WHAT IS CLAIMED IS:

1. A battery case, including:

a case body, composed of a bottom wall, two lateral walls, a front wall and a rear wall thereby allowing an elongated accommodation space to be formed, and the interior of said accommodation space being formed with at least two insertion slots according to a circuit layout; and

an electrode plate set, including a cathode connection plate having a cathode elastic piece and an anode connection plate having an anode convex part, said cathode and said anode connection plates being respectively inserted in said corresponding insertion slots according to said circuit layout; wherein each of said connection plates being adjacently formed with a pair of first clamping members and a pair of second clamping members thereby enabling a metal wire member and an insulation jacket of a conductive wire to be respectively clamped for providing a dual clamping function, and said conductive wires being protruded out from said case body.

2. The battery case as claimed in claim 1, wherein at least a separation rib is transversally formed between said two lateral walls for separating two adjacent batteries; and one of said lateral walls is formed with at least a wire hole allowing said conductive wires to be protruded out.

3. The battery case as claimed in claim 1, further including at least one intermediate connection plate formed with an anode connection point and/or a cathode connection point, and each of said intermediate connection plates is inserted in said corresponding insertion slot according to said circuit layout.

4. The battery case as claimed in claim 1, wherein two sides of said cathode and said anode connection plates are respectively formed with a pair of obliquely-protruded abutting tenons inserted in said insertion slots.

5. The battery case as claimed in claim 3, wherein two sides of each of said intermediate connection plates are respectively formed with a pair of obliquely-protruded abutting tenons inserted in said insertion slots.

6. The battery case as claimed in claim 1, wherein the width of said pair of first clamping members is wider than that of said pair of second clamping members of said cathode and said anode connection plates.

7. The battery case as claimed in claim 6, wherein the height of said pair of second clamping members is higher than that of said pair of first clamping members of

said cathode and said anode connection plates.

8. An electrode plate set for use in battery case, including an anode connection plate having an anode convex part and a cathode connection plate having a cathode elastic piece, wherein each of said connection plates being adjacently formed with a pair of first clamping members and a pair of second clamping members thereby enabling a metal wire member and an insulation jacket of a conductive wire to be respectively clamped for providing a dual clamping function.

9. The electrode plate set for use in battery case as claimed in claim 8, wherein two sides of said cathode and said anode connection plates are respectively formed with a pair of obliquely-protruded abutting tenons.

10. The electrode plate set for use in battery case as claimed in claim 8, wherein the width of said pair of first clamping members is wider than that of said pair of second clamping members of said cathode and said anode connection plates.

11. The electrode plate set for use in battery case as claimed in claim 10, wherein the height of said pair of second clamping members is higher than that of said pair of first clamping members of said cathode and said anode connection plates.