An accessory tray comprising a housing that can be composed of, at least in part, a first material, and configured to receive at least one drawer, wherein the housing includes side supports connecting a bottom side to a top side thereof. The accessory tray can further comprise a heat insulator arrangement composed of, at least in part, a second material which is configured to insulate heat from the housing and provided within or on a top side of the housing. The accessory tray can also include an internal arrangement provided between the side and supporting the top side of the housing.
APPARATUS FOR AND METHOD OF MAKING A STORAGE DRAWER

Cross-Reference to Related Application(s)

[0001] This application relates to and claims priority from U.S. Provisional Patent Application No. 61/585,884 filed on January 12, 2012, the entire disclosure of which is incorporated herein by reference in its entirety.

Field of the Disclosure

[0002] The present disclosure relates to a storage drawer which can have a center support and a heat resistive layer.

Background Information

[0003] Single serve coffee machines have gained market share in the office, home and home-office settings, as compared to more traditional pot-brewed (e.g., drip-brewed) coffee machines. Single serve coffee machines can have a variety of configurations. For example, some single-serve coffee machines can provide drip-brewed capabilities (e.g., a smaller version of traditional "pot sized" machines), have single-serve coffee pods (e.g., like the Keurig® "K-cup"), or include various other single serve packet designs (e.g., liquid packets by Flavia®).

[0004] Accessory stations designed for traditional pot-sized drip-brewed arrangements may not adequately address the unique needs of a single serve beverage station.

[0005] According to the present disclosure, exemplary embodiments of a drawer for single-serve cartridges, such as the K-cup can be provided, which overcome at least some of the deficiencies of the prior drawers.
According to certain exemplary embodiments of the present disclosure, an exemplary single-serve coffee pod/cartridge tray is described.

An accessory tray comprising a housing that can be composed of, at least in part, a first material, and configured to receive at least one drawer, wherein the housing includes side supports connecting a bottom side to a top side thereof. The accessory tray can further comprise a heat insulator arrangement composed of, at least in part, a second material which is configured to insulate heat from the housing and provided within or on a top side of the housing. The accessory tray can also include an internal arrangement provided between the side and supporting the top side of the housing.

In one configuration, the internal support arrangement can be provided within the drawer(s), and in some configurations the drawer(s) can include a plurality of drawers. The center support arrangement can be provided between at least two of the drawers. In certain embodiments of the tray, the drawers can include at least three drawers. The exemplary tray can further comprise a plurality of center supports arranged between each pair of drawers.

In other configurations, the exemplary tray can include a plurality of feet protruding from the bottom side of the housing. The exemplary tray can further comprising a plurality of indentions configured on a top side of the housing, wherein the feet and indentions are sized and aligned such that the feet of the tray are within the indentions of another tray when stacked.

The housing of the exemplary tray, in some configurations, can have a width of approximately 12 to approximately 14 inches that extends along a front portion of the housing, and a length that extends along a side portion of the housing, wherein the length and the width are approximately perpendicular to one another.
These and other objects, features and advantages of the exemplary embodiment of the present disclosure will become apparent upon reading the following detailed description of the exemplary embodiments of the present disclosure, when taken in conjunction with the appended claims.

**Brief Description of the Drawings**

Exemplary objects, features and advantages of the present disclosure will become apparent from the following detailed description taken in conjunction with the accompanying Figs. showing illustrative embodiments of the present disclosure, in which:

- **[0012]** Figure 1 is an exemplary accessory tray with three drawers partially opened and accessories within, according to an exemplary embodiment of the present disclosure;
- **[0013]** Figure 2 is an exemplary accessory tray with the drawers closed, according to another exemplary embodiment of the present disclosure;
- **[0014]** Figure 3 is a front view of the exemplary accessory tray;
- **[0015]** Figure 4 is a bottom view of the exemplary accessory tray;
- **[0016]** Figure 5 is a top view of one exemplary tray drawer, according to one exemplary embodiment of the present disclosure;
- **[0017]** Figure 6 is a front view of the exemplary accessory tray drawer;
- **[0018]** Figure 7 is a side view of the exemplary accessory tray drawer;
- **[0019]** Figures 8A-8E illustrate a set of exemplary handles for the exemplary accessory tray drawer;
- **[0020]** Figure 9 is a perspective view of an exemplary tray drawer, according to another exemplary embodiment of the present disclosure;
- **[0021]** Figure 10 is a front view of the exemplary tray housing;
- **[0022]** Figure 11 is a top view of the exemplary tray housing
[0023] Figure 12 is a side view of the exemplary tray housing; and

[0024] Figure 13 is a perspective view of the exemplary tray housing.

[0025] Throughout the drawings, the same reference numerals and characters, unless otherwise stated, are used to denote like features, elements, components, or portions of the illustrated embodiments. Moreover, while the present disclosure will now be described in detail with reference to the figures, it is done so in connection with the illustrative embodiments and is not limited by the particular embodiments illustrated in the figures or the claims appended herewith.

10 **Detailed Description of Exemplary Embodiments**

[0026] According to exemplary embodiments of the present disclosure, an accessory tray for single-serve coffee cartridges can be provided, as illustrated in Figure 1, which can include a tray of drawers. The exemplary tray can be used to store and maintain items and accessories such as, supply cartridges, sugar packets, and other items. In some configurations, the exemplary tray can be configured to facilitate placing other items, such as a coffee brewer, accessory caddy, or the like, on top of the exemplary tray. By having these items stacked on top of the exemplary tray while also storing items within the exemplary drawers, the exemplary accessory tray facilitates saves storage space. For example, when the tray is being used on a kitchen counter, a user can stack a coffee brewer on top of the exemplary accessory tray and store the sugar packets and coffee cartridges within the drawers of the exemplary tray which can greatly save counter space.

[0027] The exemplary tray can have an approximate width or some degree that is larger than a base of common single-serve coffee machines. Each exemplary machine can have different dimensions, but be within a generally narrow range of sizes, for which the exemplary tray can be dimensioned to sit under and support. Exemplary drawer systems can have one drawer
129 per horizontal row 131, which would utilize a strong material if the top is used to support a relatively heavy load.

[0028] According to certain exemplary embodiments of the present disclosure, the exemplary drawers 129 can be made from any material, and can use low-cost polymer materials or other such lightweight durable materials. Certain exemplary materials, when supported only at the extreme ends of the width of the tray may lack the strength to support a relatively heavy single-serve dispenser. As such, instead of the more traditional one drawer per horizontal row, in further exemplary embodiments, multiple drawers 129 can be provided, facilitating center support structures, such as support walls 137, between the drawers 129 to support the weight of a coffee machine placed on the top surface. Exemplary trays can include two, three, four, or more drawers 129, depending on specific implementation.

[0029] Each exemplary drawer 129 can hold one of more single-serve supply pods or cartridges 127. These cartridges 127 can be configured to provide the supply material (e.g., coffee) to the single-serve dispensing device. Each drawer 129 can include one or more rows 131 (e.g., as shown in Figure 5), and each row 131 can include a plurality of cartridges 129. For example, Figure 1 illustrates an exemplary embodiment in which a three drawer 129 is provided with two rows 131 per drawer. Drawers 129 can be dimensioned to facilitate a plurality of cartridges 127 having a particular (e.g., uniform) set of dimensions. For example, the K-cup has a particular set of dimensions, and each drawer 129 can be configured to facilitate two rows 131 of the various versions (e.g., each with the same size dimensions) of the product.

[0030] The exemplary tray according to exemplary embodiments of the present disclosure can also be constructed of a primary material 125 selected for various advantageous qualities, such as appearance, cost, weight, strength, and/or manipulability. It is possible that these exemplary primary materials (e.g., plastic, acrylic, etc.) may not provide sufficient heat...
insulation. Since the exemplary tray can be configured to be placed under a single-serve coffee brewer, which can be expected to generate a relatively large amount of heat (e.g., for heating a water supply), a second material 120 can be placed on or within the top side (or a portion of the top side) to provide sufficient heat insulation. The heat insulation can prevent melting of the primary material 125, and protect the drawer 129 contents from deterioration (since products such as coffee located within the cartridges may degrade with prolonged heat exposure).

Exemplary drawers 129 configured to hold multiple rows 131 of single-serve coffee cartridges 127 can include a dividing wall 133 arranged within the drawer 129 to separate the multiple rows. This exemplary dividing wall 133 can be configured to support the top surface, e.g., instead of the support walls 137 between drawers 129 or in addition to the support walls 137 between drawers 129. The exemplary drawers 129 can include grooved slots, e.g., located at the bottom on both sides. The exemplary slots can be used to keep the drawers 129 aligned and can allow for smooth in and out movement of the drawer 129. It is also possible to provide a stop mechanism to prevent them from completely pulling out.

Exemplary drawer 129 can include a front surface 123. The front surface 123 can have a height 145 that is larger than the height of the support wall 137 or the divider walls 133, for example, as shown in Figures 5 and 7. The exemplary height 145 can be, in some exemplary configurations, approximately 2.760 inches (shown in Figure 6). In other configurations, the support wall 137 and/or divider walls 133 can have a height that is substantially equal to the height 145 of the front surface 123. The width 147 of the exemplary drawer 129 can be approximately 12.00 inches to 13.00 inches. In one exemplary configuration, the width 147 can be approximately 12.760 inches. The exemplary front surface 123 can also have a thickness 163 of approximately 0.100 inches. The exemplary width 167 of the exemplary drawer 129 can be approximately 12.300 inches. The exemplary
width 169 of the exemplary drawer 129 (including the handle feature 121) can be approximately 12.860 inches.

[0033] The exemplary drawers 129 can also include a handle feature 121 attached to the front surface 123 of the exemplary drawer 129 to facilitate opening and closing the drawer 129. The exemplary figures illustrate an exemplary handle feature 121 having a crescent moon or half-circle configuration, and being attached to the drawers 129, such as the front surface 123, at two ends of the handle feature 121. It is appreciated, however, that other suitable configurations of the handle feature 121 and/or other handle features mechanisms can be used that are suitable for facilitating the opening and closing of the exemplary drawers 129. For example, in one configuration, the handle feature can be a cut out or recessed portion on the front surface of the drawer in which a user can grip and pull open.

[0034] Figures 5-8E illustrate one exemplary set of dimensions of one exemplary handle feature 121. For example, the distance 149 of the exemplary handle feature 121 from the bottom of the front surface 123 can be approximately 0.980 inches (as shown in Figure 7). The thickness 151 of the exemplary handle feature 121 can be approximately 0.500 inches. The length 153 of the exemplary handle feature 121 can be approximately 5.560 inches. The handle feature 121 can have a curved configuration with an inner radius 165 of, e.g., approximately 0.695 inches, (shown in Figure 5) and in some exemplary configurations, an outer radius 171 ranging from 7.00 inches to 8.00 inches (as shown in Figure 5). In some embodiments, the outer radius 171 can be approximately 7.715 inches, and in other embodiments, the outer radius 171 can be approximately 7.175 inches.

[0035] Figures 8A-8E illustrate multiple views of one exemplary configuration of an exemplary handle feature 121 having two connection features 173 at either end of the exemplary handle feature 121. The two connection features 173 facilitate coupling the exemplary handle feature 121 to the exemplary drawers 129. In one configuration, the
exemplary connection features 173 can have a thickness 175 of approximately 0.100 inches. The exemplary connection features 173, in certain configurations, can have a circular configuration. The thickness 179 of the exemplary handle feature 121 (including the exemplary connection features 173) can be approximately 0.660 inches. The distance 181 from one exemplary connection feature 173 to the center of the exemplary handle feature 121 can be approximately 2.379 inches.

[0036] In certain exemplary embodiments of the present disclosure, the exemplary drawer 129 can include curved corners and/or edges. For example, as shown in Figure 6, the exemplary tray can include curved corner portions 183. In some configurations, the curved corner portions 183 can have a radius 184 of approximately 1.150 inches.

[0037] The exemplary tray, in some configurations, can include a corner element 185 that is disposed along the top surface of the exemplary tray proximate the corner portions 183 (as shown in Figures 10 and 11). The corner element 185 can extend across the entire length of the exemplary tray. For example, in one configuration, the length 187 of the exemplary corner element 185 can be approximately 12.60 inches. An exemplary set of dimensions of the exemplary corner element 185 are also illustrated in Figure 11. For example, the exemplary corner element 185 can be positioned, in some configurations, at a distance 189 of approximately 0.400 inches from the secondary material 120. The exemplary corner element 185 can be positioned at a distance 191 of approximately 0.410 inches from the side of the exemplary tray, for example, as illustrated in Figure 11. The width 193 of the exemplary corner element can be approximately 0.590 inches.

[0038] According to certain exemplary embodiments, feet 135 can be on the bottom side of the exemplary tray, such as those shown in Figure 4. These exemplary feet 135 can be made of any number of materials, such as, e.g., rubber to increase friction with a base surface (e.g., a countertop). Figure 12 illustrates a side view of the exemplary embodiment of the tray
arrangement, with exemplary dimensions and configuration of the exemplary feet 135. For example, the exemplary feet 135 can have a length 199 of approximately 0.540 inches. The exemplary feet 135 in some configurations can be placed at a distance 201 from the front of the exemplary tray of approximately 0.830 inches (shown in Figure 12). In other configurations, the bottom side of the exemplary tray can include any suitable number of feet, e.g., 4 feet, 8 feet, 12 feet, or 3 feet. The exemplary tray can also include feet having any suitable dimensions, shapes, and configurations. For example, in one embodiment, the bottom side of the tray can include 4 oval shaped feet and 4 round shaped feet.

[0039] The top side of exemplary trays can include grooves 130, as shown in Figures 2 and 11. These grooves 130 can be sized and aligned to accommodate the feet 135 of a second exemplary tray unit, allowing them to be stackable with a greater connection than merely the friction of the feet 135. The exemplary grooves 130 can have a length 195 of approximately 0.580 inches, and in some configurations, can be curved with a diameter 197 of approximately 0.200 inches. In other configurations, the top side of the exemplary trays can be smooth and free of grooves 130, but in some configurations, can still be configured to be stackable.

[0040] The exemplary tray can be sized and configured to hold any number of coffee cartridges 127, and in one exemplary embodiment, e.g., 36, e.g., six cartridges per column, two columns per drawer and three drawers 129 per tray. The exemplary divider(s) 133 in the exemplary drawer 129 can be removable as a user deems fit, and each drawer 129 can accept items other than cartridges 127, such as a configuration with one drawer 129 having cartridges 127 and one or more drawers 129 having other accessories (e.g., sugar packets). The exemplary tray can have squared corners, or as shown in the Figures, rounded corners with drawer fronts to match, e.g., curved corner portions 183.
The drawers, receiving areas, and tray housing can be of any number of dimensions, and the exemplary Figures show one exemplary set of measurements. For example, the housing can have a wall thickness of approximately 0.150 inches (as shown in Figure 10). In one configuration of the exemplary tray shown in Figure 5, each row can have a width of approximately 2.030 inches. The exemplary row can also have a length of approximately 12.100 inches. The distance between the center of the handle feature and the drawer can be approximately 0.280 inches.

The width of the exemplary tray can range from approximately 12.00 inches to approximately 14.00 inches (as shown in Figure 4). In one embodiment, the exemplary width can be approximately 13.00 inches, and in other configurations, the width can be approximately 13.50 inches. The depth or length of the exemplary tray can range from approximately 12.00 inches to approximately 14.00 inches (as shown in Figure 4). For example, in one configuration, the depth can be approximately 12.80 inches, and in other configurations, the depth can be approximately 12.87 inches, and in yet other configurations, the depth can be approximately 13.00 inches. The height of the exemplary tray (including the feet) can range from approximately 2.00 inches to approximately 4.00 inches. For example, in one configuration, the height can be approximately 3.15 inches, and in other configurations, the height can be approximately 3.17 inches, and in yet other configurations, the height can be approximately 3.50 inches. The height of the exemplary tray (not including the feet) is approximately 3.020 inches.

The foregoing merely illustrates the principles of the disclosure. Various modifications and alterations to the described embodiments will be apparent to those skilled in the art in view of the teachings herein. It will thus be appreciated that those skilled in the art will be able to devise numerous systems, arrangements, and procedures which, although
not explicitly shown or described herein, embody the principles of the disclosure and can be thus within the spirit and scope of the disclosure. In addition, all publications and references referred to above can be incorporated herein by reference in their entireties. In addition, certain terms used in the present disclosure, including the specification, drawings and claims thereof, can be used synonymously in certain instances, including, but not limited to, e.g., data and information. It should be understood that, while these words, and/or other words that can be synonymous to one another, can be used synonymously herein, that there can be instances when such words can be intended to not be used synonymously. The term "about" and "approximately," as used herein, should generally be understood to refer to both the corresponding number and a range of numbers. Moreover, all numerical ranges herein should be understood to include each whole integer within the range. Further, to the extent that the prior art knowledge has not been explicitly incorporated by reference herein above, it can be explicitly being incorporated herein in its entirety. All publications referenced above can be incorporated herein by reference in their entireties.
WHAT IS CLAIMED IS:

1. An accessory tray, comprising:
   a housing composed of, at least in part, a first material, and configured to receive at least one drawer, wherein the housing includes side supports connecting a bottom side to a top side thereof;
   a heat insulator arrangement composed of, at least in part, a second material which is configured to insulate heat from the housing and provided within or on a top side of the housing; and
   an internal arrangement provided between the side and supporting the top side of the housing.

2. The tray of claim 1, wherein the internal support arrangement is provided within the at least one drawer.

3. The tray of claim 1, wherein the at least one drawer includes a plurality of drawers.

4. The tray of claim 3, wherein the center support arrangement is provided between at least two of the drawers.

5. The tray of claim 3, wherein the drawers includes at least 3 drawers.

6. The tray of claim 5, further comprising a plurality of center supports arranged between each pair of the drawers.
7. The tray of claim 1, further comprising a plurality of feet protruding from the bottom side of the housing.

8. The tray of claim 7, further comprising a plurality of indentions configured on a top side of the housing, wherein the feet and indentions are sized and aligned such that the feet of the tray are within the indentions of another tray when stacked.

9. The tray of claim 1, wherein the housing has a width of approximately 12 to approximately 14 inches that extends along a front portion of the housing, and a length that extends along a side portion of the housing, wherein the length and the width are approximately perpendicular to one another.
**INTERNATIONAL SEARCH REPORT**

**International application No.**

PCT/US 2013/021309

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**A. CLASSIFICATION OF SUBJECT MATTER**

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**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

B65D 81/38, F25D 11/02, 23/08, A45C 11/00, A47B 88/04, A47J 31/40

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

Electronically data base consulted during the international search (name of data base and where practicable, search terms used)

- DWPI
- Esp@cenet
- RUPTO

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**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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<tr>
<th>Category*</th>
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<td>US 6 13 1404 A (H &amp; R INDUSTRIES, INC. et al.) 17.10.2000, p. 1, col. 2, fig. 1, 2, abstract</td>
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<td>US 2004/0065579 A1 (IAN DAVID WOOD) 08.04.2004, fig. 1-5</td>
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<td>Y</td>
<td>US 2010/0155347 A1 (BRYAN MCCONNELL et al.) 24.06.2010, abstract, fig. 1-12</td>
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<td>A</td>
<td>US 4 15906 S (EXONENT ITALIA S.R.L.) 02. 11.1999</td>
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☐ Further documents are listed in the continuation of Box C."T" See patent family annex.

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