C. H. CONKLE.

MASK FOR DIVERS.

APPLICATION FILED OCT. 20, 1914.

1,139,850. Patented May 18, 1915.

FIG_1_

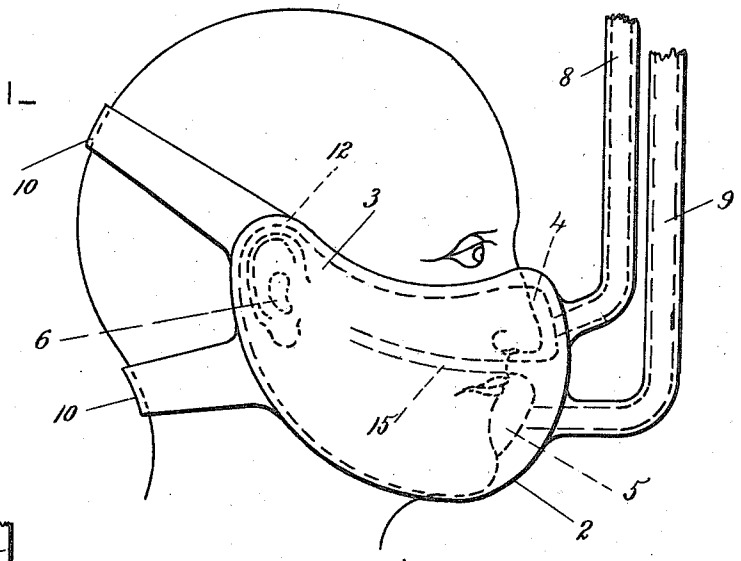


FIG_2_

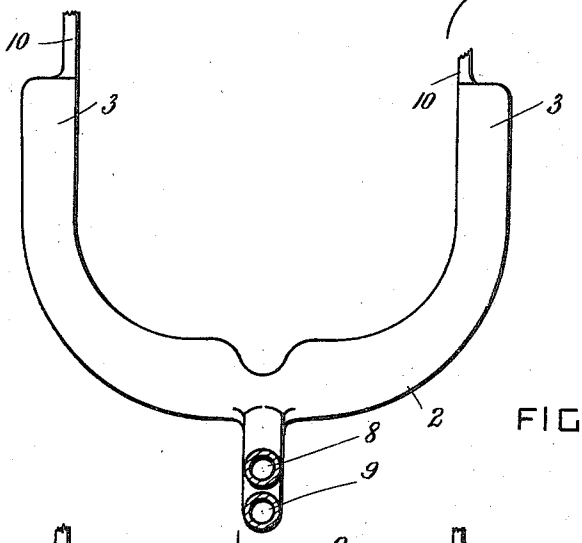


FIG_3_

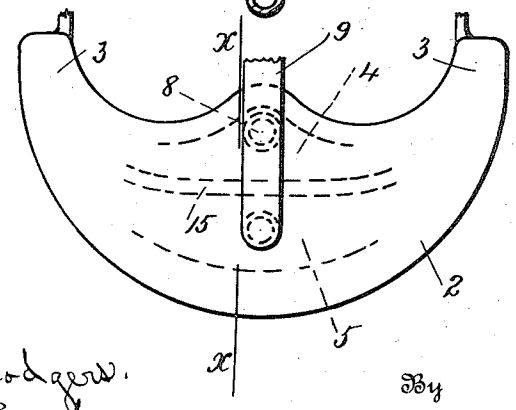
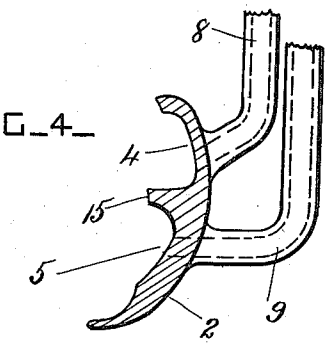


FIG_4_



Witnesses

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UNITED STATES PATENT OFFICE.

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MASK FOR DIVERS.

1,139,850. Specification of Letters Patent. Patented May 18, 1915.

Application filed October 20, 1914. Serial No. 867,602.

To all whom it may concern:

Be it known that I, CHARLES H. CONKLE, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Masks for Divers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to appliances for enabling divers to breathe under shallow water; and it consists of a mask of flexible waterproof material which is secured over the mouth, nose and ears, and is provided with air pipes.

In the drawings, Figure 1 is a side view of a mask constructed according to this invention, showing it in use. Fig. 2 is a plan view of the mask. Fig. 3 is a front view of the mask; and Fig. 4 is a section taken on the line *x*—*x* in Fig. 3.

The mask 2 is formed of flexible material which is waterproof, such as india rubber, and it is formed so as to extend over the bridge of the nose and under the chin of the diver, and it preferably has lateral flaps or cheek portions 3 which overlap the ears.

The mask is provided with an internal bar or diaphragm 15 which extends horizontally across its middle part and bears on the upper lip of the diver, and which forms two air chambers 4 and 5 on the inner side or interior of the mask. The diaphragm extends for some distance toward the ears, and it rests against the cheeks of the diver. The air chambers 4 and 5 are connected together at their ends by spaces 6 which extend over the openings of the ears of the diver. An air-inlet pipe 8 is connected to the upper air chamber 4, and is of sufficient length to extend above the surface of the water, where it is held by an assistant or is secured in any approved manner so that it will not become wholly submerged. An air-outlet pipe 9 is connected to the lower chamber 5, and is also extended above the water.

The mask is secured to the head of the diver by suitable fastenings, such as straps 10, and the edges of the mask are preferably provided with suitable beads or joint flanges 12, which bear against the face and head, and are held watertight by the bands or fastenings.

The diver preferably inhales through his nose, and exhales from his mouth, and in shallow water no mechanical air pump is necessary to enable him to have a sufficient circulation of air, although a simple mechanical air-pump might be attached if desirable. The air pipes are flexible so that the diver can move about under the water, and the device enables a number of minor operations to be carried out under shallow water without necessitating the use of a regular diver's outfit with a helmet, dress and air-pump. The extension of the cheek portions of the mask over the ears prevents head noises in the ears, and also insures the mask against accidental displacement.

This device may also be used to advantage in sewers, to guard against foul gases as well as water.

What I claim is:

A breathing device, comprising a mask of flexible material adapted to fit over the bridge of the nose, and over the cheeks and ears, and under the chin, said mask having an air space provided with a rib or diaphragm adapted to bear on the upper lip and on the cheeks, thereby dividing it into two chambers which are connected together at their end portions only where they overlap the ears, inlet and outlet pipes connected to the front and middle portions of the respective chambers, and means for holding the said mask and its rib in air-tight contact with the face.

In testimony whereof I have affixed my signature in the presence of witnesses.

CHARLES H. CONKLE.

Witnesses:

ANTONIO FRANCIS,

JOHN REACH,

ROBERT FISHER.