

May 29, 1928.

A. E. ANDERSON

1,671,691

RUBBER CAP

Filed Oct. 6, 1922

Fig. 1.

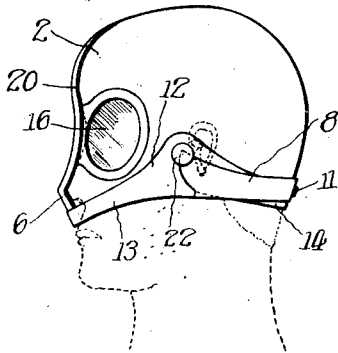


Fig. 2.

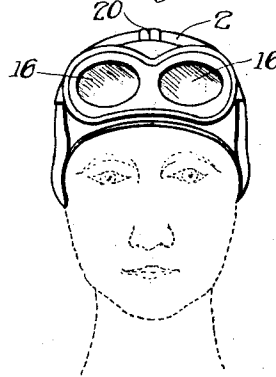


Fig. 3.

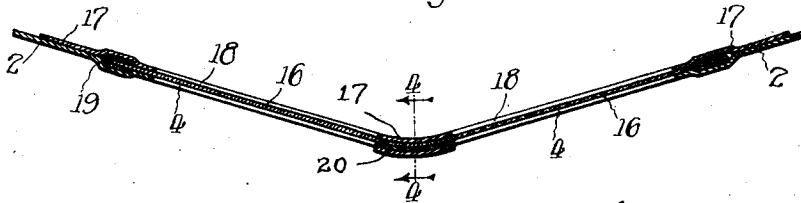


Fig. 5.

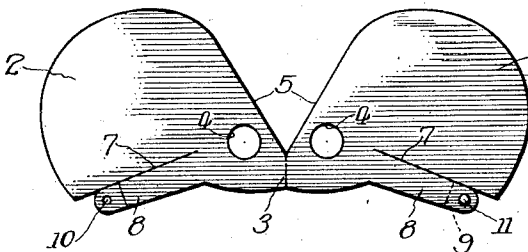


Fig. 4.

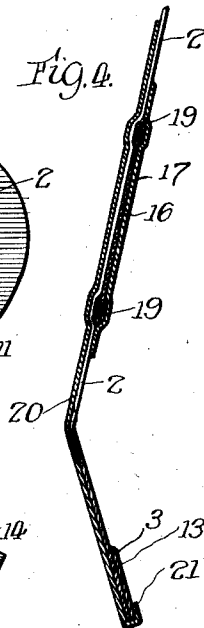


Fig. 7.

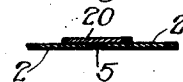


Fig. 8.

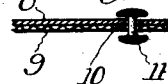
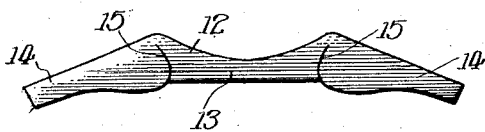


Fig. 6.



Inventor:

Arvid E. Anderson

By

Kent W. Monnell Atty.

Patented May 29, 1928.

1,671,691

UNITED STATES PATENT OFFICE.

ARVID E. ANDERSON, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO NEW YORK RUBBER CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

RUBBER CAP.

Application filed October 6, 1922. Serial No. 592,742.

This invention relates to a cap that may be used for diving or keeping the hair dry, or it may be used as a helmet for diving, or for other similar purposes. The principal object of the invention is to produce an air tight cap which is provided with transparent eye pieces so that the eyes of a wearer may be opened in diving without water being admitted to them; another object is to provide a cap of this kind in which the eye pieces may be folded upwardly above the eyes, still protecting the ears against the admission of water. As a means of carrying out these objects the main portion of the cap is made of a single piece of material, certain edges of which are connected together with the least number of parts so that the construction will be as simple and as nearly air tight as possible.

In the accompanying drawings, Fig. 1 is a side elevation of a cap constructed in accordance with the principles of this invention and applied to the head of a wearer with the eye pieces in position; Fig. 2 is a front view of the cap with the eye pieces raised, but still in place over the ears of the wearer; Fig. 3 is a sectional view of the cap across the eye piece; Fig. 4 is a section taken on the line 4-4 of Fig. 3; Fig. 5 illustrates the single piece blank from which the main portion of the cap is made; Fig. 6 shows a separate piece which is attached to the lower edge of the cap; Fig. 7 is a section of the rear portion of the cap showing the manner in which the opposite portions are secured together; and Fig. 8 is a sectional view of the end of one of the fastening straps, and the fastening member inserted therein.

In making this cap a single sheet of resilient material, preferably sheet rubber is laid out flatly and a blank, as shown by Fig. 5 is cut out to the proper size. This blank comprises the opposite rounded portions 2 joined by a bridge 3 in which are eye holes 4. Between and above the eye holes a V-shaped notch 5 is cut out with straight sides, which, when secured together, makes an angular projection 6, as shown in Fig. 1, with the bridge 3 to fit over the nose of a wearer and so that the bridge 3 will fit closely below the nose and against the upper lip. At the lower edges of the rounded portions 2 are slits 7 which form the tabs 8 disposed at a slight angle to the bridge 3, and the extremities of these tabs are com-

monly provided with a strengthening piece 9 of fabric or even of the sheet rubber itself to re-enforce a perforation 10 for the insertion of a fastening button 11 by which the extremities of the tabs 8 can be secured together at the back of the head of a wearer.

In order to re-enforce the lower edge of the cap a single piece strip 12, as shown in Fig. 6, is also cut out of the sheet material of which the cap is made, or other suitable material, and this strip has a portion 13 to extend along the lower outer edge of the bridge 3, and rear extensions 14 to fit along the lower edge formed by the slit 7 of the opposite rounded portions 2. A curved slit 15 is made on each side of a depth about equal to the width of the tabs 8 at their inner ends so that they can be extended from within the bridging piece 13 outside of the extensions 14 and fastened outside of the cap, as shown in Fig. 1.

To cover the eye holes 4 a single piece of transparent material 16, such as celluloid or the like is applied across the eye holes 4 inside of the cap, and is held in place by a piece of material 17 slightly larger than the transparent piece 16, attached all around at its edges to the material of the cap and provided with apertures 18 which register with the eye holes 4. In order to insure that the attachment of this material 16 will provide a water tight joint, an additional strip 19 of rubber or other flexible material is closely applied over both sides of the entire edge of said transparent material 16, and this strip 19 is cemented or vulcanized to the adjacent sides of the members 2 and 17 closely adjacent their respective eye holes 4 and 18. Thus the transparent material 16 is held closely in place by the resilient materials and no water will be admitted to the interior of the cap through the eye holes.

In order to re-enforce and secure the opposite portions of the cap together, a single narrow strip 20 is attached at the center with an extension 21 at the inside of the lower front edge and continuing over the top and back of the cap where the sections are secured together, as indicated in Fig. 7.

To further strengthen the cap at the inner edges of the tabs 8, a disc 22 of resilient material may be attached at each side of the cap to the member 12 and to the adjacent edge of the tab, thus strengthening not only the tab but also the adjacent portion of the

cap. It is contemplated that all of the parts thus described may be cemented or vulcanized together, the latter being preferable as the parts are more securely connected.

7 In applying the cap it is placed over the head of a wearer and drawn down tightly so that the eye holes are opposite the eyes of a wearer at which time the bridge piece 3 will extend below the nose, and owing to 10 the angular disposition of the bridge piece, and the lower edge of the tabs 8, the lower edge of the cap will be drawn tightly against the upper lip and over the ears of the 15 wearer, as shown more clearly in Fig. 1. When the eye pieces are drawn upwardly to rest upon the forehead of the wearer, as shown in Fig. 2, the eyes will be free but the ears may still be kept covered by connecting the tabs 8 at the rear of the head, 20 as there is sufficient resilience in the material of the cap to allow it to stretch, and to allow the tabs to be fastened in either position. Thus the hair may be kept dry without protecting the eyes and when the eye pieces are 25 down, water will be excluded so that the eyes can be opened under water without danger of the water reaching the eyes. This is a great advantage in diving, and as the bridge piece also extends below the nose, 30 there is no danger of water reaching the nose of the wearer. The cap is made of a minimum number of parts, it can be made quickly, inexpensively, and is less subject to deterioration, leakage, and the necessity 35 for repair.

I claim:

1. In a waterproof cap of the class described fitting over the nose and ears, a blank 40 of resilient material having two opposite rounded portions connected by a bridge with eye holes above the bridge, and an angular notch extending between and above the eye holes so that when the opposite portions are connected together by joining the edges of 45 the angular notch, an angularly projecting nose piece will be formed between the eyes.

2. In a waterproof cap of the class described fitting over the nose and ears, a single 50 sheet of material having two opposite portions connected by a front bridge and with

tabs extending oppositely therefrom at the bottoms of the said portions, and another piece of material to be applied to the lower edge of the first named sheet of material and having slits therein through which the 55 tabs extend so that the tabs can be folded over the body portion of the cap at the rear thereof.

3. In a waterproof cap of the class described fitting over the nose and ears, a pair 60 of body portions connected with a bridge portion and tabs extending oppositely therefrom, a reinforcing member applied over the top of the bridge portion and along the lower edges of the other portions with a slit 65 therein on each side through which the corresponding tab extends, and re-enforcing means applied to the end of each slit and against the edge of the tab adjacent thereto.

4. A waterproof bathing cap, comprising 70 nose and ear covering and transparent eye covering portions, said cap terminating at its lower edge in a face encircling water seal portion for preventing entrance of water 75 into said nose, ear and eye covering portions, said lower edge terminating above the mouth of the wearer when the cap is in a worn position.

5. A waterproof bathing cap comprising nose and ear covering and transparent eye 80 covering portions, a face encircling water seal part for preventing entrance of water into said portions, said water seal part including an upper lip engaging portion.

6. A waterproof bathing cap comprising 85 nose and ear covering and transparent eye covering portions, said cap tapering towards its lower edge and terminating at said edge in a face encircling water seal portion, said water seal portion including an upper lip 90 engaging part.

7. An elastic rubber bathing cap, comprising nose and ear covering and transparent eye covering portions, said cap terminating 95 in an elastic reinforced lower contracted edge, said edge including an upper lip engaging portion and forming a water seal to prevent the entrance of water into said portions.

ARVID E. ANDERSON.