

Title (en)  
Emergency breathing apparatus.

Title (de)  
Atemgerät für Notfälle.

Title (fr)  
Appareil respiratoire de secours.

Publication  
**EP 0079709 A1 19830525 (EN)**

Application  
**EP 82305745 A 19821028**

Priority  
• US 31595681 A 19811028  
• US 43243282 A 19821015

Abstract (en)  
A lightweight, self contained breathing apparatus is provided for supplying breathable gas continuously or on demand to a user such as a miner in an emergency situation or to a person suffering from emphysema or asthma who needs oxygen enriched air. The apparatus includes a pressurized oxygen container (14) and conduits (16) for delivering oxygen to a flexible breathing bag (12) from which the user draws breathable gas. Gas exhaled by the user is reused after it flows through a scrubber (30) which removes carbon dioxide and other respiratory impurities from exhaled gas. A mouthpiece (22) is connected by an inhalation conduit (18) directly to the air bag to receive air without its being reheated in a return flow through the scrubber. Within the scrubber, the exhaled air passes through molecular sieve material before and after passing through a layer of carbon dioxide reactive material. The apparatus is hermetically sealed in a transparent plastic case (34) which provides for visual inspection of the integrity of the hermetic seal as well as the condition of the apparatus contained therein. Both the case and the oxygen container are constructed of light weight materials to reduce the weight of the apparatus. A second air bag may be provided between the mouthpiece and scrubber to increase the exposure time of the exhaled air to the scrubber's chemical bed so that the carbon dioxide level may be kept low even though the user is exerting considerable energy for a prolonged period of time.

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**A62B 7/04**; **A61M 16/00**

IPC 8 full level  
**A62B 7/04** (2006.01); **A62B 7/10** (2006.01)

CPC (source: EP)  
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