PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)* 08 JAN 2009	
Applicant's or agent's file reference 12583-102	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US 08/81765	30 October 2008 (30.10.2008)	02 November 2007 (02.11.2007)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - A23B 4/03 (2008.04)
USPC - 99/495

Applicant DKB HOUSEHOLD USA CORP.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	02 January 2009 (02.01.2009)	Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:

   a. type of material

      ☐ a sequence listing

      ☐ table(s) related to the sequence listing

   b. format of material

      ☐ on paper

      ☐ in electronic form

   c. time of filing/furnishing

      ☐ contained in the international application as filed

      ☐ filed together with the international application in electronic form

      ☐ furnished subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

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Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	2, 6-8, 10, 12-14, 16, 18	YES
	Claims	1, 3-5, 9, 11, 15, 17	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-18	NO
Industrial applicability (IA)	Claims	1-18	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1, 3-5, 9, 11, 15 and 17 lack novelty under PCT Article 33(2) as being anticipated by US 5,865,109 A to Bull.

As per claim 1, Bull discloses a drive assembly for a drying device (salad spinner 10), said drive assembly comprising: a driving mechanism (ratchet teeth 48, clutch 52, 60; pinion gear teeth 58, hub 72) mechanically coupled (via fastener 76) to a rotatable lid (turret 26), wherein said lid is configured to mate with a rotatable basket (colander 14) having a plurality of apertures (perforation 16, 18) (FIG. 1-3, col 2, ln 33-37, 50-56, from 63-67 to col 3, ln 1-19); and a handle (drive handle 32) pivotally attached (via fastener 35) to a cover assembly (lid 20) (FIG. 1, 2, col 2, ln 57-62), said handle configured to actuate said driving mechanism upon rotation of said handle about an axis from a first position (left) to a second position (right) (driving mechanism is engaged when handle is rotated in arc from left side to right side) (FIG. 3-7, col 1, ln 45-56).

As per claim 3, Bull discloses the drive assembly of claim 1, and further wherein said driving mechanism comprises a rack (intermediate section 44 with ratchet teeth 48) and a pinion (pinion gear teeth 58 on central tubular section 54) (FIG. 2, 3, from col 2, ln 63-67 to col 3, ln 1-3).

As per claim 4, Bull discloses the drive assembly of claim 3, and further wherein said rack is configured to slideably engage said pinion upon rotation of said handle (driving mechanism is engaged when handle is rotated in arc from left side to right side) (FIG. 3-7, col 1, ln 45 -56).

As per claim 5, Bull discloses the drive assembly of claim 3, wherein said driving mechanism further comprises a clutch assembly (clutch housing 52, clutch assembly 60) coupled to said pinion (gear teeth 58) and a sprag assembly (clutch assembly 60) configured such that said sprag assembly engages said clutch assembly when said handle rotates (in an arc) from said first position to said second position (driving mechanism is engaged when handle is rotated in arc from left side to right side) (FIG. 3-7, col 1, ln 45-56, and from col 2, ln 57-67 to col 3, ln 1-19).

As per claim 9, Bull discloses a drying device (salad spinner 10), comprising: a bowl (12) having a top edge 925) and an opening defined by said top edge (FIG. 2, 3); a basket (colander 14) disposed within said bowl and rotatable about a first axis (center of bowl) with respect to said bowl, said basket comprising an upper edge and a plurality of apertures (perforation 16, 18) (FIG. 2, 3, col 1, ln 45-49, and col 2, ln 33-44); a cover assembly (lid 20) removably configured to mate with said top edge of said bowl, said cover assembly comprising a top side, a bottom side, and a rotatable lid (turret 26) attached to said bottom side and configured to mate with said upper edge of said basket when said cover assembly is positioned upon said top edge of said bowl (FIG. 2, 3, col 2, ln 45-56); and a drive assembly associated with said cover assembly, said drive assembly comprising a driving mechanism (ratchet teeth 48, clutch 52, 60; pinion gear teeth 58, hub 72) mechanically coupled (via fastener 76) to said lid, said driving mechanism comprising a rack (intermediate section 44 with ratchet teeth 48) and a pinion (pinion gear teeth 58 on central tubular section 54) engageable with said rack (FIG. 2, 3, from col 2, ln 63-67 to col 3, ln 1 -19), and a handle (drive handle 32) pivotally attached (via fastener 35) to said cover assembly (FIG. 1, 2, 4, col 2, ln 57-62); wherein said handle rotates (in arc) about a second axis (center of post 36) and moves said rack which rotates said pinion about said first axis imparting rotational energy to said lid and said basket (driving mechanism is engaged when handle is rotated in arc from left side to right side) (FIG. 3-7, col 1, ln 45-56).

As per claim 11, Bull discloses the device of claim 9, and further wherein said driving mechanism further comprises a clutch assembly (clutch housing 52, clutch assembly 60) coupled to said pinion (gear teeth 58) and a sprag assembly (clutch assembly 60) configured such that said sprag assembly engages said clutch assembly when said handle rotates (in an arc) from said first position to said second position (driving mechanism is engaged when handle is rotated in arc from left side to right side) (FIG. 3-7, col 1, ln 45-56, and from col 2, ln 57-67 to col 3, ln 1-19).

As per claim 15, Bull discloses a method for drying food (salad), comprising the steps of: providing a drying device (salad spinner 10), said device comprising: a container (bowl 12) having a top edge (25) and an opening defined by said top edge (FIG. 2, 3); a basket (colander 14) disposed within said container, said basket having a plurality of apertures (perforation 16, 18) and an upper edge (FIG. 2, 3, col 2, ln 33-37, 45-49); a cover assembly (lid 20) removably configured to mate with said top edge of said container, said cover assembly comprising a bottom side and a lid (turret 26) attached to said bottom side and configured to mate with said upper edge of said basket when said cover assembly is positioned upon said top edge of said container (FIG. 1-3, col 2, ln 45-56); a drive assembly associated with said cover assembly, said drive assembly comprising a driving mechanism (ratchet teeth 48, clutch 52, 60; pinion gear teeth 58, hub 72)

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In case the space in any of the preceding boxes is not sufficient.

Continuation of:
Box V.2. Citations and explanations:

mechanically coupled (via fastener 76) to said rotatable lid (FIG. 2, 3, from col 2, ln 63-67 to col 3, ln 1-19), and a handle (drive handle 32) pivotally attached (via fastener 35) to said cover assembly (FIG. 1, 2, col 2, ln 57-62); placing food containing moisture within said basket; positioning said cover assembly upon said top edge of said container such that said rotatable lid mates with said top edge of the basket; actuating said handle to engage said driving mechanism to rotate said lid and said basket about an axis in order to remove said moisture from said food; and removing said cover assembly such that said food may be removed from said basket (FIG. 1-7, col 1, ln 9-19. 39-40, and abstract).

As per claim 17, Bull discloses the method of claim 15, and further wherein said driving mechanism further comprises a rack (intermediate section 44 with ratchet teeth 48) and a pinion (pinion gear teeth 58 on central tubular section 54) engageable with said rack (FIG. 3, 4, from col 2, ln 63-67 to col 3, ln 1-3).

Claims 6-8 and 12-14 lack an inventive step under PCT Article 33(3) as being obvious over Bull, in view of US 6,018,883 A to Mulhauser.

As per claim 6, Bull discloses the drive assembly of claim 1, but does not disclose the further claim limitation of Mulhauser, namely, wherein a locking mechanism (latch 132) is positioned on a top side of said cover assembly (24) and is configured to prevent said handle (handle structure 94) from moving from said second position (down at cover) to said first position (up, away from cover) (FIG. 2, 3, 5, 6, 11, 12, 13, and col 5, ln 45-57).

It would have been obvious to one skilled in the art to modify the Bull drying device handle and drive assembly and to add the Mulhauser sliding locking mechanism in order to hold the handle in place in the second position. Such locking mechanism would serve to stop the device operation and ready the unit for storage mode.

As per claim 7, Bull and Mulhauser disclose the drive assembly of claim 6, and Mulhauser further discloses wherein said locking mechanism releasably engages (projection 136 of latch 132 is placed in by sliding the latch) an opening (slot 99) in said handle when said handle is in said second position (down at cover) (FIG. 6, 12, and col 5, ln 45-57).

As per claim 8, Bull and Mulhauser disclose the drive assembly of claim 6, and Mulhauser further discloses wherein said locking mechanism is configured to remain stationary when said handle is in said first position (up, away from cover) (latch 132 is positioned in its initial, non-engaging, location, where it does not interfere with normal handle operation; FIG. 3).

As per claim 12, Bull discloses the device of claim 9, but does not disclose the further claim limitation of Mulhauser, namely, wherein a locking mechanism (latch 132) is positioned on said top side of said cover assembly (24) configured to prevent said handle (handle structure 94) from moving from said second position (down at cover) to said first position (up, away from cover) (FIG. 2, 3, 5, 6, 11, 12, 13, and col 5, ln 45-57).

It would have been obvious to one skilled in the art to modify the Bull drying device handle and to add the Mulhauser sliding locking mechanism in order to hold the handle in place in the second position. Such locking mechanism would serve to stop the device operation and ready the unit for storage mode.

As per claim 13, Bull and Mulhauser disclose the device of claim 12, and Mulhauser further discloses wherein said locking mechanism releasably engages (projection 136 of latch 132 is placed in by sliding the latch) an opening (slot 99) in said handle when said handle is in said second position (down at cover) (FIG. 6, 12, and col 5, ln 45-57).

As per claim 14, Bull and Mulhauser disclose the device of claim 12, and Mulhauser further discloses wherein said locking mechanism is configured to remain stationary when said handle is in said first position (up, away from cover) (latch 132 is positioned in its initial, non-engaging, location, where it does not interfere with normal handle operation; FIG. 3).

Claims 2, 10, 16 and 18 lack an inventive step under PCT Article 33(3) as being obvious over Bull, in view of US 2007/0137504 A1 to Wan et al. (hereinafter 'Wan'), and further in view of US 4,052,092 A to Bergen.

As per claim 2, Bull discloses the drive assembly of claim 1, but does not disclose further comprising a rod connecting said driving mechanism to said handle, as per the combination of Wan and Bergen as detailed below.

Wan discloses a salad spinner (10') that uses a drive mechanism (300) with a linearly actuating horizontal slider (310') and gear train (320') with leading gear (321') which acts as a straight rack. Rack meshes with second gear (322'), which acts as a pinion, so that gear train 320' serves to rotate the center ratchet assembly (400') to spin basket (200') (FIG. 17, 18B, 21, 23C, and para [0105, 0108, 0112]).

It would have been obvious to one skilled in the art to modify the Bull handle and drive mechanism as per Wan, such that the handle would linearly slide a straight rack which would act to rotate a pinion to spin the basket. The straight rack would be a simpler, more efficient means to rotate the pinion than the Bull curved rack member.

Bergen discloses a latching device where the rack and pinion operation provides a simplified arrangement for translating pivotal thumb lever movement into spindle rotational movement to turn a knob (col 9, ln 50-53). Lever (88) is pivotably mounted to frame (24), and has a narrow, elongated extension, (latch actuating end part (92)), which serves as the rod which is connected to rack plate (42) via the notch in the bottom of actuator plate (50). End part (92) linearly slides rack plate (42) in rack recess (28) of the frame. Rack plate includes rack (46), which meshes with pinion (52). Depressing the lever pivots the end part (rod), which slides the rack, rotating the pinion, and thus turning the knob (FIG. 1, 3, 5, 7, col 5, ln 28-36, 48-62, col 6, ln 41-64, col 7, ln 1-12, and col 8, ln 51-58).

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In case **the space in any of the preceding boxes is not sufficient.**
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Box V.2. Citations and explanations:

It would have have been obvious to one skilled in the art to modify the Bull/Wan handle and drive mechanism as per Bergen to add the end part extension (rod) from the handle lever as a means to slide the drive mechanism rack. Such design enables the user to employ a more effective force translation by the handle/rod pumping action in order to rotate the pinion and basket, while additionally providing a second, lowered handle position for improved storage of the device.

As per claim 10, Bull discloses the device of claim 9, but does not disclose wherein said driving assembly further comprises a rod connecting said handle to said driving mechanism, as per the combination of Wan and Bergen.

Wan discloses a salad spinner (10') that uses a drive mechanism (300) with a linearly actuating horizontal slider (310') and gear train (320') with leading gear (321') which acts as a straight rack. Rack meshes with second gear (322'), which acts as a pinion, so that gear train 320' serves to rotate the center ratchet assembly (400') to spin basket (200') (FIG. 17, 18B, 21, 23C, and para [0105, 0108, 0112]).

It would have been obvious to one skilled in the art to modify the Bull handle and drive mechanism as per Wan, such that the handle would linearly slide a straight rack which would act to rotate a pinion to spin the basket. The straight rack would be a simpler, more efficient means to rotate the pinion than the Bull curved rack member.

Bergen discloses a latching device where the rack and pinion operation provides a simplified arrangement for translating pivotal thumb lever movement into spindle rotational movement to turn a knob (col 9, ln 50-53). Lever (88) is pivotably mounted to frame (24), and has a narrow, elongated extension, (latch actuating end part (92)), which serves as the rod which is connected to rack plate (42) via the notch in the bottom of actuator plate (50). End part (92) linearly slides rack plate (42) in rack recess (28) of the frame. Rack plate includes rack (46), which meshes with pinion (52). Depressing the lever pivots the end part (rod), which slides the rack, rotating the pinion, and thus turning the knob (FIG. 1, 3, 5, 7, col 5, ln 28-36, 48-62, col 6, ln 41-64, col 7, ln 1-12, and col 8, ln 51-58).

It would have have been obvious to one skilled in the art to modify the Bull/Wan handle and drive mechanism as per Bergen to add the end part extension (rod) from the handle lever as a means to slide the drive mechanism rack. Such design enables the user to employ a more effective force translation by the handle/rod pumping action in order to rotate the pinion and basket, while additionally providing a second, lowered handle position for improved storage of the device.

As per claim 16, Bull discloses the method of claim 15, but does not disclose wherein said driving assembly further comprises a rod connecting said handle to said driving mechanism, as per the combination of Wan and Bergen.

Wan discloses a salad spinner (10') that uses a drive mechanism (300) with a linearly actuating horizontal slider (310') and gear train (320') with leading gear (321') which acts as a straight rack. Rack meshes with second gear (322'), which acts as a pinion, so that gear train 320' serves to rotate the center ratchet assembly (400') to spin basket (200') (FIG. 17, 18B, 21, 23C, and para [0105, 0108, 0112]).

It would have been obvious to one skilled in the art to modify the Bull handle and drive mechanism as per Wan, such that the handle would linearly slide a straight rack which would act to rotate a pinion to spin the basket. The straight rack would be a simpler, more efficient means to rotate the pinion than the Bull curved rack member.

Bergen discloses a latching device where the rack and pinion operation provides a simplified arrangement for translating pivotal thumb lever movement into spindle rotational movement to turn a knob (col 9, ln 50-53). Lever (88) is pivotably mounted to frame (24), and has a narrow, elongated extension, (latch actuating end part (92)), which serves as the rod which is connected to rack plate (42) via the notch in the bottom of actuator plate (50). End part (92) linearly slides rack plate (42) in rack recess (28) of the frame. Rack plate includes rack (46), which meshes with pinion (52). Depressing the lever pivots the end part (rod), which slides the rack, rotating the pinion, and thus turning the knob (FIG. 1, 3, 5, 7, col 5, ln 28-36, 48-62, col 6, ln 41-64, col 7, ln 1-12, and col 8, ln 51-58).

It would have have been obvious to one skilled in the art to modify the Bull/Wan handle and drive mechanism as per Bergen to add the end part extension (rod) from the handle lever as a means to slide the drive mechanism rack. Such design enables the user to employ a more effective force translation by the handle/rod pumping action in order to rotate the pinion and basket, while additionally providing a second, lowered handle position for improved storage of the device.

As per claim 18, Bull discloses the method of claim 17, but does not disclose wherein the step of actuating comprises pivotally rotating said handle about a second axis in the direction of the cover assembly and moving said rack which rotates said pinion.

Wan discloses a salad spinner (10') that uses a drive mechanism (300) with a linearly actuating horizontal slider (310') and gear train (320') with leading gear (321') which acts as a straight rack. Rack meshes with second gear (322'), which acts as a pinion, so that gear train 320' serves to rotate the center ratchet assembly (400') to spin basket (200') (FIG. 17, 18B, 21, 23C, and para [0105, 0108, 0112]).

It would have been obvious to one skilled in the art to modify the Bull handle and drive mechanism as per Wan, such that the handle would linearly slide a straight rack which would act to rotate a pinion to spin the basket. The straight rack would be a simpler, more efficient means to rotate the pinion than the Bull curved rack member.

Bergen discloses a latching device where the rack and pinion operation provides a simplified arrangement for translating pivotal thumb lever movement into spindle rotational movement to turn a knob (col 9, ln 50-53). Lever (88) is pivotably mounted to frame (24), and has a narrow, elongated extension, (latch actuating end part (92)), which serves as the rod which is connected to rack plate (42) via the notch in the bottom of actuator plate (50). End part (92) linearly slides rack plate (42) in rack recess (28) of the frame. Rack plate includes rack (46), which meshes with pinion (52). Depressing the lever pivots the end part (rod), which slides the rack, rotating the pinion, and thus turning the knob (FIG. 1, 3, 5, 7, col 5, ln 28-36, 48-62, col 6, ln 41-64, col 7, ln 1-12, and col 8, ln 51-58).
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It would have have been obvious to one skilled in the art to modify the Bull/Wan handle and drive mechanism as per Bergen to add the end part extension (rod) from the handle lever as a means to slide the drive mechanism rack. Such design enables the user to employ a more effective force translation by the handle/rod pumping action in order to rotate the pinion and basket, while additionally providing a second, lowered handle position for improved storage of the device. Thus, this combination device would include, as per Bergen, a lever handle which would pivot about a non-central second axis. The handle would pivotally rotate down in the direction of the cover assembly, and move the sliding rack, which then rotates the pinion, and so, improving the spinning operation of the basket.

Claims 1-18 have industrial applicability as defined under PCT Article 33(4) because the subject matter can be made or used in industry.