Power Converter for a Solar Panel ­– US 11,658,508 B2

Inventors: F. William Capp, Boston, MA (US); William J. Driscoll, Westford, MA (US)

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Date of Patent: May 23, 2023

This application has been filed on June 22nd, 2021. This patent has many IPC symbols such as:

1. H02J 7/00
2. H02J 7/14
3. H02J 7/35
4. H02J 3/38
5. H02J 1/00
6. H02M 3/04
7. H02M 7/44
8. H02M 1/00

[1]

In Table 1.1 you can see what section, class and subclass the following IPC symbols are.

Table 1.1: Section, Class and Subclass of IPC symbols

|  |  |  |
| --- | --- | --- |
| Level | Symbol | Title |
| Section | H | Electricity |
| Class | H02 | Generation, Conversion, or Distribution of Electric Power |
| Subclass | J & M | Circuit Arrangements or Systems for Supplying or Distributing Electric Power; Systems for Storing Electric Energy & Apparatus for Conversion between DC and DC |

A solar array is multiple solar panels connected. The solar array must be connected to a DC/DC Converter for converting raw panel output to an optimized high voltage, low current output. The goal of this invention is to improve safety and efficiency. This patent has 20 claims and 3 drawing sheets. Below in Figure 1, the drawing of the system explains how the system works, where solar arrays are labelled in triangles, DC/DC converter below every solar array and an inverter below that. [1]

Figure 1: Diagram of the system for converting power from solar panels

A diagram of a machine

Description automatically generated[1]

Hydropower Electric Generator - US 11,041,475 B2

Inventors: Karl Baron Rohl, Babylon, NY (US)

Publication Date: June 22, 2021

This application was filed on September 25th, 2020. This patent has 4 IPC symbols they are:

1. F03B 13/06
2. H02K 11/00
3. F03B 15/04
4. H02K 7/18

[2]

Table 1.1: Table for one of the IPC symbols

|  |  |  |
| --- | --- | --- |
| Level | Symbol | Title |
| Section | F | Mechanical Engineering; Lighting; Heating; Weapons; Blasting |
| Class | F03 | Machines or Engines for Liquids; Wind, Spring, or Weight Motors; Producing Mechanical Power or a Reactive Propulsive Thrust, Not Otherwise Provided For |
| Subclass | F03B | Machines or Engines for Liquids |
| Group | F03B 13 | Adaptations of machines or engines for special use; Combinations of machines or engines with driving or driven apparatus |
| Subgroup | F03B 13/06 | Stations or aggregates of water-storage type |

This patent is for a Hydropower Electric Generator. This is a special generator that might include a closed conduit with a reservoir, a downward flow pipe, a horizontal pipe, and an upward flow pipe. Further, the hydropower electric generator may include an energy storage device for the energy that is not used but that has been made by the generator. [2]

Graph 1: AIR LINE DIA

[2]

References:

[1] F. W. Capp & W. J. Driscoll, “Power Converter for a Solar Panel,” U.S. Patent 11 658 508 B2, Jun. 16, 2021.

[2] K. B. Rohl, “Hydropower Electric Generator,” U.S. Patent 11 041 475 B2, Sep. 25, 2020.