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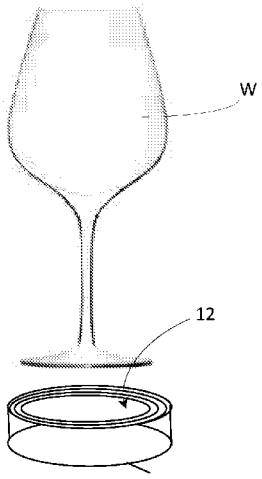
(54) Title: WEIGHT MEASUREMENT DEVICE AND SYSTEM FOR ENABLING THE DETERMINATION AND/OR MONITORING OF ALCOHOL CONSUMPTION

Fig. 3.



(57) Abstract: A weight scale (10) is described that provides the weight of an alcoholic beverage poured into a glass W, via an automatic tare switch (15), to allow subsequent derivation of a number of alcohol units. The weight scale provides a means of sending the weight readings to a computer or smart phone at a later time and/or real- time Bluetooth (or similar) transmission.

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Weight Measurement Device and System for Enabling the Determination and/or Monitoring of Alcohol Consumption

The present invention relates to a weight measurement device, particularly for inclusion in a system for enabling the monitoring of alcohol consumption for an individual.

Background to the Invention

Alcohol Liver Disease (ALD) affects millions of people worldwide. Alcohol consumption is directly associated with liver disease mortality and accounts for elevated social and economic costs. An estimated 1.6 million people in England have some degree of alcohol dependence, and of these some 250,000 are believed to be moderately or severely dependent and require intensive treatment. Alcohol misuse is linked to a range of health disorders including high blood pressure, heart disease, stroke, liver disease, some cancers and depression. There were around 1.2 million alcohol related hospital admissions in England in 2010-11 while close to 15,500 people died from alcohol related causes in 2010.

The single biggest risk factor is the quantity of alcohol ingested, irrespective of the form (i.e. type of beverage) it takes. However, while there is considerable debate as to what constitutes a safe level of alcohol consumption, it is evident that females are more at risk than males at any individual consumption level. Epidemiological data had initially suggested that consumption of greater than 80g of ethanol per day in men and 60g in women, for between 10 and 12 years, is necessary for alcoholic liver damage to occur. However, recently these levels have been questioned, with new figures of anything greater than 40g per day in men and 10–20g per day in women being associated with an increased relative risk of developing liver disease.

The healthcare burden from alcohol-related illness has risen dramatically over the last decade. It is estimated that alcohol related disease costs the National Health Service in England £3.5 billion per year.

System or devices for enabling alcohol intake to be measured or monitored are a possible approach for addressing the general problem of alcohol abuse in society. As such, a number of alcohol monitoring systems exist in the prior art; the majority of which attempt to establish alcohol blood volume or measure alcohol breath volume.

For example, US 2010/0138166 describes an interactive system that calculates an estimated blood alcohol level of the consumer based on alcohol input and compares with alcohol impairment limits retrieved from an electronic data store. Items including food and alcoholic beverages are electronically tagged, e.g. by RF tags, and items that are consumed are recorded centrally. In an attempt to estimate the resultant blood alcohol volume, the consumer is also asked to input their weight, gender, ethnicity and a speech sample.

Based on these inputs, if the comparison to the data store reveals that the consumer might be impaired by alcohol, an alert is automatically signalled.

Alcohol breathalysers (as used in checkpoint testing by police) work on a simple principle, i.e. because the alcohol concentration in the breath is related to that in the blood, it is possible to establish the blood alcohol concentration by measuring alcohol in the breath. The ratio of breath alcohol to blood alcohol is 2,100:1. This means that 2,100 millilitres (mL) of expelled breath will contain the same amount of alcohol as 1 ml of blood.

US2011/00292255 describes various examples of systems configured to determine an amount of alcohol in an alcoholic beverage and the consumption thereof. However, there are limits to its practical implementation as a system easily adopted by members of the general public.

As general background, “units of alcohol” (or “alcohol units”) are a measure of the volume of pure alcohol in an alcoholic beverage. They are used in some countries

as a guideline for alcohol consumption. In the UK, one unit of alcohol is defined as a drink comprising 10mL of ethanol. However, other countries use different definitions.

The number of UK units of alcohol in a drink can be determined by multiplying the volume of the drink (in millilitres) by its percentage alcohol by volume (ABV), and dividing by 1000.

For example, one imperial pint (568 mL) of beer at 4% ABV contains:

(568ml x 4) / 1000 = 2.3 units

When the volume of an alcoholic drink is shown in centilitres, determining the number of units in the drink is derived by: volume (cL) × percentage (as a fraction of 1). Therefore, 75 centilitres of wine (the contents of a standard wine bottle) at 12% ABV contains:

75 x 0.12 = 9 units

Similar formulae exist for the derivation of alcohol units in different countries. The methods and formulae described herein can be extrapolated to derive appropriate methods and formulae to calculate alcohol units as have been determined suitable in other countries.

Summary of the Invention

The present invention seeks to provide a weight measurement device and/or a system incorporating a weight measurement device that enables the consumption of alcoholic beverages to be monitored.

In one broad aspect of the invention there is provided a weight measurement device including a weight measurement means and an automatic tare function.

The device of the invention enables a system and method for recording the number of units of alcohol consumed by an individual. Particularly, in practice, weight readings can be sent to a second device (e.g. a smart phone) by wireless transmission, e.g. Bluetooth or near field communication or can remain stored on the device for later download. The weight readings are converted to volume readings which are subsequently converted to unit of alcohol readings as described below. However, other methods of converting the weight readings to alcohol unit readings may also be used.

According to an aspect of the invention a conversion factor (denoted as "CF") can be used to derive a volume reading from a weight reading. The CFs described herein have been derived by weighing one litre volumes of various alcoholic beverages (tabulated below). For example, a litre of whisky weighs 0.935 kg. By comparison, as is well known, one litre of water weighs 1.0 kg.

Alcohol	**ABV (%)**	**weight (kg) of 1L**	**CF**
Whisky	40	0.935	0.935
Gin	37.5	0.949	0.949
Vodka	37.5	0.949	0.949
Red wine	11	0.980	0.980
Beer	4.6	0.998	0.998

Table 1: Conversion Factors (CF)

By using this technique, it is possible to establish a weight reading for any specific volume of alcoholic beverage. For example, a 500mL volume would weigh 0.467kg. Use of a conversion factor (CF) to derive a volume reading from a weight reading can be achieved with the following formula:

volume of alcoholic beverage = weight of alcohol beverage (g) / CF

Therefore, in the case of whisky (0.935 CF) a 200g weight reading would equate to a 214 mL volume reading, i.e. 200/0.935 = 213.9. This volume reading is then used to establish the number of alcohol units using:

number of alcohol units = (volume of alcoholic drink (ml) x ABV) / 1000

So, in this whisky example of 200g at 40 ABV:

number of units = (214 x 40) / 1000

number of units = 8.56 units.

It is appreciated that Table 1 details only a limited number of alcoholic drinks and that different CFs may exist for different brands of the same type of drink.

Other methods may be used to derive the CF. For example, using the specific gravity of ethanol (0.789) and water (1.0) it is possible to derive a weight of a drink at a particular ABV.

The present invention preferably provides automated recordings of the weight of alcoholic drinks poured into a glass (or similar drinking vessel) and their subsequent conversion to units of alcohol or another useful measure that can be interpreted by a user of the system.

The recording of the weight of an alcoholic beverage also allows the calculation of other useful information such as the total weight of ethanol consumed. Such information can also be used as a means to inform the user of their alcohol consumption.

One embodiment of the device comprises a weight scale attached to the base of a glass. On attachment, the device is switched on and placed on a flat surface such that the tare button is automatically depressed and the weight of the glass is

discounted. Alternatively, the user can manually depress the tare button. In any event, on filling the glass with an alcoholic beverage, the device records the weight of the alcoholic beverage only. A signal corresponding to the weight of the alcoholic beverage is then automatically registered by the device and, directly or optionally, sent to a secondary processor, e.g. a smart phone. Subsequent part-fills or refills of the glass can also be recorded. To allow accurate recordings of subsequent fills the glass must be placed on a surface to enable automatic reset due to depression of the tare button.

A second embodiment of the device comprises a weight scale where the tare button is positioned on top of the device such that its activation occurs upon placement of a glass on top of the device. The glass is then filled with an alcoholic beverage and a weight measure is recorded as described before. Subsequent part-fills or refills of the glass are completed with the glass sitting on the device.

A third embodiment of the device comprises a weight scale attached to the side of the glass for example within a clip-on handle. The tare button is either automatically depressed upon electronic sensing of a weight change of the glass or is manually depressed by the user.

In a second broad aspect of the invention there is provided a system for enabling an intake of alcoholic beverage to be monitored, including:

a weight measurement device;

a processor means;

memory storage means; and

display means; wherein

the weight measurement device is capable of measuring a weight of alcoholic beverage within a vessel and communicating the weight value to the processor means;

the processor means being capable of retrieving data from the memory storage means for a given alcoholic beverage for calculating and displaying a prescribed unit of alcohol for the given alcoholic beverage.

Preferably the data stored by the memory storage device relates to beverage type and/or ABV value, which is selected by the user to be used in conjunction with the measured weight to calculate the prescribed unit of alcohol.

The prescribed unit of alcohol may be a guidance amount or a quantitative value.

The system preferably utilises software to correct for erroneous readings which may occur when the user applies pressure to the glass e.g. otherwise simply pressing on the glass will cause a weight recording.

A first method for correcting user error involves considering the volume of the glass used. For example, a wine glass will typically hold a volume of 500mL corresponding to a maximum weight of 500g. As such, according to a correction method of the invention, any weight over a predefined level is ignored. Typical volumes of glasses used are detailed in table 2 below.

Glass type	Volume (mL)	Corresponding weight (g)
Wine glass 1	564	564
Wine glass 2	500	500
Wine glass 3	220	220
Wine glass 4	526	526
Spirit glass 1	360	360
Spirit glass 2	254	254
Beer glass 1	316	316
Beer glass 2	564	564
Beer glass 3	282	282

Table 2: Examples of volumes of glasses typically used to consume alcohol

A second method of correcting for user error involves considering the rate of the increase in weight applied to the scale. Rate of flow of the alcoholic beverage into a glass is constrained by the laws of physics such that there is a maximum rate at which a glass can be filled. Consequently, a weight increase above this maximum rate cannot be due to the glass being filled with an alcoholic beverage. Such readings can, therefore, be discounted and attributed instead to use error. Typical flow rates of wine into wine glasses are detailed in Table 3 and 4 below. When the measurement significantly exceeds these flow rates then the particular weight reading can be ignored.

Fill rate	Trial 1	Trial 2	Trial 3	Average
Slow fill	134	133	100	122
Normal fill	258	238	272	256
Fast fill	400	423	431	418

Table 3: Volume of fluid (mL) poured at different rates measured over 5 secs

Fill rate	mL/s
Slow fill	24.4
Normal fill	51.2
Fast fill	83.6

Table 4: Average fill rate per second

The system or device may also provide a user override facility such that should a drink not be recorded e.g. when the drink is provided prior to device set-up, then the user can record the drink on the device. Similarly, if the user does not finish their drink then the override facility will allow subtraction of the volume from the final weight reading. This may comprise depressing a 2nd button such that a drink is recorded or subtracted when the user is subsequently prompted to provide details.

Examples of standard measures of alcohol served in UK public houses are detailed in Table 5 and reference to these would be used by the user or the Smartphone App when adding or subtracting additional recordings.

Alcohol	small (mL)	large (mL)
Wine	175	250
Spirit	25	50
Beer/Lager/ Ale (UK)	284	568
Lager (continental)	500	1000
Beer (bottle)	330	660
Alcopops	330	660

Table 5: Standard measures of alcohol served in UK public houses

Weight readings recorded by the device can be processed by a standalone device itself or downloaded using a USB cable connected to a processor device such as a computer or smart phone. Alternatively the readings are sent via bluetooth or similar wireless transmission. Other modes of transferring the data that are known in the art can also be used.

Brief Description of the Drawings

Figure 1 illustrates an overview of a weight measurement device according to a first embodiment of the invention;

Figure 2 illustrates the weight measurement device from Figure 1, viewed from below;

Figure 3 illustrates the weight measurement device in combination with a wine glass;

Figure 4 illustrates an overview of a weight measurement device according to a second embodiment of the invention; and

Figure 5 illustrates the weight measurement device of Figure 4 in combination with a whisky tumbler;

Detailed Description of the Preferred Embodiments

Figure 1 illustrates a first embodiment of weight measurement device 10. Particularly, a weight measurement means (not seen) is incorporated into a base or housing 11 that measures the weight of an item placed on a platform surface 12. The configuration of weight measurement means within the device can be any suitable conventional method known in the art of electronic scales. The device generally only needs to be accurate to within about 1g such that the overall manufacturing cost of the device can be low.

In this first embodiment, an attachment means 13 is included, incorporated into the platform 12, for the purposes of removably attaching a drinking vessel such that the device 10 is generally carried with the vessel (see Figure 3). Attachment means 13 may be a screw thread, rubber sleeve, clip-on, suction cup or an otherwise adhesive surface capable of securely attaching to the base of a vessel. The screw thread may be reducing to account for the different widths of glass bases. For example, a half-turn would attach securely to a wide glass base, with further turning capturing narrower glass bases.

It may be apparent that the thickness of housing 11 as illustrated is exaggerated in the drawings and it may be, in fact, a very thin mat-like construction so long as it is capable of performing the weight measurement function required by the invention.

On an underside surface 14 of the device a tare means 15 is provided that is capable of “zero-ing” the weight measurement when a vessel + device is placed on a flat surface, e.g. table top. In the illustrated embodiment, the tare means includes an arm 16 extending from an electronic switch (15) that is activated when the weight of the vessel + device compresses arm 16 against the underside surface 14.

Accordingly, when a beverage is poured into the vessel (wine glass W shown in Figure 3) with the device located on a flat surface, the weight of the beverage only is registered.

Weight measurements may be stored in a memory on board the device 10 or communicated directly to a secondary processor for storage.

As mentioned, preferably the weight measurements are subsequently converted to an alcohol unit recorder using, in the case of a smart phone, an App or similar. A computer program may instead be used to interrogate the weight measurements on a personal computer. The weight reading is typically provided in grams (g). For example, a weight of wine will be converted using the appropriate CF to a volume reading. Other formulas exist, but using the following formula the number of alcohol units is derived:

Alcohol units = (volume of alcohol x ABV) / 1000

where ABV is the alcohol by volume (%)

Once a user has specified which type of alcoholic beverage has been consumed, e.g. by selection from a list, the App can deduce the number of units of alcohol per part-fill or refill and provides a cumulative reading over the duration of the recorded event.

In a usage situation where a bottle of wine is shared by a number of individuals over the period of an evening, a device 10 is switched on and, by the use of Bluetooth or equivalent wireless technology, the user pairs their smart phone with the device. Alternatively, the weight readings are stored on the device for subsequent download by the user. The user pours their first drink into the glass and the weight reading is recorded. The recorded weight is taken when, by way of example, the rate of increase in weight has reduced to zero for at least 1 second, preferably 2 seconds. The user then drinks a quantity from their glass and places the glass on the table.

On placement on the table, the tare means 15 activates and the weight scale is zeroed.

A second quantity of alcohol is then poured into the glass and this new weight reading is recorded. The user then drinks a further quantity from their glass and the weight recording process is repeated. As long as the user finishes all the alcohol in their glass then an accurate reading of number of alcohol units consumed can be derived. If necessary, the override facility described previously can correct for any alcohol that is not consumed by the user or is consumed but not recorded.

In an alternative usage situation, the user chooses to drink alcohol with a mixing drink. The user places his glass on the device as shown in Figure 4 and 5 and fills with alcohol e.g. Vodka. The user then removes his glass from the device and then fills with the mixer. The device will record only the weight of the alcohol.

According to Figures 4 and 5 (a variation on the embodiment illustrated by Figures 1 to 3), the device 10 is in the form of a base 11 to remain separate from a drinking vessel, e.g. whisky tumbler T. As shown, the tare means 15 and extending arm 16 is located on the upper surface to contact with and be activated by the base of vessel T when it is placed thereon.

In a further example, the user chooses to drink a carbonated alcohol drink such as beer, ale, lager or cider. Generally, these are poured into a glass when the glass is held at an angle. To allow accurate weight recordings, the weight scale may be located within a handle that can be attached to the glass, for example by a mechanism shown in Figure 6 wherein weight is measured on a tilt.

In the case of operating the system by pairing a smartphone application with the device, the App requests details of the ABV of the drink to be consumed and, optionally, the type of drink e.g. wine. If the type of drink is provided then the user error facility described above can be effective. For example, if the drink chosen is wine, then error readings utilising information from table 2 and table 4 may be used. If the weight readings are to be downloaded at a later stage, then the user will be

prompted to enter the type of drink during the recording event or subsequently when downloading.

The App can provide an alarm signal e.g. by means of the smart phone vibrating or ringing when the user reaches a predefined number of alcohol units consumed over a predefined time period. This may be useful to inform the user of their sobriety and consequently their likely inability to perform certain tasks e.g. operate machinery. The App can also provide an alarm signal when the weight measurement device goes out of wireless range, e.g. if the pairing between device and smartphone is broken. This situation may occur, for example, when the device is left behind or taken by a third party. The same or similar App may also allow pairing between other wireless devices and similarly provide an alarm signal when the wireless signal is broken or otherwise out of range. Such an application is useful in the event that one device (e.g. the weight scale of the invention or a tablet computer etc) is left behind, e.g. in a bar or on public transport etc, by a user carrying another device which is less likely to be left behind, e.g. a smart phone.

The App can utilise collected data to populate a calendar or create a spreadsheet/ graph etc of the number of alcohol units consumed over a day/ week/ month/ year. The user can then use this information as a means to encourage their reduction in consumption of alcohol or provide reassurance that their alcohol intake remains within healthy guidelines.

It will be apparent that the embodiment of the automatic tare means may take several forms not necessarily requiring an extending arm 16. It could be a depressible button or any equivalent electronic sensor.

The overall functionality of the system can be incorporated into a standalone unit with additional display and processing capabilities, however, the likely most practical form of the invention is as a combination of components, e.g. a smartphone loaded with a suitable application or computer software performing an equivalent function. Data collected by the system can be reviewed by a health professional to, hopefully, provide a more accurate representation of a person's drinking habits.

Claims:

1. A system for enabling an intake of alcoholic beverage to be monitored, including:

a weight measurement means; and

a processor means; wherein

the weight measurement means is capable of measuring a weight of alcoholic beverage within a vessel and communicating a weight value to the processor means;

the processor means being capable of calculating a prescribed unit of alcohol based on alcoholic beverage information that is provided to the processor means.

2. The system of claim 1 wherein the weight measurement means includes an automatic tare function enabling the capability to measure a weight of alcoholic beverage independent of a weight of the vessel.

3. The system of claim 2 wherein the weight measurement means is incorporated into a platform attachable or contactable with the vessel, and wherein the automatic tare function is enabled by a switch located on a topside vessel-facing or underside facing-away-from-the-vessel of the platform.

4. The system of any preceding claim wherein the alcoholic beverage information is inputted by a user or retrieved from storage and includes ABV, beverage type and/or a set of conversion factors enabling conversion of a weight measurement to a volume by the following equation:

volume of alcoholic beverage = weight of alcohol beverage / Conversion Factor

5. The system of claim 4 wherein the processor further calculates a number of alcohol units by the following equation:

number of alcohol units = (volume of alcoholic drink x ABV) / 1000

6. The system of any preceding claim wherein the processor is located in a smartphone or personal computer, further including data storage and display means.

7. The system of claim 6 wherein communication between the weight measurement means and smartphone or computer is via a wireless transmission link.

8. The system of claim 7 wherein an alert is indicated by the processor in the event that the wireless transmission link is broken.

9. The system of any preceding claim further including an error correction function to discount impossible or unlikely measurements of the alcoholic beverage weight.

10. The system of claim 9 wherein the error correction function involves determination by the processor that a maximum weight of a beverage in a vessel, as measured by the weight measurement means, has been exceeded.

11. The system of claim 9 wherein the error correction function involves determination by the processor that a maximum flow rate of a beverage into a vessel has been exceeded, as defined by weight measured by the weight measurement means in a predetermined time.

12. The system according to any preceding claims wherein the weight measurement means and processor means are incorporated into a single device.

13. A device including a housing incorporating a weight measurement means capable of measuring a weight of alcoholic beverage within a vessel and communicating a weight value to a processor means.

14. The device of claim 13 wherein the weight measurement means includes an automatic tare function.

15. The device of claim 14 wherein the housing includes outer walls with at least one outer wall attachable or contactable to a vessel, and wherein the automatic tare function is enabled by a switch located on either the outer wall attachable or contactable to the vessel or an outer wall facing away from the vessel in use.

16. A system for monitoring a wireless connection between at least a first and second device, wherein:

the first device is able to establish a wireless connection with the second device and, in the event that the wireless connection is broken or interrupted, the first device indicates an alert to a user.

17. The system of claim 16 wherein the alert is audible, visual or kinaesthetic.

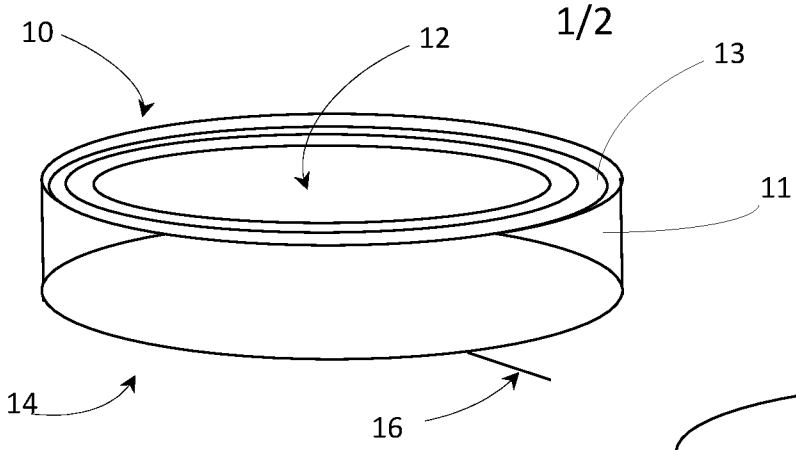

Fig. 1.

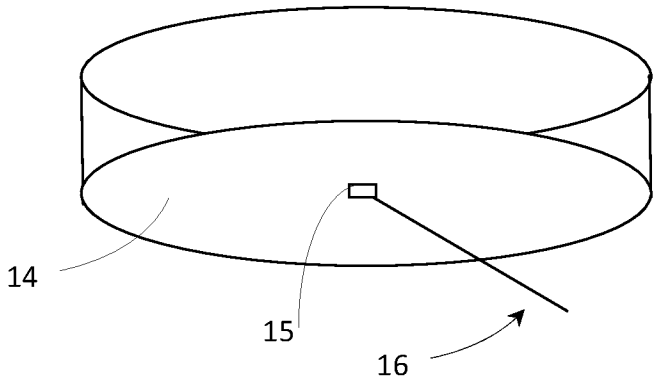

Fig. 2.

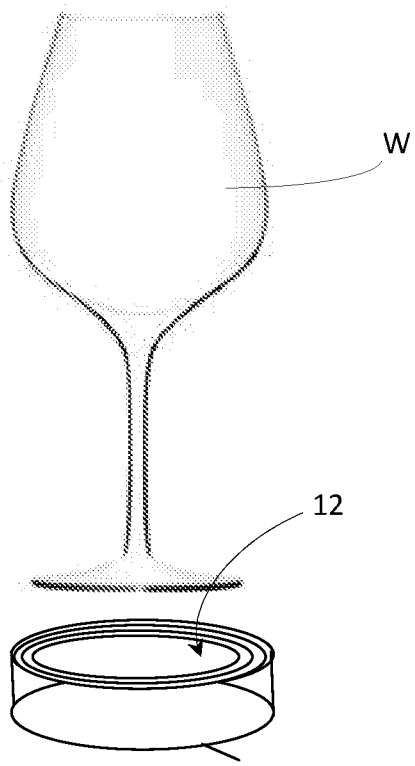

Fig. 3.

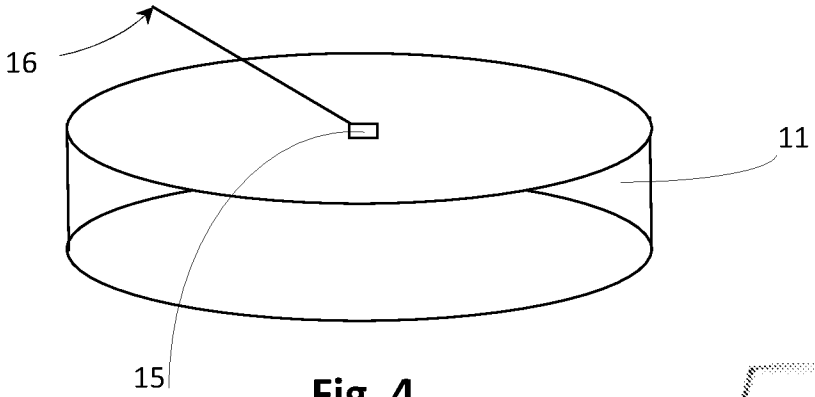

Fig. 4.

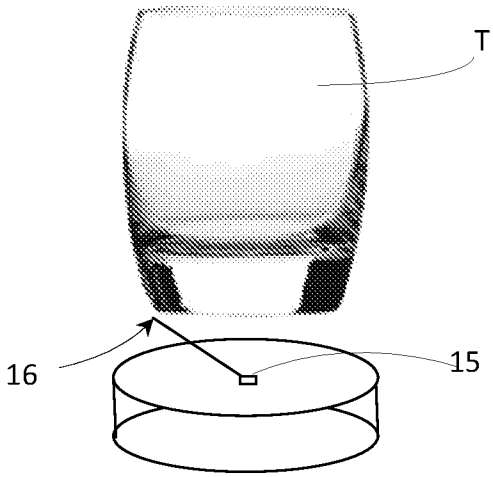

Fig. 5.

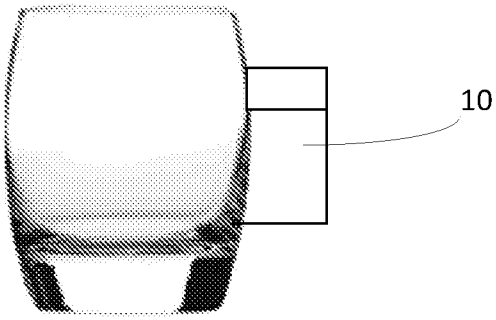

Fig. 6.

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2014/050827

A. CLASSIFICATION OF SUBJECT MATTER
INV. G01G19/415 G01G19/52 G01G23/16 A47G19/22 A47G23/03
G01N33/14 G01G17/04 G01G23/14
ADD. G01G19/56 G01G21/22 G01G23/37
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
G01G A47G G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011/029255 A1 (HYDE RODERICK A [US] ET AL) 3 February 2011 (2011-02-03) cited in the application paragraph [0016] paragraph [0023] - paragraph [0029] paragraph [0048] - paragraph [0063] figures 1A, 2A	1-15
A	DE 20 2012 004809 U1 (FRICK ALBERT [LI]) 27 July 2012 (2012-07-27) paragraph [0007] - paragraph [0011] paragraph [0034] - paragraph [0042] figure 2	2,3,14, 15

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
30 April 2014	12/05/2014

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Koch, Florian

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB2014/050827

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☒ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2014/050827

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011/021147 A1 (TOUT WALID R [US]) 27 January 2011 (2011-01-27) paragraph [0003] paragraph [0010] - paragraph [0011] paragraph [0021] paragraph [0028] - paragraph [0033] figures 2, 3 -----	16,17

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/GB2014/050827

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2011029255 A1	03-02-2011	US 2011029255 A1	03-02-2011
		US 2013151168 A1	13-06-2013
		US 2013151169 A1	13-06-2013
DE 202012004809 U1	27-07-2012	AT 13151 U1	15-07-2013
		CH 705010 A2	30-11-2012
		DE 202012004809 U1	27-07-2012
US 2011021147 A1	27-01-2011	NONE	

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-17

A system for enabling an intake of alcoholic beverage to be monitored

1.1. claims: 16, 17

A system for monitoring a wireless connection between at least a first and a second device.
