What is claimed is:

[Claim 1] A battery box, comprising:

a case, wherein a top portion of the case is provided with an opening; and

a top cover comprising a cover body;

wherein the top cover further comprises a boss connected to an edge of the cover body, the boss is welded to the case to co-seal the opening with the cover body; the boss has a first top portion and an opposite first bottom portion, the cover body has a second top portion and an opposite second bottom portion, a distance between the first top portion and the first bottom portion is greater than a distance between the second top portion and the second bottom portion, and the first bottom portion is provided with a guide portion.

[Claim 2] The battery box of claim 1, wherein the guide portion has a guide surface close to a welding portion between the boss and the case, and a distance between the guide surface and a side wall of the case is increased in a direction from the first top portion to the first bottom portion.

[Claim 3] The battery box of claim 1, wherein the first top portion of the boss is provided with a groove close to a welding surface between the boss and the case.

[Claim 4] The battery box of any one of claims 1-3, wherein the cover body and the boss are integrally formed, and the first top portion of the boss is connected to an edge of the top cover in a manner of bending the first top portion of the boss.

[Claim 5] The battery box of claim 4, wherein the guide portion has a guide surface close to a welding portion between the boss and the case, and an included angle between the guide surface and a side wall of the case is 30-60 degrees.

[Claim 6] The battery box of claim 3, wherein the cover body and the boss are integrally formed, the boss comprises a bending portion, a first extension portion, and a second extension portion disposed opposite to the first extension portion in a direction perpendicular to a direction from the second top portion to the second bottom portion, the first extension portion is located between the second extension portion and the cover body, a top portion of the first extension portion is connected to the edge of the cover body in a manner of bending the

top portion of the first extension portion, a bottom portion of the first extension portion is located below the bottom portion of the cover body, the bending portion is connected between the bottom portion of the first extension portion and a bottom portion of the second extension portion, the groove is formed by enclosing a top portion of the second extension portion, the case, and the top portion of the first extension portion, and the guide surface is formed on the bending portion.

[Claim 7] The battery box of claim 3, wherein the cover body and the boss are integrally formed, the boss comprises a bending portion, a first extension portion, and a second extension portion disposed opposite to the first extension portion in a direction perpendicular to a direction from the second top portion to the second bottom portion, a top portion of the first extension portion is connected to the edge of the cover body in a manner of bending the top portion of the first extension portion, a bottom portion of the first extension portion is located below the bottom portion of the cover body, the bending portion is connected between the bottom portion of the first extension portion and a bottom portion of the second extension portion, the groove is formed by enclosing the top portion of the first extension portion, a top portion of the second extension portion, and the bending portion, and the guide surface is formed on the bending portion.

[Claim 8] The battery box of claim 6 or 7, wherein a distance between the groove and the welding surface is less than or equal to 2 mm.

[Claim 9] The battery box of claim 1, wherein the boss and the case have a welding surface, and a length of the welding surface is greater than a thickness of the top cover in a direction from the first top portion of the boss to the first bottom portion of the boss.

[Claim 10] The battery box of claim 9, wherein the length of the welding surface is longer than the thickness of the cover by 1-5 mm in the direction from the first top portion of the boss to the first bottom portion of the boss.

[Claim 11] The battery box of any one of claims 3-9, wherein a distance between the groove and the welding surface is zero.

[Claim 12] The battery box of any one of claims 3-9, wherein the groove has an arc-shaped bottom.

[Claim 13] The battery box of any one of claims 3-9, wherein a shape of the groove comprises a triangle shape or a trapezoidal shape.

[Claim 14] The battery box of any one of claims 2-9, wherein the guide surface has a circular arc shape.

[Claim 15] The battery box of any one of claims 6-9, wherein the bending portion has a U-shaped structure.