CLAIMS

What is claimed is:

1. An elastic plug-in jaw structure for a tap-off unit (4), the elastic plug-in jaw structure comprising:

a plug-in conductor (3) and a connector (6) connected to the plug-in conductor (3), the plug-in conductor (3) is provided with a plug-in jaw base (10), wherein:

the plug-in conductor (3) is configured to be connected to a lead-out conductor (15) in the tap-off unit (4) through the connector (6), and to cooperate with a plug-in opening base (11) on a busway (1), and the plug-in opening base (11) is configured to act as a guide track for the plug-in conductor (3);

an elastic member (7) is arranged at a rear end of the plug-in conductor (3);

a pressing member (8) abuts against a rear side of the elastic member (7), the pressing member (8) comprises a hinge (13) with a fixed shaft (12) at one end of the hinge (13) and a pressing mechanism (14) at the other end of the hinge (13);

the pressing member (8) is configured to elastically press against the plug-in conductor (3) through the elastic member (7), to facilitate a direct electrical connection between the plug-in conductor (3) and a busbar conductor (2) and to swing the hinge (13) along the fixed shaft (12), to drive the plug-in conductor (3) to be electronically connected to the busbar conductor (2);

characterized in that

said connector (6) is a flexible connector.

2. The elastic plug-in jaw structure for the tap-off unit (4) according to claim 1, characterized in that, a surface of the busbar conductor (2) is fixedly covered by an insulation material (9).

~~3. The elastic plug-in jaw structure for the tap-off unit (4) according to claim 1 or 2, characterized in that:~~

~~the plug-in conductor (3) is provided with a plug-in jaw base (10); and~~

~~the plug-in conductor (3) is configured to cooperate with a plug-in opening base (11) on a busway (1), and the plug-in opening base (11) is configured to act as a guide track for the plug-in conductor (3).~~

~~4. The elastic plug-in jaw structure for the tap-off unit (4) according to claim 3, characterized in that:~~

~~the pressing member (8) comprises a hinge (13) with a fixed shaft (12) at one end of the hinge (13) and a pressing mechanism (14) at the other end of the hinge (13); and~~

~~the pressing mechanism (14) is configured to swing the hinge (13) along the fixed shaft (12), to drive the plug-in conductor (3) to be electronically connected to the busbar conductor (2).~~

~~5~~3. The elastic plug-in jaw structure for the tap-off unit (4) according to claim ~~4~~1, characterized in that, the pressing mechanism (14) is a cam mechanism.

~~6~~4. The elastic plug-in jaw structure for the tap-off unit (4) according to claim ~~4~~ 1 or ~~5~~3, characterized in that:

an end face of the hinge (13) is fixedly provided with a guide sleeve (16); and

the elastic member (7) is a spring, and the spring is sleeved at the rear end of the plug-in conductor (3) and contained within the guide sleeve (16).

~~7~~5. The elastic plug-in jaw structure for the tap-off unit (4) according to claim ~~6~~4, characterized in that, the plug-in conductor (3) and the connector (6) are connected by welding.

~~8~~6. The elastic plug-in jaw structure for the tap-off unit (4) according to claim ~~7~~5, characterized in that, a front end of the plug-in conductor (3) is provided with a U-shaped groove.

~~9~~7. The elastic plug-in jaw structure for the tap-off unit (4) according to claim ~~4~~1, characterized in that, the pressing mechanism (14) includes a screw.

~~10~~8. A plug-in structure comprising:

a busbar and ~~the~~ an elastic plug-in jaw structure, ~~according to any of the preceding claims:~~

said busbar having busbar conductors (2) of multiple phases arranged side by side in the busway (1);

wherein the busway (1) is provided with multiple plug-in openings respectively corresponding to the busbar conductors (2) of the multiple phases;

said elastic plug-in jaw structure having

a tap-off unit (4) having plug-in conductors (3) of a plurality of phases, and said plug-in conductor (3); wherein

the plug-in conductor (3) of each phase is directly plugged into the busway (1) via one of the plug-in openings (5) and is electrically connected to a side surface of the busbar conductor (2) of the corresponding phase, wherein the plug-in openings (5) are arranged in a pattern of two ports and three ports in alternative columns, and the connectors (6) corresponding to the plug-in conductors (3) arranged on the same column have a staggered layout;

the plug-in conductor (3) of each phase is connected to a connector (6);

the plug-in conductor (3) of each phase is connected to a lead-out conductor (15) of the corresponding phase in the tap-off unit (4) via the corresponding connector (6);

a rear end of the plug-in conductor (3) of each phase is provided with an elastic member (7);

a rear side of each elastic member (7) abuts against a pressing member (8); and

the pressing member (8) is configured to press against the corresponding plug-in conductor (3) through the corresponding elastic member (7), to enable direct electrical connection between the plug-in conductor (3) of each phase and the busbar conductor (2) of the corresponding phase.

~~11. The plug-in structure for the busway (1) according to claim 10, characterized in that, the plug-in openings (5) are arranged in a pattern of two ports and three ports in alternative columns,~~

~~and the connectors (6) corresponding to the plug-in conductors (3) arranged on the same column have a staggered layout.~~

~~12~~9. The plug-in structure for the busway (1) according to claim ~~11~~8, characterized in that, surfaces of the busbar conductors (2) are fixedly covered by an insulation material (9).

~~13~~10. The plug-in structure for the busway (1) according to ~~any one of~~ claim~~s~~ ~~11~~8~~-~~ or ~~12~~9, characterized in that, the plug-in conductor (3) of each phase is installed through a plug-in jaw base (10), the plug-in openings (5) are disposed on a plug-in opening base (11), and the plug-in conductors (3) are electrically connected to the corresponding busbar conductors (2) after passing through the plug-in opening base (11).

~~14~~11. The plug-in structure for the busway (1) according to claim ~~13~~10, characterized in that,

the pressing member (8) comprises a hinge (13) with a fixed shaft (12) at one end of the hinge (13) and a pressing mechanism (14) arranged at the other end of the hinge (13); and

the pressing mechanism (14) is configured to swing the hinge (13) along the fixed shaft (12), to drive the corresponding plug-in conductor (3) to be electronically connected to the corresponding busbar conductor (2).

~~15~~12. The plug-in structure for the busway (1) according to claim ~~14~~11, characterized in that, the pressing mechanism (14) is a cam mechanism.

~~16~~13. The plug-in structure for the busway (1) according to claim ~~14~~ 11 or ~~15~~12, characterized in that:

an end face of the hinge (13) is fixedly provided with a guide sleeve (16); and

the elastic member (7) is a spring, and the spring is sleeved at the rear end of the corresponding plug-in conductor (3) and is contained within the guide sleeve (16).