DISH DRAINING APPARATUS

Inventor: Nicholas B. Gillisie, Toronto (CA)

Correspondence Address:
SIMPSON & SIMPSON, PLLC
5555 MAIN STREET
WILLIAMSVILLE, NY 14221-5406 (US)

Assignee: Umbra Inc., Buffalo, NY (US)

Appl. No.: 11/323,957
Filed: Dec. 30, 2005

Publication Classification

Int. Cl. A47G 19/08 (2006.01)

U.S. Cl. 211/41.5; 211/41.6

ABSTRACT

A draining apparatus including a base having first and second ends and a rack member having first and second ends, the first end of the rack member is rotatably attached to the first end of the base. In another embodiment, the draining apparatus includes at least one supporting member rotatably attached to the rack member and arranged to hold the rack member at an angle relative to the base. In yet another embodiment, the draining apparatus includes means for holding at least one article proximate the second end of the rack member.
DISH DRAINING APPARATUS

FIELD OF THE INVENTION

[0001] The present invention relates generally to a draining apparatus, more particularly, to a dish draining apparatus, and, more specifically, to a collapsible dish draining apparatus.

BACKGROUND

[0002] Dish draining racks have been used for many years to facilitate draining and/or drying of dishes, silverware, cups, glasses, cookware, and the like. After an article is washed and/or rinsed, it may be placed on a rack where the article remains until it is dry or until the water used to rinse the article has sufficiently drained to enable towel drying. Draining racks also provide a place to keep washed articles out of the way of further washing, i.e., a place to allow washed and/or rinsed articles to drain residual fluid while other articles are handled during washing.

[0003] Draining racks often include two separate and distinct parts, a collection base and a rack. Typically racks include some form of lattice structure, often constructed of metal, plastic or plastic coated metals. The racks are arranged to hold a plurality of dishes, often in substantially the same way, separated by a small distance. Racks may include a bottom portion and sides, or merely fold from a flat to a tiered assembly. The racks, being a lattice structure, do not capture draining water, and therefore placing the rack upon a solid collection base is often necessary. In order to avoid pooling of drained liquids, the bases may include a tapered base support, whereby the entire base, and consequently the rack, is held at an angle relative to a mounting surface, e.g., a counter top. When using an angled base, the draining rack is often placed next to a sink wherein draining water may flow. Thus, the combination of base and rack provide a convenient means to hold dishes and articles while washing and/or rinsing water drains across the base and subsequently into a sink.

[0004] Draining racks have been designed with a variety of features, each providing some added benefit or function. For example, the aforementioned lattice structures are sufficient to support dishes, however they are not conducive to holding drinking glasses. Thus, breaks in the lattice or protrusions have been incorporated within the lattice structure to capture and hold drinking glasses. Similarly, silverware is difficult to hold in the common lattice structures. Depending upon the orientation of the silverware within the rack, the silverware may fall through the lattice, and potentially rest in pooling water within the base. Hence, silverware cups or containers have become a common component of draining racks.

[0005] As described above, the base and the rack are separate distinct components. They may be separated, misplaced or otherwise lost. Additionally, as some lattice structures may include bottom and side elements, the rack may consume significant amount of storage space when not in use.

[0006] As can be derived from the variety of devices directed at providing means to support articles while washing and/or rinsing water is drained, many means have been contemplated to accomplish the desired end, i.e., a collapsible support, having a rack rotatably attached to a base, and thus resulting in reduced storage space without separating the component pieces. Heretofore, tradeoffs between structure of rack and base and storage volume were required. Thus, there has been a longfelt need for a unitary collapsing draining rack having a rack rotatably attached to a base that minimizes storage volume.

BRIEF SUMMARY OF THE INVENTION

[0007] The present invention broadly includes a draining apparatus having a base with first and second ends, and a rack member with first and second ends, wherein the first end of the rack member is rotatably attached to the first end of the base. In a first embodiment, the draining apparatus further includes at least one supporting member rotatably attached to the rack member and operatively arranged to hold the rack member at an acute angle relative to the base. In a second embodiment, the at least one supporting member is operatively arranged to hold at least one article, e.g., silverware. In a third embodiment, the supporting member is also slidingly secured to the rack member. In another embodiment, the top surface of the base includes at least one protrusion, while the bottom surface of the base includes first and second thicknesses, where the first thickness in less than the second thickness. In a further embodiment, the first and second thicknesses are proximate the first and second ends of the base, respectively. In another embodiment, the top surface of the base includes at least two protrusions disposed parallel to each other. In yet another embodiment, the top surface of the base includes at least three edges and at least portions of the at least three edges include a respective raised lip. In yet a further embodiment, the dish draining apparatus may include a rack member having at least two rails, where each rail has first and second ends, and each first and second end of each rail is disposed proximate the first and second end of the rack member, respectively. And in still another embodiment, the rack member may include means for holding at least one article, e.g., a drinking glass or bowl, proximate the second end of the rack member.

[0008] A general object of the invention is to provide a draining apparatus for supporting articles, e.g., dishes, glasses, etc., while water drains from these articles, and in some instances supporting the articles until their subsequent drying.

[0009] Another object of the invention is to provide a unitary draining apparatus that may be easily collapsed and stored in a small storage volume.

[0010] Yet another object of the invention is to maximize the space available for draining articles while minimizing the storage space.

[0011] These and other objects, features, and advantages of the present invention will become readily apparent to one having ordinary skill in the art upon reading the detailed description of the invention in view of the drawings and appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The nature and mode of operation of the present invention will now be more fully described in the following detailed description of the invention taken with the accompanying drawing figures, in which:
FIG. 1 is a perspective view of an embodiment of the present invention draining apparatus shown with the rack member in a draining position;

FIG. 2 is a top plan view of the draining apparatus of FIG. 1;

FIG. 3 is a bottom plan view of the draining apparatus of FIG. 1;

FIG. 4 is a left side elevational view of the draining apparatus of FIG. 1;

FIG. 5 is a right side elevational view of the draining apparatus shown with the rack member in a storage position;

FIG. 6 is a back elevational view of the draining apparatus of FIG. 1;

FIG. 7 is a back elevational view of the draining apparatus, similar to the view of FIG. 6 except with the rack member supporting members fully rotated inward;

FIG. 8 is a back elevational view of the draining apparatus, similar to the view of FIG. 6 except with the rack member supporting members partially rotated inward; and,

FIG. 9 is a back elevational view of the draining apparatus, similar to the view of FIG. 6 except with the rack member supporting members partially rotated outward.

DETAILED DESCRIPTION OF THE INVENTION

At the outset, it should be appreciated that like drawing numbers on different drawing views identify identical, or functionally similar, structural elements of the invention. While the present invention is described with respect to what is presently considered to be the preferred embodiment, it is to be understood that the invention as claimed is not limited to the preferred embodiment. In the description below, the terms “upper”, “lower”, “front”, “back”, “left”, “right”, and their derivatives, should be interpreted from the perspective of one viewing the draining apparatus shown in FIG. 1.

Furthermore, it is understood that this invention is not limited to the particular methodology, materials and modifications described and as such may, of course, vary. It is also understood that the terminology used herein is for the purpose of describing particular embodiments only, and is not intended to limit the scope of the present invention.

Unless defined otherwise, all technical and scientific terms used herein have the same meaning as commonly understood to one of ordinary skill in the art to which this invention belongs. Although any methods, devices or materials similar or equivalent to those described herein can be used in the practice or testing of the invention, the preferred methods, devices, and materials are now described.

Adverting now to the figures, FIG. 1 shows a perspective view of an embodiment of the present invention, draining apparatus 10 shown with rack member 12 in an upright or draining position. Rack member 12 is rotatably attached to base 14 at pivot holes 16 by rack extensions 18. The rack extensions are arranged for rotation within the pivot holes.

Rack member 12 is operatively arranged to hold and retain a variety of articles for draining, e.g., plates, bowls, serving platters, and the like. Thus, in the embodiment shown in FIG. 1, rack member 12 includes a plurality of rails 20 which include arcuate segments 22 and stops 24. Although rack member 12 includes fourteen (14) rails 20 in a preferred embodiment, it is obvious that rack member 12 may include fewer or greater number of rails. It is equally obvious that although each of rails 20 is disposed substantially parallel to the other rails 20 in a preferred embodiment, they may also be disposed divergent or convergent relative to each other. Thus, rack member 12 may hold a variety of articles (not shown) by placing each article between adjacent rails 20, thereby supporting each article in a substantially vertical position. Similarly, articles may be placed on rack member 12 in a substantially horizontal position, as opposed to vertically between adjacent rails 20. The different orientations may facilitate draining the variety of articles to be held, for example, vertical orientation is appropriate for plates, while horizontal orientation is appropriate for large kitchen utensils.

The curvature of arcuate segments 22 may be the same for each rail 20 included within rack member 12, curvature may be varied so that each rail 20 has a unique arcuate segment 22, or curvature may be a combination thereof. By incorporating arcuate segments 22, rack member 12 is operatively arranged to more readily capture arcuate shaped articles, e.g., bowls, as the curvature of the article (not shown) is complimentary to the curvature of arcuate segments 22. In like fashion, stops 24 are provided to prevent articles from sliding or falling from rack member 12. Due to the angular position of rack member 12, articles disposed upon rack member 12 will likely have a tendency to move towards the lowest end of rack 12, i.e., stops 24. Thus, by including stops 24, the likelihood that articles may fall from rack member 12 is decreased.

The invention also comprises article holder 26 as shown in FIG. 1. Holder 26 may be integral to rack member 12, or alternatively, holder 26 may be releasably secured to rack member 12, or affixed by any other means known by one of ordinary skill in the art, e.g., clips. Holder 26 includes U-shaped tabs 28, wherein articles (not shown) may be placed for draining and/or drying. By varying the construction of tabs 28, holder 26 may be arranged to hold a variety of articles, e.g., a larger tab may capture a bowl, while a smaller tab may capture a drinking glass or coffee mug. Although holder 26 is shown to include six (6) tabs 28 in a preferred embodiment, obviously the holder can be designed to hold fewer or more tabs. Moreover, in a preferred embodiment, the tabs are aligned with one another, such that a common axis passes through the “U” of each of the U-shaped tabs 28. This alignment accommodates the holding and storage of a cooking utensil (such as a large knife or spoon, etc.) across a plurality of the tabs. It should be appreciated that holder 26 could comprise means other than U-shaped tabs to hold cups, glasses and the like. For example, the holder could have upwardly pointing L-shaped extensions, or extension tabs of other shapes to accomplish the same purpose and function.

Base 14 may also include features protruding from top surface 30 operatively arranged to aid in holding an article within draining apparatus 10. For example, top surface 30 may include first and second protrusions 32 and 34,
respectively, arranged so that an edge of an article, e.g., the edge of a plate, may be captured and prevented from tipping or otherwise falling from rack member 12. Thus, it is particularly advantageous to include first and second protrusions 32 and 34, respectively, between each pair of rails 20. Additionally, top surface 30 may include features operatively arranged so that all liquid draining from articles disposed above top surface 30, i.e., upon rack member 12, is collected by base 14 and directed in a predictable manner. Hence, top surface 30 is situated beneath the left, right and back edges of base 14, thereby directing any fluid collected upon top surface 30 towards front edge 38 of base 14.

[0030] Also shown in FIG. 1 are supports 40, arranged to hold rack member 12 at an acute angle relative to base 14. Supports 40 may also include through holes 42 wherein rails 20 may be disposed in such a fashion as to permit rotation of supports 40 about rails 20. The supports also slidingly engage rails 20 to permit changes in the angle of the rack relative to the base. In a preferred embodiment, support 40 engages rail 20 in a tight interference fit, such that rotation of the holder about the rail is somewhat easier than sliding engagement. Base 14 includes third protrusions 44 arranged to maintain the position of supports 40 and thereby maintain the position of rack member 12 relative to base 14 and prevent inward rotation of the supports. It should be appreciated that the length of protrusions 44 is a mere design choice; they can be made of various lengths to accommodate various angles of rack member 12 relative to base 14. In a preferred embodiment, when supports 40 are rotated and positioned proximate protrusions 44, rack member 12 forms approximately a twenty-seven degree (27°) angle with respect to base 14, although this particular angle isn’t especially critical to the invention. Although through holes 42 are shown in this embodiment, other means of rotatably attaching supports 40 to rails 20 are also within the scope of the claimed invention, e.g., clips or tabs, and similarly, means other than third protrusions 44 may be employed to maintain the position of supports 40, e.g., holes or depressions within top surface 30. In the embodiment shown in FIG. 1, supports 40 also include compartments 46 wherein articles, e.g., silverware, may be placed for draining. Although compartments 46 are shown in this embodiment, other configurations of supports 40 are also possible, including legs, support bars or support members having hooks, and these variations are also within the scope of the claims.

[0031] FIG. 2 is a top plan view of the embodiment of draining apparatus 10 shown in FIG. 1, while FIG. 3 is a bottom plan view of the same draining apparatus 10 shown in FIG. 1, and FIG. 4 is a left elevational view of the same draining apparatus 10 of FIG. 1. FIGS. 3 and 4 depict several features of this embodiment which are most clearly shown in these figures. Specifically, the features shown are bottom surface 48 of base 14 having first and second base supports 50 and 52, respectively, and pivot holes 16 in combination with rail extensions 18. As the embodiment shown in FIG. 3 describes, base support 50 may be a continuous extrusion from bottom surface 48, however one of ordinary skill in the art would recognize that other configurations are possible, e.g., individual supports similar to base supports 52 or no supports, and such structures are within the spirit and scope of the invention as claimed. Additionally, as shown in FIG. 4, first and second base supports 50 and 52, respectively, are arranged so that when base 14 is placed upon a flat surface (not shown), front edge 38 of base 14 is lower than the back edge of base 14. Thus, fluid collected upon top surface 30 will have the tendency to flow toward front edge 38.

[0032] In the embodiment shown in FIGS. 1 through 4, rack member 12 is rotatably attached to base 14 by disposing rail extensions 18 through pivot holes 16. Thus, the rotation of rack member 12 is permitted while maintaining the position of rack member 12 relative to pivot holes 16. Although this configuration is quite simple and elegant, other variations are also possible, for example a hinge mounted between rack member 12 and base 14 or a flexible plastic extension integral to base 14 wherein rail extensions 18 are disposed. Such variations are herein contemplated and within the spirit and scope of the claimed invention.

[0033] The operation of the instant invention is perhaps best understood in view of FIGS. 4 through 9. FIGS. 4 and 5 are left and right elevational views, respectively, of the present invention draining apparatus 10 shown with rack member 12 in draining and storage positions, respectively. FIG. 6 shows a back elevational view of draining apparatus 10 having supports 40 releasably engaged with base 14, as shown in FIG. 1. While FIGS. 7, 8 and 9 show back elevational views of the present invention draining apparatus 10 having supports 40 disposed in several disengaged positions. Specifically, FIG. 7 shows supports 40 fully rotated inward as shown in FIG. 5, FIG. 8 shows supports 40 partially rotated inward, while FIG. 9 shows supports 40 partially rotated outwards. In order to effect a change to the position of rack member 12, i.e., the change shown between FIGS. 4 and 5, supports 40 must be rotated as shown between FIGS. 6 and 7. By rotating supports 40 from the position shown in FIG. 6 to the position shown in FIG. 7, rack member 12 becomes freely rotatable within pivot holes 16. Although rack member 12 is free to rotate to an angle greater than that shown in FIG. 4 without rotating supports 40, in order to lower rack member 12 to a storage position, i.e., the position shown in FIG. 5, supports 40 must be rotated according to FIG. 7.

[0034] Supports 40 are not limited to only the positions shown in FIGS. 4 and 5. Hence, FIG. 8 shows how supports 40 may be rotated to positions between those shown in FIGS. 4 and 5. Similarly, as shown in FIG. 9, supports 40 may be rotated outwardly, i.e., away from the center, thereby permitting rack member 12 to collapse. However, with supports 40 oriented in such a fashion, rack member 12 would not be reduced to the small storage volume depicted in FIG. 5. Thus, it is advantageous to fully rotate supports 40 inward, prior to storing draining apparatus 10.

[0035] Thus, it is seen that the objects of the present invention are efficiently obtained, although modifications and changes to the invention should be readily apparent to those having ordinary skill in the art, which modifications are intended to be within the spirit and scope of the invention as claimed. It also is understood that the foregoing description is illustrative of the present invention and should not be considered as limiting. Therefore, other embodiments of the present invention are possible without departing from the spirit and scope of the present invention.
What is claimed:

1. A draining apparatus comprising:
   a base having first and second ends; and,
   a rack member having first and second ends, wherein said first end of said rack member is rotatably attached to said first end of said base.

2. The draining apparatus of claim 1 wherein said base further comprises top and bottom surfaces, said top surface includes at least one protrusion, said bottom surface has first and second thicknesses, and said first thickness is less than said second thickness.

3. The draining apparatus of claim 2 wherein said first and second thicknesses are proximate said first and second ends of said base, respectively.

4. The draining apparatus of claim 2 wherein said top surface further comprises at least two protrusions disposed parallel to each other.

5. The draining apparatus of claim 2 wherein said top surface further comprises at least three edges, and at least portions of said at least three edges comprise a respective raised lip.

6. The draining apparatus of claim 1 wherein said rack member further comprises at least two rails, each having first and second ends, wherein said respective first ends of said at least two rails are proximate said first end of said rack member and said respective second ends of said at least two rails are proximate said second end of said rack member.

7. The draining apparatus of claim 6 wherein each of said first ends of said at least two rails further comprise a stop.

8. The draining apparatus of claim 1 further comprising means for holding at least one article proximate said second end of said rack member.

9. The draining apparatus of claim 8 wherein said means for holding at least one article is operatively arranged to hold an article selected from the group consisting of a drinking glass, bowl, plate, platter, utensil and silverware.

10. The draining apparatus of claim 1 further comprising a supporting member operatively arranged to hold said rack member at an acute angle relative to said base, wherein said supporting member is rotatably attached to said rack member.

11. The draining apparatus of claim 10 wherein said supporting member is also slidingly secured to said rack member.

12. A draining apparatus comprising:
   a base having first and second ends;
   a rack member having first and second ends, wherein said first end of said rack member is rotatably attached to said first end of said base; and,
   a supporting member operatively arranged to hold said rack member at an acute angle relative to said base, wherein said supporting member is rotatably attached to said rack member.

13. A draining apparatus comprising:
   a base;
   a rack member; and,
   a supporting member operatively arranged to hold said rack member at an acute angle relative to said base, wherein said supporting member is rotatably attached to said rack member.

14. The draining apparatus of claim 13 wherein said base comprises first and second ends, said rack member comprises first and second ends, and said first end of said rack member is rotatably attached to said first end of said base.