No. 666,813. Patented Jan. 29, 1901.

N. LARSON.

SWIMMING DEVICE.

(Application filed Oct. 30, 1900.)

(No Model.)

Fig. 1.

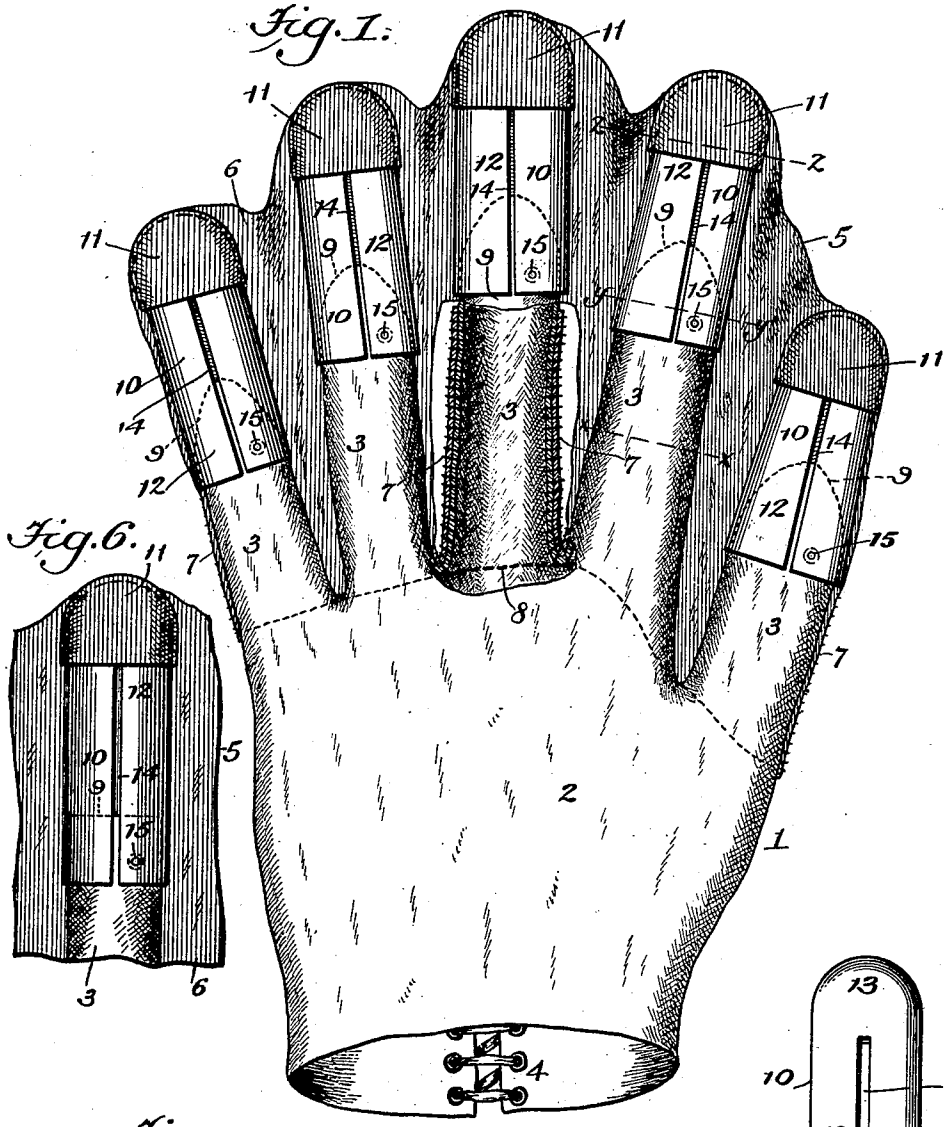
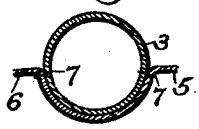


Fig. 6.

Fig. 2.



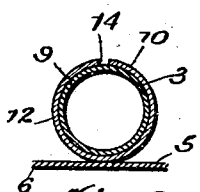


Fig. 3.

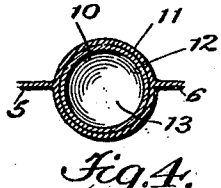


Fig. 4.

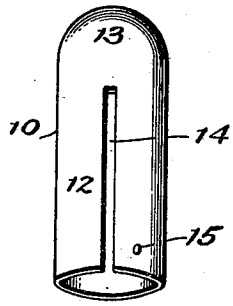


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

NILS LARSON, OF NEW YORK, N. Y.

SWIMMING DEVICE.

SPECIFICATION forming part of Letters Patent No. 666,813, dated January 29, 1901.

Application filed October 30, 1900. Serial No. 34,875. (No model.)

To all whom it may concern:

Be it known that I, NILS LARSON, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Swimming Devices, of which the following is a specification.

This invention relates to swimming devices; and it has for its object to provide an improved device of this class which is designed to be worn upon the hand and which shall be superior in point of effectiveness, adaptability to swimmers of varying strength of stroke, and general efficiency.

In the drawings, Figure 1 is a plan view of the rear side of a swimming device constructed according to my invention. Fig. 2 is a detail sectional view taken upon the line *x x*, Fig. 1. Fig. 3 is a detail sectional view taken upon the line *y y*, Fig. 1. Fig. 4 is a detail sectional view taken upon the line *z z*, Fig. 1. Fig. 5 is a detail perspective view of an essential feature of the present invention in detached position. Fig. 6 is a detail plan view of the rear side of a modified form of construction.

Corresponding parts in all the figures are denoted by the same reference characters.

Referring to the drawings, 1 designates my improved swimming device, which embodies a body portion 2, consisting of a glove provided with fingers 3. The body portion and fingers are formed in any desired and suitable manner and are preferably constructed of oiled silk, gutta-percha, or other waterproof material. The body portion is adapted to be secured upon the hand by means of fastening-cords or other securing means 4. An elastic web 5 is arranged across the area of the finger portion of the glove and consists, in a preferred form of construction, of a single piece or sheet of gutta-percha or similar elastic material 6, which extends across the inner or front surfaces of the fingers 3 and is secured to the same at the sides, as at 7, by stitching or otherwise. The inner edge of the web is secured to the glove at the bases of the fingers preferably by a transverse line of stitching, as at 8. The lines of stitching 7 extend but part way along the side of the fingers 3, from the bases of the same, leaving the end portions 9 of the latter in freely-projecting position rearwardly of the web. The end portions 9 are adapted to receive detachable extensions 10, whereby the operative length of the fingers may be varied and regulated as desired, and the extensions 10 are adapted to enter pockets 11, formed upon the back portion of the web, at the outer edge of the same and in alinement with the several fingers 3. The extensions 10 may be of any desired length proportionate to the regulation of the desired surface area of the web 5, it being understood that as the web is of elastic material it is capable of extension to the desired degree. The extensions 10 consist in the preferred form of tubes 12, of aluminium or other suitable light metal, which are closed at their outer ends, as at 13, and provided each at one side with a longitudinal slit or slot 14, which causes the extension to fit snugly over the respective finger end in operative position. If desired, independent fastening devices, as illustrated at 15, may be provided for the extensions 10 and may operate in connection with the finger ends to retain the extensions firmly in operative position.

In the practical use of my improved swimming device it is desirable to provide a number of sets of the extensions 10 of varying length, so that persons of varying strength may adapt to their strength the operative surface area of the web 5.

If desired, the tips of the fingers 3, as illustrated in dotted lines in Fig. 6, may be open, so that the same swimming device will fit hands of varying sizes. Similarly the glove and fingers may be formed of elastic material, such as elastic web, and thus be capable of stretching and fitting hands of different sizes.

The operation and advantages of my improved swimming device will be readily understood. The glove portion 2 is fitted onto the hand in the customary manner and secured in position at the wrist by means of the fastening device 4. The extensions 10, suitable with respect to the length of the fingers or strength of stroke of the user, are fitted to the glove-fingers 3 and are retained in position by the spring action resulting from the longitudinal slitting of the extensions at 14 or by means of the independent fastening devices 15, which latter may embody members secured to the glove-fingers. The tips

of the extensions are fitted in the pockets 11, causing a stretching or extending of the facial area of the web 5. As the pockets 11 are formed, respectively, in alinement with the fingers 3 of the glove, the tension of the stretched web, which is imposed upon the tips of the extensions 10, causes a constant tendency to bind the extensions 10 more firmly upon the glove-fingers and prevent accidental displacement of the same.

If the glove and glove-fingers are of elastic material, as is desirable in constructing my improved swimming device, to adapt the same to general use by different persons having different-sized hands the glove and web may be woven, molded, or otherwise formed integrally, or the palm portion of the glove and the web may be so formed, as will be understood. When the glove is made of non-elastic material, an open-tip formation of the glove-fingers is, as above stated, advantageous to accommodate fingers of varying length.

It will be noted that the employment of the detachable extensions 10 admits of adaptation of the glove not only to varying proportions of the hands of users of the swimming device and to varying strength of stroke of users, but also permits regulation of the operative surface area of the web to attain the best operative results under all conditions of use.

I do not desire to be understood as limiting myself to the details of construction and arrangement herein described and indicated, as it is manifest that variations and modifications may be made in the features of construction and arrangement in the adaptation of the device to various conditions of use without departing from the spirit and scope of my invention and improvements. I therefore reserve the right to all such variation and modification as properly falls within the scope of my invention and terms of the following claims.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. A swimming device of the class described, comprising a glove portion adapted to be worn upon the hand and having the glove-fingers, an elastic web portion connected with the glove portion and with the glove-fingers and provided with edge pockets, and detachable tubular extensions adapted for connection with the glove-fingers in position to project within said pockets and maintain the web portion in extended condition.

2. A swimming device of the class described, comprising a body portion adapted to be worn upon the hand and provided with an elastic web portion adapted for extension with respect to the fingers, and detachable devices adapted for connection with the body portion in position to maintain the web portion in extended condition.

3. A swimming device of the class described, comprising a glove portion adapted to be worn upon the hand and having the glove-fingers, an elastic web portion connected with the glove portion and extending with respect to the glove-fingers, said web portion being also connected with the glove-fingers throughout a predetermined extent longitudinally of the glove-fingers whereby the end portions of the glove-fingers project in free position, and detachable extensions adapted to be secured to the said end portions of the glove-fingers in position to maintain the elastic web portion in extended operative condition.

4. A swimming device of the class described, comprising a glove portion adapted to be worn upon the hand and having the glove-fingers, an elastic web portion connected with the glove portion, and extending with respect to the glove-fingers, said web portion being also connected with the glove-fingers throughout a predetermined extent longitudinally of the glove-fingers, whereby the end portions of the glove-fingers project in free position, and detachable extensions adapted to be secured to the said end portion of the glove-fingers in position to maintain the elastic web portion in extended operative condition, said web portion being provided with edge pockets adapted to receive said extensions.

5. A swimming device of the class described, comprising a glove portion adapted to be worn upon the hand and having the glove-fingers, an expansible web portion connected with the glove portion and extending with respect to the glove-fingers, and detachable extensions adapted to be mounted upon the glove-fingers in position to maintain the web portion in extended operative condition, said extensions consisting each of a metallic tube provided at one side with a longitudinal slit whereby a tensional spreading of the tube is permitted and secure operative connection of the same with the glove-finger is insured.

6. A swimming device of the class described, comprising a glove portion adapted to be worn upon the hand and having the glove-fingers, an expansible web portion connected with the glove portion and extending with respect to the glove-fingers, and detachable tubular extensions adapted to be fitted upon the glove-fingers in position to maintain the web portion in extended operative condition, said tubular extensions being longitudinally slitted whereby a tensional spreading of the same is permitted and secure operative connection of the same with the glove-fingers is insured, and said web portion being provided with a plurality of edge pockets adapted to receive said extensions.

In testimony whereof I have signed my name in the presence of the subscribing witnesses.

NILS LARSON.

Witnesses:
J. R. LITTELL,
GEO. VAIL HUPPERTZ.