LISTING OF CHALLENGED CLAIMS
Claims 1, 2, 5, 7-12, 20-24, 28, 31-34, 41, 43, 44, 48, and 50-53
U.S. Patent No. 11,835,421

	Claim Limitations
1[pre]	A sensor assembly configured for attachment with an object that is rotated in use, the sensor assembly comprising:
1[a]	a housing comprising an outer surface and an internal cavity that is enclosed within the housing;
1[b]	an electrical sensor device that is disposed within the internal cavity and attached therein to prevent movement of the device within the internal cavity,
1[c]	wherein the internal cavity comprises an unfilled open space above or below the electrical sensor device in the housing,
1[d]	wherein the electrical sensor device is configured to sense, transmit and/or receive information regarding surrounding conditions, orientation and/or location when the sensor assembly is attached with the object and the object is rotated in use; and
1[e]	a retaining member that is configured to accommodate attachment of the housing therewith, wherein the retaining member has an outside surface configured for attachment to rotate with the object when the object is rotated in use.
2	The sensor assembly as recited in claim **1**, wherein the housing outer surface includes one or more display features or indicia that are viewable to a user when the housing is attached with the retaining member.
5	The sensor assembly as recited in claim **1**, wherein the electrical sensor device is attached within the internal cavity by one or more surface features within the cavity that contact the electrical sensor device to retain its position therein.
7	The sensor assembly as recited in claim **1**, wherein the housing and retaining member are configured having a complementary shape to facilitate attachment of the housing with the retaining member.
8	The sensor assembly as recited in claim **7**, wherein the housing comprises a wall structure that surrounds the internal cavity, and wherein the retaining member comprises a wall structure having an open chamber that is configured to accommodate the housing wall structure therein to provide attachment therewith.

Claim Limitations	
9	The sensor assembly as recited in claim **1**, wherein the retaining member is formed from an elastomeric material that mitigates transmission of shock forces from the object to the housing when the retaining member is attached to the object and the housing is attached to the retaining member.
10	The sensor assembly as recited in claim **1**, wherein the housing includes an opening through the outside surface to the internal cavity, and further includes a filter that is positioned to filter air passing into the internal cavity before reaching the electrical sensor device.
11	A sensing system comprising the sensor assembly as recited in claim **1**, wherein the sensing system comprises a receiver that is external from the object and that is configured to receive data from the electrical sensor device by wireless communication.
12	The sensing system as recited in claim **11**, wherein the electrical sensor device comprises an accelerometer sensor connected therewith and is configured to send data from the accelerometer sensor wirelessly to the external receiver.
20	The sensor assembly as recited in claim **1**, wherein the electrical sensor device comprises: a printed circuit board comprising electrical circuitry; a portable power source for providing power to the electrical sensor device; at least one sensor element; and an antenna for receiving and/or transmitting information from the electrical sensor device.
21	The sensor assembly as recited in claim **20**, wherein the electrical sensor device comprises one or both of a storage element and a processor.
22	The sensor assembly as recited in claim **20**, wherein the electrical sensor device comprises one or both of an accelerometer sensor and a global positioning device.
23	The sensor assembly as recited in claim **20**, wherein the sensor element is configured to sense one or more variables selected from the group consisting of air pressure, temperature, acceleration, and orientation or location of the environment, the sensor assembly, or the object.

Claim Limitations	
24	The sensor assembly as recited in claim **20**, wherein the object is a vulcanized rubber vehicle tire, and wherein the retaining member is attached to an inside surface of the vehicle tire or an element attached with the tire that rotates with the tire.
28[pre]	A sensor assembly and sensing system for use with an object that rotates in use comprising:
28[a]	a housing comprising an outer structure that defines an open internal cavity therein,
28[b]	an electrical sensor device disposed within the internal cavity and having a fixed placement therein by one or more surface features of the housing configured to contact the electrical sensor device,
28[c]	wherein the electrical sensor device is configured to monitor and transmit and/or receive information regarding surrounding conditions, orientation and/or location,
28[d]	wherein the electrical sensor device comprises: a portable power source; a sensor; and an antenna for transmitting and/or receiving information relating to the operating parameter being monitored by the sensor;
28[e]	a retaining member having an outside surface configured for attaching with a surface of the object or an element connected with the object to rotate with the object in use, wherein the retaining member is configured to accommodate placement a portion of the housing therein to provide an attachment between the housing and the retaining member; and
28[f]	a receiver external from the object that is configured to receive information from the electrical sensor device wirelessly.
31	The sensor assembly and sensing system as recited in claim **28**, wherein the internal cavity comprises an open space above or below the electrical sensor device disposed within the internal cavity.
32	The sensor assembly and sensing system as recited in claim **28**, wherein the retaining member is formed from an elastomeric material that mitigates transmission of shock forces received from the object when attached to the object before reaching the housing attached with the retaining member.
33	The sensor assembly and sensing system as recited in claim **28**, wherein the electrical sensor device comprises an accelerometer sensor and is configured to send data from the accelerometer sensor wirelessly to the external receiver.

Claim Limitations	
34	The sensor assembly and sensing system as recited in claim **33**, wherein the object is a vehicle tire and the system is configured to determine one or more parameters consisting of a tire diameter, slip, strain, road conditions or soil conditions, a tire tread depth, a tire radial load, and vehicle camber and/or toe alignment from the accelerometer sensor data.
41[pre]	A method for using a sensor assembly and sensing system with an object that rotates in use comprising the steps of:
41[a]	installing an electrical sensor device within an internal cavity of a housing, wherein the housing includes an outer structure that defines the internal cavity, and
41[b]	wherein the electrical sensor device comprises a sensor, a portable power source, an antenna, a printed circuit board, and related electrical circuitry,
41[c]	wherein the housing comprises an opening extending from an outer surface of the housing to the internal cavity;
41[d]	attaching the housing after the step of installing to a retaining member, wherein the retaining member is configured to accommodate attachment with the housing by mechanical or bonding technique, wherein the retaining member is connected with the object before or after formation of the object; and
41[e]	monitoring an operating parameter of the object through the use of the electrical sensing device, wherein information related to the operating parameter is wirelessly transmitted from the electrical sensing device to a receiver that is external from the sensor assembly.
43	The method as recited in claim **41**, wherein during the step of installing, the electrical sensor device is attached in place within the internal cavity by contact between the electrical sensor device and one or more surface features in the internal cavity.
44	The method as recited in claim **41**, wherein the object is a made from vulcanized rubber, and before the step of attaching, the retaining member is attached with the object or an element that rotates with the object before or after the object has been formed.
48	The method as recited in claim **44**, wherein the object is a vehicle tire, and wherein the retaining member is attached to a surface that is inside of the vehicle tire.

Claim Limitations	
50	The method as recited in claim **41**, wherein during the step of attaching, the housing is positioned relative to the retaining member according to a display feature that is positioned on the housing.
51	The method as recited in claim **41**, wherein during the step of monitoring, the sensor monitors operating parameters comprising one or more of operating conditions, orientation, and location and transmits by use of the antenna information related to the monitored operating parameter to the receiver, and wherein the electrical device is configured to receive information transmitted from an external device to change one or more feature of the electrical sensor device.
52	The method as recited in claim **41**, wherein the sensor assembly electrical sensor device comprises an accelerometer sensor.
53	The method as recited in claim **52**, wherein the object is a vehicle tire, and wherein during the step of monitoring, one or more of a tire outside diameter, a tire tread depth, slip, strain, road or soil conditions, a tire radial load, and a vehicle camber and/or toe alignment parameter is determined from information sent wirelessly from the sensor assembly.