Embodiments of a disposable liner that is disposed in a cavity of a basin are disclosed. In one embodiment, a disposable liner comprises: sidewalls that are designed to adapt to the contours of the cavity of the basin; and a bottom wall that is attached to the sidewalls and includes a drainage hole that is aligned with the drainage hole of the basin.
DISPOSABLE LINER FOR A BASIN

CROSS-REFERENCE TO RELATED APPLICATION


TECHNICAL FIELD

[0002] This disclosure relates to a basin, and more particularly to a disposable liner that is disposed inside a cavity of a basin.

BACKGROUND

[0003] In the pedicure industry, a foot tub is used to rinse and clean a person’s foot. However, a person’s foot typically has bacteria, fungus, and other related organisms that contaminate the foot tub after using the foot tub. The contaminated foot tub can contaminate another person’s foot if the foot tub has not been properly sanitized or cleaned.

SUMMARY

[0004] Embodiments of a disposable liner that is disposed in a cavity of a basin are disclosed. In one embodiment, a disposable liner comprises: sidewalls that are design to adapt to the contours of the cavity of the basin; and a bottom wall that is attached to the sidewalls and includes a drainage hole that is aligned with the drainage hole of the basin.

[0005] In another embodiment, among others, a disposable liner comprises: sidewalls that are design to adapt to the contours of the cavity of the basin; footrests that are attached in a normal position to the respective sidewalls; and a trench that is formed between the footrests.

[0006] In yet another embodiment, among others, a disposable liner comprises: sidewalls that are design to adapt to the contours of the cavity of the basin; a bottom wall that is attached to the sidewalls and includes a drainage hole that is aligned with the drainage hole of the basin; a cover that seals the drainage hole, preventing water from draining out of the disposable liner through the drainage hole, the cover including a heat sealed foil that is a non-contact method of heating a metallic disk to hermetically seal the drainage hole using an induction sealing method.

[0007] Other apparatuses, methods, features, and advantages of the present disclosure will be or become apparent to one with skill in the art upon examination of the following drawings and detailed description. It is intended that all such additional apparatuses, methods, features, and advantages be included within this description, be within the scope of the present disclosure, and be protected by the accompanying claims.

DETAILED DESCRIPTION

[0017] Disposable liners are disclosed herein. One function of the disposable liner, among others, is to prevent the spread of infections in a basin, and more particularly, a basin of a pedicure spa. There have been many cases of bacterial infections during a pedicure service due to the inconsistent mixing of the disinfectant products or by not using the disinfectant products at all. The disposable liner is designed to eliminate the transfer of bacteria within the pedicure spa.

[0018] For example, when a customer is ready to get a pedicure, a nail technician can place a disposable liner into the basin of the pedicure spa. Fresh water is poured into the new liner to ensure cleanliness and hygiene. After a nail technician completes a customer’s pedicure, the contaminated water is disposed of by lifting a heat sealed foil cover (approximately 1.5 inch hole) at the bottom of the disposable liner.

[0019] Once drained, the liner is discarded and the inner surface of the basin is sanitized with, for example, Crosstex™ disinfectant wipes (Hospital Grade and EPA Approved). When another pedicure customer is ready, a new disposable liner is used. Once the foil has been removed, the disposable liner generally can not be reused due to the fact that the hole is sealed with a heat sealed foil, preventing multiple uses of the liner and bacteria infections to the customers.

[0020] FIG. 1 is perspective view of a disposable liner 100 that is placed in a cavity 156 (FIG. 6) of a basin or foot tub 153 (FIG. 6). The disposable liner 100 includes sidewalls 103, 106, 109, and 113, which include indentations 116, 119, 123, 126, respectively, for adapting to the contours of the cavity of the basin 153, which is described and shown in FIGS. 6 and 7. The sidewalls 109, 113 are attached in a normal position to a foot rest 129 and the sidewalls 103, 113 are attached in a normal position to another foot rest 133. Between the two foot rests 129, 133 is a trench 136. Such trench 136 includes sidewalls 143, 146, both of which are attached in a normal position to the foot rests 129, 133, respectively. Both sidewalls 143, 146 of the trench 136 are attached in a normal position to the bottom wall 149 of the trench 136. The bottom wall 149 of trench 136 includes a drainage hole 139 adjacent to the sidewall 113.
FIG. 2 is a front view of the disposable liner 100, such as that shown in FIG. 1, in which the disposable liner 100 is upside down. The front view shows the sidewall 106 and the indentation 123. FIG. 3 is a top view of the disposable liner 100, such as that shown in FIG. 1. FIG. 4 is a rear view of the disposable liner 100, such as that shown in FIG. 1, having the sidewall 113 with the indentation 126. The bottom portion of the sidewall 113 is attached in a normal position to the foot rests 129, 133. The foot rests 129, 133 are attached in a normal position to the sidewalls 143, 146 of the trench 136. The bottom portion of the sidewalls 143, 146 of the trench 136 is attached in a normal position to the bottom wall 149 of the trench 136.

FIG. 5 is a side view of the disposable liner 100, such as that shown in FIG. 1, having the sidewall 109 having the indentation 119. The bottom portion of the sidewall 109 is attached in a normal position to the foot rest 129, which is attached in a normal position to the sidewall 143 of the trench 136.

FIG. 6 is a perspective view of the disposable liner 100, such as that shown in FIG. 1, resting at an angle along the peripheral of the basin 153. In general, the disposable liner 100 is molded to adapt to the shape of the interior of the basin 153. For example, the indentations 116, 119 of the sidewalls 103, 109 adapt to the shape of the basin 153 having an overflow structure 159 and a shower head portion 163, respectively.

The basin 153 includes a cavity 156 in which the disposable liner 100 is disposed therein. The cavity 156 includes a drainage hole 166 at the bottom wall of the basin 153. The disposable liner 100 includes a cover 170 that seals the drainage hole 139 of the liner 100, preventing water from draining out of the liner 100 through the drainage hole 139. The cover 170 includes, but not limited to, a heat sealed foil that is further described in relation to FIGS. 7 and 8. The drainage hole 139 is generally aligned with the drainage hole of the basin 153.

FIG. 7 is a top view of the disposable liner 100, such as that shown in FIG. 1, being disposed inside the cavity 156 of the basin 153. The indentations 116, 119 of the sidewalls 103, 109 are adapted to shape of the overflow structure 159 and shower head portion 163. The heat sealed foil 170 of the disposable liner 100 is placed on top of the drainage hole 166. The drainage hole 139 has a diameter of approximately 1.5 inches. The heat sealed foil 170 is a non-contact method of heating a metallic disk to hermetically seal the drainage hole 139 using an induction sealing method.

In general, the heat sealed foil 170 is multi-layered. For example, a top layer of the heat sealed foil 170 can be made of paper pulp. The next layer can be made of wax that is used to bond a foil to the pulp. The bottom layer can be made of a polymer film laminated to the foil. The disposable liner 100 passes under an induction coil, which emits a varying electromagnetic field. As the disposable liner 100 passes under the induction coil (also known as a sealing head) the conductive aluminum foil liner begins to heat. The heat melts the wax, which absorbs into the pulp backing and releases the foil from the disposable liner 100. The polymer film also heats and flows onto the peripheral of the drainage hole 139. When cooled, the polymer creates a bond with the disposable liner 100 resulting in a hermetically sealed product.

FIG. 8 is a perspective view of the disposable liner 100 having the tab 173 on the heat sealed foil 170. A user can use the tab 173 to facilitate peeling the heat sealed foil 170 off the disposable liner 100. An exemplary process of using the disposable liner 100 is as follows. The disposable liner 100 is placed inside the cavity 156 of the basin 153. The disposable liner 100 is then filled with water using the shower head portion 163.

A person’s foot is placed inside the liner to be properly rinsed and cleaned. After the rinsing and cleaning are completed, the heat sealed foil 170 is peeled off the disposable liner 100 using the tab 173 draining the water out of the disposable liner 100 through the drainage hole 139 into the basin hole 166. The disposable liner 100 is then thrown away. A new and uncontaminated disposable liner 100 can be used to rinse and clean the next person’s foot. This reduces the chances of bacterial and fungus contamination from one person’s foot to another person’s foot.

Alternatively or additionally, to prevent reuse of a disposable liner, the heat sealed foil is coated with a substance that changes color when the heat sealed foil is exposed to water. This ensures the next person to a certain degree that the disposable liner 100 has never been used.

Therefore, having thus described the invention, at least the following is claimed:

1. A disposable liner that is disposed in a cavity of a basin comprising:
   - sidewalls that are design to adapt to the contours of the cavity of the basin;
   - footrests that are attached in a normal position to the respective sidewalls; and
   - a trench that is formed between the footrests.
2. The disposable liner as defined in claim 1, wherein the bottom wall of the trench includes a drainage hole.
3. The disposable liner as defined in claim 2, further comprising a cover that seals the drainage hole, preventing water from draining out of the disposable liner through the drainage hole.
4. The disposable liner as defined in claim 3, wherein the cover includes a heat sealed foil that is a non-contact method of heating a metallic disk to hermetically seal the drainage hole using an induction sealing method.
5. The disposable liner as defined in claim 4, wherein the cover includes a tab to facilitate peeling the cover off the disposable liner.
6. A disposable liner that is disposed in a cavity of a basin comprising:
   - sidewalls that are design to adapt to the contours of the cavity of the basin; and
   - a bottom wall that is attached to the sidewalls and includes a drainage hole that is aligned with the drainage hole of the basin.
7. The disposable liner as defined in claim 6, further comprising a cover that seals the drainage hole, preventing water from draining out of the disposable liner through the drainage hole.
8. The disposable liner as defined in claim 7, wherein the cover includes a heat sealed foil that is a non-contact method of heating a metallic disk to hermetically seal the drainage hole using an induction sealing method.
9. The disposable liner as defined in claim 8, wherein the cover includes a tab to facilitate peeling the cover off the disposable liner.
10. The disposable liner as defined in claim 6, further comprising footrests that are attached in a normal position to the respective sidewalls.
11. The disposable liner as defined in claim 10, further comprising a trench that is formed between the footrests.

12. A disposable liner that is disposed in a cavity of a basin comprising:
   - sidewalls that are design to adapt to the contours of the cavity of the basin;
   - a bottom wall that is attached to the sidewalls and includes a drainage hole that is aligned with the drainage hole of the basin;
   - a cover that seals the drainage hole, preventing water from draining out of the disposable liner through the drainage hole, the cover including a heat sealed foil that is a non-contact method of heating a metallic disk to hermetically seal the drainage hole using an induction sealing method.

13. The disposable liner as defined in claim 12, wherein the cover includes a tab to facilitate peeling the cover off the disposable liner.

14. The disposable liner as defined in claim 13, further comprising footrests that are attached in a normal position to the respective sidewalls.

15. The disposable liner as defined in claim 14, further comprising a trench that is formed between the footrests.

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