CLAIMS:

1. A steam heat energy collection or recovery apparatus comprising a steam chamber and a steam heat energy collection device, wherein the steam chamber is arranged such that steam enters at a steam inlet in the direction of natural upward convection and exits from a steam outlet, and that the steam heat energy collection device is arranged to collect or extract thermal energy from steam inside the steam chamber by contact thermal exchange; characterized in that, the steam chamber comprises a steam guide that is arranged to guide steam to travel inside the steam chamber between the steam inlet and the steam outlet at a direction away from vertical, wherein the steam guide is substantially horizontal or orthogonal to the natural upward convection of steam, and wherein the steam heat energy collection device and the steam guide are substantially parallel or co-axial with a substantially uniformed gap maintained there-between to further maximize thermal exchange.

2. A steam heat energy collection or recovery apparatus comprising a steam chamber and a steam heat energy collection device, wherein the steam chamber is arranged such that steam enters at a steam inlet in the direction of natural upward convection and exits from a steam outlet, and that the steam heat energy collection device is arranged to collect or extract thermal energy from steam inside the steam chamber by contact thermal exchange, and the extracted or collected thermal energy is stored in a thermal energy collection fluid; characterized in that, the thermal energy collection fluid is arranged to travel in a direction against the direction of movement of steam inside the steam chamber, wherein the steam chamber is arranged as a steam guide which is substantially horizontal or orthogonal to the natural upward convection of steam, and wherein the steam heat energy collection device and the steam guide are substantially parallel or co-axial with a

substantially uniformed gap maintained there-between to further maximize thermal exchange.

3. An apparatus according to Claims 1 or 2, wherein the steam guide is shaped such that steam inside the steam chamber travelling from the steam inlet to the steam outlet travels at a speed lower than that due to natural upward convection.

4. An apparatus according to any of preceding Claims, wherein the steam guide extends substantially horizontally between the steam inlet and the steam outlet.

5. An apparatus according to any of the preceding Claims, wherein the steam guide inclines slightly upwards from the steam inlet to the steam outlet.

6. An apparatus according to any of the preceding Claims, wherein the chamber is arranged such that steam exiting the steam chamber leaves the steam outlet in a direction substantially orthogonal to the direction of entry at the steam inlet.

7. An apparatus according to any of the preceding Claims, further comprising a distilled water outlet, the distilled water outlet being proximal the steam outlet.

8. An apparatus according to any of the preceding Claims, further comprising an insulated outer housing, the insulated housing being arranged to surround the steam chamber and mitigate heat loss from the steam chamber to the environment.

9. An apparatus according to any of the preceding Claims, wherein the steam heat energy collection device comprises at least one thermal

collection pipe, the thermal collection pipe being helically wound and forming part of a closed circulation system arranged to circulate a thermal collection medium, wherein the substantially uniform gap formed between the heat energy collection device and the steam guide is substantially the same width as the pipe diameter.

10. An apparatus according to Claim 9, wherein the helically wound thermal collection pipe collectively forms an internal core, the central portion of the internal core being blocked or baffled such that steam passing through the internal core is forced to pass through the unblocked or the un-baffled portion of the internal core during operation.

11. An apparatus according to Claims 9 or 10, wherein the thermal collection medium is arranged to travel against the direction of movement of the steam.

12. An apparatus according to any of Claims 9 to 11, wherein the thermal collection medium is water.

13. A food steamer comprising a steam heat energy collection or recovery apparatus according to any of the preceding Claims.

14. A food steamer according to Claim 13, wherein the steamer comprises a heated water pool for steam generation and an enclosed food steaming chamber having a steam inlet and a steam outlet, the steam inlet being admitting steam generated by the heated water pool into the steam chamber, and the steam outlet being arranged to feed steam exiting from the food steaming chamber into the steam chamber of the steam heat energy recovery apparatus.

15. A food steamer according to Claims 13 or 14, wherein the thermal collection medium is water and the food steamer comprises a heated

water pool for steam generation, the thermal collection medium being returned to the heated water pool as hot water for steam generation.

16. A food steamer according to any of Claims 13 to 15, wherein distilled water produced due to condensation of the steam in the steam chamber by the thermal energy collection device is returned to the heated water pool.