Claims

1. A grounding device comprising:

(a) a first casing having an open top;

(b) a pin extending from the base of and within the first casing, the pin made from an electrically conductive material and has a longitudinal length with opposite first and second ends, the second end of the pin in contact with or integral with base of the casing;

(c) a plate member having an opening to allow the plate to move along the longitudinal length of the pin between a first position and a second position, the plate member and the first casing form a cavity within the first casing; and

(d) a biasing member disposed within the cavity and attached to the plate member for biasing the plate member in the first position,

wherein the first position conceals the longitudinal length of the pin within the cavity and the second position is any position that exposes a portion of the longitudinal length of the pin; and the pin and the first casing are integrally formed from the same electrically conductive material.

2. The device according to claim 1, further comprising a stopper assembly for limiting the range of movement of the plate member.

3. The device according to claim 2, wherein the stopper assembly comprising:

(a) a stop member attached to the surface of the plate member facing the interior wall of the first casing, a portion of the stop member protrudes from the surface; and

(b) a slot in the wall of the first casing for accommodating the protruded stop member, the slot having a length parallel to the longitudinal length of the pin;

wherein movement of the plate member along the longitudinal length of the pin is limited by the length of the slot.

4. The device according to claim 3, wherein the length of the slot is shorter than the longitudinal length of the pin.

5. The device according to any one of claims 3 or 4, wherein the device comprises 3 equally spaced apart stopper assemblies.

6. The device according to any one of the preceding claims, wherein the pin further comprising a notch positioned at the first end for receiving a pair of jaws of a clamp.

7. The device according to any one of the preceding claims, wherein the biasing member is a spring mechanism.

8. The device according to any one of the preceding claims, further comprising a second casing, the second casing having an open top for housing the first casing, the first and second casings made of an electrically conductive material to provide good electrical conductivity between the first and second casings.

9. The device according to claim 8, wherein the exterior surface of the base of the first casing further comprising a boss for providing an electrical connection with an electrical conducting material, and the interior surface of the base of the second casing further comprising a pit for mating with the boss of the first casing.

10. The device according to any one of claims 8 or 9, wherein the exterior surface of the base of the second casing further comprising an opening configured for receiving a connection to an earth grounding network.

11. The device according to any one of claims 8 or 9, wherein the exterior surface of the base of the second casing further comprising a tail for conducting an electrical charge to an earth grounding network.

12. The device according to any one of claims 8 to 11, wherein the second casing is fixed into a structure and the first casing is removably attached to the second casing.

13. The device according to claim 12, wherein the first and second casings are annular and are removably attached to each other by a screw action via opposing screw threads on the exterior surface of the first casing and on the interior surface of the second casing.

14. The device according to any one of claims 12 or 13, wherein the top of the wall of the first casing further comprising at least one hole for engaging with a tool for attaching the first casing to the second casing or removing the first casing from the second casing.

15. The device according to any one of claims 8 to 14, wherein the exterior surface of second casing further comprising splines.

16. The device according to any one of claims 8 to 15, wherein the exterior surface of the base of the second casing further comprising at least one attachment means for attaching the device to a grounding plate.

17. A ground system comprising at least one grounding device according to any one of claims 1 to 16 that is connected to an earth grounding network.