

OUTLET BOXES

The present invention relates to electrical outlet boxes for raised floors.

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Outlet boxes for raised floors commonly comprise a metal box with suitable means to mount the box to a floor panel. The box has an open bottom into which several metal containers are fixed. Electrical sockets and/or
10 switches are mounted in turn in the containers. The box is arranged to accept in its top a lid assembly which includes a main lid in which are cable outlet lids and a peripheral flange which extends around the assembly. After mounting the box to the floor panel carpet is laid
15 over the floor panel and around the box, the lid assembly is located over the box so that the peripheral flange seats on top of the carpet. Outlet boxes constructed with this arrangement in mind are shown in EP 0343754 A1, GB 2194975A and GB 1583946.

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In order to allow for different thicknesses of carpet and floor panel material it is known to adjust the box height relative the floor panel and the lid assembly relative the outlet box. In GB 2194975 the fixture to and adjustment
25 relative to the floor panel is by means of an angular section bracket screwed at each end to opposed vertical sides of the box with adjustment enabled by providing three holes at each end of a vertical web of the bracket. In order to adjust the height of the bracket relative the
30 box, the two screws are removed and reinserted in upper or lower pairs of holes. This is time consuming and the removal and replacing of screws can result in the screws being lost.

Accordingly an electrical outlet box for raised floors according to the invention comprises a metal box with a lid assembly, the box being adapted to have mounted in the bottom thereof electrical sockets and/or switches, the box
5 having means for adjustably securing the box to a floor panel characterised in that the adjustable securing means comprises at least one bracket adjustably clamped to a side of the box by a central clamping means, a protrusion and recess arrangement between the bracket and box side
10 either side of the clamping means such that the protrusion and recess arrangement enables location of the bracket relative to the box side at several vertical positions.

The advantage of the arrangement according to the
15 invention is that the central clamping arrangement enables the bracket to be quickly adjusted for height and furthermore the bracket can be rotated through 180 degrees to enable further height adjustments to be made and whereby the bracket can be screwed to a floor panel either
20 on its top or bottom surface.

Preferably the clamping means is a single screw inserted through a vertical slot in the bracket and received by a threaded portion of the box side or a nut locked to the
25 box side. To adjust the bracket it is only necessary to loosen the screw rather than remove the screw and thus adjust the bracket relative to the box.

In a preferred embodiment the protrusion and recess
30 arrangement is a protrusion from the bracket either side of a central vertical slot for the clamping means and a plurality of vertically spaced recesses which may be apertures in the box wall either side of the clamping.

An embodiment of the invention will now be described with reference to the accompanying drawings in which:-

5 Figure 1 is a perspective view of an outlet box according to the invention,

 Figure 2 is a perspective view of a lid assembly for the box of Fig. 1,

 Figure 3 is a cross section of the box of Fig. 1 with the lid assembly mounted in the top of the box,

10 Figure 4 is an elevation of a bracket for adjustably securing the box to a floor panel seen from A of Fig. 6

 Figure 5 is a plan view of the bracket of Fig. 4 seen from B of Fig. 6, and

15 Figure 6 is a cross section of the bracket of Fig. 4 taken at C-C.

20 In Figure 1 there is shown an electrical outlet box 10 for raised floors. The box has a lid assembly generally shown at 12 in Fig. 2, the box 10 has an open top 11 into which the lid assembly is fitted and which is retained by ratchet arrangements 14 as shown in Fig. 3. The box has an open bottom into which are fitted modular containers 18 in which are mounted electrical sockets 20, and/or

25 switches (not shown). The box 10 has a means for adjustably securing the box to a floor panel 22 which comprises at least one and preferably two brackets 24 adjustably clamped to a side 26 of the box by a central clamping means or pan head screw 28 which is received by

30 an indented threaded hole 30 in the side and preferably both sides 26 of the box.

5 The bracket has a protrusion recess arrangement to locate it
adjustably on either side of the box. This arrangement
comprises a pair of horizontal spaced protrusions 32 on the
vertical web 34 of the bracket which locate selectively in
recesses formed as paired apertures 36, 36' or 36", the pairs
being vertically spaced in sides 26. A vertical slot 38 in
web 34 enables the bracket to be slid up or down on screw 28
when the screw is unscrewed sufficiently to allow protrusions
10 32 to escape from apertures 36, 36' or 36" and so that the
pairs of protrusions can be realigned to another pair of
apertures. Furthermore the bracket can once the screw 28 is
unscrewed be rotated through 180 degrees to enable horizontal
web 40 of the bracket to assume a different level.

15 A cut out 41 above slot 38 at the junction between webs 34 and
40 enables the pan head 29 of screw 28 to slide the full
distance of slot 38. Three holes 42 on web 40 are provided to
receive screws 44 for screwing the box to floor panel 22.

20 Details of the lid assembly which comprises a lid surround 52,
a hinged lid 53 in which are hinged cable openings 54 a handle
59 for opening the lid and ratchet arrangements 14 will be
described in copending patent application number 9113425.4
25 filed on the same date as the present application.

CLAIMS

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1. An electrical outlet box for raised floors comprising a metal box with a lid assembly, the box being adapted to have mounted in the bottom thereof electrical sockets and/or switches the box having means for adjustably securing the box to the floor panel characterised in that the adjustable securing means comprises at least one bracket adjustably clamped to a side of the box by a central clamping means, a protrusion recess arrangement between the bracket and box side either side of the clamping means such that the protrusion and recess arrangement enables location of the bracket relative to the box side at several vertical positions.

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2. An outlet box as claimed in claim 1 wherein the clamping means is a single screw inserted through a vertical slot in the bracket and received by a threaded portion of the box side or a nut located to the box side.

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3. An outlet box as claimed in claims 1 or 2 wherein the protrusion and recess arrangement is a protrusion from the bracket either side of a central vertical slot in the clamping means and a plurality of vertically spaced recesses which may be apertures in the box wall either side of the clamping means.

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4. An outlet box as claimed in claim 2 wherein a horizontally aligned cut out is provided in a web of the bracket adjacent the vertical slot in the bracket so as to



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enable the head of the screw to access the horizontal slot to enable the screw to slide the full distance of the vertical slot.

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5. An outlet box as claimed in any one of claims 1 to 4 wherein holes are provided on a web of the bracket to receive screws for screwing the box to a floor panel.

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6. An outlet box substantially as described with regard to the accompanying drawings.