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DESCRIPTION

TECHNICAL FIELD

[0001] The present disclosure relates to plant producing writing instruments, and in particular to writing instruments having a plantable portion with a seed.

BACKGROUND

[0002] Pencils are typically constructed of a wood casing surrounding a graphite core. The wood casing is partially removed at one end to expose some of the core, such as graphite, for the purpose of writing, drawing or marking. As the pencil is being used, the exposed section of the core wears out and becomes dull. To sharpen the pencil, an additional portion of the casing needs to be removed to sharpen the pencil. Eventually, after repeated sharpenings and removal of casing, the pencil becomes too short to use and is typically thrown out. Other writing instruments suffer a similar fate. After a period of use, they will run out of ink or break, and will be thrown out. The number of writing instruments that are thrown out each year is staggering and can lead to unnecessary waste. There is thus a need for a pencil or another type of writing instruments that can be enjoyed even after they are no longer suitable for their primary purpose of writing or drawing.

[0003] JP2001320914 discloses a pencil type plant-growing vessel capable of being used as a writing utensil that may sprout seeds of a plant, wherein the plant may grow simply by placing the writing utensil body into soil.

[0004] KR20120040934 discloses an environmentally-friendly biodegradable pencil comprising a transparent capsule and a seed. The pencil is biodegradable and can germinate the seed at the same time by sticking the pencil into soil.

SUMMARY

[0005] The present disclosure provides instruments and kits for growing a plant. The invention provides a plant producing writing instrument as per claim 1. Such writing instrument includes a housing having a writing end and an opposing non-writing end. In some embodiments, the housing may include a wooden casing and a marking core housed within the casing, the marking core being exposed at the writing end of the housing and is sharpenable by removing the casing. In addition, a capsule with one or more seeds is disposed at the non-writing end of the housing. The capsule is degradable after placement in a moist soil to release the one or more seeds. The capsule further includes a substrate expandable when planted into the moist soil to deliver the one or more seeds outside the capsule.

[0006] The invention provides a kit for growing a plant as per claim 8.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] The presently disclosed embodiments will be further explained with reference to the attached drawings, wherein like structures are referred to by like numerals throughout the several views. The drawings shown are not necessarily to scale, with emphasis instead generally being placed upon illustrating the principles of the presently disclosed embodiments.

FIG. 1 is a side view of a writing instrument of the present disclosure.

FIG. 2 is a side view of a capsule with a seed of the present disclosure.

FIG. 3 illustrates an embodiment of methods for using and planting a writing instrument of the present disclosure.

FIG. 4 illustrates a planted writing instrument of the present disclosure.

[0008] While the above-identified drawings set forth presently disclosed embodiments, other embodiments are also contemplated, as noted in the discussion. This disclosure presents illustrative embodiments by way of representation and not limitation.

DETAILED DESCRIPTION

[0009] In reference to FIG. 1, there is provided a plant producing writing instrument 100 in accordance with the present disclosure. The writing instrument 100 includes a housing 102 and a capsule 110 holding one or more seeds from which one or more plants can be grown. When the writing instrument 100 is exhausted, that is, no longer useable for writing or marking, or otherwise no longer needed, the capsule can be planted to grow the one or more plants.

[0010] In reference to FIG. 2, the capsule 110 includes one or more seeds 114 from which one or more plants can be grown. In this manner, the capsule 110 may be planted with at least a portion of the writing instrument, and activated to release the seeds 114 to enable germination and growth of the seeds 114. Various types of seeds may be used in connection with the writing instrument 100 of the present disclosure. Suitable seeds may include, but are not limited to, (i) flowers like calendula and marigold and others, (ii) herbs like parsley, sage, rosemary, thyme, basil, dill, mint, and others, and (iii) vegetables like tomatoes, eggplant, jalapenos, peppers, and others. In some embodiments, the seed varieties can be further varied to include flowers matched in color or style to the color or style of the writing instrument 100. For example, colored pencils can grow into colored flowers of matching color to the pencil

lead. Additionally or alternatively, fungal spore, virus, or bacterial (or other microbiological) varieties may be included in the capsule 110. In some embodiments, various seed types can be mixed to produce a variety of plants grown from the capsule.

[0011] Capsule 110, in some embodiments, protects the one or more seeds 114 from physical harm and exposure to moisture and light during ordinary course of use until the capsule 110 is planted. To that end, the capsule 110 may be made of water proof or water resistant material. In some embodiments, the capsule 110 forms a seal around the one or more seeds 114 to prevent moisture from entering the capsule 112 and irrigating the seeds 114, which may result in premature germination of the seeds 114. In some embodiments, the capsule 110 may be made from opaque or non-transparent material to protect the one or more seeds 114 from exposure to light. On the other hand, the capsule 100 is designed to degrade or dissolved upon sustained exposure to moisture, such as when the capsule is planted into a moist soil. In this manner, when the capsule 100 is planted into a moist soil, the capsule 100 may degrade or dissolve to release from the capsule 110 the one or more seeds 114, which may subsequently grow into one or more plants. In some embodiments, the capsule may be made of cellulose or gelatin.

[0012] With continued reference to FIG. 2, the capsule 100 further includes a substrate 112 in which the one or more seeds 114 may be buried inside the capsule 110. In some embodiments, the substrate 112 may be dense to enable efficient packing of the substrate into the capsule 110. The substrate 112 may further protect the seeds 114 from physical harm as well as exposure to moisture or light. The substrate 112 is expandable upon exposure to moisture, such as when the substrate is planted into a moist soil. In this manner, when the capsule 110 is planted in the moist soil and begins to degrade, the substrates 112 absorb moisture from the soil and may expand to rupture the capsule 110 (if the capsule has not yet dissolved or degraded) to deliver the one or more seeds outside the capsule 110. Upon activation, the expanding substrate 112 may push the capsule 110 away from the seeds 114, providing aeration and preventing suffocation of the seeds during germination. In some embodiments, the substrate 112 includes dry peat, which may expand upon exposure to moisture. Additional suitable materials for the substrate include, but are not limited to, regular potting soil, crushed coconut shell, sphagnum moss or combinations thereof.

[0013] Referring back to FIG. 1, the capsule 110 may be attached, at one end, to the writing instrument 100. In some embodiments, the capsule 110 may be permanently or fixedly attached to the writing instrument 100. In other embodiments, the capsule 110 may be detachably engaged from the writing instrument 100. In some embodiments, an eraser (not shown) may be attached to the capsule, at the end not attached to the writing instrument 100, to enable the user to erase writing made by the writing instrument 100.

[0014] In some disclosures not forming part of the invention, the capsule 110 may be integral to the casing 102 of the writing instrument 110. In such disclosures, a cavity may be created in the non-writing end of the casing 102. The cavity may be filled with an expandable substrate with one or more seeds. The outer end of the cavity may be covered with a degradable cover,

such as cellulose or gelatin. When the writing instrument is planted, the cover may degrade enabling the expandable substrate to push the one or more seeds out of the cavity in the casing. In some embodiments, the casing 102 may be made of a degradable material so when the writing instrument is planted, the casing will degrade, releasing the one or more seeds.

[0015] The writing instrument 100, includes a housing 102 for holding a writing or marking device or ink. The housing 102 has a writing end 104 and a non-writing end 106 opposite the writing end 104. The writing instrument 100 may be selected from any writing instrument, including, but not limited to, pens, pencils, markers, highlighters, brushes or any other instruments that can be used for marking, writing or drawing. In some embodiments, the writing instrument 100 may be a conventional pencil with a wooden housing 102 and a graphite or pigment core 108 inside the housing 102. As in any conventional pencil, the core 108 may be exposed at the writing end 104 of the housing 102 to enable the writing instrument 100 to make a mark. As the exposed section of the core 108 wears out and becomes dull, the pencil can be sharpened by removing the wooden housing 102 to expose a desired length of the core 108.

[0016] In some embodiments, a kit for a plant producing writing instrument may be provided. In some embodiments, the kit may include a casing 102 with a core and a capsule 110, which can be attached to the casing 102. In some embodiments, the substrate 112, seeds 114, and means for attaching the capsule 110 to the casing 102 may also be included in the kit.

[0017] In some embodiments, the substrate 112 is provided as a fine, dry powder. It may be desirable to break up any clumps or lumps in the substrate 112 to ensure consistency of the substrate 112. In some embodiments, the substrate 112 may be compacted inside the capsule 112. One or more seeds may be added to the substrate 112. In some embodiments, the capsule 110 may have a close end to enable the capsule 110 to retain the substrate 112 and the seeds 114 and an open end opposite the closed end. In some embodiments, the capsule 110 may be supplied already packaged with the substrate 112 and the seeds 114.

[0018] To engage the capsule 110 with the writing instrument 100, the non-writing end 106 of the writing instrument 100 may be inserted into the open end of the capsule 110. In some embodiments, the non-writing end 106 of the writing instrument 100 may be shaped, using, for example, a router, for easier insertion into the capsule 112. In some embodiments, the capsule 110 and the non-writing end 106 of the writing instrument 100 may be sized to create a friction fit with one another. Additionally or alternatively, additional attachment means, such as, for example, adhesive, fasteners or similar, may be used to secure the capsule 110 to the writing instrument 100. In some embodiments, the capsule 110 may have both ends closed for ease of manufacturing, and the capsule 110 may be attached to the writing instrument 100 by mechanical means.

[0019] In reference to FIG. 3, in operation, the writing instrument 100, specifically a pencil, having a capsule 112 engaged to the non-writing end 106 of the writing instrument 100 is provided. The pencil 100 may be used to write or draw until the pencil 100 becomes too short

for further use due to repeated sharpening of the pencil 100. At this point, the capsule 110 containing one or more seeds 114 may be planted into soil, with the remaining segment of the pencil 100. The writing instrument 100 includes an indicia 120 directing the user to plant the capsule in a certain direction, such as shown in FIG. 4. In some embodiments, the writing instrument may include the name of the seed 122 and can be used as helpful planting marker.

[0020] Because the capsule 110 is water activated, the first few waterings of the capsule 110 may activate the capsule and start the germination of one or more seeds. Once planted, the capsule 110 is exposed to moisture and begins to disintegrate or dissolve which allows moisture to reach the seed 114 to cause it to begin germination. With the expanding substrate 112, the substrate 112 expands due to the presence of moisture to deliver the seeds 114 outside the capsule 110. Conventional gardening practices may then be followed to allow the seeds 114 to grow and mature. It should be noted that while the method of using and planting the writing instrument of the present disclosure was described in reference to a pencil, a similar method is applicable to other types of writing instruments.

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- JP2001320914B [0003]
- KR20120040934 [0004]

PATENTKRAV

1. Planteproducerende skriveinstrument (100), der omfatter:
 et hus (102) med en skriveende (104) og en modstående ikke-skriveende (106);
5 en kapsel (110), der er placeret ved ikke-skriveenden (106) af huset (102), hvor kapslen (110) indbefatter ét eller flere frø (114) og kan nedbrydes efter placering af huset, mens kapslen er på det, i fugtig jord for at frigive det ene eller flere frø (114), hvor kapslen endvidere omfatter et substrat (112), der kan udvides efter eksponering for fugt for at muliggøre brud på kapslen; og et kendetegn (120), der indikerer den retning, hvori kapslen skal plantes.
10
2. Planteproducerende skriveinstrument (100) ifølge krav 1, hvor huset (102) indbefatter et træhylster og en markeringskerne (108), der er indeholdt i hylsteret, hvor markeringskernen er eksponeret ved skriveenden (104) af huset (102) og kan spidses ved fjernelse af hylsteret.
- 15 3. Planteproducerende skriveinstrument (100) ifølge krav 1, hvor kapslen (110) beskytter det ene eller flere frø (114) mod eksponering for fugt, eller hvor kapslen (110) er uigennemskinnelig for at beskytte det ene eller flere frø (114) mod lys.
4. Planteproducerende skriveinstrument (100) ifølge krav 1, hvor substratet (112) kan
20 udvides efter plantning i den fugtige jord for at afgive det ene eller flere frø (114) uden for kapslen.
5. Planteproducerende skriveinstrument (100) ifølge krav 1, hvor kapslen (110) er fikseret til huset (102) for plantning af kapslen (110) sammen med mindst en del af huset (102).
25
6. Planteproducerende skriveinstrument (100) ifølge krav 1, hvor kapslen (110) er dannet inde i huset (102).
7. Planteproducerende skriveinstrument (100) ifølge krav 1, der endvidere omfatter et
30 viskelæder fastgjort til kapslen (110) i et modstående forhold til huset (102).
8. Kit til dyrkning af en plante, hvilket kit omfatter:
 et skriveinstrument (100) med en skriveende (104) og en modstående ikke-skrive-ende (106);

en kapsel (110) til fastgørelse ved ikke-skriveenden (106) af skriveinstrumentet (100), hvor kapslen (110) kan nedbrydes efter placering af skriveinstrumentet, mens kapslen er på det, i fugtig jord, hvor kapslen endvidere omfatter et substrat (112), der kan udvides efter eksponering for fugt for at muliggøre brud på kapslen;

- 5 ét eller flere frø (114) til frembringelse af en plante;
 og et kendetegn (120), der indikerer den retning, hvori kapslen skal plantes.
9. Kit ifølge krav 8, hvor substratet (112) kan udvides efter placering i den fugtige jord.
- 10 10. Kit ifølge krav 8, hvor skriveinstrumentet (100) er en blyant.
11. Kit ifølge krav 8, hvor kapslen (110) beskytter det ene eller flere frø (114) mod eksponering for fugt, eller hvor kapslen (110) er uigennemskinnelig for at beskytte det ene eller flere frø (114) mod lys.

DRAWINGS

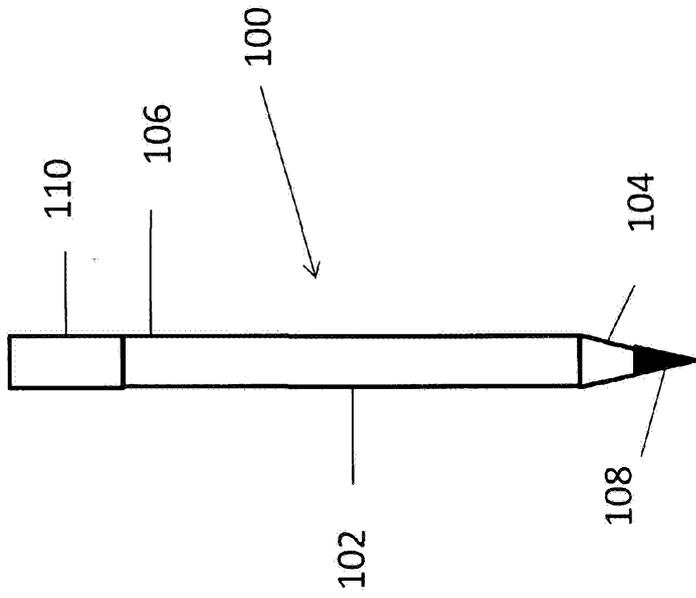


FIG. 1

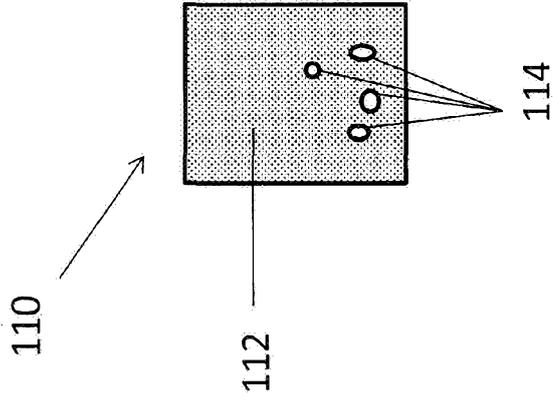


FIG. 2

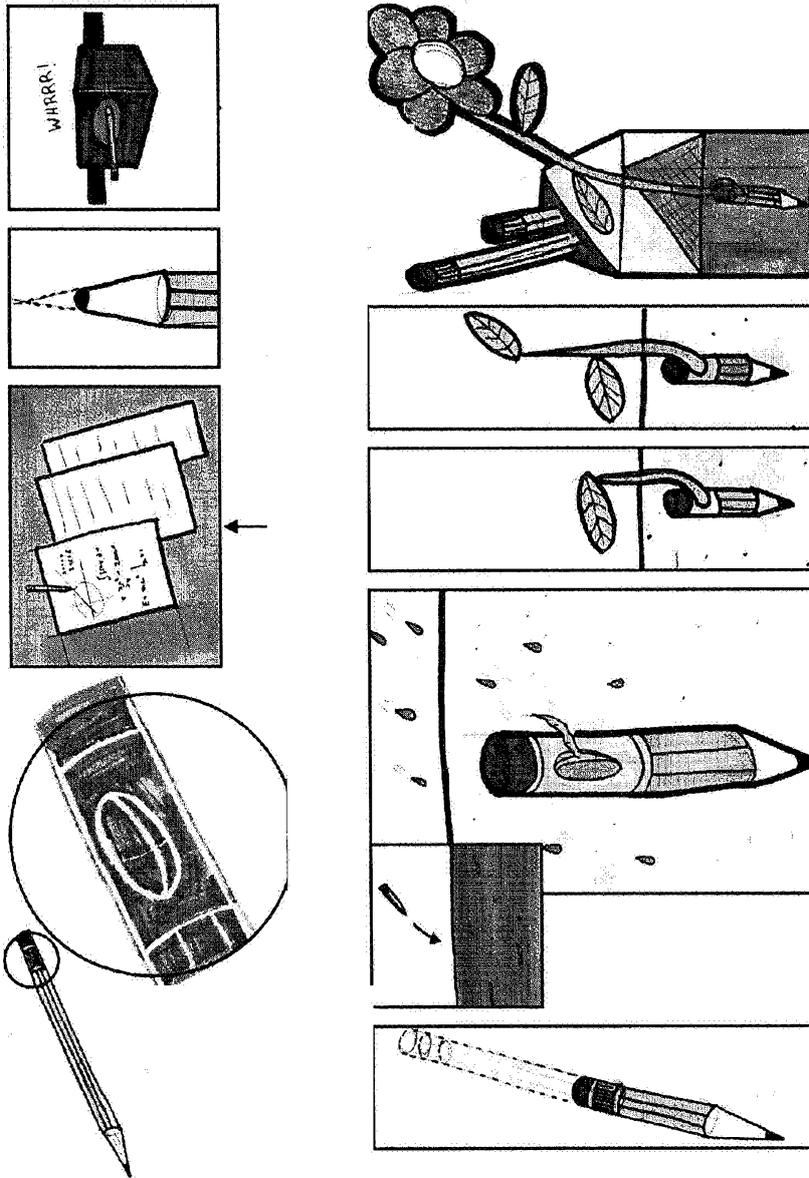


FIG. 3

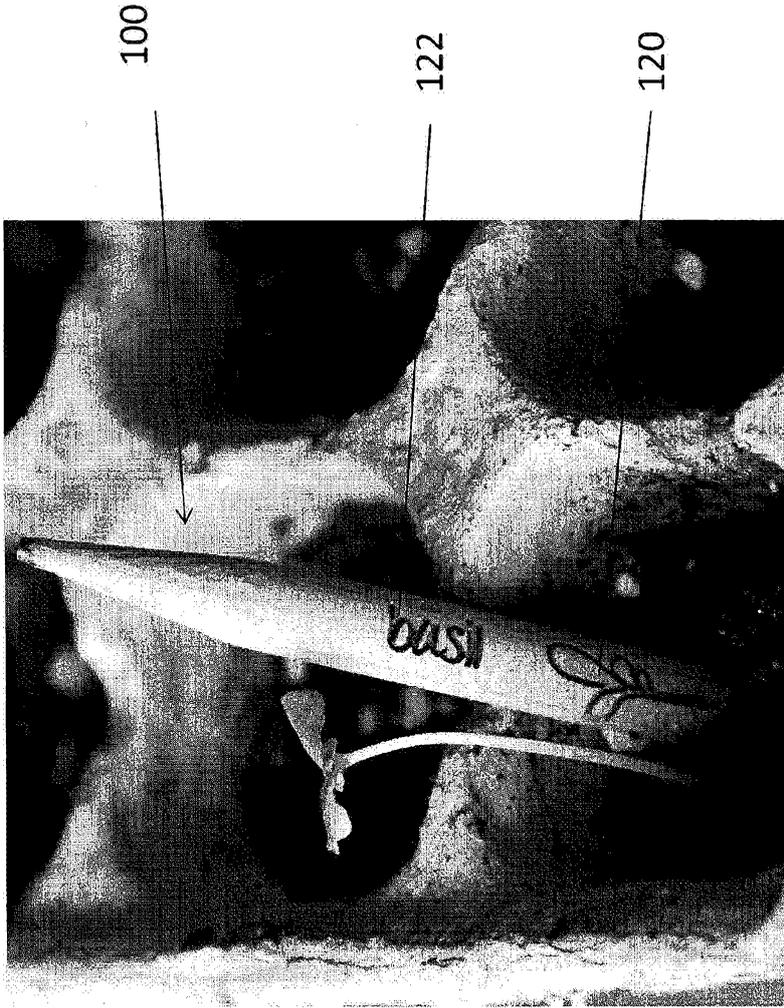


FIG. 4