R. H. DAVIS.

BREATHING BAG.

APPLICATION FILED JAN. 13, 1915.

1,213,160.

Patented Jan. 23, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

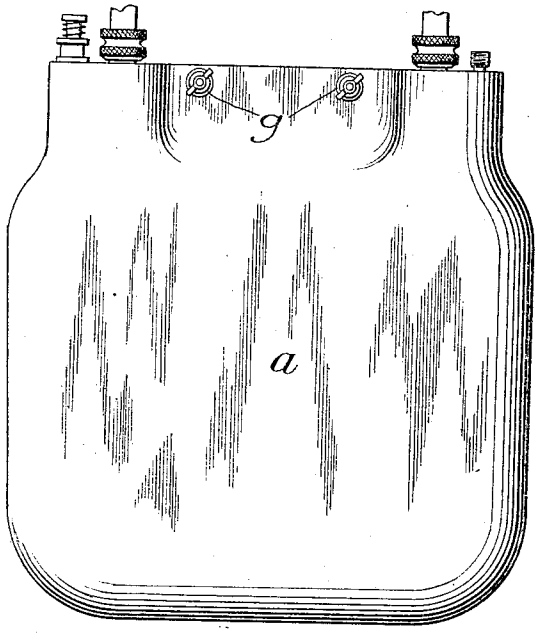


Fig. 2.

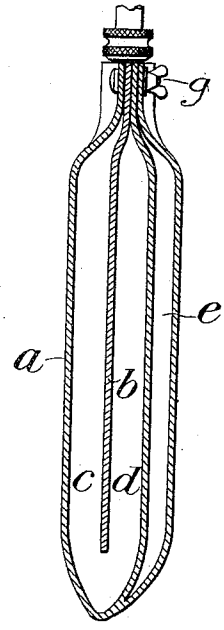
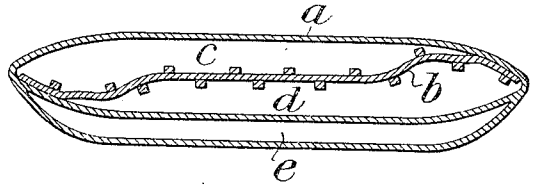


Fig. 3.



Witnesses.

J. K. Moore

Robt. E. Barry

Inventor.

Robert H. Davis.

By

Dieterich & Quad

Attys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

R. H. DAVIS.

BREATHING BAG.

APPLICATION FILED JAN. 13, 1915.

1,213,160.

Patented Jan. 23, 1917.

2 SHEETS—SHEET 2.

Fig. 4.

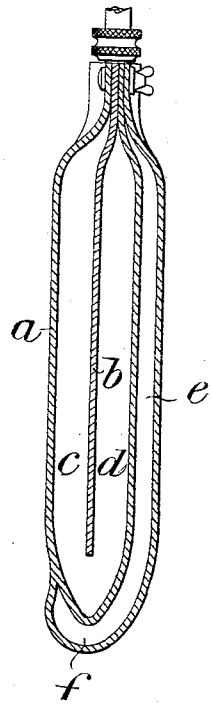


Fig. 5.

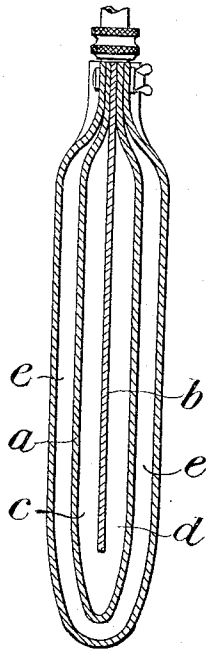
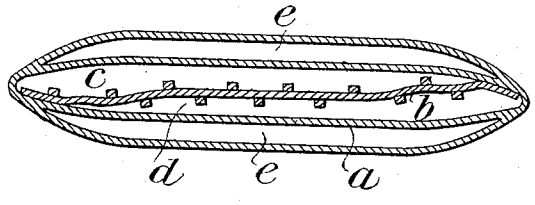


Fig. 6.



Witnesses.

J. K. Moore

Robt. E. Barry

Inventor.

Robert H. Davis.

By

Whittemore & Hubbard

Attys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ROBERT HENRY DAVIS, OF LONDON, ENGLAND.

BREATHING-BAG.

1,213,160. Specification of Letters Patent. Patented Jan. 23, 1917.

Application filed January 13, 1915. Serial No. 2,045.

To all whom it may concern:

Be it known that I, ROBERT HENRY DAVIS, a subject of the King of Great Britain, residing at 187 Westminster Bridge road, London, England, have invented new and useful Improvements in Breathing-Bags, of which the following is a specification.

My invention relates to breathing-bags such as are described in the specification of former Letters Patent No. 17644 of 1910 and which are designed for use by persons engaged in rescue work in mines and for like purposes. Such breathing-bags as hitherto made are of material such as vulcanized india-rubber and are furnished with a central longitudinal partition dividing the bags into two compartments which are in communication with one another at the lower part of the bag, the two compartments thus formed being fitted with inhaling and exhaling and oxygen supply-valves or valve connections. Now, it is found in practice that in bags of this description there is a tendency, when the bag is in use for some time, for the air which is inspired by the user to become unpleasantly warm and it is the object of this invention to provide means whereby this disadvantage is obviated. To this end according to my invention I form the bag with a third compartment designed to contain a suitable cooling agent such as sodium sulfate or the like, the said third compartment being arranged on, or in, the bag in any suitable position. For example, it may form a kind of cooling jacket on one side of the bag or on one side and around the bottom of the bag, or it may extend completely around the bag on both sides so as practically to inclose it. By forming breathing bags in this way a part or the whole of the outer surface thereof is cooled by means of a cooling medium contained in the third compartment so that the air which is inspired by the wearer is maintained at a pleasant temperature.

To enable the invention to be fully understood I will describe it by reference to the accompanying drawings, in which:—

Figure 1 is a side view of a breathing-bag made according to the invention. Fig. 2 is a vertical section, and Fig. 3 is a horizontal section thereof. Fig. 4 is a vertical section similar to Fig. 2, illustrating a modification, and Figs. 5 and 6 are views similar to Figs. 2 and 3 respectively of a still further modification.

a represents the breathing-bag proper and *b* is the longitudinal partition which extends from the top nearly to the bottom of the bag so as to divide it into the two compartments *c* and *d*, this being the ordinary construction of such breathing-bags.

e is the third compartment which is formed on or adapted to the bag *a* and which is designed to contain the cooling agent such as sodium sulfate. In the construction illustrated in Figs. 1 to 3, the said third compartment *e* is located on one side of the breathing-bag so as to form a cooling jacket at that side only. In Fig. 4 the said compartment *e* is adjacent to one side of the bag as in the construction illustrated in Figs. 1 to 3, but also extends around the bottom of the said bag as indicated at *f*. In the arrangement shown in Figs. 5 and 6 the third compartment extends completely around the bag *a* so as to form a jacket which practically incloses the latter. In each of the embodiments of my invention shown in the drawings, the upper ends of the breathing bag and cooling chamber are open, and a single closing means such as bolts and nuts *g* are used to close all of the compartments simultaneously. As will be understood, the surface of the bag is cooled either locally or throughout by means of the cooling agent contained in the third compartment or jacket *e* to an extent sufficient to maintain the air which is inspired by the user at a pleasant temperature even when the apparatus is continuously used for a considerable period.

Claims:

1. A breathing bag composed of flexible material, and having a partition dividing the interior into two compartments in communication with one another at the lower part of the bag and a third flexible compartment adapted to contain a cooling

agent, substantially as and for the purpose described.

2. A breathing bag composed of flexible material and having a partition dividing the interior into two compartments in communication with one another at the lower part of the bag and a third flexible compartment adapted to contain a cooling agent and located adjacent to one side of the breathing bag, substantially as described.

ROBERT HENRY DAVIS.

Witnesses:

F. D. BRESMAN,

S. C. BUCK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."