Abstract

This invention relates to a holder (10, 37) for paper cone type coffee filters used with drip-type coffee makers.
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Coffee Filter Holder

Abstract of the Invention
This invention relates to a holder for paper cone-type coffee filters used with drip-type coffee makers.

Background of the Invention
The prior art provides numerous embodiments of holders/dispensers for paper coffee filters of the non-cone variety, e.g., pleated basket type. In those constructions the paper filters nest within one another, like the skin of an onion. Each time one is used or dispensed the next one presents itself.

Cone-type paper coffee filters as opposed to basket type filters, however, do not nest within one another prior to use. FIG. 1 illustrates the configuration of a typical construction of a cone-type (e.g., Melitta type) filter described above. The filter itself has a cone shape when unexpanded. They are widely commercially available from a variety of manufacturers, one of which is Melitta USA, Inc. Cone-type filters may be formed by folding a filter paper, eg., a triangle shaped filter paper, upon itself along edge 3 (FIG.1), cutting said paper and crimping edge 2 (FIG.1) from point A to arc edge 1 (FIG.1), leaving edge 1 (FIG.1) uncrimped in order to enable to expansion along arc edge 1 (FIG.1) into a cone-shaped filter. FIG. 3 shows two cone filters of different sizes superimposed upon one another. FIG. 2 shows the filter paper as expanded and in a configuration for into which coffee grounds are placed after said filter is placed within a filter support
structure, which could itself be located inside of a drip-type coffee machine or directly upon a coffee urn or pot or cup.

Before being placed on a support structure within a coffee making machine or placed directly above a coffee cup or pot while supported within a filter support structure (or brewing cone) they are expanded to reveal the cone shape within which the coffee grounds are placed.

The cone-type paper coffee filters are typically pressed or folded flat and placed next to one another or on top of one another within a paper box. The dimensions of the box roughly correspond to the depth being based on the number of filters present in the box (collective thickness of filters present); the height of the box being the straight line distance from one point on the circumference of the flat pressed filter to a point directly opposite it (often one side of the flat filter is the one which has been bounded together so as to form the cone shaped filter itself when expanded) and the width of the box actually corresponding to the straight line distance on the flat pressed filter from the bottom of the filter to the top of the filter. The box typically open from the top by way of a paper flap whereby the filters can be retrieved. FIG. 4 illustrates the configuration of the filter and box described above. This box is typically where most people leave their filters when not in use.

The prior art provides numerous examples of holders for “basket” type filter holders coffee filters (not cone-type). For example, see US patents 5,097,984 and 5,197,630. The prior art embodiments for cone-type (eg., Melitta-type) coffee filter holders, however, are not sealable and are open to
the surrounding environment as, for example, the Melitta disposable paper filter holder made and sold directly by Melitta USA, Inc. The disadvantages of an open holder is that the filters are open to the environment and may become dirty and possibly unusable from contamination in the local, typically kitchen, environment (e.g., via dust, dirt, insects, liquids or other means). In addition, these filter holders are not designed to be capable of holding cone filters of different sizes, particularly smaller filters, at different times or simultaneously. These prior art filter holders are also not optimally designed to stand in an upright position on their own. The Melitta filter holder is provided with an adhesive tape which permits the filter holder to be stably affixed to an object or wall and thereby not fall down if placed in an upright position when filled with filters. Similarly, the open to the environment cone-type filter holder marketed by Emsa GMBH is designed to be hung from a supporting rack or bar. This filter is not designed to stand in an upright position on its own. In addition, it is designed with an upper surface which curves to correspond only to the curve or arc edge 1 (FIG.1) on a certain size filter which fits exactly within it.

At present, apart from the paper boxes in which the filters are sold, there are no resealable storage holders for cone-type paper coffee filters or holder or which are stable enough to stand upright on their own. The paper boxes in which the cone type filters are sold are not fully or securely re-sealable as they are also subject to water damage or damage from other liquid spills with resultant possible damage to the filters themselves and the boxes once opened. Furthermore, the paper box which the filters are originally
purchased in the store typically comes in very limited colors or color patterns chosen by and trademarked by the manufacturer. In addition, cone-type paper coffee filters are available in a variety of sizes and no sealable and/or stable stand-alone filter holder exists which can accommodate all sizes of filters simultaneously in an organized way and which allows easy access to the filters.

It is, therefore, an object of the present invention to provide a sealable and more durable, cone-type filter holder-dispenser.

It is also an object of the present invention to provide a cone-type (e.g., Melitta type) coffee filter holder-dispenser which is stable in the upright position.

It is a further object of this invention to provide a coffee filter holder-dispenser which is capable of holding cone-type coffee filters of different sizes (e.g., size nos. 2, 4 or 6 or the approximate equivalent size 102, 104, 106) at the same time.

It is an additional object of this invention to provide a cone-type coffee filter holder-dispenser which presents cone type coffee filters in a manner which facilitates retrieving one filter at a time.

It is an additional object of this invention to provide a cone-type coffee filter holder-dispenser which is available in a wide variety of colors and color patterns.
Summary of the Invention
This invention comprises a non-expanded, cone-type paper coffee filter container comprised of a body having sides and a bottom, with the sides and bottom being comprised of a durable material and a cover for engaging the open end of the body and sealing the interior of said body from environmental contaminants such as moisture and dust. The cover is preferably removably attached to the body and has substantially the outline of the shape of a non-expanded cone-type paper coffee filter. The bottom of the body also has substantially the shape of a non-expanded cone-type paper coffee filter. The sides are essentially perpendicular to the horizontal axis of said bottom and follow the outline of the edge of said bottom. The container body is of sufficient size as to accommodate a plurality of non-expanded cone-type paper coffee filters.

Brief Description of the Figures
FIG. 1 shows a plan view of a typical cone type (Melitta) filter in an unexpanded form;

FIG. 2 shows a plan view of a cone-type coffee filter in the expanded configuration.

FIG. 3 shows a plan view of two typical cone filters of different sizes superimposed upon one another.
FIG. 4 shows a perspective view of a cone-type coffee filter in the paper box in which it is typically sold.

FIG. 5 shows a perspective view of a cone-type coffee filter holder in the short vertical position and having a pressure fit top.

FIG. 6 shows a perspective view of a cone-type coffee filter holder body of FIG. 5 with the cover separated from the container body.

FIG. 7A shows a perspective view of a cone-type coffee filter holder-dispenser in the short vertical position, having a cover resting on said container body said cover also bearing filter size indicia on its surface. FIG. 7B shows a perspective view of the cone-type coffee filter holder-dispenser of FIG. 7A with the cover separated from the container body.

FIG. 8A shows a side plan view of another embodiment of a cone-type coffee filter holder wherein said cover rests on said container body, said filters are disposed in the vertical orientation and the cover is shaped to substantially correspond to the curved arc edge 1 (FIG. 1) of said filter. FIG. 8B shows a side plan view of the embodiment of FIG. 8A with the cover attached by hinge means 4 to said container body.

FIG. 9A shows a top plan view of cone-type coffee filter holder of FIG. 8 from above; FIG. 9B shows a side plan view of a cone-type coffee filter holder of FIG. 8 from a corner side view; FIG. 9C shows an end side perspective view of a cone-type coffee filter holder of FIG. 8.
FIG. 10A shows a perspective view of a cone-type coffee filter holder-dispenser in a slide out drawer configuration; FIG. 10B shows a cross-sectional view of the coffee filter holder-dispenser of 10A along axis X from the front to the back of said drawer;

FIG. 11A shows a perspective view of a cone-type coffee filter holder-dispenser in a hinged drawer configuration; FIG. 11B shows a cross-sectional view of the coffee filter holder-dispenser of 11A along axis Y from the front to the back of said drawer;

FIG. 12 shows a side plan view of a cone-type coffee filter holder-dispenser in a flexible envelope configuration (showing a filter disposed within).

**Detailed description of the Invention**

Coffee is one of the world's most popular beverages. There are numerous ways to serve it and prepare it. One of the most popular ways to prepare at present is via the drip method. In this method, coffee grounds (coffee beans ground up into small fragments) are placed into a cone shaped filter (e.g., such as that manufactured by Melitta USA Inc.) or pleated cup shaped filter, typically made of paper or metal, after which hot water is then poured over said coffee grounds. A liquid which comprises an even finer suspension of coffee particulates and other soluble and insoluble substances from the ground coffee beans passes through the filter into a holding receptacle such as a coffee urn, pot or cup.
Depending on the amount of coffee grounds to be used, the volume of the coffee drink intended to be brewed and/or the size of the receptacle and depending if the coffee to be made manually (with a person pouring the hot water over the grounds) or by a coffee machine (with the machine pouring the hot water over the grounds) a different size filter may be used. Such filters are typically given number designations such as 1, 2, 4, 6 and 8 [or their substantial equivalent size designations 101, 102, 104, 106 or 108; 1x1, 1x2, 1x4, 1x6 or 1x8], with the smaller numbers indicating respectively smaller sized filters (having a smaller radius or distance from point A, FIG.1).

The primary difference in size of a filter is primarily the length of the radius from point A at the bottom of said filter (see FIG.1, e.g., the location on the filter where the sides come closest together with the bottom of said filter being in a horizontal/parallel disposition relative to the horizontal/flat surface of a filter support surface) to the top arc edge 1 of said filter (e.g. the portion of said filter which expands to yield the cone shape and from which side said coffee grounds are added to the filter. The angle of the sides of said pressed flat filter can be seen in FIG. 1 wherein angles C and D are both about 50 degrees from the horizontal although the exact angle can be modified as required. The coffee filter holder invention herein can be designed to accommodate any filter angle. The bottom of said filter, as noted above, is typically flat or horizontal as on surface E, however, it may also have rounded corners, point F, or both sides could progress to a central point of said cone.
Most filters manufactured for drip use today utilize the flat or horizontal configuration for the bottom as seen in FIG.1. The top edge of said filter has an arc edge shape which, when said filter is fully opened, is capable of taking on a circular or semi-circular configuration (around the upper surface of said filter holder in said coffee maker or holder. The standardization of the angles of said sides of the cone filter allows for standardization of both the filters and the coffee machines which use them. The angles of said filter sides and bottom typically correspond to the angles and bottom configuration on the filter support structures found within said machines and in single-use coffee filter makers.

It a most preferred embodiment the invention herein comprises a holder for non-expanded cone-type paper coffee filters comprising a container having substantially the shape of a non-expanded cone-type paper coffee filter said container being closed on all sides except one and a cover removably attachable to the one open side of said container.

In an example of this preferred embodiment, the coffee filter holder of this invention is constructed in the same manner as are other Rubbermaid or Tupperware (plastic) containers as shown in FIGS. 5, 6, 7A and 7B. In this embodiment the cone filter holder 10 has a snap-on or pressure fit cover or lid 11. This cover and/or container body optionally includes size indicia 12 (e.g., No. 2 or 4 size). The filter holder container or body itself 13 is preferably shaped and sized in the form of and so as to retain a cone filter of a particular size. In one embodiment, the cover would be disposed on the
container and would be aligned on the side of the filters if they were lying on their side, parallel to the plane of the ground. In another embodiment the cover would be aligned with either the curved arc edge 1 or one of the other sides of the filter if the filters were standing with their edges 2 and 3 perpendicular to the horizontal plain of the ground.

Alternatively, said filter container body may include permanent or temporary inserts which would allow a substantially square or rectangular container body to have inner dimensions which substantially match a desired filter outline.

The filter container body and/or cover may be opaque or transparent or have any desired color, combination of colors or design pattern. The filter container body width or depth could be sufficient to hold an entire box of filters or more or less.

The cover for engaging the open end of said container body and sealing it against moisture and dust could optionally simply rest on a lip edge 14 on the container body as shown in FIGS 7A and 7B, pressure fit on the body as shown in FIGS. 5 and 6, attach by hinge means (and/or optionally include a latch typically opposite said hinge) or be screwed on. Preferably said cover includes a circumferential rib member 15 for engaging said body to releasably secure said cover to said body which fits into a slot 16 formed onto lid 11.
The filter holder container body and/or cover can be constructed of any
durable material such as plastic, rubber, metal, wood, glass, ceramic, textile,
mineral, carbon fiber, glass fiber or any combination of the above. Any
one of many commercially available types of these materials would be
suitable such as, but not limited to, with plastics (polymers): polyethylene,
thermoplastics, polypropylene, polystyrene, polyurethane, polycarbonate,
polyvinyl and polyvinyl chloride. The metals which are contemplated for
construction of the holder of this invention include but are not limited to,
steel, stainless steel, aluminum, brass, copper and various alloys thereof. It
is also preferable if the material used for the filter holder be able to
withstand high temperatures such as those found adjacent to coffee makers.
It is envisioned that the filter holder of this invention can be formed by
various common process such as molding (e.g., blow molding, injection
molding), shaping the material into the desired form (e.g., press molding) or
by assembly of individual pieces formed in the same or different ways.

In another embodiment the invention 20 herein as shown in FIGS. 8A, 8B,
9A, 9B and 9C comprises a holder for non-expanded cone-type paper coffee
filters said holder comprising:
a first and second substantially square or rectangular flat side pieces 22 and
23 joined to each other by at least two preferably flat support members 25
and 26; said support members each being joined at one of their ends to said
first flat side piece and at the other of their ends to said second flat side
piece; said locations at which said support members are joined being such
that said first support would intersect with at least one location on one of the
two angled sides of any of said non-expanded cone-type paper coffee filters
disposed vertically within said holder with said second support intersecting with at least one location on the other of the two angled sides of said non-expanded cone-type paper coffee filter; and wherein said first and second substantially square or rectangular flat side pieces 22 and 23 extend to the side and below where said support members 25 and 26 are joined to said side pieces. More preferably, the embodiment herein comprises a holder for non-expanded cone-type paper coffee filters said holder comprising a first and second substantially square or rectangular flat side piece joined to each other by two support members 25 and 26 having four edges and two sides, said support member being joined at one edge to said first flat side piece 22 and at the other, opposite edge to said second flat side piece 23 said position at which said support members are joined to such side pieces being such that they would intersect with the angled side of any of said non-expanded cone-type paper coffee filters disposed vertically within said holder and wherein said first and second substantially flat side pieces extending beyond where said support members are joined to said first and second substantially flat side pieces.

Specifically in this embodiment the support members 25 and 26 also would intersect with the bottom of any of said non-expanded cone-type paper coffee filters disposed vertically within said holder. In addition, the bottom edge of said first and second substantially square or rectangular flat side piece provide the support for said holder to stand vertically on the surface upon which it rests or wherein the bottom edge of said support member provides the support for said holder to stand vertically on the surface upon which it rests. In this embodiment the sides 22 and 23 are sufficiently high
enough to provide the means for supporting said paper filters in a relatively vertical orientation once they have been placed within said holder.

In the preferred aspect of this embodiment the bottom 27 of said filter holder 20 is perpendicular to the top to bottom orientation of cone type filters disposed within said holder. It is also contemplated that the bottom surface 27 of said holder is less than a right angle in relation to said first substantially square or rectangular flat side pieces 22 and 23 of said holder 20 and greater than a right angle in relation to said second substantially square or rectangular flat side pieces side of said holder whereby non-expanded cone-type paper coffee filters disposed vertically within said holder are disposed at an angle at the top of said holder so as to enable dispensing one filter at a time.

This embodiment also includes a top cover, 28, as shown in FIGS. 8A, 8B, 9A, 9B, and 9C. This top covers the filters disposed within and protects them from environmental contaminants. The top cover may optionally include a handle, 29, to assist in lifting it from the container body. The top cover may also be attached to the container body by a hinge means, 24, enabling the top cover to pivot open allowing access to filters disposed within the container body.

In this embodiment the container also preferably comprises and walls, 21, as shown in figures 9B and 9C. The end walls 21 and 24 essentially create a rectangular box as shown in figures 9A. Hinge means 24 may optionally be attached to side walls 22 and 23 or end walls 21 or 24.
Generally, any of the above embodiments of the invention herein may include the following characteristics:

1) Each filter holder can hold at least one size cone filter and preferably more than one size. This is possible because the relative angles are the same for different size filters.

2) Each filter holder which holds the filters in a vertical orientation can have a tilted or angled bottom surface so the cone filters are presented in an angled, easy to grasp one at a time configuration.

3) Each filter holder container body and/or cover can be opaque or transparent or have any desired color or design pattern.

4) Each filter holder container body and/or cover can be constructed of any durable material such as plastic, rubber, metal, wood, glass, ceramic, textile, mineral, carbon fiber, glass fiber or any combination of the above.

Any one of many commercially available types of these materials would be suitable such as, but not limited to, with plastics (polymers): polyethylene, thermoplastics, polypropylene, polystyrene, polyurethane, polycarbonate, polyvinyl and polyvinyl chloride. More specifically, plastics which may be used include: Thermoplastics including alloys and blends thereof (e.g., Nylon/ABS; PPO/Nylon; ABS/PC; PC/PBT), Ketone-based resins, Nylon, Polycarbonate, Polybutylene terephthalate (aka, PBT);
Polycyclohexylenedimethylene terephthalate (aka, PCT); Polyethylene terephthalate (aka, PET); Polyethylene; Polymethylpentene; Polypropylene (aka, PP), including PP homopolymer, PP impact copolymers and PP randomcopolymers; Styrenic resins such as ABS (made up of three monomeric building blocks: acrylonitrile, butadiene and styrene), ACS (made up of three monomeric building blocks: acrylonitrile, chlorinated polyethylene and styrene); polystyrene (aka PS) including impact PS; Styrene-acrylonitrile (aka, SAN); Vinyl-based resins such as polyvinyl chloride; Thermosets such as Allylic resins and Polyester resins; and is also intended to include composite raw materials such as Bulk molding compounds (aka, BMC) which is prepared by blending resin (e.g., unsaturated polyesters), catalyst, powdered mineral filler, reinforcing fiber [chopped strand], pigment, lubricants and other additives.

The metals which are contemplated for construction of this invention include, but are not limited to, steel, stainless steel, aluminum, brass, copper and various alloys. It is also preferable if the material used herein to be able to withstand high temperatures such as those found near coffee makers.

It is envisioned that the coffee filter holder of this invention can be formed by various common process such as molding (e.g., blow molding, injection molding), shaping the material into the desired form (e.g., press molding) or by assembly of individual pieces formed in these same or different ways.

5) Each filter holder and/or lid can be labeled with indicia such as numbers (e.g., which numbers corresponds to filter size or sizes) and/or brand names.
6) Each filter holder may be optionally constructed with an insert or inserts conforming to filter edges thereby providing additional support for said cone filters disposed within said holder.

7) Each filter holder cover can be affixed to the body of the filter holder container by a variety of means including, but not limited to, resting on said container body, pressure fit means (e.g., tongue and groove), hinge means (with or without a latch) or screw-on.

8) Each filter holder box dimensions can correspond to a "short" height configuration [from bottom edge E to top point of arc edge 1 on filter] x width [from one point on circumference of flat folded cone filter to the other] x number of filters to be held or a "tall" height configuration with the filters placed on their side and the arc edge 1 to one side and filter "bottom" edge E to other side.

9) Each filter holder is capable of standing alone without other external support or can be affixed to the side of a coffee machine, or wall or other structure by other commonly known means for affixing things such as adhesives, screws, wire, clips or hooks.

10) Each filter holder bottom for the embodiments which hold the filters in a vertical orientation may be squared off or tapered to match general shape of filter bottom thereby providing support for standing alone.
In another embodiment, the filter holder comprises a drawer or compartment 35 within a frame or assembly 37 as shown in FIGS. 10 and 11. The filter holding drawer 35 and frame or assembly 37 could preferably fit under a coffee machine and support the machine. The frame or assembly 37 within which said drawer 35 is disposed when closed may also optionally include insulating type material, for example on the top 39 of the drawer or frame or assembly, or allow for insulating space between the coffee machine and the filters within said drawer. The drawer and or frame or assembly could optionally include indicia 34 such as the label "coffee filters" or the appropriate filter number or numbers, preferably on the face of said drawer. The drawer could be opened in the typical fashion by pulling it directly our from the frame or assembly for example using knob 38. Alternatively, the drawer could be opened by a pivoting action via a hinge means 36 connected at one of the front sides of the drawer 35 to said frame or assembly 37. As with the embodiments described above, each filter holder can hold at least one size cone filter and preferably more than one size; each filter holder can be opaque or transparent or have any desired color or design pattern. The drawer, frame or assembly may be constructed of any durable material such as plastic, rubber, metal, ceramic, wood, or glass. Each drawer can hold at least one size cone filter and preferably more than one size. Optionally, each drawer can also be shaped in two dimensions to approximate the outline shape of a designated coffee filter. Alternatively, said drawer may include permanent or temporary inserts such as 32 or 33 which would allow a substantially square or rectangular drawer to have inner dimensions which substantially match or fit a desired filter.
outline (as for example a cutlery drawer insert often includes places to insert and properly fit spoons or forks). In another embodiment, the upper surface 39 of said drawer (between the drawer and a coffee machine placed upon it) could also comprise insulating means such as selected from the group consisting of cork, wood, plastic, rubber, glass, metal, air space, vacuum, textiles, mineral fibers, carbon fiber, glass fiber, ceramic or a combination of two or more of these materials.

In another embodiment the filter holder can be constructed in an envelope or pouch configuration, 40, as in FIG.12. The envelope may be constructed of any durable material such as plastic, rubber, metal, wood, ceramic or glass and also may be made of cloth or other textile natural or synthetic fabric or flexible, thin gauge plastic. In this embodiment it is preferable if the envelope is generally in the shape of the cone filter and include a flap 41 (flexibly attached to the envelope body or by a hinge means) which opens at the side or top of the filter to allow filters to be removed or added to the envelope. If the flap 41 is at the top of the envelope, it is preferable that it be folded along a straight line as it is less preferred to fold the flap along the arc shape of the filter top. In this embodiment, it is also preferred that the flap and envelope include a means for securing the flap to the envelope once it is closed. Such flap securing means can include Velcro, magnetic latches, conventional snaps, clips and other such means for securing the flap (as on any other container having a flap such as found on a pocketbook or briefcase). As with the embodiments described above, each filter holder can hold at least one size cone filter and preferably more than one size; each filter holder envelope can be opaque or transparent or have any desired
color or design pattern; each filter holder envelope can be labeled with indicia such as numbers (eg., which numbers corresponds to filter size or sizes) or brand names.

In another embodiment, the invention herein comprises a kitchen cabinet drawer divider for non-expanded cone-type paper coffee filters, said drawer divider comprising at least four side pieces of a durable material formed approximately in the two-dimensional shape and having the approximate dimensions of the non-expanded cone-type coffee filter which it will accommodate whereby said coffee filters disposed within said divider will remain separated from any other material placed within said kitchen cabinet drawer. The kitchen cabinet drawer divider of is preferably constructed of durable material, wherein said durable material comprises plastic, rubber, wood, glass, metal, ceramic or a combination of two or more of these materials. The kitchen cabinet drawer divider embodiment, further may comprise additional partitions for kitchen utensils adjacent to and integral with said divider for non-expanded cone-type paper coffee filters. The depth of said divider is sufficient to accommodate a plurality of non-expanded cone-type paper coffee filters.

It should be understood that the examples and embodiments described herein are for illustration purposes only and that various modifications or changes in light thereof will be suggested to persons skilled in the art and are to be included within the spirit and purview of this application and the scope of the appended claims.
What I claim is:

1. A non-expanded cone-type paper coffee filter container comprising: a body having sides and a bottom, with said sides and bottom being comprised of a durable material; said body being of sufficient shape and size as to accommodate a plurality of non-expanded cone-type paper coffee filters, said bottom of said body having substantially the shape of a non-expanded cone-type paper coffee filter with said sides being essentially perpendicular to the horizontal axis of said bottom and following the outline of the edge of said bottom;

a cover for engaging the open end of said body and sealing the interior of said body from moisture and dust wherein said cover is releasably attached to said body said cover having substantially the outline of the shape of a non-expanded cone-type paper coffee filter.

2. The cone-type paper coffee filter container of claim 1, wherein said cover is removably attached to said container by hinge means.

3. The cone-type paper coffee filter container of claim 1, wherein said cover is removably attached to said container by pressure fitting means.

4. The cone-type paper coffee filter container of claim 3, wherein said pressure fitting means uses a tongue and groove means.
5. The cone-type paper coffee filter container of claim 1, wherein said covers rests upon said container body.

6. The cone-type paper coffee filter container of claim 1, wherein at least one of said sides of said container body or cover is labeled with at least one numerical indica corresponding to the filter number size which could fit inside of said body.

7. The cone-type paper coffee filter container of claim 1, wherein said bottom of said container is labeled with at least one numerical indica corresponding to the filter number size which could fit inside of said body.

8. The cone-type paper coffee filter container of claim 6, wherein said side and bottom of said body are formed as an integrated piece.

9. The cone-type paper coffee filter container of claim 1, wherein said container is large enough to hold non-expanded cone-type paper coffee filters of more than one size.

10. The cone-type paper coffee filter container of claim 1, wherein said durable material is plastic, rubber, wood, glass, metal, ceramic or a combination of two or more of these materials.

11. The holder for cone-type paper coffee filters of claim 1, wherein said container is comprised of a durable material.
12. The cone-type paper coffee filter holder of claim 11, wherein said
durable material is plastic, rubber, wood, glass, metal, ceramic or a
combination of two or more of these materials.

13. The cone-type paper coffee filter holder of claim 12, wherein said
durable material is substantially opaque.

14. The cone-type paper coffee filter holder of claim 12, wherein said
durable material is substantially transparent.

15. The cone-type paper coffee filter holder of claim 1, wherein said cone-
type paper coffee filter holder is capable of holding cone-type paper coffee
filters of different sizes.

16. The cone-type paper coffee filter holder of claim 1, wherein the bottom
surface of said holder is approximately perpendicular to the sides of said
container body.

17. A non-expanded cone-type paper coffee filter drawer unit comprising
a drawer body having four sides and a bottom, being comprised of a durable
material and shaped so as to accommodate a non-expanded cone-type
paper coffee filter and
a cabinet having dimensions sufficient to encompass said drawer and
comprising a top, and at least two sides, said drawer being removable
from at least one open side of said cabinet.
18. The non-expanded cone-type paper coffee filter drawer unit of claim 17, wherein said cabinet further comprises a bottom to which said sides are affixed.

19. The non-expanded cone-type paper coffee filter drawer unit of claim 17, wherein said cabinet further comprises a third side.

20. The non-expanded cone-type paper coffee filter drawer unit of claim 17, wherein said sides of said drawer body is formed essentially in the two-dimensional shape of the non-expanded cone-type coffee filter which it will accommodate.

21. The non-expanded cone-type paper coffee filter drawer unit of claim 17, wherein said drawer body can accommodate non-expanded cone-type paper coffee filters of more than one size.

22. The non-expanded cone-type paper coffee filter drawer unit of claim 17, wherein said drawer unit is of sufficient strength and size to support a drip-type coffee maker placed upon the top surface of said cabinet.

23. The non-expanded cone-type paper coffee filter drawer unit of claim 17, wherein the top surface of said cabinet further comprises and insulating means.
24. The non-expanded cone-type paper coffee filter drawer unit of claim 23, wherein said insulating means is selected from the group consisting of cork, wood, plastic, rubber, glass, metal, air space, vacuum, textiles, mineral fibers, carbon fiber, glass fiber, ceramic or a combination of two or more of these materials.

25. The non-expanded cone-type paper coffee filter drawer unit of claim 17, wherein said durable material of drawer unit comprises plastic, wood, glass, metal, ceramic or a combination of two or more of these materials.

26. The non-expanded cone-type paper coffee filter drawer unit of claim 17, wherein said drawer unit cabinet or drawer is labeled with at least one numerical indica corresponding to the filter number size which fit inside of it.

27. The non-expanded cone-type paper coffee filter drawer unit of claim 17, wherein said drawer body is slidably removable from said cabinet.

28. The non-expanded cone-type paper coffee filter drawer unit of claim 17, wherein said drawer body is attached to said cabinet by hinge means and is removable by a pivoting motion of said drawer.

29. A kitchen cabinet drawer divider for non-expanded cone-type paper coffee filters, said drawer divider comprising a durable material formed approximately in the two-dimensional shape and having essentially the dimensions of the non-expanded cone-type coffee filter which it will
accommodate and having at least four sides of whereby said coffee filters disposed within said divider will remain separated from any other material placed within said kitchen cabinet drawer.

30. The kitchen cabinet drawer divider of claim 29, wherein said durable material comprises plastic, rubber, wood, glass, metal, ceramic or a combination of two or more of these materials.

31. The kitchen cabinet drawer divider of claim 29, further comprising additional partitions for kitchen utensils adjacent to and integral with said divider for non-expanded cone-type paper coffee filters.

32. The kitchen cabinet drawer divider of claim 29, wherein the depth of said divider is sufficient to accommodate a plurality of non-expanded cone-type paper coffee filters.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7): Please See Extra Sheet.
US CL: Please See Extra Sheet.
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)

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category*</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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<tbody>
<tr>
<td>X</td>
<td>US 5,427,266 A (YUN) 27 June 1995, see columns 2 and 3.</td>
<td>1, 3-5 and 9-16</td>
</tr>
<tr>
<td>Y</td>
<td>US 4,454,958 A (JUILLET et al) 19 June 1984, col. 2, lines 49-60.</td>
<td>2</td>
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<tr>
<td>Y</td>
<td>US 5,301,802 A (NEMEROFF) 12 April 1994, col. 2, lines 57-60.</td>
<td>6-8 and 26</td>
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<tr>
<td>Y</td>
<td>US 5,182,895 A (LUGO) 02 February 1993, col. 6, lines 6-19.</td>
<td>6-8 and 26</td>
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<tr>
<td>X</td>
<td>US 5,680,957 A (LIU) 28 October 1997, see abstract.</td>
<td>17-19, 21-22 and 27</td>
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<td>20, 25</td>
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[X] 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 document 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

Date of the actual completion of the international search
14 MARCH 2000

Date of mailing of the international search report
06 APR 2000

Name and mailing address of the ISA/US Commissioner of Patents and Trademarks
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Authorized officer
PAUL SEWELL
Telephone No. (703) 308-2126

Form PCT/ISA/210 (second sheet) (July 1998)
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<th>Relevant to claim No.</th>
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<tr>
<td>Y</td>
<td>US 4,413,869 A (PICHLER et al) 08 November 1983, col. 3, lines 49-68.</td>
<td>23-24</td>
</tr>
<tr>
<td>X</td>
<td>US 5,887,961 A (ROSENBERG et al) 14 April 1998, col. 3, lines 31-67 and cols. 4-5.</td>
<td>29-32</td>
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</table>
INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/28026

Box I  Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international 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 II  Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

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

Please See Extra 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 fee, this Authority did not invite payment of any additional fee.

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.

□ No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet(1)) (July 1998)★
A. CLASSIFICATION OF SUBJECT MATTER:

IPC (7):

A45C 11/20; A47B 88/00; B65D 1/24, 43/08, 43/04, 43/14, 1/34, 85/48, 85/00

A. CLASSIFICATION OF SUBJECT MATTER:

US CL.:

206/425, 449, 459.5, 551, 555; 220/529, 553, 555,833,834, 835, 837, 780, 796, 805; 312/333, 348.3, 348.5

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION WAS LACKING

This ISA found multiple inventions as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Invention I: The coffee filter container in Figures 5-7B.

Invention II: The coffee filter drawer unit in Figures 10-11.

Invention III: A divider for the coffee filters.

Group I, claims 1-16, drawn to a filter container.
Group II, claims 17-28, drawn to a drawer unit.
Group III, claims 29-32, drawn to a divider.

The inventions listed as Groups I-III do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of Group I invention is the attachment of the container with a lip to engage a groove formed on the lid while the special technical feature of the Group II invention is the drawer unit with a rectangular housing for receiving a drawer therein while the special technical feature of Group III is a divider with individual compartments for holding filters of different shapes. Since the special technical feature of the Group I invention invention is not present in the Group II and III claims and the special technical feature of the Group II invention is not present in Group I and III claims, unity of invention is lacking.