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(56) Documents Cited
GB 2288287 A **GB 2280551 A** **GB 2261775 A**
GB 2237455 A **GB 2180414 A** **GB 1259497 A**
GB 0977947 A **GB 0492058 A**

(58) Field of Search
UK CL (Edition O) **H2E ECSH EGD**

(54) **Electrical power supply plug/adaptor**

(57) A fitting that combines an electrical plug with an electrical adaptor. The fitting, see Figure 6, has a base casing 1 from which protrudes three pins; a live pin 3, a neutral pin 4, and an earth pin 5. These pins will locate into a standard wall socket. The top cover 2 is produced with three rectangular holes which correspond with the three pins in the base casing 1 and are identical to the rectangular holes in a wall socket. These holes allow a plug or a similar plug/adaptor to be inserted and connect internally to the three pins on the base casing 1 via connecting metal jaws. An electrical cord 8 enters the fitting and connects internally to the three pins by the use of screwed clamps. The cord 8 is retained by plastic cord grips 7 where it enters the fitting. The plug/adaptor is fitted with an electrical fuse.

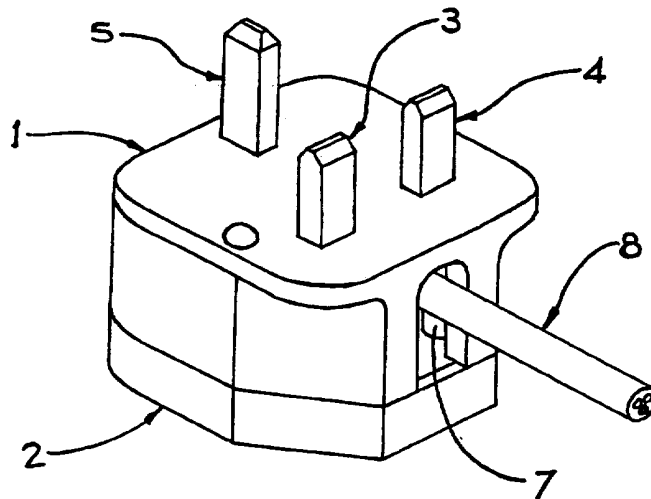


FIGURE 6

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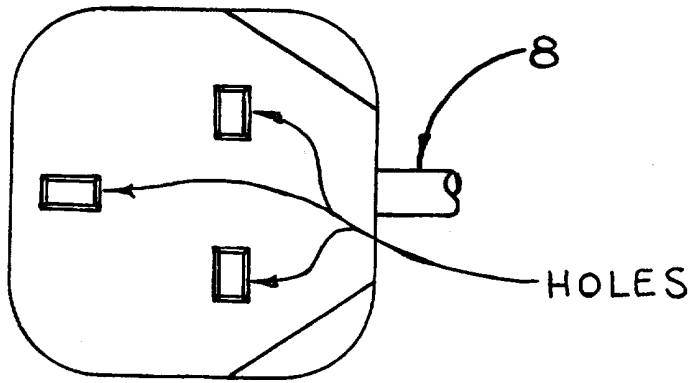


FIGURE 1

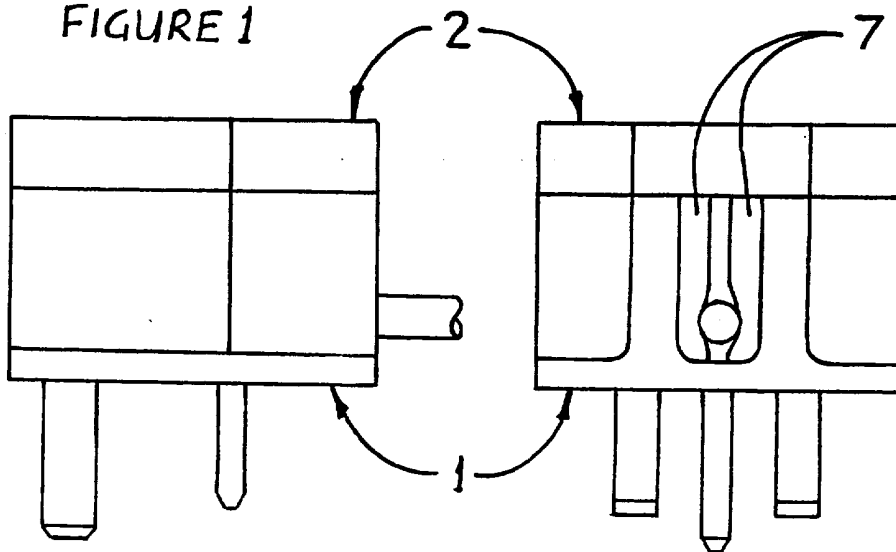


FIGURE 2

FIGURE 3

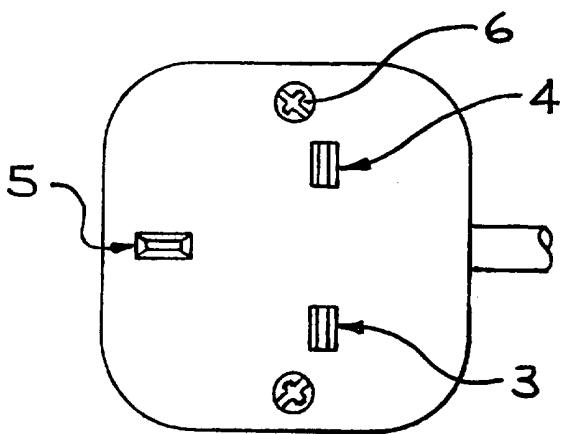


FIGURE 4

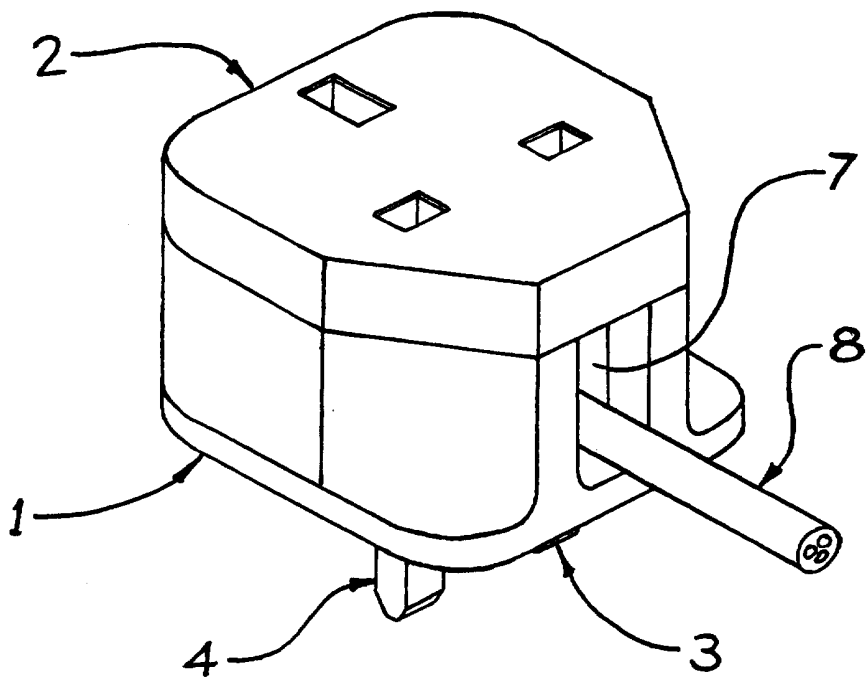


FIGURE 5

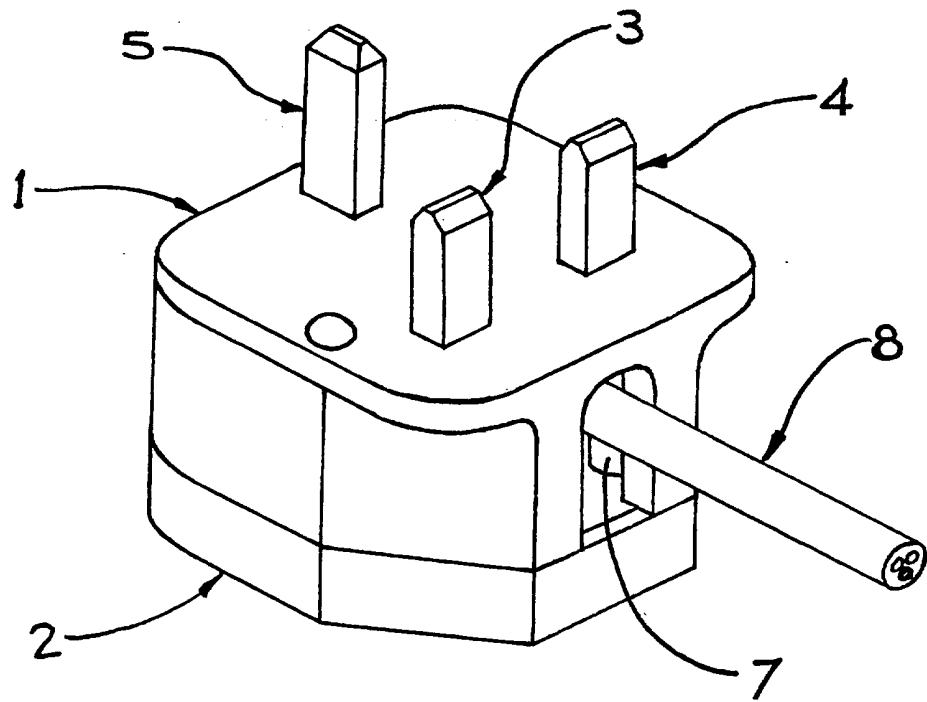


FIGURE 6

ELECTRICAL PLUG/ADAPTOR

This invention relates to a combined electrical plug/adaptor.

Today, all electrical appliances require a fitting for connection to a power source. This fitting is known as an Electrical Plug which is a male fitting (in the UK this fitting usually has three pins) and connects into a female socket which is usually housed in a recess in the wall of a building.

Often there is a need to connect more than one appliance where there is only one wall socket. To accommodate more than one electrical appliance where there is only one socket an electrical adaptor is used. This invention is a fitting to prevent the need for a separate adaptor by providing the adaptor within the plug as a combined unit. Two or more of these plug/adaptors can be used in series to provide power to more than two appliances.

This invention is a combined electrical plug/adaptor (adaptor/plug) and is of similar design to many electrical plugs found in common use today but has a greater depth than a common plug as it needs to accommodate the pins from another plug or plug/adaptor. It will be fitted with three pins (for use in the UK); 'Live', 'Neutral' and 'Earth'. The three pins protrude from the bottom of this fitting and the top has three corresponding recesses to accommodate three identical pins from another plug. This plug/adaptor will be fitted with an electrical fuse.

When a second plug is connected, into the top of the plug/adaptor, the second plug's pins will locate into metal conductor jaws within the fitting. These jaws are fixed to the corresponding pins in the plug/adaptor.

Where the electrical cord enters the plug/adaptor there are two flexible grips which clamp and retain the cord and therefore prevent putting undue pressure on the connections to the electrical pins within the fitting.

The invention will now be described by way of example with reference to the accompanying drawings in which :-

Figure 1 is a plan view of the plug/adaptor showing the three recesses which accept the pins from another plug or plug/adaptor.

Figure 2 is a side elevation of the plug/adaptor.

Figure 3 shows a rear elevation of the plug/adaptor, the side where the cord enters the fitting.

Figure 4 is a view from the underside of the plug/adaptor showing the three pins and the screw heads which hold the two halves of the fitting together.

Figure 5 is an isometric view of the plug/adaptor showing the three recesses and the cord entry point.

Figure 6 is an isometric view from the underside of the plug/adaptor showing the three pins and the cord entry point.

Referring to the drawings, the plug/adaptor comprises a base casing 1 and a top cover 2. The base casing 1 and the top cover 2 are one piece elements respectively, each being formed from an insulating material. There are three pins; a live pin 3, a neutral pin 4 and an earth pin 5. The three pins 3,4 and 5 protrude from the outside of the base casing 1 and are located in suitable rectangular shaped recesses on the inside of the base casing 1. The pins are connected internally to the metal conductor jaws which accept the pins, and form contact with, a second plug or plug/adaptor. The pins 3, 4 and 5 are kept in place when the top cover 2 is held together with the base casing by the retaining screws 6. Cord grips 7 are used to retain the electrical cord 8.

The top cover 2 has three rectangular shaped holes which correspond with the three pins and are identical to the holes in a common wall socket.

Within the fitting is a fuse and spring loaded shutter which closes off the holes in the top cover 2 as a safety measure. This spring loaded shutter is similar to that found in most common wall sockets and electrical adaptors.

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CLAIMS

1. This fitting combines an electrical power supply plug with an electrical adaptor.
2. This electrical power supply plug/adaptor prevents the need for a plug and separate adaptor when only one socket is available to provide power for two appliances.
3. A series of these plug/adaptors can be used to provide power for two or more appliances.



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Examiner: Mrs Jennifer Bannister

Claims searched: 1-3

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Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.O): H2E[ECSH EGDY]

Int CI (Ed.6):

Other:

Documents considered to be relevant:

Table with 3 columns: Category, Identity of document and relevant passage, Relevant to claims. Rows include GB 2288287 A, GB 2280551 A, GB 2261775 A, GB 2237455 A, GB 2180414 A, GB 1259497, GB 0977947, GB 0492058.

Legend table with 2 columns: Symbol and Description. Symbols include X, Y, &, A, P, E.