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Title of Invention : Demountable Extension Socket Holder

Specification



G00001

1.0 Description of the invention

This invention relates to a demountable holder for extension sockets.

2.0 Description of Related Arts

Extension sockets are extensively used for the purposes of extending power supply from a fixed power point to another location whereby there is no permanent power supply available. Extension sockets are also used in situation whereby the provision of the existing fixed power point is inadequate to cater for the growing number of electrical and/or electronic appliances tapping on it over time. Very often, when in use, extension sockets are simply left lying loosely and hidden at one corner either on the table top or under the table on the floor. This is not only rather unsightly but at the same time, subsequent access to the extension socket is also difficult and at times, even hazardous.

Over the years, numerous attempts had been made to improve the design of extension sockets. This had eventually led to various ingenious developments in the art relating to the mounting of extension socket onto the work station which not only offered easy access to the extension socket but at the same time also provided demountability being devised. One such example is the US Patent to Norman R. Byrne under Patent No. US 6,379,182 B1 issued on 30 April 2002. In this patent, the whole length of the extension socket actually sat on a base support. The base support resembled a long vice with two clamping arms which can be mounted over the edge of a table top and secured in position by tightening the clamping arms.

Another mounting support which had been developed and patented is that of M/s Voltex Electronics Limited under UK Patent GB 2325097 A published on 11 November 1998. In this patent, the extension socket came in the form of a receptacle that had been designed to receive the electrical outlet sockets and this receptacle had

an extension that acted as a clamping member adapted to be releasably clamped to the edge of a table.

In both the previous arts cited above, the extension socket and the clamping mechanism had been designed and constructed as a single integral unit, i.e. the clamping mechanism is actually part of the outer casting of the extension socket itself. The entire assembly therefore resembled an extension socket that comes with a built-in clamping mechanism which allowed the extension socket to be mounted to the edge of the table top of the work station by means of appropriate clamping screws or bolts.

Nowadays, the variety and range of extension sockets which are readily available in retail outlets and supermarkets are very extensive and wide. They can range from 2-pins extension socket unit to 3-pin extension socket unit. There are also 3-ways, 4-ways and even 6-ways extension sockets units. As there is no standardization in the dimension requirements for the extension socket, extension sockets produced by different manufacturers will normally come in different sizes. But more importantly, these readily available extension sockets do not come with self clamping devices.

The object of the invention is to provide a device that will not only afford a sound and sturdy fixing of the extension socket unit at the point of usage but is also adaptable enough to accommodate the varying dimensions of the various extension sockets units that are readily available in retail outlets and supermarkets.

The concept of the present invention is to have a preformed profile (100) as shown in Figure 1, that will house the extension socket unit (200) on one face (120) and at the same time, have provision made on the opposite face (130) to allow the preformed profile (100) to be clamped onto the edge of the table top or side panel or the leg or framing of the furniture (300). The preformed profile of a Demountable Extension Socket Holder (100) resembles a smaller 'C' channel jointed back-to-back to a bigger 'C' channel as shown in Figure 1.

The function of the bigger 'C' channel compartment (120) is to hold the extension socket unit (200). Since the Demountable Extension Socket Holder (100) is designed

independent of the Extension Socket Unit (200) and as a separate and standalone unit by itself, it can be used to hold any particular type of Extension Socket Unit (200), i.e. 2-pins Extension Socket units, 3-pins Extension Socket units or 3-ways Extension Socket units, 4-ways Extension Socket unit or even 6-ways extension socket unit, all can be mounted onto the Demountable Extension Socket Holder (100) with ease.

As the widths of these Extension Socket Units (200) will vary from manufacturer to manufacturer, the Extension Socket Unit (200) is secured in position in the Demountable Extension Socket Holder (100) by tightening the two adjustment screws (285) provided at the base of the bigger “C” channel as shown in Figure 2. The free ends of the adjustment screws are fitted with capping nuts (288) whose purpose is to spread the forces exerted by the screws over a larger area of contact so as to prevent any puncturing effect that may otherwise be caused by the concentration of forces at the tip of the screws when the capping nuts are not there, which will in turn cause damage to the surface of the Extension Socket Unit (200).

The function of the return flap (190) at the base of the bigger “C” channel (120) is not only to conceal the adjustment screws (285) from view like a screen but it also acts as a shield to prevent a person from accidentally colliding with the adjustment screws thereby hurting oneself.

Once the Extension Socket Unit (200) is firmly secured in position in the Demountable Extension Socket Holder (100), the whole assembled unit can then be fixed either to the edge of the table top or side panel or the leg or framing of the furniture (300) at the smaller ‘C’ channel location as shown in Figure 3. Since the thickness of the table tops or side panels or legs or framings of different furniture (300) may vary from furniture to furniture, the Demountable Extension Socket Holder (100) can be tightly held in position by tightening the two adjustment screws (385) provided at the base of the smaller “C” channel as shown in Figure 3. The free ends of the adjustment screws are similarly provided with capped nuts (388) to protect the contact surfaces of the furniture against damages by the adjustment screws.

Should there be a need to replace the existing Extension Socket Unit (200) for any reason, the replacement can be easily carried out by simply loosening the two

adjustment screws (285) at the base of the bigger 'C' channel to release the existing Extension Socket Unit (200). The old Extension Socket Unit (200) can then be taken down and set aside. The desired new Extension Socket Unit (200) can now be installed in position in the manner as described before.

Similarly, if there is a need to shift the mounted Extension Socket Unit (200) to another location, this can be done by simply loosening the adjustment screws (385) at the base of the smaller 'C' channel as above to disengage the Demountable Extension Socket Holder (100) together with the Extension Socket Unit (200) from its original fixing point. The whole Demountable Extension Socket Holder (100) together with the Extension Socket Unit (200) is then being moved and fixed at the new intended location.

CLAIMS

1. The Demountable Extension Socket Holder characterised in that it is a preformed profile that resembles 2 unequal 'C' channels jointed back-to-back by a common web. The bigger 'C' channel compartment hold the Extension Socket Unit. As the Demountable Extension Socket Holder is designed independently of the Extension Socket Unit and come as a standalone unit, different types of Extension Socket Units can all be mounted onto the Demountable Extension Socket Holder. The differing heights of different types of Extension Socket Units are being taken care of by two adjustment screws provided in the bigger "C" channel compartment and fitted with capped nuts, at the base of the bigger "C" channel. The Extension Socket Holder together with the Extension Socket Unit firmly attached to it, can be mounted onto the edge of the table top or side panel or the leg or framing of the furniture at the smaller "C" channel compartment. The entire assembled unit is tightly clamped in position by two adjustment screws provided at the base of the smaller "C" channel.
2. A Demountable Extension Socket Holder according to Claim 1, characterized in that the smaller "C" channel compartment of the Demountable Extension Socket Holder is specifically designed for fixing onto the edge of the table / desk top or side panel or the leg or framing of the work station. The varying thickness of the table / desk top or side panel or the leg or framing of the work station are being taken care of by two socket head adjustment screws at the base of the smaller "C" channel. The open ends of the adjustment screws are fitted with capping nuts to protect the surface of the table / desk top or side panel or the leg or framing of the work station which come into direct contact with the adjustment screws from being scratched or punctured by the tightening action. The socket heads of the adjustment screws make it possible to tighten the adjustment screws without the need of any hand tools or screw drivers. If greater torque is required, winged screws can be used in place of socket head screws. The "winged head" behaves like a key that allow the adjustment screws to be tightened to a greater torque.
3. A Demountable Extension Socket Holder accordingly to Claim 1 and 2 characterized in that the bigger "C" channel compartment of the Demountable

Extension Socket Holder is being designed independent of the Extension Socket Unit and as a standalone unit. As a result, it is able to receive Extension Socket Unit of any length. The two adjustment screws located at the base of the bigger “C” channel will ensure that the different widths of the Extension Socket Units attributed to different manufacturers or from different countries, can continue to be securely fastened to the Demountable Extension Socket Holder by tightening the adjustment screws. The socket head of the adjustment screw allows the adjustment screw to be fastened without the need for any hand tools. Winged adjustment screws can be used if there is a need for greater torque. Since the Demountable Extension Socket Holder will be fixed to the open edge of the table / desk top or side panel or the leg or framing of the work station, the Extension Socket Unit that it carries will remain exposed and can be easily and readily accessible.

4. A Demountable Extension Socket Holder accordingly to Claim 1 and 2 characterized in that the Demountable Extension Socket Holder, together with the Extension Socket Unit attached to it, can be dismantled easily by loosening the adjustments screws at the smaller “C” channel compartment that secure the Demountable Extension Socket Holder to the table / desk top or side panel or the leg or framing of the work station, disengaging the entire assembled unit from its original point of installation and reinstalled the whole assembled unit to any other location elsewhere in the work station or desired.