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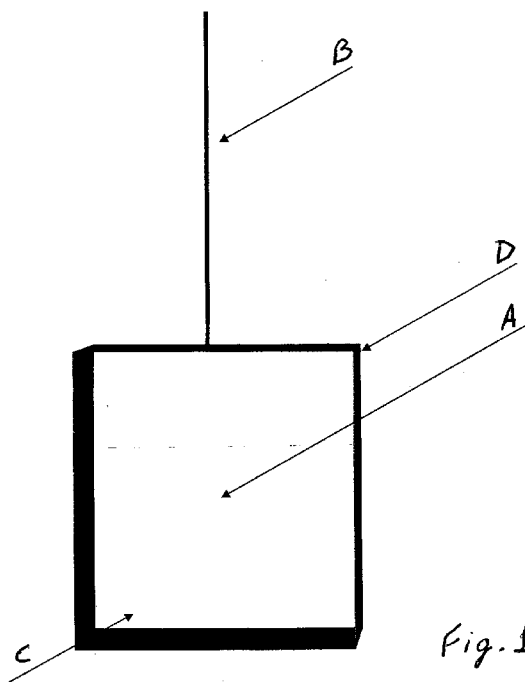
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- Published:**
- with international search report (Art. 21(3))
 - with amended claims (Art. 19(1))

(54) **Title:** TEA BAG WITH HERBAL STEM



(57) **Abstract:** This invention concerns a tea bag, for immersion, which, instead of having a string guided by the user, makes use of an extended section of a stalk, or stem, in part inside and in part outside the bag so that the user may remain in complete control of the whole immersion procedure. This is achieved due to its stable control of movement of the immersed bag in every direction, something impossible to achieve with the loose string approach.



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DESCRIPTION

Tea bag with herbal stem

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The 'traditional' tea bag involves the consumer immersing a bag, held by a string and containing a mixture of herbs, into a cup or mug of heated water, or to which heated water is added, in order to release flavours and essential oils into the liquid, resulting in a tea drink.

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However, the use of a string to hold the bag does not allow the optimum stirring necessary for best circulation of water around and through the herbs, since the stirring movement achieved is for the most part only vertical, an up-down movement. Moreover, removal of the used bag from the cup or mug, a bag which for a considerable time continues to drip liquid, requires careful manoeuvre on the part of the consumer, thus rendering the procedure undesirable to a considerable number of users of all ages. In addition, there is the cost of the required string, string that does not itself contribute to herbal flavours produced. Finally, with the string-attached bag method the consumer does not come into contact with the herbs, despite the fact that they are natural ingredients.

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The innovation under consideration aims to solve these disadvantages:

- By allowing the immersed bag to be stirred horizontally, with any movement side to side
- By allowing, due to this same sideways turning movement, the bag to be withdrawn from the tea swiftly and safely without much risk of uncontrolled spilling
- By saving the stem, which can contribute to the release of the tea's natural flavours
- By offering the consumer direct contact with the natural material, the herb tea selected, which s/he confirms through the tactile experience of touch

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Specifically, the innovation under consideration aims to allow the consumer to hold, and thus control, the contents of the bag, in which the lower end of the stem is enclosed, by making use of an herb with a stable and relatively firm stem (such as the stem of *sideritis scardica*), from which the majority of leaves have been removed. The head of the healthy plant is enclosed in the bag, along with the other herbs that constitute the tea mixture; the rest of the stem is used by the consumer as the means to hold and control the bag. The method by which this is done will be shown below.

This innovation overcomes the following issues:

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- A. It solves the problem of how to control and carry out stirring by giving the user the additional choice of stable, circular and elliptical, besides vertical up down, movement. Stirring in all directions is periodically necessary to

- allow free circulation of the hot water through the bag so that as many of the tea's flavours as possible are released.
- 5 B. It reduces the use of ancillary materials, both essentially and visually, taking into consideration the fact that herbal tea users are particularly sensitive to issues of bioethics.
- C. It offers the user the unique experience of direct contact with the herb, starting with touching the stem right at the outset of tea preparation and also achieving the wellness experience of a personal encounter with nature, since all the sprigs from the herbs contain essential oils.
- 10 D. If the bag is made of biodegradable material, it can be placed, after use, in its entirety in a plant pot or such like, without becoming litter.
- E. Global awareness of tea gravitates towards the East, towards black, green and white, which are actually one and the same although produced with different procedures; herbal teas play 'second fiddle'. With **this** use of herbs, however, which in our case is initially *sideritis scardica*, a European approach to the idea of 'tea' and 'herbs' is offered.
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The idea originated from observing how, in the traditional Greek family, products of the genus *sideritis* are stirred, whether for preparing an extract or a tea. Also, from the need to provide mixtures, together in one bag, containing a host of other valuable herbs in powder or loose-leaf form. It should be noted that there are other methods of plunging, or immersing, herbs in water, such as the perforated egg-shaped or spherical metal spoon.

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25 The above-mentioned, and further characteristics of the innovation under consideration will now be presented in a simple but clear description of the realization of the innovation, in combination with Plan 1.

A tea bag of this kind is prepared in the following way:

30 A strong leaf-bearing stem of the plant *sideritis* is selected, with flower and leaf still attached, and with a total length of around 16cm (10cm minimum and 20 cm maximum), according to [A] and [B] of Plan 1. The flowering head is held and shaped to a length of between 6 cm and 8 cm, and is placed inside the bag [A]; the rest of the stem measures between 4 cm and 14 cm and is either stripped of

35 its leaves or has some of them preserved (both for aesthetic reasons and to constitute additional material containing essential oils) [B].

Into the bag for immersion [C] are placed the specific herbs for the herbal tea selected for preparation. This bag should have an opening of at least 6 – 8 cm and a depth of between 7 and 20 cm, so that the flowering part of the stem may enter

40 the bag unobstructed.

The opening [D] is then closed up, using heat adhesion or other well-tried and tested ways (thread, wire of suitable material, automated machine sewing), enclosing the 6 to 8cm length of flowering head inside the bag.

The remaining length of the stem of the *sideritis* plant is left outside the bag and can either be left as it is or appropriate labelling can be added containing information such as name of company and specific herbal mixture, for the information of the consumer.

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CLAIMS

- 5 1. The tea bag is immersed without the use of a string for support and control but by making use of the stalk, or stem, of an herb, constituting the stable point of control of the bag to be immersed. The stem of a herb, our example being from the plant *sideritis*, is partly enclosed by the bag but is, for the most part, freestanding outside the bag so that the user can get a hold on it.
- 10 2. The stem referred to in the claim needs to be of sufficient thickness to withstand the weight of the bag, whose initial weight is multiplied, due to the addition of water, from a starting weight of between 0.75 g to as much as 25g. Typical stems that are strong enough and suitable for the purpose exist in the family: *sideritis scardica*, *sideritis raeseri* and *achillea millefolium*.
- 15 3. The bag referred to in this claim must meet the specifications for foods; it should be made either of paper or be biodegradable, and it should either permit heat adhesion, as presented in the following attached claim, or incorporate thread that can seal the contents by squeezing the bag against the stem and, ultimately, be characterised as a safe connection between stem and bag, so that it does not become detached and move beyond the anticipated connection standards.
- 20 4. The process of enclosing (placing and stabilising) the lower end of the stem, when carried out by heat adhesion, needs to be adjusted each time according to materials since excess heat could destroy either the plant or the bag. It should be noted that the quantity of leaves or flowers housed within the bag is not important here; what is important is that the stem should run the whole length of the bag, for stability and greater handling control. As a result, the length of the stem enclosed will be equal to the length of the bag enclosing it, which is, optimally, between 6cm and 8cm. The top, or free, end of the stem should be at least 4cm and up to 14cm in length in order that the user can have full control both while preparing the tea drink and, afterwards, during the process of removing the bag.
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AMENDED CLAIMS

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1. The tea bag to be immersed is characterized by the fact that it makes use of the stem of an herb, constituting the stable point of control of the bag to be immersed; the stem is partly enclosed by the bag but is, for the most part, freestanding outside the bag so that it is held by the user.
2. In accordance with Claim 1, the tea bag to be immersed is characterized as having a stem of sufficient sturdiness to withstand the weight of the bag, whose initial weight is multiplied, due to the addition of water, from a starting weight of between 0.75 gr and 3 gr to a weight as great as 25 gr; stems that are strong enough, and therefore suitable, for use are to be found in the families: *sideritis scardica*, *sideritis raeseri* and *achillea millefolium*, among others.
3. In accordance with Claim 1, the tea bag to be immersed is characterized by the fact that it meets specifications for foods and it is made either of paper or it is biodegradable, and it permit either heat adhesion, as presented in the following attached claim, or incorporate thread that seal the contents by squeezing the bag against the stem and, ultimately, be characterized as a safe connection between stem and bag, so that it does not become detached and move beyond the anticipated connection standards.
4. In accordance with Claim 1, the tea bag to be immersed is characterised by the fact that the process of enclosing (placing and stabilizing) the lower end of the stem, when carried out by heat adhesion, is adjusted each time according to materials since excess heat could destroy either the plant or the bag; it is important that the stem should run the whole length of the bag, for stability and greater handling control; as a result, the length of the stem enclosed will be equal to the length of the bag enclosing it, which is, optimally, between 6cm and 8cm; the top, or free, end of the stem should be at least 4cm and up to 14cm in length in order that the user can have full control both while preparing the tea drink and, afterwards, during the process of removing the bag.

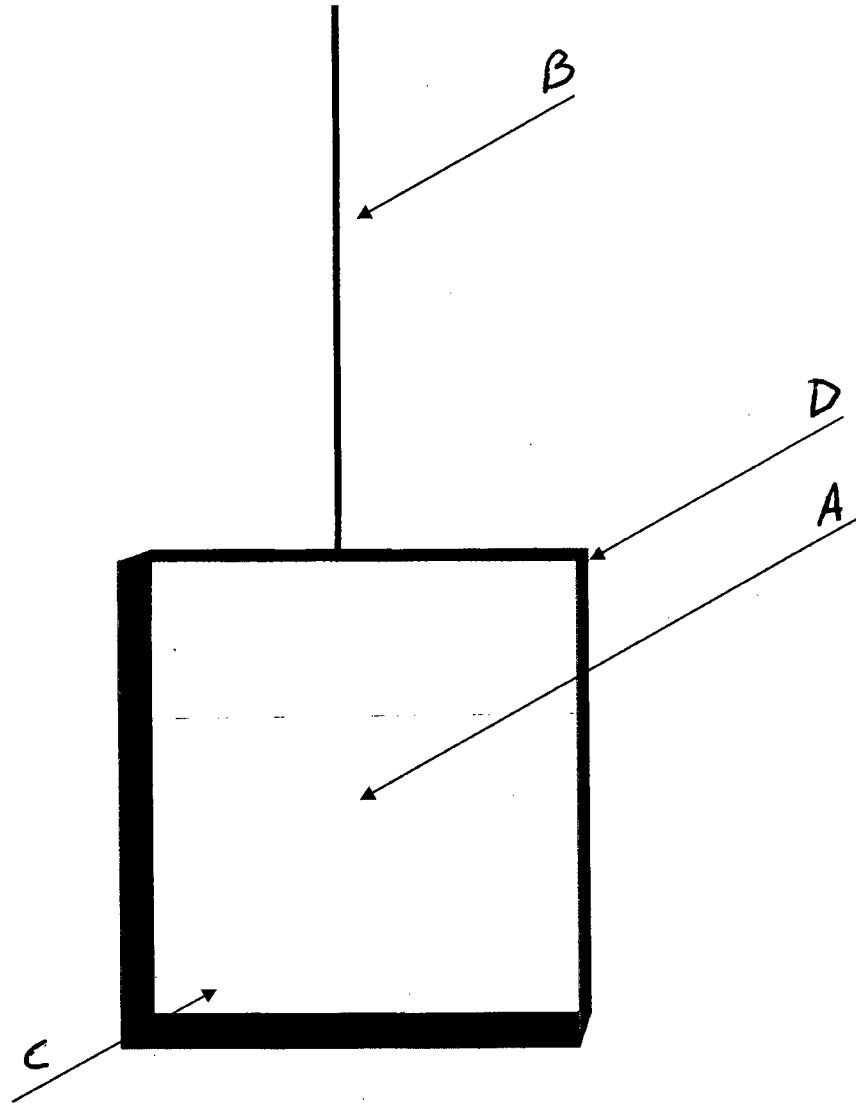


Fig. 1

INTERNATIONAL SEARCH REPORT

International application No
PCT/GR2018/000053

A. CLASSIFICATION OF SUBJECT MATTER

INV. B65D85/812
ADD.

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)

B65D A47G

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 667 027 A (ABBOTT) 9 October 1929 (1929-10-09) page 2, line 91 - line 99; figures 1, 3 -----	1-4

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"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

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR 667027	A	NONE	
