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(54) Title: AQUACULTURE SYSTEMS WITH BALL VALVE MECHANISMS

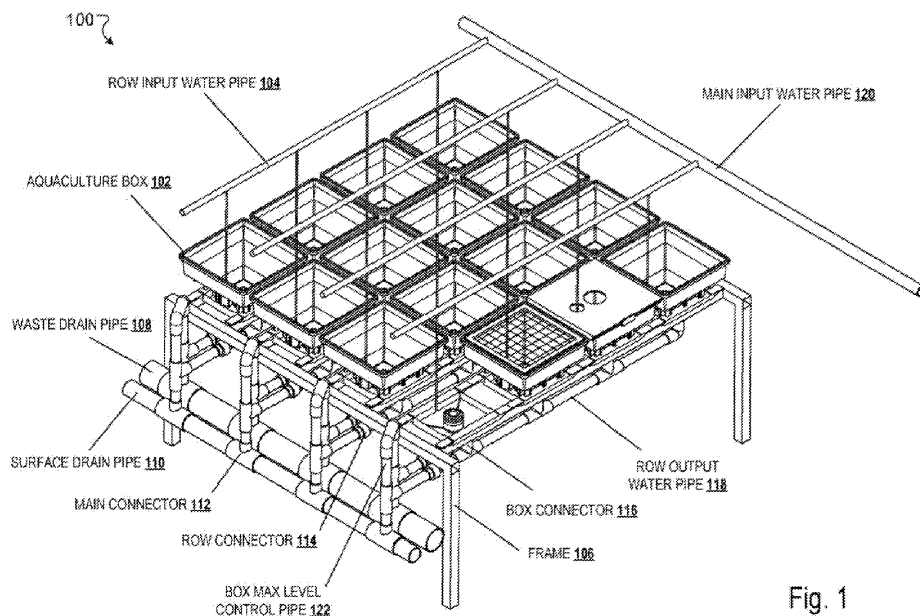


Fig. 1

(57) Abstract: Systems and apparatus for an aquaculture box configured to store water at a water storing stage and to drain water and waste material at a water draining stage are described. In one aspect, the aquaculture box forms an upper end opposite a lower end, where the interior of the aquaculture box comprises one or more drain holes configured to drain water from the aquaculture box. The valve is connected to the first drain hole, where the valve comprises a first drain pipe configured to drain water and waste material from the box during the water draining stage, and a buoyant ball configured to move between the first drain hole and the first drain pipe to prevent water from flowing out of the box during the water storing stage and to detach from the first drain hole and move toward the first drain pipe at the water draining stage.

[Continued on next page]

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