WHAT IS CLAIMED IS:

1. A ~~skin~~ face washing apparatus using a brushless DC motor, comprising:

a case (100) ~~for the skin washing apparatus~~;

an operation unit (200) installed outside the case~~,~~ ~~for commanding~~ to command an ~~ON/OFF~~ on/off operation ~~of the skin washing apparatus~~ and ~~an~~ a reversible rotation switching ~~operation for forward and reverse rotations~~ in a unit of a predetermined angle;

a power supply unit (300) installed at ~~one~~ an inner end of ~~an interior of~~ the case;

a brushless ~~DC~~ electric motor (400) installed ~~inside~~ in the case~~,~~ ~~to be~~ operated by receiving ~~electric~~ power ~~received~~ from the power supply unit according to a switching signal of the operation unit and ~~so as to be~~ reversibly rotated ~~forwardly and reversely~~ in a unit of a predetermined angle;

a control unit (500) for outputting an ~~electrical~~ electric signal ~~for controlling forward and reverse rotations~~ to control a reversible rotation of the brushless electric motor ~~by~~ in a predetermined angle ~~in response~~ according to ~~a~~ the switching signal of the operation unit; and

a ~~skin~~ face washing brush (600) ~~mounted on~~ fitted to a shaft of the brushless electric motor (400) ~~to be~~ and reversibly rotated ~~forwardly and reversely~~ according to an operation of the brushless electric motor~~.~~,

~~2. The skin washing apparatus of claim 1, wherein the control unit comprises:~~

~~position sensors located between the three phases of the motor to detect a relative position of the rotator with respect to the stator;~~

~~a rectifying circuit for converting an AC power to DC power;~~

~~a smoothing condenser for removing voltage pulsations of the converted DC power;~~

~~an inverter circuit having a plurality of electric power devices, for applying the DC power having passes through the smoothing condenser to the motor with an AC voltage having desired average voltage and frequency according to a switching state of the power devices;~~

~~a control circuit for controlling an inverter circuit based on a detection value of the position sensor; and~~

~~a power source circuit for supplying electric power to the control circuit 540.~~

~~3. The skin washing apparatus of claim 1,~~ wherein the control unit (500) comprises:

a rectifying unit (510) that supplies DC power by ~~adapted to~~ rectifying and smoothing AC power ~~to supply DC power~~ and ~~including~~ includes a rectifier (511) and a smoothing ~~capacitor~~ condenser (512);

an inverter (530) that converts ~~having six switching devices and diodes for converting the~~ DC power supplied from the rectifying unit (510) into pulse type 3-phase ~~three~~ AC power (U, V and W) ~~in a waveform~~ having ~~an arbitrary~~ a predetermined variable frequency to supply the pulse type 3-phase AC power (U, V and W) to the ~~BLDC~~ brushless electric motor (400) and includes six switching elements (Q1 to Q6) and a diode;

a terminal voltage ~~detecting~~ detection unit (560) ~~for detecting~~ that detects terminal ~~voltages~~ voltage of ~~the phases~~ each phase (U, V or W) from the ~~three phase~~ 3-phase AC power supplied to the ~~BLDC~~ brushless electric motor (400);

a control circuit (570) that obtains position information of a rotor by ~~for~~ detecting a zero crossing point (ZCR) of ~~a back~~ counter electromotive force according to the terminal ~~voltages~~ voltage of ~~the phases~~ each phase (U, V or W) detected by the terminal voltage ~~detecting units~~ detection unit (560) and controls the rotor of the

motor to reversibly rotate in a predetermined angle ~~to acquire position information of the rotator, and~~ by controlling a pattern of ~~the~~ a PWM signal supplied to the inverter (530) ~~to rotate the rotator of the motor forwardly and reversely by a predetermined angle~~; and

a PWM signal ~~generating~~ generation unit (580) ~~for generating~~ that generates the ~~a~~ pattern of the PWM signal by using output ~~according to an input~~ of the control circuit (570)~~,~~ and ~~supplying~~ supplies the pattern of the PWM signal to the inverter (530).

2~~4~~. A method of controlling a ~~skin~~ face washing apparatus using a brushless DC motor, the method comprising:

~~if an operation unit outputs a switching signal,~~ initially operating ~~the~~ a brushless electric motor as an operation unit outputs a switching signal (S10);

detecting ~~a back~~ counter electromotive force according to a rotation of a ~~rotator~~ rotor while initially operating the brushless electric motor (S20) ~~is initially operated~~;

~~if~~ detecting a position of the rotor ~~rotator is detected,~~ and outputting a PWM driving signal ~~for rotating~~ to rotate the ~~rotator~~ rotor in a forward direction ~~forwardly and reversely~~ by a predetermined angle ~~with respect to~~ from the position of the rotor (S30); and

stopping the rotation of the rotor as the rotor rotates forward by the predetermined angle according to an angle range preset in the operation unit and outputting ~~a~~ the PWM driving signal to reversibly rotate the rotor (S40) ~~for, if the rotator is rotated forwardly and reversely according to an angle range set by an operator, stopping the rotator and rotating the rotator reversely again~~.

3~~5~~. A program ~~reading~~ recording medium ~~for performing~~ to perform a ~~skin~~ face washing method using a brushless DC motor, the program ~~reading~~ recording medium comprising:

a program code ~~for, if~~ to initially operate a brushless electric motor as an operation unit outputs a switching signal~~, initially operating a brushless electric motor~~;

a program code ~~for detecting a back~~ to detect counter electromotive force according to a rotation of a ~~rotator~~ rotor while initially operating the brushless electric motor ~~is initially operated~~;

a program code ~~for, if~~ to detect a position of the ~~rotator is detected, outputting~~ rotor and output a PWM driving signal ~~for rotating the rotator forwardly and reversely~~ to rotate the rotor in a forward direction by a

predetermined angle ~~with respect to~~ from the position of the rotor; and

a program code ~~for~~ to stop the rotation of the rotor as the rotor rotates forward by the predetermined angle according to an angle range preset in the operation unit and output the ~~outputting a~~ PWM driving signal ~~for, if the rotator is rotated forwardly and reversely according to an angle range set by an operator, stopping the rotator and rotating the rotator reversely again~~ to reversibly rotate the rotor.