Barrier-Free Acoustic Magnetic Socket Parts

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This device is designed to enable the blind people to use the sockets anywhere without the need to modify the current facilities. This device can also be customized to the users' needs. It consists of five functional components: the case, the wireless receiver to trigger the sound, the energized conductor, the joining magnet and the security scheme. The entire device has two parts. The first part is installed on the existing socket, comprising the signal receiver and the acoustic generator. The second part is a converter to connect with the existing sockets. Pressing the button on it will make the socket produce sounds, helping users to locate the sockets. By joining magnets with the aid of the annular conductor, users can energize the circuit easily and efficiently without knowing the direction. People with visual impairment are invited to participate in the experiments. And they appreciate the way the proposed device operates. No anomaly is observed about the structure and the security of the proposed device in the quantitative experiment.

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