

MEDIUM VOLTAGE APPARATUS IN CASES FOR SECONDARY POWER SUPPLY

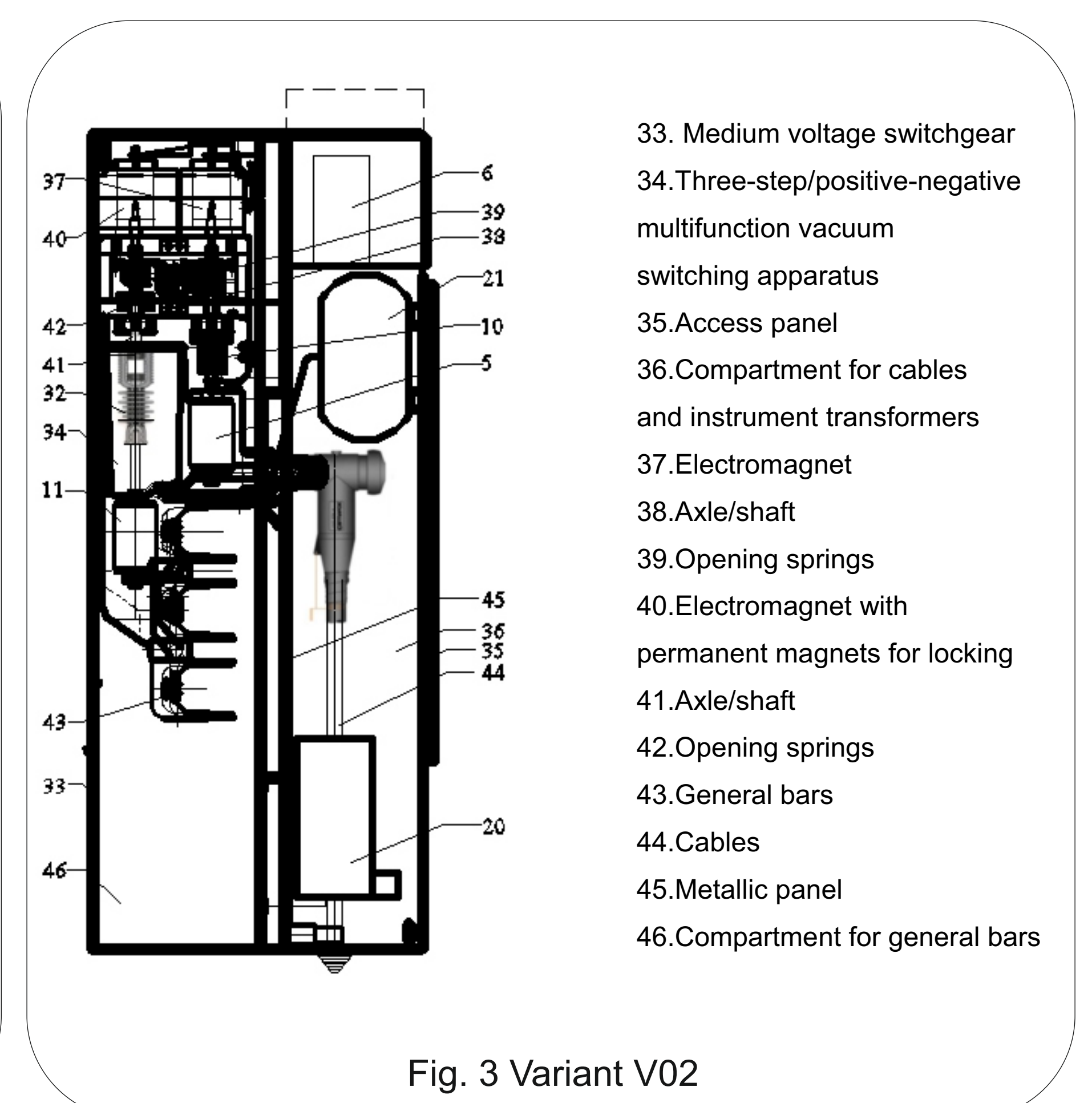
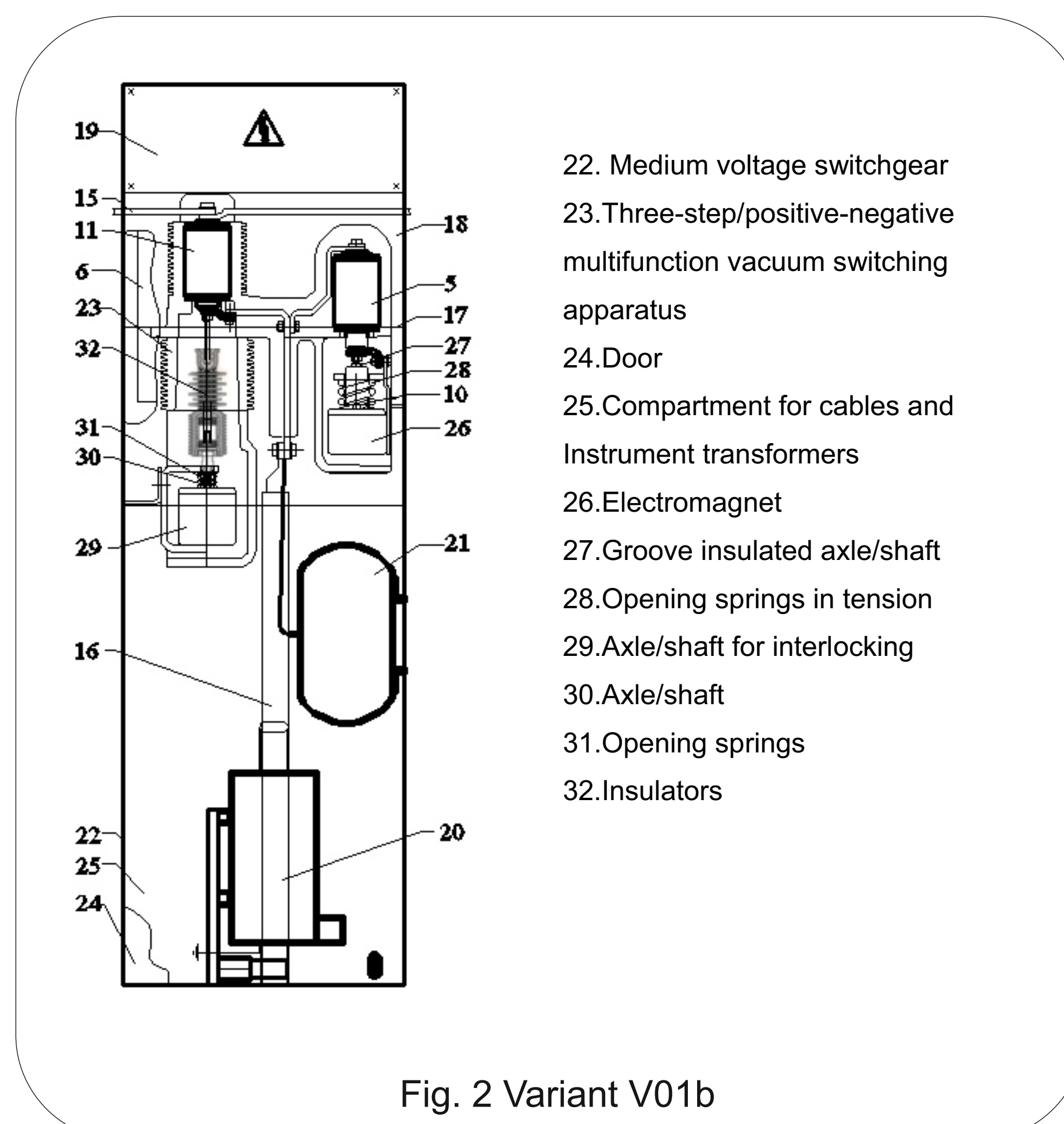
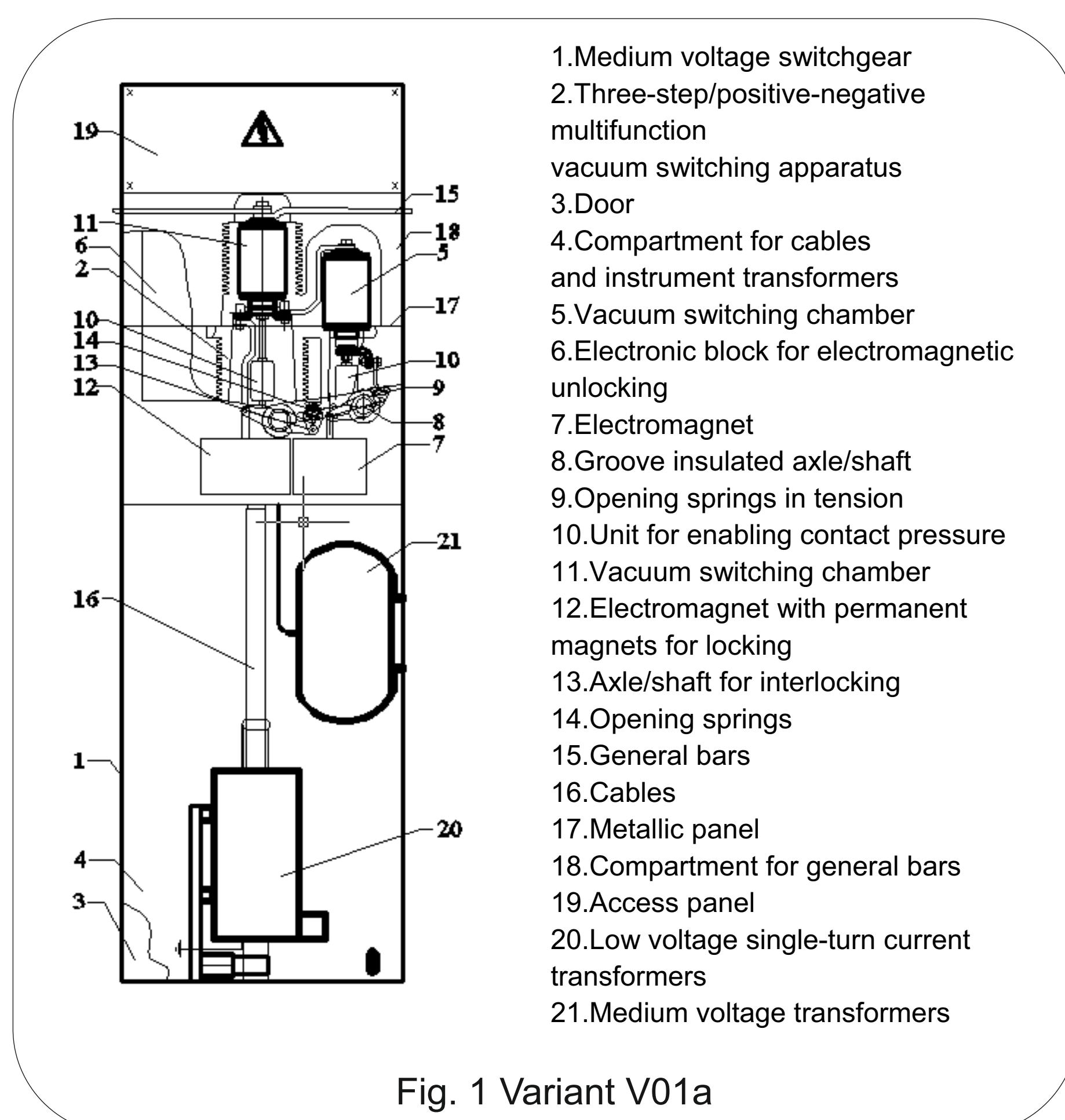
Patent application no: RO128456 (A2) — 30.05.2013

Applicants: National Institute for Research-Development and Testing in Electrical Engineering - ICMET Craiova

Authors: Dipl. Eng. Serghie VLASE, Dipl. Eng. Marian DUTA

Description

The invention refers to medium voltage cells for secondary distribution of electricity fitted with a multipurpose vacuum switching device, with three positions (on, off, grounded) with solid insulation, operated with electromagnets with permanent magnets, with magnetic lock, locally or remotely controlled via an electronic module, providing for ampere rating break, overload or shortcircuit, breaking and earthing functions.



Advantages

- It allows the fitting of a single multifunction vacuum switching device, which can be used both in the case of the cell fitted with the circuit breaker, and in the case of the cell fitted with mechanical switch disconnector, with the same cell step/pitch. At the same time the number of operations and interlocks between the locally or remotely controlled switching devices of the cell;
- By using the solid insulation and vacuum interrupters, the switching and disconnecting functions may be cumulated in a single chamber, thus eliminating the need to use switching equipment which is insulated or sulfur hexafluoride insulated and switched;
- By fitting the cells with a multifunction vacuum switching device, with three positions for the interruption, separation and earthing functions, this increases the reliability of the cells due to the number of operations allowed by the vacuum interrupters;
- It allows the use of the same switching device both for switching of rated currents (mechanical switch disconnector with three positions) and for switching of overload and short circuit rated currents (circuit breaker with three positions).

Applicability

Substations, industrial applications, subway trains, small and medium power plants.