SUMMARY OF THE INVENTION

The present invention involves various aspects of a container and/or dispenser for use in dispensing loose materials, such as dry products. Suitable dry products for use with the novel dispenser disclosed herein include tea, spices, coffee, dried foods, other powders and the like. For purposes of illustration, the container and dispenser described herein shall be described with respect to the dispensing of loose leaf tea. However, it shall be appreciated that the system could be easily applied to other loose materials, such as, but not limited to, those listed above. In one further form, the dispenser may include a coin/bill acceptor and/or credit card terminal or like device for use as a vending machine.

According to a first aspect of the present invention, there is provided a bulk material dispenser operable to dispense a selected amount of loose material comprising: an exterior housing defining a receptacle location suitable for the placement of a receptacle into which the loose material is to be dispensed, wherein said exterior housing includes an outlet opening positioned above said receptacle location; a sealed housing for storing said loose material; a user interface mounted to said exterior housing; an electronic controller for receiving a user selection identifying a desired amount of loose material to be dispensed via said user interface; and a measuring mechanism positioned below said sealed housing and above said outlet opening, comprising: a bin mounted to a scale so as to provide the weight of the material currently contained therein to said electronic controller, and upon activation by said electronic controller, release the material contained therein through said outlet opening; a material chute, having an inlet in sealed fluid communication with the interior of said sealed housing and an outlet positioned so as to dispense material into said bin; a rotable screw powered by a motor connected to said electronic controller, wherein said rotable screw is located within said material chute so as to provide controllable dispensing of the material into said bin; and a sealing cap adapted to mechanically seal the outlet of said material chute when said rotable screw is not in operation.

According to a second aspect of the present invention, there is provided a method of dispensing a user selected amount of loose tea using a dispenser comprising: receiving a first user input via a user interface located on said

dispenser, wherein said user input identifies a desired amount of tea; receiving a second user input via said user interface, wherein said second input adjusts said desired amount of tea upward or downward by a predetermined amount; receiving a weight from scale having a bin mounted thereto; transferring tea from a sealed container into said bin until said weight received from said scale meets or exceeds said desired amount; and dispensing said tea from said bin through an outlet opening in said dispenser.

According to a third aspect of the present invention, there is provided a bulk material dispenser operable to dispense a selected amount of loose material comprising: an exterior housing defining a receptacle location suitable for the placement of a receptacle into which the loose material is to be dispensed, wherein said exterior housing includes an outlet opening positioned above said receptacle location; a housing for storing said loose material; a user interface mounted to said exterior housing; an electronic controller for receiving a user selection identifying a desired amount of loose material to be dispensed via said user interface; and a measuring mechanism positioned below said sealed housing and above said outlet opening, comprising: a bin mounted to a scale so as to provide the weight of the material currently contained therein to said electronic controller, and upon activation by said electronic controller, release the material contained therein through said outlet opening; a controlled outlet in fluid communication with said housing, wherein said controlled outlet is adapted to dispense loose material from said housing when activated by said electronic controller; a conveyor powered by a motor connected to said electronic controller, wherein said conveyor is mounted below said controlled outlet and configured to receive loose material from said controlled outlet and dispense the material into said bin.

According to a fourth aspect of the present invention, there is provided a bulk material dispenser operable to dispense a predetermined amount of loose material upon activation by a user comprising: an exterior housing defining a receptacle location suitable for the placement of a receptacle into which the loose material is to be dispensed, wherein said exterior housing includes an outlet opening positioned above said receptacle location; a housing for storing said loose material; a user interface mounted to said exterior housing capable of receiving use

input regarding a first predetermined amount of loose material and storing it in association with a first user selectable button; a measuring mechanism positioned below said sealed housing and above said outlet opening, comprising: a bin mounted to a scale so as to provide the weight of the material currently contained therein to said electronic controller, and upon activation by said electronic controller, release the material contained therein through said outlet opening; and a controlled outlet in fluid communication with said housing, wherein said controlled outlet is adapted to dispense loose material from said housing when activated by said electronic controller; and an electronic controller for receiving a user selection of said first button via said user interface and in response activating said measuring mechanism to dispense said first predetermined amount of loose material.

An illustrative embodiment of the present invention is a loose leaf tea system including a container and dispenser. The tea container serves to store the tea leaves or grounds in a storage bin prior to activation of the system. Upon activation, the dispenser measures and loads a selected amount of tea into a hopper for dispensing, such as into a waiting cup, tea pot, or a tea infuser. The amount of tea may be selected based upon user operation of one of a number of quantity indicating/selection buttons provided in a user interface or may be otherwise input by the user, such as by rotating a dial or pushing a button or lever. The container is preferably a sealed canister, such as a bag or jug, which may be stored within the dispenser so as to not expose the material contained to light, air and/or moisture. In another form, no external canister is used, rather the container is a sealed refillable housing formed within the device, so as to prevent additional waste and increase efficiency. Below the opening in the container or housing, a mechanism is provided for loading the tea into a measuring hopper below. The mechanism preferably seals when not in use so as to prevent the tea in the container from coming into contact with the outside atmosphere prior to entering the hopper below. Furthermore, the dispenser is able to operate the mechanism such that it loads a desired amount of tea (e.g. by weight), specified by the user, into the hopper. Once the desired amount of tea is loaded into the hopper, the tea may be dispensed into a desired location, such as into a waiting cup, tea pot, or infuser below.