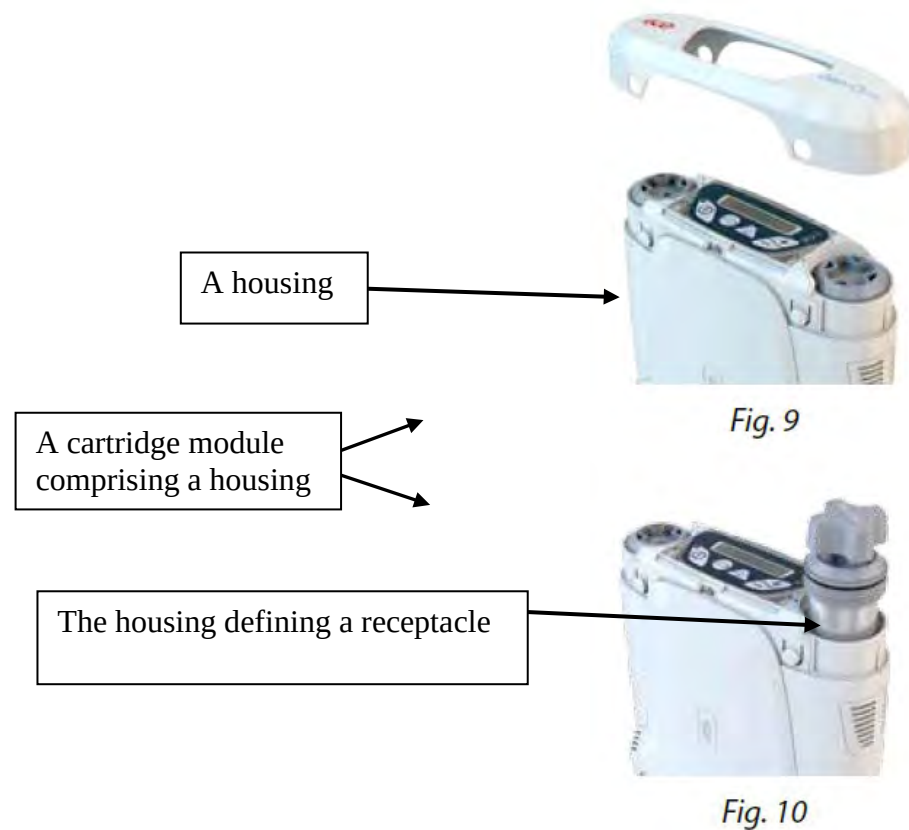


	<u>US Patent 10,357,628: REMOVABLE CARTRIDGE FOR OXYGEN CONCENTRATOR¹</u> <i>GCE Zen-O Lite system and components , including at least part Nos.: RS-00600 and RS-00600C, RS-00601, RS-602, RS-603, RS-00604, RS-00605, RS-00606, RS-00608-G-S, RS-00608-G-D, RS-608-X-D, RS-00616, RS-00619, and other applicable part numbers corresponding to GCE Zen-O Lite portable concentrators, batteries, carry bags or backpacks, replacement sieve modules, and/or other related components.</i>	<u>Infringement Literally and/or Under the Doctrine of Equivalents</u>
Claim 1: A portable oxygen concentrator, comprising: a cartridge module comprising a housing, the housing defining a receptacle;	Under 35 U.S.C. § 271(a), GCE has willfully infringed, and continues to willfully infringe, independent claim 1 and its dependent claims below by making, using, offering to sell, selling, and/or importing the GCE Zen-O Lite System in a manner that directly infringes U.S. Patent 10,357,628 (“the ‘628 Patent”). Alternatively and/or additionally, under 35 U.S.C. § 271(b), GCE willfully and actively induces infringement of independent claim 1 and its dependent claims below by at least instructing, teaching and intending customers/end users to make and/or use the GCE Zen-O Lite System in an infringing manner, while knowing such acts by customers/end users constitute infringement of the ‘628 Patent or by remaining willfully blind that such acts by customers/end users constitute infringement of the ‘628 Patent. Customers/end users directly infringe by following these teachings or instructions. 3B relies on and cites at least Exhibits A-E to this chart in support of the contentions made herein: • Exhibit A – GCE Zen-O Lite User Manual • Exhibit B – GCE Zen-O Lite Brochure for Home Oxygen Providers • Exhibit C – Images of GCE Zen-O Lite Separation Cartridge • Exhibit D – GCE Zen-O Lite Overview Video, available at https://youtu.be/OzT8VcYdEFY • Exhibit E – GCE Zen-O Lite Leaflet	Literally infringed.

¹ 3B reserves the right to amend this claim chart and any of the disclosures contained herein as information becomes available to it during the course of discovery, in view of GCE’s positions and contentions, and/or in view of the court’s claim construction ruling.

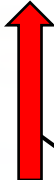




[Exs. A, B].

GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a portable oxygen concentrator comprising a cartridge module comprising a

	housing, the housing defining a receptacle. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	
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a separation cartridge selectively removable from the receptacle by movement relative to the receptacle in a first direction,	 Fig. 9 A separation cartridge selectively removable from the receptacle by movement relative to the receptacle in a first direction  Fig. 10  A first direction	Literally infringed.
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[Ex. A; *see also* Ex. D].

GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a separation cartridge selectively removable from the receptacle by movement relative to the receptacle in a first direction. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.

the separation cartridge comprising a case at least partially defining an outer volume of the separation cartridge, an inlet oriented in a second direction opposite the first direction, an outlet oriented in the second direction, and a bed of adsorbent material configured to preferentially adsorb nitrogen, the case at least partially surrounding the bed of adsorbent material;

The separation cartridge comprising a case at least partially defining an outer volume of the separation cartridge

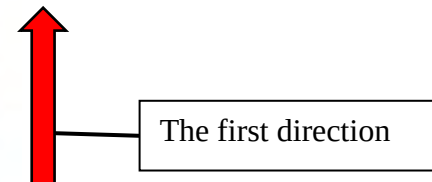
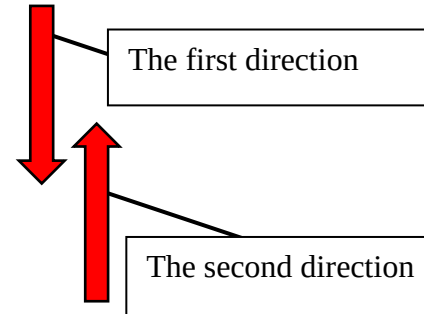
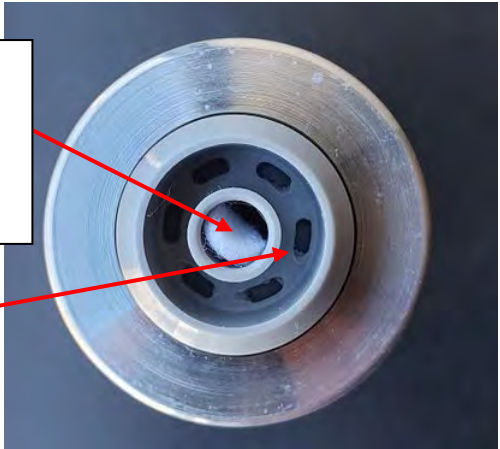
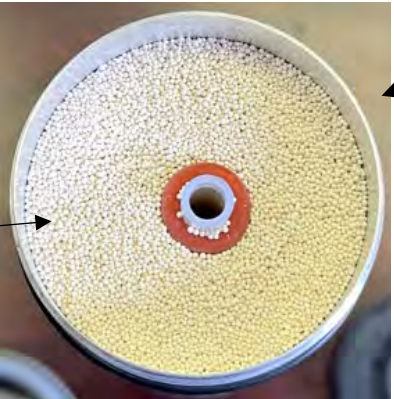
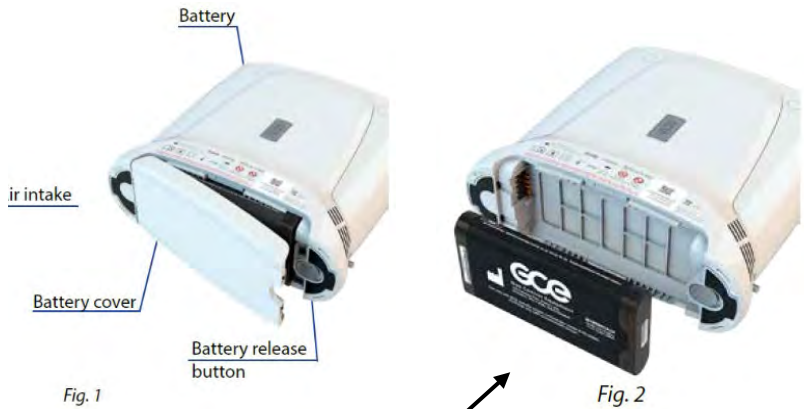


Fig. 10

Literally infringed.

	The separation cartridge comprising an inlet oriented in a second direction opposite the first direction The separation cartridge comprising an outlet oriented in the second direction The separation cartridge comprises a bed of adsorbent material configured to preferentially adsorb nitrogen A top-down view of the separation cartridge. It is a circular metal component with a central white plastic fitting. Two red arrows point to the fitting: one points to the top (inlet) and the other points to the bottom (outlet). A side view of the separation cartridge. It shows a cylindrical metal case filled with a bed of yellow and white granular adsorbent material. A red plastic fitting is visible in the center. The case at least partially surrounding the bed of adsorbent material [Exs. A, C]. GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make the separation cartridge comprising a case at least partially defining an outer volume of the separation cartridge, an inlet oriented in a second direction opposite the first direction, an outlet oriented in the second direction, and a bed of adsorbent material configured to preferentially adsorb nitrogen, the case at least partially surrounding the	
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	bed of adsorbent material. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	
a power pack removable from the portable oxygen concentrator;	 Fig. 1 Fig. 2 A power pack removable from the portable oxygen concentrator [Ex. A] GCE also indirectly infringes by instructing and teaching customers/end users to use and/or make a power pack removable from the portable oxygen concentrator. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	Literally infringed.

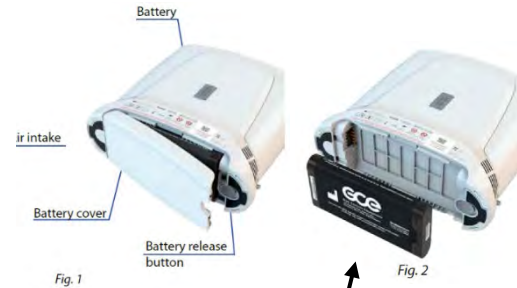
a pump electrically coupled to the power pack, the pump operable to cause a flow of fluid to move relative to the adsorbent material;



A pump (internal) is electrically coupled to the power pack and operable to cause a flow of fluid to move relative to the adsorbent material

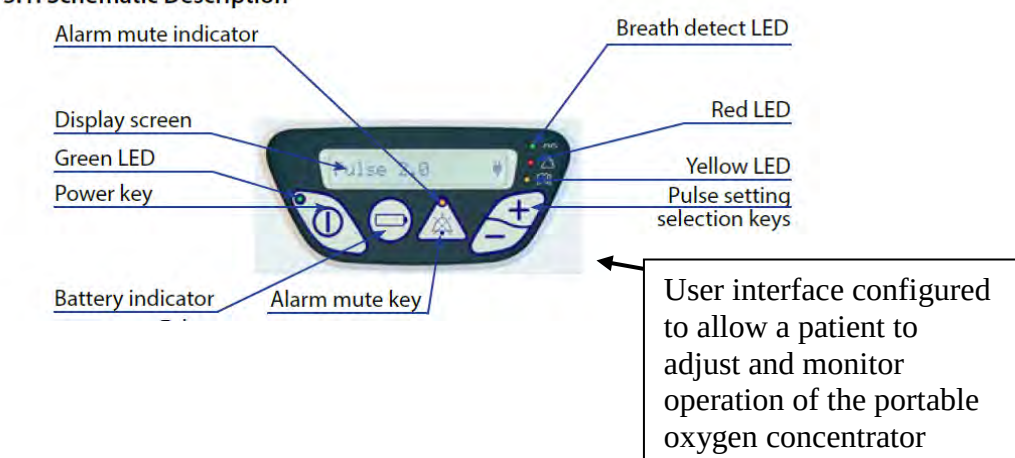
[Ex. A, *see also* Ex. D]

GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a pump electrically coupled to the power pack, the pump operable to cause a flow of fluid to move relative to the adsorbent material. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.



Power pack

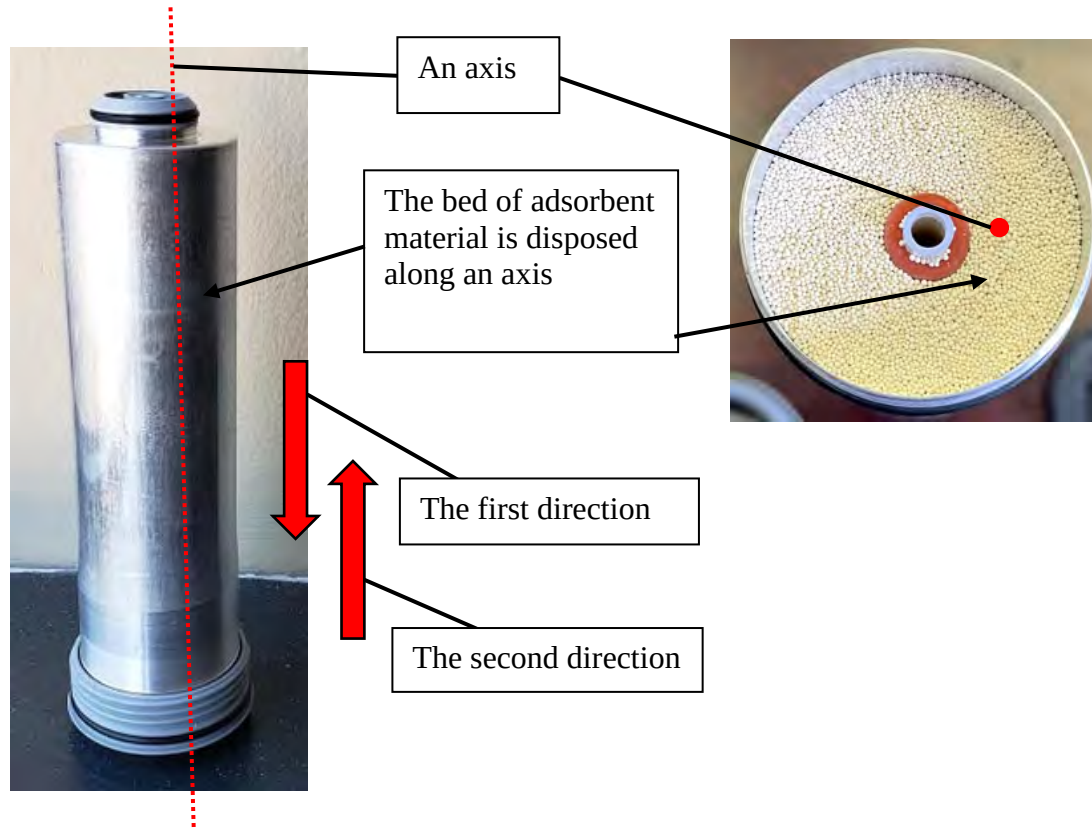
Literally infringed.

a user interface configured to allow a patient to adjust and monitor operation of the portable oxygen concentrator;	5.1. Schematic Description  7.4. Adjusting Setting <i>IMPORTANT: After powering on Zen-O lite™, the startup sequence will take approximately 35 seconds. Specified oxygen level will be reached within 2 minutes of use.</i> • The device starts working in the previous setting. • The device will deliver a pulse of oxygen at the beginning of each of your inhalation. • Pulse mode of operation can be adjusted from 1.0 to 5.0 in 0.5 increments with the  and  keys. [Ex. A; see also Ex. B]. GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a user interface configured to allow a patient to adjust and monitor operation of the portable oxygen concentrator. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	Literally infringed.
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a carrying device for transporting the portable oxygen concentrator;	Carrying device for transporting the portable oxygen concentrator  Zen-O lite™ carry bag Zen-O lite™ rucksack (backpack) [Ex. A; <i>see also</i> Ex. B]. GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a carrying device for transporting the portable oxygen concentrator. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	Literally infringed.
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wherein the housing of the cartridge module is configured to at least partially surround the case of the separation cartridge,	The housing of the cartridge module is configured to at least partially surround the case of the separation cartridge  Fig. 9 Fig. 10 [Ex. A]. GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a portable oxygen concentrator wherein the housing of the cartridge module is configured to at least partially surround the case of the separation cartridge. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	Literally infringed.
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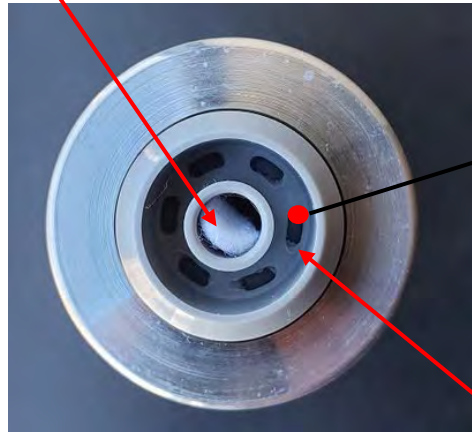
wherein the bed of adsorbent material is disposed along an axis, one of the inlet and the outlet is disposed along the axis, and the other of the inlet and the outlet is spaced-apart from the axis, and wherein the first direction and the second direction are substantially parallel to the axis.



The first direction and the second direction are substantially parallel to the axis.

Literally infringed.

The other of the inlet and
the outlet is spaced-apart
from the axis



An axis

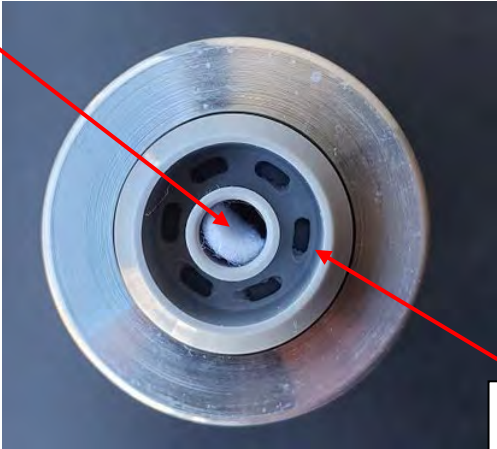
One of the inlet and the outlet
is disposed along the axis

[Ex. C]

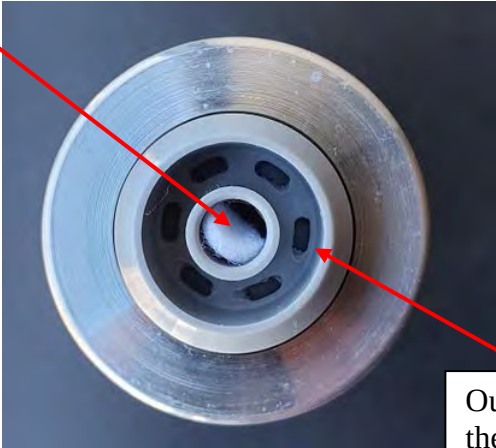
GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a portable oxygen concentrator wherein the bed of adsorbent material is disposed along an axis, one of the inlet and the outlet is disposed along the axis, and the other of the inlet and the outlet is spaced-apart from the axis, and wherein the first direction and the second direction are substantially parallel to the axis. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.

Claim 4: The portable oxygen concentrator as recited in claim 1, wherein the bed of adsorbent material comprises a bed of zeolite which provides preferential adsorption of nitrogen.	The bed of adsorbent material comprises a bed of zeolite which provides preferential adsorption of nitrogen  [Ex. C] GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a portable oxygen concentrator wherein the bed of adsorbent material comprises a bed of zeolite which provides preferential adsorption of nitrogen. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	Literally infringed.
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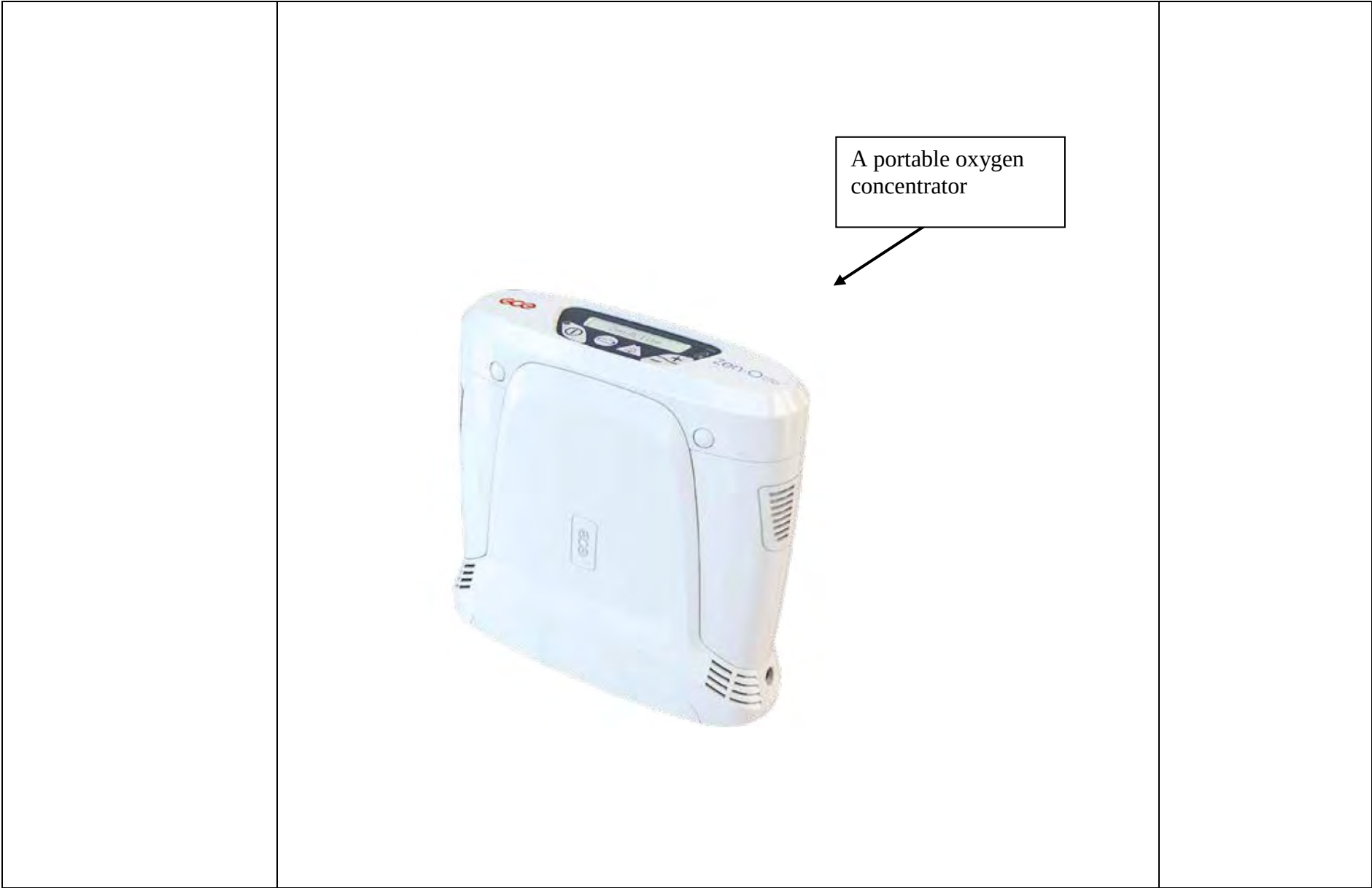
Claim 5: The portable oxygen concentrator as recited in claim 4, wherein the zeolite is an LiLSX adsorbent.	The zeolite is an LiLSX adsorbent  [Ex. C]. GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a portable oxygen concentrator wherein the zeolite is an LiLSX adsorbent. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	Literally infringed.
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Claim 7: The portable oxygen concentrator as recited in claim 1, wherein the inlet is an inlet port, and the outlet is an outlet port.	The inlet is an inlet port  The outlet is an outlet port [Ex. C]. GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a portable oxygen concentrator wherein the inlet is an inlet port and the outlet is an outlet port. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	Literally infringed.
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Claim 8: The portable oxygen concentrator as recited in claim 1, wherein the case includes a main housing and a cap coupled to the main housing.	The case includes a main housing Cap coupled to the main housing  [Ex. C] GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a portable oxygen concentrator wherein the case includes a main housing and a cap coupled to the main housing. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	Literally infringed.
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Claim 9: The portable oxygen concentrator as recited in claim 8, wherein both the inlet and the outlet are formed in the main housing.	Inlet formed in the main housing  Outlet formed in the main housing [Ex. C] GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a portable oxygen concentrator wherein both the inlet and the outlet are formed in the main housing. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	Literally infringed.
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Claim 11: A portable oxygen concentrator, comprising: a cartridge module comprising a housing, the housing defining a receptacle;	Under 35 U.S.C. § 271(a), GCE has willfully infringed, and continues to willfully infringe, independent claim 11 and its dependent claims below by making, using, offering to sell, selling, and/or improving the GCE Zen-O Lite System in a manner that directly infringes the '628 Patent. Alternatively and/or additionally, under 35 U.S.C. § 271(b), GCE willfully and actively induces infringement of independent claim 11 and its dependent claims below by at least instructing, teaching and intending customers/end users to make and/or use the GCE Zen-O Lite System in an infringing manner, while knowing such acts by customers/end users constitute infringement of the '628 Patent or by remaining willfully blind that such acts by customers/end users constitute infringement of the '628 Patent. Customers/end users directly infringe by following these teachings or instructions. 3B relies on and cites Exhibits A-E to this chart in support of the contentions made herein: • Exhibit A – GCE Zen-O Lite User Manual • Exhibit B – GCE Zen-O Lite Brochure for Home Oxygen Providers • Exhibit C – Images of GCE Zen-O Lite Separation Cartridge • Exhibit D – GCE Zen-O Lite Overview Video, available at https://youtu.be/OzT8VcYdEFY • Exhibit E – GCE Zen-O Lite Leaflet	Literally infringed.
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A portable oxygen
concentrator

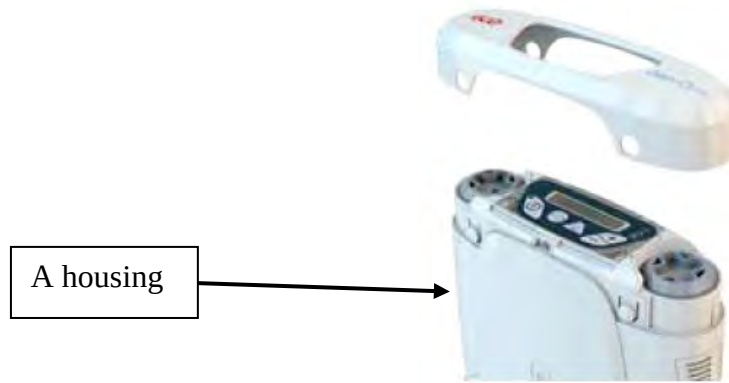


Fig. 9

A cartridge module
comprising a housing

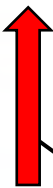
The housing defining a receptacle



Fig. 10

[Exs. A, B].

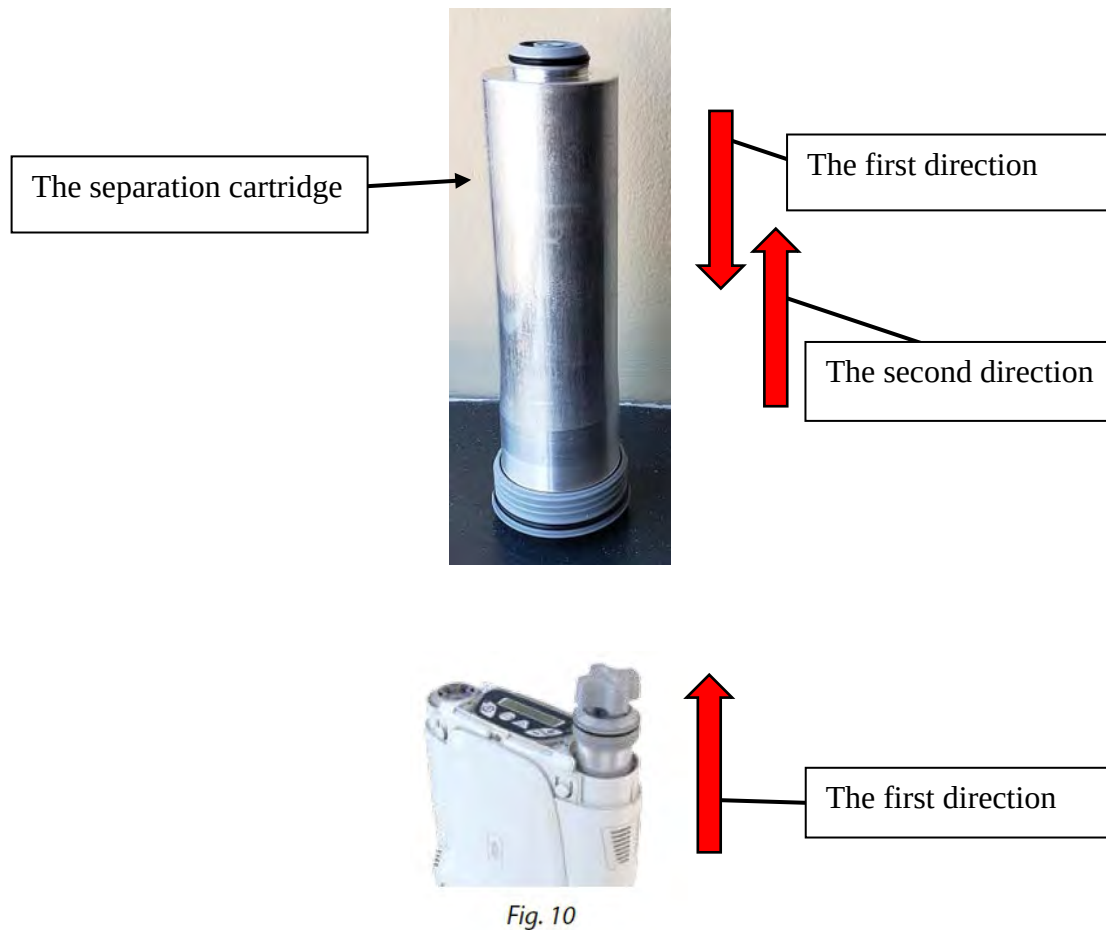
GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a portable oxygen concentrator comprising a cartridge module comprising a housing, the housing defining a receptacle. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.

a separation cartridge selectively removable from the receptacle by movement relative to the receptacle in a first direction,	A photograph showing a white, L-shaped separation cartridge with a handle and a red emergency stop button, positioned above a white rectangular oxygen concentrator receptacle. Fig. 9 A separation cartridge selectively removable from the receptacle by movement relative to the receptacle in a first direction A photograph of the same white oxygen concentrator receptacle with the separation cartridge attached to its top. A black arrow points from the text box to the cartridge. Fig. 10 A thick red arrow pointing vertically upwards. A first direction	Literally infringed.
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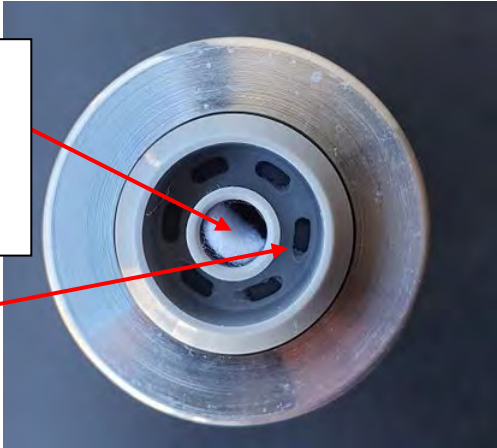
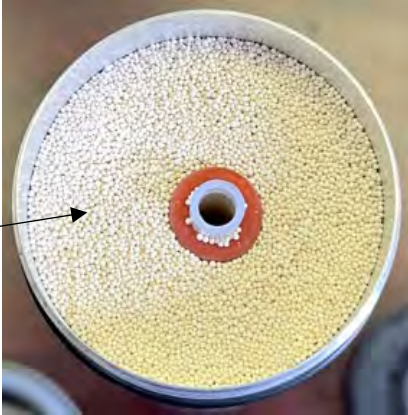
[Ex. A; *see also* Ex. D].

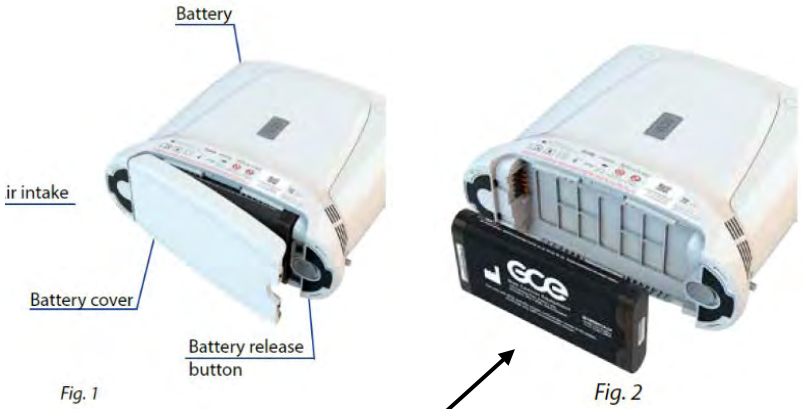
GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a separation cartridge selectively removable from the receptacle by movement relative to the receptacle in a first direction. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.

the separation cartridge comprising an inlet oriented in a second direction opposite the first direction, an outlet oriented in the second direction, and a bed of adsorbent material configured to preferentially adsorb nitrogen;

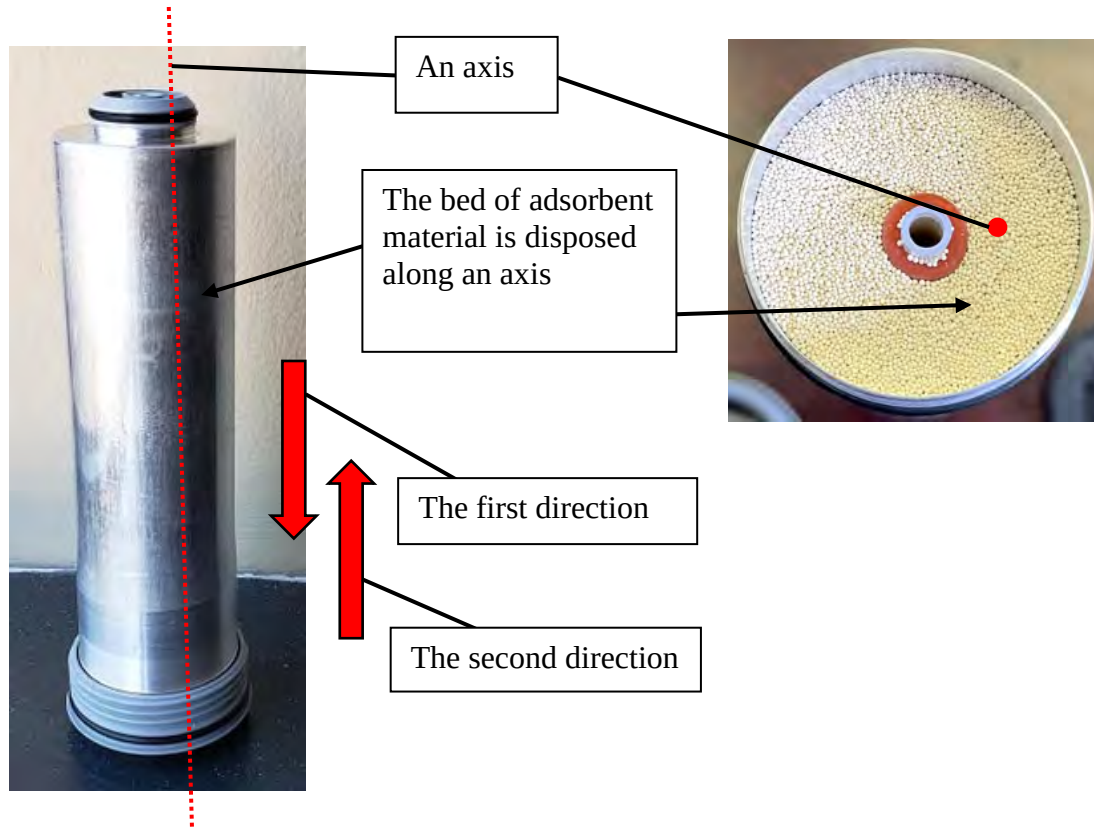


Literally infringed.

	The separation cartridge comprising an inlet oriented in a second direction opposite the first direction The separation cartridge comprising an outlet oriented in the second direction The separation cartridge comprising a bed of adsorbent material configured to preferentially adsorb nitrogen A top-down view of a circular separation cartridge. It features a central inlet with a small white plug and an outer ring with several rectangular slots. Two red arrows point from the text boxes to the inlet and the outlet ring. A side view of a circular separation cartridge filled with a bed of yellow granular adsorbent material. A red ring is visible at the bottom center. A black arrow points from the text box to the adsorbent bed.	
	[Exs. A, C]. GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make the separation cartridge comprising an inlet oriented in a second direction opposite the first direction, an outlet oriented in the second direction, and a bed of	

	adsorbent material configured to preferentially adsorb nitrogen. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	
and a power pack removable from the portable oxygen concentrator,	 Fig. 1 Fig. 2 A power pack removable from the portable oxygen concentrator [Ex. A] GCE also indirectly infringes by instructing and teaching customers/end users to use and/or make a power pack removable from the portable oxygen concentrator. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	Literally infringed.

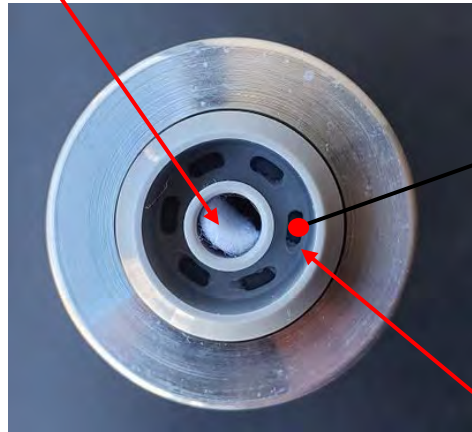
wherein the bed of adsorbent material is disposed along an axis, wherein one of the inlet and the outlet is disposed along the axis, wherein the other of the inlet and the outlet is spaced-apart from the axis, and wherein the first direction and the second direction are substantially parallel to the axis.



The first direction and the second direction are substantially parallel to the axis.

Literally infringed.

The other of the inlet and the outlet is spaced-apart from the axis

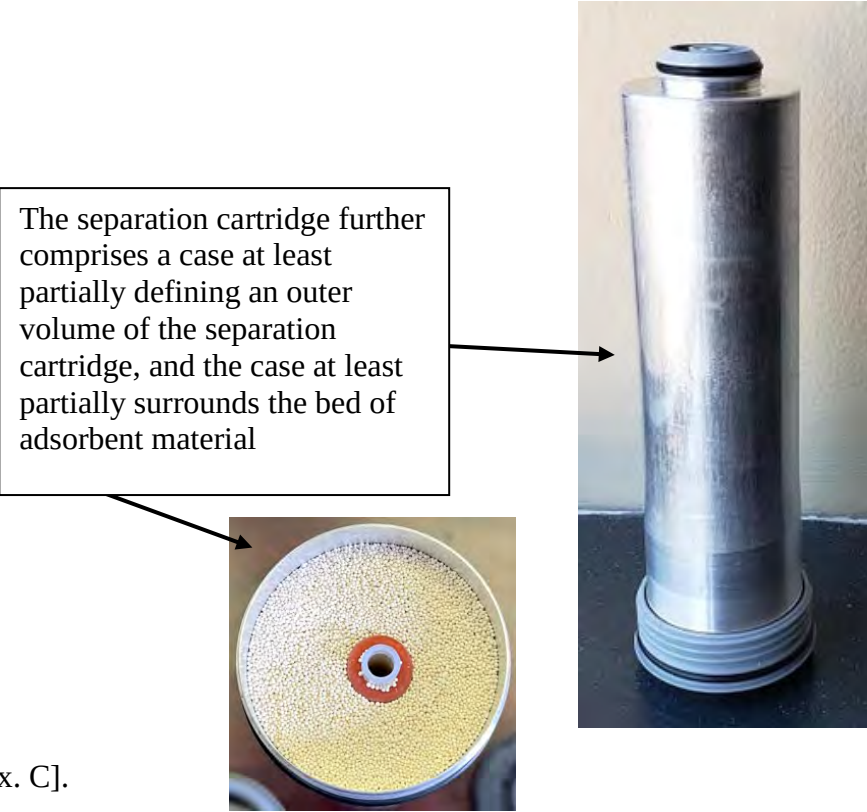


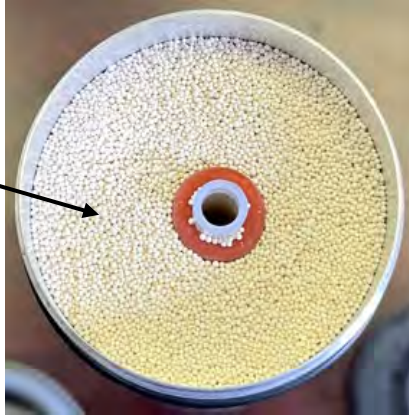
An axis

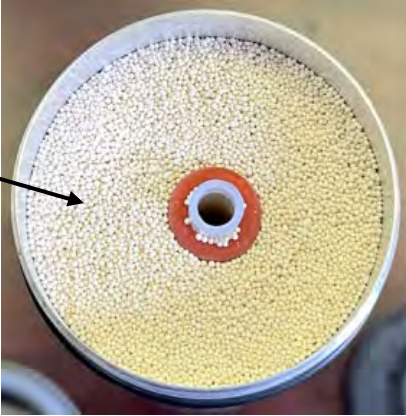
One of the inlet and the outlet is disposed along the axis

[Ex. C]

GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a portable oxygen concentrator wherein the bed of adsorbent material is disposed along an axis, one of the inlet and the outlet is disposed along the axis, and the other of the inlet and the outlet is spaced-apart from the axis, and wherein the first direction and the second direction are substantially parallel to the axis. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.

Claim 12: The portable oxygen concentrator as recited in claim 11, wherein: the separation cartridge further comprises a case at least partially defining an outer volume of the separation cartridge, and the case at least partially surrounds the bed of adsorbent material.	The separation cartridge further comprises a case at least partially defining an outer volume of the separation cartridge, and the case at least partially surrounds the bed of adsorbent material  [Ex. C]. GCE further indirectly infringes by instructing and teaching customers/end users to use or make a portable oxygen concentrator wherein the separation cartridge further comprises a case at least partially defining an outer volume of the separation cartridge, and the case at least partially surrounds the bed of adsorbent material. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	Literally infringed.
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Claim 17: The portable oxygen concentrator as recited in claim 11, wherein the bed of adsorbent material comprises a bed of zeolite which provides preferential adsorption of nitrogen.	The bed of adsorbent material comprises a bed of zeolite which provides preferential adsorption of nitrogen  [Ex. C] GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a portable oxygen concentrator wherein the bed of adsorbent material comprises a bed of zeolite which provides preferential adsorption of nitrogen. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	Literally infringed.
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Claim 18: The portable oxygen concentrator as recited in claim 17, wherein the zeolite is an LiLSX adsorbent.	The zeolite is an LiLSX adsorbent  [Ex. C]. GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a portable oxygen concentrator wherein the zeolite is an LiLSX adsorbent. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	Literally infringed.
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Claim 19: The portable oxygen concentrator as recited in claim 11, further comprising a carrying device for transporting the portable oxygen concentrator.	Carrying device for transporting the portable oxygen concentrator  Zen-O lite™ carry bag Zen-O lite™ rucksack (backpack) [Ex. A; <i>see also</i> Ex. B]. GCE further indirectly infringes by instructing and teaching customers/end users to use and/or make a carrying device for transporting the portable oxygen concentrator. [Exs. A-E]. Customers/end users directly infringe by following these instructions and teachings.	Literally infringed.
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