

**Abstract**

In a robot system of the present invention, a wireless power supply/charging unit is incorporated in an apparatus main body 10 having a robot arm 11 mounted thereon and an unmanned carrier 20 for transporting the apparatus main body 10. An electric power transmission coil 33 constituting the wireless power supply/charging unit is incorporated in the unmanned carrier 20, and an electric power reception coil is incorporated in the apparatus main body 10. A positioning mechanism for positioning the electric power transmission coil 33 and the electric power reception coil on the same axis is provided to cooperate between the unmanned carrier 20 and the apparatus main body 10. The positioning mechanism is configured by a combination of a convex portion 41 having a tapered outer circumferential surface and a concave portion having a cone-shaped inner circumferential surface.