WHAT IS CLAIMED IS:

1. An ostomy bag comprising: two bag layers permanently joined together around a portion of an edge of the bag layers, a remainder of the edge of the bag layers remaining open to define a drain opening, a first one of the bag layers configured to be placed facing skin of a user and a second one of the bag layers configured to face away from the user when the first one of the bag layers faces the skin of the user; a stoma opening in the first wall, the stoma opening configured to be disposed around a stoma of the user and to receive effluent from the stoma; and a flexible sensor layer, the flexible sensor layer comprising a hardware processor and a coin cell battery, wherein the hardware processor is supported by the coin cell battery.

2. The ostomy bag of Claim 1, wherein the coin cell battery is attached to the hardware processor and/or the sensor layer by electrically conductive adhesive.

3. The ostomy bag of Claim 1 or 2, wherein at least a portion of the hardware processor is located close to a center of the coin cell battery to reduce component detaching during flexing of the ostomy bag.

4. The ostomy bag of any one of Claims 1-3, wherein the sensor layer does not include a printed circuit board.

5. The ostomy bag of any one of Claims 1-4, wherein the hardware processor is located on a user-facing side of the sensor layer and the coin cell battery is on an opposite side of the sensor layer facing away from the user.

6. The ostomy bag of any one of Claims 1-5, wherein the sensor layer comprises a plurality of openings to improve flexibility of the sensor layer.

7. The ostomy bag of any one of Claims 1-6, wherein the sensor layer further comprises a plurality of temperature sensors.

8. The ostomy bag of Claim 7, wherein the temperature sensors are arranged in an array or matrix.

9. The ostomy bag of Claim 7 or 8, wherein the hardware processor is configured to detect a fill level of the bag or an output volume at least in part based on signals from the temperature sensors.

10. The ostomy bag of any one of Claims 1-9, wherein the sensor layer comprises a cut-out portion or slot configured to define a viewing window for observing the stoma.

11. The ostomy bag of Claim 10, wherein an outermost layer of the bag comprises a gap or opening aligning with the cut-out portion or slot.

12. The ostomy bag of any one of Claims 1-11, further comprising comfort layers on both sides of the bag layers, the comfort layers defining outermost layers of the bag, wherein the sensor layer is located between one of the comfort layers and the second bag layer, wherein the sensor layer is protected from the one of the comfort layers by a clear protector layer.

~~13. The ostomy bag of Claim 12, wherein the sensor layer is located between one of the comfort layers and the second bag layer.~~

~~14. The ostomy bag of Claim 13, wherein the sensor layer is protected from the one of the comfort layers by a clear protector layer.~~

~~15.~~13. An ostomy bag of an ostomy kit that comprises a predetermined number of new ostomy bags, wherein the ostomy bag comprises: two bag layers permanently joined together around a portion of an edge of the bag layers, a remainder of the edge of the bag layers remaining open to define a drain opening, a first one of the bag layers configured to be placed facing skin of a user and a second one of the bag layers configured to face away from the user when the first one of the bag layers faces the skin of the user; a stoma opening in the first bag layer, the stoma opening configured to be disposed around a stoma of the user and to receive effluent from the stoma; a connector located near the drain opening, the connector comprising a first part on a first side of the bag facing skin of the user and a second part located on an opposite second side of the bag facing away from the user, the first and second parts being complementary to each other so that when a portion of the bag near the drain opening is folder over, the first part can be releasably secured onto the second part to seal the bag; a hardware processor; and a sensor layer, the sensor layer comprising a sensor near the drain opening, the sensor configured to output a signal to the processor when the first part is attached to the second part of the connector for the first time, wherein the hardware processor is configured to wirelessly communicate to a remote server a

message that the ostomy bag is used in response to the signal from the sensor, and wherein a processor on the

remote server is configured to decrease the predetermined number of new ostomy bags by one in response to the message.

~~16.~~14. The ostomy bag of Claim ~~15~~13, wherein the hardware processor of the bag or the processor of the remote server is configured to alert the user when the number of new ostomy bags remaining in the kit has decreased to a threshold.

~~17. The ostomy bag of Claim 16, wherein the hardware processor of the bag or the processor of the remote server is further configured to prompt the user to order new ostomy bags in response to the number of new ostomy bags remaining in the kit reaching threshold.~~

~~18. The ostomy bag of Claim 16, wherein the hardware processor of the bag or the processor of the remote server is further configured to automatically initiate an order of new ostomy bags in response to the number of new ostomy bags remaining in the kit reaching threshold.~~

~~19. The ostomy bag of any of Claims 15-18, wherein the sensor is further configured to detect subsequent detachment of the first part from the second part of the connector so as to detect a drain event.~~

~~20. The ostomy bag of Claim 19, wherein the hardware processor of the bag or the processor of the remote server is configured to detect trends in the number of drain events.~~

~~21. The ostomy bag of Claim 20, wherein the hardware processor of the bag or the processor of the remote server is configured to output an alert when the user's drain events have increased or decreased from a baseline that is determined from the trends.~~

~~22. The ostomy bag of any of Claims 15-21, wherein the connector comprises a metallic component.~~

~~23. The ostomy bag of Claim 22, wherein the sensor comprises one or more electrodes.~~

~~24. The ostomy bag of Claim 23, wherein the one or more electrodes are located on a drain tab of the sensor layer, the drain tab extending away from a main body of the sensor layer toward the drain opening of the bag.~~

~~25. The ostomy bag of Claim 23 or 24, wherein the one or more electrodes are located on a user-facing side of the sensor layer.~~

~~26. The ostomy bag of any of Claims 23-25, wherein the one or more electrodes are located on a side of the sensor layer facing away from the user.~~

~~27. The ostomy bag of any of Claims 15-26, further comprising comfort layers on both sides of the bag layers, the comfort layers defining outermost layers of the bag.~~

~~28. The ostomy bag of Claim 27, wherein the sensor layer is located between one of the comfort layers and the second bag layer.~~

~~29. The ostomy bag of Claim 28, wherein the sensor layer is protected from the one of the comfort layers by a clear protector layer.~~

~~30. The ostomy bag of Claim 29, wherein the first part of the connector is located on a user-facing side of the clear protector layer.~~

~~31. The ostomy bag of any of Claims 15-30, wherein the connector comprise interlocking zippers.~~

~~32.~~15. An ostomy wafer configured to couple an ostomy bag to a user, the wafer comprising: a sensor layer comprising at least in part a ring-shaped main body and a plurality of inner fingers extending radially inwardly from the main body; a plurality of sensors located on the plurality of inner fingers, the plurality of sensors comprising leak sensors and temperature sensors; and a hardware processor, the hardware processor configured to detect at least one of user skin temperature or leakage of effluent based at least in part on signals from one or more of the plurality of sensors

~~33.~~16. The ostomy wafer of Claim ~~32~~15, further comprising a battery configured to power the plurality of sensors.

~~34. The ostomy wafer of Claim 32 or 33, wherein the plurality of leak sensors are configured to be separated into four quadrants.~~

~~35. The ostomy wafer of any of Claims 32-34, wherein each leak sensor comprises a ground electrode and a sensing electrode.~~

~~36. The ostomy wafer of Claim 35, wherein each leak sensor is located on one of the inner fingers, the ground electrode being further away from a tip of the one of fingers than the sensing electrode.~~

~~37. The ostomy wafer of any of Claims 32-36, wherein the plurality of inner fingers form a plurality of sensing regions, each sensing region comprising one inner finger with a temperature sensor between two inner fingers with leak sensors.~~

~~38. The ostomy wafer of any of Claims 32-37, wherein the hardware processor is configured to detect inflammation of the user based at least in part on signals from the temperature sensors on the inner fingers.~~

~~39. The ostomy wafer of any of Claims 32-38, further comprising outer fingers extending radially outwardly from the main body.~~

~~40. The ostomy wafer of Claim 39, further comprising a plurality of temperature sensors located on the outer fingers.~~

~~41. The ostomy wafer of Claim 40, wherein the hardware processor is configured to detect peeling of the wafer from the user's body based at least in part on signals from the plurality of temperature sensors on the outer fingers.~~

~~42. The ostomy wafer of any of Claims 32-41, further comprising an accelerometer.~~

~~43. The ostomy wafer of Claim 42, wherein the hardware processor is further configured to determine a location of a leak and/or inflammation based on at least one signal from at least one of the leak and/or temperature sensors, and data from the accelerometer.~~

~~44.~~17. An ostomy wafer configured to couple an ostomy bag to a user, the wafer comprising: a sensor layer comprising a plurality of leak sensors surrounding a stoma opening of the wafer, wherein the plurality of leak sensors are generally an equal distance away from a center of the stoma opening; and a hardware processor, the hardware processor configured to detect leakage of effluent based at least in part on signals from one or more of the plurality of leak sensors, the leak sensors being in an open-circuit configuration, wherein contact with moisture or liquid is configured to complete a leak detection circuit.

~~45.~~18. The ostomy wafer of Claim ~~44~~17, wherein the hardware processor is configured to determine a location of a leak based at least in part on a location of at least one leak sensor that is in a closed circuit.

~~46. . The ostomy wafer of Claim 44 or 45, wherein the hardware processor is configured to receive a voltage value of one or more leak sensors so as to determine whether any leak sensor or any group of leak sensors is in a closed circuit.~~

~~47. The ostomy wafer of Claim 46, wherein the hardware processor is configured to normalize the voltage value by a battery voltage value.~~

~~48. The ostomy wafer of Claim 46 or 47, wherein the hardware processor is further configured to determine a rate of change of the voltage value so as to determine whether any leak sensor or any group of leak sensors is in a closed circuit.~~

~~49. The ostomy wafer of any of Claims 46-48, wherein the hardware processor is further configured to differentiate moisture due to the user's sweating or leakage of effluent.~~

~~50. The ostomy wafer of any of Claims 46-49, wherein the plurality of leak sensors are configured to be separated into four groups.~~

~~51. The ostomy wafer of any of Claims 44-50, further comprising an accelerometer.~~

~~52. The ostomy wafer of Claim 51, wherein the hardware processor is further configured to determine a location and/or direction of a leak based on at least one signal from at least one of the leak sensors and data from the accelerometer.~~

~~53. The ostomy wafer of any of Claims 44-52, further comprising a user adhesive layer, the user adhesive layer comprising one or more openings configured to overlap with one or more of the leak sensors.~~

~~54. The ostomy wafer of Claim 53, wherein the one or more openings have an inner diameter greater than an outer diameter of the leak sensors.~~

~~55.~~19. An ostomy wafer configured to couple an ostomy bag to a user, the wafer comprising: a sensor layer comprising a plurality of temperature sensors surrounding a stoma opening of the wafer, wherein the plurality of temperature sensors are configured to be separated into four quadrants; and a hardware processor, the hardware processor configured to detect inflammation based at least in part on signals from one or more of the plurality of temperature sensors, wherein the hardware processor is configured to determine an average temperature of the temperature sensors in the same quadrant.

~~56.~~20. The ostomy wafer of Claim ~~55~~19, wherein the hardware processor is further configured to calculate a difference between a short-term average temperature and a long-term average temperature of the temperature sensors in the same quadrant.

~~57. The ostomy wafer of Claim 56, wherein the hardware processor is further configured to calculate a rate of change of a different between the short-term and long-term average temperatures.~~

58. The ostomy wafer of any of Claims 55-57, wherein the sensor layer comprises at least in part a ring-shaped main body and a plurality of fingers extending radially inwardly from the main body, the plurality of temperature sensors located on the plurality of fingers.

59. The ostomy wafer of any of Claims 55-58, further comprising an accelerometer.

60. The ostomy wafer of Claim 59, wherein the hardware processor is further configured to determine a location of inflammation based on at least one signal from at least one of the temperature sensors and data from the accelerometer.