(54) Title: IMPROVEMENTS RELATING TO BEVERAGE DISPENSERS

A concertina bellows (1) is raised and lowered to draw in water through an inlet (8) to pass through a tea-bag (34). As the bellows is compressed the extract is drawn out again through the tea-bag and is ejected through an outlet (10) to a cup. A further tea-bag (38) can then be indexed along for a similar procedure to take place. The bellows (1) can be replaced with a piston and cylinder unit.
### FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

<table>
<thead>
<tr>
<th>Code</th>
<th>Country</th>
<th>Code</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT</td>
<td>Austria</td>
<td>FR</td>
<td>France</td>
</tr>
<tr>
<td>AU</td>
<td>Australia</td>
<td>GA</td>
<td>Gabon</td>
</tr>
<tr>
<td>BB</td>
<td>Barbados</td>
<td>GB</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>BE</td>
<td>Belgium</td>
<td>GN</td>
<td>Guinea</td>
</tr>
<tr>
<td>BF</td>
<td>Burkina Faso</td>
<td>GR</td>
<td>Greece</td>
</tr>
<tr>
<td>BG</td>
<td>Bulgaria</td>
<td>HU</td>
<td>Hungary</td>
</tr>
<tr>
<td>BJ</td>
<td>Benin</td>
<td>IE</td>
<td>Ireland</td>
</tr>
<tr>
<td>BR</td>
<td>Brazil</td>
<td>IT</td>
<td>Italy</td>
</tr>
<tr>
<td>CA</td>
<td>Canada</td>
<td>JP</td>
<td>Japan</td>
</tr>
<tr>
<td>CF</td>
<td>Central African Republic</td>
<td>KP</td>
<td>Democratic People's Republic of Korea</td>
</tr>
<tr>
<td>CG</td>
<td>Congo</td>
<td>CR</td>
<td>Croatia</td>
</tr>
<tr>
<td>CH</td>
<td>Switzerland</td>
<td>CZ</td>
<td>Czech Republic</td>
</tr>
<tr>
<td>CI</td>
<td>Côte d'Ivoire</td>
<td>DE</td>
<td>Germany</td>
</tr>
<tr>
<td>CM</td>
<td>Cameroon</td>
<td>DK</td>
<td>Denmark</td>
</tr>
<tr>
<td>CS</td>
<td>Czechoslovakia</td>
<td>ES</td>
<td>Spain</td>
</tr>
<tr>
<td>CZ</td>
<td>Czech Republic</td>
<td>FI</td>
<td>Finland</td>
</tr>
<tr>
<td>DE</td>
<td>Germany</td>
<td>FR</td>
<td>France</td>
</tr>
<tr>
<td>DN</td>
<td>Democratic People's Republic of Korea</td>
<td>GB</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>FI</td>
<td>Finland</td>
<td>GN</td>
<td>Guinea</td>
</tr>
<tr>
<td>FR</td>
<td>France</td>
<td>GR</td>
<td>Greece</td>
</tr>
<tr>
<td>GG</td>
<td>Guernsey</td>
<td>HU</td>
<td>Hungary</td>
</tr>
<tr>
<td>IE</td>
<td>Ireland</td>
<td>IT</td>
<td>Italy</td>
</tr>
<tr>
<td>JP</td>
<td>Japan</td>
<td>KP</td>
<td>Democratic People's Republic of Korea</td>
</tr>
<tr>
<td>KR</td>
<td>Republic of Korea</td>
<td>KZ</td>
<td>Kazakhstan</td>
</tr>
<tr>
<td>LK</td>
<td>Sri Lanka</td>
<td>LU</td>
<td>Luxembourg</td>
</tr>
<tr>
<td>MC</td>
<td>Monaco</td>
<td>MG</td>
<td>Madagascar</td>
</tr>
<tr>
<td>MI</td>
<td>Mali</td>
<td>MN</td>
<td>Mongolia</td>
</tr>
<tr>
<td>MR</td>
<td>Mauritania</td>
<td>MW</td>
<td>Malawi</td>
</tr>
<tr>
<td>NL</td>
<td>Netherlands</td>
<td>NO</td>
<td>Norway</td>
</tr>
<tr>
<td>NZ</td>
<td>New Zealand</td>
<td>PL</td>
<td>Poland</td>
</tr>
<tr>
<td>PT</td>
<td>Portugal</td>
<td>RO</td>
<td>Romania</td>
</tr>
<tr>
<td>RU</td>
<td>Russian Federation</td>
<td>SD</td>
<td>Sudan</td>
</tr>
<tr>
<td>SE</td>
<td>Sweden</td>
<td>SK</td>
<td>Slovak Republic</td>
</tr>
<tr>
<td>SN</td>
<td>Senegal</td>
<td>SU</td>
<td>Soviet Union</td>
</tr>
<tr>
<td>TD</td>
<td>Chad</td>
<td>TG</td>
<td>Togo</td>
</tr>
<tr>
<td>UA</td>
<td>Ukraine</td>
<td>US</td>
<td>United States of America</td>
</tr>
<tr>
<td>VN</td>
<td>Viet Nam</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
"Improvements relating to Beverage Dispensers"

This invention relates to beverage dispensers and in particular to an infusible product brewing dispenser.

In recent years, the common sight of the tea lady has all but disappeared in factories and offices throughout the country. This has been brought about by the introduction of vending machines which offer a wide range of snacks such as, chocolate bars, crisps, etc. and also by the introduction of beverage dispensers, whether they be vending machines or not.

Such beverage dispensers offer a wide range of hot and cold drinks and are viewed upon as being very convenient, since they are able to dispense drinks immediately and may operate 24 hours a day. Another factor is the ease by which they may be operated and maintained. The beverage dispensers are self-contained units with the only requirement being a supply of diluent, typically water, and the need for supplies, such as drink ingredients and plastic cups, to be replenished at frequent intervals. One of the problems, which is well known, with such beverage dispensers is the poor quality of drinks which are often dispensed, and reasons for this will be explained later.

Conventional infusible product dispensers, for example tea and coffee dispensers, use a one-pass extraction process, i.e. water is mixed with the infusible product and the extract then passes out through the infusible product so
as to extract further flavour from the infusible product before being dispensed into a cup.

As such systems largely expose the infusible ingredient to extracted liquor to brew, for example, the tea or coffee, it is necessary to use sufficient of the tea or coffee to provide a finished product of sufficient strength of flavour as a high concentration gradient is not maintained during this extraction process. As a result high residence times are necessary and in practice, finely divided infusible products associated with small pore filters, either in the form of paper or stainless steel, are used. As a consequence of the use of finely divided ingredients and small pore filters of relatively small surface area, it is necessary to use high filtration pressures to ensure that the flow rate is of an acceptable level.

Disadvantages of the conventional method are that as the beverage is created by a single pass under pressure of the extracted liquor through the infusible product, high quality beverages are not always obtained. Also the use of high pressure to force the water through the ingredients and the filter, usually at high temperature, is undesirable. The known dispensers also tend to be complex and expensive.

The present invention seeks to alleviate the above problems associated with conventional infusion product brewing dispensers.

In accordance with the present invention, there is provided a brewing dispenser which comprises support means to hold a filter pouch containing an infusible product, and
flushing means for passing a quantity of water to make a beverage through the said filter pouch.

Conventional systems have been unable to use linked paper filter bags containing an infusible product such as tea or coffee bags, because of the problems of liquid migration through the filter paper together with poor extraction rates. Such systems have a number of problems associated with them, namely hygiene, portion control and speed of extraction which leads inevitably to the impairment of the quality of the product.

The invention also extends to a method for brewing an infusible product, comprising positioning a filter pouch containing an infusible product within a holder and using flushing means to pass a quantity of water to make a beverage through the said filter pouch.

Preferably, the flushing means is pump means, for example a concertina or piston and cylinder device, utilized to draw water into the pump and then force or push the liquid back through the infusible product in the filter pouch. Clearly, when water is drawn through the infusible product in this way a high concentration gradient is maintained during this part of the cycle allowing shorter residence times, larger particles of infusible product, coarser filters and lower pressures to push the liquor back through the infusible product. Ideally, the inlet and outlet passageways for the water incorporate respective non-return valves. Whilst the system can be operated so that the water is passed only once through the infusible product
it may be preferable for the pump to operate as a dual-pass system to pass the water through the filter pouch as it is drawn into the pump. By suitable designing or the system the pump can act as a metering device to determine the amount of dispensed beverage.

The filter pouch can be a closed bag of filter material incorporating the infusible product. As an alternative, the filter pouch can be in the form of a perforated region (ideally a recess) in a feed belt or in a reciprocatable member with a separate associated filter membrane being provided as part of the overall arrangement defining the pouch. In this arrangement the filter pouch could be defined by sheets of filter material enclosing a charge of infusible product positioned above said perforated region.

The separate filter membrane may be attached to a part of the adjacent portion of the flushing means. Alternatively, it may be a separate disposable element which co-operates with the adjacent portions of the flushing means and the reciprocatable member.

Advantageously, indexing means is provided for moving a new filter pouch into position on the support means after dispensing of a beverage through a previous filter pouch. In such a structure a camming arrangement may be provided for creating sequential operation of the indexing means for positioning a filter pouch in position on the support means and operation of the flushing means prior to the next operation of the indexing means to position a new filter pouch in the support means. The system can be designed most
advantageously so that a single drive mechanism operates to
control the functions of ingredient feeding, operational
timing and metering of the amount of dispensed beverage.

In accordance with a further aspect of the present
invention, there is provided a web comprising or
incorporating water-pervious material defining windows in
the form of regularly-spaced filter pouches in the same
plane as the web, and each enclosing a charge of an
infusable product, the web being provided with a plurality
of regularly spaced apart slots or other indexing means,
whereby the web can be advanced and its position detected,
and/or having bands of water-impervious material between
and/or around the pouches to isolate them from each other.

Preferably, the said filter pouches are formed from
filter paper. Alternatively, porous sections can be
isolated by impregnating the filter paper strip with a non-
porous flexible material in those areas where liquid
conductivity is not desired and where sealing engagement is
required. The flexible material can be a non-toxic flexible
plastics material, providing a latex-like seal, for example
suitable vinyl copolymers. Another alternative is to modify
the normal process by which ingredient filter bags are made
by widening or proliferating the heat sealed areas
surrounding the porous ingredient section thereby providing
non-water-conducting bands between porous areas and also
providing an area to which the pump components can seal.

As an alternative to infusable product the pouches may
instead contain prepacked portions of "instant" or soluble
ingredients affording the advantage of portion control at
the packaging factory and easier ingredient handling.

The invention may be performed in various ways and
preferred embodiments thereof will now be described, by way
of example, with reference to the accompanying drawings, in
which:-

Figure 1 illustrates diagrammatically and in sectional
side views, part of a beverage dispenser of the present
invention;

Figure 2 illustrates, in greater detail and in plan, a
section of a web shown in Figure 1;

Figure 3 is a section through a detail of a modifica-
tion of the construction shown in Figure 1;

Figures 4 and 5 are side and end views respectively of
a portion of an alternative form of beverage dispenser of
this invention;

Figures 6 and 7 are front and side views respectively
of an alternative drive mechanism to that shown in Figure 4;

Figure 8 is a part-sectional view of an alternative
form of valve for use in the supply lines of the devices as
illustrated in Figures 1, 3, 4 and 5; and

Figures 9 and 10 show designs of storage containers for
webs of tea-bag pouches for use in the apparatus illustrated
in Figures 1 and 3 to 7.

The embodiment of the present invention, illustrated in
Figures 1 and 2 of the drawings is a tea brewer but it
should be appreciated that any infusible product may be
used. The beverage dispenser 1 incorporates a flexible
concertina bellows 2 which is shown in a partly expanded form. At its lowest end, the bellows 2 is connected to an adjustable ring seal 4. The lower section 6 of the dispenser has an inlet pipe 8 which feeds in hot water from a boiler (not shown) and an outlet pipe 10 to feed the resultant liquid usually via a mixing bowl where other ingredients are added into a collecting cup (not shown) from which the beverage will normally be consumed. Alternatively, all the ingredients may be contained all in one pouch.

Outlet pipe 10 and inlet pipe 8, each have a one way flap or ball valve as indicated by numerals 12 and 14 respectively. An inwardly projecting flange 16 is positioned at the top of section 6 and lies spaced from and opposite to the ring seal 4.

An ingredient web 20 is made from a suitable non-absorbent plastics material or other suitable material and holds, at regular intervals along the entire length of the web, round tea-bag pouches 22. In some circumstances, non-round pouches may be preferred, for instance to increase surface area and reduce the piston travel for the same volume of beverage. Also positioned at regular intervals along the length of the web are pairs of sprocket feed holes, three pairs of which are shown in Figure 2 and are indicated by the numerals 24, 26 and 28. Cut-out portions 30 and 32 reduce the tendency for liquid to be conducted along the web and reduce the quantity of plastics material used and thereby reduce the overall cost of the web 20. The web 20 is advanced tea-bag by tea-bag so that each tea-bag
may be positioned between the bellows 2 and the lower section 6, as shown by tea-bag 34.

The operation of the beverage dispenser illustrated in Figures 1 and 2 will now be described, it being assumed that the concertina is initially in a partially compressed state and that the dispenser is ready to dispense a drink. Web 20 is advanced, by sprockets (not shown) which engage the slot pairs 24, 26, 28 to advance and position the tea-bags, so that a tea-bag 34 is positioned between the bellows 2 and the lower section 6. When a tea-bag has been so positioned, as detected by means (not shown) adjacent the slot pairs, the ring seal 4 is adjusted so that an essentially air and water tight seal is formed between the ring seal 4, the web 20 and the flange 16. The sealed area, in relation to a tea-bag, is indicated at 40 in Figure 2. Suitable means (manual or automatic) are then employed to expand the bellows 2 in the direction indicated by the arrow 42. The action of the bellows causes hot water to be drawn from the boiler (not shown) through the ball valve 14, pipe 8 and tea-bag 34 in a first pass. The size of the bellows is such that only a cupful of hot water is drawn from the boiler and through the ball valve 14 in one full expansion of the bellows. Once the bellows has been fully expanded, it is then fully compressed by the said means in the direction indicated by the arrow 44. The action of the bellows causes the liquid (and some air to remove excess moisture) to be forced through the tea-bag 34, in a second pass, then out of outlet pipe 10 and through the ball valve 12 to be caught in
a cup (not shown). Liquid is prevented from being fed back through the inlet pipe 8 due to one-way valve 14.

After the liquid has been expelled through the outlet pipe 10, the adjustable ring seal 4 is lifted, thereby allowing web 20 to be advanced, and the bellows is moved back to the partially-compressed condition. At the start of the cycle, the concertina is less compressed than at the end of the cycle, in order to ensure that air is forced through the extracted tea-bag to reduce its moisture content and alleviate the storage problems in the waste area. The advance of web 20 causes the spent tea-bag 34 to be moved to a waste area (not shown), as for the tea-bag 36, and causes the next tea-bag pouch 38 to be advanced so as to be located in place of the previously positioned tea-bag 34, between the bellows 2 and the lower section 6 (see Figure 1). This ends the cycle and the dispenser is ready to dispense the next cup of tea.

This embodiment of the invention fulfils the objects of the present invention by providing, portion control by the use of the tea-bags, and good extraction with a two pass low pressure water/liquor metering system enabling larger tea leaves and consequently larger pores in filters to be used. The use of linked tea-bags improves hygiene and, together with the ability to use low pressure water, produces a less complex and therefore less expensive system. Whilst a single back and forth pass extraction system is used, the invention is not so limited and a greater number of back and forth passes may be used. Furthermore, if the outlet tube
10 and the valve 12 are positioned on the suction side of the tea-bag, a single one-pass system for readily extracted materials can be employed. This latter arrangement may also reduce any problems caused by compaction of the ingredient cake, as for instance with coffee, on the expression of the extracted liquor. Another possibility is to invert the system with the tube 10 above and the bellows 2 below. Such inversion of the system allows expulsion of the liquor from the lower end of the bellows and ensures that the extracting water is pulled through at low pressure rather than being pushed through, thus compacting the ingredients. Compacted ingredients could require high liquid flow pressures which might be undesirable. The inverted design is partially illustrated in Figure 3. A perforated plate 10A helps to distribute the incoming water over the whole of the tea-bag surface.

This embodiment has been illustrated as utilising a bellows, but equally a piston or other pump means may be used to draw and force the water through the tea-bag. Such an alternative arrangement is illustrated in Figures 3 and 4.

Figures 4 and 5, which operate to draw hot water through the inlet pipe 8 via valve 14 and then express the water after it has been drawn through a tea-bag through the outlet 10 with its valve 12. In the arrangement shown in Figure 4 a construction is shown using a piston 50 with a cylinder 51 whilst Figure 5 shows a modified arrangement using a bellows 52. Otherwise the construction and
operation of the device as illustrated in these two Figures is much the same. A camming disk 53 on both sides of the device is driven by a cog 54 connected to a drive motor 55. As the disk 53 rotates it causes the first camming surface 56 to rotate in relation to a pin 57 which is connected to the lower end of cylinder 51 which carries a sealing rim 65. A second camming face 58 is carried round between the alternative solid and dashed line positions 58 and 58A to move a bar 59 up and down. The bar 59 is connected to the piston 50 and thus moves that up and down within the cylinder 51. The camming disk also carries drive teeth 60 which react to holes in the web 61 carrying tea-bags 62.

As the cam disk 53 rotates the teeth 60 move a tea-bag 62 into position onto a perforated support plate 63. The pin 57 is then driven downwardly by the step 64 in the camming surface 56 to depress the sealing rim 65 into the tea-bag. Further rotation of the disk 53 results in raising of the bar 59 (due to rotation of the cam face 58) so that the piston 50 moves up within the cylinder 51 so as to cause the hot water from the boiler to enter through the passage-way 8 and to be drawn up through the tea-bag 62 into the cylinder 51. The bar 59 is then forced downwardly again so that the infused extract in the cylinder 51 is forced up by the piston 50 back through the tea-bag and out through the inlet 10. Ultimately, the pin 57 is raised by the further step 66 on the cam face 56 so that the tea-bag is released and can be moved on by the drive pins 60 as they come round once again to deliver the fresh tea-bag to the dispensing
position.

As shown in Figure 5 the piston and cylinder arrangement is replaced by the concertina 52 which is connected to the bar 59 and the pin 57 and the sealing rim 65 so that it is raised and lowered to draw in and force out the water in the same way as the piston 50 and sleeve 51. The shape of the camming face 58 is such that steps 64 and 66 are not spaced symmetrically with respect to the centreline through the circular cam 58 so that, just before the cylinder 51 is raised, the piston is driven down to an additional extent so as to force air through the tea-bag to dry it. Then, just before the cylinder 51 is lowered onto the tea-bag the piston 50 is raised again slightly to draw in a small portion of air.

An alternative drive system for the strip 20 of tea-bags is shown in Figures 6 and 7. In this arrangement the drive disk 53 carries a cam 67 which co-operates with a spring-loaded nip roller 68 to grip the web 20 and thus feed along a further tea-bag pouch 22 to the dispensing position.

A preferred form of valve (instead of the ball valve 12 in particular and possibly also the ball valve 14) is illustrated in Figure 8. This has a valve body 69 of conical form biased by a spring 70. A plurality of raised circumferential rings 71 are provided on the outer surface of the body 69 and these seat against a sleeve 72 on the end of the pipe 10. The sleeve 72 is formed from a resilient material so as to form a secure seal under the action of the spring 70. This configuration ensures that
even though small particles may pass through the filter and lodge somewhere within the valve it is unlikely that each of the rings 71 will be held off the seating sleeve 72, particularly due to the rounded nature of the outer wall of each of the rings 71. At least one of the rings therefore should seal against the seat 72. It will be appreciated that the arrangement could be reversed with the rings 71 being of a resilient material to seat against a firm sleeve 72.

Two arrangements for dispensing the strip of tea-bag pouches are illustrated in Figures 9 and 10. In the first proposal shown in Figure 9 the web 20 is stored, concertina-fashion, in a sealed rectangular box 73 formed from a convenient air-tight material such as a laminate construction incorporating aluminium foil or plastics sheeting. The strip is withdrawn from the box 73 through a mouth 74 at the top provided with flexible lips 75 which will reduce the ingress of air or moisture. In the arrangement shown in Figure 10 the outer container is in the form of a drum 76 with the web 10 being coiled up inside. Again, the web 10 is withdrawn through an opening 76 formed by flexible lips 77.

The web 20 incorporating the tea-bags (or pouches enclosing some other insusceptible product) may take many forms. The objective is to provide a strip with regularly spaced pouches which can be isolated in such a way that the liquid can be passed through the pouch without migrating to an adjacent pouch. This can be achieved even if the sheet
material is all of liquid-pervious material, so long as a water-tight seal is formed, at the region where the bellows, or other type of pump, is provided, during the flushing procedure. For such a strip it may be desirable to incorporate registration holes down the sides, whereby the strip may be indexed by the equipment, rather than relying upon a friction grip on the sides of a relatively delicate strip. Another possibility is to provide non-water-conducting bands across the strip, between the pouches. These bands can be extended down the sides of the strip and/or around the pouches.
CLAIMS

1. A brewing dispenser comprising support means to hold a filter pouch containing an infusible product, and flushing means for passing a quantity of water to make a beverage through the said filter pouch.

2. A method for brewing an infusible product, comprising positioning a filter pouch containing an infusible product within a holder and using flushing means to pass a quantity of water to make a beverage through the said filter pouch.

3. A brewing dispenser or brewing method according to Claim 1 or Claim 2, wherein the flushing means is a concertina, a piston and cylinder device, or another form of pump, utilized to draw water into the pump and then force or push the liquid through the infusible product in the filter pouch.

4. A brewing dispenser or brewing method according to Claim 3, wherein the pump operates to pass the water through the filter pouch as it is drawn into the pump.

5. A brewing dispenser or brewing method according to Claim 3 or Claim 4, wherein the pump acts as a metering device to determine the amount of dispensed beverage.

6. A brewing dispenser or brewing method according to any one of Claims 3 to 5, wherein inlet and outlet passageways for the liquid incorporate respective non-return valves.

7. A brewing dispenser or brewing method according to
Claim 6, wherein one or each valve is formed by a conical member with a plurality of circumferential raised rings on the outer face of the cone and biased into a closed position on a correspondingly conically shaped sleeve member.

8. A brewing dispenser or brewing method according to Claim 7, wherein the rings on the sleeve are formed from a resilient material which will form a seal with the respective other member formed from a hard material.

9. A brewing dispenser or brewing method according to any one of Claims 1 to 8, wherein the filter pouch is a closed bag of filter material incorporating the infusible product.

10. A brewing dispenser or brewing method according to any one of Claims 1 to 8, wherein the filter pouch is a perforated region in a feed belt or in a reciprocatable member with an associated filter membrane.

11. A brewing dispenser or brewing method according to Claim 10, wherein the filter pouch is defined by sheets of filter material enclosing a charge of infusible product positioned above said perforated region.

12. A brewing dispenser or brewing method according to any one of Claims 1 to 11, wherein indexing means is provided for moving a new filter pouch into position on the support means after dispensing of a beverage through a previous filter pouch.

13. A brewing dispenser or brewing method according to Claim 12, wherein a camming arrangement is provided for creating sequential operation of the indexing means for
positioning a filter pouch in position on the support means and operation of the flushing means prior to the next operation of the indexing means to position a new filter pouch on the support means.

14. A brewing dispenser or brewing method according to Claim 13, wherein a single drive mechanism operates to control the functions of ingredient feeding, operational timing and metering of the amount of dispensed beverage.

15. A brewing dispenser or brewing method according to any one of Claims 1 to 14, wherein the inlet of the flushing means at the support means for the filter pouch is a perforated plate.

16. A web comprising or incorporating water-pervious material defining windows in the form of regularly-spaced filter pouches in the same plane as the web, and each enclosing a charge of an infusible product, the web having bands of water-impervious material between the pouches to isolate the pouches from each other.

17. A web according to Claim 16, wherein the water-impervious material extends around each pouch and/or across the width of the web.

18. A web according to Claim 16 or claim 17, wherein the web is provided with a plurality of regularly spaced apart slots or other indexing means, whereby the web can be advanced and its position detected.

19. A web comprising or incorporating water-pervious material defining windows in the form of regularly-spaced filter pouches in the same plane as the web, and each
enclosing a charge of an infusible product, the web being provided with a plurality of regularly spaced apart slots or other indexing means, whereby the web can be advanced and its position detected.

20. A web according to any one of claims 16 to 19, wherein the pouches are formed from filter paper.

21. The combination of a web according to any one of Claims 16 to 20, stored within a closed container with one end of the web projecting through a dispensing outlet of the container, the dispensing outlet preferably being in the form of a flexible seal.

22. The combination according to Claim 21, wherein the container is of rectangular form with the web folded in a stack or of drum-like form with the web coiled within the drum.

23. A valve formed by a conical member with a plurality of circumferential raised rings on the outer face of the cone and biased into a closed position on a correspondingly conically shaped sleeve member.

24. A valve according to Claim 23, wherein the rings on the sleeve are formed from a resilient material which will form a seal with the respective other member formed from a hard material.

25. A brewing dispenser, a brewing method, a continuous filter web, a web and container combination, or valve substantially as herein described with reference to the accompanying drawings.