An environmental faucet includes a body, a valve seat, a valve core, an outlet elbow, a water-intake duct, an aerator, a locking cap and a handle. The valve seat and the valve core are mounted in the body. The outlet elbow is connected with a top end of the valve seat and has an outer pipe and an inner pipe, the outer pipe is made from metal, and the inner pipe is made from plastic. The water-intake duct is connected with a bottom end of the valve seat and has an outer pipe and an inner pipe, the outer pipe thereof is made from metal, and the inner pipe is made from plastic. As water entering the environmental faucet in a flow path sequentially through the water-intake duct and the outlet elbow does not flow through the metal portions, excessive heavy metal released in the water can be avoided.
ENVIRONMENTAL FAUCET AND METHOD FOR PRODUCING THE SAME

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention
The present invention relates to an environmental faucet and, more particularly, to an environmental faucet installed in a kitchen.

[0002] 2. Description of the Related Art
Faucet is a type of hardware necessary in our daily life. The new faucet standard GB-18145 has been enforced since Dec. 1, 2014 to regulate the allowable amount of heavy metal released from the faucet. However, most of conventional faucets in the market have the problem of excessive release of heavy metal while qualified faucets are disadvantageous in high cost of manufacture, making them less competitive in the faucet market.

SUMMARY OF THE INVENTION

[0005] In view of the problems and drawbacks of the conventional techniques, the objective of the present invention is to provide an environmental faucet spout.

[0006] The objective of the present invention is to provide an environmental faucet capable of reducing the allowable amount of heavy metal released in water flowing through the environmental faucet.

[0007] To achieve the foregoing objective, the environmental faucet spout includes a body, a valve seat, a valve core, a spout, a water-intake duct, an aerator, a locking cap, and a handle.

[0008] The body is cylindrical in shape and has a top end, a bottom end and a tube seat. The bottom end is connected with a water-intake duct. The tube seat is formed on and extends perpendicularly outwards from a sidewall of the body and is internally threaded.

[0009] The valve seat is mounted in the body and has a top end, a bottom end and a connected recess. The top end is externally threaded. The bottom end is internally threaded. The connected recess is formed in a peripheral edge wall of the valve seat.

[0010] The valve core has a spindle formed on and extending from an outer portion of the valve core. An inner portion of the valve core is mounted inside the connected recess of the valve seat. One end of the valve core opposite to the spindle is mounted in the tube seat of the body.

[0011] The outlet elbow has an outer pipe and an inner pipe. The outer pipe is made from a metal material. The inner pipe is made from a plastic material. An inlet end of the outlet elbow engages the top end of the valve seat.

[0012] The water-intake duct has an outer pipe and an inner pipe. The outer pipe is made from a metal material. The inner pipe is made from a plastic material. A top end of the water-intake duct is securely mounted in the bottom end of the valve seat.

[0013] The locking cap has a central coupling hole and a locking section. The locking section is externally threaded, is formed on a periphery of the locking cap, and engages an internally-threaded portion of the tube seat of the body.

[0014] The handle is securely connected with the locking cap and the valve core. The spindle of the valve core is mounted in the handle through the central coupling hole of the locking cap.

[0015] As water entering the environmental faucet in a flow path sequentially through the water-intake duct and the outlet elbow only flow through the inner plastic portions of the water-intake duct and the outlet elbow, excessive heavy metal released in the water can be avoided accordingly.

[0016] According to the foregoing description, the present invention has the advantages that simplifying the manufacture, and resolving excessive heavy metal in drinking water.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] The detailed description of the drawings particularly refers to the accompanying figures in which:

[0018] FIG. 1 is an exploded perspective view of an environmental faucet;

[0019] FIG. 2 is a partially exploded perspective view of an outlet elbow of the environmental faucet in FIG. 1; and

[0020] FIG. 3 is a partially exploded perspective view of a water-intake duct of the environmental faucet in FIG. 1.

DETAILED DESCRIPTION OF THE INVENTION

[0021] The purpose, construction, features, functions and advantages of the present invention can be appreciated and understood more thoroughly through the following detailed description in conjunction with the attached drawings.

[0022] With reference to FIG. 1, an environmental faucet in accordance with the present invention includes a body 1, a valve seat 2, a valve core 3, a locking cap 7, a handle 8, an outlet elbow 4, a water-intake duct 5, and an aerator 6.

[0023] The body 1 takes the form of a cylindrical tube, has a top end, a bottom end and a tube seat 1-1. The top end is connected with an inlet end of the outlet elbow 4, the bottom end is connected with the water-intake duct 5, and the tube seat 1-1 is formed on and extends perpendicularly outwards from a sidewall of the body 1 and is internally-threaded. The valve seat 2 is mounted in the body 1, and has a top end, a bottom end and a connected recess 2-1. The top end is externally threaded. The bottom end is internally threaded. The connected recess 2-1 is formed in a peripheral wall of the valve seat 2. The valve core 3 has a spindle 3-1 formed on and extending from an outer portion of the valve core 3, and an inner portion of the valve core 3 is mounted inside the connected recess 2-1 of the valve seat 2. The valve core 3 is laterally mounted in the valve seat 2 through the tube seat 1-1 of the body 1.

[0024] The locking cap 7 has a central coupling hole 7-1 and an externally-threaded section formed on a periphery of the locking cap 7. The handle 8 is securely connected with the locking cap 7 and the valve core 3. The spindle 3-1 of the valve core 3 is mounted in the handle 8 through the central coupling hole 7-1 of the locking cap 7 and one end of the valve core opposite to the spindle 3-1 is mounted in the tube seat 1-1 of the body 1. The externally-threaded section of the locking cap 7 engages the internally-threaded portion of the tube seat 1-1 of the body 1, such that the handle 8 is mounted on the tube seat 1-1 of the body 1 to receive the valve core 3 and the locking cap 7 inside the tube seat 1-1 of the body 1 and the handle 8.

[0025] With reference to FIG. 2, the outlet elbow 4 has an outer pipe 4-1, an inner pipe 4-2, a PP (Polypropylene) tube connector 4-3 and a nut 4-4. The outer pipe 4-1 is made from stainless steel, and the inner pipe 4-2 is made from plastic. The inner pipe 4-2 is mounted into the outer pipe 4-1. A first
O-ring 4-21 is mounted on an inlet end of the inner pipe 4-2 and is mounted between the inner pipe 4-2 and the outer pipe 4-1 to avoid the inner pipe 4-2 to come off the outer pipe 4-1. The PP tube connector 4-3 is securely connected with bottom portions of the outer pipe 4-1 and inner pipe 4-2 by means of laser welding to seal and join the bottom portions of the outer pipe 4-1 and the inner pipe 4-2 through the PP tube connector 4-3. The nut 4-4 is mounted around a periphery of the outer tube 4-1 and is located above the PP tube connector 4-3. An inlet end of the outlet elbow 4 engages the externally threaded top end of the valve seat 2 with the nut 4-4 through threaded connection, and a second O-ring 4-5 mounted between an outer surface of the PP tube connector 4-3 and an inner surface of the valve seat 2 to form hermetic seal between the outlet elbow 4 and the valve seat 2. The aerator 6 is made from an ABS (Acrylonitrile Butadiene Styrene) plastic material and is mounted on an outlet end of the outlet elbow 4. [0026] With reference to FIG. 3, the water-intake duct 5 has an outer pipe 5-1 and an inner pipe 5-2, the outer pipe 5-1 is made from a metal material, and the inner pipe 5-2 is made from plastic. The inner pipe 5-2 mounted into the outer pipe 5-2. The outer pipe 5-1 is externally threaded across an outer surface of the outer pipe 5-1. The inner pipe 5-2 is axially mounted through the outer pipe 5-1, and a top end of the water-intake duct 5 is securely mounted in the bottom end of the valve seat 2 through threaded connection and is mounted into the body 1. [0027] Water enters the environmental faucet in a flow path sequentially through the inner pipe 5-2 of the water intake duct 5, the inner pipe 4-2 of the outlet elbow 4, and the aerator 6. Therefore, metal portions of the present invention are used for connecting and fastening different elements of the environmental faucet, such that the water only flows through the plastic portions instead of the metal portions. Since water does not directly contact with the metal portions at all, excessive heavy metal release in the water can be avoided to ensure safe drinking water.

What is claimed is:

1. An environmental faucet, comprising:
   a body being cylindrical in shape and having:
     a top end;
     a bottom end; and
     a tube seat formed on and extending perpendicularly outwards from a side wall of the body and being internally threaded;
   a valve seat mounted in the body and having:
     a top end being externally threaded;
     a bottom end being internally threaded;
     a connected recess formed in a peripheral wall of the valve seat;
   a valve core having a spindle formed on and extending from an outer portion of the valve core, wherein an inner portion of the valve core is mounted inside the connected recess of the valve seat, and one end of the valve core opposite to the spindle is mounted in the tube seat of the body;
   an outlet elbow having:
     an outer pipe made from a metal material; and
     an inner pipe made from a plastic material and mounted inside the outer pipe, wherein an inlet end of the outlet elbow engages the top end of the valve seat;
   a water-intake duct having:
     an outer pipe made from a metal material; and
     an inner pipe made from a plastic material; wherein a top end of the water-intake duct is securely mounted in the bottom end of the valve seat;
   a locking cap having:
     a central coupling hole; and
     a locking section being externally threaded, formed on a periphery of the locking cap, and engaging an internally-threaded portion of the tube seat of the body; and
   a handle securely connected with the locking cap and the valve core, wherein the spindle of the valve core is mounted in the handle through the central coupling hole of the locking cap.

2. The environmental faucet as claimed in claim 1, wherein an aerator is made from a plastic material and is mounted on an outlet end of the outlet elbow.

3. The environmental faucet as claimed in claim 1, wherein the outlet elbow has:
   a PP (Polypropylene) tube connector securely connected with bottom portions of the outer pipe and inner pipe of the outlet elbow to seal and join the bottom portions of the outer pipe and the inner pipe; and
   a nut mounted on the top of the connector mounted around a periphery of the outer tube and located above the PP tube connector, wherein an inlet end of the outlet elbow engages the externally threaded top end of the valve seat with the nut.

4. The environmental faucet as claimed in claim 3, wherein the outlet elbow has a second O-ring mounted between an outer surface of the PP tube connector and an inner surface of the valve seat to form hermetic seal between the outlet elbow and the valve seat.

5. The environmental faucet as claimed in claim 1, wherein the outlet elbow has a first O-ring mounted on an inlet end of the inner pipe of the outlet elbow and is mounted between the inner pipe and the outer pipe of the outlet elbow to avoid the inner pipe to come off the outer pipe.

* * * * *