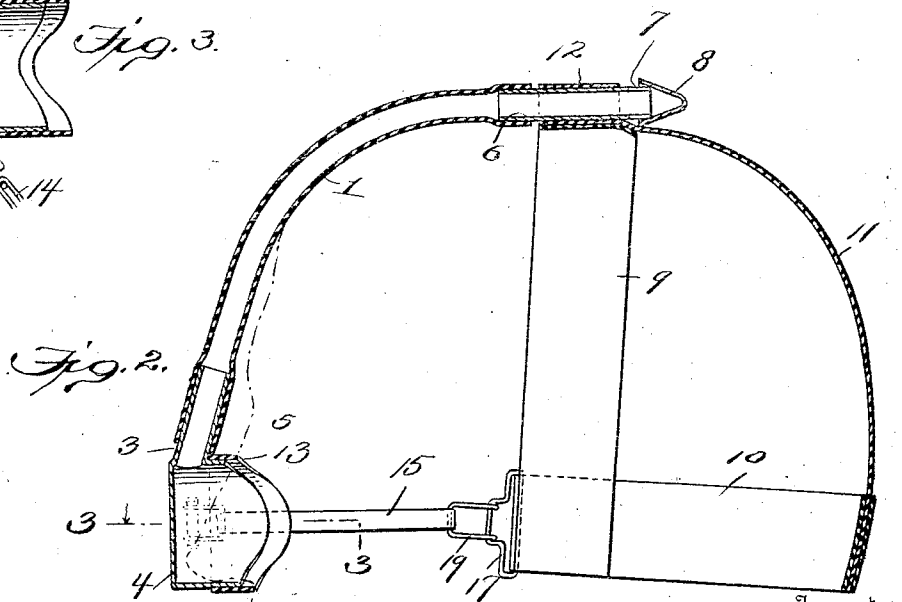
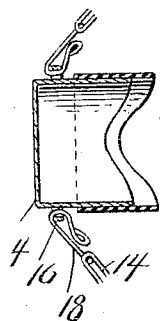
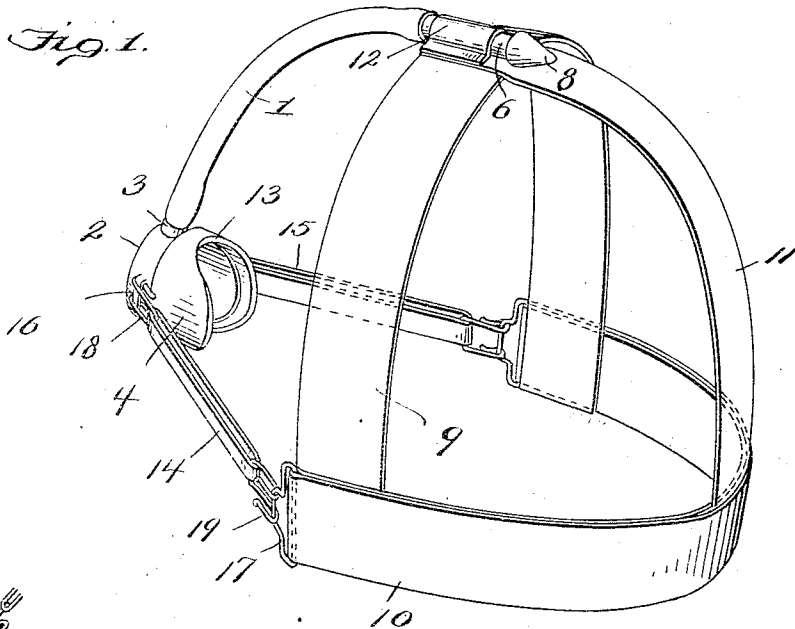


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RESPIRATOR FOR SWIMMERS

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RESPIRATOR FOR SWIMMERS.

Application filed May 24, 1923. Serial No. 641,137.

To all whom it may concern:

Be it known that I, ROBERT J. HASKELL, a citizen of the United States, residing at Washington, District of Columbia, have invented new and useful Improvements in Respirators for Swimmers, of which the following is a specification.

This invention relates to respirators for swimmers and has for its principal object the provision of means for supplying air to the nose while the latter may be submerged, at the same time preventing the entrance of water into the nostrils.

More specifically, the invention comprises an air conduit having one end thereof enclosing the nose and communicating with the nostrils, and the other or inlet end terminating at a point adjacent that part of the head which is above the level of normal submergence.

A further object of the invention is the provision of head harness for retaining the air conduit in place, at least a part of said harness being of elastic nature so that the nose-enclosing portion of the air conduit may be quickly pulled away from the face to permit free breathing in the event that the inlet end of the conduit should become inadvertently submerged so as to admit water.

Still another object of the invention is the provision of a respirator for swimmers which is characterized by the absence of portions projecting some distance beyond the contour of the head, and which afford considerable leverage when pressed by the water during the movements of the swimmer's head, tending to displace the respirator.

With the above and other objects in view, my invention consists in the improved respirator for swimmers illustrated in the accompanying drawings, described in the following specification, and particularly claimed, and in such variations and modifications thereof as will be obvious to those skilled in the art to which my invention relates.

In the drawings accompanying and forming a part of this specification, and wherein the preferred embodiment of my invention is illustrated:—

Figure 1 is a perspective view of my improved respirator for swimmers.

Figure 2 is a side sectional view of the same.

Figure 3 is a section taken along the line 3—3 of Figure 2.

Referring now in detail to the several figures, the numeral 1 represents a flexible tube, forming the intermediate part of the air conduit, to the lower end of which is attached the nose-enclosing portion consisting of a head 2 which may be made of metal or other suitable material, a nipple 3 and being provided with a flexible nose-engaging piece 4. As shown in detail in Figure 2 the nipple 3 may be made integral with the head 2, and the latter formed with a flange 5 upon which the nose-engaging piece is slipped being retained by frictional or other means, but the construction of the nose-enclosing portion is subject to considerable change or alteration without departing from the spirit of the invention. The upper end of the air conduit consists preferably of a metallic tube 6 one end of which telescopes within the upper end of the rubber tube, the other end of the tube 6 being formed with air admission slots 7, the latter being protected by a conical shield 8 which overhangs said slots and prevents the entrance of water which may be splashed upon the inlet end of the air conduit. The air conduit is retained in place by means of the head harness which preferably consists of a band 9 of elastic or other material and which extends over the head from one side to the other substantially in the plane of the ears. The ends of the band 9 are joined to the ends of a band 10 which extends substantially horizontally around the back of the head. Said bands are connected at intermediate portions by a third band 11 which extends upwardly over the back of the head and to the forward end of which the inlet end of the air conduit is fixed by means of an overlying loop 12 which may be made of the same material as the bands or of any other appropriate material. The bands and said loop may be secured wherever required in any suitable manner as by cementing or stitching.

The respirator is worn in the manner shown in Figure 2 with the head harness snugly fitting the head at the back and sides and the air conduit extending along the median line of the forehead with the inlet end substantially at the occipital part or the head. The nose-engaging piece 4 is formed with an opening having an edge 13 which fits snugly around the nose and upper lip in a water-tight manner, and the

nose-enclosing portion of the air conduit is held in position by means of the elastic members 14 and 15 which are preferably detachably secured to opposite sides of the nose-enclosing portion and to the ends of the band 10. In the illustrated form of the invention the fastening means for said elastic members consist of eyes 16 and 17 secured respectively to the nose-enclosing portion and the band 10, which are engaged by the hooks 18 and 19 fastened to the respective ends of said elastic members.

The invention is primarily intended to assist those learning to swim and also as an apparatus for improving the comfort of expert swimmers. In learning to swim the principal obstacle which confronts the beginner is the difficulty of keeping the nose above water. It is the usual experience for the beginner to unavoidably strangle, the fear of which mishap greatly retards his progress. In the use of the present invention this difficulty is eliminated and the beginner can swim comfortably with his mouth and nose submerged, breathing easily and naturally through the air conduit which is preferably valveless. In the substantially horizontal position usually assumed by the swimmer the air admission slots are well above the level of normal submergence of the body.

When used by an expert swimmer the respirator makes possible improvement and added comfort in certain styles of swimming such as the trudgeon stroke in which the major portion of the stroke is made with the face beneath the water, the inhalation and exhalation of the breath being done quickly and only at a short interval during said stroke while the face is raised above the water. The necessity for quick completion of the respiration makes this stroke extremely difficult for those who are otherwise good swimmers. In the use of this invention both the exhalation and inhalation may take place leisurely while the face is under water. This lessens fatigue and greatly adds to the comfort and pleasure of the exercise.

One of the important features of the invention consists in the elastic elements 14 and 15 by means of which the nose enclosing portion of the air conduit is held in place. In the event that water is drawn

into the inlet of the air conduit the swimmer easily avoids choking by raising the face above the water and quickly pulling the nose-enclosing portion of the air conduit away from the face against the tension of the elastic members 14 and 15 thus being able to breathe freely while the water is draining from the air conduit.

The fact that the elastic members 14 and 15 are made detachable both from the nose enclosing portion and the head harness is important from the manufacturing standpoint since it permits of but one size head harness and air conduit being made and the same assembled in sizes for adults or children by merely providing elastic bands 14 and 15 of suitable length.

It will be noted that my improved respirator for swimmers is so designed as to cling closely at all points to the contour of the head and face, avoiding the use of projecting brackets or other like features so common in "life preservers" of this type and which are useless as an aid to swimming since the projecting portions, reacting against the water as the swimmer advances, tends to displace the apparatus from its position upon the swimmer's head. In the present device these projecting portions are avoided, and the swimmer is free to make whatever natural movements may be called for by the stroke without any material impediment occasioned by the presence of the respirator.

Having described my invention what I claim as new and desire to secure by Letters Patent is:—

A respirator for swimmers comprising head harness, a nose piece connected to said head harness solely by flexible members, two of said members extending laterally from said nose piece to said head harness, and another of said members being constructed to constitute an air conduit communicating with said nose piece and secured to said head harness adjacent the top of the head, said conduit terminating closely adjacent its point of attachment to said head harness and being formed with a terminal opening rearwardly directed.

In testimony whereof I have hereunto set my hand.

ROBERT J. HASKELL.