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STATOR ASSEMBLY AND MOTOR

Abstract

A stator assembly and a motor are provided. The stator assembly incudes an insulating frame, a winding, a wire leading-out base, a cover plate, and a plurality of first terminals. The winding is wound around the insulating frame and includes a plurality of first lead-out wires; the wire leading-out base is provided with a plurality of first mounting positions; the cover plate is connected to the wire leading-out base and covers the plurality of first mounting positions; the plurality of first terminals are arranged in one-to-one correspondence with the plurality of first mounting positions; each of the first terminals includes a first welding portion and a wire leading-out portion; each of the first welding portions is used for welding a corresponding first lead-out wire; and the plurality of wire leading-out portions penetrate through the cover plate.

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Background/Summary

CROSS-REFERENCE TO RELATED APPLICATIONS [0001] This application is a continuation of International Application No. PCT/CN 2023/078760 filed on Feb. 28, 2023, which claims priority to and benefits of Chinese Patent Application No. 202211421666.5 filed Nov. 14, 2022 and entitled “STATOR ASSEMBLY AND MOTOR,” the entire contents of each of which are incorporated herein by reference for all purposes. No new matter has been introduced.

FIELD
[0002] The present disclosure relates to the field of wiring terminals, and in particular, to a stator assembly and a motor.
BACKGROUND
[0003] The power supply to the winding is established by connecting a power line to a terminal, and connecting the terminal to a lead-out wire of the motor. In related art, the stator has high requirements for miniaturization and slot fill rate, which brings unfavorable conditions for leading out wires of the winding. In order to facilitate installation, the lead-out wire is generally fixed by press-fitting. That is, the lead-out wire is fixed and fitted in a wiring slot by a pressing piece, to facilitate the engagement between the lead-out wire and a terminal. However, in this way, the connection achieved between the lead-out wire and the terminal is not stable and is prone to loosening up, which results in unsatisfactory contact.
SUMMARY
[0004] The present disclosure aims to at least partially resolve the problems in the existing technology. Therefore, the present disclosure provides a stator assembly, according to an aspect thereof.
[0005] The present disclosure further provides a motor including the stator assembly, according to another aspect thereof.
[0006] In accordance with a first aspect of the present disclosure, an embodiment provides a stator assembly, including: [0007] an insulating frame; [0008] a winding, wound around the insulating frame and including a plurality of first lead-out wires; [0009] a wire outlet base, arranged on the insulating frame, and provided with a plurality of first mounting positions; [0010] a cover plate, connected to the wire outlet base and covering the plurality of first mounting positions; [0011] a plurality of first terminals, arranged in one-to-one correspondence with the plurality of first mounting positions, wherein each of the first terminals includes a first welding portion and a wire leading-out portion, each of the first welding portions is used for welding a corresponding first lead-out wire, and the wire leading-out portions extend out of the cover plate.
[0012] According to some embodiments of the present disclosure, an edge of each of the first welding portions is provided with a first bent portion, and each of the first bent portions extends in a direction facing away from the wire outlet base.
[0013] According to some embodiments of the present disclosure, each of the first bent portions is

provided at an end of the corresponding first welding portion facing one end of the corresponding first lead-out wire. Each of the first bent portions is provided with a first wire notch, and each of the first lead-out wires passes through the corresponding first wire notch.

[0014] According to some embodiments of the present disclosure, first holder seats and second holder seats are arranged at intervals on the wire outlet base along an extending direction of the first lead-out wire. Each of the first terminals is located between one of the first holder seats and one of the second holder seats, and each of the first lead-out wires is clamped in and held by one of the first holder seats and one of the second holder seats.

[0015] According to some embodiments of the present disclosure, the wire outlet base is provided with clearance grooves along the extending direction of the first lead-out wire, and the clearance grooves run through the wire outlet base along the extending direction of the first lead-out wire.

[0016] According to some embodiments of the present disclosure, each of the first terminals further includes a first mounting portion. The first mounting portion is connected to the first welding portion and the wire leading-out portion, and the first mounting portion is inserted into the first mounting position.

[0017] According to some embodiments of the present disclosure, the wire outlet base is further provided with a second mounting position. The winding further includes a plurality of second lead-out wires. The stator assembly further includes a second terminal arranged at the second mounting position, and the second terminal includes a connection portion and a plurality of second welding portions. The plurality of second welding portions are arranged at intervals on the connection portion, and the plurality of second welding portions are used for welding the plurality of second lead-out wires.

[0018] According to some embodiments of the present disclosure, an edge of each of the second welding portions is provided with a second bent portion, and each of the second bent portions extends in a direction facing away from the wire outlet base.

[0019] According to some embodiments of the present disclosure, the second terminal further includes a protruding portion and a second mounting portion. The second mounting portion is connected to the connection portion and is inserted into the second mounting position, and the protruding portion is connected to the second mounting portion and extends in a direction facing away from the wire outlet base.

[0020] According to some embodiments of the present disclosure, the cover plate is provided with a peripheral edge and a plurality of through holes. The peripheral edge is arranged and erected around the plurality of through holes and creates mounting cavities. The plurality of wire leading-out portions are located in the mounting cavities and correspondingly pass through the plurality of through holes.

[0021] According to some embodiments of the present disclosure, a positioning groove is provided at an end of the wire outlet base away from the insulating frame. A baffle plate is provided at an end of the cover plate away from the insulating frame, and the baffle plate is engaged with the positioning groove, such that a plastic-encapsulating space is formed by the wire outlet base, the cover plate, and the baffle plate.

[0022] In accordance with a second aspect of the present disclosure, an embodiment provides a motor, which includes the stator assembly of the above embodiments.

[0023] Other aspects and advantages of the present disclosure will be given in the following description, some of which will become apparent from the following description or may be learned from practices of the present disclosure.

Description

BRIEF DESCRIPTION OF DRAWINGS

[0024] The present disclosure is further described below in conjunction with the accompanying drawings and embodiments. In the drawings:

[0025] FIG. **1** is a schematic structural diagram of a stator assembly according to an embodiment of the present disclosure;

[0026] FIG. **2** is a partial and exploded structural view of a stator assembly according to an embodiment of the present disclosure;

[0027] FIG. **3** is a schematic structural diagram of a first terminal according to an embodiment of the present disclosure;

[0028] FIG. **4** is a schematic structural diagram of a second terminal according to an embodiment of the present disclosure;

[0029] FIG. **5** is a schematic structural diagram of an insulating frame in connection with a wire outlet base according to an embodiment of the present disclosure;

[0030] FIG. **6** is a schematic structural diagram of a wire outlet base in connection with first terminals and a second terminal according to an embodiment of the present disclosure;

[0031] FIG. **7** is a schematic enlarged view of area A in FIG. **6**;

[0032] FIG. **8** is a schematic structural diagram of a cover plate according to an embodiment of the present disclosure; and

[0033] FIG. **9** is a schematic structural diagram of an encapsulated stator assembly according to an embodiment of the present disclosure.

LIST OF REFERENCE NUMERALS AS FOLLOWINGS

[0034] stator assembly **1000**; [0035] stator core **100**; first lead-out wire **110**; second lead-out wire **120**; winding **130**; [0036] insulating frame **200**; wire outlet base **210**; first mounting position **211**; first holder seat **212**; [0037] second holder seat **213**; clearance groove **214**; positioning groove **215**; second mounting position **216**; cover plate **220**; through hole **221**; peripheral edge **222**; mounting cavity **223**; baffle plate **224**; [0038] first terminal **300**; first welding portion **310**; first bent portion **311**; first wire notch **312**; wire leading-out portion **320**; first mounting portion **330**; protrusion **331**; and [0039] second terminal **400**; connection portion **410**; second welding portion **420**; second mounting portion **430**; protruding portion **440**; second bent portion **450**; second wire notch **451**.

DETAILED DESCRIPTION OF EMBODIMENTS

[0040] Embodiments of the present disclosure will be described in detail below with reference to the accompanying drawings in which the same or like reference numerals refer to the same or like elements or elements having the same or like functions throughout. The embodiments described below with reference to the accompanying drawings are illustrative and are intended for illustrating only and are not to be construed as limiting the present disclosure.

[0041] In the description of the present disclosure, it should be understood that for the description of orientations, the orientation or positional relationships indicated by the terms such as “on,” “below,” “front,” “rear,” “left,” “right” are based on orientation or positional relationships shown in the accompanying drawings, and are used only for ease and brevity of illustration and description, rather than indicating or implying that the mentioned apparatus or element must have a particular orientation or must be constructed and operated in a particular orientation. Therefore, such terms should not be construed as limiting of the present disclosure.

[0042] In the description of the present disclosure, the term “at least one” means one or more, the term “a plurality of” (or multiple) means at least two, the term such as “greater than,” “less than,” “exceed” or variants prior to a number or series of numbers is understood to exclude the number, and “above,” “below,” “within,” etc. are understood to include the number. If used herein, the terms such as “first,” “second,” etc., are merely used for distinguishing technical features, and are not intended to indicate or imply relative importance, or implicitly point out the number of the indicated technical features, or implicitly point out the order of the indicated technical features.

[0043] In the description of the present disclosure, unless otherwise explicitly defined, the terms such as “configure,” “install/mount” and “connect” should be understood in a broad sense, and those having ordinary skills in the art can reasonably determine the specific meanings of the above terms in the present disclosure based on the specific contents of the technical scheme.

[0044] Referring to FIG. **1** and FIG. **2**, an embodiment of the present disclosure provides a stator assembly **1000**, which may be applied to a motor, such as a plastic-encapsulated motor, a washer motor, and the like. The stator assembly **1000** of the embodiment of the present disclosure includes a stator core **100**, an insulating frame **200**, a winding **130**, a wire outlet base **210**, a cover plate **220**, and a plurality of first terminals **300**. The insulating frame **200** is embedded in the stator core **100**. The winding **130** is wound around the insulating frame **200**, and includes a plurality of first lead-out wires **110**. The wire outlet base **210** is connected to the insulating frame **200** and is located outside the stator core **100**. In an embodiment, the wire outlet base **210** and the insulating frame **200** are integrally formed, or the wire outlet base **210** is connected to the insulating frame **200** by a buckle, a screw, or other means. In another embodiment, the wire outlet base **210** is connected to the stator core **100**. The appropriate solution is determined according to an actual situation.

[0045] Referring to FIG. **3**, FIG. **5**, and FIG. **7**, the wire outlet base **210** is provided with a plurality of first mounting positions **211**, and the plurality of first terminals **300** are mounted into the plurality of first mounting positions **211** in one-to-one correspondence. In an embodiment, the first mounting positions **211** and the first terminals **300** are each provided with two or three, and the first lead-out wires **110** are correspondingly provided with two or three. The first terminals **300** may be made of a metal, such as copper or iron. Each of the first terminals **300** includes a wire leading-out portion **320** and a first welding portion **310**, and the wire leading-out portion **320** is connected to the first welding portion **310**. Alternatively, the first terminal **300** further includes a first mounting portion **330**, and the wire leading-out portion **320** and the first welding portion **310** are respectively connected to the first mounting portion **330**. The first welding portion **310** is configured for welding the corresponding first lead-out wire **110**. Each of the plurality of first lead-out wires **110** are correspondingly welded to one of the plurality of first welding portions **310**. Mesh blocks in FIG. **7** represent welding materials. After the welding is completed, the cover plate **220** is connected to the wire outlet base **210**. The cover plate **220** can cover and protect the plurality of first mounting positions **211**. In order to facilitate the connection between the wire leading-out portion **320** and a power cable, the wire leading-out portion **320** extends out of the cover plate **220**, in this way, a power source can be easily connected to the winding **130** for power supply.

[0046] It can be understood that some stators have high requirements for miniaturization and slot fill rate, which will bring unfavorable conditions for leading out the wires of the winding. Therefore, the wire outlet base **210** is arranged outside the stator core **100**, such that the lead-out wires of the winding **130** can be conveniently connected to the first welding portions **310** of the first terminals **300**. As such, the welding difficulty is reduced, the production efficiency is improved, and automated production can be achieved to reduce the labor costs. The connection of the first lead-out wires **110** to the first welding portions **310** by welding can improve the stability of connection between the first lead-out wires **110** and the first terminals **300**, making the first lead-out wires **110** less likely to loosen up and fall off from the first terminals **300**.

[0047] Referring to FIG. **3**, in an embodiment of the present disclosure, an edge of each of the first welding portions **310** is provided with a first bent portion **311**, and each of the first bent portions **311** extends in a direction facing away from the wire outlet base **210**. For example, the first bent portion **311** may be formed by bending the edge of the first welding portion **310** in the direction facing away from the wire outlet base **210**, that is, the first bent portion **311** and the first welding portion **310** may be integrally formed, thus reducing the manufacturing complexity and costs. It can be understood that the first lead-out wire **110** is connected to the corresponding first welding portion **310** by soldering, and when the first terminal **300** is made of copper, the adhesion between solder and copper is satisfactory. In order to further improve the adhesion between solder and

copper, the first bent portion **311** is arranged at the edge of the first welding portion **310**, and the solder can be adhered to the first welding portion **310** and the first bent portion **311**, such that the solder can better wrap the first lead-out wire **110**, to reduce the occurrence of faulty soldering, and improve the stability and soldering quality of the connection between the first lead-out wire **110** and the first terminal **300**.

[0048] Still referring to FIG. **3**, in an embodiment of the present disclosure, the first bent portion **311** is arranged at an end of the first welding portion **310** in an extending direction of the first lead-out wire **110**. For example, the first bent portion **311** is located at an end of the first welding portion **310** facing the end of the first lead-out wire **110**. Each of the first bent portions **311** is further provided with a first wire notch **312**, such that the corresponding first lead-out wire **110** can pass through the first wire notch **312**. A height of the first wire notch **312** is greater than or equal to an outer diameter of the first lead-out wire **110**, and a width of the first wire notch **312** is greater than or equal to the outer diameter of the first lead-out wire **110**, such that the first lead-out wire **110** can pass through the first wire notch **312**. It can be understood that the first wire notch **312** can limit the position of the first lead-out wire **110**, and has a certain limiting effect on the first lead-out wire **110** during welding, thereby effectively reducing the misalignment and movement of the first lead-out wire **110**, allowing the first lead-out wire **110** to be accurately welded to the first welding portion **310**.

[0049] Referring to FIG. **5**, FIG. **6**, and FIG. **7**, in an embodiment of the present disclosure, first holder seats **212** and second holder seats **213** are arranged at intervals on the wire outlet base **210** along the extending direction of the first lead-out wire **110**, and each of the first terminals **300** is located between one of the first holder seats **212** and one of the second holder seats **213**. When the first lead-out wire **110** needs to be welded, the first lead-out wire **110** may be sequentially clamped in and held by the corresponding first holder seat **212**, the corresponding first wire notch **312**, and the corresponding second holder seat **213**. As such, the first lead-out wire **110** can be conveniently welded to the corresponding first welding portion **310**, thereby reducing the welding difficulty and improving the welding efficiency.

[0050] Referring to FIG. **7**, in an embodiment of the present disclosure, the wire outlet base **210** is provided with clearance grooves **214** along the extending direction of the first lead-out wire **110**, and the clearance grooves **214** run through the wire outlet base **210** along the extending direction of the first lead-out wire **110**. It can be understood that the length of the first lead-out wire **110** is relatively long in the welding stage, and after the first lead-out wire **110** is sequentially clamped and held in the corresponding first holder seat **212**, the corresponding first wire notch **312**, and the corresponding second holder seat **213**, the first lead-out wire **110** passes through the corresponding clearance groove **214**, such that the first lead-out wire **110** can be conveniently pulled to fit a welding position on the first welding portion **310**, thereby facilitating the subsequent welding process. After the welding is completed, the first lead-out wire **110** is cut, for example, to the length shown in FIG. **7**. Therefore, the provision of the clearance grooves **214** can reduce the welding difficulty and improve the welding efficiency.

[0051] Referring to FIG. **3** and FIG. **5**, in an embodiment of the present disclosure, each of the first mounting positions **211** is provided with a mounting groove, and the first mounting portion **330** of each of the first terminals **300** is inserted into the corresponding mounting groove. As such, the mounting process is simple and convenient. In an embodiment of the present disclosure, each of the first mounting portions **330** is provided with a protrusion **331**, and the protrusion **331** is inclined such that the first mounting portion **330** is in tight fit with the mounting groove, to effectively prevent the first terminal **300** from loosening up and falling off, and improve the stability of mounting of the first terminal **300**.

[0052] Referring to FIG. **4**, FIG. **5**, and FIG. **7**, in an embodiment of the present disclosure, the wire outlet base **210** is provided with a second mounting position **216**, the winding **130** further includes a plurality of second lead-out wires **120**, the stator assembly **1000** further includes a

second terminal **400**, and the second terminal **400** is mounted at the second mounting position **216**. The second terminal **400** includes a connection portion **410** and a plurality of second welding portions **420**. The plurality of second welding portions **420** are arranged at intervals on the connection portion **410**. The plurality of second welding portions **420** are configured for welding the second lead-out wires **120**. The plurality of second lead-out wires **120** are welded to the plurality of second welding portions **420** in one-to-one correspondence. In an embodiment, three second welding portions **420** are provided, three second lead-out wires **120** are provided, and the three second lead-out wires **120** are correspondingly welded to the three second welding portions **420**. Alternatively, two second welding portions **420** and two second lead-out wires **120** are provided. The number of the second welding portions **420** and the number of the second lead-out wires **120** may be determined according to an actual situation. The second terminal **400** may be made of a metal, such as copper or iron. The second terminal **400** is provided as a neutral point for connecting the second lead-out wires **120** by welding, such that a plurality of sets of winding wires forms a Y connection.

[0053] It should be noted that heat generated during welding of another second lead-out wire **120** has impact on the second lead-out wires **120** that have been welded before, especially has great impact on the second lead-out wire **120** in the middle. Therefore, the arrangement of the plurality of second welding portions **420** at intervals can effectively reduce the transfer of heat, reduce the impact of two adjacent second lead-out wires **120** on each other during welding, improve the welding quality, and reduce the amount of material used.

[0054] Referring to FIG. **4**, in an embodiment of the present disclosure, an edge of each of the second welding portions **420** is provided with a second bent portion **450**, and the second bent portion **450** extends in a direction facing away from the wire outlet base **210**. In an embodiment, the second bent portion **450** may be formed by bending the edge of the second welding portion **420** in the direction facing away from the wire outlet base **210**, that is, the second bent portion **450** and the second welding portion **420** may be integrally formed, thus reducing the manufacturing complexity and costs. It can be understood that the second lead-out wire **120** is connected to the corresponding second welding portion **420** by soldering, and when the second terminal **400** is made of copper, the adhesion between solder and copper is satisfactory. In order to further improve the adhesion between solder and copper, the second bent portion **450** is arranged at the edge of the second welding portion **420**, and the solder can be adhered to the second welding portion **420** and the second bent portion **450**, such that the solder can better wrap the second lead-out wire **120**, to reduce the occurrence of faulty soldering, and improve the stability of the connection between the second lead-out wire **120** and the second terminal **400**.

[0055] Referring to FIG. **4** and FIG. **7**, in an embodiment of the present disclosure, the second bent portion **450** is arranged at an end of the second welding portion **420** in an extending direction of the second lead-out wire **120**. For example, the second bent portion **450** is located at an end of the second welding portion **420** facing one end of the second lead-out wire **120**. Each of the second bent portions **450** is further provided with a second wire notch **451**, such that the corresponding second lead-out wire **120** can pass through the second wire notch **451**. A height of the second wire notch **451** is greater than or equal to an outer diameter of the second lead-out wire **120**, and a width of the second wire notch **451** is greater than or equal to the outer diameter of the second lead-out wire **120**, such that the second lead-out wire **120** can pass through the second wire notch **451**. It can be understood that the second wire notch **451** can limit the position of the second lead-out wire **120**, and has a certain limiting effect on the second lead-out wire **120** during welding, thereby effectively reducing the misalignment and movement of the second lead-out wire **120**, and ensuring that the second lead-out wire **120** can be accurately welded to the second welding portion **420**.

[0056] Referring to FIG. **4**, in an embodiment of the present disclosure, the second terminal **400** further includes a protruding portion **440** and a second mounting portion **430**. The second mounting portion **430** is connected to the connection portion **410**. The second mounting position **216** is also

provided with a mounting groove, and the second mounting portion **430** is inserted into the second mounting groove to limit the position of the second terminal **400**. The protruding portion **440** is connected to the second mounting portion **430**, and the protruding portion **440** extends in a direction facing away from the wire outlet base **210**. It can be understood that when installing the second terminal **400**, operation personnel or a machine can conveniently mount the second terminal **400** at the second mounting position **216** by gripping the protruding portion **440**. The connection of the protruding portion **440** to the second mounting portion **430** facilitates the alignment of the second mounting portion **430** with the mounting groove during mounting the second terminal **400**, thereby reducing the mounting difficulty and improving the mounting efficiency.

[0057] Referring to FIG. **1** and FIG. **8**, in an embodiment of the present disclosure, the cover plate **220** is provided with a peripheral edge **222** and a plurality of through holes **221**. In an embodiment, three through holes **221** are provided. The peripheral edge **222** is arranged and erected around the three through holes **221** and creates mounting cavities **223**. For example, three mounting cavities **223** are formed. The three wire leading-out portions **320** correspondingly pass through the three through holes **221** and are located in the three mounting cavities **223**. The peripheral edge **222** is configured to protect the wire leading-out portions **320**, effectively reducing the occurrence of collision, damage and the like of the wire leading-out portions **320**, such that it is convenient to connect the wire leading-out portions **320** to the power cable.

[0058] Referring to FIG. **2** and FIG. **7**, in an embodiment of the present disclosure, a positioning groove **215** is provided at an end of the wire outlet base **210** away from the insulating frame **200**. A baffle plate **224** is provided at an end of the cover plate **220** away from the insulating frame **200**, and the baffle plate **224** is engaged with the positioning groove **215**, such that a plastic-encapsulating space is formed by the wire outlet base **210**, the cover plate **220**, and the baffle plate **224**. Therefore, after the first lead-out wires **110** and the second lead-out wires **120** are welded, the cover plate **220** is connected to the wire outlet base **210**, and a sealing material is injected into the plastic-encapsulating space between the cover plate **220**, the baffle plate **224**, and the wire outlet base **210**, to provide a protection effect and further improve the stability of the connection between the first lead-out wires **110** and the first terminals **300** and between the second lead-out wires **120** and the second terminals **400**. In addition, the injection of the sealing material does not require manually crimping a terminal and wrapping the terminal with a sleeve, such that the number of parts and the costs are reduced. Because such an operation is simple, automated production can be realized to improve the production efficiency. Referring to FIG. **8**, finally, the stator assembly **1000** may be encapsulated to reduce the temperature and noise of the motor.

[0059] A motor according to an embodiment of the present disclosure includes the stator assembly **1000** of the above embodiments. In the motor of the embodiment of the present disclosure, the stator assembly **1000** of the above embodiments is used. The wire outlet base **210** is arranged on the insulating frame **200**. The wire outlet base **210** is provided with a plurality of first mounting positions **211**. A plurality of first terminals **300** are correspondingly arranged in the plurality of first mounting positions **211**. Each of the first terminals **300** includes a wire leading-out portion **320** and a first welding portion **310**. The winding **130** is wound around the insulating frame **200**. The winding **130** further includes a plurality of first lead-out wires **110**. With the configuration of the wire outlet base **210** and the skillful design of the structure of the first terminals **300**, the lead-out wires can be conveniently connected to the first terminals **300**, such that the difficulty of welding the first lead-out wires **110** to the first welding portions **310** is reduced, and the production efficiency is improved. The plurality of first lead-out wires **110** can be correspondingly welded to the plurality of first welding portions **310**, such that the stability of connection between the first lead-out wires **110** and the terminals is improved, and the first lead-out wires **110** are less likely to loosen up. Because the wire leading-out portions **320** extend out of the cover plate **220**, the wire leading-out portions **320** can be conveniently connected to a power cable.

[0060] Because the motor adopts all the technical schemes of the stator assembly **1000** of the above

embodiments, the motor has at least all the beneficial effects achieved by the technical schemes of the above embodiments, and the details will not be repeated here.
[0061] The embodiments of the present disclosure have been described in detail above with reference to the accompanying drawings, but the present disclosure is not limited to the above embodiments, and various changes may be made within the knowledge of those having ordinary skills in the art without departing from the scope of the present disclosure.

Claims

1. A stator assembly comprising: an insulating frame; a winding, wound around the insulating frame and comprising a plurality of first lead-out wires; a wire outlet base, provided with a plurality of first mounting positions; a cover plate, connected to the wire outlet base and covering the plurality of first mounting positions; and a plurality of first terminals, arranged in one-to-one correspondence with the plurality of first mounting positions, wherein each of the first terminals comprises a first welding portion and a wire leading-out portion, each of the first welding portions is configured to weld a corresponding first lead-out wire, and the plurality of wire leading-out portions extend out of the cover plate.
2. The stator assembly of claim 1, wherein an edge of each of the first welding portions is arranged with a first bent portion, and each of the first bent portions extends in a direction facing away from the wire outlet base.
3. The stator assembly of claim 2, wherein each of the first bent portions is arranged at an end of the corresponding first welding portion facing one end of the corresponding first lead-out wire, each of the first bent portions is provided with a first wire notch, and each of the first lead-out wires passes through the corresponding first wire notch.
4. The stator assembly of claim 1, wherein, first holder seats and second holder seats are arranged at intervals on the wire outlet base along an extending direction of the first lead-out wire; each of the first terminals is located between one of the first holder seats and one of the second holder seats; and each of the first lead-out wires is clamped in and held by one of the first holder seats and one of the second holder seats.
5. The stator assembly of claim 1, wherein, the wire outlet base is provided with clearance grooves along the extending direction of the first lead-out wire; and the clearance grooves run through the wire outlet base along the extending direction of the first lead-out wire.
6. The stator assembly of claim 1, wherein each of the first terminals further comprises a first mounting portion, the first mounting portion is connected to the first welding portion and the wire leading-out portion, and the first mounting portion is configured for inserting into the first mounting position.
7. The stator assembly of claim 1, wherein, the wire outlet base is further provided with a second mounting position; the winding further comprises a plurality of second lead-out wires; the stator assembly further comprises a second terminal arranged at the second mounting position, the second terminal comprises a connection portion and a plurality of second welding portions; and the plurality of second welding portions are arranged at intervals on the connection portion, and the plurality of second welding portions are welded with the plurality of second lead-out wires.
8. The stator assembly of claim 7, wherein, an edge of each of the second welding portions is provided with a second bent portion' and each of the second bent portions extends in the direction facing away from the wire outlet base.
9. The stator assembly of claim 7, wherein, the second terminal further comprises a protruding portion and a second mounting portion; and the second mounting portion is connected to the connection portion and is inserted into the second mounting position, and the protruding portion is connected to the second mounting portion and extends in the direction facing away from the wire outlet base.

10. The stator assembly of claim 1, wherein, the cover plate is provided with a peripheral edge and a plurality of through holes; the peripheral edge is arranged and erected around the plurality of through holes and forms mounting cavities; and the plurality of wire leading-out portions are located in the mounting cavities and correspondingly pass through the plurality of through holes.
11. The stator assembly of claim 1, wherein, a positioning groove is provided at an end of the wire outlet base away from the insulating frame; a baffle plate is provided at an end of the cover plate away from the insulating frame; and the baffle plate is engaged with the positioning groove, such that a plastic-encapsulating space is formed by the wire outlet base, the cover plate, and the baffle plate.
12. A motor comprising the stator assembly of claim 1.