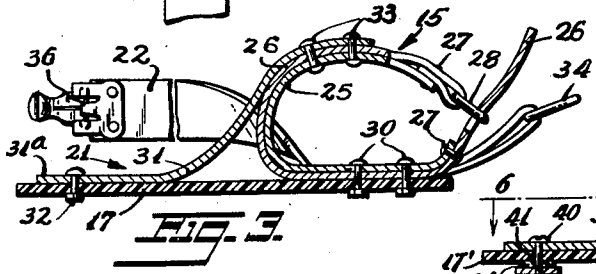


FIG. 3.

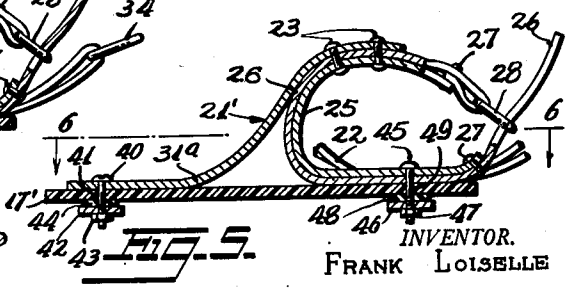


FIG. 5.

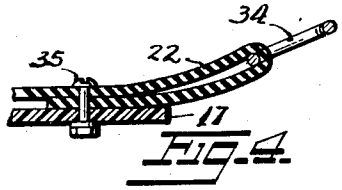


FIG. 4.

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SWIMMING AID DEVICE

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3 Claims. (Cl. 9—21)

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This invention relates to new and useful improvements in the construction of a swimming aid device.

More particularly, the invention proposes the construction of a swimming aid characterized by a pair of like opposed members which are arranged to be engaged upon each of a swimmer's forearms to increase the surface area of the forearm to produce greater power with each stroke while at the same time leaving the wrist and fingers of the hand free for movement as may be required.

Another object of the present invention proposes characterizing each of the members by a plate formed of a synthetic resin material and having supporting straps secured thereto in such a manner, that when the member is mounted in position on the respective forearm, the major portion of the plate will be projected from the outer side of the forearm leaving the inner side of the forearm free of any obstruction which could strike the side of the body during swimming and hinder free swimming movements.

Still another object of the present invention proposes characterizing the supporting straps by a front loop member for extension across the back of the hand, an intermediate adjustable strap for engaging the forearm just behind the wrist and a rear strap for engaging the forearm just below the elbow in a manner to securely mount the plate in position on the forearm.

A further object of the present invention proposes the provision of a stiffening member for holding the intermediate strap in a somewhat elliptical form corresponding to the cross sectional shape of the portion of the forearm to be engaged by that intermediate strap so as to retain the plate against turning on the forearm.

The present invention further proposes a means for adjustably mounting the intermediate strap on the plate in a manner so that the position of the intermediate strap may be adjusted on the plate, longitudinally thereof, to a position in which it will comfortably engage the forearm behind the wrist.

It is a further object of the present invention to construct a swimming aid which is simple and durable and which can be manufactured and sold at a reasonable cost.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended

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claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing, forming a material part of this disclosure:

Fig. 1 is a plan view of the swimming aid constructed in accordance with the present invention shown applied to the right forearm illustrated in dot and dash lines.

Fig. 2 is a side elevational view of Fig. 1 looking from the left side thereof.

Fig. 3 is a transverse vertical sectional view taken substantially on the line 3—3 of Fig. 1.

Fig. 4 is a partially enlarged transverse vertical sectional view taken on the line 4—4 of Fig. 1.

Fig. 5 is a view similar to Fig. 3, but illustrating the swimming aid constructed in accordance with a modification of the present invention.

Fig. 6 is a horizontal sectional view taken on the line 6—6 of Fig. 5.

The swimming aid, according to the present invention, includes a pair of like opposed members 15, only one of which is shown on the drawing, which are to be secured in position on a swimmer's forearms to increase the surface area thereof to produce greater power with each stroke during swimming. An important feature of the present invention resides in the fact that while the members 15 are strapped in position on the forearms in such fashion as to preclude any possible rotative movement of the members relative to the forearms, they leave the fingers and wrists of the arms free for complete freedom of movement.

The one of the pair of opposed members 15 shown on the drawing, is the member which is applied to the right forearm which is indicated by the dot and dash lines 16 in Fig. 1, where the position of the member 15 on the forearm is clearly illustrated.

Each of the members 15 is formed of a flat plate 17 shaped from a synthetic resin material which may be clear or appropriately colored. The longitudinal edge 18 of the plate 17 which extends along the inner side of the forearm 16 is substantially straight, but formed adjacent the front end thereof with an inwardly extended niche 18a, see Fig. 1. The niche 18a is located so as to be aligned with the inner portion of the thumb, as shown in Fig. 1 so as not to interfere with movement of the thumb. The opposed longitudinal edge 19 of the plate 17 is extended outward and rounded so that the major portion of the plate extends beyond the outer side of the forearm when the plate is secured

in position thereon. This arrangement leaves the arm free for normal swimming movements with no obstructions extending from the inner side of the forearm which could strike on the body during such swimming movements.

Straps are provided for securing the plate 17 in position on the forearm. Such straps include a front strap 20, an intermediate strap 21 and a rear strap 22. The front strap 20 is formed of a length of relatively thick rubber and has one end secured to the top face of the plate, inward of the front end thereof, by means of bolts 23, and its other end secured to the bottom face of the plate 17, inward of the front end thereof, by means of a bolt 24. This forms a front loop through which the fingers of the hand are freely extended with the thumb of the hand extended along one side of the loop, as shown in Fig. 1.

The intermediate strap 21 comprises a main substantially C-shaped arm engaging portion 25 of metal or the like and an outer belt portion 26. The belt portion 26 is longer than the arm engaging portion 25 and the ends of the arm engaging portion are secured to the belt portion 26 by means of rivets 27. The end of the belt portion 26 has engaged thereon a conventional buckle 28 after which the end is doubled back upon itself and inserted between the adjacent faces of the belt portion 26 and the arm engaging portion 25 and secured in position by the same rivet 27 which secures the end of the arm engaging portion 25 to the belt portion 26, see Fig. 3. The other end of the belt portion 26 is formed with spaced holes 29 selectively engageable with the tongue of the buckle 28.

The intermediate strap 21 is secured to the flat plate 17 by means of several rivets 30, see Fig. 3, which pass through the plate 17, the outer belt portion 26, and the arm engaging portion 25.

Means is provided for holding the intermediate strap 21 in elliptical configuration, see Fig. 3, conforming to the cross sectional shape of the portion of the forearm just to the rear of the wrist, which portion is to be engaged by the intermediate strap 21. The holding means is comprised of a piece of metal 31 having an enlarged outer end 31a secured to the top face of the plate 17 by spaced rivets 32. The piece of metal 31 is formed of flexible but somewhat rigid stock and has its free end bent to extend away from the face of the plate 17 and secured to the arm engaging portion 25 and the belt portion 26 by spaced rivets 33. While the piece of metal 31 should have a sufficient degree of rigidity to hold the intermediate strap 21 in the desired elliptical form, it should have sufficient flexibility to permit forearms of different diameters to be engaged in the intermediate strap 21.

The rear strap 22 is also formed of a length of relatively thick rubber and has one end thereof passed through a metallic loop 34 and then doubled upon itself and secured to the top face of the plate 17, slightly inwards of the rear end thereof, by several bolts 35. The opposite end of the rear strap is provided with a conventional spring clip 36 engageable with the loop after that end has been passed around the forearm 16 just in front of the elbow.

It is believed that the manner of mounting the member 15 upon the forearm 16 will be clear from the foregoing description. When the swimming aid is properly mounted in position, it provides a convenient means for increasing the power of each swimming stroke while at the same time leaving the fingers and wrist of the forearm free for complete freedom of movement.

In the modification of the invention shown in Figs. 5 and 6, the construction of the swimming aid is similar to that illustrated in connection with the previous form of the invention, except for the provision of means for adjustably mounting the intermediate strap 21' on the plate 17' to be adjusted longitudinally thereof to be positioned so that it may be comfortably engaged about the forearm just behind the wrist.

This adjustable mounting means comprises bolts 40 which pass through complementary holes formed in the enlarged portion 31a of the metal piece 31' and through elongated slots 41 formed in the plate 17'. Beneath the plate 17', the bolts 40 pass through an elongated plate 42 and are engaged by nuts 43. A strip of rubber 44 is interposed between the adjacent faces of the plate 17' and the plate 42 and frictionally bears against the bottom face of the plate 17' to assist the bolts 40 in securing the metal piece 31' in position.

Likewise, the arm engaging portion 25 and the belt portion 26 are adjustably secured to the plate 17' by a bolt 45 which passes through aligned apertures formed in the belt portions 25 and 26 and through a complementary elongated slot 49 formed in the plate 17'. Beneath the plate 17', the bolt 45 has positioned thereon a washer 46 which is secured in position by a nut 47. Positioned on the bolt 45 between the adjacent faces of the plate 17' and the washer 46, there is an apertured disc 48 of rubber, which frictionally bears against the bottom face of the plate 17' to assist bolt 45 in securing the portions 25 and 26 in position.

When the nuts 43 and 47 are loosened, the bolts 40 and 45 may be slid along the length of the slots 41 and 49 to a desired position along the length of the plate 17' after which the nuts 43 and 47 may again be tightened to hold the intermediate strap 21' in position.

In other respects this form of the invention is similar to that illustrated in Figs. 1 to 4 and like reference numerals identify like parts in each of the several views.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by United States Letters Patent is:

1. Means securing the intermediate area of a swimming aid device which extends along the bottom of a forearm to the forearm at a point slightly rearward of the wrist, comprising a flat plate, a C-shaped arm engaging portion being of a diameter substantially the same as the diameter of the forearm rearward of the wrist and having an open side through which the forearm can be passed into said arm engaging portion, a belt portion engaged about said arm engaging portion and being of a length to have its ends project beyond the ends of said arm engaging portion to be connected together across the open side of said arm engaging portion, said arm engaging portion having its ends secured to said belt portion, means mounting one side of said arm engaging portion and said belt portion on the flat plate, and a piece of metal having

one end mounted on the flat plate to one side of said arm engaging portion and belt portion, said piece of metal having its other end bent to extend away from the plate and secured to said arm engaging portion and belt portion on the side opposed to the side thereof mounted on the flat plate, said mounting means comprising a bolt passed through said arm engaging portion and said belt portion, the flat plate having an elongated slot through which said bolt passes, and a nut threaded on said bolt to be tightened against the plate for holding said arm engaging portion and said belt portion in desired shifted positions on the flat plate within the bounds of the ends of said slot.

2. Means securing the intermediate area of a swimming aid device which extends along the bottom of a forearm to the forearm at a point slightly rearward of the wrist, comprising a flat plate, a C-shaped arm engaging portion being of a diameter substantially the same as the diameter of the forearm rearward of the wrist and having an open side through which the forearm can be passed into said arm engaging portion, a belt portion engaged about said arm engaging portion and being of a length to have its ends project beyond the ends of said arm engaging portion to be connected together across the open side of said arm engaging portion, said arm engaging portion having its ends secured to said belt portion, means mounting one side of said arm engaging portion and said belt portion on the flat plate, and a piece of metal having one end mounted on the flat plate to one side of said arm engaging portion and belt portion, said piece of metal having its other end bent to extend away from the plate and secured to said arm engaging portion and belt portion on the side opposed to the side thereof mounted on the flat plate, said mounting means comprising a bolt passed through said arm engaging portion and said belt portion, the flat plate having an elongated slot through which said bolt passes, and a nut threaded on said bolt to be tightened against the plate for holding said arm engaging portion and said belt portion in desired shifted positions on the flat plate within the bounds of the ends of said slot, said mounting of the said one end of said piece of metal on the flat plate being adjustable to coincide with adjustments of said arm engaging portion and belt portion.

3. Means securing the intermediate area of a swimming aid device which extends along the bottom of a forearm to the foreman at a point

slightly rearward of the wrist, comprising a flat plate, a C-shaped arm engaging portion being of a diameter substantially the same as the diameter of the forearm rearward of the wrist and having an open side through which the forearm can be passed into said arm engaging portion, a belt portion engaged about said arm engaging portion and being of a length to have its ends project beyond the ends of said arm engaging portion to be connected together across the open side of said arm engaging portion, said arm engaging portion having its ends secured to said belt portion, means mounting one side of said arm engaging portion and said belt portion on the flat plate, and a piece of metal having one end mounted on the flat plate to one side of said arm engaging portion and belt portion, said piece of metal having its other end bent to extend away from the plate and secured to said arm engaging portion and belt portion on the side opposed to the side thereof mounted on the flat plate, said mounting means comprising a bolt passed through said arm engaging portion and said belt portion, the flat plate having an elongated slot through which said bolt passes, and a nut threaded on said bolt to be tightened against the plate for holding said arm engaging portion and said belt portion in desired shifted positions on the flat plate within the bounds of the ends of said slot, said mounting of the said one end of said piece of metal on the flat plate being adjustable to coincide with adjustments of said arm engaging portion and belt portion, said adjustable mounting of the said one end of said piece of metal, comprising spaced bolts passed through the said one end of said piece of metal, the flat plate having spaced elongated slots extended parallel to the said first elongated slot and through which said spaced bolts are passed, and nuts threaded onto said spaced bolts to be tightened against the flat plate.

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