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STOWAGE FOR THREE-PIN ELECTRICAL PLUG

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1 Claim. (Cl. 248—314)

The invention relates to a stowage for three-pin electrical plugs having earthing pins of a diameter which fall within a predetermined range.

An object of the invention is to enable three-pin plugs having earthing pins within the range to be stowed and removed easily.

A further object of the invention is to provide a stowage including a rigid body having an aperture which is just larger than the diameter of the largest earthing pin of the range, and a resilient member, defining an extensible opening which is aligned with the aperture and is just smaller than the diameter of the smallest earthing pin of the range, the opening resiliently expanding to grip any earthing pin within the range frictionally, and means for accommodating the other two pins of plugs within the range.

In the accompanying drawings:

Figure 1 is an elevation of one form of stowage embodying the invention;

Figure 2 is a section on the line II—II of Figure 1 with the plug shown (in dot-dash lines) in stowed position; and

Figure 3 is a section on line III—III of Figure 1.

In Figure 1 is shown part of a support plate 10, over a central aperture in which is secured a rigid body in the form of an annular plate 11 having a central aperture 12 and an outer peripheral flange 13 (Figure 2). In the outer face of the plate 11 and on either side of the central aperture 12 are stamped arcuate grooves 14. One end of each groove 14 opens into a circular groove 15 in which is formed an aperture 16.

Through each aperture 16 extends a securing bolt 17 which passes through a corresponding aperture 18 in the plate 10 and carries a nut 19 (Figure 3).

Captive between the plate 11 and the plate 10 is a ring-like wire resilient member 20 the movement of which is limited by the flange 13 and by the inner walls of the arcuate grooves 14. The resilient member 20 includes two substantially parallel radial arms 21 which are, adjacent their free ends 22, outwardly bowed to define between them an extensible opening 23 smaller than but coaxial with the central aperture 12 in the plate 11.

In the plate 10 are formed two slots 24 which diverge from the aperture 12.

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A conventional three-pin electrical plug 25 is shown in Figure 2 held in the stowage. The plug 25 has the usual large-diameter pin 26 and two small-diameter pins 27, only one of which is shown. The aperture 12 is of slightly greater diameter than that of pin 26 and the unstressed extensible opening 23 is of slightly less diameter than that of pin 26. The width of the slots 24 is considerably greater than the diameter of pins 27.

Thus, the plug is held in position by the pin 26 being inserted through the aperture 12 to be gripped in the extensible opening 23 by the resilient radial arms 21; the smaller pins 27 being housed in, but not resiliently held in, the slots 24.

The support plate 10 can, for example, form an outer part of a cabinet wall of a clothes drying cabinet; the stowage being adapted for a three-pin electrical plug carried by a wandering lead for supplying current to a heater within the cabinet. In this way the plug can be stowed in a readily detachable manner when, for example, the cabinet is to be transported.

By making the aperture 12 sufficiently large and the slots 24 sufficiently elongated the stowage can be used for a range of three pin plugs e. g., for 5 amp., 10 amp. and 15 amp. plugs. It is necessary for the diameter of the aperture 12 to be greater than the diameter of the earthing pin on the 15 amp. plug, and for the unstressed width of extensible opening 23 to be less than the diameter of the earthing pin of the 5 amp. plug.

What I claim as my invention and desire to secure by Letters Patent of the United States is:

A stowage for a three-pin electrical plug having a larger ground pin and two smaller current carrying pins, the cross-sectional size of the larger pin falling within a predetermined range, the stowage comprising an annular plate, having an outer peripheral flange and a central aperture, which is just larger than the maximum diameter of the range, said annular plate also having arcuate grooves between the flange and said central aperture, said grooves being defined by arcuate walls; a resilient member in the form of a ring-like wire located between the flange and the arcuate walls nearer to the flange and having two radially extending arms forming between them an extensible opening which is aligned with the aperture and is just smaller than the minimum diameter of the range, the opening resiliently expanding to grip the larger pin frictionally, and a plate supporting said annular plate and having two slots which diverge outwardly from the aperture beyond the plate to receive the two smaller pins of the plug.

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