METHODS FOR AUTOMATIC FILLING, DISPENSING, AND CHARGING CARBON DIOXIDE SNOW BLOCK

Abstract

A method of preparing a container for automated charging carbon dioxide (CO2) snow block into a single container, comprising: inputting into a controller a set point to be used for determining completion of fill of the CO2 snow block into the container, said set point based on i) fill duration; (ii) a pre-defined weight of the CO2 snow block, (iii) a pressure in the container, (iii) a capacitance of the CO2 snow block, (v) a temperature in the container or (vi) a deformation of a plate, said plate permanently or removably affixed to the container; the controller performing integrity checks and determining said integrity checks to meet applicable criteria; and in response thereto, the controller validating the container is in a filling orientation, and if the container is determined to not be in the filling orientation, said controller either (i) transmitting a first signal to cause the container to actuate into the filling orientation, or (ii) transmitting an alert notification for a user to manually configure the container into the filling orientation.

Figure 1b