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(54) Title: COMPRESSORS AND METHODS FOR USE

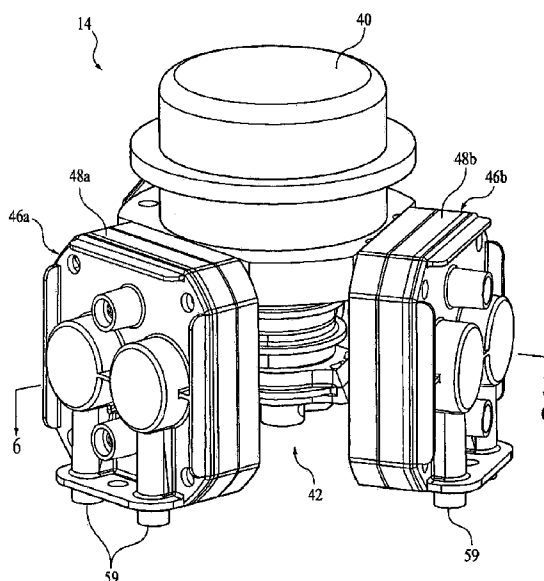


FIG. 5A

(57) Abstract: A compressor (14) suitable for use in a portable oxygen concentrator (10). In one exemplary embodiment, the compressor includes a crankshaft (49) rotatable about a central axis and a plurality of diaphragm assemblies (46) spaced apart around the central axis generally within a plane. The diaphragm assemblies include diaphragms (50) movably mounted to respective housings to at least partially define chambers. A plurality of rods (44) extend between respective diaphragms and the crankshaft. The rods are coupled to the crankshaft such that the rods are offset axially from one another along the central axis and are coupled to the diaphragms for cyclically increasing and decreasing pressure within the chambers as the crankshaft rotates about the central axis.

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A. CLASSIFICATION OF SUBJECT MATTER

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 4,381,179 (PAREJA) 26 April 1983 (26.04.1983), Figures 6-8	21-22, 28 ----- 1-20; 23-27
Y	US 6,205,960 B1 (VALLEJOS) 27 March 2001 (27.03.2001), Figure 6	1-20, 23-27
X --- Y	US 6,923,180 B2 (RICHEY, II et al) 02 August 2005 (02.08.2005), Figures 7-14	29-32 ----- 33



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