

CLAIMS

1. A waste separator and collector system for use under a sink, the waste separator comprising: a transverse pipe, the transverse pipe including a proximal end, a distal end, a sidewall therebetween, a solid waste outlet at the distal end and a flange on the sidewall, the transverse pipe defining a transverse bore; a motor-driven, non-cutting auger which is housed in the transverse bore; a cylindrical filter around the motor-driven, non-cutting auger; a water collector below the cylindrical filter and terminating in a wastewater outlet; a sink wastewater inlet in a vicinity of the proximal end, the sink wastewater inlet normal to the transverse bore and in fluid communication with the transverse bore; a normally-closed flap valve, the normally-closed flap valve hingedly attached to transverse pipe proximate the distal end; a hinge actuator for the normally-closed flap valve; and a microprocessor, the microprocessor in electronic communication with the hinge actuator and the collector comprising: a telescoping bin which defines an interior and which includes an inner member which includes walls, a top, a push pin on a wall and a waste aperture in a wall, an outer member which includes walls, a bottom and a plurality of vertically disposed apertures in a wall for releasably engaging the push pin, and a drawer which is slidably engaged in a front of both the inner member and the outer member, wherein at least the distal end of the transverse pipe extends into the interior through the waste aperture such that the flange abuts the back of the collector and releasably seals the transverse pipe to the back.
2. The waste system of claim 1, wherein the waste separator further comprises a pressure sensor which is in the water collector proximate the proximal end of the transverse bore, the pressure sensor in electronic communication with the microprocessor.
3. The system of claim 1 or 2, wherein the waste separator further comprises a locking arm which is hingedly attached to transverse pipe proximate the distal end and locking arm actuator which is in electronic communication with the microprocessor.
4. The system of any one of claims 1 to 3, wherein the waste separator further comprises a pair of gaskets between the distal end and the normally-closed flap valve.

5. The system of any one of claims 1 to 4, wherein system includes an alarm and the collector includes a sensor which senses when the collector is full, the alarm and the sensor in electronic communication with the microprocessor.
6. The system of any one of claims 1 to 5, wherein the collector further comprises a collection bin housed in the drawer in the interior.
7. The system of any one of claims 1 to 6, wherein the outer member of the telescoping bin further comprises a plurality of air intake apertures in a wall in the vicinity of the bottom and the top of the telescoping bin includes a plurality of air vents.
8. The system of claim 7, wherein the top includes a filter housing on an underside.
9. The system of claim 8, further comprising an activated carbon filter in the filter housing.
10. The system of any one of claims 1 to 9, wherein the motor-driven auger is a non-cutting, motor-driven auger.
11. A method of separating organic, solid waste in waste water from liquid waste and collecting the organic solid waste using the system of claim 1, wherein the waste separator is plumbed into a drain pipe for a sink, the method comprising: a user actuating the waste separator as waste water flows into the system; the system opening the normally-closed flap valve; the waste separator urging the organic solid waste into the telescoping bin; and the liquid waste exiting the system into the drain pipe.
12. The method of claim 11, further comprising the user inactivating the waste separator and the system closing the normally-closed flap valve.
13. The method of claim 11, further comprising the system autonomously closing the normally-closed flap valve.
14. The method of any one of claims 11 to 13, wherein the user actuates the system remotely.

15. A waste separator for attachment to a sink drain pipe, the waste separator comprising: a transverse pipe, the transverse pipe including a proximal end, a distal end, a sidewall therebetween, a solid waste outlet at the distal end and a flange on the sidewall, the transverse pipe defining a transverse bore; a motor-driven, non-cutting auger which is housed in the transverse bore; a cylindrical filter around the motor-driven, non-cutting auger; a water collector below the cylindrical filter and terminating in a wastewater outlet; a sink wastewater inlet in a vicinity of the proximal end, the sink wastewater inlet normal to the transverse bore and in fluid communication with the transverse bore; a normally-closed flap valve, the normally-closed flap valve hingedly attached to transverse pipe proximate the distal end; a hinge actuator for the normally-closed flap valve; and a microprocessor, the microprocessor in electronic communication with the hinge actuator.

16. The waste separator of claim 15, further comprising an upper pipe, the upper pipe disposed between the sink wastewater inlet and the transverse pipe, the upper pipe defining an upper bore, the upper bore in fluid communication with the sink wastewater inlet and the transverse bore.

17. The waste separator of claim 16, wherein the upper pipe includes a dishwasher waste inlet.

18. The waste separator of claim 16 or 17, further comprising a pressure sensor which is in the water collector proximate the proximal end of the transverse bore, the pressure sensor in electronic communication with the microprocessor.

19. The waste separator of any one of claims 15 to 18, further comprising a locking arm which is hingedly attached to transverse pipe proximate the distal end and locking arm actuator which is in electronic communication with the microprocessor.

20. The waste separator of any one of claims 15 to 19, further comprising a pair of gaskets between the distal end and the normally-closed flap valve.

21. The waste separator of any one of claims 15 to 20, further comprising a motor, the motor attached to the proximal end of the transverse pipe and driving the non-cutting auger to provide the motor-driven, non-cutting auger.
22. The waste separator of any one of claims 15 to 21, wherein the flange is a magnetic flange.
23. The waste separator of any one of claims 15 to 22, wherein the hinge actuator is a servo.
24. The waste separator of claim 19, wherein the locking arm actuator is a servo.