

(19)



(11)

EP 4 509 758 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
19.02.2025 Bulletin 2025/08

(51) International Patent Classification (IPC):
F21V 17/00 (2006.01) **F21V 23/00** (2015.01)
F21V 23/02 (2006.01) **F21V 23/06** (2006.01)

(21) Application number: **23204009.7**

(52) Cooperative Patent Classification (CPC):
F21V 23/003; F21V 17/002; F21V 23/02;
F21V 23/06; H05B 45/31; H05B 45/37

(22) Date of filing: **17.10.2023**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL
NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA
Designated Validation States:
KH MA MD TN

- **HUANG, Chunguang**
Huizhou, Guangdong (CN)
- **LUO, Zhiping**
Huizhou, Guangdong (CN)

(30) Priority: **17.08.2023 CN 202311045621**

(74) Representative: **Ipey**
Apex House
Thomas Street
Trethomas
Caerphilly CF83 8DP (GB)

(71) Applicant: **Trieco (Huizhou) Co., Ltd**
Huizhou Guangdong (CN)

Remarks:
Amended claims in accordance with Rule 137(2) EPC.

(72) Inventors:
• **ZENG, Xianpeng**
Huizhou, Guangdong (CN)

(54) **POWER DRIVER AND LAMP**

(57) Disclosed herein is a power driver and a lamp. The power driver includes a phase conversion module, a dimming module, a power module and connecting modules, where the phase conversion module includes an input member and a first electrical connection member, and the input member is electrically connected to the first electrical connection member; the dimming module includes an output member and a second electrical connection member, and the output member is electrically connected to the second electrical connection member; the power module includes a power supply member and two third electrical connection members, the two third electrical connection members are respectively arranged at two ends of the power supply member and are electrically connected to the power supply member, and the two third electrical connection members are respectively movably connected to the first electrical connection member and the second electrical connection member; and the power module is detachably connected to the phase conversion module and the dimming module by means of the connecting modules. With regard to the present application, the power module is detachably connected to the phase conversion module and the dimming module, so that when the power module is required to be replaced, all that is needed is to directly remove the power module and replace same with a new power module, no tool is needed, and reconnection of

cables is also not needed.

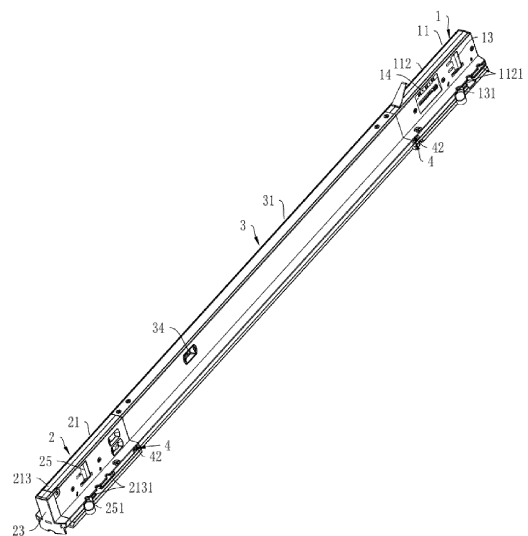


FIG. 1

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Description**FIELD OF TECHNOLOGY**

[0001] The present disclosure relates to the technical field of LED lamps, in particular to a power driver and a lamp.

BACKGROUND

[0002] Due to the characteristics of LED light sources, conventional mains supply network voltages cannot be directly applied to LEDs. In order to meet the special voltage and current requirements of the LEDs, specially-designed voltage conversion equipment must be used, and then the LEDs can operate normally, so that LED lamps have power drivers different from those of traditional lamps.

[0003] After product assembly of existing power drivers for the LED lamps, phase conversion modules, dimming modules and power modules are of integrated structures, are directly connected to the LED lamps by means of cables, and cannot be disassembled. The LED lamps are more and more widely used, the service lives of bodies of the LED lamps are very long, the service lives of the power modules thereof are relatively short, and generally, the power modules need to be replaced every one to two years; however, the power drivers are of the integrated structures, and many cables in the power drivers are connected to other components, so that during replacement of the power modules, the cables need to be disconnected and reconnected in addition to disassembly of the various components of the power drivers, the operations are very inconvenient, and generally, the LED lamps can only be sent back to manufacturers to be replaced by the manufacturers, which wastes time and energy.

SUMMARY

[0004] Aiming at the defects in the prior art, the present disclosure provides a power driver and a lamp.

[0005] The power driver disclosed herein comprises:

a phase conversion module which comprises an input member and a first electrical connection member, where the input member is electrically connected to the first electrical connection member;
 a dimming module which comprises an output member and a second electrical connection member, where the output member is electrically connected to the second electrical connection member;
 a power module which comprises a power supply member and two third electrical connection members, where the two third electrical connection members are respectively arranged at two ends of the power supply member and are electrically connected to the power supply member, and the two third elec-

trical connection members are respectively movably connected to the first electrical connection member and the second electrical connection member; and connecting modules, where the power module is detachably connected to the phase conversion module and the dimming module by means of the connecting modules.

[0006] According to an implementation of the present disclosure, the power module further comprises clamping plate members, and the clamping plate members are connected to the power supply member; each of the connecting modules comprises a buckle member, shifting members and a reset member, the buckle member is connected to the shifting members and the reset member, and the buckle member is clamped with the respective clamping plate member; the respective shifting members are movably connected to the input member and extend out of the input member, and the respective reset member abuts against the input member.

[0007] According to an implementation of the present disclosure, the top of each of the buckle members is provided with a first buffer surface, and the position of the respective clamping plate member corresponding to the first buffer surface is provided with a second buffer surface.

[0008] According to an implementation of the present disclosure, each of the buckle members comprises a limiting block, and the limiting block is arranged at the bottom of the buckle member; and the output member is provided with a limiting groove, and the respective limiting block moves in the limiting groove.

[0009] According to an implementation of the present disclosure, the input member is provided with a first groove, the position of the respective clamping plate member corresponding to the first groove is provided with a first protrusion, and the first protrusion is arranged in the first groove.

[0010] According to an implementation of the present disclosure, the output member is provided with a second groove, the position of the respective clamping plate member corresponding to the second groove is provided with a second protrusion, and the second protrusion is arranged in the second groove.

[0011] According to an implementation of the present disclosure, the power module further comprises a power regulation member, and the power regulation member is electrically connected to the power supply member.

[0012] According to an implementation of the present disclosure, the dimming module further comprises a flip member and an interface member, the flip member is movably connected to the end of the output member far away from the power supply member, and the interface member is located between the output member and the flip member and is electrically connected to an output end of the output member.

[0013] According to an implementation of the present disclosure, the phase conversion module further com-

prises a phase conversion member and a phase conversion switch member, and the phase conversion member and the phase conversion switch member are respectively connected to the input member.

[0014] A lamp comprises a light-emitting module and the above-mentioned power driver, where the phase conversion module, the dimming module and the power module are respectively arranged on the light-emitting module and are electrically connected to the light-emitting module.

[0015] The present application has the following beneficial effects: the power module is detachably connected to the phase conversion module and the dimming module by means of the connecting modules, and meanwhile, the third electrical connection members are further provided to be respectively movably connected to the first electrical connection member and the second electrical connection member, so that the power module is not required to be directly connected to the phase conversion module and the dimming module by means of cables, when the power module is required to be replaced, all that is needed is to directly remove the power module and replace same with a new power module, reconnection of the cables is not needed, the operation is easy, and the time and energy are saved.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] Drawings described herein are used for providing a further understanding of the present application and constitute a portion of the present application. Schematic embodiments of the present application and descriptions thereof are used for explaining the present application, and should not be construed to unduly limit the present application. In the drawings:

FIG. 1 is a structure diagram of a power driver in an embodiment;

FIG. 2 is a structure diagram of a phase conversion module in the embodiment;

FIG. 3 is an internal structure diagram of the phase conversion module in the embodiment;

FIG. 4 is a structure diagram of a dimming module in the embodiment;

FIG. 5 is an internal structure diagram of the dimming module in the embodiment;

FIG. 6 is a structure diagram of a power module in the embodiment;

FIG. 7 is another structure diagram of the power module in the embodiment;

FIG. 8 is a structure diagram of a connecting module in the embodiment;

FIG. 9 is a structure diagram of the dimming module and the connecting module in the embodiment; and

FIG. 10 is a structure diagram of a lamp in an embodiment.

DESCRIPTION OF THE EMBODIMENTS

[0017] A plurality of embodiments of the present disclosure will be schematically disclosed below, and for the purpose of clarity, many practical details will be described together in the following description. However, it should be understood that these practical details are not intended to limit the present disclosure. That is, in some embodiments of the present disclosure, these practical details are non-essential. In addition, for the purpose of simplifying the drawings, some common structures and modules will be drawn in a simple schematic manner in the drawings.

[0018] It should be noted that all directional indications, such as up, down, left, right, front, back, etc., in the embodiments of the present disclosure are only used to explain the relative position relationship and motions of components in a specific attitude, as shown in the accompanying drawings, and if the specific attitude is changed, the directional indications will be changed accordingly.

[0019] Besides, the descriptions involving "first" and "second" in the present disclosure are only for the purpose of describing, do not specially mean the sequence or order, are not intended to limit the present disclosure, are only used to distinguish modules or operations described with the same technical terms, and cannot be understood as indicating or implying the relative importance or implicitly indicating the number of technical features indicated. Thus, the features defined as "first" and "second" can explicitly or implicitly include at least one such feature. Besides, the technical solutions of the embodiments can be combined with one another on the basis that such combinations can be implemented by a person of ordinary skill in the art, and when the combinations of the technical solutions are contradictory or cannot be implemented, it should be considered that such combinations of the technical solutions do not exist and do not fall within the scope of protection claimed by the present disclosure.

[0020] In order to further understand the content, characteristics and functions of the present disclosure, the following embodiments are listed and are described in detail in conjunction with the drawings as follows:

Embodiment 1

[0021] Reference is made to FIGS. 1-7, where FIG. 1 is a structure diagram of a power driver in the embodiment, FIG. 2 is a structure diagram of a phase conversion module in the embodiment, FIG. 3 is an internal structure diagram of the phase conversion module in the embodiment, FIG. 4 is a structure diagram of a dimming module in the embodiment, FIG. 5 is an internal structure diagram of the dimming module in the embodiment, FIG. 6 is a structure diagram of a power module in the embodiment, and FIG. 7 is another structure diagram of the power module in the embodiment. The power driver in this

embodiment includes the phase conversion module 1, the dimming module 2, the power module 3 and connecting modules 4, where the phase conversion module 1 includes an input member 11 and a first electrical connection member 12, and the input member 11 is electrically connected to the first electrical connection member 12; the dimming module 2 includes an output member 21 and a second electrical connection member 22, and the output member 21 is electrically connected to the second electrical connection member 22; the power module 3 includes a power supply member 31 and two third electrical connection members 32, the two third electrical connection members 32 are respectively arranged at two ends of the power supply member 31 and are electrically connected to the power supply member 31, and the two third electrical connection members 32 are respectively movably connected to the first electrical connection member and the second electrical connection member 22; and the power module 3 is detachably connected to the phase conversion module 1 and the dimming module 2 by means of the connecting modules 4.

[0022] The power module 3 is detachably connected to the phase conversion module 1 and the dimming module 2 by means of the connecting modules 4, and meanwhile, the third electrical connection members 32 are further provided to be respectively connected to the first electrical connection member 12 and the second electrical connection member 22, so that the power module 4 is not required to be connected to the phase conversion module 1 and the dimming module 2 by means of cables, when the power module 4 is required to be replaced, all that is needed is to directly remove the power module 4 and replace same with a new power module 4, reconnection of the cables is also not needed, the operation is easy, and the time and energy are saved.

[0023] Reference is made to FIGS. 1-3, further, the input member 11 includes a first input housing 112, a second input housing 113 and an input circuit board 114, the first input housing 112 is connected to the second input housing 113, the input circuit board 114 is arranged in an input housing 111 and is electrically connected to the first electrical connection member 12, the second input housing 113 is circularly arranged outside the first electrical connection member 12, and one connecting module 4 is located at the end of the first input housing 112 close to the second input housing 113 and extends out of the first input housing 112.

[0024] Further, the phase conversion module 1 further includes a phase conversion member 13 and a phase conversion switch member 14, and the phase conversion member 13 and the phase conversion switch member 14 are respectively connected to the input circuit board 114. The phase conversion member 13 is rotatably arranged on the first input housing 112 and extends out of the first input housing 112; the phase conversion switch member 14 is arranged on the first input housing 112, and a regulation end thereof is exposed out of the first input housing 112; the phase conversion member 13 is pro-

vided with a plurality of electrically-conductive components for being simultaneously connected to a plurality of live wires; and the phase conversion switch member 14 is configured to select the matching connection with the plurality of electrically-conductive components, so as to achieve the connection with the corresponding live wires. The phase conversion switch member 14 is provided with a phase conversion rail clamp dial code having a plurality of gears, and the phase conversion switch member 14 is connected to the corresponding electrically-conductive component of the phase conversion member 13 by moving the corresponding gear on the dial code, thereby achieving the phase conversion effect; under the combined action of the phase conversion member 13 and the phase conversion switch member 14, three phases of live wires are introduced, and the power driver flexibly selects one of the three live wires for connection, thereby increasing the load of a circuit, and improving the safety and the stability of the mounting circuit. During actual application, the phase conversion member 13 is an existing phase conversion device on the market, for example, it may be the phase conversion device in the Chinese patent CN213299737U; and the phase conversion switch member 14 is an existing phase conversion switch on the market, for example, it may be the phase conversion switch in the Chinese patent CN213299737U.

[0025] Further, the phase conversion member 13 is provided with a phase conversion limiting block 131, the position of the first input housing 112 corresponding to the phase conversion limiting block 131 is provided with two phase conversion limiting grooves 1121, when the phase conversion limiting block 131 is located in one of the phase conversion limiting grooves 1121, the phase conversion member 13 is in a connected state, and when the phase conversion limiting block 131 is located in the other phase conversion limiting groove 1121, the phase conversion member 13 is in a disconnected state. The limiting block 131 and the phase conversion limiting grooves 1121 are provided, so that the rotation of the phase conversion member 13 is limited, the phase conversion member can only rotate when being manually rotated and is prevented from rotating during the use process, and the stability during use is ensured.

[0026] Reference is made to FIGS. 1, 4 and 5, further, the output member 21 includes a first output housing 213, a second output housing 214 and an output circuit board 215, the first output housing 213 is connected to the second output housing 214, the output circuit board 215 is arranged in the first output housing 213 and is electrically connected to the second electrical connection member 22, the second output housing 214 is circularly arranged outside the second electrical connection member 22, and the other connecting module 4 is arranged at the end of the first output housing 213 close to the second output housing 214 and extends out of the second output housing 214.

[0027] Further, the dimming module 2 further includes a flip member 23 and an interface member 24, the flip

member 23 is movably connected to the end of the first output housing 213 far away from the power supply member 31, and the interface member 24 is located between the output member 21 and the flip member 23 and is electrically connected to an output end of the output circuit board 215. The interface member 24 is arranged, so that the power driver can be connected to an external light source by means of a connector, and welding of cables is not needed; and the flip member 23 is further arranged, so that an output end of the dimming module 2 is in a movable state, after assembly, the dimming module can be connected to an external light-emitting component by means of the connector, additional welding of the cables is not needed during the production process, the more modular production is achieved, and the production efficiency is improved.

[0028] Further, the dimming module 2 further includes a dimming connection member 25, and the dimming connection member 25 is electrically connected to the output member 21. During specific application, the dimming connection member 25 is configured to connect the external light-emitting component and a dimming device, so that the external light-emitting component has a dimming function. During specific application, the dimming connection member 25 may be an existing dimming rotation component, for example, the dimming rotation component in the Chinese patent CN213299737U.

[0029] Further, the dimming connection member 25 is provided with a dimming limiting block 251, the position of the first output housing 213 corresponding to the dimming limiting block 251 is provided with two dimming limiting grooves 2131, when the dimming limiting block 251 is located in one of the dimming limiting grooves 2131, the dimming connection member 25 is in a connected state, and when the dimming limiting block 251 is located in the other dimming limiting groove 2131, the dimming connection member 25 is in a disconnected state. The dimming limiting block 251 and the dimming limiting grooves 2131 are provided, so that the rotation of the dimming connection member 25 is limited, the dimming connection member can only rotate when being manually rotated and is prevented from rotating during the use process, and the stability during use is ensured.

[0030] Reference is made to FIGS. 1, 6 and 7, further, the power module further includes clamping plate members 33, in this embodiment, there are two connecting modules 4, and correspondingly, there are also two clamping plate members 33. The two clamping plate members 33 are respectively arranged at two ends of the power supply member 31, side surfaces of the clamping plate members 33 are connected to side surfaces of the power supply member 31, and the clamping plate members are circularly arranged outside the third electrical connection members 32. The second output housing 214 is provided with a first groove 111, the position of the respective clamping plate member 33 corresponding to the first groove 111 is provided with a first protrusion 332, and the first protrusion 332 is arranged in the first

groove 111. Preferably, the second output housing 214 is provided with a second groove 212, the position of the respective clamping plate member 33 corresponding to the second groove 212 is provided with a second protrusion 333, the second protrusion 333 is arranged in the second groove 212, and the first groove 111 and the second groove 212 are located on the same side of the power driver, thereby preventing mounting misplacement during assembly of the power module 3.

[0031] During actual application, the first electrical connection member 12, the second electrical connection member 22 and the third electrical connection members 32 can be connected by means of pin headers and female headers, can also be connected by means of connectors, and can also be connected by means of connectors with harnesses, which is not limited here; and the number of terminals of the first electrical connection member 12, the second electrical connection member 22 and the third electrical connection members 32 is determined according to the actual use demands, which is not limited here.

[0032] Further, the power module 3 further includes a power regulation member 34, and the power regulation member 34 is electrically connected to the power supply member 31. The power regulation member 34 is arranged, so that output power of the power module 3 can be regulated. During actual application, the power regulation member 34 is an existing power regulation device, for example, it may be the power regulation device in the Chinese patent CN213299737U.

[0033] Reference is made to FIGS. 1, 8 and 9, where FIG. 8 is a structure diagram of the connecting module in the embodiment, and FIG. 9 is a structure diagram of the dimming module and the connecting module in the embodiment. Further, each of the connecting modules 4 includes a buckle member 41, two shifting members 42 and a reset member 43, the buckle member 41 is connected to the shifting members 42 and the reset member 43, and the buckle member 41 is clamped with the respective clamping plate member 33; the shifting members 42 of one of the connecting modules 4 are movably connected to the first input housing 112 and extend out of the first input housing 112, and the side of the reset member 43 facing away from the buckle member 41 abuts against the input member 11; and the shifting members 42 of the other connecting module 4 are movably connected to the first output housing 213 and extend out of the first output housing 213, and the side of the reset member 43 facing away from the buckle member 41 abuts against the input member 11. In this embodiment, each buckle member 41 and the respective reset member 43 form an isosceles trapezoid, and the two shifting members 42 are respectively arranged on two corners of long edges thereof. Each reset member 43 abuts against the input member 11, thereby limiting the movement of the reset member 43; there is a gap between each buckle member 41 and the respective reset member 43, so that a movement space is reserved for the buckle member 41, and when the respective connecting

module 4 moves away from the clamping plate member 33 under the action of an external force, the buckle member 41 moves close to the reset member 43; however, the reset member 43 can only be elastically deformed and cannot shift, so that after the external force is removed, the reset member 43 recovers the original state, thereby driving the buckle member 41 to move away from the reset member 43 and be clamped with the clamping plate member 33.

[0034] Further, the top of each of the buckle members 41 is provided with a first buffer surface 411, and the position of the respective clamping plate member 33 corresponding to the first buffer surface 411 is provided with a second buffer surface 331. During assembly of the power module 3, the clamping plate members 33 move from the tops of the buckle members 41 to the bottoms thereof, the second buffer surfaces 331 abut against the first buffer surface 411, the clamping plate members 33 push the buckle members 41 along the buffer surfaces 411 to move away from the clamping plate members 33, when the clamping plate members 33 move below the buffer surfaces 411, the second buffer surfaces 331 no longer abut against the first buffer surface 411, the buckle members 41 are driven by the reset members 43 to move close to the clamping plate members 33 so as to be clamped with the clamping plate members 33, thus during mounting of the power module 3, the buckle members 41 can be clamped with the clamping plate members 33 without manually pushing the shifting members 42, and the assembly operation is easy and convenient.

[0035] Further, each of the buckle members 41 includes a limiting block 412, and the limiting block 412 is arranged at the bottom of the buckle member 41; the output member 21 is provided with a limiting groove 211, the respective limiting block 412 moves in the limiting groove 211, the limiting groove 211 is formed in the output circuit board 215, the movement of the buckle member 41 is limited through cooperation of the limiting block 412 and the limiting groove 211, and thus misplacement of the buckle member 41 is prevented during assembly and disassembly processes of the power module 3.

[0036] During disassembly of the power module 3, the shifting members 42 are pushed away from the clamping plate members 33, the shifting members 42 move to drive the buckle members 41 to move away from the clamping plate members 33, thus the buckle members 41 are not clamped with the clamping plate members 33, the power module 3 can be disassembled, and the reset members 43 recover the original state under the action of elastic deformation after loosening; and during assembly of the power module 3, the clamping plate members 33 move from the tops of the buckle members 41 to the bottoms thereof, the second buffer surfaces 331 abut against the first buffer surface 411, the clamping plate members 33 push the buckle members 41 along the buffer surfaces 411 to move away from the clamping plate members 33, when the clamping plate members 33 move below the buffer surfaces 411, the second buffer surfaces 331 no

longer abut against the buffer surface, and the buckle members 41 are driven by the reset members 43 to move close to the clamping plate members 33 so as to be clamped with the clamping plate members 33.

[0037] In another embodiment, the power module 3 is detachably connected to the phase conversion module 1 and the dimming module 2 in a threaded connection manner, and the connecting modules 4 are screws.

10 Embodiment 2

[0038] Reference is made to FIG. 10, where FIG. 10 is a structure diagram of a lamp in the embodiment. The lamp includes a light-emitting module 5 and the power driver in Embodiment 1, where the phase conversion module 1, the dimming module 2 and the power module 3 are respectively arranged at the top of the light-emitting module 5 and are electrically connected to the light-emitting module 5.

[0039] Further, the first input housing 112, the second input housing 113, the first output housing 213, the second output housing 214 and the power supply member 31 are respectively connected to the top of the light-emitting module 5, during actual application, a light-emitting end of the light-emitting module 5 is the bottom, and the other opposite end is the top.

[0040] In this embodiment, the light-emitting module 5 is a strip lamp, a ceiling lamp or a track lamp, which is not limited here.

[0041] Further, the interface member 24 is arranged, so that the power driver can be electrically connected to the light-emitting module 5 by means of the connector, and welding of cables is not needed; and the flip member 23 is further arranged, so that the output end of the dimming module 2 is in the movable state, after assembly, the dimming module can be connected to the light-emitting module 5 by means of the connector, additional welding of the cables is not needed during the production process, the more modular production is achieved, and the production efficiency is improved. The dimming connection member 25 is configured to connect the light-emitting module 5 and an external dimming device, so that the light-emitting module 5 has a dimming function.

[0042] In conclusion, with regard to the power driver in the present application, the clamping plate members are provided to be clamped with the connecting modules, so that the power module is detachably connected to the phase conversion module and the dimming module; meanwhile, the third electrical connection members are further provided to be respectively connected to the first electrical connection member and the second electrical connection member, so that the power module is not required to be connected to the phase conversion module and the dimming module by means of cables, when the power module is required to be replaced, all that is needed is to directly remove the power module and replace same with a new power module, no tool is needed, reconnection of the cables is also not needed,

the operation is easy, and the time and energy are saved.

[0043] The above are only embodiments of the present disclosure, and are not intended to limit the present disclosure. Various changes and modifications can be made to the present disclosure by those skilled in the art. Any modification, equivalent substitution, improvement, etc. made within the spirit and principles of the present disclosure should fall within the scope of the claims of the present disclosure.

Claims

1. A power driver, comprising:

a phase conversion module (1) which comprises an input member (11) and a first electrical connection member (12), wherein the input member (11) is electrically connected to the first electrical connection member (12);

a dimming module (2) which comprises an output member (21) and a second electrical connection member (22), wherein the output member (21) is electrically connected to the second electrical connection member (22);

a power module (3) which comprises a power supply member (31) and two third electrical connection members (32), wherein the two third electrical connection members (32) are respectively arranged at two ends of the power supply member (31) and are electrically connected to the power supply member (31), and the two third electrical connection members (32) are respectively movably connected to the first electrical connection member (12) and the second electrical connection member (22); and

connecting modules (4), wherein the power module (3) is detachably connected to the phase conversion module (1) and the dimming module (2) by means of the connecting modules (4).

2. The power driver according to claim 1, wherein the power module (3) further comprises clamping plate members (33), and the clamping plate members (33) are connected to the power supply member (31); each of the connecting modules (4) comprises a buckle member (41), shifting members (42) and a reset member (43), the buckle member (41) is connected to the shifting members (42) and the reset member (43), and the buckle member (41) is clamped with the respective clamping plate member (33); the respective shifting members (42) are movably connected to the input member (11) and extend out of the input member (11), and the respective reset member (43) abuts against the input member (11).

3. The power driver according to claim 2, wherein the

top of each of the buckle members (41) is provided with a first buffer surface (411), and the position of the respective clamping plate member (33) corresponding to the first buffer surface (411) is provided with a second buffer surface (331).

4. The power driver according to claim 2, wherein each of the buckle members (41) comprises a limiting block (412), and the limiting block (412) is arranged at the bottom of the buckle member (41); and the output member (21) is provided with a limiting groove (211), and the respective limiting block (412) moves in the limiting groove (211).

5. The power driver according to claim 1, wherein the input member (11) is provided with a first groove (111), the position of the respective clamping plate member (33) corresponding to the first groove (111) is provided with a first protrusion (332), and the first protrusion (332) is arranged in the first groove (111).

6. The power driver according to claim 1, wherein the output member (21) is provided with a second groove (212), the position of the respective clamping plate member (33) corresponding to the second groove (212) is provided with a second protrusion (333), and the second protrusion (333) is arranged in the second groove (212).

7. The power driver according to claim 1, wherein the power module (3) further comprises a power regulation member (34), and the power regulation member (34) is electrically connected to the power supply member (31).

8. The power driver according to claim 1, wherein the dimming module (2) further comprises a flip member (23) and an interface member (24), the flip member (23) is movably connected to the end of the output member (21) far away from the power supply member (31), and the interface member (24) is located between the output member (21) and the flip member (23) and is electrically connected to an output end of the output member (21).

9. The power driver according to claim 1, wherein the phase conversion module (1) further comprises a phase conversion member (13) and a phase conversion switch member (14), and the phase conversion member (13) and the phase conversion switch member (14) are respectively connected to the input member (11).

10. A lamp, comprising a light-emitting module (5) and the power driver according to any one of claims 1-9, wherein the phase conversion module (1), the dimming module (2) and the power module (3) are respectively arranged on the light-emitting module

(5) and are electrically connected to the light-emitting module (5).

Amended claims in accordance with Rule 137(2) EPC.

1. A power driver, comprising:

a phase conversion module (1), which comprises an input member (11) and a first electrical connection member (12), wherein the input member (11) is electrically connected to the first electrical connection member (12);

a dimming module (2), which comprises an output member (21) and a second electrical connection member (22), wherein the output member (21) is electrically connected to the second electrical connection member (22);

a power module (3), which comprises a power supply member (31) and two third electrical connection members (32), wherein the two third electrical connection members (32) are respectively arranged at two ends of the power supply member (31) and are electrically connected to the power supply member (31), and the two third electrical connection members (32) are respectively movably connected to the first electrical connection member (12) and the second electrical connection member (22);

connecting modules (4), wherein the power module (3) is detachably connected to the phase conversion module (1) and the dimming module (2) by means of the connecting modules (4);

characterized in that the power module (3) further comprises clamping plate members (33), and the clamping plate members (33) are connected to the power supply member (31); each of the connecting modules (4) comprises a buckle member (41), shifting members (42) and a reset member (43), the buckle member (41) is connected to the shifting members (42) and the reset member (43); the buckle member (41) is clamped with the clamping plate members (33); the shifting members (42) are movably connected to the input member (11) and extend out of the input member (11); the reset member (43) abuts against the input member (11);

a top of the buckle member (41) is provided with a first buffer surface (411), and a position of each of the clamping plate members (33) corresponding to the first buffer surface (411) is provided with a second buffer surface (331);

the buckle member (41) comprises a limiting block (412), and the limiting block (412) is arranged at a bottom of the buckle member (41); the output member (21) is provided with a limiting groove (211), and the limiting block (412)

moves in the limiting groove (211).

2. The power driver according to claim 1, wherein the input member (11) is provided with a first groove (111), a position of each of the clamping plate members (33) corresponding to the first groove (111) is provided with a first protrusion (332), and the first protrusion (332) is arranged in the first groove (111).
3. The power driver according to claim 1, wherein the output member (21) is provided with a second groove (212), a position of each of the clamping plate members (33) corresponding to the second groove (212) is provided with a second protrusion (333), and the second protrusion (333) is arranged in the second groove (212).
4. The power driver according to claim 1, wherein the power module (3) further comprises a power regulation member (34), and the power regulation member (34) is electrically connected to the power supply member (31).
5. The power driver according to claim 1, wherein the dimming module (2) further comprises a flip member (23) and an interface member (24), the flip member (23) is movably connected to an end of the output member (21) far away from the power supply member (31), and the interface member (24) is located between the output member (21) and the flip member (23) and is electrically connected to an output end of the output member (21).
6. The power driver according to claim 1, wherein the phase conversion module (1) further comprises a phase conversion member (13) and a phase conversion switch member (14), the phase conversion member (13) and the phase conversion switch member (14) are respectively connected to the input member (11).
7. A lamp, comprising a light-emitting module (5) and the power driver according to any one of claims 1-6, wherein the phase conversion module (1), the dimming module (2) and the power module (3) are respectively arranged on the light-emitting module (5) and are electrically connected to the light-emitting module (5).

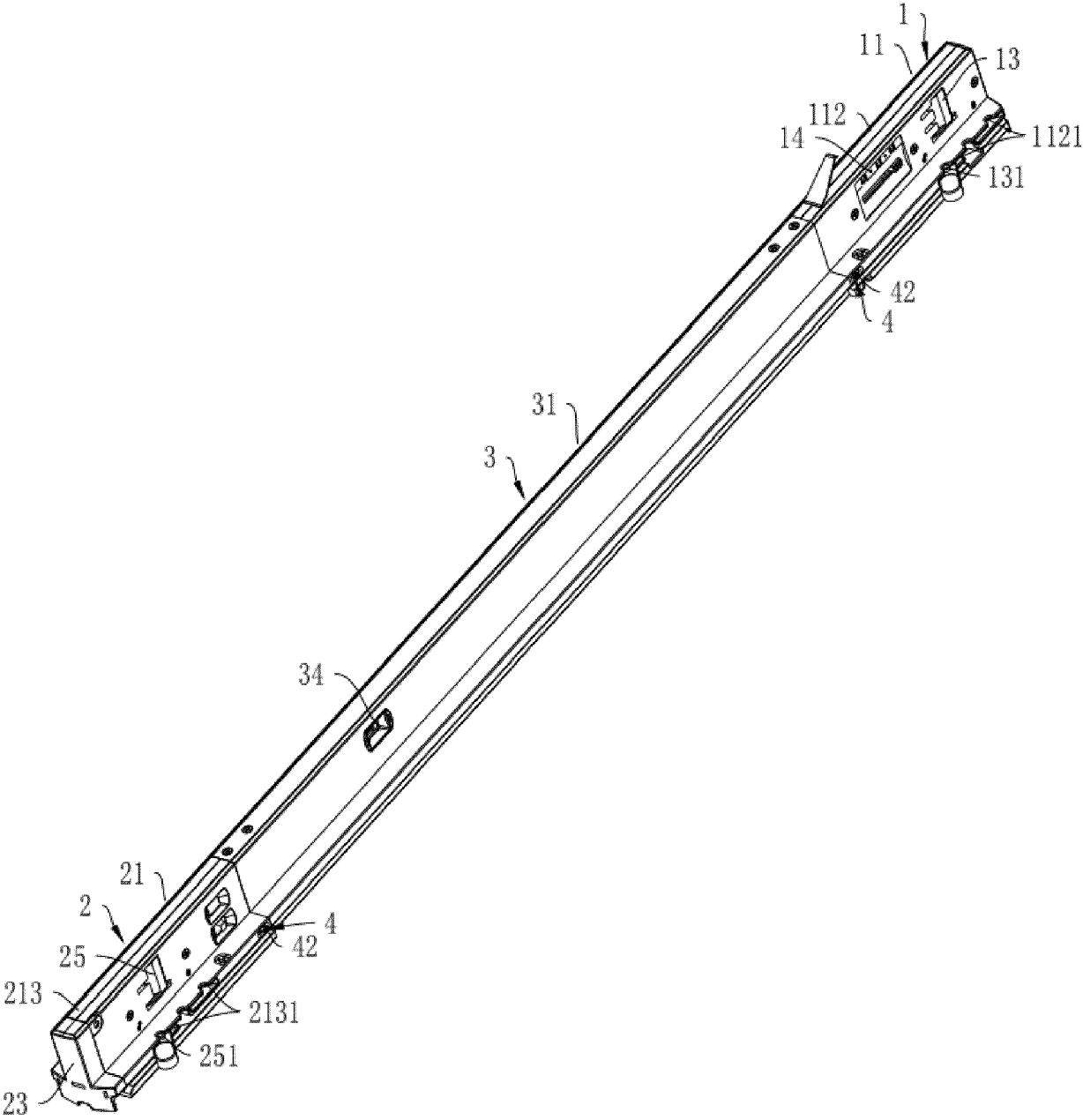


FIG. 1

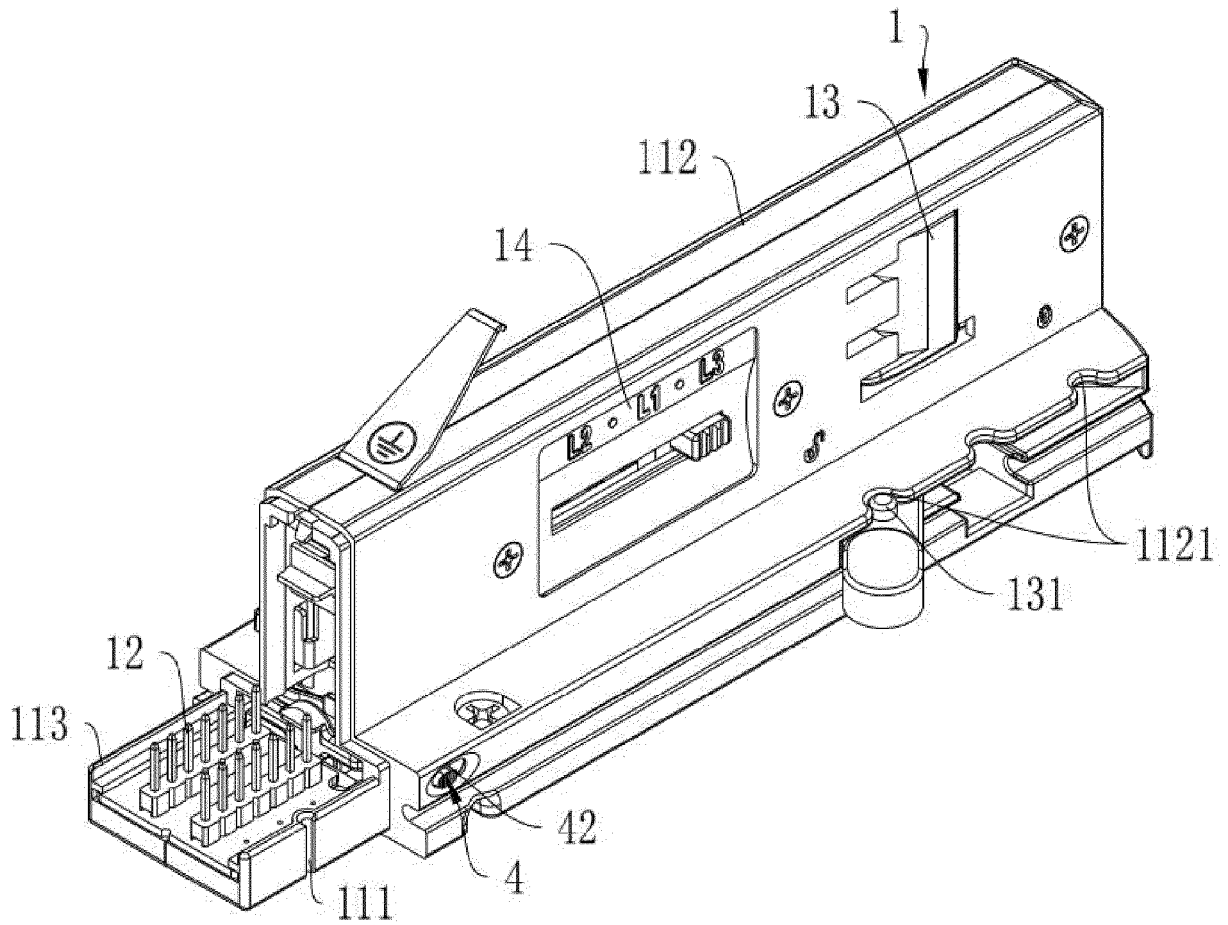


FIG. 2

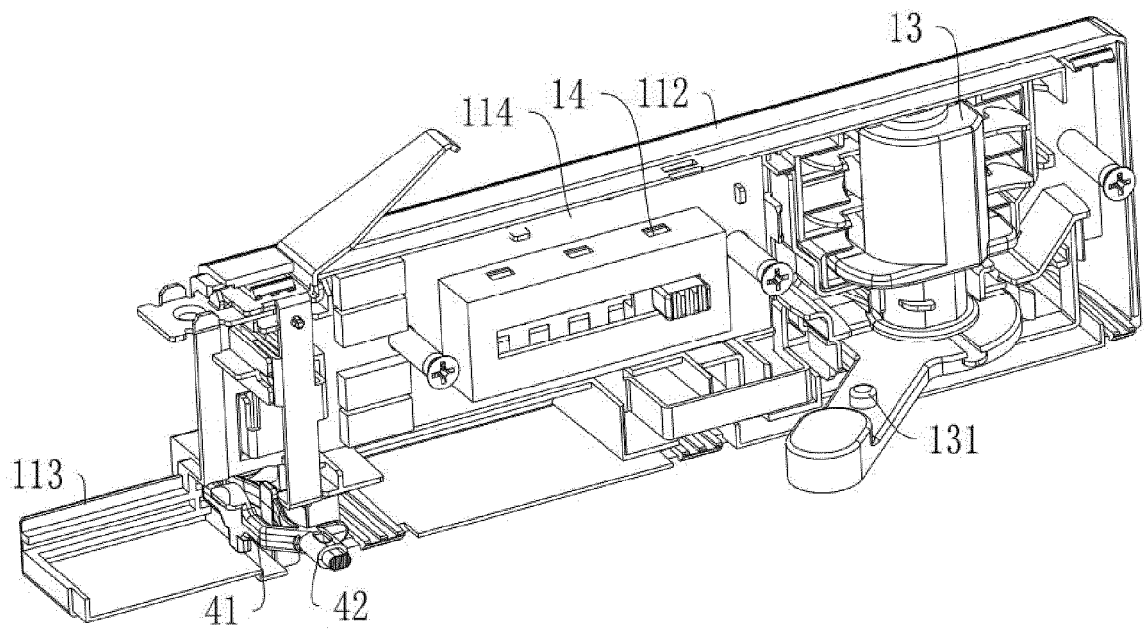


FIG. 3

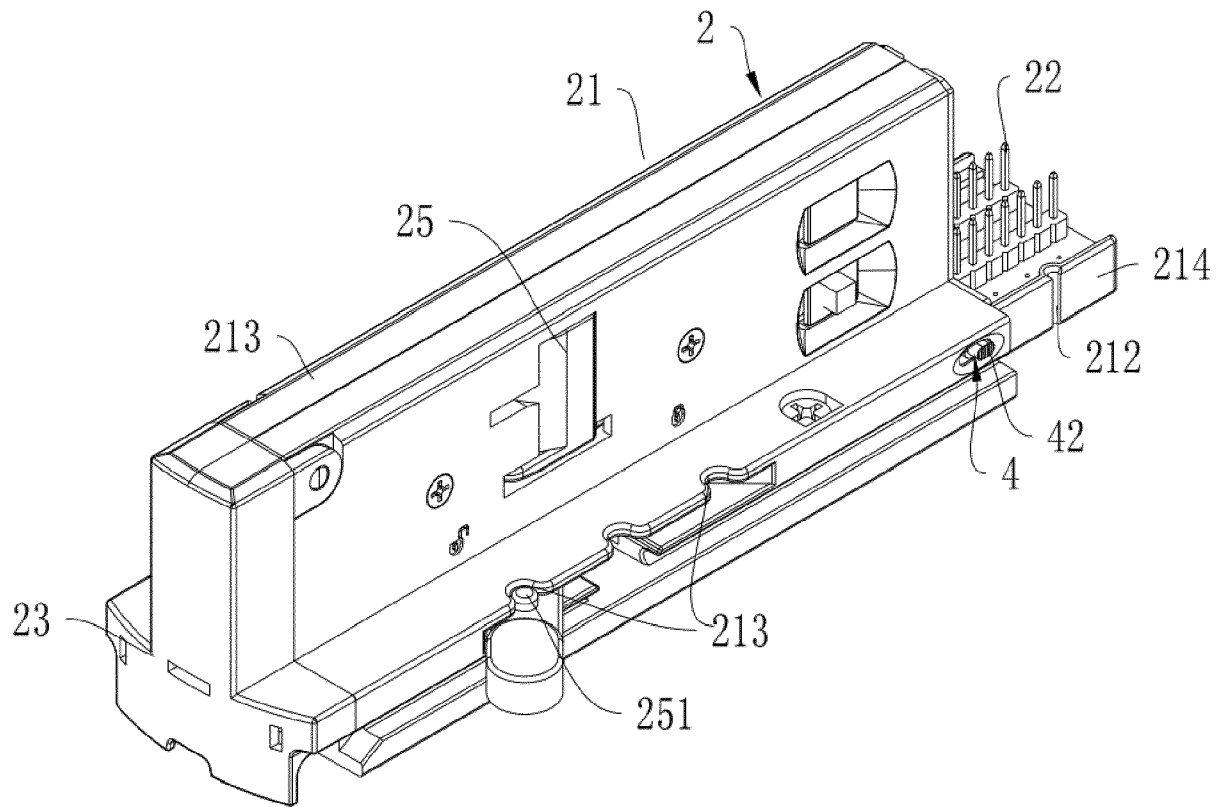


FIG. 4

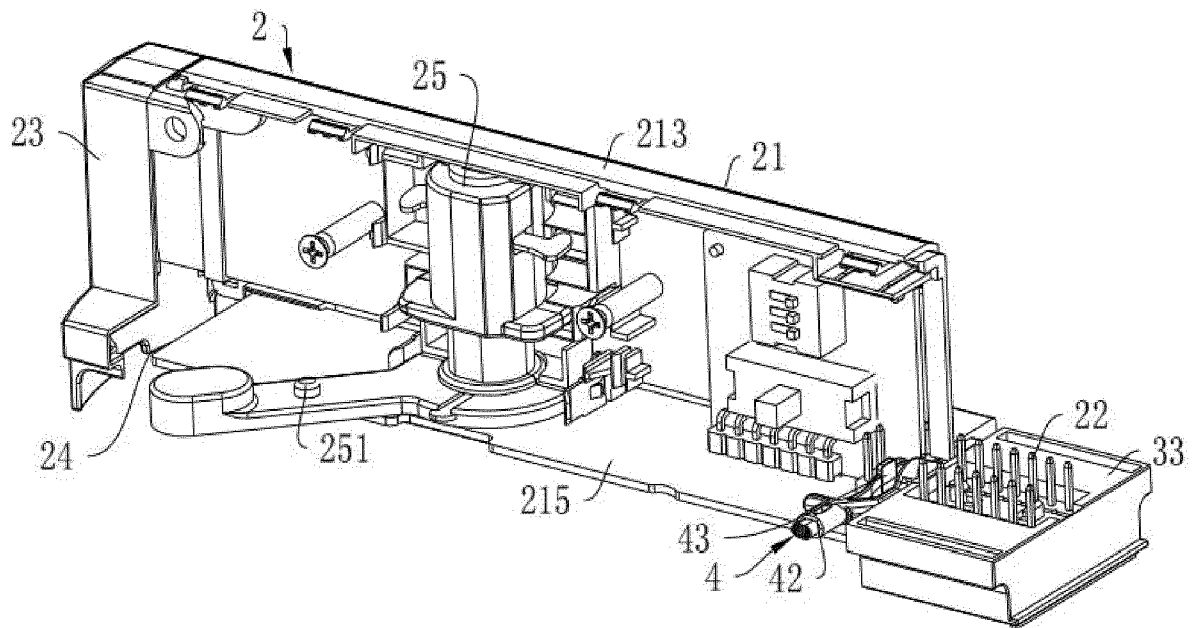


FIG. 5

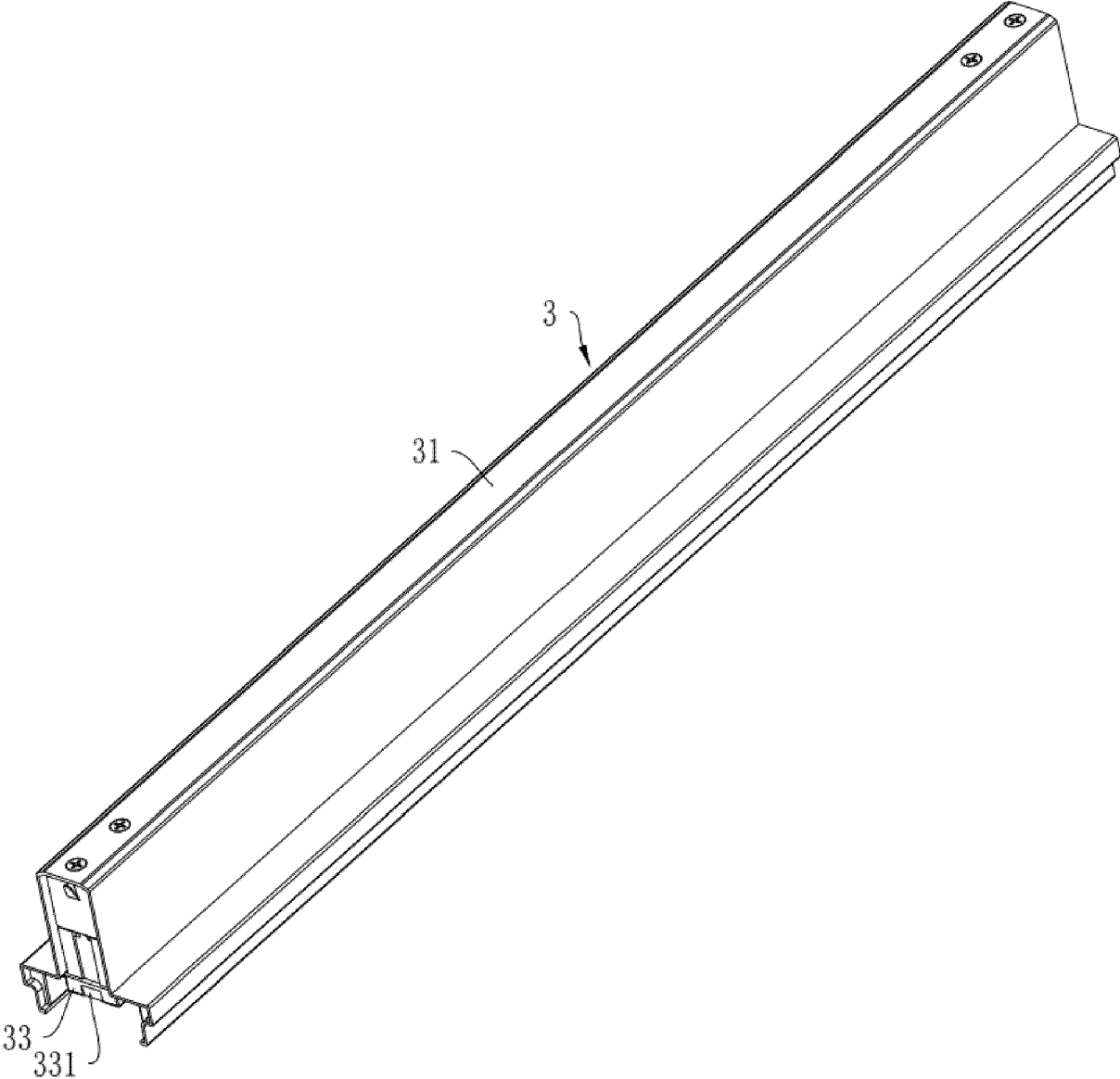


FIG. 6

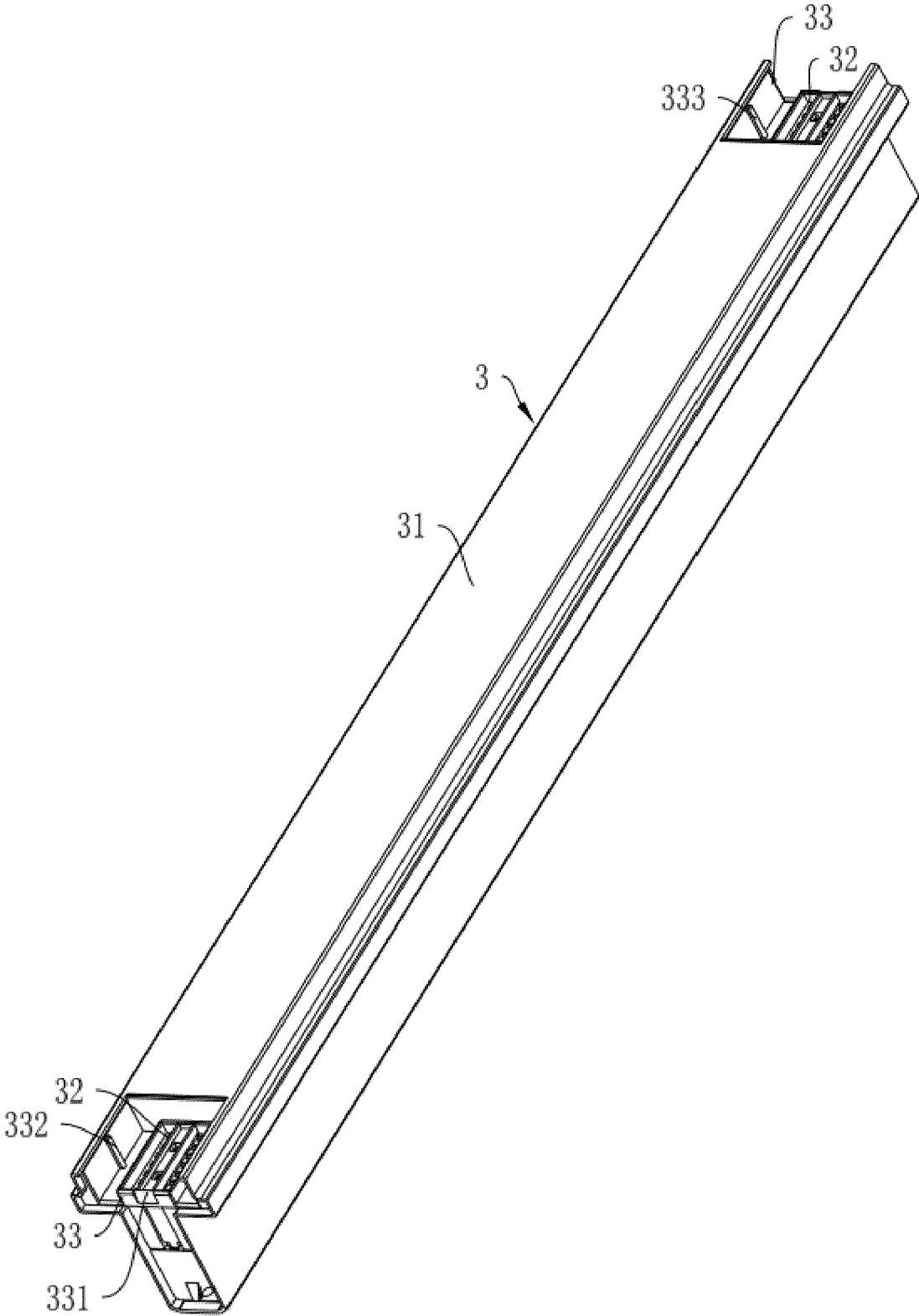


FIG. 7

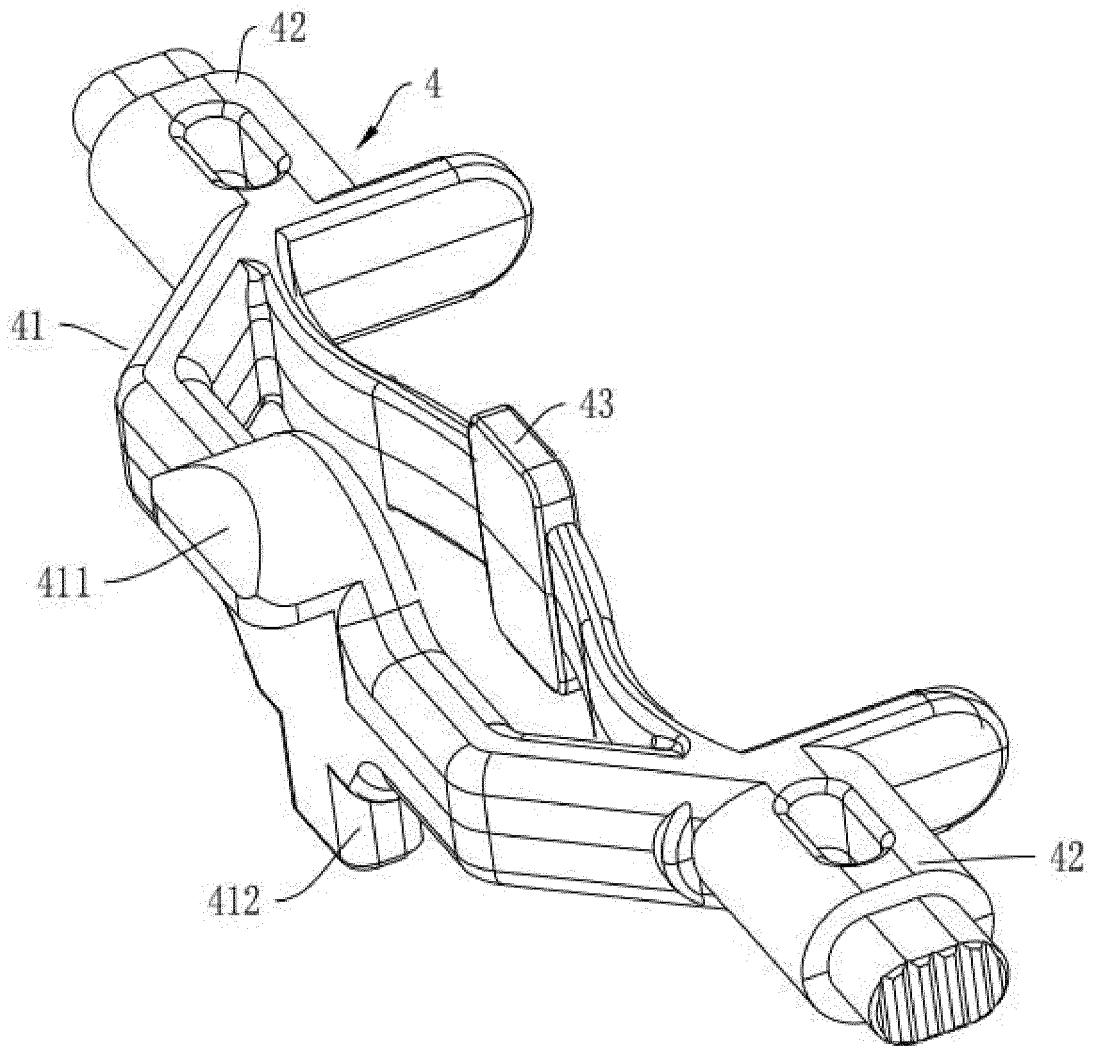


FIG. 8

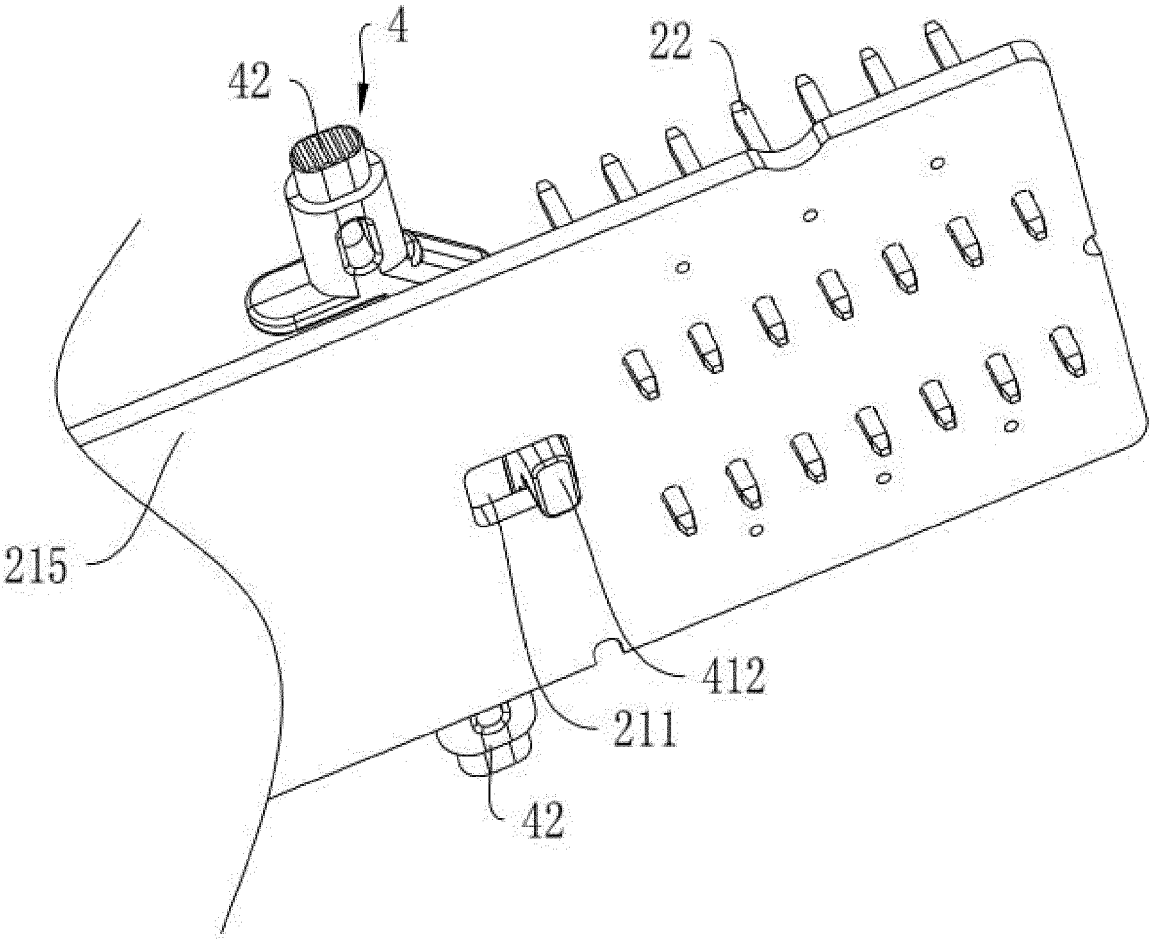


FIG. 9

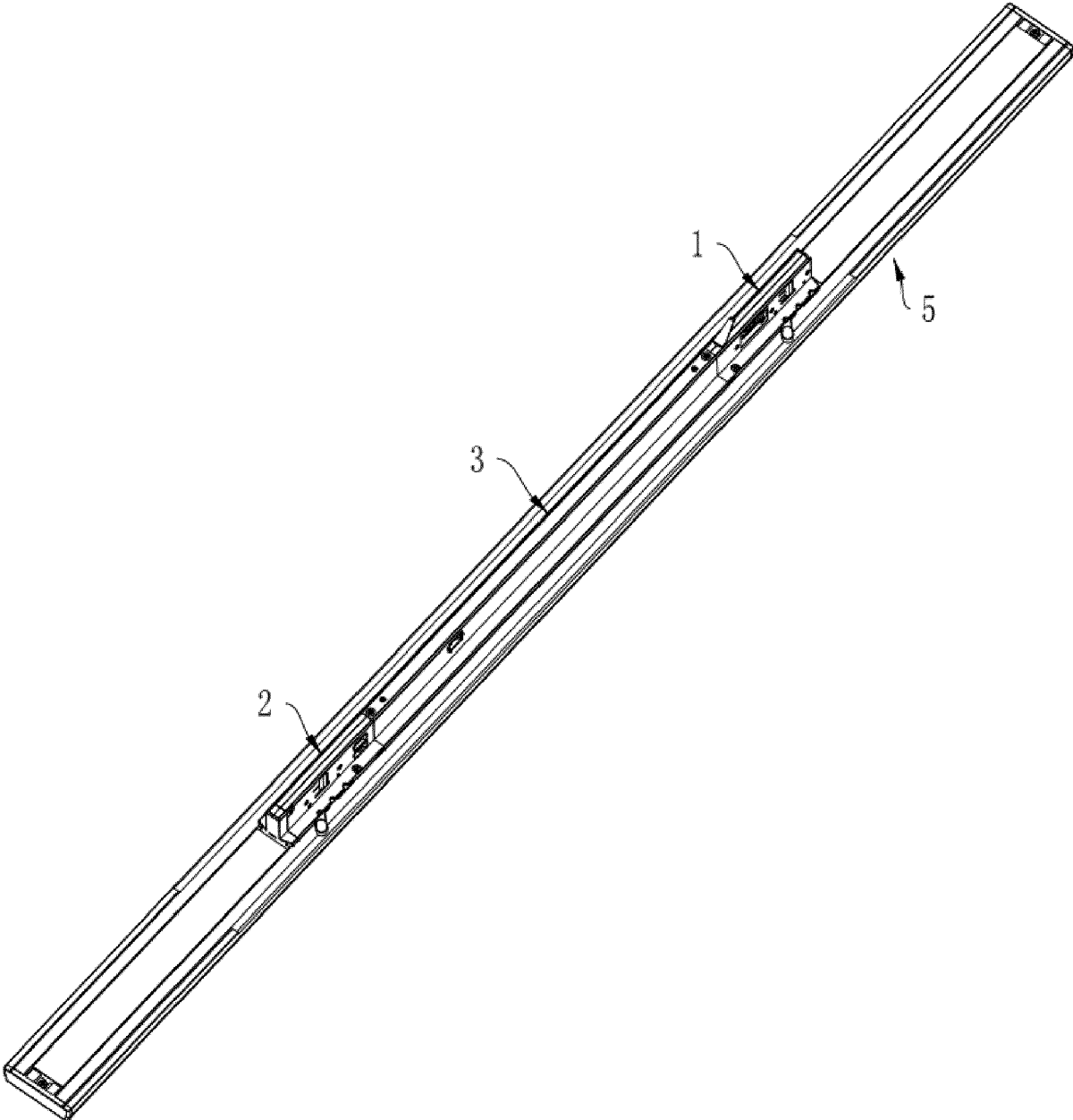


FIG. 10



EUROPEAN SEARCH REPORT

Application Number
EP 23 20 4009

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A	* figures 1-3, 5-10, 13, 14 * -----	2-4	F21V23/00 F21V23/02
X	CN 217 109 474 U (HUIZHOU DAYAWAN JUXIN LIGHTING TECH CO LTD) 2 August 2022 (2022-08-02)	1, 7-10	F21V23/06
Y	* figures 1-4 *	5, 6	
A	-----	2-4	
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			F21V H01R
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 14 March 2024	Examiner Kebemou, Augustin
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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14-03-2024

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