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~~Specification of Demountable Extension Socket Holder~~

Title of Invention : Demountable Extension Socket Holder

Specification

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 to extend power supply from a fixed power point to another location whereby no power supply is available. Extension sockets are also used in situation whereby the existing fixed point power supply provision is inadequate to cater for the number of electrical and/or electronic appliances tapping on it. When in use, extension sockets are commonly left lying loose and hidden at one corner either on the table top or under the furniture on the floor. This is rather unsightly. At the same time, it also renders subsequent access to the extension socket difficult and at times, even hazardous.

Over the years, the problems associated with the use of extension sockets as a mean to instantly increase the supply of power points to a work station had been dealt with and addressed to a certain extent. In fact, various ingenious developments in the art relating to the mounting of extension socket onto the work station which whilst maintaining ease of access to the extension socket also provide demountability, had been 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 entire extension socket assembly is mounted over the edge of a table top and secured in position by mean of a clamping arrangement provided at the base of the extension socket.

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 support for the extension socket comes in the

form of a receptacle for receiving the extension socket connected to a clamping mechanism which is then clamped to the edge of the work station.

In both instances, the extension socket and the clamping mechanism had been designed and constructed as an integral unit, i.e. the clamping mechanism was also being designed to serve as a receptacle that is actually performing the function of the outer casting for the extension socket itself. The entire assembly therefore resembles an extension socket that come with a clamping mechanism which allows itself to be clamped to the edge of the table top of the work station by means of appropriate clamping screws or bolts.

As a result of the way the clamping mechanism in the prior arts had been designed, each particular clamping mechanism can only be used with the very extension socket it had been designed to accommodate, e.g. 4-ways or 6-ways extension socket. There can be no inter-changeability amongst the different type of extension sockets i.e. a clamping device that had been designed to house a 4-way extension socket will not be able to accommodate a 6-ways extension socket and vice versa.

Nowadays, there are a wide variety and range of extension sockets available in the open market ranging from 2-pins extension socket unit to 3-pin extension socket unit, 3-ways, 4-ways or even 6-ways extension sockets units. Owing to the fact that these extension sockets are also produced by different manufacturers from different countries, this has therefore led to the result of different extension sockets produced by different manufacturers and from different countries bearing different dimensions thereby further curtailing the effectiveness on the use of the clamping mechanisms devised in the prior arts in these extension socket units.

~~The object of the invention is to provide a device that will afford a sound and sturdy fixing of the extension socket at the point of usage. The extension socket will have to remain easily and readily accessible. Moreover, the device will also allow the extension socket to be easily and freely dismantled and moved to another location with the bare hand. More importantly, any repositioning of the extension socket unit shall not leave any damage on the contact surfaces of the furniture~~.

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 various lengths and widths of the extension sockets units that are readily available in the open market.

~~The concept of the Extension Socket Holder is to have a preformed profile that will house the extension socket on one face and at the same time, have provision made on the opposite face to allow the fully assembled unit to be fixed onto the edge of the table top or side panel or the leg or framing of the furniture. The preformed profile of an Extension Socket Holder resembles a smaller 'C' channel jointed back-to-back to a bigger 'C' channel as show in Figure 1.~~

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 fully assembled unit to be fixed 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 is to house the extension socket unit. As the width of the extension socket will vary from manufacturer to manufacturer, the extension socket will be secured in position in the Extension Socket Holder by tightening the two adjustment screws provided at the base of the bigger "C" channel as shown in Figure 2. The free ends of the adjustment screws are fitted with capped nuts whose purpose is to help to distribute the forces exerted by the screws over a larger area of contact so as to prevent any puncturing effect that may be caused by the concentration of forces at the tip of the screws, which will in turn cause damage to the surface of the extension socket unit. The function of the return flap at the base of the bigger "C" channel is not only to conceal the adjustment screws from view like a screen but it also acts as a shield to prevent one from any accidentally collision with the adjustment screws thereby hurting oneself.~~

The function of the bigger 'C' channel compartment (120) is to house the extension socket unit (200). Owing to the fact that the Demountable Extension Socket Holder (100) is designed independent of the Extension Socket Unit (200) and as a separate and standalone unit altogether, there is no restriction on the particular length of Extension Socket Unit (200) that can be mounted onto the Demountable Extension Socket Holder (100). 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 also vary from manufacturer to manufacturer and country to country, the Extension Socket Unit (200) will be 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 capped nuts (288) whose purpose is to help to spread the forces exerted by the screws over a larger area of contact so as to prevent any puncturing effect that may be caused by the concentration of forces at the tip of the screws, 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 is firmly secured in position in the Extension Socket Holder, 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 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 will vary from furniture to furniture, the Extension Socket Holder can be tightly held in position by tightening the two adjustment screws provided at the base of the smaller "C" channel as shown in Figure 3. The free end of the adjustment screw is similarly provided with capped nuts to protect the contact surface of the furniture against damages.~~

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.

~~In the subsequent event that there is a need to replace the existing Extension Socket for any reason, the replacement of the existing Extension Socket can be easily carried out by simply loosening the two adjustment screws at the base of the bigger 'C' channel to release the existing Extension Socket. The old Extension Socket removed and discarded. The desired new Extension Socket can then be installed in position in the manner as described before.~~

In the subsequent event that there is 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 removed and discarded. The desired new Extension Socket Unit (200) can then be installed in position in the manner as described before.

~~Similarly, if there should be a need to move the Extension Socket from one point to another point, this can be carried out by simply loosening the adjustment screws at the base of the smaller 'C' channel as above to disengage the whole assembled unit from its original fixing point. The whole assembled unit can then be moved and fixed at the new intended location.~~

Similarly, if there should be a need to shift the Extension Socket Unit (200) in use from one point to another point, this can be carried out 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 face houses the Extension Socket unit. The varying widths of various types of Extension Socket units are being taken care of by two adjustment screws provided and fitted with capped nuts at the base of the bigger "C" channel. The whole assembled unit can then 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 face. Once again, the entire assembled unit is held tightly in position by two adjustment screws provided at the base of the smaller "C" channel.~~
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 houses the Extension Socket Unit. As the Demountable Extension Socket Holder is designed independently of the Extension Socket Unit and as a standalone unit, the different lengths and widths of the Extension Socket Units associated with the different types of Extension Socket Units can all be mounted onto the Demountable Extension Socket Holder. The varying widths of different types of Extension Socket Units produced by different manufacturers or from different countries are being accommodated in the bigger "C" channel compartment by two adjustment screws provided 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 it permits the Extension Socket unit to be securely and soundly mounted onto the edge of the table top or side panel or the leg or framing of the furniture~~.
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 Extension Socket unit will continue to remain easily and readily accessible at all times.~~

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 according to Claim 1 and 2, characterized in that the entire assembly can be easily dismantled and effortlessly~~

~~moved to another location without the need for any hand tools and will not leave any damage on the surface of the furniture.~~

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.