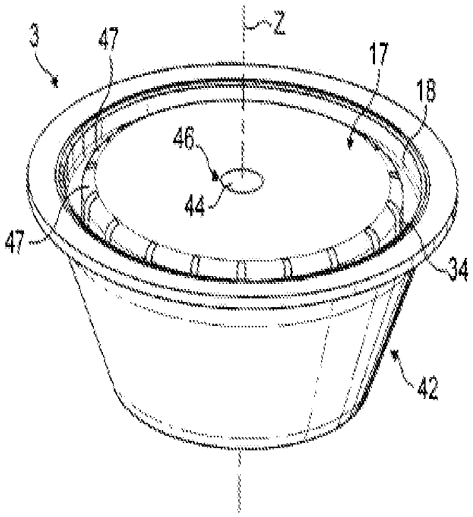
U.S. Patent No. 10,870,531	Disclosure
	
[8.c] wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element.	Denisart discloses, either expressly or inherently, that the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element. *See, e.g.*: *See also* [8.b].
[10.pre] A method of using a portion capsule for making a coffee beverage, the method comprising:	Denisart discloses, either expressly or inherently, a method of using a portion capsule for making a coffee beverage. *See, e.g.*:

U.S. Patent No. 10,870,531	Disclosure
	See [1].
[10.a] providing an apparatus including a barcode reader, the apparatus having a pump and being adapted to supply heated water;	Denisart discloses, either expressly or inherently, providing an apparatus including a barcode reader. *See, e.g.*: *See* [1.a].
[10.b] the apparatus having a pump and being adapted to supply heated water;	Denisart discloses, either expressly or inherently, the apparatus having a pump and being adapted to supply heated water. *See, e.g.*: *See* [1.b].
[10.c] inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity within which a powdered coffee material is located,	Denisart discloses, either expressly or inherently, inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity within which a powdered coffee material is located. *See, e.g.*: *See* [1.c].
[10.d] the base element including a circumferential flange having a top side	Denisart discloses, either expressly or inherently, the base element including a circumferential flange having a top side. *See, e.g.*: *See* [1.d].
[10.e] and a bottom side with a barcode located on the bottom side,	Denisart discloses, either expressly or inherently, a bottom side with a barcode located on the bottom side. *See, e.g.*: *See* [1.e].
[10.f] the portion capsule being free of a filter	Denisart discloses, either expressly or inherently, the portion capsule being free of a filter. *See, e.g.*:

K-FEE SYSTEM GMBH, EX2012, page 1524
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
	See [1.i].
[10.g] and comprising a plurality of ribs that are radially spaced, vertically oriented and extend toward a central portion of the cavity, wherein an outer surface of the base element comprises radially spaced and vertically oriented grooves;	
[10.h] piercing the foil lid;	Denisart discloses, either expressly or inherently, piercing the foil lid. *See, e.g.*: *See* [1.k].
[10.i] reading the barcode with the barcode reader; and	Denisart discloses, either expressly or inherently, .reading the barcode with the barcode reader. *See, e.g.*: *See* [1.l].
[10.j] activating the pump to introduce the heated water into the portion capsule only upon a determination that the read barcode agrees with a stored reference, or not activating the pump upon a determination that the read barcode does not agree with the stored reference.	Denisart discloses, either expressly or inherently, activating the pump to introduce the heated water into the portion capsule only upon a determination that the read barcode agrees with a stored reference, or not activating the pump upon a determination that the read barcode does not agree with the stored reference. *See, e.g.*: *See* [1.m] and [2].

K-FEE SYSTEM GMBH, EX2012, page 1525
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
11. The method according to claim 10, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element comprises an electrically conductive section.	Denisart discloses, either expressly or inherently, the method according to claim 10, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element comprises an electrically conductive section. *See, e.g.*: *See* [1.f], [3].
14. The method according to claim 10, wherein the method comprises dropping the portion capsule into a dropping box, wherein the base element and/or the lid are made of metal.	Denisart discloses, either expressly or inherently, the method according to claim 10, wherein the method comprises dropping the portion capsule into a dropping box, wherein the base element and/or the lid are made of metal. *See* [1.j].
[16.pre] The method according to claim 10,	Denisart discloses, either expressly or inherently, the method according to claim 10. *See, e.g.*: *See* [10].
[16.a] wherein the method comprises sealing a seal of the apparatus against the foil lid	Denisart discloses, either expressly or inherently, wherein the method comprises sealing a seal of the apparatus against the foil lid. *See, e.g.*: *See* [5].
[16.b] wherein the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is	Denisart discloses, either expressly or inherently, wherein the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located between the upper section and a bottom of the base element. *See, e.g.*:

U.S. Patent No. 10,870,531	Disclosure
located between the upper section and a bottom of the base element	*See* [8.b].
[16.c] wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element.	Denisart discloses, either expressly or inherently, wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element. *See, e.g.*: *See* [8.c].

K-FEE SYSTEM GMBH, EX2012, page 1527
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

Exhibit C-4 – Invalidity of U.S. Patent No. 10,870,531 in view of Erlandsson

INVALIDITY CLAIM CHART
Invalidity of U.S. Patent No. 10,858,531 in view of Erlandsson

According to its cover page, U.S. Patent Pub. 2007/0203587A1 ("Erlandsson") was published on August 30, 2007. Erlandsson therefore constitutes prior art to the '531 Patent under pre-AIA 35 U.S.C. § 102(b). Erlandsson anticipates and/or renders obvious the Asserted Claims of the '531 Patent (at least as Nespresso understands K-fee's application of the Asserted Claims in an effort to show infringement).

To the extent K-fee argues that any element below is not disclosed by Erlandsson, a person of ordinary skill in the art would have found it obvious to combine the teachings of Erlandsson with the background knowledge of a person of ordinary skill in the art and/or the additional references, and exemplary teachings, set forth in Exhibits C-1 to C-9 and in Appendix C.

The chart below provides representative examples of where each element of each claim is found within Erlandsson. Citations are meant to be exemplary, not exhaustive, and Nespresso reserves the right to identify and discuss additional portions of the reference in support of its contentions and/or to rebut arguments made by K-fee. Citations to figures, drawings, tables, and the like include reference to any accompanying or related text. All internal cross references are meant to incorporate the cross-referenced material as if fully set forth therein.

It is Nespresso's position that K-fee's Infringement Contentions have not established that any accused product or service infringes any valid claim. Thus, Nespresso's statements below should not be treated as an admission, implication, or suggestion that Nespresso agrees with K-fee regarding either the scope, construction, or interpretation of any of the Asserted Claims, or the infringement theories advanced by K-fee in its Infringement Contentions, including whether any Asserted Claim satisfies 35 U.S.C. §§ 101 or 112. In certain cases, Nespresso specified non-limiting examples of where its application of the prior art is based on K-fee's apparent application of the claim element. These statements are not intended to suggest that Nespresso agrees with K-fee's application of any claim term, suggest a proposed construction at this stage of the case, or suggest that construction is needed, as the parties are not required to exchange terms for construction or proposed constructions until a later date.

K-fee has yet to identify any limitation of the Asserted Claims that it contends is not anticipated and/or rendered obvious by Erlandsson. Nespresso therefore expressly reserves the right to respond to any such contention, including by identifying additional obviousness combinations, if K-fee makes any such contention.

Where Nespresso states that Erlandsson "discloses" a limitation, that disclosure may be express, implicit, and/or inherent.

K-FEE SYSTEM GMBH, EX2012, page 1528
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

Exhibit C-4 – Invalidity of U.S. Patent No. 10,870,531 in view of Erlandsson

U.S. Patent No. 10,870,531	Disclosure
[1.pre] A method of using a portion capsule for producing a beverage, the method comprising:	Erlandsson discloses, either expressly or inherently, a method of using a portion capsule for producing a beverage, the method . *See, e.g.*: Erlandsson at Abstract: The invention relates to a system (1) for preparing a beverage from a beverage base material (5), comprising an apparatus (2) for preparing a beverage extract from a beverage base material (5) and a liquid and a container (3) for containing the beverage base material (5) during storage, the container (3) comprising an identifier (4) provided with data (A), which apparatus (2) comprises a reader (14) for reading the data (A) in said identifier (4) and a controller (6) for controlling a beverage brewing process in dependence on the data (A) during operation of the apparatus (2). In this manner the brewing process parameters for the beverage extract can be optimized for the specific variety of beverage in a user-friendly manner. Erlandsson at [0006]: To achieve this object, a system according to the invention is characterized in that the container comprises an identifier provided with data, and the apparatus comprises a reader for reading the data in said identifier, and a controller for controlling a preparation process during operation of the apparatus based on the data. When a user wants to prepare a consumable matter, such as a cup of beverage, for example coffee, the container is picked up and placed in the vicinity of the apparatus, to take out the basis material, in this case coffee pad. This basis material is then placed in the apparatus for preparing a consumable matter, for example an apparatus for preparing a beverage. When the container is present at a certain predetermined distance from the apparatus, the reader in the apparatus is able to read the data that are provided in the identifier comprised in the container. Based on this information, the controller in the apparatus controls a preparation during operation of the apparatus, which is based on the data in the identifier. In this manner the parameters of the preparation process can be tailored to their optimum, to obtain an optimum result for the prepared consumable matter. *See also* Erlandsson at Claims 1-8.

K-FEE SYSTEM GMBH, EX2012, page 1529
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

Exhibit C-4 – Invalidity of U.S. Patent No. 10,870,531 in view of Erlandsson

U.S. Patent No. 10,870,531	Disclosure
[1.a] providing an apparatus including a barcode reader,	Erlandsson discloses, either expressly or inherently, providing an apparatus including a barcode reader. *See, e.g.*: Erlandsson at [0006]-[0008]: To achieve this object, a system according to the invention is characterized in that the container comprises an identifier provided with data, and the apparatus comprises a reader for reading the data in said identifier, and a controller for controlling a preparation process during operation of the apparatus based on the data. When a user wants to prepare a consumable matter, such as a cup of beverage, for example coffee, the container is picked up and placed in the vicinity of the apparatus, to take out the basis material, in this case coffee pad. This basis material is then placed in the apparatus for preparing a consumable matter, for example an apparatus for preparing a beverage. When the container is present at a certain predetermined distance from the apparatus, the reader in the apparatus is able to read the data that are provided in the identifier comprised in the container. Based on this information, the controller in the apparatus controls a preparation during operation of the apparatus, which is based on the data in the identifier. In this manner the parameters of the preparation process can be tailored to their optimum, to obtain an optimum result for the prepared consumable matter. An embodiment according to the invention is characterized in that the container comprises an identifier provided with data, and the apparatus comprises a reader for reading the data in said identifier and a controller for controlling a beverage brewing process in dependence on the data during operation of the apparatus. When a user wants to prepare a cup of beverage, for example coffee, the container is picked up and placed in the vicinity of the apparatus, and the beverage base material is taken out. This beverage base material is then placed in the apparatus for preparing a beverage. When the container is present at a certain predetermined distance from the apparatus, the reader in the apparatus is able to read the data provided in the identifier comprised in the container. Based on this information, the controller in the apparatus controls a beverage brewing process during operation of the apparatus, which is based on the data in the identifier. In this manner the parameters of the brewing process can be optimized so as to obtain an optimum beverage result.

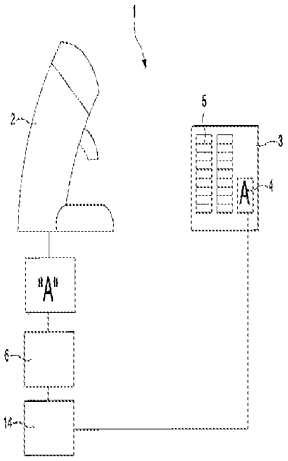
K-FEE SYSTEM GMBH, EX2012, page 1530
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
	An embodiment of a system according to the invention is characterized in that the data comprise information identifying the type of beverage base material comprised in the container. In this manner the brewing process parameters can be optimized for the specific type of beverage such as, for example, coffee or hot chocolate. Erlandsson at [0012]: An embodiment of a system according to the invention is characterized in that said controller comprises a processing unit which comprises a plurality of pre-programmed brewing process parameters, from which a selection is made during operation in dependence on the data as read. Various brewing processing parameters for different beverage types are pre-programmed into the processing unit and are assigned different integers. The integer corresponding to the most appropriate program for the beverage base material in the container is present as the data in the identifier and is read as such by the reader when the container is present at a certain predetermined distance from the apparatus. Based on this read integer, the program with appropriate brewing processing parameters is then activated in the apparatus by the controller for preparing a beverage extract. Erlandsson at [0016]: The invention further relates to an apparatus for preparing a beverage extract from beverage base material and a liquid, for use with the system according to the invention, characterized in that said apparatus comprises a reader for reading data in an identifier which is comprised in a container for containing a beverage base material, and a controller for controlling a beverage brewing process in dependence on the data during operation of the apparatus. Erlandsson at [0024]: The container 3 comprises an identifier 4 provided with data A, and the apparatus 2 comprises a reader 14 for reading the data A in said identifier. The identifier in this embodiment comprises a radio frequency transponder which can be read by a radio frequency reader

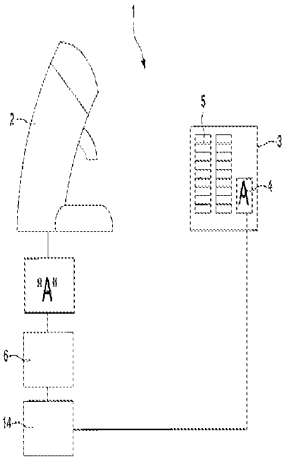
U.S. Patent No. 10,870,531	Disclosure
	comprised in the apparatus. In this embodiment, a radio frequency transponder is placed in every bag, and a radio frequency reader incorporated into the beverage maker. There are several methods of identifying objects using RFID, but the most common one is to store a serial number that identifies a product, and perhaps other information, on a microchip that is attached to an antenna (the chip and the antenna together are called an RFID transponder or an RFID tag). The reader sends out electromagnetic waves that induce a current in the tag's antenna, powering the chip, and enabling transmission of the identification information back to the reader. The reader demodulates the radio waves returned from the RFID tag, then interprets the serial number. In this application, the range of the reader will be limited so that data stored on the tag can be read by bringing the bag into close proximity with the beverage maker, avoiding any conflict with other bags the user may have purchased. Erlandsson at [0026]: It is noted that other known types of identifier technologies, such as bar codes on the container and a bar code reader in or connected to the apparatus, may also be applied. The apparatus 2 further comprises a controller 6 for controlling a beverage brewing process "A" during operation of the apparatus 2 based on the data A. This will be further illustrated with an example. Erlandsson at [0028]: In this embodiment, the controller 6 comprises a processing unit which comprises a plurality of pre-programmed brewing process parameters from which a selection is made during operation dependent on the data as read. The processing unit in the apparatus comprises various pre-programmed brewing processes, which are assigned different integers. The data in the identifier in each container comprise an integer corresponding to the most appropriate brewing process for the specific type of beverage base material comprised in the container. After reading out of the integer by the reader, the correct pre-programmed brewing process is selected by the controller in dependence on that integer, to control the operation of the apparatus. In another embodiment, the data in the identifier itself comprise specific brewing

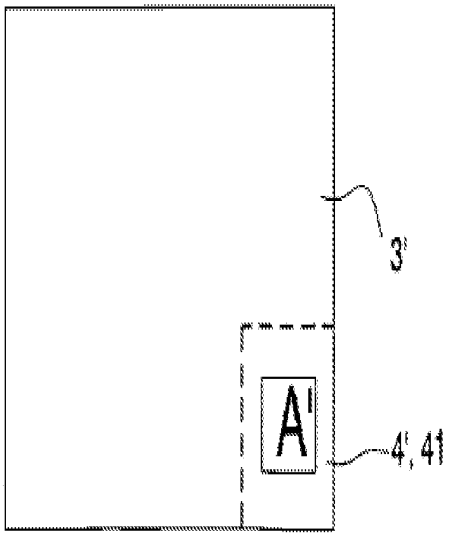
U.S. Patent No. 10,870,531	Disclosure
	parameters such as a pre-selected fluid quantity, fluid temperature, and fluid pass-through rate, which are read out by the reader and transferred to the control unit 6 to control the beverage brewing process. Erlandsson at [0032]: FIG. 2a is a schematic view of a container 3' for containing a beverage base material during storage, for use with a system according to the invention. Said container 3' comprises an identifier 4' provided with data A', said data A', being readable by a reader in an apparatus for preparing a beverage, and a beverage brewing process during operation of the apparatus being controlled in dependence on the data. In this embodiment, the identifier 4' comprises an element 41 which is detachably connected to the container 3'. The element 41 in this embodiment is connected to the container via a perforated line and can be torn off the container 3'. It is noted that the element 41 may also be detachably connected to the container by means of other known types of connections, the element for example comprising a sticker or a clip which is removably attached to the container. Erlandsson at [0033]: In another embodiment, the identifier comprises a separate element for inclusion in a container for containing the beverage base material during storage, which element is provided with data which can be read by a reader in an apparatus for preparing a beverage, and a beverage brewing process during operation of the apparatus being controlled in dependence on said data.
[1.b] the apparatus including a pump adapted to supply heated water;	Erlandsson discloses, either expressly or inherently, the apparatus including a pump adapted to supply heated water. *See, e.g.*: Erlandsson at [0003]: A system for preparing a consumable matter as described in the opening paragraph is known from EP0904718. The known system comprises an apparatus for preparing a coffee extract

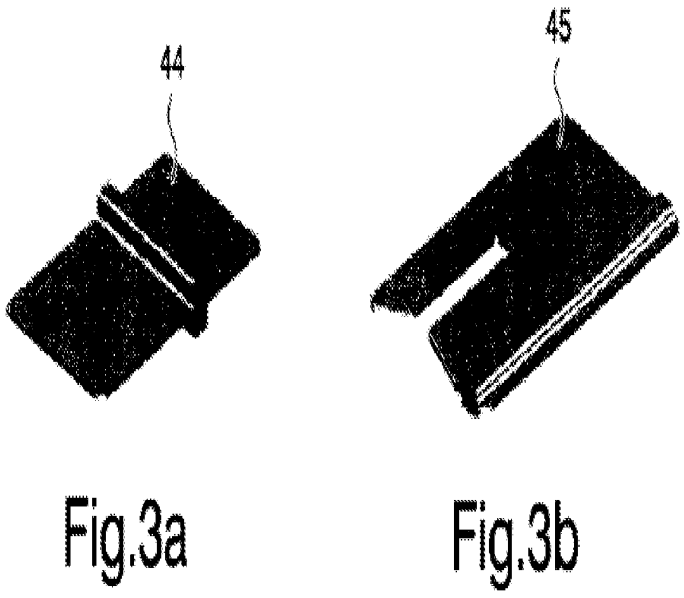
U.S. Patent No. 10,870,531	Disclosure
	from ground coffee and water. The ground coffee is contained in a pouch made of a filter material, which pouch is placed in a holder in the apparatus. During operation hot water passes through the pouch to create a coffee extract which is then transported into a cup. The coffee pouches are sold in a container, in this case a bag, which contains a number of pouches. Numerous varieties of coffee pouches are offered to the consumer, who can select his or her preferred cup of coffee. These varieties may comprise for example coffee with special flavors (vanilla, chocolate etc.), coffee of varying strengths, or coffee without caffeine. Erlandsson at [0023]: FIG. 1 is a schematic view of a system 1 according to the invention, comprising an apparatus 2 in this embodiment an apparatus for preparing a beverage extract from beverage base material 5 and a liquid, and a container 3 for containing the beverage base material 5 during storage. In this embodiment, the beverage base material 5 comprises a plurality of pouches 51 made of filter material and containing ground coffee. One or two pouches, depending on whether one or two cups of beverage are to be prepared, are placed in a holder in the apparatus, to prepare a coffee extract from the ground coffee and water that flows through the pouch during the brewing process in the apparatus. It is noted, however, that the beverage base material 5 may comprise alternative types of beverage base material, with or without an enclosure of filter material such as, for example, loose ground coffee, chocolate milk powder, or tea leaves in a teabag. The container 3 in this embodiment comprises a flexible bag comprising a plurality of coffee pouches, but it is noted that this container may comprise any known type of container such as, for example, tins, canisters, boxes, etc., for containing any type of beverage base material.

U.S. Patent No. 10,870,531	Disclosure
	Erlandsson at Fig. 1:  Fig.1
[1.c] inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity in which a beverage raw material is provided,	Erlandsson discloses, either expressly or inherently, inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity in which a beverage raw material is provided. *See, e.g.*: Erlandsson at [0006]: To achieve this object, a system according to the invention is characterized in that the container comprises an identifier provided with data, and the apparatus comprises a reader for reading the data in said identifier, and a controller for controlling a preparation process during operation of the apparatus based on the data. When a user wants to prepare a consumable matter, such as a cup of beverage, for example coffee, the container is picked up and placed in the vicinity of the apparatus, to take out the basis material, in this case coffee pad. This basis material is then placed in the apparatus for preparing a consumable matter, for example an apparatus for preparing a beverage. When the container is present at a certain predetermined distance from the apparatus, the reader in the apparatus is able to read the data that are

U.S. Patent No. 10,870,531	Disclosure
	provided in the identifier comprised in the container. Based on this information, the controller in the apparatus controls a preparation during operation of the apparatus, which is based on the data in the identifier. In this manner the parameters of the preparation process can be tailored to their optimum, to obtain an optimum result for the prepared consumable matter. Erlandsson at [0007]: An embodiment according to the invention is characterized in that the container comprises an identifier provided with data, and the apparatus comprises a reader for reading the data in said identifier and a controller for controlling a beverage brewing process in dependence on the data during operation of the apparatus. When a user wants to prepare a cup of beverage, for example coffee, the container is picked up and placed in the vicinity of the apparatus, and the beverage base material is taken out. This beverage base material is then placed in the apparatus for preparing a beverage. When the container is present at a certain predetermined distance from the apparatus, the reader in the apparatus is able to read the data provided in the identifier comprised in the container. Based on this information, the controller in the apparatus controls a beverage brewing process during operation of the apparatus, which is based on the data in the identifier. In this manner the parameters of the brewing process can be optimized so as to obtain an optimum beverage result. Erlandsson at [0022]: FIGS. 3a, 3b and 3c are perspective views of further embodiments of an identifier according to the invention. Erlandsson at [0023]: FIG. 1 is a schematic view of a system 1 according to the invention, comprising an apparatus 2 in this embodiment an apparatus for preparing a beverage extract from beverage base material 5 and a liquid, and a container 3 for containing the beverage base material 5 during storage. In this embodiment, the beverage base material 5 comprises a plurality of pouches 51 made of filter material and containing ground coffee. One or two pouches, depending on

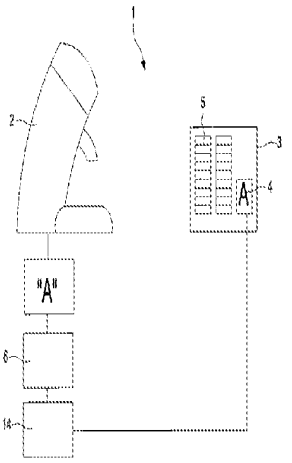
U.S. Patent No. 10,870,531	Disclosure
	whether one or two cups of beverage are to be prepared, are placed in a holder in the apparatus, to prepare a coffee extract from the ground coffee and water that flows through the pouch during the brewing process in the apparatus. It is noted, however, that the beverage base material 5 may comprise alternative types of beverage base material, with or without an enclosure of filter material such as, for example, loose ground coffee, chocolate milk powder, or tea leaves in a teabag. The container 3 in this embodiment comprises a flexible bag comprising a plurality of coffee pouches, but it is noted that this container may comprise any known type of container such as, for example, tins, canisters, boxes, etc., for containing any type of beverage base material. Erlandsson at Fig. 1:  Fig.1 Erlandsson at Fig. 2a:

U.S. Patent No. 10,870,531	Disclosure
	
[1.d] the base element comprising a flange, the flange having a top side to which the foil lid is sealed.	Erlandsson discloses, either expressly or inherently, the base element comprising a flange, the flange having a top side to which the foil lid is sealed. *See, e.g.*: Erlandsson at [0035]: Other embodiments of these elements are shown in FIGS. 3a and 3b. FIG. 3a shows a rigid tag 44 with a flange positioned at a variable distance from its free end, which tag is included in the container with the beverage base material. This tag 44 can be inserted into a recess in the body of the beverage making apparatus, where it operates a spring-loaded sliding switch that indicates the length of the tag and thus controls the beverage processing parameters. FIG. 3b shows a rigid tag 45 with a notch positioned a variable distance from an orientation feature at one side of the tag, which is included in the container with the beverage base material. This tag can be inserted into a recess in the beverage making apparatus, where it operates a sliding switch that indicates the position of the notch and thus controls the beverage brewing parameters.

U.S. Patent No. 10,870,531	Disclosure
	Erlandsson at Figs. 3a, 3b:  Fig.3a Fig.3b
[1.e] and an opposing bottom side with a barcode located on the bottom side,	Erlandsson discloses, either expressly or inherently, an opposing bottom side with a barcode located on the bottom side. *See, e.g.*: Erlandsson at [0005]-[0008]: It is an object of the invention to provide a system for preparing a consumable matter in which the parameters can be tailored to their optimum for the specific variety of consumable matter, in a user-friendly manner. To achieve this object, a system according to the invention is characterized in that the container comprises an identifier provided with data, and the apparatus comprises a reader for reading the data in said identifier, and a controller for controlling a preparation process during operation of the apparatus based on the data. When a user wants to prepare a consumable

U.S. Patent No. 10,870,531	Disclosure
	matter, such as a cup of beverage, for example coffee, the container is picked up and placed in the vicinity of the apparatus, to take out the basis material, in this case coffee pad. This basis material is then placed in the apparatus for preparing a consumable matter, for example an apparatus for preparing a beverage. When the container is present at a certain predetermined distance from the apparatus, the reader in the apparatus is able to read the data that are provided in the identifier comprised in the container. Based on this information, the controller in the apparatus controls a preparation during operation of the apparatus, which is based on the data in the identifier. In this manner the parameters of the preparation process can be tailored to their optimum, to obtain an optimum result for the prepared consumable matter. An embodiment according to the invention is characterized in that the container comprises an identifier provided with data, and the apparatus comprises a reader for reading the data in said identifier and a controller for controlling a beverage brewing process in dependence on the data during operation of the apparatus. When a user wants to prepare a cup of beverage, for example coffee, the container is picked up and placed in the vicinity of the apparatus, and the beverage base material is taken out. This beverage base material is then placed in the apparatus for preparing a beverage. When the container is present at a certain predetermined distance from the apparatus, the reader in the apparatus is able to read the data provided in the identifier comprised in the container. Based on this information, the controller in the apparatus controls a beverage brewing process during operation of the apparatus, which is based on the data in the identifier. In this manner the parameters of the brewing process can be optimized so as to obtain an optimum beverage result. An embodiment of a system according to the invention is characterized in that the data comprise information identifying the type of beverage base material comprised in the container. In this manner the brewing process parameters can be optimized for the specific type of beverage such as, for example, coffee or hot chocolate. Erlandsson at [0023]-[0026]:

U.S. Patent No. 10,870,531	Disclosure
	FIG. 1 is a schematic view of a system 1 according to the invention, comprising an apparatus 2 in this embodiment an apparatus for preparing a beverage extract from beverage base material 5 and a liquid, and a container 3 for containing the beverage base material 5 during storage. In this embodiment, the beverage base material 5 comprises a plurality of pouches 51 made of filter material and containing ground coffee. One or two pouches, depending on whether one or two cups of beverage are to be prepared, are placed in a holder in the apparatus, to prepare a coffee extract from the ground coffee and water that flows through the pouch during the brewing process in the apparatus. It is noted, however, that the beverage base material 5 may comprise alternative types of beverage base material, with or without an enclosure of filter material such as, for example, loose ground coffee, chocolate milk powder, or tea leaves in a teabag. The container 3 in this embodiment comprises a flexible bag comprising a plurality of coffee pouches, but it is noted that this container may comprise any known type of container such as, for example, tins, canisters, boxes, etc., for containing any type of beverage base material. The container 3 comprises an identifier 4 provided with data A, and the apparatus 2 comprises a reader 14 for reading the data A in said identifier. The identifier in this embodiment comprises a radio frequency transponder which can be read by a radio frequency reader comprised in the apparatus. In this embodiment, a radio frequency transponder is placed in every bag, and a radio frequency reader incorporated into the beverage maker. There are several methods of identifying objects using RFID, but the most common one is to store a serial number that identifies a product, and perhaps other information, on a microchip that is attached to an antenna (the chip and the antenna together are called an RFID transponder or an RFID tag). The reader sends out electromagnetic waves that induce a current in the tag's antenna, powering the chip, and enabling transmission of the identification information back to the reader. The reader demodulates the radio waves returned from the RFID tag, then interprets the serial number. In this application, the range of the reader will be limited so that data stored on the tag can be read by bringing the bag into close proximity with the beverage maker, avoiding any conflict with other bags the user may have purchased.

U.S. Patent No. 10,870,531	Disclosure
	Interpretation of the tag's data will lead to verification of the manufacturer and unique identification of the variety of beverage within the pad, so that the brewing parameters can be optimized for the drink. This optimization can be achieved either by selection of pre-programmed parameters, or by interpretation of the data provided by the RF tag into brewing instructions, increasing brewing versatility and allowing the introduction of new beverage types after manufacture of the beverage maker. If no tag or a tag of some unrecognized format is detected, default brewing parameters will be adopted. It is noted that other known types of identifier technologies, such as bar codes on the container and a bar code reader in or connected to the apparatus, may also be applied. The apparatus 2 further comprises a controller 6 for controlling a beverage brewing process "A" during operation of the apparatus 2 based on the data A. This will be further illustrated with an example. Erlandsson at Fig. 1:  Fig.1

U.S. Patent No. 10,870,531	Disclosure
[1.f] the base element has a wall region with an electrically conductive section	Erlandsson discloses, either expressly or inherently, the base element has a wall region with an electrically conductive section. *See, e.g.*: Erlandsson at [0003]: A system for preparing a consumable matter as described in the opening paragraph is known from EP0904718. The known system comprises an apparatus for preparing a coffee extract from ground coffee and water. The ground coffee is contained in a pouch made of a filter material, which pouch is placed in a holder in the apparatus. During operation hot water passes through the pouch to create a coffee extract which is then transported into a cup. The coffee pouches are sold in a container, in this case a bag, which contains a number of pouches. Numerous varieties of coffee pouches are offered to the consumer, who can select his or her preferred cup of coffee. These varieties may comprise for example coffee with special flavors (vanilla, chocolate etc.), coffee of varying strengths, or coffee without caffeine. Erlandsson at [0023]: FIG. 1 is a schematic view of a system 1 according to the invention, comprising an apparatus 2 in this embodiment an apparatus for preparing a beverage extract from beverage base material 5 and a liquid, and a container 3 for containing the beverage base material 5 during storage. In this embodiment, the beverage base material 5 comprises a plurality of pouches 51 made of filter material and containing ground coffee. One or two pouches, depending on whether one or two cups of beverage are to be prepared, are placed in a holder in the apparatus, to prepare a coffee extract from the ground coffee and water that flows through the pouch during the brewing process in the apparatus. It is noted, however, that the beverage base material 5 may comprise alternative types of beverage base material, with or without an enclosure of filter material such as, for example, loose ground coffee, chocolate milk powder, or tea leaves in a teabag. The container 3 in this embodiment comprises a flexible bag comprising a plurality of coffee pouches, but it is noted that this container may comprise any

U.S. Patent No. 10,870,531	Disclosure
	known type of container such as, for example, tins, canisters, boxes, etc., for containing any type of beverage base material.
[1.g] and radially spaced and vertically oriented grooves,	
[1.h] the cavity has radially spaced and vertically oriented ribs,	
[1.i] the portion capsule being free of a filter,	Erlandsson discloses, either expressly or inherently, the portion capsule being free of a filter. *See, e.g.*: Erlandsson at [0023]: FIG. 1 is a schematic view of a system 1 according to the invention, comprising an apparatus 2 in this embodiment an apparatus for preparing a beverage extract from beverage base material 5 and a liquid, and a container 3 for containing the beverage base material 5 during storage. In this embodiment, the beverage base material 5 comprises a plurality of pouches 51 made of filter material and containing ground coffee. One or two pouches, depending on whether one or two cups of beverage are to be prepared, are placed in a holder in the apparatus, to prepare a coffee extract from the ground coffee and water that flows through the pouch during the brewing process in the apparatus. It is noted, however, that the beverage base material 5 may comprise alternative types of beverage base material, with or without an enclosure of filter material such as, for example, loose ground coffee, chocolate milk powder, or tea leaves in a teabag. The container 3 in this embodiment comprises a flexible bag comprising a plurality of coffee pouches, but it is noted that this container may comprise any known type of container such as, for example, tins, canisters, boxes, etc., for containing any type of beverage base material.
[1.j] the base element and/or the lid are made of metal;	Erlandsson discloses, either expressly or inherently, the base element and/or the lid are made of metal. *See, e.g.*:

U.S. Patent No. 10,870,531	Disclosure
	Erlandsson at [0003]: A system for preparing a consumable matter as described in the opening paragraph is known from EP0904718. The known system comprises an apparatus for preparing a coffee extract from ground coffee and water. The ground coffee is contained in a pouch made of a filter material, which pouch is placed in a holder in the apparatus. During operation hot water passes through the pouch to create a coffee extract which is then transported into a cup. The coffee pouches are sold in a container, in this case a bag, which contains a number of pouches. Numerous varieties of coffee pouches are offered to the consumer, who can select his or her preferred cup of coffee. These varieties may comprise for example coffee with special flavors (vanilla, chocolate etc.), coffee of varying strengths, or coffee without caffeine. Erlandsson at [0023]: FIG. 1 is a schematic view of a system 1 according to the invention, comprising an apparatus 2 in this embodiment an apparatus for preparing a beverage extract from beverage base material 5 and a liquid, and a container 3 for containing the beverage base material 5 during storage. In this embodiment, the beverage base material 5 comprises a plurality of pouches 51 made of filter material and containing ground coffee. One or two pouches, depending on whether one or two cups of beverage are to be prepared, are placed in a holder in the apparatus, to prepare a coffee extract from the ground coffee and water that flows through the pouch during the brewing process in the apparatus. It is noted, however, that the beverage base material 5 may comprise alternative types of beverage base material, with or without an enclosure of filter material such as, for example, loose ground coffee, chocolate milk powder, or tea leaves in a teabag. The container 3 in this embodiment comprises a flexible bag comprising a plurality of coffee pouches, but it is noted that this container may comprise any known type of container such as, for example, tins, canisters, boxes, etc., for containing any type of beverage base material.
[1.k] piercing the foil lid;	

Exhibit C-4 – Invalidity of U.S. Patent No. 10,870,531 in view of Erlandsson

U.S. Patent No. 10,870,531	Disclosure
[1.l] reading the barcode with the barcode reader;	Erlandsson discloses, either expressly or inherently, reading the barcode with the barcode reader. *See, e.g.*: Erlandsson at [0006]-[0008]: To achieve this object, a system according to the invention is characterized in that the container comprises an identifier provided with data, and the apparatus comprises a reader for reading the data in said identifier, and a controller for controlling a preparation process during operation of the apparatus based on the data. When a user wants to prepare a consumable matter, such as a cup of beverage, for example coffee, the container is picked up and placed in the vicinity of the apparatus, to take out the basis material, in this case coffee pad. This basis material is then placed in the apparatus for preparing a consumable matter, for example an apparatus for preparing a beverage. When the container is present at a certain predetermined distance from the apparatus, the reader in the apparatus is able to read the data that are provided in the identifier comprised in the container. Based on this information, the controller in the apparatus controls a preparation during operation of the apparatus, which is based on the data in the identifier. In this manner the parameters of the preparation process can be tailored to their optimum, to obtain an optimum result for the prepared consumable matter. An embodiment according to the invention is characterized in that the container comprises an identifier provided with data, and the apparatus comprises a reader for reading the data in said identifier and a controller for controlling a beverage brewing process in dependence on the data during operation of the apparatus. When a user wants to prepare a cup of beverage, for example coffee, the container is picked up and placed in the vicinity of the apparatus, and the beverage base material is taken out. This beverage base material is then placed in the apparatus for preparing a beverage. When the container is present at a certain predetermined distance from the apparatus, the reader in the apparatus is able to read the data provided in the identifier comprised in the container. Based on this information, the controller in the apparatus controls a beverage brewing process during operation of the apparatus, which is based on the data in the identifier. In this manner the parameters of the brewing process can be optimized so as to obtain an optimum beverage result.

K-FEE SYSTEM GMBH, EX2012, page 1546
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

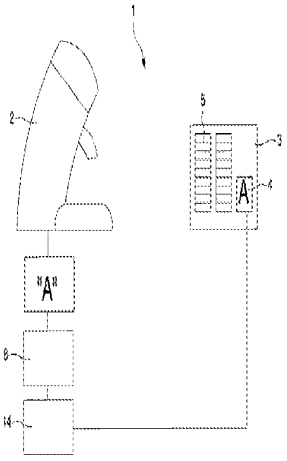
U.S. Patent No. 10,870,531	Disclosure
	An embodiment of a system according to the invention is characterized in that the data comprise information identifying the type of beverage base material comprised in the container. In this manner the brewing process parameters can be optimized for the specific type of beverage such as, for example, coffee or hot chocolate. Erlandsson at [0012]: An embodiment of a system according to the invention is characterized in that said controller comprises a processing unit which comprises a plurality of pre-programmed brewing process parameters, from which a selection is made during operation in dependence on the data as read. Various brewing processing parameters for different beverage types are pre-programmed into the processing unit and are assigned different integers. The integer corresponding to the most appropriate program for the beverage base material in the container is present as the data in the identifier and is read as such by the reader when the container is present at a certain predetermined distance from the apparatus. Based on this read integer, the program with appropriate brewing processing parameters is then activated in the apparatus by the controller for preparing a beverage extract. Erlandsson at [0016]: The invention further relates to an apparatus for preparing a beverage extract from beverage base material and a liquid, for use with the system according to the invention, characterized in that said apparatus comprises a reader for reading data in an identifier which is comprised in a container for containing a beverage base material, and a controller for controlling a beverage brewing process in dependence on the data during operation of the apparatus. Erlandsson at [0024]: The container 3 comprises an identifier 4 provided with data A, and the apparatus 2 comprises a reader 14 for reading the data A in said identifier. The identifier in this embodiment comprises a radio frequency transponder which can be read by a radio frequency reader

U.S. Patent No. 10,870,531	Disclosure
	comprised in the apparatus. In this embodiment, a radio frequency transponder is placed in every bag, and a radio frequency reader incorporated into the beverage maker. There are several methods of identifying objects using RFID, but the most common one is to store a serial number that identifies a product, and perhaps other information, on a microchip that is attached to an antenna (the chip and the antenna together are called an RFID transponder or an RFID tag). The reader sends out electromagnetic waves that induce a current in the tag's antenna, powering the chip, and enabling transmission of the identification information back to the reader. The reader demodulates the radio waves returned from the RFID tag, then interprets the serial number. In this application, the range of the reader will be limited so that data stored on the tag can be read by bringing the bag into close proximity with the beverage maker, avoiding any conflict with other bags the user may have purchased. Erlandsson at [0026]: It is noted that other known types of identifier technologies, such as bar codes on the container and a bar code reader in or connected to the apparatus, may also be applied. The apparatus 2 further comprises a controller 6 for controlling a beverage brewing process "A" during operation of the apparatus 2 based on the data A. This will be further illustrated with an example. Erlandsson at [0028]: In this embodiment, the controller 6 comprises a processing unit which comprises a plurality of pre-programmed brewing process parameters from which a selection is made during operation dependent on the data as read. The processing unit in the apparatus comprises various pre-programmed brewing processes, which are assigned different integers. The data in the identifier in each container comprise an integer corresponding to the most appropriate brewing process for the specific type of beverage base material comprised in the container. After reading out of the integer by the reader, the correct pre-programmed brewing process is selected by the controller in dependence on that integer, to control the operation of the apparatus. In another embodiment, the data in the identifier itself comprise specific brewing

U.S. Patent No. 10,870,531	Disclosure
	parameters such as a pre-selected fluid quantity, fluid temperature, and fluid pass-through rate, which are read out by the reader and transferred to the control unit 6 to control the beverage brewing process. Erlandsson at [0032]: FIG. 2a is a schematic view of a container 3' for containing a beverage base material during storage, for use with a system according to the invention. Said container 3' comprises an identifier 4' provided with data A', said data A', being readable by a reader in an apparatus for preparing a beverage, and a beverage brewing process during operation of the apparatus being controlled in dependence on the data. In this embodiment, the identifier 4' comprises an element 41 which is detachably connected to the container 3'. The element 41 in this embodiment is connected to the container via a perforated line and can be torn off the container 3'. It is noted that the element 41 may also be detachably connected to the container by means of other known types of connections, the element for example comprising a sticker or a clip which is removably attached to the container. Erlandsson at [0033]: In another embodiment, the identifier comprises a separate element for inclusion in a container for containing the beverage base material during storage, which element is provided with data which can be read by a reader in an apparatus for preparing a beverage, and a beverage brewing process during operation of the apparatus being controlled in dependence on said data.
[1.m] determining whether the read barcode agrees with a stored reference; and activating the pump to push heated water into the portion capsule only upon a determination	Erlandsson discloses, either expressly or inherently, determining whether the read barcode agrees with a stored reference; and activating the pump to push heated water into the portion capsule only upon a determination that the read barcode agrees with the stored reference. *See, e.g.*: *See* [1.l].

U.S. Patent No. 10,870,531	Disclosure
that the read barcode agrees with the stored reference.	
[redacted]	
2. The method according to claim 1, wherein the method comprises not activating the pump to push the heated water into the portion capsule upon a determination that the read barcode does not agree with the stored reference.	Erlandsson discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises not activating the pump to push the heated water into the portion capsule upon a determination that the read barcode does not agree with the stored reference. *See, e.g.*: *See* [1.1].
[redacted]	
3. The method according to claim 1, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element and/or the foil lid are made of aluminum.	Erlandsson discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element and/or the foil lid are made of aluminum. *See, e.g.*: Erlandsson at [0003]: A system for preparing a consumable matter as described in the opening paragraph is known from EP0904718. The known system comprises an apparatus for preparing a coffee extract from ground coffee and water. The ground coffee is contained in a pouch made of a filter material, which pouch is placed in a holder in the apparatus. During operation hot water passes through the pouch to create a coffee extract which is then transported into a cup. The coffee pouches are sold in a container, in this case a bag, which contains a number of pouches. Numerous varieties of coffee pouches are offered to the consumer, who can select his or her preferred cup of coffee. These varieties may comprise for example coffee with special flavors (vanilla, chocolate etc.), coffee of varying strengths, or coffee without caffeine.

U.S. Patent No. 10,870,531	Disclosure
	Erlandsson at [0023]: FIG. 1 is a schematic view of a system 1 according to the invention, comprising an apparatus 2 in this embodiment an apparatus for preparing a beverage extract from beverage base material 5 and a liquid, and a container 3 for containing the beverage base material 5 during storage. In this embodiment, the beverage base material 5 comprises a plurality of pouches 51 made of filter material and containing ground coffee. One or two pouches, depending on whether one or two cups of beverage are to be prepared, are placed in a holder in the apparatus, to prepare a coffee extract from the ground coffee and water that flows through the pouch during the brewing process in the apparatus. It is noted, however, that the beverage base material 5 may comprise alternative types of beverage base material, with or without an enclosure of filter material such as, for example, loose ground coffee, chocolate milk powder, or tea leaves in a teabag. The container 3 in this embodiment comprises a flexible bag comprising a plurality of coffee pouches, but it is noted that this container may comprise any known type of container such as, for example, tins, canisters, boxes, etc., for containing any type of beverage base material. Erlandsson at [0027]: In this embodiment, the data A comprise information identifying the type of beverage base material present in the container, for example, 'regular roast coffee'. A user will pick up the container and bring it into the vicinity of the apparatus for preparing a beverage, in this embodiment coffee extract. When the container is in a certain pre-determined area around the apparatus, said area being defined by the chosen identifier and reader, the reader 14 in the apparatus is able to read the type of beverage base material that is contained in the container, in this case 'regular roast coffee'. After reading of this data, the controller 6 in the apparatus 2 is ready to initiate a beverage brewing process which is especially designed for this specific type of beverage. The specific beverage brewing process comprises the optimum parameters such as fluid temperature, fluid pressure, and fluid pass-through rate for this specific type of beverage, which ensure an optimal cup of 'regular roast coffee' resulting from the beverage brewing process in the apparatus 2. It is noted that the specific brewing process in the

U.S. Patent No. 10,870,531	Disclosure
	apparatus may start after activation of the on/off button of the apparatus by the user, after a certain pre-determined period of time starting from the moment the data are read, or upon detection of a pouch being placed in the holder of the apparatus. Erlandsson at Fig. 1:  Fig.1
[redacted]	
5. The method according to claim 1, wherein the method comprises sealing a seal of the apparatus against the foil lid, and wherein the grooves are free from extending all the way into a region of the base element that is immediately adjacent to the flange.	
[redacted]	

U.S. Patent No. 10,870,531	Disclosure
6. The method according to claim 1, wherein the method comprises introducing the heated water into the portion capsule along a central axis of the portion capsule.	Erlandsson discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises introducing the heated water into the portion capsule along a central axis of the portion capsule. *See, e.g.*: Erlandsson at [0003]: A system for preparing a consumable matter as described in the opening paragraph is known from EP0904718. The known system comprises an apparatus for preparing a coffee extract from ground coffee and water. The ground coffee is contained in a pouch made of a filter material, which pouch is placed in a holder in the apparatus. During operation hot water passes through the pouch to create a coffee extract which is then transported into a cup. The coffee pouches are sold in a container, in this case a bag, which contains a number of pouches. Numerous varieties of coffee pouches are offered to the consumer, who can select his or her preferred cup of coffee. These varieties may comprise for example coffee with special flavors (vanilla, chocolate etc.), coffee of varying strengths, or coffee without caffeine. Erlandsson at [0023]: FIG. 1 is a schematic view of a system 1 according to the invention, comprising an apparatus 2 in this embodiment an apparatus for preparing a beverage extract from beverage base material 5 and a liquid, and a container 3 for containing the beverage base material 5 during storage. In this embodiment, the beverage base material 5 comprises a plurality of pouches 51 made of filter material and containing ground coffee. One or two pouches, depending on whether one or two cups of beverage are to be prepared, are placed in a holder in the apparatus, to prepare a coffee extract from the ground coffee and water that flows through the pouch during the brewing process in the apparatus. It is noted, however, that the beverage base material 5 may comprise alternative types of beverage base material, with or without an enclosure of filter material such as, for example, loose ground coffee, chocolate milk powder, or tea leaves in a teabag. The container 3 in this embodiment comprises a flexible bag comprising a plurality of coffee pouches, but it is noted that this container may comprise any

U.S. Patent No. 10,870,531	Disclosure
	known type of container such as, for example, tins, canisters, boxes, etc., for containing any type of beverage base material.
[redacted]	
7. The method according to claim 1, wherein the method comprises piercing the foil lid in a region that is offset from a central axis of the portion capsule, and wherein the lid is crowned in a region of the central axis of the portion capsule relative to a region of the lid adjacent to the flange.	
[redacted]	
[8.pre] The method according to claim 1,	Erlandsson discloses, either expressly or inherently, the method according to claim 1. *See, e.g.*: *See* [1].
[8.a] wherein the method comprises controlling a production process of the beverage according to the read barcode,	Erlandsson discloses, either expressly or inherently, wherein the method comprises controlling a production process of the beverage according to the read barcode. *See, e.g.*: *See* [1.m].
[8.b] and wherein the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is	Erlandsson discloses, either expressly or inherently, that the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located in between the upper section and a bottom of the base element. *See, e.g.*:

U.S. Patent No. 10,870,531	Disclosure
located in between the upper section and a bottom of the base element,	
[8.c] wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element.	Erlandsson discloses, either expressly or inherently, that the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element. *See, e.g.*: *See also* [8.b].
[10.pre] A method of using a portion capsule for making a coffee beverage, the method comprising:	Erlandsson discloses, either expressly or inherently, a method of using a portion capsule for making a coffee beverage. *See, e.g.*: *See* [1].
[10.a] providing an apparatus including a barcode reader, the apparatus having a pump and being adapted to supply heated water;	Erlandsson discloses, either expressly or inherently, providing an apparatus including a barcode reader. *See, e.g.*: *See* [1.a].
[10.b] the apparatus having a pump and being adapted to supply heated water;	Erlandsson discloses, either expressly or inherently, the apparatus having a pump and being adapted to supply heated water. *See, e.g.*: *See* [1.b].
[10.c] inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base	Erlandsson discloses, either expressly or inherently, inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity within which a powdered coffee material is located. *See, e.g.*:

K-FEE SYSTEM GMBH, EX2012, page 1555
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
element having a cavity within which a powdered coffee material is located,	*See* [1.c].
[10.d] the base element including a circumferential flange having a top side	Erlandsson discloses, either expressly or inherently, the base element including a circumferential flange having a top side. *See, e.g.*: *See* [1.d].
[10.e] and a bottom side with a barcode located on the bottom side,	Erlandsson discloses, either expressly or inherently, a bottom side with a barcode located on the bottom side. *See, e.g.*: *See* [1.e].
[10.f] the portion capsule being free of a filter	Erlandsson discloses, either expressly or inherently, the portion capsule being free of a filter. *See, e.g.*: *See* [1.i].
[10.g] and comprising a plurality of ribs that are radially spaced, vertically oriented and extend toward a central portion of the cavity, wherein an outer surface of the base element comprises radially spaced and vertically oriented grooves;	Erlandsson discloses, either expressly or inherently, a plurality of ribs that are radially spaced, vertically oriented and extend toward a central portion of the cavity, wherein an outer surface of the base element comprises radially spaced and vertically oriented grooves. *See, e.g.*: *See* [1.g] and [1.h].
[10.h] piercing the foil lid;	Erlandsson discloses, either expressly or inherently, piercing the foil lid. *See, e.g.*: *See* [1.k].

K-FEE SYSTEM GMBH, EX2012, page 1556
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

Exhibit C-4 – Invalidity of U.S. Patent No. 10,870,531 in view of Erlandsson

U.S. Patent No. 10,870,531	Disclosure
[10.i] reading the barcode with the barcode reader; and	Erlandsson discloses, either expressly or inherently, .reading the barcode with the barcode reader. *See, e.g.*: *See* [1.l].
[10.j] activating the pump to introduce the heated water into the portion capsule only upon a determination that the read barcode agrees with a stored reference, or not activating the pump upon a determination that the read barcode does not agree with the stored reference.	Erlandsson discloses, either expressly or inherently, activating the pump to introduce the heated water into the portion capsule only upon a determination that the read barcode agrees with a stored reference, or not activating the pump upon a determination that the read barcode does not agree with the stored reference. *See, e.g.*: *See* [1.m] and [2].
11. The method according to claim 10, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element comprises an electrically conductive section.	Erlandsson discloses, either expressly or inherently, the method according to claim 10, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element comprises an electrically conductive section. *See, e.g.*: *See* [1.f], [3].
14. The method according to claim 10, wherein the method comprises dropping the portion capsule into a dropping box, wherein the base	Erlandsson discloses, either expressly or inherently, the method according to claim 10, wherein the method comprises dropping the portion capsule into a dropping box, wherein the base element and/or the lid are made of metal. *See* [1.j].

K-FEE SYSTEM GMBH, EX2012, page 1557
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
element and/or the lid are made of metal.	
[redacted]	
[16.pre] The method according to claim 10,	Erlandsson discloses, either expressly or inherently, the method according to claim 10. *See, e.g.*: *See* [10].
[16.a] wherein the method comprises sealing a seal of the apparatus against the foil lid	Erlandsson discloses, either expressly or inherently, wherein the method comprises sealing a seal of the apparatus against the foil lid. *See, e.g.*: *See* [5].
[16.b] wherein the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located between the upper section and a bottom of the base element	Erlandsson discloses, either expressly or inherently, wherein the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located between the upper section and a bottom of the base element. *See, e.g.*: *See* [8.b].
[16.c] wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element.	Erlandsson discloses, either expressly or inherently, wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element. *See, e.g.*: *See* [8.c].

Exhibit C-5 – Invalidity of U.S. Patent No. 10,870,531 in view of Jarisch

INVALIDITY CLAIM CHART
Invalidity of U.S. Patent No. 10,858,531 in view of Jarisch

According to its cover page, U.S. Patent Pub. US2013/0064937A1 ("Jarisch") was published on March 14, 2013 from an application filed on May 12, 2011. Jarisch therefore constitutes prior art under pre-AIA 35 U.S.C. § 102(e) to the '531 Patent's PCT filing date. Jarisch anticipates and/or renders obvious the Asserted Claims of the '531 Patent (at least as Nespresso understands K-fee's application of the Asserted Claims in an effort to show infringement).

To the extent K-fee argues that any element below is not disclosed by Jarisch, a person of ordinary skill in the art would have found it obvious to combine the teachings of Jarisch with the background knowledge of a person of ordinary skill in the art and/or the additional references, and exemplary teachings, set forth in Exhibits C-1 to C-9 and in Appendix C.

The chart below provides representative examples of where each element of each claim is found within Jarisch. Citations are meant to be exemplary, not exhaustive, and Nespresso reserves the right to identify and discuss additional portions of the reference in support of its contentions and/or to rebut arguments made by K-fee. Citations to figures, drawings, tables, and the like include reference to any accompanying or related text. All internal cross references are meant to incorporate the cross-referenced material as if fully set forth therein.

It is Nespresso's position that K-fee's Infringement Contentions have not established that any accused product or service infringes any valid claim. Thus, Nespresso's statements below should not be treated as an admission, implication, or suggestion that Nespresso agrees with K-fee regarding either the scope, construction, or interpretation of any of the Asserted Claims, or the infringement theories advanced by K-fee in its Infringement Contentions, including whether any Asserted Claim satisfies 35 U.S.C. §§ 101 or 112. In certain cases, Nespresso specified non-limiting examples of where its application of the prior art is based on K-fee's apparent application of the claim element. These statements are not intended to suggest that Nespresso agrees with K-fee's application of any claim term, suggest a proposed construction at this stage of the case, or suggest that construction is needed, as the parties are not required to exchange terms for construction or proposed constructions until a later date.

K-fee has yet to identify any limitation of the Asserted Claims that it contends is not anticipated and/or rendered obvious by Jarisch. Nespresso therefore expressly reserves the right to respond to any such contention, including by identifying additional obviousness combinations, if K-fee makes any such contention.

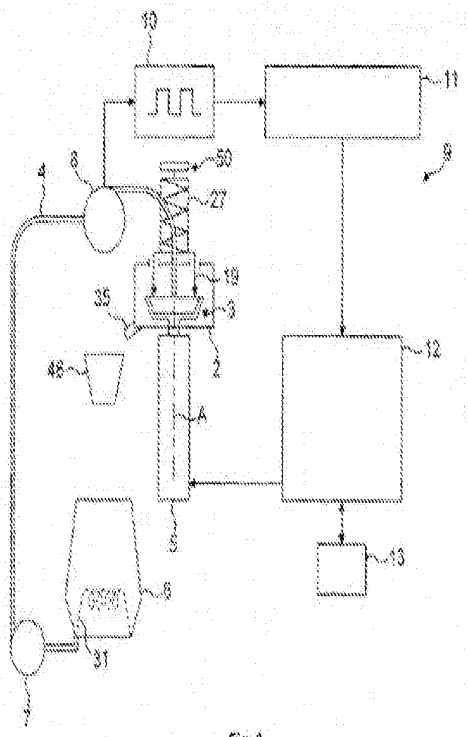
Where Nespresso states that Jarisch "discloses" a limitation, that disclosure may be express, implicit, and/or inherent.

K-FEE SYSTEM GMBH, EX2012, page 1559
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

Exhibit C-5 – Invalidity of U.S. Patent No. 10,870,531 in view of Jarisch

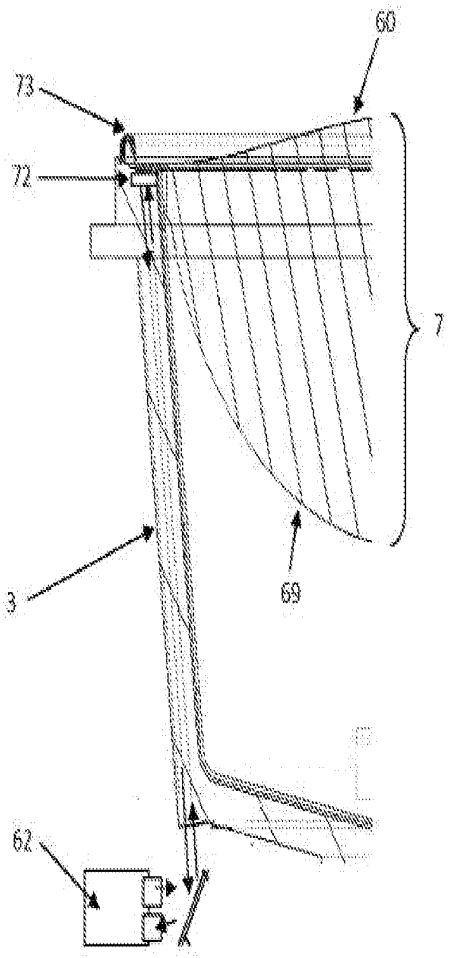
U.S. Patent No. 10,870,531	Disclosure
[1.pre] A method of using a portion capsule for producing a beverage, the method comprising:	Jarisch discloses, either expressly or inherently, a method of using a portion capsule for producing a beverage. *See, e.g.*: Jarisch at Abstract: Capsule for the preparation of a beverage comprising a con-tainer and a beverage ingredient contained therein, wherein the container comprises a code (65) adapted for being iden-tified or read by external reading means (62), wherein the code is arranged on the container to be read while the capsule is rotated around an axis of rotation traversing the capsule. Jarisch at [0014]: The aim of the present invention is to propose an improved way to identify the capsule within a beverage production machine to ensure a more reliable and convenient retrieval or reading of information so as to adjust working parameters of the machine. Jarisch at [0023]: The invention further relates to a system for preparing a beverage from a capsule as aforementioned and further comprising a beverage preparation device; wherein the device comprises capsule holding means for holding the capsule and rotational drive means for driving the holding means and capsule in rotation along said axis of rotation and reading means arranged for reading the code when the capsule is rotated along said axis. Jarisch at [0034]: FIG. 1 illustrates an example of a beverage preparation system 1 as described in WO2010/026053 for which the capsule of the invention can be used. Jarisch at FIG. 1:

K-FEE SYSTEM GMBH, EX2012, page 1560
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

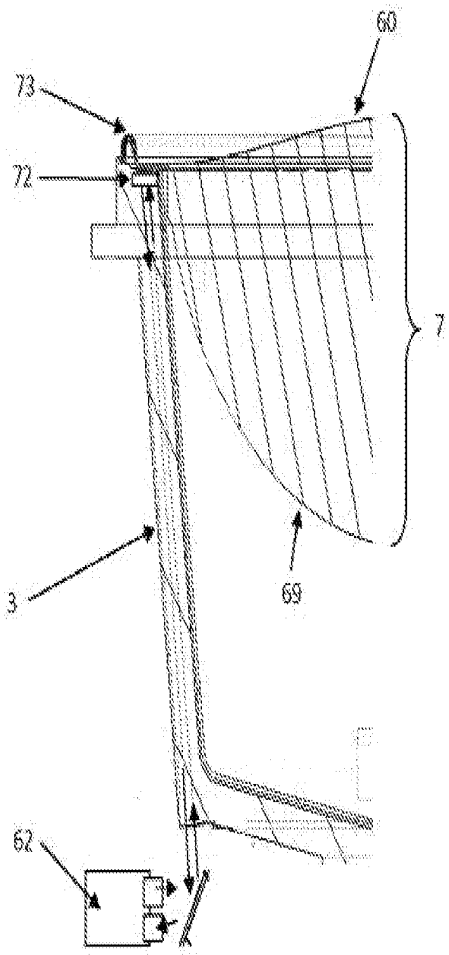
U.S. Patent No. 10,870,531	Disclosure
	 Fig. 1
[1.a] providing an apparatus including a barcode reader,	Jarisch discloses, either expressly or inherently, providing an apparatus including a barcode reader. *See, e.g.*: Jarisch at [0023]: The invention further relates to a system for preparing a beverage from a capsule as aforementioned and further comprising a beverage preparation device; wherein the device

U.S. Patent No. 10,870,531	Disclosure
	comprises capsule holding means for holding the capsule and rotational drive means for driving the holding means and capsule in rotation along said axis of rotation and reading means arranged for reading the code when the capsule is rotated along said axis. Jarisch at [0024]: In particular, the reading means may comprise a light emitter and a light sensor. In an alternative, the reading means comprises an inductive sensor. The optical reading means or inductive sensor may be arranged to detect a code on the rim of the capsule. Jarisch at [0071]-[0073]: The reader may consist of: • A light source with/without focusing optic, and • A light sensor with/without focusing optic. Jarisch at [0082]: In the embodiment of the figure 4, the light source is placed at the bottom of the centrifugal cell 3. This cell is light conductive allowing the beam to reach the bottom side 72 of its rim 73. The reflected light is conducted by the transparent (or light conductive) centrifugal cell 3 to reach the sensor 62. In case that the sensor 62 cannot be aligned with the transparent part of the centrifugal cell 3, a mirror can be placed as illustrated in the figure 4 to deflect the forward and backward beams. *See also* Jarisch at Claims 14-16; FIGs. 2-7.
[1.b] the apparatus including a pump adapted to supply heated water;	Jarisch discloses, either expressly or inherently, the apparatus including a pump adapted to supply heated water. *See, e.g.*:

U.S. Patent No. 10,870,531	Disclosure
	Jarisch at [0035]: The centrifugal unit 2 comprises a centrifugal cell 3. The cell 3 may comprise a capsule holder and a capsule received therein. The centrifugal unit is connected to driving means 5 such as a rotary motor. The centrifugal unit comprises a collecting part and an outlet 35. A receptacle 48 can be disposed below the outlet to collect the extracted beverage. The system further comprises liquid supply means such as a water reservoir 6 and a fluid circuit 4. Heating means 31 may also be provided in the reservoir or along the fluid circuit. The liquid supply means may further comprise a pump 7 connected to the reservoir. A flow restriction means 19 is provided to create a restriction to the flow of the centrifuged liquid which leaves the capsule. The system may further comprise a flow meter such as a flow-metering turbine 8 for providing a control of the flow rate of water supplied in the cell 3. The counter 11 can be connected to the flow-metering turbine 8 to enable an analysis of the generated impulse data 10. The analysed data is then transferred to the processor 12. Accordingly, the exact actual flow rate of the liquid within the fluid circuit 4 can be calculated in real-time. A user interface 13 may be provided to allow the user to input information that is transmitted to the control unit 9. Further characteristics of the system can be found in WO2010/026053.
[1.c] inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity in which a beverage raw material is provided,	Jarisch discloses, either expressly or inherently, inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity in which a beverage raw material is provided. *See, e.g.*: Jarisch at [0021]: In an embodiment, the container comprises a body and a lid connected to the body and wherein the code is present on the lid of the container. The lid may be a closed foil and/or a filter, for example. Jarisch at [0036]:

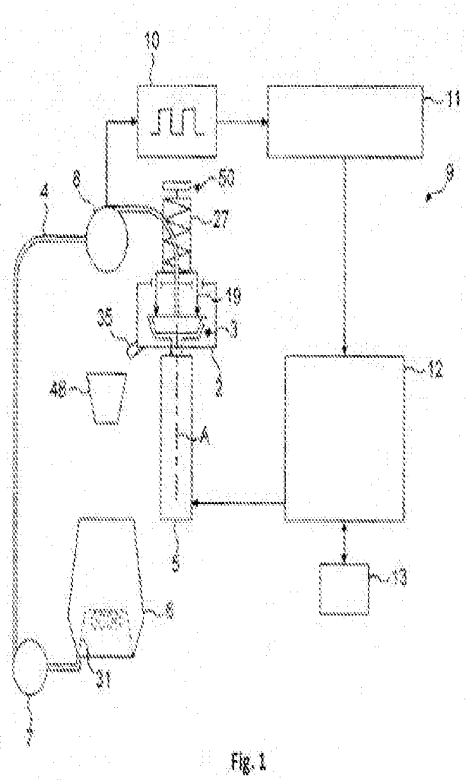
U.S. Patent No. 10,870,531	Disclosure
	In the following examples (see FIG. 4), the capsule comprises a cup-shaped body 69 extending by a flange-like rim 73. A lid such as a foil or membrane (liquid-tight or permeable to liquid) 60 is connected to the body, e.g., sealed on the rim. The capsule is filled with beverage ingredient such as ground coffee. *See also* Jarisch at FIG. 4:  Fig. 4

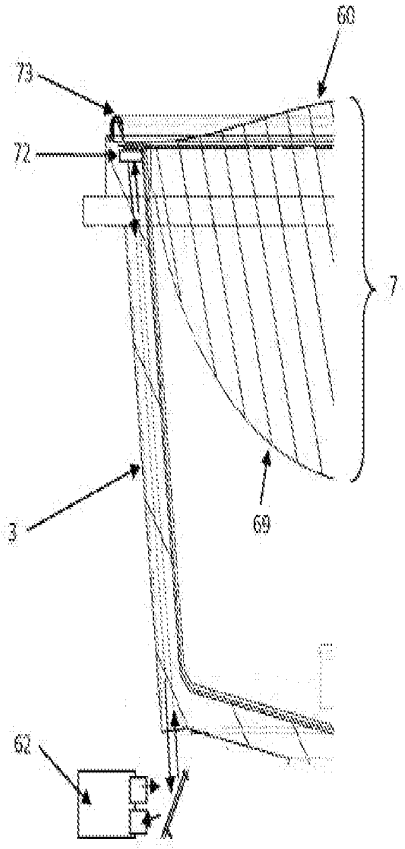
U.S. Patent No. 10,870,531	Disclosure
	See also Jarisch at FIGS 5-7.
[1.d] the base element comprising a flange, the flange having a top side to which the foil lid is sealed.	Jarisch discloses, either expressly or inherently, the base element comprising a flange, the flange having a top side to which the foil lid is sealed. *See, e.g.*: Jarisch at [0036]: In the following examples (see FIG. 4), the capsule comprises a cup-shaped body 69 extending by a flange-like rim 73. A lid such as a foil or membrane (liquid-tight or permeable to liquid) 60 is connected to the body, e.g., sealed on the rim. The capsule is filled with beverage ingredient such as ground coffee. *See also* Jarisch at FIG. 4:

U.S. Patent No. 10,870,531	Disclosure
	 Fig. 4 *See also* Jarisch at FIGS 5-7.

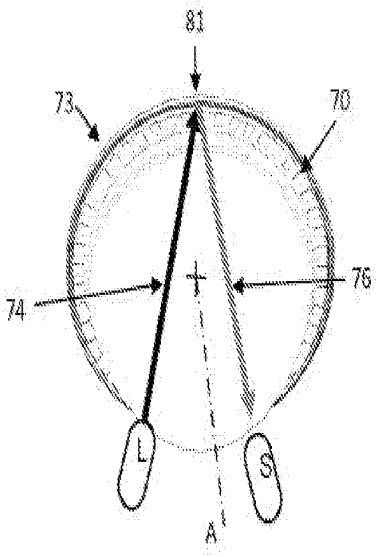
U.S. Patent No. 10,870,531	Disclosure
[1.e] and an opposing bottom side with a barcode located on the bottom side,	Jarisch discloses, either expressly or inherently, an opposing bottom side with a barcode located on the bottom side. *See, e.g.*: Jarisch at [0016]-[0017]: More particularly, the capsule has a circumference wherein the code is arranged on the container along an arc-shaped or circular path of the circumference. In a particular mode, the capsule has a circumference wherein the code comprises successive segments which are individually rectilinear but extend substantially along at least a part of the circumference. More particularly, the code is arranged along at least a eighth of the circumference. This configuration provides a reliable reading or retrieval of information as well as an effective portion for information. In order to ensure a reliable reading or retrieval of information, the code is repeated along said circumference. The repetition ensures a higher probability that at least one code is readable but also may potentially reduce the reading time. Preferably, the code is an optical code. The code may be a bit code formed by a series of discrete polygonal (e.g., rectangles or squares) or dot surfaces printed on the container and/or embossed in the container. Jarisch at [0019]: Preferably, the code is printed or embossed to form a pattern which possesses surfaces having different reflective and/or absorbing properties to light. In particular, the pattern possesses first surfaces and second surfaces having different reflective and/or absorbing properties to light. More particularly, the pattern possesses first surfaces inclined mirroring or absorbing properties to light and second surfaces having flat mirroring or flat reflective properties to light. Jarisch at [0022]:

U.S. Patent No. 10,870,531	Disclosure
	In another embodiment, the code is present on the rim of the capsule. In the most preferred embodiment, the code is present on the bottom of the rim of the capsule which is opposed to the lid of the capsule. The bottom of the rim is sufficiently away from the liquid injection and beverage delivery areas so that there is a lower risk for the code to become unreadable such if partly or totally hidden or soiled by beverage residues or otherwise (e.g., coffee particles). As a result, the reading is made more reliable. The reading may also be carried out while the capsule is in place in the beverage production device. Therefore, the preparation of the beverage is simplified and the preparation time can be reduced. Jarisch at [0024]: In particular the reading means may comprise a light emitter and a light sensor. In an alternative, the reading means comprises an inductive sensor. The optical reading means or inductive sensor may be arranged to detect a code on the rim of the capsule. Jarisch at [0063]-[0064]: <u>2) Optical reading on rim bottom side of capsule (figures 4 to 7):</u> The capsule 7 may comprise a code 70 on the bottom side 72 of its rim 73. The bit code is formed of a succession of small rectangular surfaces having light mirroring properties and intermediate surfaces having flat mirroring and/or diffusing properties.

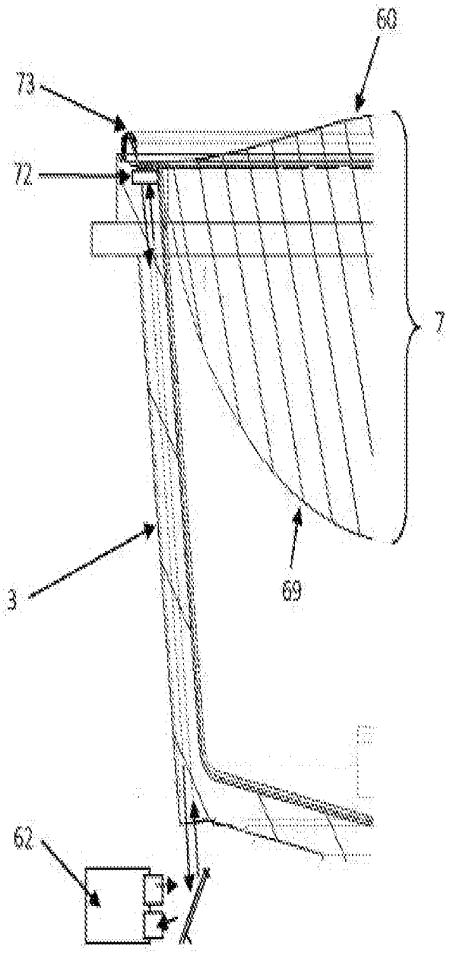
U.S. Patent No. 10,870,531	Disclosure
	See Jarisch at FIG. 1:  Fig. 1 Jarisch at FIG. 4:

U.S. Patent No. 10,870,531	Disclosure
	 Jarisch at [0022]: In the most preferred embodiment, the code is present on the bottom of the rim of the capsule which is opposed to the lid of the capsule. The bottom of the rim is sufficiently away from the liquid injection and beverage delivery areas so that there is a lower risk for the code to become unreadable such if partly or totally hidden or soiled by beverage residues or otherwise (e.g., coffee particles). As a result, the reading is made more reliable. The reading may also be carried out while the capsule is in place in the beverage production device. Therefore, the preparation of the beverage is simplified and the preparation time can be reduced.

U.S. Patent No. 10,870,531	Disclosure
	Jarisch at [0042]-[0048]: Onto the capsule foil 60, a plurality of bits forming the code 61 is applied along a circular or arc-shaped path. Preferably, the code is placed on a flat portion of the lid and close to the peripheral edge of the capsule. The code is preferably placed the lid that is supported by the flange-like rim of the capsule or overlaps with the rim. Hence, the code is not distorted due to mechanical constraints and can be read more reliably. The marks may consist of: Mirroring or absorbing surfaces for providing bit 0 and, Diffusing and reflective surfaces for providing bit 1 The binary values 0 and 1 are arbitrary chosen and can be inversed. The code is read by rotating the capsule along a central axis A (FIG. 1). Jarisch at [0070]: The bit code is read by rotating the capsule along its central axis A. Jarisch at [0086]: Therefore, the number of bits and their bit code depend on the number and specific arrangement of mirror surfaces (e.g. rectangles) and diffusing or absorbing surfaces (e.g., zones between the rectangles). The same sequence of bits forming a code can be repeated several times on the circumference of the rim. This repetition provides redundancy and more reliability to the reading. Jarisch at [0099]: The code preferably comprises three sections, the synchronization section, the payload section and the verification section. The synchronization section serves for the synchronization purpose i.e. to inform the sensor when the code begins. Since the speed of the rotation of the

U.S. Patent No. 10,870,531	Disclosure
	capsule can vary, the synchronization is achieved through a known sequence of bits such as 0.1.0.1. Then the payload of the code identifying the capsule can be read. In order to avoid misinterpretation of the code, the payload can be followed by verification bits. These bits can be a checksum on the payload or a similar verification function. Jarisch at FIG. 5:  *See also* Jarisch at Claims 11-14; FIGs. 6-7.
[1.f] the base element has a wall region with an electrically conductive section	Jarisch discloses, either expressly or inherently, the base element has a wall region with an electrically conductive section. *See, e.g.*: Jarisch at [0007]: Recognition means can comprise one or more strips of a magnetic material applied to the body of the package, which can be read by an appropriate magnetic sensor, one or more shaped or

U.S. Patent No. 10,870,531	Disclosure
	divided areas of metal foil applied to the package body which cause an inductive effect on movement of the package in the machine, which inductive effect can be sensed; or one or more electrically conductive areas formed on the body of the package which can be sensed electrically. Jarisch at [0093]-[0095]: -Printing on the inner surface of a capsule container, using the curl as information support (Aluminum capsule technology) 4) Inductive code reading: Another mode consists in sensing a code provided on a metallic surface of the capsule using an inductive sensor. The code is formed by reliefs or recesses in the metallic surface.
[1.g] and radially spaced and vertically oriented grooves,	
[1.h] the cavity has radially spaced and vertically oriented ribs,	
[1.i] the portion capsule being free of a filter,	Jarisch discloses, either expressly or inherently, the portion capsule being free of a filter. *See, e.g.*: Jarisch at [0021]: In an embodiment, the container comprises a body and a lid connected to the body and wherein the code is present on the lid of the container. The lid may be a closed foil and/or a filter, for example. Jarisch at FIG. 4:

U.S. Patent No. 10,870,531	Disclosure
	 Fig. 4
[1.j] the base element and/or the lid are made of metal;	Jarisch discloses, either expressly or inherently, the base element and/or the lid are made of metal. *See, e.g.*:

U.S. Patent No. 10,870,531	Disclosure
	Jarisch at [0007]: Recognition means can comprise one or more strips of a magnetic material applied to the body of the package, which can be read by an appropriate magnetic sensor, one or more shaped or divided areas of metal foil applied to the package body which cause an inductive effect on movement of the package in the machine, which inductive effect can be sensed; or one or more electrically conductive areas formed on the body of the package which can be sensed electrically. Jarisch at [0093]-[0095]: -Printing on the inner surface of a capsule container, using the curl as information support (Aluminum capsule technology) 4) Inductive code reading: Another mode consists in sensing a code provided on a metallic surface of the capsule using an inductive sensor. The code is formed by reliefs or recesses in the metallic surface.
[1.k] piercing the foil lid;	Jarisch discloses, either expressly or inherently, piercing the foil lid. *See, e.g.*: Jarisch at [0021]: In an embodiment, the container comprises a body and a lid connected to the body and wherein the code is present on the lid of the container. The lid may be a closed foil and/or a filter, for example. Jarisch at [0036]: In the following examples (see FIG. 4), the capsule comprises a cup-shaped body 69 extending by a flange-like rim 73. A lid such as a foil or membrane (liquid-tight or permeable

U.S. Patent No. 10,870,531	Disclosure
	to liquid) 60 is connected to the body, e.g., sealed on the rim. The capsule is filled with beverage ingredient such as ground coffee.
[1.l] reading the barcode with the barcode reader;	Jarisch discloses, either expressly or inherently, reading the barcode with the barcode reader. *See, e.g.*: Jarisch at [0022]: In another embodiment, the code is present on the rim of the capsule. In the most preferred embodiment, the code is present on the bottom of the rim of the capsule which is opposed to the lid of the capsule. The bottom of the rim is sufficiently away from the liquid injection and beverage delivery areas so that there is a lower risk for the code to become unreadable such if partly or totally hidden or soiled by beverage residues or otherwise (e.g., coffee particles). As a result, the reading is made more reliable. The reading may also be carried out while the capsule is in place in the beverage production device. Therefore, the preparation of the beverage is simplified and the preparation time can be reduced. Jarisch at [0024]: In particular the reading means may comprise a light emitter and a light sensor. In an alternative, the reading means comprises an inductive sensor. The optical reading means or inductive sensor may be arranged to detect a code on the rim of the capsule. Jarisch at [0064]-0064]: 2) Optical reading on rim bottom side of capsule (figures 4 to 7): The capsule 7 may comprise a code 70 on the bottom side 72 of its rim 73. The bit code is formed of a succession of small rectangular surfaces having light mirroring properties and intermediate surfaces having flat mirroring and/or diffusing properties. Jarisch at [0070]:

U.S. Patent No. 10,870,531	Disclosure
	The bit code is read by rotating the capsule along its central axis A. *See also* [1.a] and [1.e].
[1.m] determining whether the read barcode agrees with a stored reference; and activating the pump to push heated water into the portion capsule only upon a determination that the read barcode agrees with the stored reference.	Jarisch discloses, either expressly or inherently, determining whether the read barcode agrees with a stored reference; and activating the pump to push heated water into the portion capsule only upon a determination that the read barcode agrees with the stored reference. *See, e.g.*: Jarisch at [0023]: The invention further relates to a system for preparing a beverage from a capsule as aforementioned and further comprising a beverage preparation device; wherein the device comprises capsule holding means for holding the capsule and rotational drive means for driving the holding means and capsule in rotation along said axis of rotation and reading means arranged for reading the code when the capsule is rotated along said axis. Jarisch at [0024]: In particular, the reading means may comprise a light emitter and a light sensor. In an alternative, the reading means comprises an inductive sensor. The optical reading means or inductive sensor may be arranged to detect a code on the rim of the capsule. Jarisch at [0071]-[0073]: The reader may consist of: • A light source with/without focusing optic, and • A light sensor with/without focusing optic. Jarisch at [0082]: In the embodiment of the figure 4, the light source is placed at the bottom of the centrifugal cell 3. This cell is light conductive allowing the beam to reach the bottom side 72 of its rim 73.

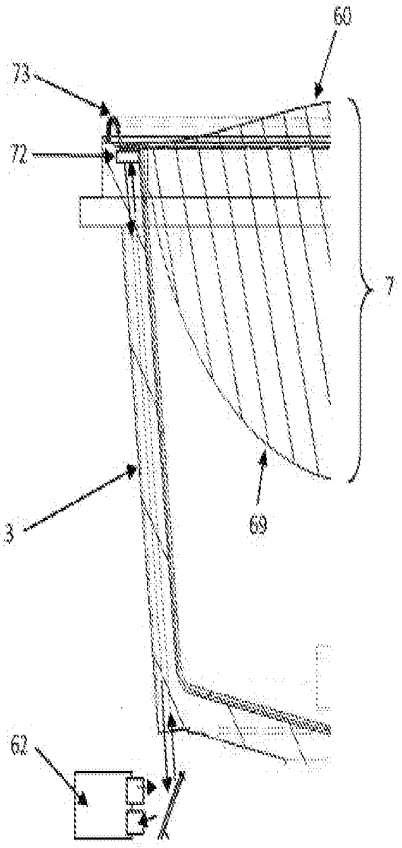
U.S. Patent No. 10,870,531	Disclosure
	The reflected light is conducted by the transparent (or light conductive) centrifugal cell 3 to reach the sensor 62. In case that the sensor 62 cannot be aligned with the transparent part of the centrifugal cell 3, a mirror can be placed as illustrated in the figure 4 to deflect the forward and backward beams. *See also* Jarisch at Claims 14-16; FIGs. 2-7. *See also* [1.l].
[redacted]	
2. The method according to claim 1, wherein the method comprises not activating the pump to push the heated water into the portion capsule upon a determination that the read barcode does not agree with the stored reference.	Jarisch discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises not activating the pump to push the heated water into the portion capsule upon a determination that the read barcode does not agree with the stored reference. *See, e.g.*: Jarisch at [0023]: The invention further relates to a system for preparing a beverage from a capsule as aforementioned and further comprising a beverage preparation device; wherein the device comprises capsule holding means for holding the capsule and rotational drive means for driving the holding means and capsule in rotation along said axis of rotation and reading means arranged for reading the code when the capsule is rotated along said axis. Jarisch at [0024]: In particular, the reading means may comprise a light emitter and a light sensor. In an alternative, the reading means comprises an inductive sensor. The optical reading means or inductive sensor may be arranged to detect a code on the rim of the capsule. Jarisch at [0071]-[0073]: The reader may consist of:

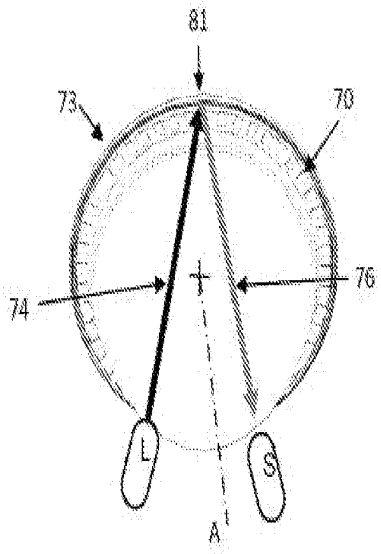
U.S. Patent No. 10,870,531	Disclosure
	• A light source with/without focusing optic, and • A light sensor with/without focusing optic. Jarisch at [0082]: In the embodiment of the figure 4, the light source is placed at the bottom of the centrifugal cell 3. This cell is light conductive allowing the beam to reach the bottom side 72 of its rim 73. The reflected light is conducted by the transparent (or light conductive) centrifugal cell 3 to reach the sensor 62. In case that the sensor 62 cannot be aligned with the transparent part of the centrifugal cell 3, a mirror can be placed as illustrated in the figure 4 to deflect the forward and backward beams. *See also* [1].
3. The method according to claim 1, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element and/or the foil lid are made of aluminum.	
5. The method according to claim 1, wherein the method comprises sealing a seal of the apparatus against the foil lid, and wherein the grooves are free from extending all the way	Jarisch discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises sealing a seal of the apparatus against the foil lid, and wherein the grooves are free from extending all the way into a region of the base element that is immediately adjacent to the flange. *See, e.g.*: Jarisch at [0036]:

U.S. Patent No. 10,870,531	Disclosure
into a region of the base element that is immediately adjacent to the flange.	In the following examples (see FIG. 4), the capsule comprises a cup-shaped body 69 extending by a flange-like rim 73. A lid such as a foil or membrane (liquid-tight or permeable to liquid) 60 is connected to the body, e.g., sealed on the rim. The capsule is filled with beverage ingredient such as ground coffee. *See also* [1].
6. The method according to claim 1, wherein the method comprises introducing the heated water into the portion capsule along a central axis of the portion capsule.	Jarisch discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises introducing the heated water into the portion capsule along a central axis of the portion capsule. *See, e.g.*: Jarisch at [0035]: The centrifugal unit 2 comprises a centrifugal cell 3. The cell 3 may comprise a capsule holder and a capsule received therein. The centrifugal unit is connected to driving means 5 such as a rotary motor. The centrifugal unit comprises a collecting part and an outlet 35. A receptacle 48 can be disposed below the outlet to collect the extracted beverage. The system further comprises liquid supply means such as a water reservoir 6 and a fluid circuit 4. Heating means 31 may also be provided in the reservoir or along the fluid circuit. The liquid supply means may further comprise a pump 7 connected to the reservoir. A flow restriction means 19 is provided to create a restriction to the flow of the centrifuged liquid which leaves the capsule. The system may further comprise a flow meter such as a flow-metering turbine 8 for providing a control of the flow rate of water supplied in the cell 3. The counter 11 can be connected to the flow-metering turbine 8 to enable an analysis of the generated impulse data 10. The analysed data is then transferred to the processor 12. Accordingly, the exact actual flow rate of the liquid within the fluid circuit 4 can be calculated in real-time. A user interface 13 may be provided to allow the user to input information that is transmitted to the control unit 9. Further characteristics of the system can be found in WO2010/026053.

U.S. Patent No. 10,870,531	Disclosure
	See also [1].
[redacted]	
7. The method according to claim 1, wherein the method comprises piercing the foil lid in a region that is offset from a central axis of the portion capsule, and wherein the lid is crowned in a region of the central axis of the portion capsule relative to a region of the lid adjacent to the flange.	Jarisch discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises piercing the foil lid in a region that is offset from a central axis of the portion capsule, and wherein the lid is crowned in a region of the central axis of the portion capsule relative to a region of the lid adjacent to the flange Jarisch at [0021]: In an embodiment, the container comprises a body and a lid connected to the body and wherein the code is present on the lid of the container. The lid may be a closed foil and/or a filter, for example. Jarisch at [0036]: In the following examples (see FIG. 4), the capsule comprises a cup-shaped body 69 extending by a flange-like rim 73. A lid such as a foil or membrane (liquid-tight or permeable to liquid) 60 is connected to the body, e.g., sealed on the rim. The capsule is filled with beverage ingredient such as ground coffee.
[redacted]	
[8.pre] The method according to claim 1,	Jarisch discloses, either expressly or inherently, the method according to claim 1. *See, e.g.*: *See* [1].
[8.a] wherein the method comprises controlling a production process of	Jarisch discloses, either expressly or inherently, wherein the method comprises controlling a production process of the beverage according to the read barcode. *See, e.g.*:

U.S. Patent No. 10,870,531	Disclosure
the beverage according to the read barcode,	*See* [1.m].
[8.b] and wherein the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located in between the upper section and a bottom of the base element,	Jarisch discloses, either expressly or inherently, that the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located in between the upper section and a bottom of the base element. *See, e.g.*: Jarisch at [0036]: In the following examples (see FIG. 4), the capsule comprises a cup-shaped body 69 extending by a flange-like rim 73. A lid such as a foil or membrane (liquid-tight or permeable to liquid) 60 is connected to the body, e.g., sealed on the rim. The capsule is filled with beverage ingredient such as ground coffee. Jarisch at [0037]: The capsule is designed for rotating around an axis A. This axis A crosses perpendicularly the center of the membrane which has the form of a disk. This axis A exits at the center of the bottom of the body. This axis A will help to define the notion of circumference which is a circular path located on the capsule and having the axis A as reference axis. This circumference can be on the lid, e.g., membrane or on the body part such as on the flange-like rim. The lid may be impervious to liquid before insertion in the device or it may be pervious to liquid by means of small openings or pores provided in the center and/or periphery of the lid. The code is spread along the circumference or a part of the circumference. The code may comprise successive arch-shaped segments. The code may also comprise successive segments which are individually rectilinear but extend along at least a part of the circumference. According to one embodiment, the sensor cannot read the code without the rotation of the capsule. This is the case where the code is spread along at least a eighth, preferably at least a quarter of the circumference or even more. The fact that the code is placed along an arc-shaped line render the reading by a sweep beam very difficult. This is why the rotation of the capsule plays an important role. In case that the code is located on the body, it is then

U.S. Patent No. 10,870,531	Disclosure
	necessary to rotate the capsule to have access, for the sensor, to the entire set of marks composing the code. The code is further located close to the peripheral edge of the capsule. The peripheral edge is defined as the outermost circular line of the capsule. Preferably, the distance of the code from the peripheral edge is not more than 10 mm, more preferably not more than 8 mm. Jarisch at FIG. 4: 

U.S. Patent No. 10,870,531	Disclosure
	Jarisch at FIG. 5: 
[8.c] wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element.	Jarisch discloses, either expressly or inherently, that the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element. *See, e.g.*: Jarisch at [0036]: In the following examples (see FIG. 4), the capsule comprises a cup-shaped body 69 extending by a flange-like rim 73. A lid such as a foil or membrane (liquid-tight or permeable

U.S. Patent No. 10,870,531	Disclosure
	to liquid) 60 is connected to the body, e.g., sealed on the rim. The capsule is filled with beverage ingredient such as ground coffee. Jarisch at [0037]: The capsule is designed for rotating around an axis A. This axis A crosses perpendicularly the center of the membrane which has the form of a disk. This axis A exits at the center of the bottom of the body. This axis A will help to define the notion of circumference which is a circular path located on the capsule and having the axis A as reference axis. This circumference can be on the lid, e.g., membrane or on the body part such as on the flange-like rim. The lid may be impervious to liquid before insertion in the device or it may be pervious to liquid by means of small openings or pores provided in the center and/or periphery of the lid. The code is spread along the circumference or a part of the circumference. The code may comprise successive arch-shaped segments. The code may also comprise successive segments which are individually rectilinear but extend along at least a part of the circumference. According to one embodiment, the sensor cannot read the code without the rotation of the capsule. This is the case where the code is spread along at least a eighth, preferably at least a quarter of the circumference or even more. The fact that the code is placed along an arc-shaped line render the reading by a sweep beam very difficult. This is why the rotation of the capsule plays an important role. In case that the code is located on the body, it is then necessary to rotate the capsule to have access, for the sensor, to the entire set of marks composing the code. The code is further located close to the peripheral edge of the capsule. The peripheral edge is defined as the outermost circular line of the capsule. Preferably, the distance of the code from the peripheral edge is not more than 10 mm, more preferably not more than 8 mm. *See also* [8.b].
[redacted]	[redacted]

Exhibit C-5 – Invalidity of U.S. Patent No. 10,870,531 in view of Jarisch

U.S. Patent No. 10,870,531	Disclosure
[10.pre] A method of using a portion capsule for making a coffee beverage, the method comprising:	Jarisch discloses, either expressly or inherently, a method of using a portion capsule for making a coffee beverage. *See, e.g.*: *See* [1].
[10.a] providing an apparatus including a barcode reader, the apparatus having a pump and being adapted to supply heated water;	Jarisch discloses, either expressly or inherently, providing an apparatus including a barcode reader. *See, e.g.*: *See* [1.a].
[10.b] the apparatus having a pump and being adapted to supply heated water;	Jarisch discloses, either expressly or inherently, the apparatus having a pump and being adapted to supply heated water. *See, e.g.*: *See* [1.b].
[10.c] inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity within which a powdered coffee material is located,	Jarisch discloses, either expressly or inherently, inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity within which a powdered coffee material is located. *See, e.g.*: *See* [1.c].
[10.d] the base element including a circumferential flange having a top side	Jarisch discloses, either expressly or inherently, the base element including a circumferential flange having a top side. *See, e.g.*: *See* [1.d].
[10.e] and a bottom side with a barcode located on the bottom side,	Jarisch discloses, either expressly or inherently, a bottom side with a barcode located on the bottom side. *See, e.g.*: *See* [1.e].

K-FEE SYSTEM GMBH, EX2012, page 1586
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
[10.f] the portion capsule being free of a filter	Jarisch discloses, either expressly or inherently, the portion capsule being free of a filter. *See, e.g.*: *See* [1.i].
[10.g] and comprising a plurality of ribs that are radially spaced, vertically oriented and extend toward a central portion of the cavity, wherein an outer surface of the base element comprises radially spaced and vertically oriented grooves;	Jarisch discloses, either expressly or inherently, a plurality of ribs that are radially spaced, vertically oriented and extend toward a central portion of the cavity, wherein an outer surface of the base element comprises radially spaced and vertically oriented grooves. *See, e.g.*: *See* [1.g] and [1.h].
[10.h] piercing the foil lid;	Jarisch discloses, either expressly or inherently, piercing the foil lid. *See, e.g.*: *See* [1.k].
[10.i] reading the barcode with the barcode reader; and	Jarisch discloses, either expressly or inherently, .reading the barcode with the barcode reader. *See, e.g.*: *See* [1.l].
[10.j] activating the pump to introduce the heated water into the portion capsule only upon a determination that the read barcode agrees with a stored reference, or not activating the pump upon a determination that the read barcode	Jarisch discloses, either expressly or inherently, activating the pump to introduce the heated water into the portion capsule only upon a determination that the read barcode agrees with a stored reference, or not activating the pump upon a determination that the read barcode does not agree with the stored reference. *See, e.g.*: *See* [1.m] and [2].

K-FEE SYSTEM GMBH, EX2012, page 1587
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
does not agree with the stored reference.	
11. The method according to claim 10, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element comprises an electrically conductive section.	Jarisch discloses, either expressly or inherently, the method according to claim 10, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element comprises an electrically conductive section. *See, e.g.*: *See* [1.f], [3].
14. The method according to claim 10, wherein the method comprises dropping the portion capsule into a dropping box, wherein the base element and/or the lid are made of metal.	Jarisch discloses, either expressly or inherently, the method according to claim 10, wherein the method comprises dropping the portion capsule into a dropping box, wherein the base element and/or the lid are made of metal. *See* [1.j].
[16.pre] The method according to claim 10,	Jarisch discloses, either expressly or inherently, the method according to claim 10. *See, e.g.*: *See* [10].
[16.a] wherein the method comprises sealing a seal of the apparatus against the foil lid	Jarisch discloses, either expressly or inherently, wherein the method comprises sealing a seal of the apparatus against the foil lid. *See, e.g.*: *See* [5].

U.S. Patent No. 10,870,531	Disclosure
[16.b] wherein the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located between the upper section and a bottom of the base element	Jarisch discloses, either expressly or inherently, wherein the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located between the upper section and a bottom of the base element. *See, e.g.*: *See* [8.b].
[16.c] wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element.	Jarisch discloses, either expressly or inherently, wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element. *See, e.g.*: *See* [8.c].

K-FEE SYSTEM GMBH, EX2012, page 1589
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

Exhibit C-6 – Invalidity of U.S. Patent No. 10,870,531 in view of Panesar

INVALIDITY CLAIM CHART
Invalidity of U.S. Patent No. 10,858,531 in view of Panesar

According to its cover page, PCT Pub. WO2005/079638A1 (Panesar) was published on September 1, 2005. Panesar therefore constitutes prior art to the '531 Patent under pre-AIA 35 U.S.C. § 102(b). Panesar anticipates and/or renders obvious the Asserted Claims of the '531 Patent (at least as Nespresso understands K-fee's application of the Asserted Claims in an effort to show infringement).

To the extent K-fee argues that any element below is not disclosed by Panesar, a person of ordinary skill in the art would have found it obvious to combine the teachings of Panesar with the background knowledge of a person of ordinary skill in the art and/or the additional references, and exemplary teachings, set forth in the charts in Exhibits C-1 to C-9, and in Appendix C.

The chart below provides representative examples of where each element of each claim is found within Panesar. Citations are meant to be exemplary, not exhaustive, and Nespresso reserves the right to identify and discuss additional portions of the reference in support of its contentions and/or to rebut arguments made by K-fee. Citations to figures, drawings, tables, and the like include reference to any accompanying or related text. All internal cross references are meant to incorporate the cross-referenced material as if fully set forth therein.

It is Nespresso's position that K-fee's Infringement Contentions have not established that any accused product or service infringes any valid claim. Thus, Nespresso's statements below should not be treated as an admission, implication, or suggestion that Nespresso agrees with K-fee regarding either the scope, construction, or interpretation of any of the Asserted Claims, or the infringement theories advanced by K-fee in its Infringement Contentions, including whether any Asserted Claim satisfies 35 U.S.C. §§ 101 or 112. In certain cases, Nespresso specified non-limiting examples of where its application of the prior art is based on K-fee's apparent application of the claim element. These statements are not intended to suggest that Nespresso agrees with K-fee's application of any claim term, suggest a proposed construction at this stage of the case, or suggest that construction is needed, as the parties are not required to exchange terms for construction or proposed constructions until a later date.

K-fee has yet to identify any limitation of the Asserted Claims that it contends is not anticipated and/or rendered obvious by Panesar. Nespresso therefore expressly reserves the right to respond to any such contention, including by identifying additional obviousness combinations, if K-fee makes any such contention.

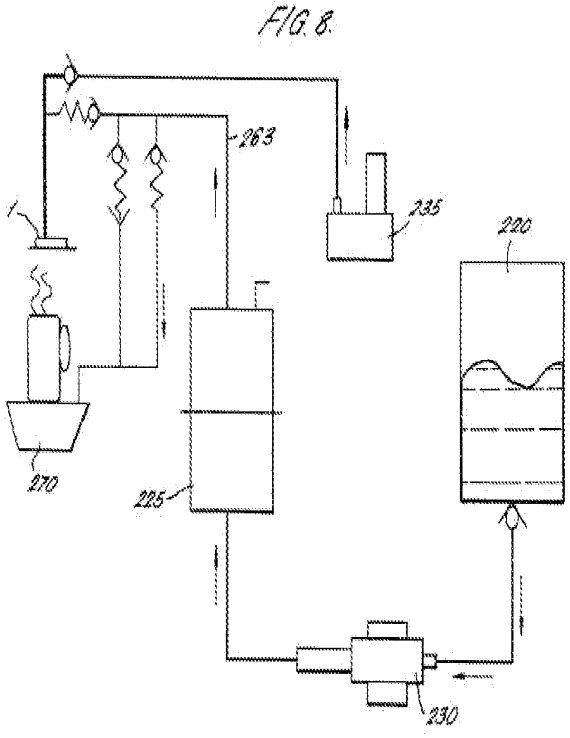
Where Nespresso states that Panesar discloses a limitation, that disclosure may be express, implicit, and/or inherent.

K-FEE SYSTEM GMBH, EX2012, page 1590
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

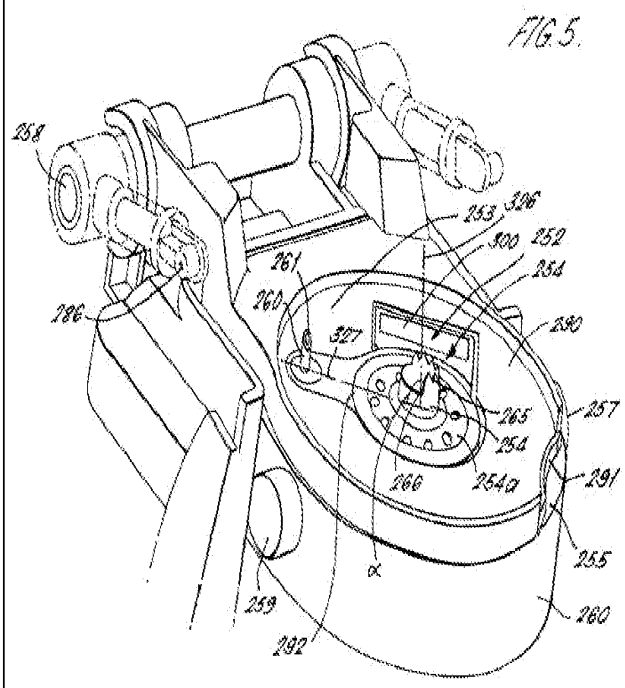
Exhibit C-6 – Invalidity of U.S. Patent No. 10,870,531 in view of Panesar

U.S. Patent No. 10,870,531	Disclosure
[1.pre] A method of using a portion capsule for producing a beverage, the method comprising:	Panesar discloses, either expressly or inherently, a method of using a portion capsule for producing a beverage. *See, e.g.*: Panesar at p. 1, ll. 4-5: The present invention relates to an insert, a machine and a system for the preparation of beverages. Panesar at p. 1, ll. 20–28: In the domestic market consumers may not wish to use separate machines when preparing beverages from different beverage ingredient containing containers or, indeed, loose beverage ingredients. It is therefore an object of the present 25 invention to provide an insert, a beverage preparation machine and a beverage preparation system which allows consumers to use a variety of containers or loose ingredients in a single beverage preparation machine. Panesar at p. 8, ll. 17–26; FIG. 8. <u>Beverage Preparation System</u> A beverage preparation machine 201 of the beverage preparation system of the present invention is shown in Figures la to 9b. The beverage preparation machine 201 generally comprises a housing 210 containing a water tank 220, a water heater 225, a water pump 230, an air compressor 235, a control processor, a user interface 240 and a brew head 250. The brew head 250 in turn generally comprises a holder 251, recognition means 252 and inlet and outlet piercers 253, 254. Panesar at FIG. 8:

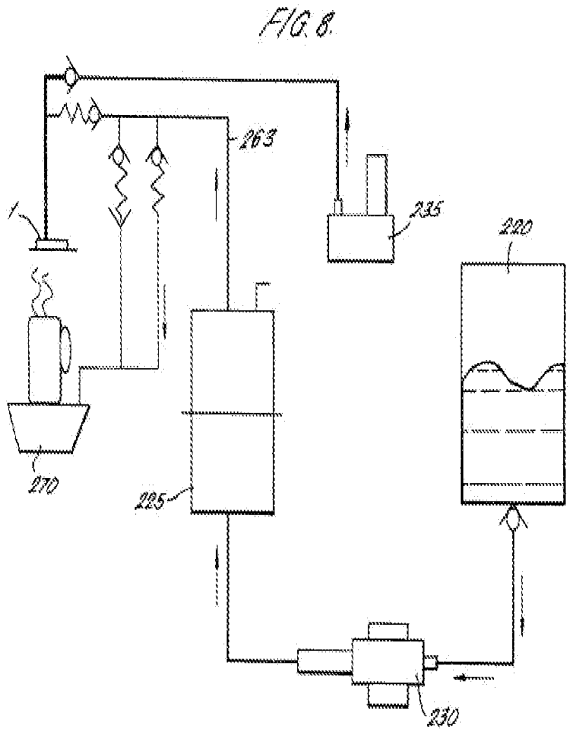
K-FEE SYSTEM GMBH, EX2012, page 1591
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
	 Panesar at Claims 23–31.
[1.a] providing an apparatus including a barcode reader,	Panesar discloses, either expressly or inherently, providing an apparatus including a barcode reader. *See, e.g.*: Panesar at p. 4, ll. 24–29: The beverage preparation machine may comprise a brew head comprising an upwardly directed inlet for supplying water to the brew head, a downwardly directed outlet for outflow of beverage

U.S. Patent No. 10,870,531	Disclosure
	produced by the machine and a barcode or RFID reader having a window in the brew head through which signals may be transmitted . . . Panesar at p. 5, ll. 7–8: Preferably the barcode reader or RFID reader window is located at or near a periphery of the brew head. Panesar at p. 34, ll. 5–26: The purpose of the recognition means 252 is to allow the machine 201 to recognize the type of beverage cartridge 1 that has been inserted and to adjust one or more operational parameters accordingly. In a typical embodiment, the recognition means 252 comprises an optical barcode reader which reads the printed barcode 320 provided on the laminate 5 of the beverage cartridge 1 as shown in Figure 10 and discussed above. The optical barcode reader comprises one or more LEDs 321 to illuminate the barcode 320, a focusing lens 322 to acquire an image of the barcode, a charge coupled device (CCD) 323 for producing an electrical signal representative of the acquired image and support circuitry for the LEDs and CCD. The space in the lower part for accommodating the barcode reader is limited. A mirror or mirrors 324 may be used to reflect the light from the LEDs 321 to a focusing lens which is not located in the lower part 255. Schematic arrangements are shown in Figures 9a and 9b. The lower part 255 comprises an aperture 326 which is the same size as the barcode 320 on the beverage cartridge 1. The aperture 326 is closed by a window, preferably glass, which can transmit the signals produced by the barcode reader. Panesar at p. 35, ll. 4–6: Alternatively, an RFID reader is provided to read an RFID located on the cartridge 1. Panesar at FIG. 5:

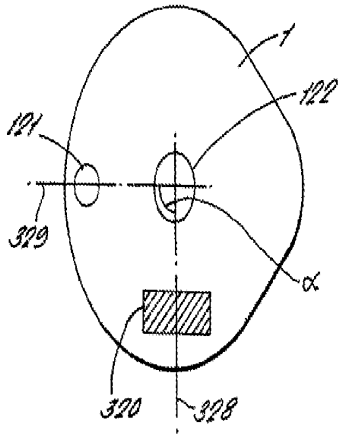
U.S. Patent No. 10,870,531	Disclosure
	 Panesar at Claims 24, 27, 30.
[1.b] the apparatus including a pump adapted to supply heated water;	Panesar discloses, either expressly or inherently, the apparatus including a pump adapted to supply heated water. *See, e.g.*: Panesar at p. 8, ll. 17–26: <u>Beverage Preparation System</u> A beverage preparation machine 201 of the beverage preparation system of the present invention is shown in Figures la to 9b. The beverage preparation machine 201 generally

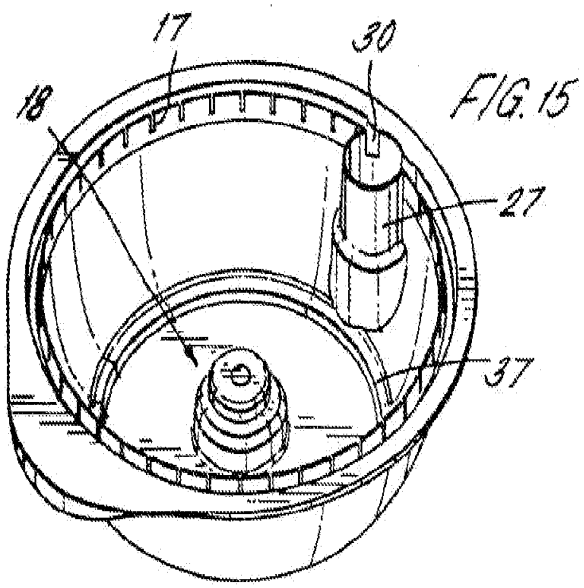
U.S. Patent No. 10,870,531	Disclosure
	comprises a housing 210 containing a water tank 220, a water heater 225, a water pump 230, an air compressor 235, a control processor, a user interface 240 and a brew head 250. The brew head 250 in turn generally comprises a holder 251, recognition means 252 and inlet and outlet piercers 253, 254. Panesar at p. 23, ll. 23–32: The water pump 230 is operatively connected between the water tank 220 and the water heater 225 as shown schematically in Figure 8 and is controlled by the control processor. The pump provides a maximum flow rate of 900 ml/min of water at a maximum pressure of 2.5 bar. Preferably, in normal use, the pressure will be limited to 2 bar. The flow rate of water through the machine 201 can be controlled by the control processor to be a percentage of the maximum flow rate of the pump by cycle chopping the electrical supply to the pump. Panesar at p. 24, ll. 10–14: The water heater 225 is located in the interior of the housing 210. The heater 225 has a power rating of 1550 W and is able to heat water received from the water pump 230 from a starting temperature of approximately 20 °C to an operating temperature of around 85 °C in under 1 minute. Panesar at p. 25, ll. 8–29: The control processor of the beverage preparation machine 201 comprises a processing module and a memory. The control processor is operatively connected to, and controls operation of, the water heater 225, water pump 230, air compressor 235 and user interface 240. The memory of the control processor includes one or more variables for one or more operational parameters for the beverage preparation machine 201. The operational parameters are the temperature of the water passed through the beverage cartridge 1 during the operating stage, the speed of charging the beverage cartridge 1, the presence or otherwise of a soak step,

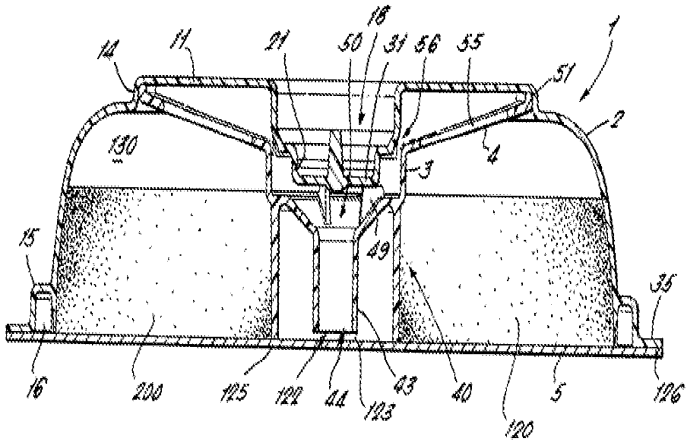
U.S. Patent No. 10,870,531	Disclosure
	the total dispensed volume of the beverage, the flow rate of the water during the discharge stage, and the flow rate and period of the purge stage. The variables for the operational parameters are stored in the memory. The cartridge 1 comprises a code provided on or in the cartridge 1 representing the operational parameters required for optimal dispensation of the beverage in that cartridge 1 The code is in binary format and comprises a plurality of data bits corresponding to the variables stored in the control processor memory. Panesar at FIG. 8: 

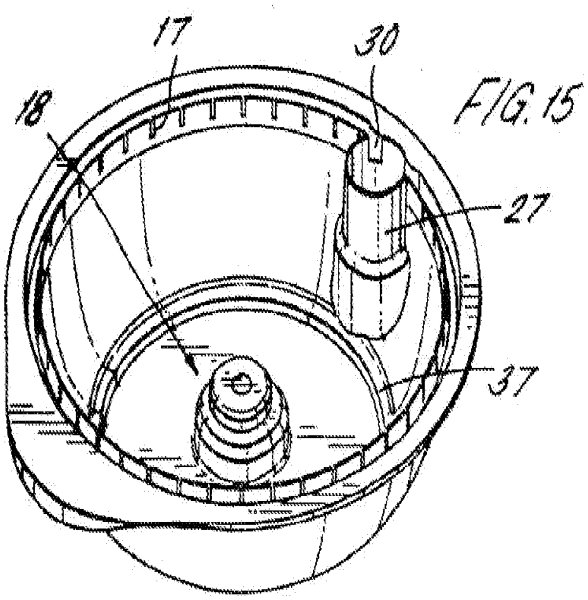
U.S. Patent No. 10,870,531	Disclosure
[1.c] inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity in which a beverage raw material is provided,	Panesar discloses, either expressly or inherently, a portion capsule comprising: a foil lid sealed to a base element having a cavity within which a beverage raw material is provided. *See, e.g.*: Panesar at p. 9, ll. 8–18: Cartridge for use in the system As shown in Figure 10 to 21, the cartridge 1 generally comprises an outer member 2, an inner member 3 and a laminate 5. The outer member 2, inner member 3 and laminate 5 are assembled to form the cartridge 1 which has an interior 120 for containing one or more beverage ingredients, an inlet 121, an outlet 122 and a beverage flow path linking the inlet 121 to the outlet 122 and which passes through the interior 120. The inlet 121 and outlet 122 are initially sealed by the laminate 5 and are opened in use by piercing or cutting of the laminate 5. Panesar at p. 35, ll. 24–31: To insert the cartridge 1 the holder 251 is opened as described above to expose the cartridge mount 257. The cartridge 1 is then placed on the cartridge mount 257 received within the recess 290 such that the handle 24 of the cartridge is located in the irregularity 291. The optical or magnetic barcode 320 or RFID of the cartridge 1 is oriented directly above the aperture 326 in the cartridge mount 257. Panesar at p. 38, ll. 15–21: Insert for use in the system As described above, the machine 201 of the present invention may also be used with other inserts not necessarily of a cartridge form. An example of another suitable form of insert will now be described. The insert 400 comprises an upper part 401 and a lower part 402. Panesar at p. 14 at line 21 – p. 15 at line 2:

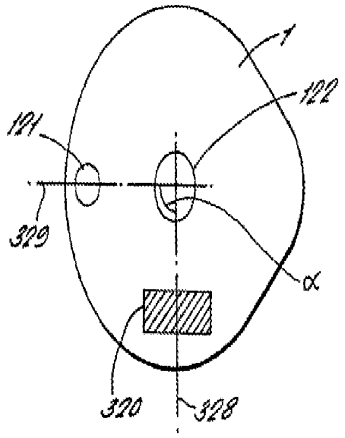
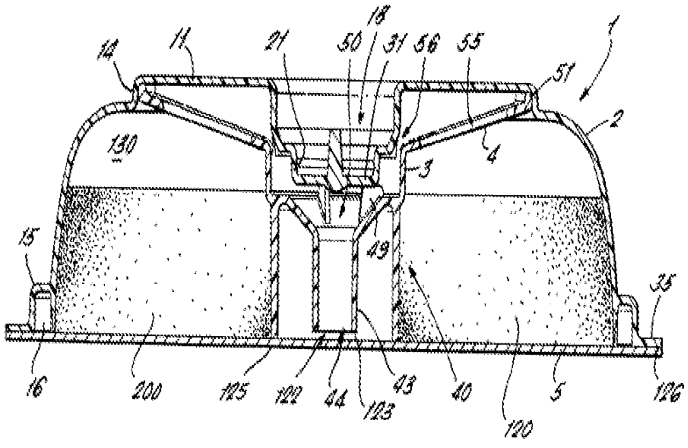
U.S. Patent No. 10,870,531	Disclosure
	The laminate 5 is formed from two layers, a first layer of aluminium and a second layer of cast polypropylene. The aluminium layer is between 0.02 and 0.07 mm in thickness. . . . In one embodiment the aluminium layer is 0.06 mm and the polypropylene layer is 0.025 mm thick. This laminate is particularly advantageous as it has a high resistance to curling during assembly. As a result the laminate 5 may be pre-cut to the correct size and shape and subsequently transferred to the assembly station on the production line without undergoing distortion. Consequently, the laminate is particularly well suited to welding. Other laminate materials may be used including PET/Aluminium/PP, PE/EVOH/PP, PET/metallised/PP and Aluminium/PP laminates. Panesar at p. 16, ll. 28-31: The laminate 5 is then affixed to the outer member 2 by forming a weld 126 around the periphery of the laminate 5 to join the laminate 5 to the lower surface of the outwardly extending flange 35. Panesar at p. 5, ll. 23–32: The insert of the present invention may contain or be loaded with one or more beverage ingredients suitable for 25 the formation of a beverage product. The beverage product may be, for example, one of coffee, tea, chocolate or a dairy-based beverage including milk. The beverage ingredients may be powdered, ground, leaf-based or liquid. The beverage ingredients may be insoluble or soluble. 30 Examples include roast and ground coffee, leaf tea, powdered chocolate and soup, liquid milk-based beverages, carbonated drinks and concentrated fruit juices. Panesar at p. 9, ll. 24–29: The cartridge 1 is particularly designed for use in dispensing filtered products such as roast and ground coffee or leaf tea. However, the cartridge 1 may be used with other products such

U.S. Patent No. 10,870,531	Disclosure
	as chocolate, coffee, tea, sweeteners, cordials, flavourings, alcoholic beverages, flavoured milk, fruit juices, squashes, sauces and desserts. Panesar at FIGs. 10, 15, 21: FIG. 10. 

U.S. Patent No. 10,870,531	Disclosure
	

U.S. Patent No. 10,870,531	Disclosure
	FIG. 21 
[1.d] the base element comprising a flange, the flange having a top side to which the foil lid is sealed.	Panesar discloses, either expressly or inherently, the base element comprising a flange, the flange having a top side to which the foil lid is sealed. *See, e.g.*: Panesar at p. 12, ll. 1–7: A lower end of the outwardly extending shoulder 33 is provided with an outwardly extending flange 35 which extends perpendicularly to the major axis X. Typically the flange 35 has a width of between 2 and 4 mm. A portion of the flange 35 is enlarged to form a handle 24 by which the outer member 2 may be held. The handle 24 is provided with an upturned rim 25 to improve grip. Panesar at p. 16, ll. 28–32: The laminate 5 is then affixed to the outer member 2 by forming a weld 126 around the periphery of the laminate 5 to join the laminate 5 to the lower surface of the outwardly extending flange 35.

U.S. Patent No. 10,870,531	Disclosure
	Panesar at FIGs. 10, 15, 21: 

U.S. Patent No. 10,870,531	Disclosure
	FIG. 10.  FIG. 21. 

U.S. Patent No. 10,870,531	Disclosure
[1.e] and an opposing bottom side with a barcode located on the bottom side,	Panesar discloses, either expressly or inherently, an opposing bottom side with a barcode located on the bottom side. *See, e.g.*: Panesar at p. 2, ll. 19–28: [T]he lower surface of the insert further comprises a barcode or RFID which, in use, is readable by a barcode or RFID reader of the beverage preparation machine for controlling operation of the beverage preparation machine, wherein the barcode or RFID is located on the lower surface of the insert such that a line joining the outlet of the insert to a centre of the barcode and a line joining the outlet of the insert to the inlet of the insert [are] separated by a minimum angular separation of greater than 70 degrees. Panesar at p. 2 at line 29 – p. 3 at line 12: Advantageously, it has been found that this minimum angular separation of the barcode or RFID from the inlet improves the accuracy of the reading of the barcode or RFID by the recognition means of the machine. Firstly, the separation results in any distortion of the inlet area having a minimal affect [sic] on the region of the barcode or RFID. Secondly, it has been found that there may be a small degree of leakage of fluid from the inlet area during dispensation since dispensation occurs at pressure. This fluid may spread, in particular due to capillary effect between the insert and a brew to partial obfuscation of the resulting in a greater chance head of the machine, leading barcode or RFID by the fluid of the barcode or RFID being misread. With the barcode or RFID separated by an angle of greater than 70 degrees it has been found that this problem does not occur. Panesar at p. 3, ll. 18–20: The barcode or RFID is preferably located at or near a periphery of the lower surface. Panesar at p. 18, ll. 24–31:

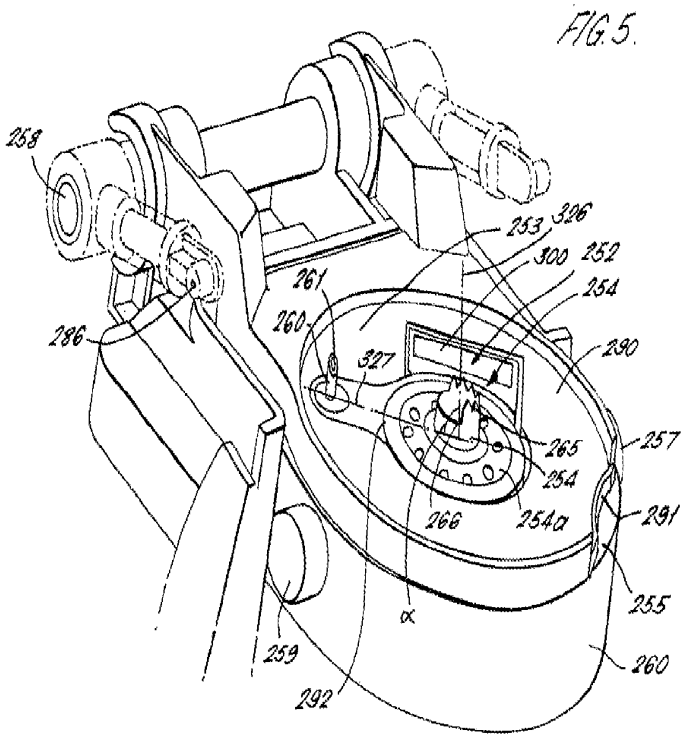
U.S. Patent No. 10,870,531	Disclosure
	[T]he cartridge 1 is provided on the laminate with a barcode 320 as shown in Figure 10. The barcode 320 is formed from a plurality of bars of contrasting colour. Preferably the bar are black on a white background to maximise the contrast. The barcode 320 is not required to conform to a published standard but a standard format for barcodes, such as EAN-13, UPC-A, or Interleaf 2 of 5 may be used. Panesar at p. 20, ll. 10–13: Preferably, the barcode 320 is also located near a periphery of the laminate 5 so as to separate the barcode 320 from the outlet 122 so as to avoid distortion of the barcode 320 on piercing of the outlet 122. Panesar at p. 35, ll. 24–31: To insert the cartridge 1 the holder 251 is opened as described above to expose the cartridge mount 257. The cartridge 1 is then placed on the cartridge mount 257 received within the recess 290 such that the handle 24 of the cartridge is located in the irregularity 291. The optical or magnetic barcode 320 or RFID of the cartridge 1 is oriented directly above the aperture 326 in the cartridge mount 257.
[1.f] the base element has a wall region with an electrically conductive section	Panesar discloses, either expressly or inherently, the portion capsule being free of a filter. *See, e.g.*: Panesar at p. 9, ll. 8–23: <u>Cartridge for use in the system</u> As shown in Figure 10 to 21, the cartridge 1 generally comprises an outer member 2, an inner member 3 and a laminate 5. The outer member 2, inner member 3 and laminate 5 are assembled to form the cartridge 1 which has an interior 120 for containing one or more beverage ingredients, an inlet 121, an outlet 122 and a beverage flow path linking the inlet

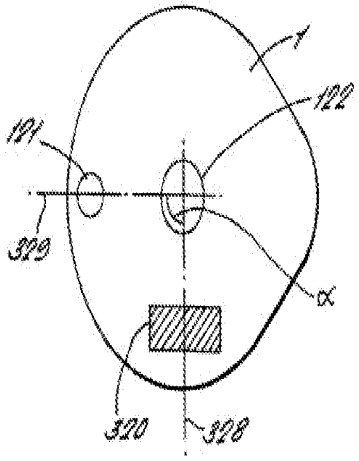
U.S. Patent No. 10,870,531	Disclosure
	121 to the outlet 122 and which passes through the interior 120. The inlet 121 and outlet 122 are initially sealed by the laminate 5 and are opened in use by piercing or cutting of the laminate 5. The beverage flow path is defined by spatial inter-relationships between the outer member 2, inner member 3 and laminate 5 as discussed below. Other components may optionally be included in the cartridge 1, such as a filter 4, as will be described further below. Panesar at p. 14, ll. 21–32: The laminate 5 is formed from two layers, a first layer of aluminium and a second layer of cast polypropylene. The aluminium layer is between 0.02 and 0.07 mm in thickness. The cast polypropylene layer is between 0.025 and 0.065 mm in thickness. In one embodiment the aluminium layer is 0.06 mm and the polypropylene layer is 0.025 mm thick. This laminate is particularly advantageous as it has a high resistance to curling during assembly. As a result the laminate 5 may be pre-cut to the correct size and shape and subsequently transferred to the assembly station on the production line without undergoing distortion. Consequently, the laminate 5 is particularly well suited to welding. Other laminate materials may be used including PET/Aluminium/PP, PE/EVOH/PP, PET/metallised/PP and Aluminium/PP laminates. Roll laminate stock may be used instead of die cut stock. The cartridge 1 may be closed by a rigid or semi-rigid lid instead of a flexible laminate. *See also* Panesar at FIGs. 10-21.
[1.g] and radially spaced and vertically oriented grooves,	
[1.h] the cavity has radially spaced and vertically oriented ribs,	
[1.i] the portion capsule being free of a filter,	Panesar discloses, either expressly or inherently, the portion capsule being free of a filter. *See, e.g.*:

U.S. Patent No. 10,870,531	Disclosure
	Panesar at p. 3 at line 22 – p. 4 at line 2: The insert may be a cartridge. The cartridge may be rigid or semi-rigid. The lower surface may be a laminate. In this case, the inlet and outlet of the cartridge may be portions of the lower surface which are opened for transportation, in use, by piercing the lower surface. Alternatively, the insert may define a receptacle for receiving loose beverage ingredients. Alternatively, the insert may define a receptacle for receiving a container of beverage ingredients, wherein the container comprises filtering means. In one aspect, the container is formed at least in part from filter paper or filtering membrane. For example, the container may be a filter bag. Panesar at p. 9, ll. 9–22: [T]he cartridge 1 generally comprises an outer membrane 2, an inner member 3 and a laminate 5. . . . Other components may optionally be included in the cartridge 1, such as a filter 4 . . . Panesar at p. 41 at line 30 – p. 42 at line 1: The quantity of beverage ingredients loaded into the brewing volume of the insert 400 may be loose or may be contained in a container such as a flexible filter bag made of filter paper. Panesar at p. 42, ll. 18–23: The insert 400 has been described particularly for use with beverage ingredients contained in containers such as 20 filter bags. As indicated, the beverage ingredients may alternatively be in a loose form. In this case, a separate filter may be provided in the insert 400 to prevent discharge of beverage ingredient residue.

U.S. Patent No. 10,870,531	Disclosure
[1.j] the base element and/or the lid are made of metal;	Panesar discloses, either expressly or inherently, the base element and/or the lid are made of metal. *See, e.g.*: *See* [1.c].
[1.k] piercing the foil lid;	Panesar discloses, either expressly or inherently, piercing the foil lid. *See, e.g.*: Panesar at p. 3, ll. 22–26: The insert may be a cartridge. . . . The lower surface may be a laminate. In this case, the inlet and outlet of the cartridge may be portions of the lower surface which are opened for transportation, in use, by piercing the lower surface. Panesar at p. 8, ll. 20–26: The beverage preparation machine 201 generally comprises a housing 210 containing a water tank 220, a water heater 225, a water pump 230, an air compressor 235, a control processor, a user interface 240 and a brew head 250. The brew head 250 in turn generally comprises a 25 holder 251, recognition means 252 and inlet and outlet piercers 253, 254. Panesar at p. 9, ll. 9–18: [T]he cartridge 1 generally comprises an outer membrane 2, an inner member 3 and a laminate 5. The outer member 2, inner member 3 and laminate 5 are assembled to form the cartridge 1 which has an interior 120 for containing one or more beverage ingredients, an inlet 121, an outlet 122 and a beverage flow 15 path linking the inlet 121 to the outlet 122 and which passes through the interior 120. The inlet 121 and outlet 122 are initially sealed by the laminate 5 and are opened in use by piercing or cutting of the laminate 5. Panesar at p. 17, ll. 25–29:

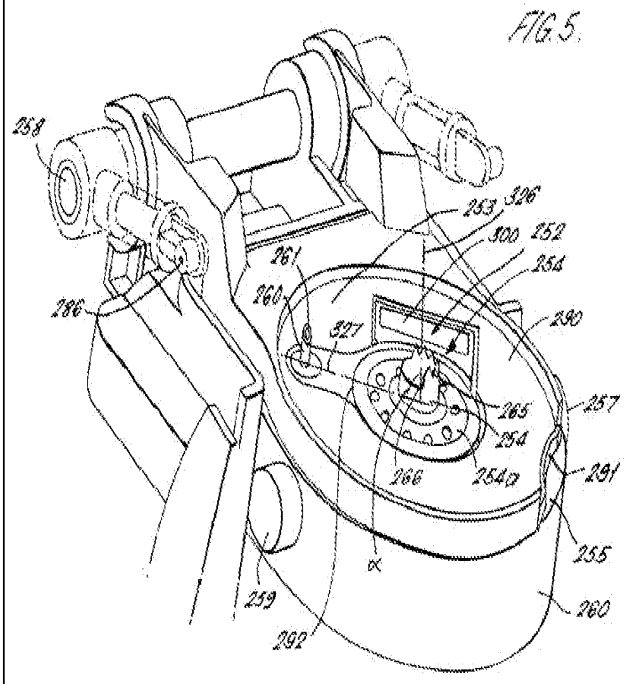
U.S. Patent No. 10,870,531	Disclosure
	To use the cartridge 1 it is first inserted into the beverage preparation machine and the inlet 121 and outlet 122 are opened by piercing members of the beverage preparation machine which perforate and fold back the laminate 5. Panesar at p. 29 at line 3 – p. 30 at line 29: The lower part 255 comprises the inlet and outlet piercers 253, 254 and the head 300 of the cartridge recognition means 252. The inlet piercer 253 comprises a hollow needle-like tube 260 having a sharpened end 261 for perforating the laminate 5 of the beverage cartridge 1 in use. The inlet piercer 253 is in fluid communication with a water conduit 262 as shown in Figure 7 which passes through the lower part 255 and is connected to an outlet conduit 263 of the water heater 225. The outlet piercer 254 is similar in type to the outlet piercer described in the applicant's European patents EP 0 389 141 and EP 0 334 572 and comprises an open ended cylinder 264 of circular or D-shaped cross-section having dimensions larger than the discharge spout 43. An arcuate portion 265 of the upper end of the outlet piercer 254 is serrated to pierce and eventually cut the laminate of the beverage cartridge 1. The remainder of the upper end is cut back longitudinally of the cylinder at least to the base of the teeth 266 of the serrated portion to fold or pull the cut laminate 5 away from the outlet aperture before the beverage is dispensed there through. The outlet piercer 254 pierces the laminate 5 externally of the discharge spout 43 and when the cartridge mount 257 is in the closed position, rests in the annulus between the discharge spout 43 and the outer wall 42 of the discharge funnel 40. The outlet piercer 254 folds back the cut laminate 105 into the annulus. Thereby both the outlet piercer 254 and the cut laminate 105 are held out of the way of the discharged beverage. The outlet piercer 254 is surrounded by a ledge 254a which is raised relative to its surroundings by 0.5mm. Advantageously, the outlet piercer 254 is removable from the lower part 255 to enable it to be thoroughly cleaned, for example, in a dishwasher. The removable outlet piercer 254 is received in a recess 267 in the lower part 255 where it is seated. The inlet piercer 253 and/or the outlet piercer 254 may be made of a metal, such as stainless steel, or from a plastics material. Panesar at p. 35 at line 32 – p. 33 at line 3:

U.S. Patent No. 10,870,531	Disclosure
	During closure the inlet and outlet piercers 253, 254 pierce the laminate 5 of the cartridge 1 to form the cartridge inlet 121 and outlet 122. Panesar at FIG. 5:  Panesar at FIG. 10:

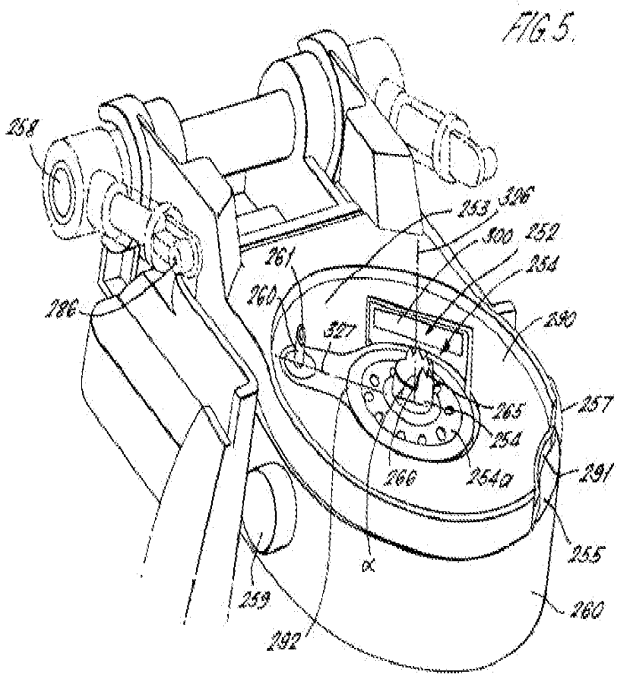
U.S. Patent No. 10,870,531	Disclosure
	FIG. 10  *See also* [4].
[1.l] reading the barcode with the barcode reader;	Panesar discloses, either expressly or inherently, reading the barcode with the barcode reader. *See, e.g.*: Panesar at p. 4, ll. 24–29: The beverage preparation machine may comprise a brew head comprising an upwardly directed inlet for supplying water to the brew head, a downwardly directed outlet for outflow of beverage produced by the machine and a barcode or RFID reader having a window in the brew head through which signals may be transmitted . . . Panesar at p. 5, ll. 7–8:

K-FEE SYSTEM GMBH, EX2012, page 1611
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
	Preferably the barcode reader or RFID reader window is located at or near a periphery of the brew head. Panesar at p. 34, ll. 5–26: The purpose of the recognition means 252 is to allow the machine 201 to recognize the type of beverage cartridge 1 that has been inserted and to adjust one or more operational parameters accordingly. In a typical embodiment, the recognition means 252 comprises an optical barcode reader which reads the printed barcode 320 provided on the laminate 5 of the beverage cartridge 1 as shown in Figure 10 and discussed above. The optical barcode reader comprises one or more LEDs 321 to illuminate the barcode 320, a focusing lens 322 to acquire an image of the barcode, a charge coupled device (CCD) 323 for producing an electrical signal representative of the acquired image and support circuitry for the LEDs and CCD. The space in the lower part for accommodating the barcode reader is limited. A mirror or mirrors 324 may be used to reflect the light from the LEDs 321 to a focusing lens which is not located in the lower part 255. Schematic arrangements are shown in Figures 9a and 9b. The lower part 255 comprises an aperture 326 which is the same size as the barcode 320 on the beverage cartridge 1. The aperture 326 is closed by a window, preferably glass, which can transmit the signals produced by the barcode reader. Panesar at p. 35, ll. 4–6: Alternatively, an RFID reader is provided to read an RFID located on the cartridge 1. Panesar at FIG. 5:

U.S. Patent No. 10,870,531	Disclosure
	 Panesar at Claims 24, 27, 30.
[1.m] determining whether the read barcode agrees with a stored reference; and activating the pump to push heated water into the portion capsule only upon a determination that the read barcode agrees with the stored reference.	Panesar discloses, either expressly or inherently, determining whether the read barcode agrees with a stored reference; and activating the pump to push heated water into the portion capsule only upon a determination that the read barcode agrees with the stored reference. *See, e.g.*: *See* [1.l].

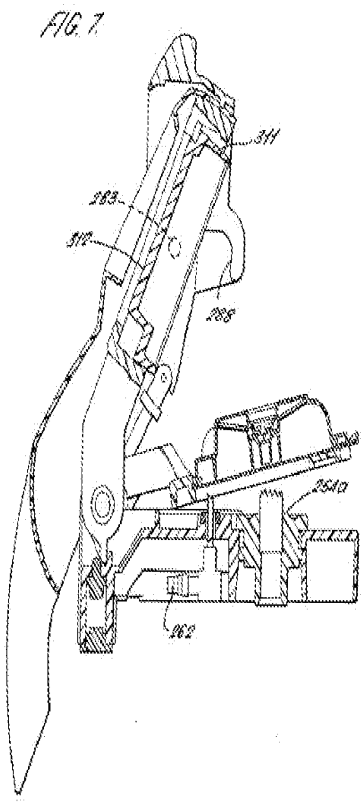
U.S. Patent No. 10,870,531	Disclosure
2. The method according to claim 1, wherein the method comprises not activating the pump to push the heated water into the portion capsule upon a determination that the read barcode does not agree with the stored reference.	Panesar discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises not activating the pump to push the heated water into the portion capsule upon a determination that the read barcode does not agree with the stored reference. *See, e.g.*: Panesar at p. 4, ll. 24–29: The beverage preparation machine may comprise a brew head comprising an upwardly directed inlet for supplying water to the brew head, a downwardly directed outlet for outflow of beverage produced by the machine and a barcode or RFID reader having a window in the brew head through which signals may be transmitted . . . Panesar at p. 5, ll. 7–8: Preferably the barcode reader or RFID reader window is located at or near a periphery of the brew head. Panesar at p. 34, ll. 5–26: The purpose of the recognition means 252 is to allow the machine 201 to recognize the type of beverage cartridge 1 that has been inserted and to adjust one or more operational parameters accordingly. In a typical embodiment, the recognition means 252 comprises an optical barcode reader which reads the printed barcode 320 provided on the laminate 5 of the beverage cartridge 1 as shown in Figure 10 and discussed above. The optical barcode reader comprises one or more LEDs 321 to illuminate the barcode 320, a focusing lens 322 to acquire an image of the barcode, a charge coupled device (CCD) 323 for producing an electrical signal representative of the acquired image and support circuitry for the LEDs and CCD. The space in the lower part for accommodating the barcode reader is limited. A mirror or mirrors 324 may be used to reflect the light from the LEDs 321 to a focusing lens which is not located in the lower part 255.

U.S. Patent No. 10,870,531	Disclosure
	Schematic arrangements are shown in Figures 9a and 9b. The lower part 255 comprises an aperture 326 which is the same size as the barcode 320 on the beverage cartridge 1. The aperture 326 is closed by a window, preferably glass, which can transmit the signals produced by the barcode reader. Panesar at p. 35, ll. 4–6: Alternatively, an RFID reader is provided to read an RFID located on the cartridge 1. Panesar at FIG. 5: 

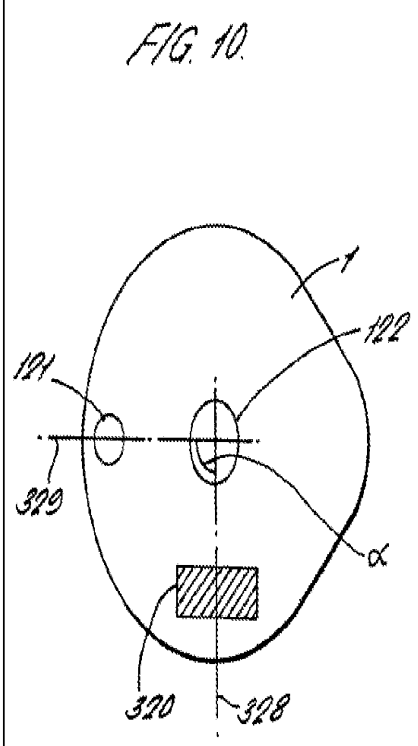
U.S. Patent No. 10,870,531	Disclosure
	Panesar at Claims 24, 27, 30. *See also* [1].
[redacted]	
3. The method according to claim 1, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element and/or the foil lid are made of aluminum.	Panesar discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element and/or the foil lid are made of aluminum. *See, e.g.*: Panesar at p. 9, ll. 8–23: <u>Cartridge for use in the system</u> As shown in Figure 10 to 21, the cartridge 1 generally comprises an outer member 2, an inner member 3 and a laminate 5. The outer member 2, inner member 3 and laminate 5 are assembled to form the cartridge 1 which has an interior 120 for containing one or more beverage ingredients, an inlet 121, an outlet 122 and a beverage flow path linking the inlet 121 to the outlet 122 and which passes through the interior 120. The inlet 121 and outlet 122 are initially sealed by the laminate 5 and are opened in use by piercing or cutting of the laminate 5. The beverage flow path is defined by spatial inter-relationships between the outer member 2, inner member 3 and laminate 5 as discussed below. Other components may optionally be included in the cartridge 1, such as a filter 4, as will be described further below. Panesar at p. 14, ll. 21–32: The laminate 5 is formed from two layers, a first layer of aluminium and a second layer of cast polypropylene. The aluminium layer is between 0.02 and 0.07 mm in thickness. The cast polypropylene layer is between 0.025 and 0.065 mm in thickness. In one embodiment the aluminium layer is 0.06 mm and the polypropylene layer is 0.025 mm thick. This laminate is particularly advantageous as it has a high resistance to curling during assembly. As a result

U.S. Patent No. 10,870,531	Disclosure
	the laminate 5 may be pre-cut to the correct size and shape and subsequently transferred to the assembly station on the production line without undergoing distortion. Consequently, the laminate 5 is particularly well suited to welding. Other laminate materials may be used including PET/Aluminium/PP, PE/EVOH/PP, PET/metallised/PP and Aluminium/PP laminates. Roll laminate stock may be used instead of die cut stock. The cartridge 1 may be closed by a rigid or semi-rigid lid instead of a flexible laminate. *See also* Panesar at FIGs. 10-21. *See also* [1].
[redacted]	
5. The method according to claim 1, wherein the method comprises sealing a seal of the apparatus against the foil lid, and wherein the grooves are free from extending all the way into a region of the base element that is immediately adjacent to the flange.	Panesar discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises sealing a seal of the apparatus against the foil lid, and wherein the grooves are free from extending all the way into a region of the base element that is immediately adjacent to the flange. *See, e.g.*: Panesar at p. 28 at line 22 – p. 29 at line 2: When the holder 251 is in the closed position, the viewing window 312 bears against the beverage cartridge 1 biasing it against the lower part 256. In one arrangement, the rim 311 of the viewing window contacts and bears against the flange 35 of the beverage cartridge. At the same time the window 312 contacts the closed top 11 of the cartridge 1. In an alternative arrangement, only the viewing window 312 contacts the closed top 11 of the cartridge 1, and there is no bearing contact between the rim 311 and the flange 35. The pressure exerted by the rim 311 on the flange 35 and/or by the window 312 on the closed top 11 ensures a fluid tight seal between the cartridge 1 and the holder 251. Panesar at p. 31 at line 19 – p. 32 at line 8:

U.S. Patent No. 10,870,531	Disclosure
	During this last stage of rotation the cartridge 1 is compressed between the cartridge mount 257 and the viewing window 312. As a result, the viewing window 312 is moved axially relative to the circular body 310 of the upper part 256 against the bias of the wave spring or helical springs. This movement allows for a take up of tolerances in the beverage cartridge 1 and beverage preparation machine and ensures that the amount of compressive force applied to the cartridge is kept within an acceptable range. The clamping force of the mechanism as moderated by the action of the wave spring or helical springs ensures a clamping pressure on the cartridge. For the arrangement where bearing pressure is applied to both the flange 35 and the closed top 11 of the cartridge 1, it has been found that a pressure of between 130 and 280N is required. Preferably the force is approximately 200N. A force less than about 130N does not provide an adequate seal, whilst a force greater than about 280N leads to plastic failure of the components of the cartridge 1. For the arrangement where bearing pressure is applied only to the closed top 11 of the cartridge 1 it has been found that a pressure of between 50N and 280N is required. Panesar at p. 32, ll. 19–30: In the closed position the cartridge 1 may thus be clamped around the flange 35 by means of the rim 311 of the viewing window 312 and is always firmly clamped between the closed top 11 of the cartridge and the outer tube 42 of the inner member 3 by contact with the viewing window 312 and the ledge 254a. These clamping forces help prevent failure of the cartridge 1 during pressurisation and also ensure that the inner member 3 and outer member 2 are fully seated relative to one another and thus that all internal passageways and apertures remain at their intended dimensions even during internal pressurisation. Panesar at p. 36, ll. 5–10: When closed the holder 251 grips the cartridge 1 around the rim 35 between the cartridge mount 257 and the upper part 256 and/or between the window 311 and the top 11 of the cartridge 1 to form a fluid tight seal of sufficient integrity to withstand the pressures developed during the dispense cycle.

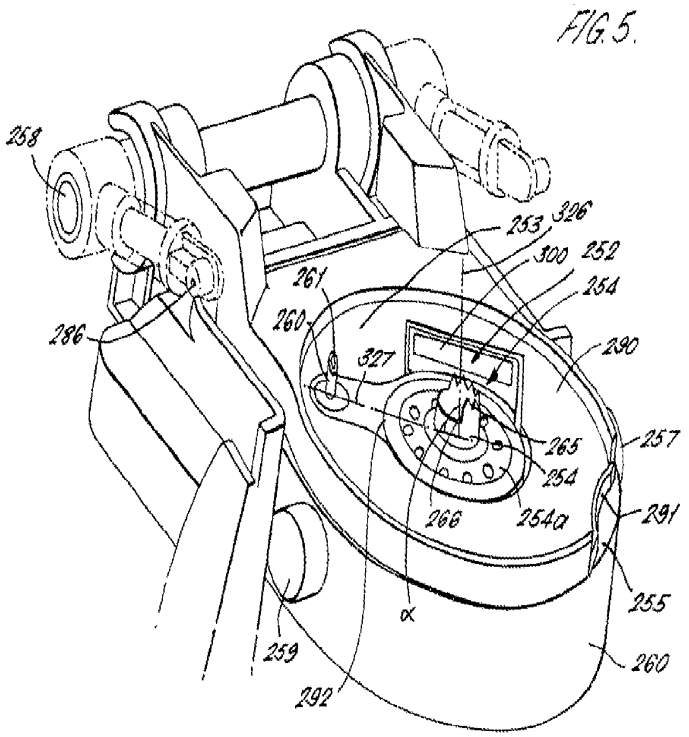
U.S. Patent No. 10,870,531	Disclosure
	Panesar at Fig. 7:  *See also* [1].
6. The method according to claim 1, wherein the method comprises introducing the heated water into the	Panesar discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises introducing the heated water into the portion capsule along a central axis of the portion capsule. *See, e.g.*:

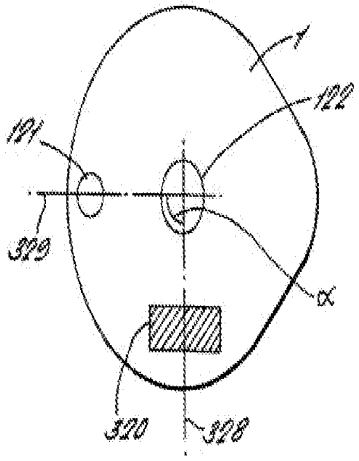
U.S. Patent No. 10,870,531	Disclosure
portion capsule along a central axis of the portion capsule.	Panesar at p. 17 at line 29 – p. 18 at line 5: An aqueous medium, typically water, under pressure enters the cartridge 1 through the inlet 121 into the inlet chamber 26 at a pressure of between 0.1-2.0 bar. From there the water is directed to flow through the slots 30 and round the manifold 16 and into the filtration chamber 130 of the cartridge 1 through the plurality of slots 17. The water is forced radially inwardly through the filtration chamber 130 and mixes with the beverage ingredients 200 contained therein. Panesar at p. 37, ll. 17–24: In the brew/mixing stage water is passed through the cartridge 1 in order to produce the beverage from the beverage ingredients 200. The temperature of the water is determined by the control processor which sends instructions to the water heater 225 to heat the water passing from the water tank 220 to the brew head 250. Water enters the lower part 255 of the holder 251 through the conduit 262 via the inlet valve and the inlet piercer 253 into the inlet chamber 25 126 of the beverage cartridge 1.

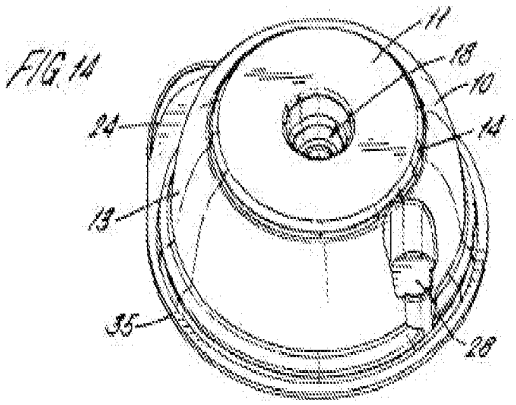
U.S. Patent No. 10,870,531	Disclosure
	Panesar at FIG. 10:  *See also* [1].
7. The method according to claim 1, wherein the method comprises piercing the foil lid in a region that is offset from a central axis of the portion capsule, and wherein the lid is crowned in a region of the central	Panesar discloses, either expressly or inherently, piercing the foil lid. *See, e.g.*: Panesar at p. 3, ll. 22–26:

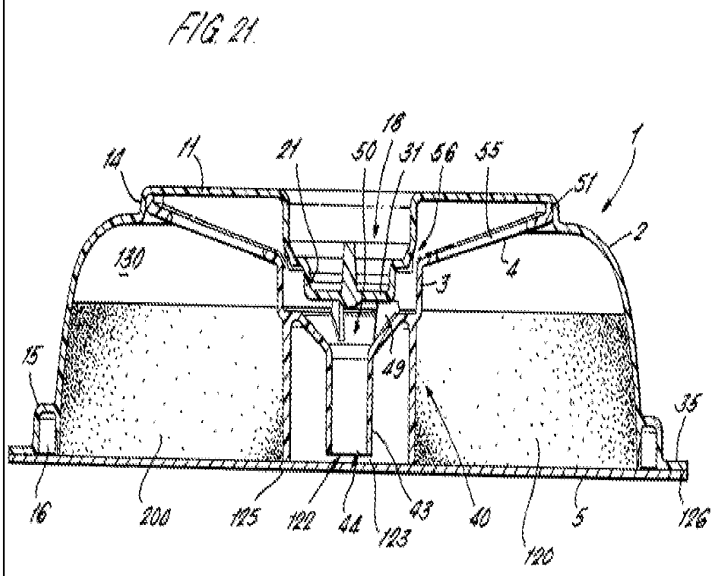
U.S. Patent No. 10,870,531	Disclosure
axis of the portion capsule relative to a region of the lid adjacent to the flange.	The insert may be a cartridge. . . . The lower surface may be a laminate. In this case, the inlet and outlet of the cartridge may be portions of the lower surface which are opened for transportation, in use, by piercing the lower surface. Panesar at p. 8, ll. 20–26: The beverage preparation machine 201 generally comprises a housing 210 containing a water tank 220, a water heater 225, a water pump 230, an air compressor 235, a control processor, a user interface 240 and a brew head 250. The brew head 250 in turn generally comprises a 25 holder 251, recognition means 252 and inlet and outlet piercers 253, 254. Panesar at p. 9, ll. 9–18: [T]he cartridge 1 generally comprises an outer membrane 2, an inner member 3 and a laminate 5. The outer member 2, inner member 3 and laminate 5 are assembled to form the cartridge 1 which has an interior 120 for containing one or more beverage ingredients, an inlet 121, an outlet 122 and a beverage flow 15 path linking the inlet 121 to the outlet 122 and which passes through the interior 120. The inlet 121 and outlet 122 are initially sealed by the laminate 5 and are opened in use by piercing or cutting of the laminate 5. Panesar at p. 17, ll. 25–29: To use the cartridge 1 it is first inserted into the beverage preparation machine and the inlet 121 and outlet 122 are opened by piercing members of the beverage preparation machine which perforate and fold back the laminate 5. Panesar at p. 29 at line 3 – p. 30 at line 29: The lower part 255 comprises the inlet and outlet piercers 253, 254 and the head 300 of the cartridge recognition means 252. The inlet piercer 253 comprises a hollow needle-like tube 260 having a sharpened end 261 for perforating the laminate 5 of the beverage cartridge 1 in

U.S. Patent No. 10,870,531	Disclosure
	use. The inlet piercer 253 is in fluid communication with a water conduit 262 as shown in Figure 7 which passes through the lower part 255 and is connected to an outlet conduit 263 of the water heater 225. The outlet piercer 254 is similar in type to the outlet piercer described in the applicant's European patents EP 0 389 141 and EP 0 334 572 and comprises an open ended cylinder 264 of circular or D-shaped cross-section having dimensions larger than the discharge spout 43. An arcuate portion 265 of the upper end of the outlet piercer 254 is serrated to pierce and eventually cut the laminate of the beverage cartridge 1. The remainder of the upper end is cut back longitudinally of the cylinder at least to the base of the teeth 266 of the serrated portion to fold or pull the cut laminate 5 away from the outlet aperture before the beverage is dispensed there through. The outlet piercer 254 pierces the laminate 5 externally of the discharge spout 43 and when the cartridge mount 257 is in the closed position, rests in the annulus between the discharge spout 43 and the outer wall 42 of the discharge funnel 40. The outlet piercer 254 folds back the cut laminate 105 into the annulus. Thereby both the outlet piercer 254 and the cut laminate 105 are held out of the way of the discharged beverage. The outlet piercer 254 is surrounded by a ledge 254a which is raised relative to its surroundings by 0.5mm. Advantageously, the outlet piercer 254 is removable from the lower part 255 to enable it to be thoroughly cleaned, for example, in a dishwasher. The removable outlet piercer 254 is received in a recess 267 in the lower part 255 where it is seated. The inlet piercer 253 and/or the outlet piercer 254 may be made of a metal, such as stainless steel, or from a plastics material. Panesar at p. 35 at line 32 – p. 33 at line 3:

U.S. Patent No. 10,870,531	Disclosure
	During closure the inlet and outlet piercers 253, 254 pierce the laminate 5 of the cartridge 1 to form the cartridge inlet 121 and outlet 122. Panesar at FIG. 5:  Panesar at FIG. 10:

U.S. Patent No. 10,870,531	Disclosure
	FIG. 10  *See also* [1].
[8.pre] The method according to claim 1,	Panesar discloses, either expressly or inherently, the method according to claim 1. *See, e.g.*: *See* [1].
[8.a] wherein the method comprises controlling a production process of the beverage according to the read barcode,	Panesar discloses, either expressly or inherently, wherein the method comprises controlling a production process of the beverage according to the read barcode. *See, e.g.*: *See* [1.m].

U.S. Patent No. 10,870,531	Disclosure
[8.b] and wherein the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located in between the upper section and a bottom of the base element,	Panesar discloses, either expressly or inherently, that the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located in between the upper section and a bottom of the base element. *See, e.g.*: Panesar at Figs. 14 and 21: 

U.S. Patent No. 10,870,531	Disclosure
	
[8.c] wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element.	Panesar discloses, either expressly or inherently, that the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element. *See, e.g.*: Panesar at p. 10, ll. 6–13: The outer member 2 generally comprises a bowl-shaped shell 10 having a curved annular wall 13, a closed top 11 and an open bottom 12. The diameter of the outer member 2 is smaller at the top 11 compared to the diameter at the bottom 12, resulting from a flaring of the annular wall 13 as one traverses from the closed top 11 to the open bottom 12 The annular wall 13 and closed bottom 11 together define a receptacle having an interior 34. Panesar at FIGs. 14 and 21:

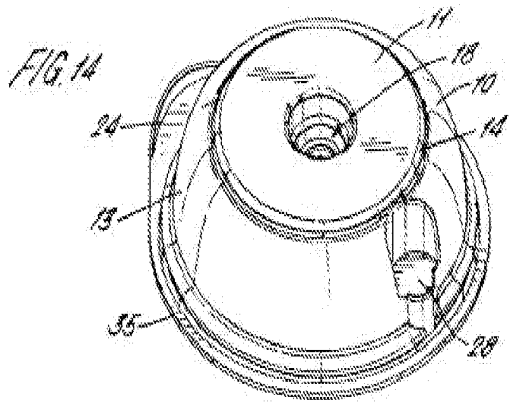
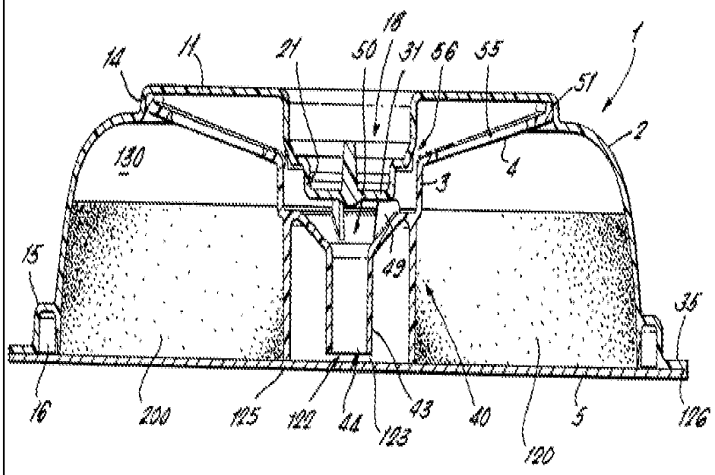
U.S. Patent No. 10,870,531	Disclosure
	  *See also* [8.b].

Exhibit C-6 – Invalidity of U.S. Patent No. 10,870,531 in view of Panesar

U.S. Patent No. 10,870,531	Disclosure
[10.pre] A method of using a portion capsule for making a coffee beverage, the method comprising:	Panesar discloses, either expressly or inherently, a method of using a portion capsule for making a coffee beverage. *See, e.g.*: *See* [1].
[10.a] providing an apparatus including a barcode reader, the apparatus having a pump and being adapted to supply heated water;	Panesar discloses, either expressly or inherently, providing an apparatus including a barcode reader. *See, e.g.*: *See* [1.a].
[10.b] the apparatus having a pump and being adapted to supply heated water;	Panesar discloses, either expressly or inherently, the apparatus having a pump and being adapted to supply heated water. *See, e.g.*: *See* [1.b].
[10.c] inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity within which a powdered coffee material is located,	Panesar discloses, either expressly or inherently, inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity within which a powdered coffee material is located. *See, e.g.*: *See* [1.c].
[10.d] the base element including a circumferential flange having a top side	Panesar discloses, either expressly or inherently, the base element including a circumferential flange having a top side. *See, e.g.*: *See* [1.d].
[10.e] and a bottom side with a barcode located on the bottom side,	Panesar discloses, either expressly or inherently, a bottom side with a barcode located on the bottom side. *See, e.g.*: *See* [1.e].

K-FEE SYSTEM GMBH, EX2012, page 1629
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
[10.f] the portion capsule being free of a filter	Panesar discloses, either expressly or inherently, the portion capsule being free of a filter. *See, e.g.*: *See* [1.i].
[10.g] and comprising a plurality of ribs that are radially spaced, vertically oriented and extend toward a central portion of the cavity, wherein an outer surface of the base element comprises radially spaced and vertically oriented grooves;	Panesar discloses, either expressly or inherently, a plurality of ribs that are radially spaced, vertically oriented and extend toward a central portion of the cavity, wherein an outer surface of the base element comprises radially spaced and vertically oriented grooves. *See, e.g.*: *See* [1.g] and [1.h].
[10.h] piercing the foil lid;	Panesar discloses, either expressly or inherently, piercing the foil lid. *See, e.g.*: *See* [1.k].
[10.i] reading the barcode with the barcode reader; and	Panesar discloses, either expressly or inherently, .reading the barcode with the barcode reader. *See, e.g.*: *See* [1.l].
[10.j] activating the pump to introduce the heated water into the portion capsule only upon a determination that the read barcode agrees with a stored reference, or not activating the pump upon a determination that the read barcode	Panesar discloses, either expressly or inherently, activating the pump to introduce the heated water into the portion capsule only upon a determination that the read barcode agrees with a stored reference, or not activating the pump upon a determination that the read barcode does not agree with the stored reference. *See, e.g.*: *See* [1.m] and [2].

U.S. Patent No. 10,870,531	Disclosure
does not agree with the stored reference.	
11. The method according to claim 10, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element comprises an electrically conductive section.	Panesar discloses, either expressly or inherently, the method according to claim 10, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element comprises an electrically conductive section. *See, e.g.*: *See* [1.f], [3].
14. The method according to claim 10, wherein the method comprises dropping the portion capsule into a dropping box, wherein the base element and/or the lid are made of metal.	Panesar discloses, either expressly or inherently, the method according to claim 10, wherein the method comprises dropping the portion capsule into a dropping box, wherein the base element and/or the lid are made of metal. *See* [1.j].
[16.pre] The method according to claim 10,	Panesar discloses, either expressly or inherently, the method according to claim 10. *See, e.g.*: *See* [10].
[16.a] wherein the method comprises sealing a seal of the apparatus against the foil lid	Panesar discloses, either expressly or inherently, wherein the method comprises sealing a seal of the apparatus against the foil lid. *See, e.g.*: *See* [5].

U.S. Patent No. 10,870,531	Disclosure
[16.b] wherein the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located between the upper section and a bottom of the base element	Panesar discloses, either expressly or inherently, wherein the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located between the upper section and a bottom of the base element. *See, e.g.*: *See* [8.b].
[16.c] wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element.	Panesar discloses, either expressly or inherently, wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element. *See, e.g.*: *See* [8.c].

K-FEE SYSTEM GMBH, EX2012, page 1632
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

Exhibit C-7 – Invalidity of U.S. Patent No. 10,870,531 in view of Ruchonnet

INVALIDITY CLAIM CHART
Invalidity of U.S. Patent No. 10,858,531 in view of Ruchonnet

According to its cover page, WO 2005/044067 A1 ("Ruchonnet") was published on May 19, 2005 from an application filed on October 26, 2004. Ruchonnet therefore constitutes prior art under at least pre-AIA 35 U.S.C. § 102(b) to the '531 Patent's PCT filing date. Ruchonnet anticipates and/or renders obvious the Asserted Claims of the '531 Patent (at least as Nespresso understands K-fee's application of the Asserted Claims in an effort to show infringement).

To the extent K-fee argues that any element below is not disclosed by Ruchonnet, a person of ordinary skill in the art would have found it obvious to combine the teachings of Ruchonnet with the background knowledge of a person of ordinary skill in the art and/or the additional references, and exemplary teachings, set forth in the charts in Exhibits C-1 to C-9 and in Appendix C.

The chart below provides representative examples of where each element of each claim is found within Ruchonnet. Citations are meant to be exemplary, not exhaustive, and Nespresso reserves the right to identify and discuss additional portions of the reference in support of its contentions and/or to rebut arguments made by K-fee. Citations to figures, drawings, tables, and the like include reference to any accompanying or related text. All internal cross references are meant to incorporate the cross-referenced material as if fully set forth therein.

It is Nespresso's position that K-fee's Infringement Contentions have not established that any accused product or service infringes any valid claim. Thus, Nespresso's statements below should not be treated as an admission, implication, or suggestion that Nespresso agrees with K-fee regarding either the scope, construction, or interpretation of any of the Asserted Claims, or the infringement theories advanced by K-fee in its Infringement Contentions, including whether any Asserted Claim satisfies 35 U.S.C. §§ 101 or 112. In certain cases, Nespresso specified non-limiting examples of where its application of the prior art is based on K-fee's apparent application of the claim element. These statements are not intended to suggest that Nespresso agrees with K-fee's application of any claim term, suggest a proposed construction at this stage of the case, or suggest that construction is needed, as the parties are not required to exchange terms for construction or proposed constructions until a later date.

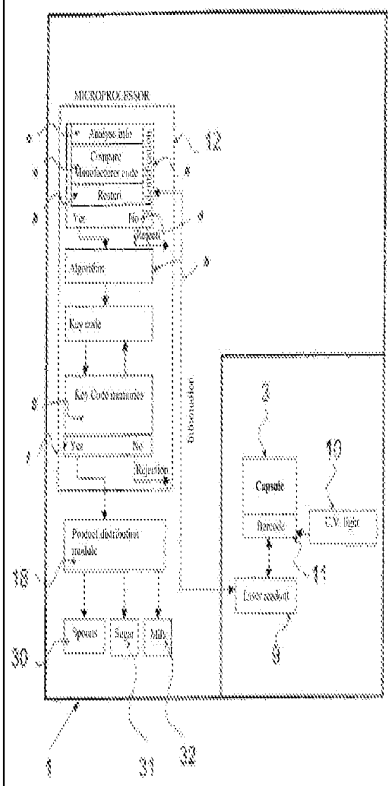
K-fee has yet to identify any limitation of the Asserted Claims that it contends is not anticipated and/or rendered obvious by Ruchonnet. Nespresso therefore expressly reserves the right to respond to any such contention, including by identifying additional obviousness combinations, if K-fee makes any such contention.

Where Nespresso states that Ruchonnet "discloses" a limitation, that disclosure may be express, implicit, and/or inherent.

K-FEE SYSTEM GMBH, EX2012, page 1633
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

Exhibit C-7 – Invalidity of U.S. Patent No. 10,870,531 in view of Ruchonnet

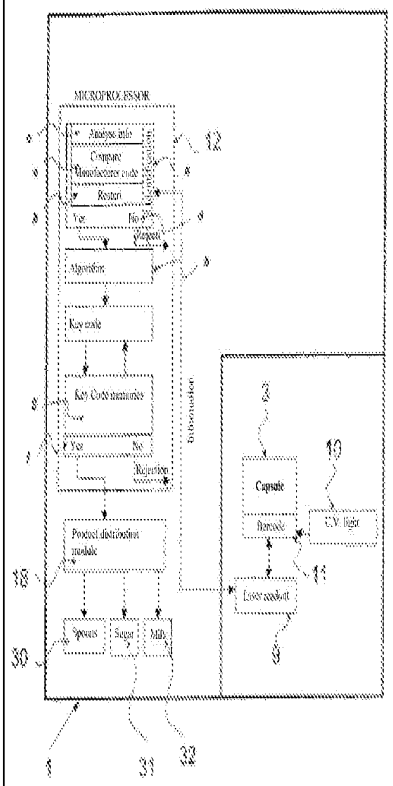
U.S. Patent No. 10,870,531	Disclosure
[1.pre] A method of using a portion capsule for producing a beverage, the method comprising:	Ruchonnet discloses, either expressly or inherently, a method of using a portion capsule for producing a beverage. *See, e.g.*: Ruchonnet at Abstract: (57) Abstract: The aim of the present invention is to provide an apparatus for determining the traceability of the contents of a container (3) as well as the origin of said container (3), wherein information (11) provided on said container can be read out using an optical and/or magnetic reader but is invisible to the naked eye. Said container (3) comprises a pierceable upper portion for injecting a liquid into the container (3), and a pressure-pierce-able lower diaphragm for discharging the liquid flavoured by the contents of the container (3). The apparatus includes an optical and/or magnetic reader (9) for reading said information (11) off a container (3) placed inside the apparatus, a microprocessor for encrypting and decrypting, processing, comparing, approving or rejecting and storing the information (11) read off a container (3), and for selectively initiating or not initiating an operative cycle which includes piercing the upper portion of the container (3) and injecting the liquid, as well as for storing (11) said information to ensure readiness for the initiation of a fresh cycle. Ruchonnet at Figure 1:

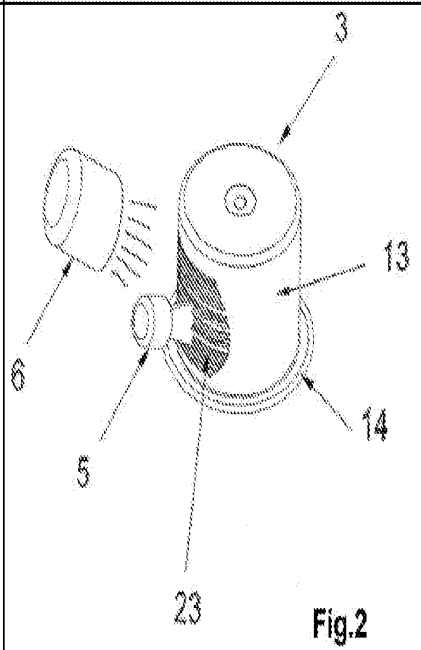
U.S. Patent No. 10,870,531	Disclosure
	 Fig.1 Ruchonnet at 1:3-9: This invention relates to the field of containers, more particularly containers enabling the storage or transport of substances intended to flavor beverages. A container is a receptacle that receives its contents from various sources. Traceability is the ability to identify the origin of a product while reconstructing its itinerary, from its production to its diffusion.

U.S. Patent No. 10,870,531	Disclosure
	It is known to use apparatuses to obtain coffee by infusion, the coffee being kept in a receptacle called a capsule. Ruchonnet at 2:6-19: This purpose is achieved by an apparatus that makes it possible to establish the traceability of the contents in a receptacle and the origin of said receptacle on which readable information is displayed, by means of an optical and/or magnetic reader but invisible to the naked eye, said receptacle being of the type comprising an upper part that can be perforated for the injection of liquid into the receptacle and a lower membrane that can be perforated under pressure for the release of said liquid flavored by the contents of the receptacle, the apparatus comprising an optical and/or magnetic reader for reading said information on a receptacle introduced into the apparatus, and a microprocessor that makes it possible to encrypt/decrypt, analyze, compare, approve/reject and store information read on a receptacle, and arranged to selectively start or not start a cycle of operations including perforating the upper part of the receptacle and injecting the liquid, as well as to store the information read in order to be ready to start a new cycle. Ruchonnet at 4:20-5:5: In one embodiment, illustrated in Figures 1, 2 and 3, a system enabling the traceability of the contents in a receptacle (3) and the origin of that receptacle comprises: - a support medium (1), - a microprocessor (12), - a product distribution module (18), - a laser reading device (9), - a U.V. light emission device (10), and - a receptacle (3) comprising the traceability/origin information (11).

U.S. Patent No. 10,870,531	Disclosure
	The support medium (1) is in particular a coffee machine enabling liquid to be injected into the receptacle (3). Ruchonnet at 5:19-6:6: The product distribution module (18) comprises electronics to control the openings, particularly of the liquid to be injected into the receptacle (3), of ingredients, such as sugar (31) and milk (32), to be added to said flavored liquid delivered by the receptacle (3) and of devices such as spoons (30) that make it possible to stir the ingredients into the liquid and, by simple numbering of the latter devices, to identify the recipient. The laser reading device (9) is equipped with a reading head (5 - Fig. 2) through which information (11) is distributed to the microprocessor (12). The laser reading head (5) is attached to the support medium (1) and located in such a way as to enable the information (11) on a receptacle (3) to be read when it is introduced into the support medium (1). Ruchonnet at 6:7-20: The receptacle (3) comprises a support medium (13) that is, in particular, a cylinder or a conical trunk on which, during its packaging, the information (11) has been affixed to its edge, a circular base (14) that makes it possible to hold the substance, especially coffee, that is to be filtered. This base (14) can be perforated under the pressure of the liquid so as to allow the liquid to pass through to filter and be flavored. The information (11) is in the form of an invisible barcode (23 - Fig. 2) written with ink that is reactive to ultra-violet (U.V.) light. The barcode (23) is visible when placed under a source (6 - Fig. 2) of ultraviolet (U.V.) light. The information (11) comprises all of the indications relative to the traceability of the product contained in the receptacle (3) and the origin of the receptacle.

U.S. Patent No. 10,870,531	Disclosure
	The receptacle (3) bearing the barcode (23), is moved under the laser reading head (5). The barcode (23) is subjected to the U.V. light emitted by the source (6). Ruchonnet at Claims 1, 4, 15.
[1.a] providing an apparatus including a barcode reader,	Ruchonnet discloses, either expressly or inherently, providing an apparatus including a barcode reader. *See, e.g.*: Ruchonnet at Abstract: (57) Abstract: The aim of the present invention is to provide an apparatus for determining the traceability of the contents of a container (3) as well as the origin of said container (3), wherein information (11) provided on said container can be read out using an optical and/or magnetic reader but is invisible to the naked eye. Said container (3) comprises a pierceable upper portion for injecting a liquid into the container (3), and a pressure-pierce-able lower diaphragm for discharging the liquid flavoured by the contents of the container (3). The apparatus includes an optical and/or magnetic reader (9) for reading said information (11) off a container (3) placed inside the apparatus, a microprocessor for encrypting and decrypting, processing, comparing, approving or rejecting and storing the information (11) read off a container (3), and for selectively initiating or not initiating an operative cycle which includes piercing the upper portion of the container (3) and injecting the liquid, as well as for storing (11) said information to ensure readiness for the initiation of a fresh cycle. Ruchonnet at Figures 1-2:

U.S. Patent No. 10,870,531	Disclosure
	 Fig.1

U.S. Patent No. 10,870,531	Disclosure
	 Fig.2 Ruchonnet at 2:6-19: This purpose is achieved by an apparatus that makes it possible to establish the traceability of the contents in a receptacle and the origin of said receptacle on which readable information is displayed, by means of an optical and/or magnetic reader but invisible to the naked eye, said receptacle being of the type comprising an upper part that can be perforated for the injection of liquid into the receptacle and a lower membrane that can be perforated under pressure for the release of said liquid flavored by the contents of the receptacle, the apparatus comprising an optical and/or magnetic reader for reading said information on a receptacle introduced into the apparatus, and a microprocessor that makes it possible to encrypt/decrypt, analyze, compare, approve/reject and store information read on a receptacle, and arranged to selectively start or not start a cycle of operations including perforating the upper part of the receptacle and injecting the liquid, as well as to store the information read in order to be ready to start a new cycle.

U.S. Patent No. 10,870,531	Disclosure
	Ruchonnet at 3:9-18: In one embodiment, the information on the receptacle is indicated in the form of a U.V. barcode located in particular around the outer lateral surface of the receptacle. In this case, the device advantageously comprises a reading device with a three-dimensional laser head. The U.V. barcode is inscribed using colorless ink, visible only when exposed to ultraviolet (U.V.) light. In another embodiment, the receptacle is made of anti-magnetic material and the information is on a circular ribbon inside said receptacle. Lastly, another variant of the invention presents a receptacle in which the magnetic code is placed between the lid and the body of the receptacle. In this case the information is stored in a flexible, ring-shaped magnetic strip. Ruchonnet at 4:20-5:5: In one embodiment, illustrated in Figures 1, 2 and 3, a system enabling the traceability of the contents in a receptacle (3) and the origin of that receptacle comprises: - a support medium (1), - a microprocessor (12), - a product distribution module (18), - a laser reading device (9), - a U.V. light emission device (10), and - a receptacle (3) comprising the traceability/origin information (11). The support medium (1) is in particular a coffee machine enabling liquid to be injected into the receptacle (3). Ruchonnet at 5:19-6:6:

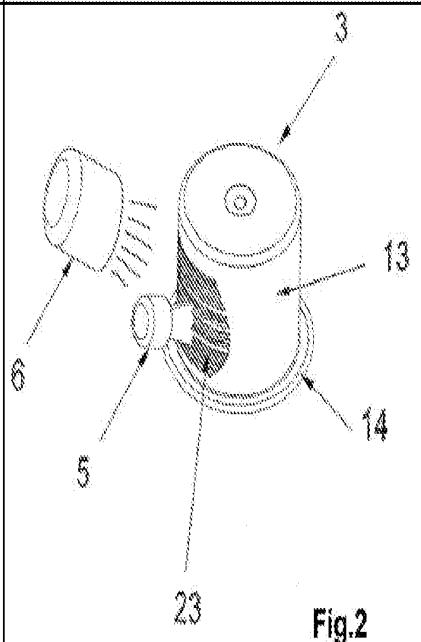
U.S. Patent No. 10,870,531	Disclosure
	The product distribution module (18) comprises electronics to control the openings, particularly of the liquid to be injected into the receptacle (3), of ingredients, such as sugar (31) and milk (32), to be added to said flavored liquid delivered by the receptacle (3) and of devices such as spoons (30) that make it possible to stir the ingredients into the liquid and, by simple numbering of the latter devices, to identify the recipient. The laser reading device (9) is equipped with a reading head (5 - Fig. 2) through which information (11) is distributed to the microprocessor (12). The laser reading head (5) is attached to the support medium (1) and located in such a way as to enable the information (11) on a receptacle (3) to be read when it is introduced into the support medium (1). Ruchonnet at 6:7-20: The receptacle (3) comprises a support medium (13) that is, in particular, a cylinder or a conical trunk on which, during its packaging, the information (11) has been affixed to its edge, a circular base (14) that makes it possible to hold the substance, especially coffee, that is to be filtered. This base (14) can be perforated under the pressure of the liquid so as to allow the liquid to pass through to filter and be flavored. The information (11) is in the form of an invisible barcode (23 - Fig. 2) written with ink that is reactive to ultra-violet (U.V.) light. The barcode (23) is visible when placed under a source (6 - Fig. 2) of ultraviolet (U.V.) light. The information (11) comprises all of the indications relative to the traceability of the product contained in the receptacle (3) and the origin of the receptacle. The receptacle (3) bearing the barcode (23), is moved under the laser reading head (5). The barcode (23) is subjected to the U.V. light emitted by the source (6). Ruchonnet at 6:21-7:1: The information (11) is read and transmitted to the microprocessor (12) which activates, if the information is positively recognized, the aforementioned operations and, in the event of

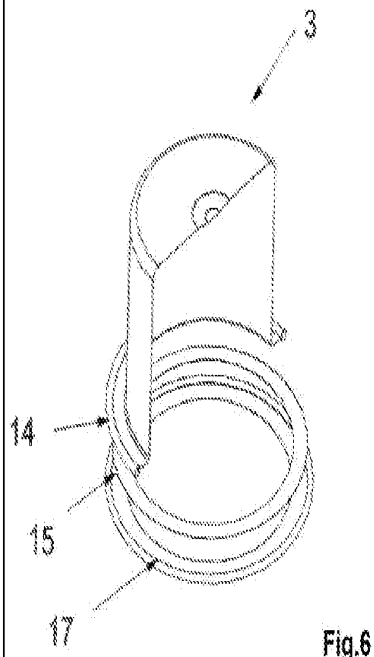
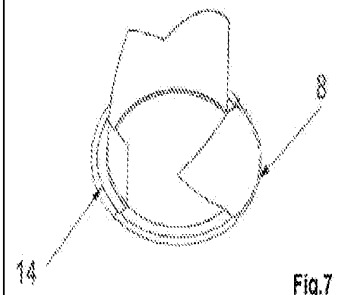
U.S. Patent No. 10,870,531	Disclosure
	negative recognition, rejects the information (11) and stops the procedure for activating the distribution module (18) to interrupt the perforation of the upper part of the receptacle (3) and extraction of the products (30, 31, 32). It should be noted that the microprocessor (12) emits a key, recalculated by an algorithm, in the form of numbers and letters, which represents the indication compared to the manufacturer's data. All keys, after processing, are stored in the internal memory of the microprocessor (12). Ruchonnet at Claims 1-3, 5-6.
[1.b] the apparatus including a pump adapted to supply heated water;	Ruchonnet discloses, either expressly or inherently, the apparatus including a pump adapted to supply heated water. *See, e.g.*: Ruchonnet at Abstract: (57) Abstract: The aim of the present invention is to provide an apparatus for determining the traceability of the contents of a container (3) as well as the origin of said container (3), wherein information (11) provided on said container can be read out using an optical and/or magnetic reader but is invisible to the naked eye. Said container (3) comprises a pierceable upper portion for injecting a liquid into the container (3), and a pressure-pierce-able lower diaphragm for discharging the liquid flavoured by the contents of the container (3). The apparatus includes an optical and/or magnetic reader (9) for reading said information (11) off a container (3) placed inside the apparatus, a microprocessor for encrypting and decrypting, processing, comparing, approving or rejecting and storing the information (11) read off a container (3), and for selectively initiating or not initiating an operative cycle which includes piercing the upper portion of the container (3) and injecting the liquid, as well as for storing (11) said information to ensure readiness for the initiation of a fresh cycle. Ruchonnet at 2:6-19:

U.S. Patent No. 10,870,531	Disclosure
	This purpose is achieved by an apparatus that makes it possible to establish the traceability of the contents in a receptacle and the origin of said receptacle on which readable information is displayed, by means of an optical and/or magnetic reader but invisible to the naked eye, said receptacle being of the type comprising an upper part that can be perforated for the injection of liquid into the receptacle and a lower membrane that can be perforated under pressure for the release of said liquid flavored by the contents of the receptacle, the apparatus comprising an optical and/or magnetic reader for reading said information on a receptacle introduced into the apparatus, and a microprocessor that makes it possible to encrypt/decrypt, analyze, compare, approve/reject and store information read on a receptacle, and arranged to selectively start or not start a cycle of operations including perforating the upper part of the receptacle and injecting the liquid, as well as to store the information read in order to be ready to start a new cycle. Ruchonnet at 4:20-5:5: In one embodiment, illustrated in Figures 1, 2 and 3, a system enabling the traceability of the contents in a receptacle (3) and the origin of that receptacle comprises: - a support medium (1), - a microprocessor (12), - a product distribution module (18), - a laser reading device (9), - a U.V. light emission device (10), and - a receptacle (3) comprising the traceability/origin information (11). The support medium (1) is in particular a coffee machine enabling liquid to be injected into the receptacle (3). Ruchonnet at 6:7-20: The receptacle (3) comprises a support medium (13) that is, in particular, a cylinder or a conical trunk on which, during its packaging, the information (11) has been affixed to its

U.S. Patent No. 10,870,531	Disclosure
	edge, a circular base (14) that makes it possible to hold the substance, especially coffee, that is to be filtered. This base (14) can be perforated under the pressure of the liquid so as to allow the liquid to pass through to filter and be flavored. The information (11) is in the form of an invisible barcode (23 - Fig. 2) written with ink that is reactive to ultra-violet (U.V.) light. The barcode (23) is visible when placed under a source (6 - Fig. 2) of ultraviolet (U.V.) light. The information (11) comprises all of the indications relative to the traceability of the product contained in the receptacle (3) and the origin of the receptacle. The receptacle (3) bearing the barcode (23), is moved under the laser reading head (5). The barcode (23) is subjected to the U.V. light emitted by the source (6). Ruchonnet at 6:21-7:1: The information (11) is read and transmitted to the microprocessor (12) which activates, if the information is positively recognized, the aforementioned operations and, in the event of negative recognition, rejects the information (11) and stops the procedure for activating the distribution module (18) to interrupt the perforation of the upper part of the receptacle (3) and extraction of the products (30, 31, 32). It should be noted that the microprocessor (12) emits a key, recalculated by an algorithm, in the form of numbers and letters, which represents the indication compared to the manufacturer's data. All keys, after processing, are stored in the internal memory of the microprocessor (12). Ruchonnet at 7:6-14: Figures 4 and 5 illustrate an embodiment in which the receptacle (3) is made of anti-magnetic material (10) and the information (11) is on a tape, in particular a circular magnetic tape (20) inside said receptacle (3).

U.S. Patent No. 10,870,531	Disclosure
	Figure 6 illustrates a variant of the invention that presents a receptacle (3) in which the information (11) is placed on a ring (15) between a perforable lid (17) and the base (14) of the receptacle (3). 15 Figure 7 illustrates a variant in which a wire is housed (8) in the base (14) of the receptacle (3) in such a way that the information (11) is recorded in magnetic format. Ruchonnet at Claims 1, 6, 15.
[1.c] inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity in which a beverage raw material is provided,	Ruchonnet discloses, either expressly or inherently, inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity in which a beverage raw material is provided. *See, e.g.*: Ruchonnet at Abstract: (57) Abstract: The aim of the present invention is to provide an apparatus for determining the traceability of the contents of a container (3) as well as the origin of said container (3), wherein information (11) provided on said container can be read out using an optical and/or magnetic reader but is invisible to the naked eye. Said container (3) comprises a pierceable upper portion for injecting a liquid into the container (3), and a pressure-pierce-able lower diaphragm for discharging the liquid flavoured by the contents of the container (3). The apparatus includes an optical and/or magnetic reader (9) for reading said information (11) off a container (3) placed inside the apparatus, a microprocessor for encrypting and decrypting, processing, comparing, approving or rejecting and storing the information (11) read off a container (3), and for selectively initiating or not initiating an operative cycle which includes piercing the upper portion of the container (3) and injecting the liquid, as well as for storing (11) said information to ensure readiness for the initiation of a fresh cycle. Ruchonnet at Figures 2, 6, 7:

U.S. Patent No. 10,870,531	Disclosure
	 Fig.2

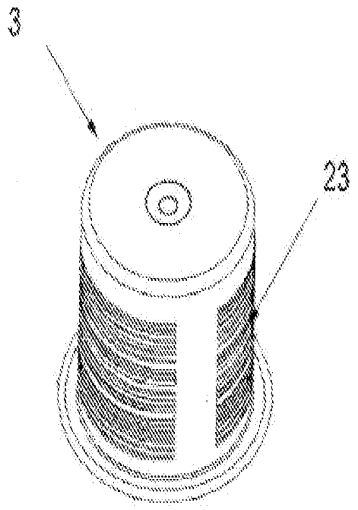
U.S. Patent No. 10,870,531	Disclosure
	 Fig.6  Fig.7 Ruchonnet at 1:3-9: This invention relates to the field of containers, more particularly containers enabling the storage or transport of substances intended to flavor beverages.

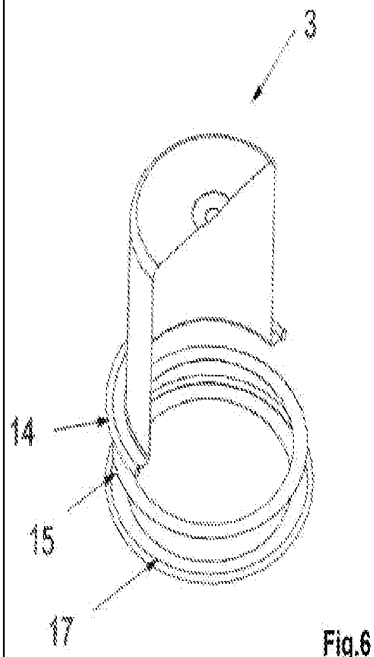
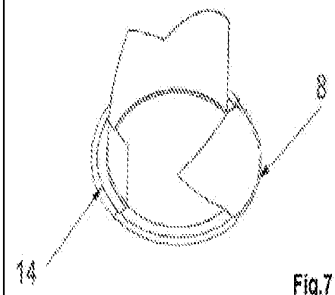
U.S. Patent No. 10,870,531	Disclosure
	A container is a receptacle that receives its contents from various sources. Traceability is the ability to identify the origin of a product while reconstructing its itinerary, from its production to its diffusion. It is known to use apparatuses to obtain coffee by infusion, the coffee being kept in a receptacle called a capsule. Ruchonnet at 2:6-19: This purpose is achieved by an apparatus that makes it possible to establish the traceability of the contents in a receptacle and the origin of said receptacle on which readable information is displayed, by means of an optical and/or magnetic reader but invisible to the naked eye, said receptacle being of the type comprising an upper part that can be perforated for the injection of liquid into the receptacle and a lower membrane that can be perforated under pressure for the release of said liquid flavored by the contents of the receptacle, the apparatus comprising an optical and/or magnetic reader for reading said information on a receptacle introduced into the apparatus, and a microprocessor that makes it possible to encrypt/decrypt, analyze, compare, approve/reject and store information read on a receptacle, and arranged to selectively start or not start a cycle of operations including perforating the upper part of the receptacle and injecting the liquid, as well as to store the information read in order to be ready to start a new cycle. Ruchonnet at 3:9-18: In one embodiment, the information on the receptacle is indicated in the form of a U.V. barcode located in particular around the outer lateral surface of the receptacle. In this case, the device advantageously comprises a reading device with a three-dimensional laser head. The U.V. barcode is inscribed using colorless ink, visible only when exposed to ultraviolet (U.V.) light.

U.S. Patent No. 10,870,531	Disclosure
	In another embodiment, the receptacle is made of anti-magnetic material and the information is on a circular ribbon inside said receptacle. Lastly, another variant of the invention presents a receptacle in which the magnetic code is placed between the lid and the body of the receptacle. In this case the information is stored in a flexible, ring-shaped magnetic strip. Ruchonnet at 4:20-5:5: In one embodiment, illustrated in Figures 1, 2 and 3, a system enabling the traceability of the contents in a receptacle (3) and the origin of that receptacle comprises: - a support medium (1), - a microprocessor (12), - a product distribution module (18), - a laser reading device (9), - a U.V. light emission device (10), and - a receptacle (3) comprising the traceability/origin information (11). The support medium (1) is in particular a coffee machine enabling liquid to be injected into the receptacle (3). Ruchonnet at 5:19-6:6: The product distribution module (18) comprises electronics to control the openings, particularly of the liquid to be injected into the receptacle (3), of ingredients, such as sugar (31) and milk (32), to be added to said flavored liquid delivered by the receptacle (3) and of devices such as spoons (30) that make it possible to stir the ingredients into the liquid and, by simple numbering of the latter devices, to identify the recipient. The laser reading device (9) is equipped with a reading head (5 - Fig. 2) through which information (11) is distributed to the microprocessor (12). The laser reading head (5) is

U.S. Patent No. 10,870,531	Disclosure
	attached to the support medium (1) and located in such a way as to enable the information (11) on a receptacle (3) to be read when it is introduced into the support medium (1). Ruchonnet at 6:7-20: The receptacle (3) comprises a support medium (13) that is, in particular, a cylinder or a conical trunk on which, during its packaging, the information (11) has been affixed to its edge, a circular base (14) that makes it possible to hold the substance, especially coffee, that is to be filtered. This base (14) can be perforated under the pressure of the liquid so as to allow the liquid to pass through to filter and be flavored. The information (11) is in the form of an invisible barcode (23 - Fig. 2) written with ink that is reactive to ultra-violet (U.V.) light. The barcode (23) is visible when placed under a source (6 - Fig. 2) of ultraviolet (U.V.) light. The information (11) comprises all of the indications relative to the traceability of the product contained in the receptacle (3) and the origin of the receptacle. The receptacle (3) bearing the barcode (23), is moved under the laser reading head (5). The barcode (23) is subjected to the U.V. light emitted by the source (6). Ruchonnet at 7:6-14: Figures 4 and 5 illustrate an embodiment in which the receptacle (3) is made of anti-magnetic material (10) and the information (11) is on a tape, in particular a circular magnetic tape (20) inside said receptacle (3). Figure 6 illustrates a variant of the invention that presents a receptacle (3) in which the information (11) is placed on a ring (15) between a perforable lid (17) and the base (14) of the receptacle (3).

U.S. Patent No. 10,870,531	Disclosure
	15 Figure 7 illustrates a variant in which a wire is housed (8) in the base (14) of the receptacle (3) in such a way that the information (11) is recorded in magnetic format. Ruchonnet at Claims 1, 6.
[1.d] the base element comprising a flange, the flange having a top side to which the foil lid is sealed.	Ruchonnet discloses, either expressly or inherently, the base element comprising a flange, the flange having a top side to which the foil lid is sealed. *See, e.g.*: Ruchonnet at Abstract: (57) Abstract: The aim of the present invention is to provide an apparatus for determining the traceability of the contents of a container (3) as well as the origin of said container (3), wherein information (11) provided on said container can be read out using an optical and/or magnetic reader but is invisible to the naked eye. Said container (3) comprises a pierceable upper portion for injecting a liquid into the container (3), and a pressure-pierce-able lower diaphragm for discharging the liquid flavoured by the contents of the container (3). The apparatus includes an optical and/or magnetic reader (9) for reading said information (11) off a container (3) placed inside the apparatus, a microprocessor for encrypting and decrypting, processing, comparing, approving or rejecting and storing the information (11) read off a container (3), and for selectively initiating or not initiating an operative cycle which includes piercing the upper portion of the container (3) and injecting the liquid, as well as for storing (11) said information to ensure readiness for the initiation of a fresh cycle. Ruchonnet at Figures 3, 6, 7:

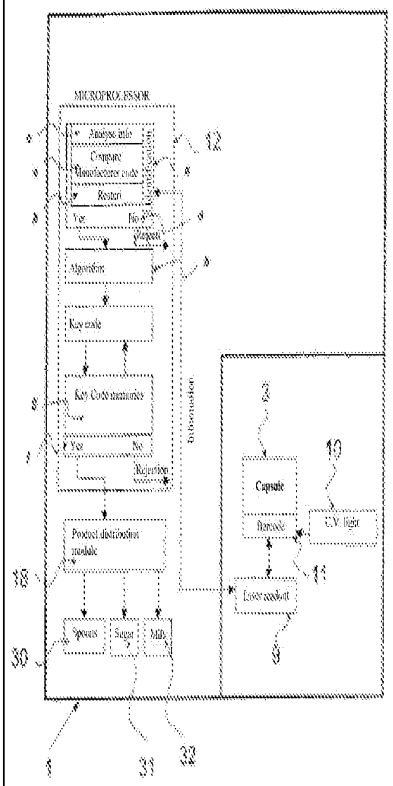
U.S. Patent No. 10,870,531	Disclosure
	 Fig.3

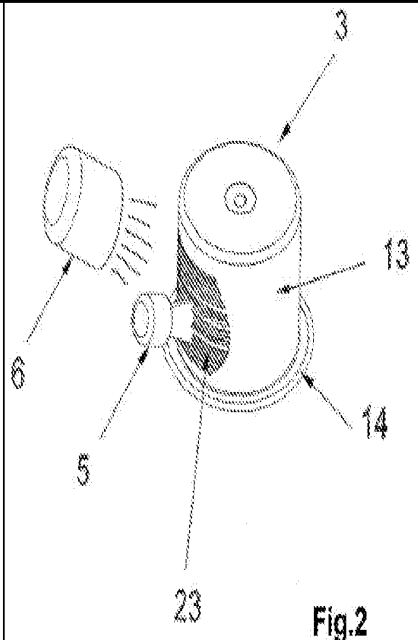
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	 Fig.6  Fig.7 Ruchonnet at 2:6-19: This purpose is achieved by an apparatus that makes it possible to establish the traceability of the contents in a receptacle and the origin of said receptacle on which readable information is displayed, by means of an optical and/or magnetic reader but invisible to the naked eye, said receptacle being of the type comprising an upper part that can be perforated for the injection

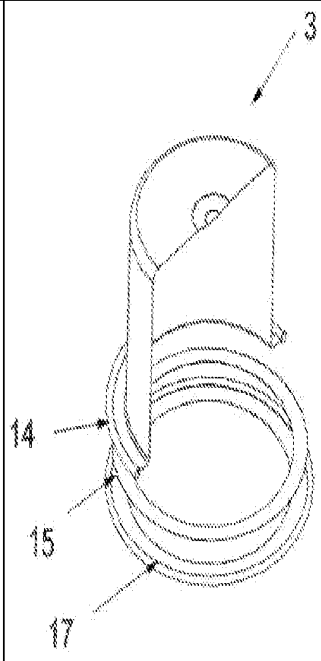
U.S. Patent No. 10,870,531	Disclosure
	of liquid into the receptacle and a lower membrane that can be perforated under pressure for the release of said liquid flavored by the contents of the receptacle, the apparatus comprising an optical and/or magnetic reader for reading said information on a receptacle introduced into the apparatus, and a microprocessor that makes it possible to encrypt/decrypt, analyze, compare, approve/reject and store information read on a receptacle, and arranged to selectively start or not start a cycle of operations including perforating the upper part of the receptacle and injecting the liquid, as well as to store the information read in order to be ready to start a new cycle. Ruchonnet at 3:9-18: In one embodiment, the information on the receptacle is indicated in the form of a U.V. barcode located in particular around the outer lateral surface of the receptacle. In this case, the device advantageously comprises a reading device with a three-dimensional laser head. The U.V. barcode is inscribed using colorless ink, visible only when exposed to ultraviolet (U.V.) light. In another embodiment, the receptacle is made of anti-magnetic material and the information is on a circular ribbon inside said receptacle. Lastly, another variant of the invention presents a receptacle in which the magnetic code is placed between the lid and the body of the receptacle. In this case the information is stored in a flexible, ring-shaped magnetic strip. Ruchonnet at 6:7-20: The receptacle (3) comprises a support medium (13) that is, in particular, a cylinder or a conical trunk on which, during its packaging, the information (11) has been affixed to its edge, a circular base (14) that makes it possible to hold the substance, especially coffee, that is to be filtered. This base (14) can be perforated under the pressure of the liquid so as to allow the liquid to pass through to filter and be flavored.

U.S. Patent No. 10,870,531	Disclosure
	The information (11) is in the form of an invisible barcode (23 - Fig. 2) written with ink that is reactive to ultra-violet (U.V.) light. The barcode (23) is visible when placed under a source (6 - Fig. 2) of ultraviolet (U.V.) light. The information (11) comprises all of the indications relative to the traceability of the product contained in the receptacle (3) and the origin of the receptacle. The receptacle (3) bearing the barcode (23), is moved under the laser reading head (5). The barcode (23) is subjected to the U.V. light emitted by the source (6). Ruchonnet at 7:6-14: Figures 4 and 5 illustrate an embodiment in which the receptacle (3) is made of anti-magnetic material (10) and the information (11) is on a tape, in particular a circular magnetic tape (20) inside said receptacle (3). Figure 6 illustrates a variant of the invention that presents a receptacle (3) in which the information (11) is placed on a ring (15) between a perforable lid (17) and the base (14) of the receptacle (3). 15 Figure 7 illustrates a variant in which a wire is housed (8) in the base (14) of the receptacle (3) in such a way that the information (11) is recorded in magnetic format. Ruchonnet at Claims 1, 6, 8.
[1.e] and an opposing bottom side with a barcode located on the bottom side,	Ruchonnet discloses, either expressly or inherently, an opposing bottom side with a barcode located on the bottom side. *See, e.g.*: Ruchonnet at Abstract: (57) Abstract: The aim of the present invention is to provide an apparatus for determining the traceability of the contents of a container (3) as well as the origin of said container (3), wherein information (11) provided on said container can be read out using an optical and/or

U.S. Patent No. 10,870,531	Disclosure
	magnetic reader but is invisible to the naked eye. Said container (3) comprises a pierceable upper portion for injecting a liquid into the container (3), and a pressure-pierce-able lower diaphragm for discharging the liquid flavoured by the contents of the container (3). The apparatus includes an optical and/or magnetic reader (9) for reading said information (11) off a container (3) placed inside the apparatus, a microprocessor for encrypting and decrypting, processing, comparing, approving or rejecting and storing the information (11) read off a container (3), and for selectively initiating or not initiating an operative cycle which includes piercing the upper portion of the container (3) and injecting the liquid, as well as for storing (11) said information to ensure readiness for the initiation of a fresh cycle. Ruchonnet at Figures 1-2, 6:

U.S. Patent No. 10,870,531	Disclosure
	 Fig.1

U.S. Patent No. 10,870,531	Disclosure
	 Fig.2

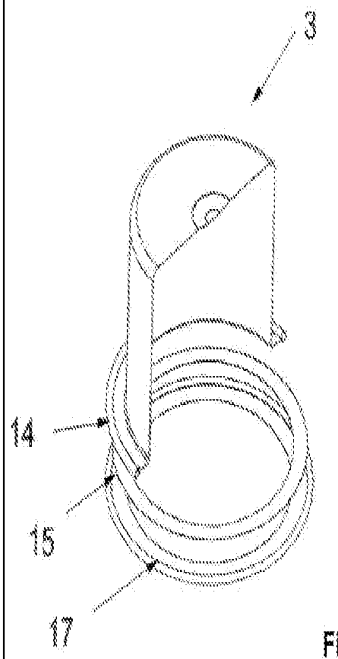
U.S. Patent No. 10,870,531	Disclosure
	 Fig.6 Ruchonnet at 1:3-9: This invention relates to the field of containers, more particularly containers enabling the storage or transport of substances intended to flavor beverages. A container is a receptacle that receives its contents from various sources. Traceability is the ability to identify the origin of a product while reconstructing its itinerary, from its production to its diffusion. It is known to use apparatuses to obtain coffee by infusion, the coffee being kept in a receptacle called a capsule. Ruchonnet at 2:6-19:

U.S. Patent No. 10,870,531	Disclosure
	This purpose is achieved by an apparatus that makes it possible to establish the traceability of the contents in a receptacle and the origin of said receptacle on which readable information is displayed, by means of an optical and/or magnetic reader but invisible to the naked eye, said receptacle being of the type comprising an upper part that can be perforated for the injection of liquid into the receptacle and a lower membrane that can be perforated under pressure for the release of said liquid flavored by the contents of the receptacle, the apparatus comprising an optical and/or magnetic reader for reading said information on a receptacle introduced into the apparatus, and a microprocessor that makes it possible to encrypt/decrypt, analyze, compare, approve/reject and store information read on a receptacle, and arranged to selectively start or not start a cycle of operations including perforating the upper part of the receptacle and injecting the liquid, as well as to store the information read in order to be ready to start a new cycle. Ruchonnet at 2:20-26: This results in a system that identifies a receptacle, compares the information it carries to the manufacturer's code contained in a system memory, accepts or refuses the information, memorizes it so as to prevent its recovery, authorizes the distribution of products and starts a new work cycle. It should be noted that the information contains the data on the product traceability but also the data on the origin of the receptacle and is affixed to the latter by the manufacturer at the time of the its production. Ruchonnet at 3:9-18: In one embodiment, the information on the receptacle is indicated in the form of a U.V. barcode located in particular around the outer lateral surface of the receptacle. In this case, the device advantageously comprises a reading device with a three-dimensional laser head. The U.V. barcode is inscribed using colorless ink, visible only when exposed to ultraviolet (U.V.) light.

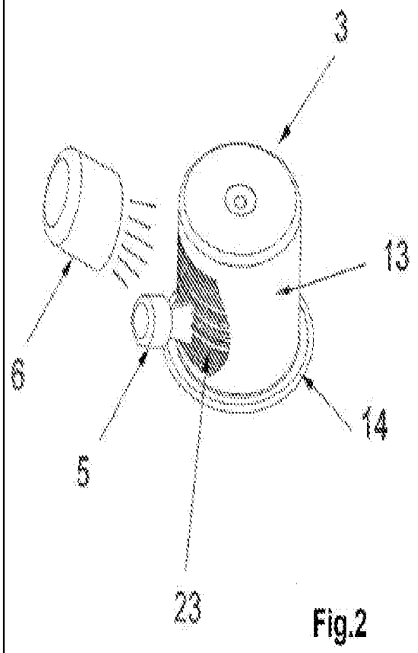
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	In another embodiment, the receptacle is made of anti-magnetic material and the information is on a circular ribbon inside said receptacle. Lastly, another variant of the invention presents a receptacle in which the magnetic code is placed between the lid and the body of the receptacle. In this case the information is stored in a flexible, ring-shaped magnetic strip. Ruchonnet at 4:20-5:5: In one embodiment, illustrated in Figures 1, 2 and 3, a system enabling the traceability of the contents in a receptacle (3) and the origin of that receptacle comprises: - a support medium (1), - a microprocessor (12), - a product distribution module (18), - a laser reading device (9), - a U.V. light emission device (10), and - a receptacle (3) comprising the traceability/origin information (11). The support medium (1) is in particular a coffee machine enabling liquid to be injected into the receptacle (3). Ruchonnet at 5:19-6:6: The product distribution module (18) comprises electronics to control the openings, particularly of the liquid to be injected into the receptacle (3), of ingredients, such as sugar (31) and milk (32), to be added to said flavored liquid delivered by the receptacle (3) and of devices such as spoons (30) that make it possible to stir the ingredients into the liquid and, by simple numbering of the latter devices, to identify the recipient. The laser reading device (9) is equipped with a reading head (5 - Fig. 2) through which information (11) is distributed to the microprocessor (12). The laser reading head (5) is

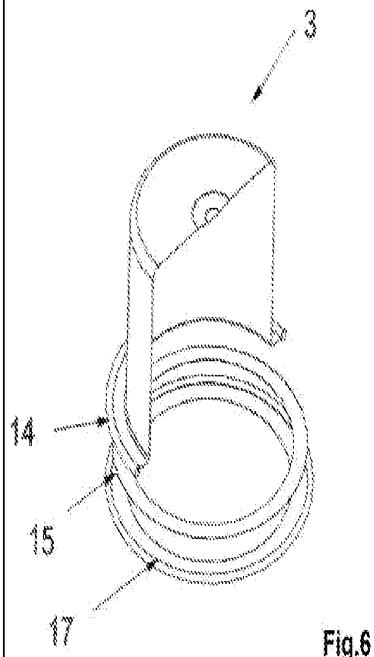
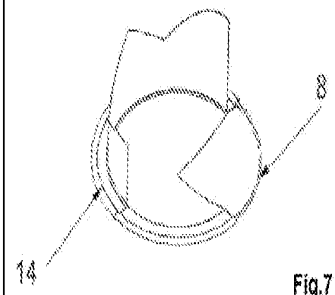
U.S. Patent No. 10,870,531	Disclosure
	attached to the support medium (1) and located in such a way as to enable the information (11) on a receptacle (3) to be read when it is introduced into the support medium (1). Ruchonnet at 6:7-20: The receptacle (3) comprises a support medium (13) that is, in particular, a cylinder or a conical trunk on which, during its packaging, the information (11) has been affixed to its edge, a circular base (14) that makes it possible to hold the substance, especially coffee, that is to be filtered. This base (14) can be perforated under the pressure of the liquid so as to allow the liquid to pass through to filter and be flavored. The information (11) is in the form of an invisible barcode (23 - Fig. 2) written with ink that is reactive to ultra-violet (U.V.) light. The barcode (23) is visible when placed under a source (6 - Fig. 2) of ultraviolet (U.V.) light. The information (11) comprises all of the indications relative to the traceability of the product contained in the receptacle (3) and the origin of the receptacle. The receptacle (3) bearing the barcode (23), is moved under the laser reading head (5). The barcode (23) is subjected to the U.V. light emitted by the source (6). Ruchonnet at 7:6-14: Figures 4 and 5 illustrate an embodiment in which the receptacle (3) is made of anti-magnetic material (10) and the information (11) is on a tape, in particular a circular magnetic tape (20) inside said receptacle (3). Figure 6 illustrates a variant of the invention that presents a receptacle (3) in which the information (11) is placed on a ring (15) between a perforable lid (17) and the base (14) of the receptacle (3).

U.S. Patent No. 10,870,531	Disclosure
	15 Figure 7 illustrates a variant in which a wire is housed (8) in the base (14) of the receptacle (3) in such a way that the information (11) is recorded in magnetic format. Ruchonnet at Claims 1-3, 5-6, 8-9, 13.
[1.f] the base element has a wall region with an electrically conductive section	
[1.g] and radially spaced and vertically oriented grooves,	
[1.h] the cavity has radially spaced and vertically oriented ribs,	
[1.i] the portion capsule being free of a filter,	Ruchonnet discloses, either expressly or inherently, the portion capsule being free of a filter. *See, e.g.*: Ruchonnet at Abstract: (57) Abstract: The aim of the present invention is to provide an apparatus for determining the traceability of the contents of a container (3) as well as the origin of said container (3), wherein information (11) provided on said container can be read out using an optical and/or magnetic reader but is invisible to the naked eye. Said container (3) comprises a pierceable upper portion for injecting a liquid into the container (3), and a pressure-pierce-able lower diaphragm for discharging the liquid flavoured by the contents of the container (3). The apparatus includes an optical and/or magnetic reader (9) for reading said information (11) off a container (3) placed inside the apparatus, a microprocessor for encrypting and decrypting, processing, comparing, approving or rejecting and storing the information (11) read off a container (3), and for selectively initiating or not initiating an operative cycle which includes

U.S. Patent No. 10,870,531	Disclosure
	piercing the upper portion of the container (3) and injecting the liquid, as well as for storing (11) said information to ensure readiness for the initiation of a fresh cycle. Ruchonnet at Figure 6:  Fig.6 Ruchonnet at 6:7-20: The receptacle (3) comprises a support medium (13) that is, in particular, a cylinder or a conical trunk on which, during its packaging, the information (11) has been affixed to its edge, a circular base (14) that makes it possible to hold the substance, especially coffee, that is to be filtered. This base (14) can be perforated under the pressure of the liquid so as to allow the liquid to pass through to filter and be flavored.

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[1.j] the base element and/or the lid are made of metal;	
[1.k] piercing the foil lid;	Ruchonnet discloses, either expressly or inherently, piercing the foil lid. *See, e.g.*: Ruchonnet at Abstract: (57) Abstract: The aim of the present invention is to provide an apparatus for determining the traceability of the contents of a container (3) as well as the origin of said container (3), wherein information (11) provided on said container can be read out using an optical and/or magnetic reader but is invisible to the naked eye. Said container (3) comprises a pierceable upper portion for injecting a liquid into the container (3), and a pressure-pierce-able lower diaphragm for discharging the liquid flavoured by the contents of the container (3). The apparatus includes an optical and/or magnetic reader (9) for reading said information (11) off a container (3) placed inside the apparatus, a microprocessor for encrypting and decrypting, processing, comparing, approving or rejecting and storing the information (11) read off a container (3), and for selectively initiating or not initiating an operative cycle which includes piercing the upper portion of the container (3) and injecting the liquid, as well as for storing (11) said information to ensure readiness for the initiation of a fresh cycle.

U.S. Patent No. 10,870,531	Disclosure
	Ruchonnet at Figures 2, 6, 7:  Fig.2

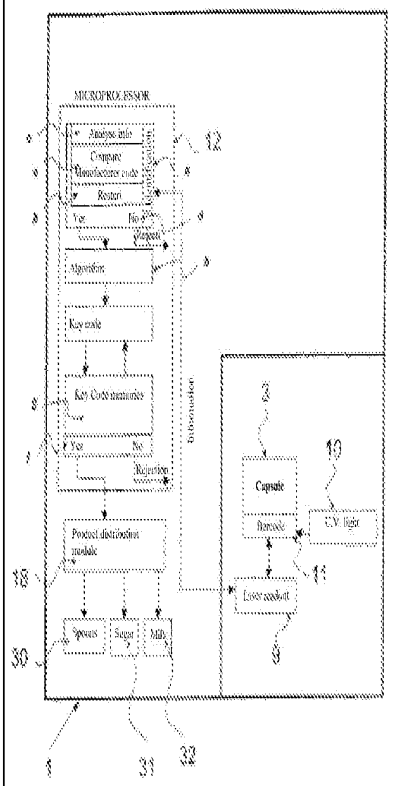
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	 Fig.6  Fig.7 Ruchonnet at 2:6-19: This purpose is achieved by an apparatus that makes it possible to establish the traceability of the contents in a receptacle and the origin of said receptacle on which readable information is displayed, by means of an optical and/or magnetic reader but invisible to the naked eye, said receptacle being of the type comprising an upper part that can be perforated for the injection

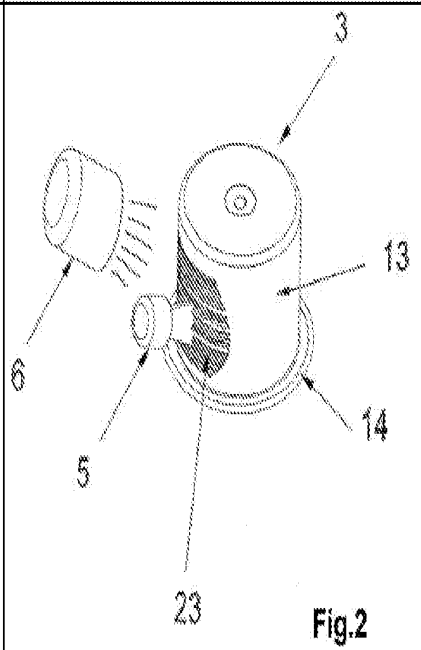
U.S. Patent No. 10,870,531	Disclosure
	of liquid into the receptacle and a lower membrane that can be perforated under pressure for the release of said liquid flavored by the contents of the receptacle, the apparatus comprising an optical and/or magnetic reader for reading said information on a receptacle introduced into the apparatus, and a microprocessor that makes it possible to encrypt/decrypt, analyze, compare, approve/reject and store information read on a receptacle, and arranged to selectively start or not start a cycle of operations including perforating the upper part of the receptacle and injecting the liquid, as well as to store the information read in order to be ready to start a new cycle. Ruchonnet at 4:20-5:5: In one embodiment, illustrated in Figures 1, 2 and 3, a system enabling the traceability of the contents in a receptacle (3) and the origin of that receptacle comprises: - a support medium (1), - a microprocessor (12), - a product distribution module (18), - a laser reading device (9), - a U.V. light emission device (10), and - a receptacle (3) comprising the traceability/origin information (11). The support medium (1) is in particular a coffee machine enabling liquid to be injected into the receptacle (3). Ruchonnet at 6:7-20: The receptacle (3) comprises a support medium (13) that is, in particular, a cylinder or a conical trunk on which, during its packaging, the information (11) has been affixed to its edge, a circular base (14) that makes it possible to hold the substance, especially coffee, that is to be filtered. This base (14) can be perforated under the pressure of the liquid so as to allow the liquid to pass through to filter and be flavored.

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U.S. Patent No. 10,870,531	Disclosure
	15 Figure 7 illustrates a variant in which a wire is housed (8) in the base (14) of the receptacle (3) in such a way that the information (11) is recorded in magnetic format. Ruchonnet at Claims 1, 6, 15.
[1.l] reading the barcode with the barcode reader;	Ruchonnet discloses, either expressly or inherently, reading the barcode with the barcode reader. *See, e.g.*: Ruchonnet at Abstract: (57) Abstract: The aim of the present invention is to provide an apparatus for determining the traceability of the contents of a container (3) as well as the origin of said container (3), wherein information (11) provided on said container can be read out using an optical and/or magnetic reader but is invisible to the naked eye. Said container (3) comprises a pierceable upper portion for injecting a liquid into the container (3), and a pressure-pierce-able lower diaphragm for discharging the liquid flavoured by the contents of the container (3). The apparatus includes an optical and/or magnetic reader (9) for reading said information (11) off a container (3) placed inside the apparatus, a microprocessor for encrypting and decrypting, processing, comparing, approving or rejecting and storing the information (11) read off a container (3), and for selectively initiating or not initiating an operative cycle which includes piercing the upper portion of the container (3) and injecting the liquid, as well as for storing (11) said information to ensure readiness for the initiation of a fresh cycle. Ruchonnet at Figures 1-2:

Exhibit C-7 – Invalidity of U.S. Patent No. 10,870,531 in view of Ruchonnet

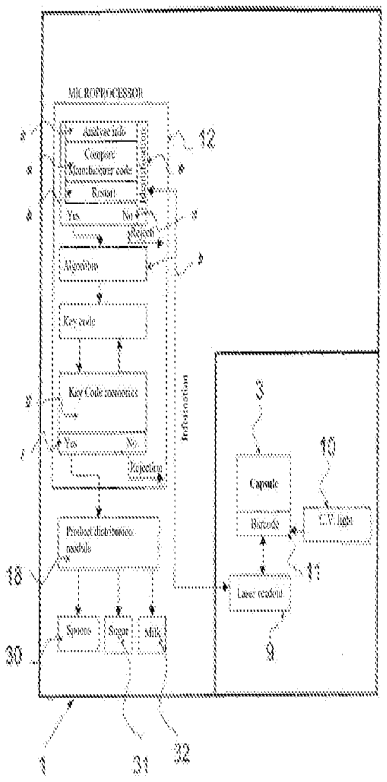
U.S. Patent No. 10,870,531	Disclosure
	 Fig.1

U.S. Patent No. 10,870,531	Disclosure
	 Fig.2 Ruchonnet at 2:6-19: This purpose is achieved by an apparatus that makes it possible to establish the traceability of the contents in a receptacle and the origin of said receptacle on which readable information is displayed, by means of an optical and/or magnetic reader but invisible to the naked eye, said receptacle being of the type comprising an upper part that can be perforated for the injection of liquid into the receptacle and a lower membrane that can be perforated under pressure for the release of said liquid flavored by the contents of the receptacle, the apparatus comprising an optical and/or magnetic reader for reading said information on a receptacle introduced into the apparatus, and a microprocessor that makes it possible to encrypt/decrypt, analyze, compare, approve/reject and store information read on a receptacle, and arranged to selectively start or not start a cycle of operations including perforating the upper part of the receptacle and injecting the liquid, as well as to store the information read in order to be ready to start a new cycle.

U.S. Patent No. 10,870,531	Disclosure
	Ruchonnet at 3:9-18: In one embodiment, the information on the receptacle is indicated in the form of a U.V. barcode located in particular around the outer lateral surface of the receptacle. In this case, the device advantageously comprises a reading device with a three-dimensional laser head. The U.V. barcode is inscribed using colorless ink, visible only when exposed to ultraviolet (U.V.) light. In another embodiment, the receptacle is made of anti-magnetic material and the information is on a circular ribbon inside said receptacle. Lastly, another variant of the invention presents a receptacle in which the magnetic code is placed between the lid and the body of the receptacle. In this case the information is stored in a flexible, ring-shaped magnetic strip. Ruchonnet at 4:20-5:5: In one embodiment, illustrated in Figures 1, 2 and 3, a system enabling the traceability of the contents in a receptacle (3) and the origin of that receptacle comprises: - a support medium (1), - a microprocessor (12), - a product distribution module (18), - a laser reading device (9), - a U.V. light emission device (10), and - a receptacle (3) comprising the traceability/origin information (11). The support medium (1) is in particular a coffee machine enabling liquid to be injected into the receptacle (3). Ruchonnet at 5:19-6:6:

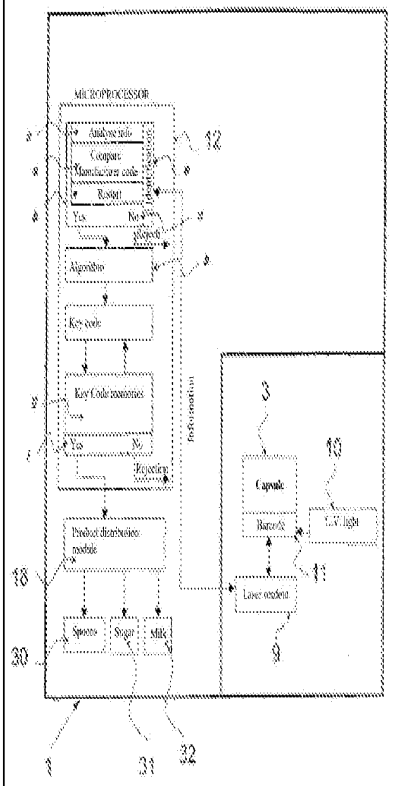
U.S. Patent No. 10,870,531	Disclosure
	The product distribution module (18) comprises electronics to control the openings, particularly of the liquid to be injected into the receptacle (3), of ingredients, such as sugar (31) and milk (32), to be added to said flavored liquid delivered by the receptacle (3) and of devices such as spoons (30) that make it possible to stir the ingredients into the liquid and, by simple numbering of the latter devices, to identify the recipient. The laser reading device (9) is equipped with a reading head (5 - Fig. 2) through which information (11) is distributed to the microprocessor (12). The laser reading head (5) is attached to the support medium (1) and located in such a way as to enable the information (11) on a receptacle (3) to be read when it is introduced into the support medium (1). Ruchonnet at 6:7-20: The receptacle (3) comprises a support medium (13) that is, in particular, a cylinder or a conical trunk on which, during its packaging, the information (11) has been affixed to its edge, a circular base (14) that makes it possible to hold the substance, especially coffee, that is to be filtered. This base (14) can be perforated under the pressure of the liquid so as to allow the liquid to pass through to filter and be flavored. The information (11) is in the form of an invisible barcode (23 - Fig. 2) written with ink that is reactive to ultra-violet (U.V.) light. The barcode (23) is visible when placed under a source (6 - Fig. 2) of ultraviolet (U.V.) light. The information (11) comprises all of the indications relative to the traceability of the product contained in the receptacle (3) and the origin of the receptacle. The receptacle (3) bearing the barcode (23), is moved under the laser reading head (5). The barcode (23) is subjected to the U.V. light emitted by the source (6). Ruchonnet at 6:21-7:1: The information (11) is read and transmitted to the microprocessor (12) which activates, if the information is positively recognized, the aforementioned operations and, in the event of

U.S. Patent No. 10,870,531	Disclosure
	negative recognition, rejects the information (11) and stops the procedure for activating the distribution module (18) to interrupt the perforation of the upper part of the receptacle (3) and extraction of the products (30, 31, 32). It should be noted that the microprocessor (12) emits a key, recalculated by an algorithm, in the form of numbers and letters, which represents the indication compared to the manufacturer's data. All keys, after processing, are stored in the internal memory of the microprocessor (12). Ruchonnet at Claims 1-3, 5-6.
[1.m] determining whether the read barcode agrees with a stored reference; and activating the pump to push heated water into the portion capsule only upon a determination that the read barcode agrees with the stored reference.	Ruchonnet discloses, either expressly or inherently, determining whether the read barcode agrees with a stored reference; and activating the pump to push heated water into the portion capsule only upon a determination that the read barcode agrees with the stored reference. *See, e.g.*: Ruchonnet at Abstract: (57) Abstract: The aim of the present invention is to provide an apparatus for determining the traceability of the contents of a container (3) as well as the origin of said container (3), wherein information (11) provided on said container can be read out using an optical and/or magnetic reader but is invisible to the naked eye. Said container (3) comprises a pierceable upper portion for injecting a liquid into the container (3), and a pressure-pierce-able lower diaphragm for discharging the liquid flavoured by the contents of the container (3). The apparatus includes an optical and/or magnetic reader (9) for reading said information (11) off a container (3) placed inside the apparatus, a microprocessor for encrypting and decrypting, processing, comparing, approving or rejecting and storing the information (11) read off a container (3), and for selectively initiating or not initiating an operative cycle which includes piercing the upper portion of the container (3) and injecting the liquid, as well as for storing (11) said information to ensure readiness for the initiation of a fresh cycle.

U.S. Patent No. 10,870,531	Disclosure
	Ruchonnet at Figure 1:  Fig.1 Ruchonnet at 2:6-19: This purpose is achieved by an apparatus that makes it possible to establish the traceability of the contents in a receptacle and the origin of said receptacle on which readable information is displayed, by means of an optical and/or magnetic reader but invisible to the naked eye, said receptacle being of the type comprising an upper part that can be perforated for the injection of liquid into the receptacle and a lower membrane that can be perforated under pressure for the release of said liquid flavored by the contents of the receptacle, the apparatus comprising an optical and/or magnetic reader for reading said information on a receptacle introduced into

U.S. Patent No. 10,870,531	Disclosure
	the apparatus, and a microprocessor that makes it possible to encrypt/decrypt, analyze, compare, approve/reject and store information read on a receptacle, and arranged to selectively start or not start a cycle of operations including perforating the upper part of the receptacle and injecting the liquid, as well as to store the information read in order to be ready to start a new cycle. Ruchonnet at 2:20-26: This results in a system that identifies a receptacle, compares the information it carries to the manufacturer's code contained in a system memory, accepts or refuses the information, memorizes it so as to prevent its recovery, authorizes the distribution of products and starts a new work cycle. It should be noted that the information contains the data on the product traceability but also the data on the origin of the receptacle and is affixed to the latter by the manufacturer at the time of the its production. Ruchonnet at 2:30-3:4: Acceptance/refusal is determined by a microprocessor which, after encrypting the original information, compares it to the manufacturer's key codes in order to enable/refuse product distribution. Memorization is provided by the manufacturer in particular by means of electronic chips that are installed on the device. Ruchonnet at 6:21-7:1: The information (11) is read and transmitted to the microprocessor (12) which activates, if the information is positively recognized, the aforementioned operations and, in the event of negative recognition, rejects the information (11) and stops the procedure for activating the distribution module (18) to interrupt the perforation of the upper part of the receptacle (3) and extraction of the products (30, 31, 32).

U.S. Patent No. 10,870,531	Disclosure
	It should be noted that the microprocessor (12) emits a key, recalculated by an algorithm, in the form of numbers and letters, which represents the indication compared to the manufacturer's data. All keys, after processing, are stored in the internal memory of the microprocessor (12). Ruchonnet at 7:2-5: A key is advantageously assigned to a single barcode (23) which allows the receptacle (3) to be used only once. A receptacle (3) without a barcode (23) is automatically rejected, as is an erroneous barcode (23), and the reuse of a used barcode (23) is rejected by comparison of the keys. Ruchonnet at Claims 1, 15.
[redacted]	
2. The method according to claim 1, wherein the method comprises not activating the pump to push the heated water into the portion capsule upon a determination that the read barcode does not agree with the stored reference.	Ruchonnet discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises not activating the pump to push the heated water into the portion capsule upon a determination that the read barcode does not agree with the stored reference. *See, e.g.*: Ruchonnet at Abstract: (57) Abstract: The aim of the present invention is to provide an apparatus for determining the traceability of the contents of a container (3) as well as the origin of said container (3), wherein information (11) provided on said container can be read out using an optical and/or magnetic reader but is invisible to the naked eye. Said container (3) comprises a pierceable upper portion for injecting a liquid into the container (3), and a pressure-pierce-able lower diaphragm for discharging the liquid flavoured by the contents of the container (3). The apparatus includes an optical and/or magnetic reader (9) for reading said information (11) off a container (3) placed inside the apparatus, a microprocessor for encrypting and decrypting, processing, comparing, approving or rejecting and storing the information (11) read off a

U.S. Patent No. 10,870,531	Disclosure
	container (3), and for selectively initiating or not initiating an operative cycle which includes piercing the upper portion of the container (3) and injecting the liquid, as well as for storing (11) said information to ensure readiness for the initiation of a fresh cycle. Ruchonnet at Figure 1:  Fig.1 Ruchonnet at 2:6-19: This purpose is achieved by an apparatus that makes it possible to establish the traceability of the contents in a receptacle and the origin of said receptacle on which readable information is displayed, by means of an optical and/or magnetic reader but invisible to the naked eye, said

U.S. Patent No. 10,870,531	Disclosure
	receptacle being of the type comprising an upper part that can be perforated for the injection of liquid into the receptacle and a lower membrane that can be perforated under pressure for the release of said liquid flavored by the contents of the receptacle, the apparatus comprising an optical and/or magnetic reader for reading said information on a receptacle introduced into the apparatus, and a microprocessor that makes it possible to encrypt/decrypt, analyze, compare, approve/reject and store information read on a receptacle, and arranged to selectively start or not start a cycle of operations including perforating the upper part of the receptacle and injecting the liquid, as well as to store the information read in order to be ready to start a new cycle. Ruchonnet at 2:20-26: This results in a system that identifies a receptacle, compares the information it carries to the manufacturer's code contained in a system memory, accepts or refuses the information, memorizes it so as to prevent its recovery, authorizes the distribution of products and starts a new work cycle. It should be noted that the information contains the data on the product traceability but also the data on the origin of the receptacle and is affixed to the latter by the manufacturer at the time of the its production. Ruchonnet at 2:30-3:4: Acceptance/refusal is determined by a microprocessor which, after encrypting the original information, compares it to the manufacturer's key codes in order to enable/refuse product distribution. Memorization is provided by the manufacturer in particular by means of electronic chips that are installed on the device. Ruchonnet at 6:21-7:1: The information (11) is read and transmitted to the microprocessor (12) which activates, if the information is positively recognized, the aforementioned operations and, in the event of

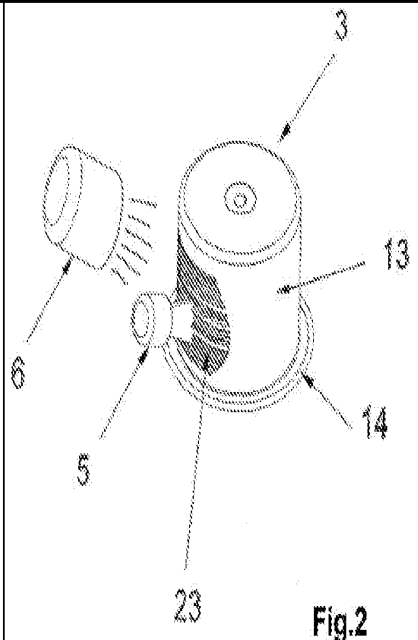
U.S. Patent No. 10,870,531	Disclosure
	negative recognition, rejects the information (11) and stops the procedure for activating the distribution module (18) to interrupt the perforation of the upper part of the receptacle (3) and extraction of the products (30, 31, 32). It should be noted that the microprocessor (12) emits a key, recalculated by an algorithm, in the form of numbers and letters, which represents the indication compared to the manufacturer's data. All keys, after processing, are stored in the internal memory of the microprocessor (12). Ruchonnet at 7:2-5: A key is advantageously assigned to a single barcode (23) which allows the receptacle (3) to be used only once. A receptacle (3) without a barcode (23) is automatically rejected, as is an erroneous barcode (23), and the reuse of a used barcode (23) is rejected by comparison of the keys. Ruchonnet at Claims 1, 15. *See also* [1].
3. The method according to claim 1, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element and/or the foil lid are made of aluminum.	

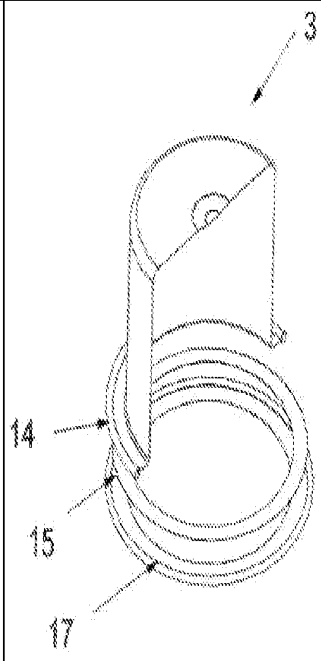
U.S. Patent No. 10,870,531	Disclosure
5. The method according to claim 1, wherein the method comprises sealing a seal of the apparatus against the foil lid, and wherein the grooves are free from extending all the way into a region of the base element that is immediately adjacent to the flange.	Ruchonnet discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises sealing a seal of the apparatus against the foil lid, and wherein the grooves are free from extending all the way into a region of the base element that is immediately adjacent to the flange. *See, e.g.*: Ruchonnet at Abstract: (57) Abstract: The aim of the present invention is to provide an apparatus for determining the traceability of the contents of a container (3) as well as the origin of said container (3), wherein information (11) provided on said container can be read out using an optical and/or magnetic reader but is invisible to the naked eye. Said container (3) comprises a pierceable upper portion for injecting a liquid into the container (3), and a pressure-pierce-able lower diaphragm for discharging the liquid flavoured by the contents of the container (3). The apparatus includes an optical and/or magnetic reader (9) for reading said information (11) off a container (3) placed inside the apparatus, a microprocessor for encrypting and decrypting, processing, comparing, approving or rejecting and storing the information (11) read off a container (3), and for selectively initiating or not initiating an operative cycle which includes piercing the upper portion of the container (3) and injecting the liquid, as well as for storing (11) said information to ensure readiness for the initiation of a fresh cycle. Ruchonnet at 1:15-21: Ruchonnet at 2:6-19: This purpose is achieved by an apparatus that makes it possible to establish the traceability of the contents in a receptacle and the origin of said receptacle on which readable information is displayed, by means of an optical and/or magnetic reader but invisible to the naked eye, said receptacle being of the type comprising an upper part that can be perforated for the injection of liquid into the receptacle and a lower membrane that can be perforated under pressure for the release of said liquid flavored by the contents of the receptacle, the apparatus comprising an optical and/or magnetic reader for reading said information on a receptacle introduced into the apparatus, and a microprocessor that makes it possible to encrypt/decrypt, analyze,

U.S. Patent No. 10,870,531	Disclosure
	compare, approve/reject and store information read on a receptacle, and arranged to selectively start or not start a cycle of operations including perforating the upper part of the receptacle and injecting the liquid, as well as to store the information read in order to be ready to start a new cycle. Ruchonnet at 6:7-20: The receptacle (3) comprises a support medium (13) that is, in particular, a cylinder or a conical trunk on which, during its packaging, the information (11) has been affixed to its edge, a circular base (14) that makes it possible to hold the substance, especially coffee, that is to be filtered. This base (14) can be perforated under the pressure of the liquid so as to allow the liquid to pass through to filter and be flavored. The information (11) is in the form of an invisible barcode (23 - Fig. 2) written with ink that is reactive to ultra-violet (U.V.) light. The barcode (23) is visible when placed under a source (6 - Fig. 2) of ultraviolet (U.V.) light. The information (11) comprises all of the indications relative to the traceability of the product contained in the receptacle (3) and the origin of the receptacle. The receptacle (3) bearing the barcode (23), is moved under the laser reading head (5). The barcode (23) is subjected to the U.V. light emitted by the source (6). Ruchonnet at Claims 1, 6. *See also* [1].
[redacted]	
6. The method according to claim 1, wherein the method comprises introducing the heated water into the	Ruchonnet discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises introducing the heated water into the portion capsule along a central axis of the portion capsule. *See, e.g.*:

K-FEE SYSTEM GMBH, EX2012, page 1684
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
portion capsule along a central axis of the portion capsule.	Ruchonnet at Abstract: (57) Abstract: The aim of the present invention is to provide an apparatus for determining the traceability of the contents of a container (3) as well as the origin of said container (3), wherein information (11) provided on said container can be read out using an optical and/or magnetic reader but is invisible to the naked eye. Said container (3) comprises a pierceable upper portion for injecting a liquid into the container (3), and a pressure-pierce-able lower diaphragm for discharging the liquid flavoured by the contents of the container (3). The apparatus includes an optical and/or magnetic reader (9) for reading said information (11) off a container (3) placed inside the apparatus, a microprocessor for encrypting and decrypting, processing, comparing, approving or rejecting and storing the information (11) read off a container (3), and for selectively initiating or not initiating an operative cycle which includes piercing the upper portion of the container (3) and injecting the liquid, as well as for storing (11) said information to ensure readiness for the initiation of a fresh cycle. Ruchonnet at Figures 2, 6:

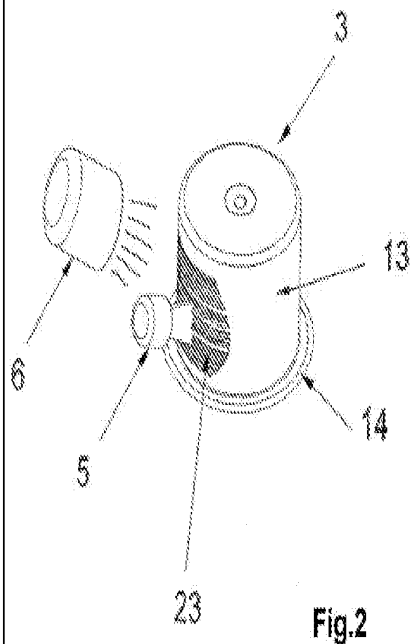
U.S. Patent No. 10,870,531	Disclosure
	 Fig.2

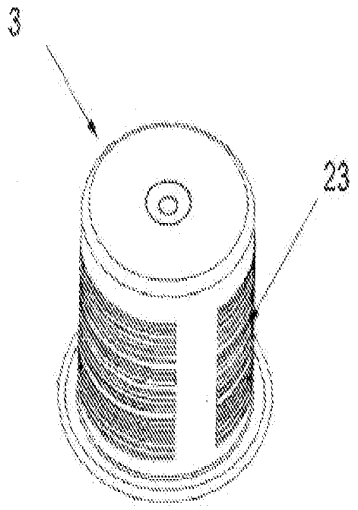
U.S. Patent No. 10,870,531	Disclosure
	 Fig.6 Ruchonnet at 2:6-19: This purpose is achieved by an apparatus that makes it possible to establish the traceability of the contents in a receptacle and the origin of said receptacle on which readable information is displayed, by means of an optical and/or magnetic reader but invisible to the naked eye, said receptacle being of the type comprising an upper part that can be perforated for the injection of liquid into the receptacle and a lower membrane that can be perforated under pressure for the release of said liquid flavored by the contents of the receptacle, the apparatus comprising an optical and/or magnetic reader for reading said information on a receptacle introduced into the apparatus, and a microprocessor that makes it possible to encrypt/decrypt, analyze, compare, approve/reject and store information read on a receptacle, and arranged to selectively start or not start a cycle of operations including perforating the upper part of the

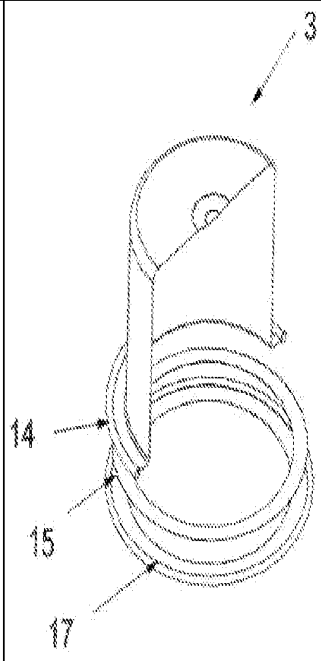
U.S. Patent No. 10,870,531	Disclosure
	receptacle and injecting the liquid, as well as to store the information read in order to be ready to start a new cycle. Ruchonnet at 4:20-5:5: In one embodiment, illustrated in Figures 1, 2 and 3, a system enabling the traceability of the contents in a receptacle (3) and the origin of that receptacle comprises: - a support medium (1), - a microprocessor (12), - a product distribution module (18), - a laser reading device (9), - a U.V. light emission device (10), and - a receptacle (3) comprising the traceability/origin information (11). The support medium (1) is in particular a coffee machine enabling liquid to be injected into the receptacle (3). Ruchonnet at 6:7-20: The receptacle (3) comprises a support medium (13) that is, in particular, a cylinder or a conical trunk on which, during its packaging, the information (11) has been affixed to its edge, a circular base (14) that makes it possible to hold the substance, especially coffee, that is to be filtered. This base (14) can be perforated under the pressure of the liquid so as to allow the liquid to pass through to filter and be flavored. The information (11) is in the form of an invisible barcode (23 - Fig. 2) written with ink that is reactive to ultra-violet (U.V.) light. The barcode (23) is visible when placed under a source (6 - Fig. 2) of ultraviolet (U.V.) light. The information (11) comprises all of the indications relative to the traceability of the product contained in the receptacle (3) and the origin of the receptacle.

U.S. Patent No. 10,870,531	Disclosure
	The receptacle (3) bearing the barcode (23), is moved under the laser reading head (5). The barcode (23) is subjected to the U.V. light emitted by the source (6). Ruchonnet at 6:21-7:1: The information (11) is read and transmitted to the microprocessor (12) which activates, if the information is positively recognized, the aforementioned operations and, in the event of negative recognition, rejects the information (11) and stops the procedure for activating the distribution module (18) to interrupt the perforation of the upper part of the receptacle (3) and extraction of the products (30, 31, 32). It should be noted that the microprocessor (12) emits a key, recalculated by an algorithm, in the form of numbers and letters, which represents the indication compared to the manufacturer's data. All keys, after processing, are stored in the internal memory of the microprocessor (12). Ruchonnet at 7:6-14: Figures 4 and 5 illustrate an embodiment in which the receptacle (3) is made of anti-magnetic material (10) and the information (11) is on a tape, in particular a circular magnetic tape (20) inside said receptacle (3). Figure 6 illustrates a variant of the invention that presents a receptacle (3) in which the information (11) is placed on a ring (15) between a perforable lid (17) and the base (14) of the receptacle (3). 15 Figure 7 illustrates a variant in which a wire is housed (8) in the base (14) of the receptacle (3) in such a way that the information (11) is recorded in magnetic format. Ruchonnet at Claims 1, 6, 15.

U.S. Patent No. 10,870,531	Disclosure
	See also [1].
[redacted]	
7. The method according to claim 1, wherein the method comprises piercing the foil lid in a region that is offset from a central axis of the portion capsule, and wherein the lid is crowned in a region of the central axis of the portion capsule relative to a region of the lid adjacent to the flange.	
[redacted]	
[8.pre] The method according to claim 1,	Ruchonnet discloses, either expressly or inherently, the method according to claim 1. *See, e.g.*: *See* [1].
[8.a] wherein the method comprises controlling a production process of the beverage according to the read barcode,	Ruchonnet discloses, either expressly or inherently, wherein the method comprises controlling a production process of the beverage according to the read barcode. *See, e.g.*: Ruchonnet at 5:19-6:6: The product distribution module (18) comprises electronics to control the openings, particularly of the liquid to be injected into the receptacle (3), of ingredients, such as sugar (31) and milk (32), to be added to said flavored liquid delivered by the receptacle (3) and of devices such as spoons (30) that make it possible to stir the ingredients into the liquid and, by simple numbering of the latter devices, to identify the recipient.

U.S. Patent No. 10,870,531	Disclosure
	The laser reading device (9) is equipped with a reading head (5 - Fig. 2) through which information (11) is distributed to the microprocessor (12). The laser reading head (5) is attached to the support medium (1) and located in such a way as to enable the information (11) on a receptacle (3) to be read when it is introduced into the support medium (1). Ruchonnet at Claim 4. *See also* [1.m].
[8.b] and wherein the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located in between the upper section and a bottom of the base element,	Ruchonnet discloses, either expressly or inherently, that the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located in between the upper section and a bottom of the base element. *See, e.g.*: Ruchonnet at Figures 2-3, 6:  Fig.2

U.S. Patent No. 10,870,531	Disclosure
	 Fig.3

U.S. Patent No. 10,870,531	Disclosure
	 Fig.6 Ruchonnet at 2:6-19: This purpose is achieved by an apparatus that makes it possible to establish the traceability of the contents in a receptacle and the origin of said receptacle on which readable information is displayed, by means of an optical and/or magnetic reader but invisible to the naked eye, said receptacle being of the type comprising an upper part that can be perforated for the injection of liquid into the receptacle and a lower membrane that can be perforated under pressure for the release of said liquid flavored by the contents of the receptacle, the apparatus comprising an optical and/or magnetic reader for reading said information on a receptacle introduced into the apparatus, and a microprocessor that makes it possible to encrypt/decrypt, analyze, compare, approve/reject and store information read on a receptacle, and arranged to selectively start or not start a cycle of operations including perforating the upper part of the

U.S. Patent No. 10,870,531	Disclosure
	receptacle and injecting the liquid, as well as to store the information read in order to be ready to start a new cycle. Ruchonnet at 3:9-18: In one embodiment, the information on the receptacle is indicated in the form of a U.V. barcode located in particular around the outer lateral surface of the receptacle. In this case, the device advantageously comprises a reading device with a three-dimensional laser head. The U.V. barcode is inscribed using colorless ink, visible only when exposed to ultraviolet (U.V.) light. In another embodiment, the receptacle is made of anti-magnetic material and the information is on a circular ribbon inside said receptacle. Lastly, another variant of the invention presents a receptacle in which the magnetic code is placed between the lid and the body of the receptacle. In this case the information is stored in a flexible, ring-shaped magnetic strip. Ruchonnet at 6:7-20: The receptacle (3) comprises a support medium (13) that is, in particular, a cylinder or a conical trunk on which, during its packaging, the information (11) has been affixed to its edge, a circular base (14) that makes it possible to hold the substance, especially coffee, that is to be filtered. This base (14) can be perforated under the pressure of the liquid so as to allow the liquid to pass through to filter and be flavored. The information (11) is in the form of an invisible barcode (23 - Fig. 2) written with ink that is reactive to ultra-violet (U.V.) light. The barcode (23) is visible when placed under a source (6 - Fig. 2) of ultraviolet (U.V.) light. The information (11) comprises all of the indications relative to the traceability of the product contained in the receptacle (3) and the origin of the receptacle.

U.S. Patent No. 10,870,531	Disclosure
	The receptacle (3) bearing the barcode (23), is moved under the laser reading head (5). The barcode (23) is subjected to the U.V. light emitted by the source (6). Ruchonnet at 7:6-14: Figures 4 and 5 illustrate an embodiment in which the receptacle (3) is made of anti-magnetic material (10) and the information (11) is on a tape, in particular a circular magnetic tape (20) inside said receptacle (3). Figure 6 illustrates a variant of the invention that presents a receptacle (3) in which the information (11) is placed on a ring (15) between a perforable lid (17) and the base (14) of the receptacle (3). 15 Figure 7 illustrates a variant in which a wire is housed (8) in the base (14) of the receptacle (3) in such a way that the information (11) is recorded in magnetic format. Ruchonnet at Claims 1, 8.
[8.c] wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element.	Ruchonnet discloses, either expressly or inherently, that the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element. *See, e.g.*: *See* [8.b].
[10.pre] A method of using a portion capsule for making a coffee beverage, the method comprising:	Ruchonnet discloses, either expressly or inherently, a method of using a portion capsule for making a coffee beverage. *See, e.g.*: *See* [1].

Exhibit C-7 – Invalidity of U.S. Patent No. 10,870,531 in view of Ruchonnet

U.S. Patent No. 10,870,531	Disclosure
[10.a] providing an apparatus including a barcode reader, the apparatus having a pump and being adapted to supply heated water;	Ruchonnet discloses, either expressly or inherently, providing an apparatus including a barcode reader. *See, e.g.*: *See* [1.a].
[10.b] the apparatus having a pump and being adapted to supply heated water;	Ruchonnet discloses, either expressly or inherently, the apparatus having a pump and being adapted to supply heated water. *See, e.g.*: *See* [1.b].
[10.c] inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity within which a powdered coffee material is located,	Ruchonnet discloses, either expressly or inherently, inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity within which a powdered coffee material is located. *See, e.g.*: *See* [1.c].
[10.d] the base element including a circumferential flange having a top side	Ruchonnet discloses, either expressly or inherently, the base element including a circumferential flange having a top side. *See, e.g.*: *See* [1.d].
[10.e] and a bottom side with a barcode located on the bottom side,	Ruchonnet discloses, either expressly or inherently, a bottom side with a barcode located on the bottom side. *See, e.g.*: *See* [1.e].
[10.f] the portion capsule being free of a filter	Ruchonnet discloses, either expressly or inherently, the portion capsule being free of a filter. *See, e.g.*: *See* [1.i].

K-FEE SYSTEM GMBH, EX2012, page 1696
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
[10.g] and comprising a plurality of ribs that are radially spaced, vertically oriented and extend toward a central portion of the cavity, wherein an outer surface of the base element comprises radially spaced and vertically oriented grooves;	
[10.h] piercing the foil lid;	Ruchonnet discloses, either expressly or inherently, piercing the foil lid. *See, e.g.*: *See* [1.k].
[10.i] reading the barcode with the barcode reader; and	Ruchonnet discloses, either expressly or inherently, .reading the barcode with the barcode reader. *See, e.g.*: *See* [1.l].
[10.j] activating the pump to introduce the heated water into the portion capsule only upon a determination that the read barcode agrees with a stored reference, or not activating the pump upon a determination that the read barcode does not agree with the stored reference.	Ruchonnet discloses, either expressly or inherently, activating the pump to introduce the heated water into the portion capsule only upon a determination that the read barcode agrees with a stored reference, or not activating the pump upon a determination that the read barcode does not agree with the stored reference. *See, e.g.*: *See* [1.m] and [2].
11. The method according to claim 10, wherein the method comprises	

U.S. Patent No. 10,870,531	Disclosure
engaging the portion capsule with a pair of holding arms, and wherein the base element comprises an electrically conductive section.	
[redacted]	
14. The method according to claim 10, wherein the method comprises dropping the portion capsule into a dropping box, wherein the base element and/or the lid are made of metal.	
[redacted]	
[16.pre] The method according to claim 10,	Ruchonnet discloses, either expressly or inherently, the method according to claim 10. *See, e.g.*: *See* [10].
[16.a] wherein the method comprises sealing a seal of the apparatus against the foil lid	Ruchonnet discloses, either expressly or inherently, wherein the method comprises sealing a seal of the apparatus against the foil lid. *See, e.g.*: *See* [5].
[16.b] wherein the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is	Ruchonnet discloses, either expressly or inherently, wherein the wall comprises an upper section and a lower section, the upper section is located adjacent to the flange, and the lower section is located between the upper section and a bottom of the base element. *See, e.g.*: *See* [8.b].

U.S. Patent No. 10,870,531	Disclosure
located between the upper section and a bottom of the base element	
[16.c] wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element.	Ruchonnet discloses, either expressly or inherently, wherein the upper section comprises a circumferential border and the wall of the lower section is angled, with respect to the upper section, and is tapered towards a bottom of the base element. *See, e.g.*: *See* [8.c].

Exhibit C-8 – Invalidity of U.S. Patent No. 10,870,531 in view of Schifferle

INVALIDITY CLAIM CHART
Invalidity of U.S. Patent No. 10,858,531 in view of Schifferle

According to its cover page, U.S. Patent Pub. US2005/0150391A1 ("Schifferle") was published on July 14, 2005 from an application filed on January 13, 2005. Schifferle therefore constitutes prior art under at least pre-AIA 35 U.S.C. § 102(b) to the '531 Patent's PCT filing date. Schifferle anticipates and/or renders obvious the Asserted Claims of the '531 Patent (at least as Nespresso understands K-fee's application of the Asserted Claims in an effort to show infringement).

To the extent K-fee argues that any element below is not disclosed by Schifferle, a person of ordinary skill in the art would have found it obvious to combine the teachings of Schifferle with the background knowledge of a person of ordinary skill in the art and/or the additional references, and exemplary teachings, set forth in the charts in Exhibits C-1 to C-9 and in Appendix C.

The chart below provides representative examples of where each element of each claim is found within Schifferle. Citations are meant to be exemplary, not exhaustive, and Nespresso reserves the right to identify and discuss additional portions of the reference in support of its contentions and/or to rebut arguments made by K-fee. Citations to figures, drawings, tables, and the like include reference to any accompanying or related text. All internal cross references are meant to incorporate the cross-referenced material as if fully set forth therein.

It is Nespresso's position that K-fee's Infringement Contentions have not established that any accused product or service infringes any valid claim. Thus, Nespresso's statements below should not be treated as an admission, implication, or suggestion that Nespresso agrees with K-fee regarding either the scope, construction, or interpretation of any of the Asserted Claims, or the infringement theories advanced by K-fee in its Infringement Contentions, including whether any Asserted Claim satisfies 35 U.S.C. §§ 101 or 112. In certain cases, Nespresso specified non-limiting examples of where its application of the prior art is based on K-fee's apparent application of the claim element. These statements are not intended to suggest that Nespresso agrees with K-fee's application of any claim term, suggest a proposed construction at this stage of the case, or suggest that construction is needed, as the parties are not required to exchange terms for construction or proposed constructions until a later date.

K-fee has yet to identify any limitation of the Asserted Claims that it contends is not anticipated and/or rendered obvious by Schifferle. Nespresso therefore expressly reserves the right to respond to any such contention, including by identifying additional obviousness combinations, if K-fee makes any such contention.

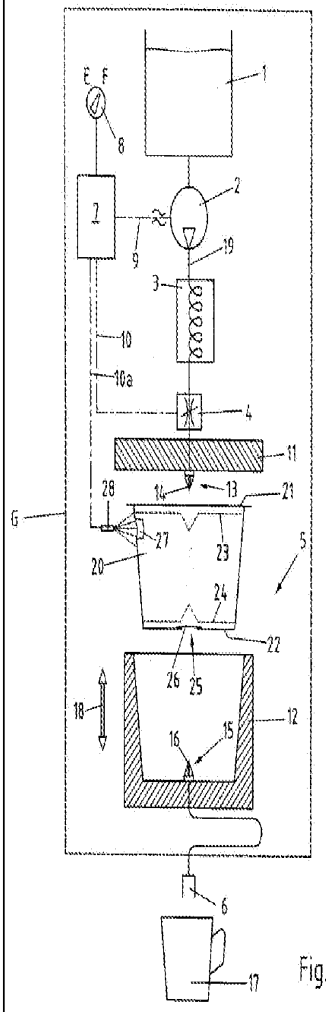
Where Nespresso states that Schifferle "discloses" a limitation, that disclosure may be express, implicit, and/or inherent.

K-FEE SYSTEM GMBH, EX2012, page 1700
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
[1.pre] A method of using a portion capsule for producing a beverage, the method comprising:	Schifferle discloses, either expressly or inherently, a method of using a portion capsule for producing a beverage. *See, e.g.*: Schifferle at Abstract: The coffee maker for brewing powder coffee contained in a cartridge comprises a brewing chamber adapted to receive the cartridge, at least one punching member for punching the cartridge and a pump for feeding brewing water into the brewing chamber. In order to avoid that the prepared coffee shows froth at its surface, the coffee maker comprises means for restricting the amount of water fed by the pump into the brewing chamber per unit of time. This means ensures that the brewing water flows through the cartridge essentially unpressurized. Schifferle at [0001]: The present invention refers to a coffee maker for brewing coffee powder contained in a cartridge, comprising a brewing chamber adapted to receive a coffee powder cartridge, at least one means for punching the coffee powder cartridge, and a pump for feeding hot brewing water into the brewing chamber. Schifferle at [0010]-[0012]: It is an object of the present invention to provide a coffee maker for brewing coffee powder contained in a cartridge by means of which not only an espresso coffee beverage, but also a normal coffee beverage can be prepared, the latter one not having froth on its surface and corresponding in taste to a normal filter coffee. To meet this and other objects, the invention provides a coffee maker for brewing coffee powder contained in a cartridge, comprising a brewing chamber adapted to receive the coffee powder cartridge, at least one means for punching the coffee powder cartridge, and a pump for feeding hot brewing water into the brewing chamber. Further, means are provided for restricting the amount of brewing water fed into the brewing chamber per unit of time to such

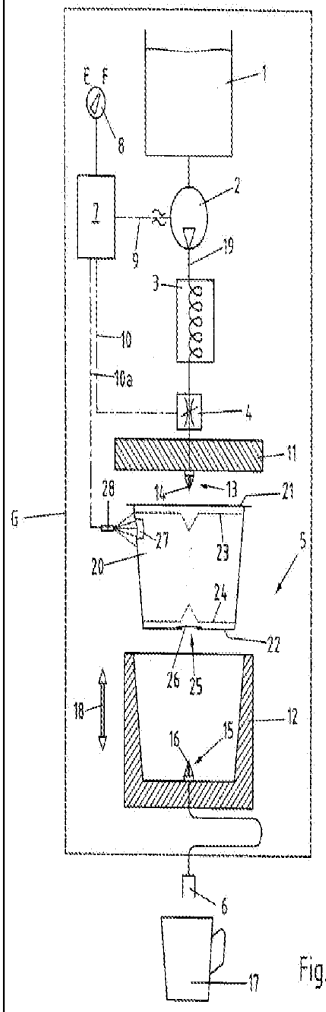
U.S. Patent No. 10,870,531	Disclosure
	an extent that the brewing water flows through the powder coffee cartridge received in the brewing chamber essentially unpressurized. Due to the fact that means are provided for restricting the amount of brewing water fed into the brewing chamber per unit of time to such an extent that the brewing water flows through the powder coffee cartridge received in the brewing chamber essentially unpressurized, the formation of froth on the surface of the coffee beverage can be essentially avoided. Preferably, both the cover and the bottom of the cartridge are punched before the brewing operation is initiated. Schifferle at [0020]-[0021]: The brewing operation using a cartridge designated for preparing a froth-less coffee beverage, a so-called filter coffee, takes place as follows: The selector switch 8 is manually rotated into the position "F" and the cartridge 20 is inserted into the cartridge retainer 12. Then, the retainer 12 is moved upwards towards the closing plate member 11. Upon completion of this upwards movement (see FIG. 2), both the cartridge cover 21 and the bottom 22 of the cartridge 20, i.e. the foil 26, are punched. Once the upper end position is reached, the closing plate member 11 not only closes the brewing chamber 5, but also presses the cartridge cover 21 against the top end face of the cartridge retainer 12 along an annular contact area, thereby hydraulically sealing the upper portion of the cartridge 20 against the bottom 22 of the cartridge 20. As soon as the brewing chamber 5 is closed, the pump 2 is operated. The amount of brewing water fed into the brewing chamber 5 per unit of time is restricted, as compared to the brewing operation of an espresso coffee, to such an extent that the brewing water flows through the cartridge 20 essentially unpessurized. The flow restriction rate is determined either by a pre-selected, stored value or on the basis of a code contained in the label or marking 27 of the cartridge 20. The flow restriction can be realized either by reducing the flow rate of the pump 2 or by adjusting the throttle valve 4. For reducing the flow rate of the pump 2, in the case of an AC operated pump, a phase controlled modulator or a wave packet controller can be used. As an alternative, the operating frequency

U.S. Patent No. 10,870,531	Disclosure
	of the pump 2 can be changed. It is understood that in practice only one of the measures for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time is provided, i.e. either means are provided for reducing the flow rate of the pump 2, or a throttle valve 4 is provided for reducing the effective flow cross sectional area. It is further understood that other means for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time could be provided. Schifferle at [0029]: The coffee maker according to the invention is known under the designation "espresso machine"; it is suitable both for preparing a filter coffee beverage and particularly an espresso coffee beverage. The coffee maker can be designed as a manually operated machine, with a cartridge holder to be manually inserted into the machine, or as a semi- or fully-automatic coffee maker.
[1.a] providing an apparatus including a barcode reader,	Schifferle discloses, either expressly or inherently, providing an apparatus including a barcode reader. *See, e.g.*: Schifferle at Fig. 1:

U.S. Patent No. 10,870,531	Disclosure
	 Fig.1 Schifferle at [0019]: The selector switch 8 serves for selecting the coffee beverage to be prepared. The letter "E" denotes espresso coffee, while the letter "F" denotes filter coffee. The selector switch is electrically connected to the control unit 7. The control unit is operationally connected to the pump 2 via a conductor 9 and to a throttle valve 4 via a conductor 10. The throttle valve is

U.S. Patent No. 10,870,531	Disclosure
	inserted into a brewing water conduit 19 running from the pump 2 to the closing plate member 11. Moreover, there is provided a sensor 28, electrically connected to the control unit 7 by means of a conductor 10 a. The sensor 28 serves for detecting and reading a label or marking 27, provided on the cartridge 20 and containing information about the kind and/or content of the cartridge 20. Such a label or marking 27 can consist, for example, of a barcode printed onto the cartridge 20; however, other kinds of markings are possible, for example in electronic form. It is understood that the sensor 28 and the label or marking 27 are matched to each other to enable the sensor 28 to read the label or marking 28 and to forward the information contained therein to the control unit 7. In the case where exclusively cartridges 20 are used that are provided with such a label or marking 28, the selector switch 8 can be omitted since the kind of cartridge 20 is automatically recognized by the sensor 27, and the control unit, consequently, influences certain operating parameters of the coffee maker, e.g. the delivery rate of the pump 2, the adjustment of the throttle valve 4 et cetera. Schifferle at [0021]: The selector switch 8 is manually rotated into the position "F" and the cartridge 20 is inserted into the cartridge retainer 12. Then, the retainer 12 is moved upwards towards the closing plate member 11. Upon completion of this upwards movement (see FIG. 2), both the cartridge cover 21 and the bottom 22 of the cartridge 20, i.e. the foil 26, are punched. Once the upper end position is reached, the closing plate member 11 not only closes the brewing chamber 5, but also presses the cartridge cover 21 against the top end face of the cartridge retainer 12 along an annular contact area, thereby hydraulically sealing the upper portion of the cartridge 20 against the bottom 22 of the cartridge 20. As soon as the brewing chamber 5 is closed, the pump 2 is operated. The amount of brewing water fed into the brewing chamber 5 per unit of time is restricted, as compared to the brewing operation of an espresso coffee, to such an extent that the brewing water flows through the cartridge 20 essentially unpessurized. The flow restriction rate is determined either by a pre-selected, stored value or on the basis of a code contained in the label or marking 27 of the cartridge 20. The flow restriction can be realized either by reducing the flow rate of the pump 2 or by adjusting the throttle valve 4. For reducing the flow rate of the pump 2, in the case of an AC operated pump, a phase controlled

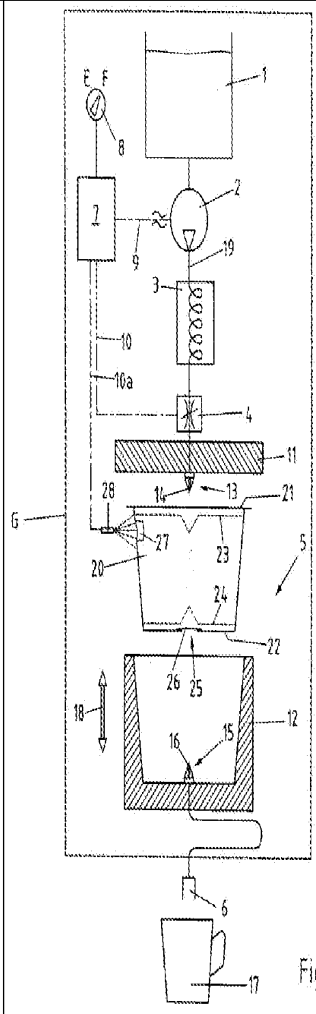
U.S. Patent No. 10,870,531	Disclosure
	modulator or a wave packet controller can be used. As an alternative, the operating frequency of the pump 2 can be changed. It is understood that in practice only one of the measures for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time is provided, i.e. either means are provided for reducing the flow rate of the pump 2, or a throttle valve 4 is provided for reducing the effective flow cross sectional area. It is further understood that other means for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time could be provided. Schifferle at Claim 12.
[1.b] the apparatus including a pump adapted to supply heated water;	Schifferle discloses, either expressly or inherently, the apparatus including a pump adapted to supply heated water. *See, e.g.*: Schifferle at Abstract: The coffee maker for brewing powder coffee contained in a cartridge comprises a brewing chamber adapted to receive the cartridge, at least one punching member for punching the cartridge and a pump for feeding brewing water into the brewing chamber. In order to avoid that the prepared coffee shows froth at its surface, the coffee maker comprises means for restricting the amount of water fed by the pump into the brewing chamber per unit of time. This means ensures that the brewing water flows through the cartridge essentially unpressurized. Schifferle at Fig. 1:

U.S. Patent No. 10,870,531	Disclosure
	 Fig.1 Schifferle at [0001]: The present invention refers to a coffee maker for brewing coffee powder contained in a cartridge, comprising a brewing chamber adapted to receive a coffee powder cartridge, at

U.S. Patent No. 10,870,531	Disclosure
	least one means for punching the coffee powder cartridge, and a pump for feeding hot brewing water into the brewing chamber. Schifferle at [0011]: To meet this and other objects, the invention provides a coffee maker for brewing coffee powder contained in a cartridge, comprising a brewing chamber adapted to receive the coffee powder cartridge, at least one means for punching the coffee powder cartridge, and a pump for feeding hot brewing water into the brewing chamber. Further, means are provided for restricting the amount of brewing water fed into the brewing chamber per unit of time to such an extent that the brewing water flows through the powder coffee cartridge received in the brewing chamber essentially unpressurized. Schifferle at [0016]: Schematically shown in FIGS. 1 and 2 are the essential elements of the coffee maker according to the invention, namely a fresh water tank 1, a pump 2, a boiler 3, a throttle valve 4, a brewing chamber 5, a beverage outlet 6, a control unit 7 and a selector switch 8. All these elements are mounted inside a schematically indicated housing G. Located below the beverage outlet 6, there is shown a coffee mug 17 for receiving the prepared coffee beverage. The cartridge to be put into the brewing chamber 5 and containing ground coffee is designated by reference numeral 20. In the present example, the bottom 22 of the cartridge 20 is provided with an aperture 25 which is covered by a foil 26 provided at the inside of the bottom 22 of the cartridge 20. Since such a cartridge is primarily suitable for preparing filter coffee, it is designated, in the following, as a filter cartridge 20, while a conventional cartridge having a continuous bottom without any opening is designated as an espresso cartridge. Schifferle at [0018]-[0021]: Both the lower surface of the closing plate member 11 and the bottom of the cartridge retainer 12 are provided with a punching member 13 and 15, respectively. Thereby, the upper

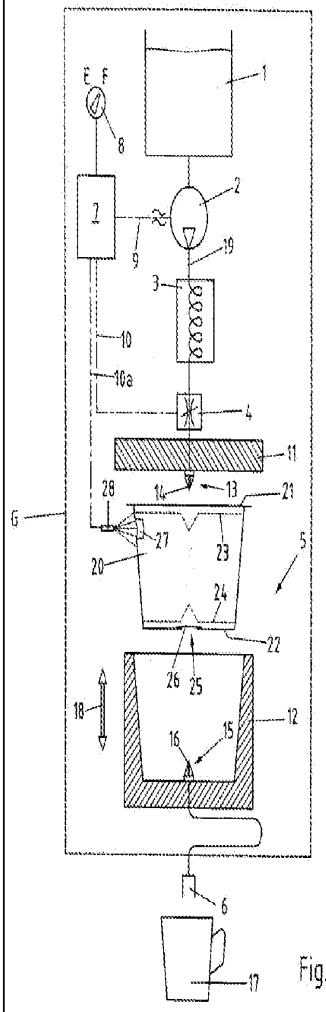
U.S. Patent No. 10,870,531	Disclosure
	punching member 13 serves for punching the cover 21 of the cartridge 20, while the lower punching member 15 serves for punching the bottom 22 of the cartridge 20. Both punching members 13 and 15, respectively, are located centrally on the closing plate member 11 and the bottom of the cartridge retainer 12, respectively. Moreover, both punching members 13 and 15, respectively, comprise a conically shaped front portion comprising a number of slots 14 and 16, respectively, through which the brewing water can flow into the cartridge 20 and the prepared coffee beverage can flow out of the cartridge 20, respectively. The selector switch 8 serves for selecting the coffee beverage to be prepared. The letter "E" denotes espresso coffee, while the letter "F" denotes filter coffee. The selector switch is electrically connected to the control unit 7. The control unit is operationally connected to the pump 2 via a conductor 9 and to a throttle valve 4 via a conductor 10. The throttle valve is inserted into a brewing water conduit 19 running from the pump 2 to the closing plate member 11. Moreover, there is provided a sensor 28, electrically connected to the control unit 7 by means of a conductor 10 a. The sensor 28 serves for detecting and reading a label or marking 27, provided on the cartridge 20 and containing information about the kind and/or content of the cartridge 20. Such a label or marking 27 can consist, for example, of a barcode printed onto the cartridge 20; however, other kinds of markings are possible, for example in electronic form. It is understood that the sensor 28 and the label or marking 27 are matched to each other to enable the sensor 28 to read the label or marking 28 and to forward the information contained therein to the control unit 7. In the case where exclusively cartridges 20 are used that are provided with such a label or marking 28, the selector switch 8 can be omitted since the kind of cartridge 20 is automatically recognized by the sensor 27, and the control unit, consequently, influences certain operating parameters of the coffee maker, e.g. the delivery rate of the pump 2, the adjustment of the throttle valve 4 et cetera. The brewing operation using a cartridge designated for preparing a froth-less coffee beverage, a so-called filter coffee, takes place as follows: The selector switch 8 is manually rotated into the position "F" and the cartridge 20 is inserted into the cartridge retainer 12. Then, the retainer 12 is moved upwards towards the closing

U.S. Patent No. 10,870,531	Disclosure
	plate member 11. Upon completion of this upwards movement (see FIG. 2), both the cartridge cover 21 and the bottom 22 of the cartridge 20, i.e. the foil 26, are punched. Once the upper end position is reached, the closing plate member 11 not only closes the brewing chamber 5, but also presses the cartridge cover 21 against the top end face of the cartridge retainer 12 along an annular contact area, thereby hydraulically sealing the upper portion of the cartridge 20 against the bottom 22 of the cartridge 20. As soon as the brewing chamber 5 is closed, the pump 2 is operated. The amount of brewing water fed into the brewing chamber 5 per unit of time is restricted, as compared to the brewing operation of an espresso coffee, to such an extent that the brewing water flows through the cartridge 20 essentially unpessurized. The flow restriction rate is determined either by a pre-selected, stored value or on the basis of a code contained in the label or marking 27 of the cartridge 20. The flow restriction can be realized either by reducing the flow rate of the pump 2 or by adjusting the throttle valve 4. For reducing the flow rate of the pump 2, in the case of an AC operated pump, a phase controlled modulator or a wave packet controller can be used. As an alternative, the operating frequency of the pump 2 can be changed. It is understood that in practice only one of the measures for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time is provided, i.e. either means are provided for reducing the flow rate of the pump 2, or a throttle valve 4 is provided for reducing the effective flow cross sectional area. It is further understood that other means for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time could be provided. Schifferle at Claim 1.
[1.c] inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity in which a beverage raw material is provided,	Schifferle discloses, either expressly or inherently, inserting the portion capsule into the apparatus, the portion capsule including a foil lid sealed to a base element having a cavity in which a beverage raw material is provided. *See, e.g.*: Schifferle at Fig. 1:

U.S. Patent No. 10,870,531	Disclosure
	 Fig.1 Schifferle at [0016]: Schematically shown in FIGS. 1 and 2 are the essential elements of the coffee maker according to the invention, namely a fresh water tank 1, a pump 2, a boiler 3, a throttle valve

U.S. Patent No. 10,870,531	Disclosure
	4, a brewing chamber 5, a beverage outlet 6, a control unit 7 and a selector switch 8. All these elements are mounted inside a schematically indicated housing G. Located below the beverage outlet 6, there is shown a coffee mug 17 for receiving the prepared coffee beverage. The cartridge to be put into the brewing chamber 5 and containing ground coffee is designated by reference numeral 20. In the present example, the bottom 22 of the cartridge 20 is provided with an aperture 25 which is covered by a foil 26 provided at the inside of the bottom 22 of the cartridge 20. Since such a cartridge is primarily suitable for preparing filter coffee, it is designated, in the following, as a filter cartridge 20, while a conventional cartridge having a continuous bottom without any opening is designated as an espresso cartridge. Schifferle at [0020]-[0021]: The brewing operation using a cartridge designated for preparing a froth-less coffee beverage, a so-called filter coffee, takes place as follows: The selector switch 8 is manually rotated into the position "F" and the cartridge 20 is inserted into the cartridge retainer 12. Then, the retainer 12 is moved upwards towards the closing plate member 11. Upon completion of this upwards movement (see FIG. 2), both the cartridge cover 21 and the bottom 22 of the cartridge 20, i.e. the foil 26, are punched. Once the upper end position is reached, the closing plate member 11 not only closes the brewing chamber 5, but also presses the cartridge cover 21 against the top end face of the cartridge retainer 12 along an annular contact area, thereby hydraulically sealing the upper portion of the cartridge 20 against the bottom 22 of the cartridge 20. As soon as the brewing chamber 5 is closed, the pump 2 is operated. The amount of brewing water fed into the brewing chamber 5 per unit of time is restricted, as compared to the brewing operation of an espresso coffee, to such an extent that the brewing water flows through the cartridge 20 essentially unpessurized. The flow restriction rate is determined either by a pre-selected, stored value or on the basis of a code contained in the label or marking 27 of the cartridge 20. The flow restriction can be realized either by reducing the flow rate of the pump 2 or by adjusting the throttle valve 4. For reducing the flow rate of the pump 2, in the case of an AC operated pump, a phase controlled

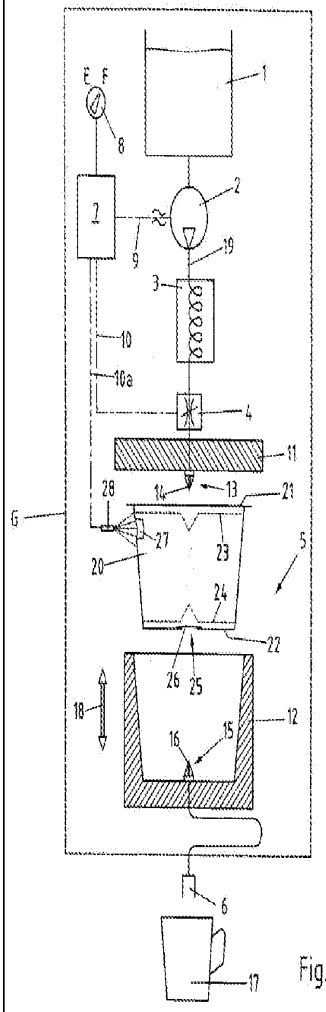
U.S. Patent No. 10,870,531	Disclosure
	modulator or a wave packet controller can be used. As an alternative, the operating frequency of the pump 2 can be changed. It is understood that in practice only one of the measures for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time is provided, i.e. either means are provided for reducing the flow rate of the pump 2, or a throttle valve 4 is provided for reducing the effective flow cross sectional area. It is further understood that other means for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time could be provided. Schifferle at [0024]: As can be further seen in the drawings, the filter cartridge 20 is provided with an upper filter element 23 and a lower filter element 24. Such filter elements 23, 24 favor a consistent flow of the brewing water through the filter cartridge 20 and prevent the coffee powder contained in the cartridge 20 from escaping through the punched out apertures. The filter elements 23, 24 are provided each with a recess directed towards the interior of the cartridge 20 and located in the area where the cover 21 and the bottom 22, respectively, of the cartridge 20 are punched and into which the punching members 13, 15 extend once the cartridge cover 21 and bottom 22 are punched. In order to ensure that the bottom 22 of the cartridge 20 is reliably punched upon closing the brewing chamber 5, a foil 26 is provided which has a low ductility and a low tensile strength as compared to the material of the cartridge itself, such that it easily tears apart under the influence of the lower punching member 15 located at the bottom of the cartridge retainer 12. Schifferle at Claims 13-14.
[1.d] the base element comprising a flange, the flange having a top side to which the foil lid is sealed.	Schifferle discloses, either expressly or inherently, the base element comprising a flange, the flange having a top side to which the foil lid is sealed. *See, e.g.*: Schifferle at Fig. 1:

U.S. Patent No. 10,870,531	Disclosure
	 Fig.1 Schifferle at [0016]: Schematically shown in FIGS. 1 and 2 are the essential elements of the coffee maker according to the invention, namely a fresh water tank 1, a pump 2, a boiler 3, a throttle valve 4, a brewing chamber 5, a beverage outlet 6, a control unit 7 and a selector switch 8. All these elements are mounted inside a schematically indicated housing G. Located below the

U.S. Patent No. 10,870,531	Disclosure
	beverage outlet 6, there is shown a coffee mug 17 for receiving the prepared coffee beverage. The cartridge to be put into the brewing chamber 5 and containing ground coffee is designated by reference numeral 20. In the present example, the bottom 22 of the cartridge 20 is provided with an aperture 25 which is covered by a foil 26 provided at the inside of the bottom 22 of the cartridge 20. Since such a cartridge is primarily suitable for preparing filter coffee, it is designated, in the following, as a filter cartridge 20, while a conventional cartridge having a continuous bottom without any opening is designated as an espresso cartridge. Schifferle at [0018]-[0019]: Both the lower surface of the closing plate member 11 and the bottom of the cartridge retainer 12 are provided with a punching member 13 and 15, respectively. Thereby, the upper punching member 13 serves for punching the cover 21 of the cartridge 20, while the lower punching member 15 serves for punching the bottom 22 of the cartridge 20. Both punching members 13 and 15, respectively, are located centrally on the closing plate member 11 and the bottom of the cartridge retainer 12, respectively. Moreover, both punching members 13 and 15, respectively, comprise a conically shaped front portion comprising a number of slots 14 and 16, respectively, through which the brewing water can flow into the cartridge 20 and the prepared coffee beverage can flow out of the cartridge 20, respectively. The selector switch 8 serves for selecting the coffee beverage to be prepared. The letter “E” denotes espresso coffee, while the letter “F” denotes filter coffee. The selector switch is electrically connected to the control unit 7. The control unit is operationally connected to the pump 2 via a conductor 9 and to a throttle valve 4 via a conductor 10. The throttle valve is inserted into a brewing water conduit 19 running from the pump 2 to the closing plate member 11. Moreover, there is provided a sensor 28, electrically connected to the control unit 7 by means of a conductor 10 a. The sensor 28 serves for detecting and reading a label or marking 27, provided on the cartridge 20 and containing information about the kind and/or content of the cartridge 20. Such a label or marking 27 can consist, for example, of a barcode printed onto the cartridge 20; however, other kinds of markings are possible, for example in

U.S. Patent No. 10,870,531	Disclosure
	electronic form. It is understood that the sensor 28 and the label or marking 27 are matched to each other to enable the sensor 28 to read the label or marking 28 and to forward the information contained therein to the control unit 7. In the case where exclusively cartridges 20 are used that are provided with such a label or marking 28, the selector switch 8 can be omitted since the kind of cartridge 20 is automatically recognized by the sensor 27, and the control unit, consequently, influences certain operating parameters of the coffee maker, e.g. the delivery rate of the pump 2, the adjustment of the throttle valve 4 et cetera. Schifferle at [0021]: The selector switch 8 is manually rotated into the position "F" and the cartridge 20 is inserted into the cartridge retainer 12. Then, the retainer 12 is moved upwards towards the closing plate member 11. Upon completion of this upwards movement (see FIG. 2), both the cartridge cover 21 and the bottom 22 of the cartridge 20, i.e. the foil 26, are punched. Once the upper end position is reached, the closing plate member 11 not only closes the brewing chamber 5, but also presses the cartridge cover 21 against the top end face of the cartridge retainer 12 along an annular contact area, thereby hydraulically sealing the upper portion of the cartridge 20 against the bottom 22 of the cartridge 20. As soon as the brewing chamber 5 is closed, the pump 2 is operated. The amount of brewing water fed into the brewing chamber 5 per unit of time is restricted, as compared to the brewing operation of an espresso coffee, to such an extent that the brewing water flows through the cartridge 20 essentially unpessurized. The flow restriction rate is determined either by a pre-selected, stored value or on the basis of a code contained in the label or marking 27 of the cartridge 20. The flow restriction can be realized either by reducing the flow rate of the pump 2 or by adjusting the throttle valve 4. For reducing the flow rate of the pump 2, in the case of an AC operated pump, a phase controlled modulator or a wave packet controller can be used. As an alternative, the operating frequency of the pump 2 can be changed. It is understood that in practice only one of the measures for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time is provided, i.e. either means are provided for reducing the flow rate of the pump 2, or a throttle valve 4 is provided for reducing the effective flow cross sectional area. It is further

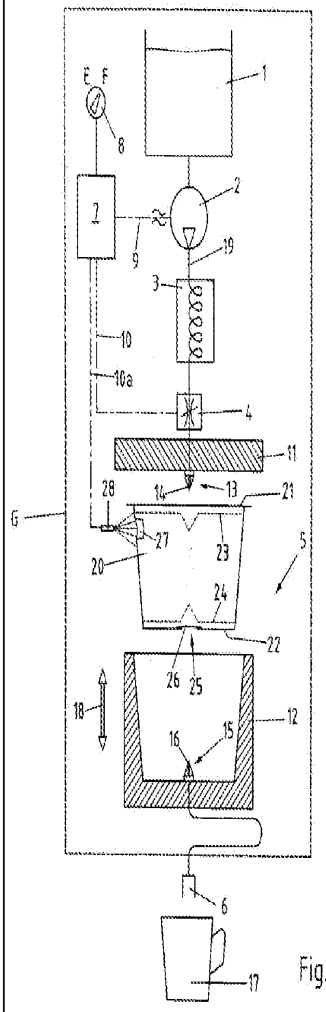
U.S. Patent No. 10,870,531	Disclosure
	understood that other means for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time could be provided. Schifferle at [0024]: As can be further seen in the drawings, the filter cartridge 20 is provided with an upper filter element 23 and a lower filter element 24. Such filter elements 23, 24 favor a consistent flow of the brewing water through the filter cartridge 20 and prevent the coffee powder contained in the cartridge 20 from escaping through the punched out apertures. The filter elements 23, 24 are provided each with a recess directed towards the interior of the cartridge 20 and located in the area where the cover 21 and the bottom 22, respectively, of the cartridge 20 are punched and into which the punching members 13, 15 extend once the cartridge cover 21 and bottom 22 are punched. In order to ensure that the bottom 22 of the cartridge 20 is reliably punched upon closing the brewing chamber 5, a foil 26 is provided which has a low ductility and a low tensile strength as compared to the material of the cartridge itself, such that it easily tears apart under the influence of the lower punching member 15 located at the bottom of the cartridge retainer 12. Schifferle at Claim 3.
[1.e] and an opposing bottom side with a barcode located on the bottom side,	Schifferle discloses, either expressly or inherently, an opposing bottom side with a barcode located on the bottom side. *See, e.g.*: Schifferle at Fig. 1:

U.S. Patent No. 10,870,531	Disclosure
	 Fig.1 Schifferle at [0019]: The selector switch 8 serves for selecting the coffee beverage to be prepared. The letter "E" denotes espresso coffee, while the letter "F" denotes filter coffee. The selector switch is electrically connected to the control unit 7. The control unit is operationally connected to the pump 2 via a conductor 9 and to a throttle valve 4 via a conductor 10. The throttle valve is

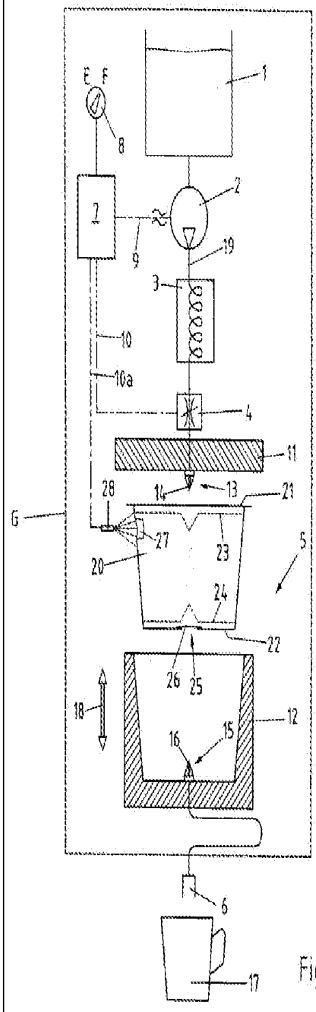
U.S. Patent No. 10,870,531	Disclosure
	inserted into a brewing water conduit 19 running from the pump 2 to the closing plate member 11. Moreover, there is provided a sensor 28, electrically connected to the control unit 7 by means of a conductor 10 a. The sensor 28 serves for detecting and reading a label or marking 27, provided on the cartridge 20 and containing information about the kind and/or content of the cartridge 20. Such a label or marking 27 can consist, for example, of a barcode printed onto the cartridge 20; however, other kinds of markings are possible, for example in electronic form. It is understood that the sensor 28 and the label or marking 27 are matched to each other to enable the sensor 28 to read the label or marking 28 and to forward the information contained therein to the control unit 7. In the case where exclusively cartridges 20 are used that are provided with such a label or marking 28, the selector switch 8 can be omitted since the kind of cartridge 20 is automatically recognized by the sensor 27, and the control unit, consequently, influences certain operating parameters of the coffee maker, e.g. the delivery rate of the pump 2, the adjustment of the throttle valve 4 et cetera. Schifferle at [0021]: The selector switch 8 is manually rotated into the position "F" and the cartridge 20 is inserted into the cartridge retainer 12. Then, the retainer 12 is moved upwards towards the closing plate member 11. Upon completion of this upwards movement (see FIG. 2), both the cartridge cover 21 and the bottom 22 of the cartridge 20, i.e. the foil 26, are punched. Once the upper end position is reached, the closing plate member 11 not only closes the brewing chamber 5, but also presses the cartridge cover 21 against the top end face of the cartridge retainer 12 along an annular contact area, thereby hydraulically sealing the upper portion of the cartridge 20 against the bottom 22 of the cartridge 20. As soon as the brewing chamber 5 is closed, the pump 2 is operated. The amount of brewing water fed into the brewing chamber 5 per unit of time is restricted, as compared to the brewing operation of an espresso coffee, to such an extent that the brewing water flows through the cartridge 20 essentially unpessurized. The flow restriction rate is determined either by a pre-selected, stored value or on the basis of a code contained in the label or marking 27 of the cartridge 20. The flow restriction can be realized either by reducing the flow rate of the pump 2 or by adjusting the throttle valve 4. For reducing the flow rate of the pump 2, in the case of an AC operated pump, a phase controlled

U.S. Patent No. 10,870,531	Disclosure
	modulator or a wave packet controller can be used. As an alternative, the operating frequency of the pump 2 can be changed. It is understood that in practice only one of the measures for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time is provided, i.e. either means are provided for reducing the flow rate of the pump 2, or a throttle valve 4 is provided for reducing the effective flow cross sectional area. It is further understood that other means for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time could be provided. Schifferle at Claim 12.
[1.f] the base element has a wall region with an electrically conductive section	Schifferle discloses, either expressly or inherently, the base element has a wall region with an electrically conductive section. *See, e.g.*: Schifferle at Fig. 1:

K-FEE SYSTEM GMBH, EX2012, page 1720
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
	 Fig.1 Schifferle at [0019]: The selector switch 8 serves for selecting the coffee beverage to be prepared. The letter "E" denotes espresso coffee, while the letter "F" denotes filter coffee. The selector switch is electrically connected to the control unit 7. The control unit is operationally connected to the pump 2 via a conductor 9 and to a throttle valve 4 via a conductor 10. The throttle valve is

U.S. Patent No. 10,870,531	Disclosure
	inserted into a brewing water conduit 19 running from the pump 2 to the closing plate member 11. Moreover, there is provided a sensor 28, electrically connected to the control unit 7 by means of a conductor 10 a. The sensor 28 serves for detecting and reading a label or marking 27, provided on the cartridge 20 and containing information about the kind and/or content of the cartridge 20. Such a label or marking 27 can consist, for example, of a barcode printed onto the cartridge 20; however, other kinds of markings are possible, for example in electronic form. It is understood that the sensor 28 and the label or marking 27 are matched to each other to enable the sensor 28 to read the label or marking 28 and to forward the information contained therein to the control unit 7. In the case where exclusively cartridges 20 are used that are provided with such a label or marking 28, the selector switch 8 can be omitted since the kind of cartridge 20 is automatically recognized by the sensor 27, and the control unit, consequently, influences certain operating parameters of the coffee maker, e.g. the delivery rate of the pump 2, the adjustment of the throttle valve 4 et cetera.
[1.g] and radially spaced and vertically oriented grooves,	
[1.h] the cavity has radially spaced and vertically oriented ribs,	
[1.i] the portion capsule being free of a filter,	Schifferle discloses, either expressly or inherently, the portion capsule being free of a filter. *See, e.g.*: Schifferle at Fig. 1:

U.S. Patent No. 10,870,531	Disclosure
	 Fig.1 Schifferle at [0016]: Schematically shown in FIGS. 1 and 2 are the essential elements of the coffee maker according to the invention, namely a fresh water tank 1, a pump 2, a boiler 3, a throttle valve

U.S. Patent No. 10,870,531	Disclosure
	4, a brewing chamber 5, a beverage outlet 6, a control unit 7 and a selector switch 8. All these elements are mounted inside a schematically indicated housing G. Located below the beverage outlet 6, there is shown a coffee mug 17 for receiving the prepared coffee beverage. The cartridge to be put into the brewing chamber 5 and containing ground coffee is designated by reference numeral 20. In the present example, the bottom 22 of the cartridge 20 is provided with an aperture 25 which is covered by a foil 26 provided at the inside of the bottom 22 of the cartridge 20. Since such a cartridge is primarily suitable for preparing filter coffee, it is designated, in the following, as a filter cartridge 20, while a conventional cartridge having a continuous bottom without any opening is designated as an espresso cartridge. Schifferle at [0020]-[0021]: The brewing operation using a cartridge designated for preparing a froth-less coffee beverage, a so-called filter coffee, takes place as follows: The selector switch 8 is manually rotated into the position "F" and the cartridge 20 is inserted into the cartridge retainer 12. Then, the retainer 12 is moved upwards towards the closing plate member 11. Upon completion of this upwards movement (see FIG. 2), both the cartridge cover 21 and the bottom 22 of the cartridge 20, i.e. the foil 26, are punched. Once the upper end position is reached, the closing plate member 11 not only closes the brewing chamber 5, but also presses the cartridge cover 21 against the top end face of the cartridge retainer 12 along an annular contact area, thereby hydraulically sealing the upper portion of the cartridge 20 against the bottom 22 of the cartridge 20. As soon as the brewing chamber 5 is closed, the pump 2 is operated. The amount of brewing water fed into the brewing chamber 5 per unit of time is restricted, as compared to the brewing operation of an espresso coffee, to such an extent that the brewing water flows through the cartridge 20 essentially unpessurized. The flow restriction rate is determined either by a pre-selected, stored value or on the basis of a code contained in the label or marking 27 of the cartridge 20. The flow restriction can be realized either by reducing the flow rate of the pump 2 or by adjusting the throttle valve 4. For reducing the flow rate of the pump 2, in the case of an AC operated pump, a phase controlled

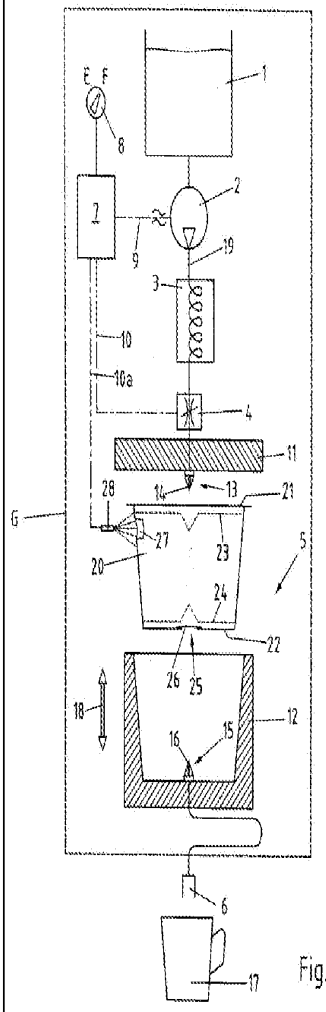
U.S. Patent No. 10,870,531	Disclosure
	modulator or a wave packet controller can be used. As an alternative, the operating frequency of the pump 2 can be changed. It is understood that in practice only one of the measures for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time is provided, i.e. either means are provided for reducing the flow rate of the pump 2, or a throttle valve 4 is provided for reducing the effective flow cross sectional area. It is further understood that other means for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time could be provided. Schifferle at [0024]: As can be further seen in the drawings, the filter cartridge 20 is provided with an upper filter element 23 and a lower filter element 24. Such filter elements 23, 24 favor a consistent flow of the brewing water through the filter cartridge 20 and prevent the coffee powder contained in the cartridge 20 from escaping through the punched out apertures. The filter elements 23, 24 are provided each with a recess directed towards the interior of the cartridge 20 and located in the area where the cover 21 and the bottom 22, respectively, of the cartridge 20 are punched and into which the punching members 13, 15 extend once the cartridge cover 21 and bottom 22 are punched. In order to ensure that the bottom 22 of the cartridge 20 is reliably punched upon closing the brewing chamber 5, a foil 26 is provided which has a low ductility and a low tensile strength as compared to the material of the cartridge itself, such that it easily tears apart under the influence of the lower punching member 15 located at the bottom of the cartridge retainer 12.
[1.j] the base element and/or the lid are made of metal;	
[1.k] piercing the foil lid;	Schifferle discloses, either expressly or inherently, piercing the foil lid. *See, e.g.*: Schifferle at Abstract:

U.S. Patent No. 10,870,531	Disclosure
	The coffee maker for brewing powder coffee contained in a cartridge comprises a brewing chamber adapted to receive the cartridge, at least one punching member for punching the cartridge and a pump for feeding brewing water into the brewing chamber. In order to avoid that the prepared coffee shows froth at its surface, the coffee maker comprises means for restricting the amount of water fed by the pump into the brewing chamber per unit of time. This means ensures that the brewing water flows through the cartridge essentially unpressurized. Schifferle at [0001]: The present invention refers to a coffee maker for brewing coffee powder contained in a cartridge, comprising a brewing chamber adapted to receive a coffee powder cartridge, at least one means for punching the coffee powder cartridge, and a pump for feeding hot brewing water into the brewing chamber. Schifferle at [0011]-[0012]: To meet this and other objects, the invention provides a coffee maker for brewing coffee powder contained in a cartridge, comprising a brewing chamber adapted to receive the coffee powder cartridge, at least one means for punching the coffee powder cartridge, and a pump for feeding hot brewing water into the brewing chamber. Further, means are provided for restricting the amount of brewing water fed into the brewing chamber per unit of time to such an extent that the brewing water flows through the powder coffee cartridge received in the brewing chamber essentially unpressurized. Due to the fact that means are provided for restricting the amount of brewing water fed into the brewing chamber per unit of time to such an extent that the brewing water flows through the powder coffee cartridge received in the brewing chamber essentially unpressurized, the formation of froth on the surface of the coffee beverage can be essentially avoided. Preferably, both the cover and the bottom of the cartridge are punched before the brewing operation is initiated.

U.S. Patent No. 10,870,531	Disclosure
	Schifferle at [0018]: Both the lower surface of the closing plate member 11 and the bottom of the cartridge retainer 12 are provided with a punching member 13 and 15, respectively. Thereby, the upper punching member 13 serves for punching the cover 21 of the cartridge 20, while the lower punching member 15 serves for punching the bottom 22 of the cartridge 20. Both punching members 13 and 15, respectively, are located centrally on the closing plate member 11 and the bottom of the cartridge retainer 12, respectively. Moreover, both punching members 13 and 15, respectively, comprise a conically shaped front portion comprising a number of slots 14 and 16, respectively, through which the brewing water can flow into the cartridge 20 and the prepared coffee beverage can flow out of the cartridge 20, respectively. Schifferle at [0023]-[0024]: Further important is that both the cover 21 of the cartridge 20 and the bottom 22 of the cartridge 20 are punched, i.e. provided with an aperture, before the brewing operation is initiated in order to ensure that no hydraulic pressure build-up can take place, which would lead to the formation of froth in the beverage. As can be further seen in the drawings, the filter cartridge 20 is provided with an upper filter element 23 and a lower filter element 24. Such filter elements 23, 24 favor a consistent flow of the brewing water through the filter cartridge 20 and prevent the coffee powder contained in the cartridge 20 from escaping through the punched out apertures. The filter elements 23, 24 are provided each with a recess directed towards the interior of the cartridge 20 and located in the area where the cover 21 and the bottom 22, respectively, of the cartridge 20 are punched and into which the punching members 13, 15 extend once the cartridge cover 21 and bottom 22 are punched. In order to ensure that the bottom 22 of the cartridge 20 is reliably punched upon closing the brewing chamber 5, a foil 26 is provided which has a low ductility and a low tensile strength as compared to the material of the cartridge itself, such that it easily tears apart under the influence of the lower punching member 15 located at the bottom of the cartridge retainer 12.

U.S. Patent No. 10,870,531	Disclosure
	Schifferle at Claims 1, 4-6.
[1.l] reading the barcode with the barcode reader;	Schifferle discloses, either expressly or inherently, reading the barcode with the barcode reader. *See, e.g.*: Schifferle at Fig. 1:

K-FEE SYSTEM GMBH, EX2012, page 1728
NESPRESSO USA, INC. v. K-FEE SYSTEM GMBH
IPR2023-00485, U.S. PATENT 11,230,430

U.S. Patent No. 10,870,531	Disclosure
	 Fig.1 Schifferle at [0019]: The selector switch 8 serves for selecting the coffee beverage to be prepared. The letter "E" denotes espresso coffee, while the letter "F" denotes filter coffee. The selector switch is electrically connected to the control unit 7. The control unit is operationally connected to the pump 2 via a conductor 9 and to a throttle valve 4 via a conductor 10. The throttle valve is

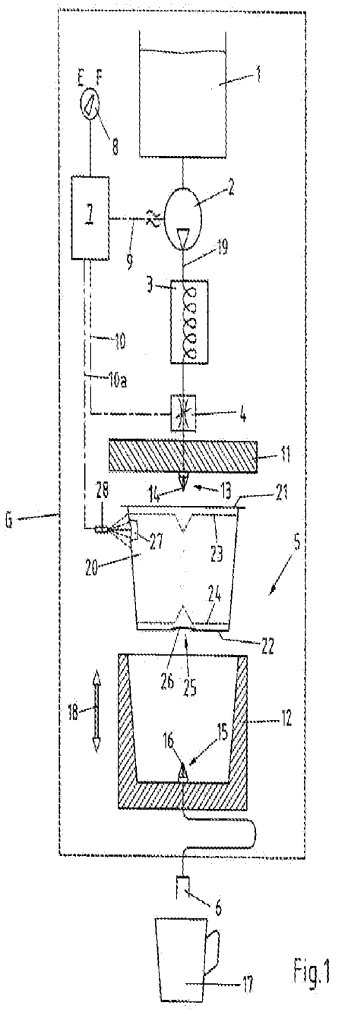
U.S. Patent No. 10,870,531	Disclosure
	inserted into a brewing water conduit 19 running from the pump 2 to the closing plate member 11. Moreover, there is provided a sensor 28, electrically connected to the control unit 7 by means of a conductor 10 a. The sensor 28 serves for detecting and reading a label or marking 27, provided on the cartridge 20 and containing information about the kind and/or content of the cartridge 20. Such a label or marking 27 can consist, for example, of a barcode printed onto the cartridge 20; however, other kinds of markings are possible, for example in electronic form. It is understood that the sensor 28 and the label or marking 27 are matched to each other to enable the sensor 28 to read the label or marking 28 and to forward the information contained therein to the control unit 7. In the case where exclusively cartridges 20 are used that are provided with such a label or marking 28, the selector switch 8 can be omitted since the kind of cartridge 20 is automatically recognized by the sensor 27, and the control unit, consequently, influences certain operating parameters of the coffee maker, e.g. the delivery rate of the pump 2, the adjustment of the throttle valve 4 et cetera. Schifferle at [0021]: The selector switch 8 is manually rotated into the position "F" and the cartridge 20 is inserted into the cartridge retainer 12. Then, the retainer 12 is moved upwards towards the closing plate member 11. Upon completion of this upwards movement (see FIG. 2), both the cartridge cover 21 and the bottom 22 of the cartridge 20, i.e. the foil 26, are punched. Once the upper end position is reached, the closing plate member 11 not only closes the brewing chamber 5, but also presses the cartridge cover 21 against the top end face of the cartridge retainer 12 along an annular contact area, thereby hydraulically sealing the upper portion of the cartridge 20 against the bottom 22 of the cartridge 20. As soon as the brewing chamber 5 is closed, the pump 2 is operated. The amount of brewing water fed into the brewing chamber 5 per unit of time is restricted, as compared to the brewing operation of an espresso coffee, to such an extent that the brewing water flows through the cartridge 20 essentially unpessurized. The flow restriction rate is determined either by a pre-selected, stored value or on the basis of a code contained in the label or marking 27 of the cartridge 20. The flow restriction can be realized either by reducing the flow rate of the pump 2 or by adjusting the throttle valve 4. For reducing the flow rate of the pump 2, in the case of an AC operated pump, a phase controlled

U.S. Patent No. 10,870,531	Disclosure
	modulator or a wave packet controller can be used. As an alternative, the operating frequency of the pump 2 can be changed. It is understood that in practice only one of the measures for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time is provided, i.e. either means are provided for reducing the flow rate of the pump 2, or a throttle valve 4 is provided for reducing the effective flow cross sectional area. It is further understood that other means for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time could be provided. Schifferle at Claim 12.
[1.m] determining whether the read barcode agrees with a stored reference; and activating the pump to push heated water into the portion capsule only upon a determination that the read barcode agrees with the stored reference.	Schifferle discloses, either expressly or inherently, determining whether the read barcode agrees with a stored reference; and activating the pump to push heated water into the portion capsule only upon a determination that the read barcode agrees with the stored reference. *See, e.g.*: Schifferle at [0019]-[0021]: The selector switch 8 serves for selecting the coffee beverage to be prepared. The letter "E" denotes espresso coffee, while the letter "F" denotes filter coffee. The selector switch is electrically connected to the control unit 7. The control unit is operationally connected to the pump 2 via a conductor 9 and to a throttle valve 4 via a conductor 10. The throttle valve is inserted into a brewing water conduit 19 running from the pump 2 to the closing plate member 11. Moreover, there is provided a sensor 28, electrically connected to the control unit 7 by means of a conductor 10 a. The sensor 28 serves for detecting and reading a label or marking 27, provided on the cartridge 20 and containing information about the kind and/or content of the cartridge 20. Such a label or marking 27 can consist, for example, of a barcode printed onto the cartridge 20; however, other kinds of markings are possible, for example in electronic form. It is understood that the sensor 28 and the label or marking 27 are matched to each other to enable the sensor 28 to read the label or marking 28 and to forward the information contained therein to the control unit 7. In the case where exclusively cartridges 20 are used that are provided with such a label or marking 28, the selector switch 8 can be

U.S. Patent No. 10,870,531	Disclosure
	omitted since the kind of cartridge 20 is automatically recognized by the sensor 27, and the control unit, consequently, influences certain operating parameters of the coffee maker, e.g. the delivery rate of the pump 2, the adjustment of the throttle valve 4 et cetera. The brewing operation using a cartridge designated for preparing a froth-less coffee beverage, a so-called filter coffee, takes place as follows: The selector switch 8 is manually rotated into the position "F" and the cartridge 20 is inserted into the cartridge retainer 12. Then, the retainer 12 is moved upwards towards the closing plate member 11. Upon completion of this upwards movement (see FIG. 2), both the cartridge cover 21 and the bottom 22 of the cartridge 20, i.e. the foil 26, are punched. Once the upper end position is reached, the closing plate member 11 not only closes the brewing chamber 5, but also presses the cartridge cover 21 against the top end face of the cartridge retainer 12 along an annular contact area, thereby hydraulically sealing the upper portion of the cartridge 20 against the bottom 22 of the cartridge 20. As soon as the brewing chamber 5 is closed, the pump 2 is operated. The amount of brewing water fed into the brewing chamber 5 per unit of time is restricted, as compared to the brewing operation of an espresso coffee, to such an extent that the brewing water flows through the cartridge 20 essentially unpessurized. The flow restriction rate is determined either by a pre-selected, stored value or on the basis of a code contained in the label or marking 27 of the cartridge 20. The flow restriction can be realized either by reducing the flow rate of the pump 2 or by adjusting the throttle valve 4. For reducing the flow rate of the pump 2, in the case of an AC operated pump, a phase controlled modulator or a wave packet controller can be used. As an alternative, the operating frequency of the pump 2 can be changed. It is understood that in practice only one of the measures for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time is provided, i.e. either means are provided for reducing the flow rate of the pump 2, or a throttle valve 4 is provided for reducing the effective flow cross sectional area. It is further understood that other means for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time could be provided.

U.S. Patent No. 10,870,531	Disclosure
	Schifferle at Claim 12.
[redacted]	
2. The method according to claim 1, wherein the method comprises not activating the pump to push the heated water into the portion capsule upon a determination that the read barcode does not agree with the stored reference.	Schifferle discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises not activating the pump to push the heated water into the portion capsule upon a determination that the read barcode does not agree with the stored reference. *See, e.g.*: Schifferle at [0019]-[0021]: The selector switch 8 serves for selecting the coffee beverage to be prepared. The letter "E" denotes espresso coffee, while the letter "F" denotes filter coffee. The selector switch is electrically connected to the control unit 7. The control unit is operationally connected to the pump 2 via a conductor 9 and to a throttle valve 4 via a conductor 10. The throttle valve is inserted into a brewing water conduit 19 running from the pump 2 to the closing plate member 11. Moreover, there is provided a sensor 28, electrically connected to the control unit 7 by means of a conductor 10 a. The sensor 28 serves for detecting and reading a label or marking 27, provided on the cartridge 20 and containing information about the kind and/or content of the cartridge 20. Such a label or marking 27 can consist, for example, of a barcode printed onto the cartridge 20; however, other kinds of markings are possible, for example in electronic form. It is understood that the sensor 28 and the label or marking 27 are matched to each other to enable the sensor 28 to read the label or marking 28 and to forward the information contained therein to the control unit 7. In the case where exclusively cartridges 20 are used that are provided with such a label or marking 28, the selector switch 8 can be omitted since the kind of cartridge 20 is automatically recognized by the sensor 27, and the control unit, consequently, influences certain operating parameters of the coffee maker, e.g. the delivery rate of the pump 2, the adjustment of the throttle valve 4 et cetera. The brewing operation using a cartridge designated for preparing a froth-less coffee beverage, a so-called filter coffee, takes place as follows:

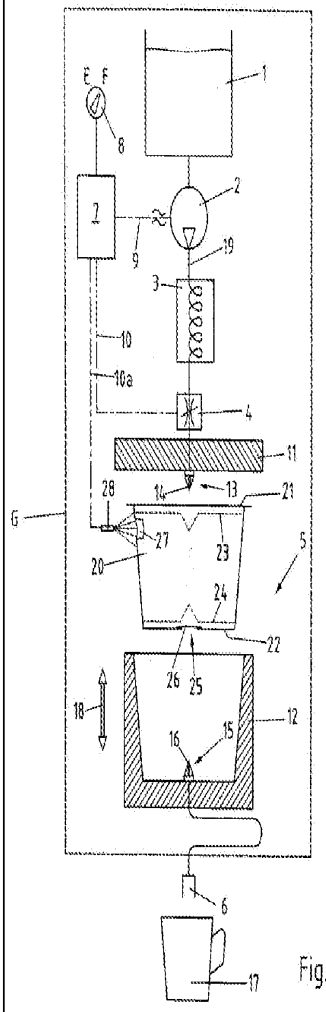
U.S. Patent No. 10,870,531	Disclosure
	The selector switch 8 is manually rotated into the position "F" and the cartridge 20 is inserted into the cartridge retainer 12. Then, the retainer 12 is moved upwards towards the closing plate member 11. Upon completion of this upwards movement (see FIG. 2), both the cartridge cover 21 and the bottom 22 of the cartridge 20, i.e. the foil 26, are punched. Once the upper end position is reached, the closing plate member 11 not only closes the brewing chamber 5, but also presses the cartridge cover 21 against the top end face of the cartridge retainer 12 along an annular contact area, thereby hydraulically sealing the upper portion of the cartridge 20 against the bottom 22 of the cartridge 20. As soon as the brewing chamber 5 is closed, the pump 2 is operated. The amount of brewing water fed into the brewing chamber 5 per unit of time is restricted, as compared to the brewing operation of an espresso coffee, to such an extent that the brewing water flows through the cartridge 20 essentially unpessurized. The flow restriction rate is determined either by a pre-selected, stored value or on the basis of a code contained in the label or marking 27 of the cartridge 20. The flow restriction can be realized either by reducing the flow rate of the pump 2 or by adjusting the throttle valve 4. For reducing the flow rate of the pump 2, in the case of an AC operated pump, a phase controlled modulator or a wave packet controller can be used. As an alternative, the operating frequency of the pump 2 can be changed. It is understood that in practice only one of the measures for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time is provided, i.e. either means are provided for reducing the flow rate of the pump 2, or a throttle valve 4 is provided for reducing the effective flow cross sectional area. It is further understood that other means for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time could be provided. Schifferle at Claim 12. *See also* [1].
[redacted]	

U.S. Patent No. 10,870,531	Disclosure
3. The method according to claim 1, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element and/or the foil lid are made of aluminum.	Schifferle discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises engaging the portion capsule with a pair of holding arms, and wherein the base element and/or the foil lid are made of aluminum. *See, e.g.*: Schifferle at Fig. 1:  Fig.1

U.S. Patent No. 10,870,531	Disclosure
	Schifferle at [0002]-[0003]: Coffee makers of this kind are used predominantly in homes, i.e. are designed for household use. As compared to conventional coffee makers with a grinder for grinding whole coffee beans, a fundamental advantage of the above mentioned coffee maker may be seen in the fact that a qualitatively high grade coffee beverage can be prepared by using pre-packed coffee powder cartridges, the more so as the coffee powder is optimally ground and kept in the cartridge in an airtight manner. Moreover, such coffee makers are less subject to contamination by coffee powder. For brewing the coffee powder contained in the cartridge, either manually operated or semi-automatic as well as fully automatic coffee makers are used. Usually, in a manually operated coffee maker, the cartridge is inserted into a cartridge holder that in turn is inserted into the coffee maker. In the semi-automatic coffee makers, the cartridge is inserted into a cartridge retainer or directly into the brewing chamber of the machine, whereby the brewing chamber is manually closed by means of a central lever mechanism. In a fully automatic coffee maker, however, the cartridge is removed from a cartridge magazine and automatically inserted into the brewing chamber; after the brewing operation, the cartridge is removed from the brewing chamber and discarded into a trash receptacle without any intervention of the operator. Schifferle at [0016]-[0018]: Schematically shown in FIGS. 1 and 2 are the essential elements of the coffee maker according to the invention, namely a fresh water tank 1, a pump 2, a boiler 3, a throttle valve 4, a brewing chamber 5, a beverage outlet 6, a control unit 7 and a selector switch 8. All these elements are mounted inside a schematically indicated housing G. Located below the beverage outlet 6, there is shown a coffee mug 17 for receiving the prepared coffee beverage. The cartridge to be put into the brewing chamber 5 and containing ground coffee is designated by reference numeral 20. In the present example, the bottom 22 of the cartridge 20 is provided with an aperture 25 which is covered by a foil 26 provided at the inside of the bottom 22 of the cartridge 20. Since such a cartridge is primarily suitable for preparing filter

U.S. Patent No. 10,870,531	Disclosure
	coffee, it is designated, in the following, as a filter cartridge 20, while a conventional cartridge having a continuous bottom without any opening is designated as an espresso cartridge. The brewing chamber 5 comprises an upper closing plate member 11 and a lower cartridge retainer 12. The inner contour of the cartridge retainer 12 essentially corresponds to the outer contour of the filter cartridge 20. In the drawings, both the closing plate member 11 and the cartridge retainer 12 are shown in a cross sectional view. The cartridge retainer 12 is movable in vertical direction, as shown by the double-arrow 18. The means for moving the cartridge retainer up and down, as well as possibly provided means for feeding and removing a cartridge, are not shown since the design thereof is well within the skill of a professional person. Both the lower surface of the closing plate member 11 and the bottom of the cartridge retainer 12 are provided with a punching member 13 and 15, respectively. Thereby, the upper punching member 13 serves for punching the cover 21 of the cartridge 20, while the lower punching member 15 serves for punching the bottom 22 of the cartridge 20. Both punching members 13 and 15, respectively, are located centrally on the closing plate member 11 and the bottom of the cartridge retainer 12, respectively. Moreover, both punching members 13 and 15, respectively, comprise a conically shaped front portion comprising a number of slots 14 and 16, respectively, through which the brewing water can flow into the cartridge 20 and the prepared coffee beverage can flow out of the cartridge 20, respectively. Schifferle at [0029]: The coffee maker according to the invention is known under the designation “espresso machine”; it is suitable both for preparing a filter coffee beverage and particularly an espresso coffee beverage. The coffee maker can be designed as a manually operated machine, with a cartridge holder to be manually inserted into the machine, or as a semi- or fully-automatic coffee maker.

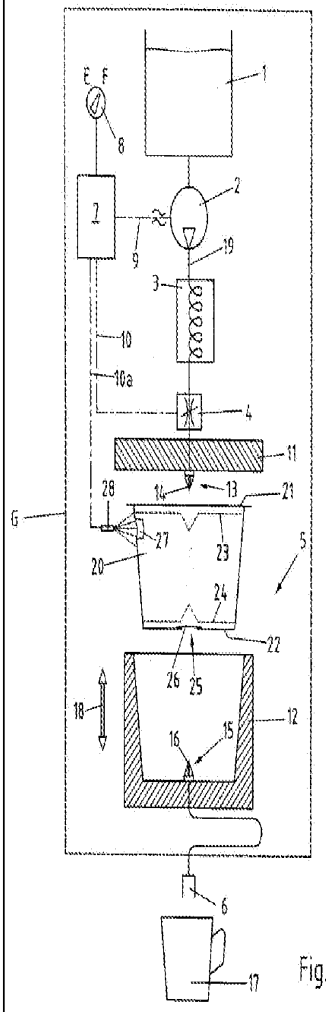
U.S. Patent No. 10,870,531	Disclosure
	See also [1].
[redacted]	
5. The method according to claim 1, wherein the method comprises sealing a seal of the apparatus against the foil lid, and wherein the grooves are free from extending all the way into a region of the base element that is immediately adjacent to the flange.	Schifferle discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises sealing a seal of the apparatus against the foil lid, and wherein the grooves are free from extending all the way into a region of the base element that is immediately adjacent to the flange. *See, e.g.*: Schifferle at Fig. 1:

U.S. Patent No. 10,870,531	Disclosure
	 Fig.1 Schifferle at [0017]-[0018]: The brewing chamber 5 comprises an upper closing plate member 11 and a lower cartridge retainer 12. The inner contour of the cartridge retainer 12 essentially corresponds to the outer contour of the filter cartridge 20. In the drawings, both the closing plate member 11 and the cartridge retainer 12 are shown in a cross sectional view. The cartridge retainer 12 is movable

U.S. Patent No. 10,870,531	Disclosure
	in vertical direction, as shown by the double-arrow 18. The means for moving the cartridge retainer up and down, as well as possibly provided means for feeding and removing a cartridge, are not shown since the design thereof is well within the skill of a professional person. Both the lower surface of the closing plate member 11 and the bottom of the cartridge retainer 12 are provided with a punching member 13 and 15, respectively. Thereby, the upper punching member 13 serves for punching the cover 21 of the cartridge 20, while the lower punching member 15 serves for punching the bottom 22 of the cartridge 20. Both punching members 13 and 15, respectively, are located centrally on the closing plate member 11 and the bottom of the cartridge retainer 12, respectively. Moreover, both punching members 13 and 15, respectively, comprise a conically shaped front portion comprising a number of slots 14 and 16, respectively, through which the brewing water can flow into the cartridge 20 and the prepared coffee beverage can flow out of the cartridge 20, respectively. Schifferle at [0020]-[0021]: The brewing operation using a cartridge designated for preparing a froth-less coffee beverage, a so-called filter coffee, takes place as follows: The selector switch 8 is manually rotated into the position "F" and the cartridge 20 is inserted into the cartridge retainer 12. Then, the retainer 12 is moved upwards towards the closing plate member 11. Upon completion of this upwards movement (see FIG. 2), both the cartridge cover 21 and the bottom 22 of the cartridge 20, i.e. the foil 26, are punched. Once the upper end position is reached, the closing plate member 11 not only closes the brewing chamber 5, but also presses the cartridge cover 21 against the top end face of the cartridge retainer 12 along an annular contact area, thereby hydraulically sealing the upper portion of the cartridge 20 against the bottom 22 of the cartridge 20. As soon as the brewing chamber 5 is closed, the pump 2 is operated. The amount of brewing water fed into the brewing chamber 5 per unit of time is restricted, as compared to the brewing operation of an espresso coffee, to such an extent that the brewing water flows through the cartridge 20 essentially unpessurized. The

U.S. Patent No. 10,870,531	Disclosure
	flow restriction rate is determined either by a pre-selected, stored value or on the basis of a code contained in the label or marking 27 of the cartridge 20. The flow restriction can be realized either by reducing the flow rate of the pump 2 or by adjusting the throttle valve 4. For reducing the flow rate of the pump 2, in the case of an AC operated pump, a phase controlled modulator or a wave packet controller can be used. As an alternative, the operating frequency of the pump 2 can be changed. It is understood that in practice only one of the measures for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time is provided, i.e. either means are provided for reducing the flow rate of the pump 2, or a throttle valve 4 is provided for reducing the effective flow cross sectional area. It is further understood that other means for reducing the flow rate of the brewing water flowing through the brewing chamber 5 per unit of time could be provided. Schifferle at [0025]-[0027]: For preparing a conventional espresso coffee, the selector switch 8 is manually rotated into the position marked "E". In this mode of operation, the brewing water flows through a conventional espresso cartridge under high pressure. In the present case, the expression "espresso coffee" shall mean a coffee beverage that is provided with a froth layer at its top, independent of the amount of brewing water used for preparing the coffee beverage. Preferably, for preparing a filter coffee, different cartridges are used than for preparing espresso coffee. Besides the different design of the bottom of the cartridge, also the coffee powder blend, the amount of coffee powder and/or the degree of grinding can be different. Moreover, in the case of a filter coffee cartridge, the apertures in the filter elements 23, 24 are larger and/or their number is increased, such that these filter elements 23, 24 do not constitute a hydraulic resistance to the brewing water flowing there trough. As an alternative to the embodiment discussed herein before, the coffee maker can incorporate more extensive features: For example, means can be provided to punch the bottom of the cartridge later than the cover of the cartridge, depending on the kind of coffee beverage to be prepared. In case an espresso coffee is to be prepared, the bottom of the

U.S. Patent No. 10,870,531	Disclosure
	espresso cartridge is punched only after a certain hydraulic pressure has been built up in the interior of the cartridge, because this measure favors the formation of froth, as is well known. Alternatively, in the case of an espresso cartridge, its bottom can be punched by the lower punching member in a first phase only partially, i.e. to such an extent that the tip of the punching member just penetrates the bottom of the cartridge, but only so far that the slots 16 of the punching member 15 do not communicate with the interior of the espresso cartridge. In this way, a hydraulic overpressure can be built up in the interior of the espresso cartridge during a first phase of the brewing operation. Schifferle at Claim 11. *See also* [1].
6. The method according to claim 1, wherein the method comprises introducing the heated water into the portion capsule along a central axis of the portion capsule.	Schifferle discloses, either expressly or inherently, the method according to claim 1, wherein the method comprises introducing the heated water into the portion capsule along a central axis of the portion capsule. *See, e.g.*: Schifferle at Abstract: The coffee maker for brewing powder coffee contained in a cartridge comprises a brewing chamber adapted to receive the cartridge, at least one punching member for punching the cartridge and a pump for feeding brewing water into the brewing chamber. In order to avoid that the prepared coffee shows froth at its surface, the coffee maker comprises means for restricting the amount of water fed by the pump into the brewing chamber per unit of time. This means ensures that the brewing water flows through the cartridge essentially unpressurized. Schifferle at Fig. 1:

U.S. Patent No. 10,870,531	Disclosure
	 Fig.1 Schifferle at [0011]: To meet this and other objects, the invention provides a coffee maker for brewing coffee powder contained in a cartridge, comprising a brewing chamber adapted to receive the coffee powder cartridge, at least one means for punching the coffee powder cartridge, and a pump for feeding hot brewing water into the brewing chamber. Further, means are provided for