

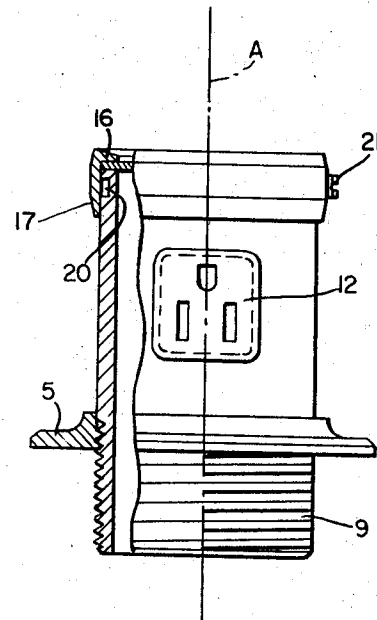
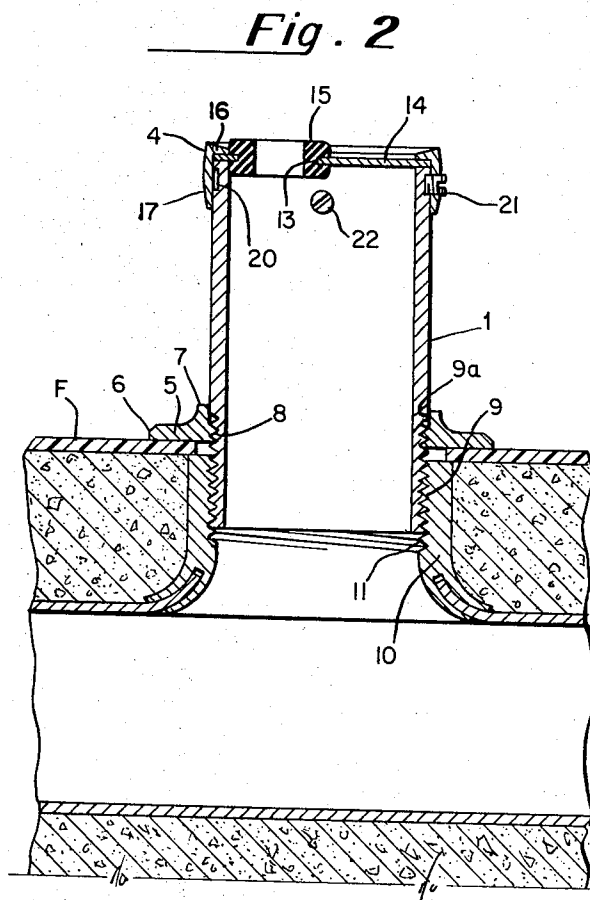
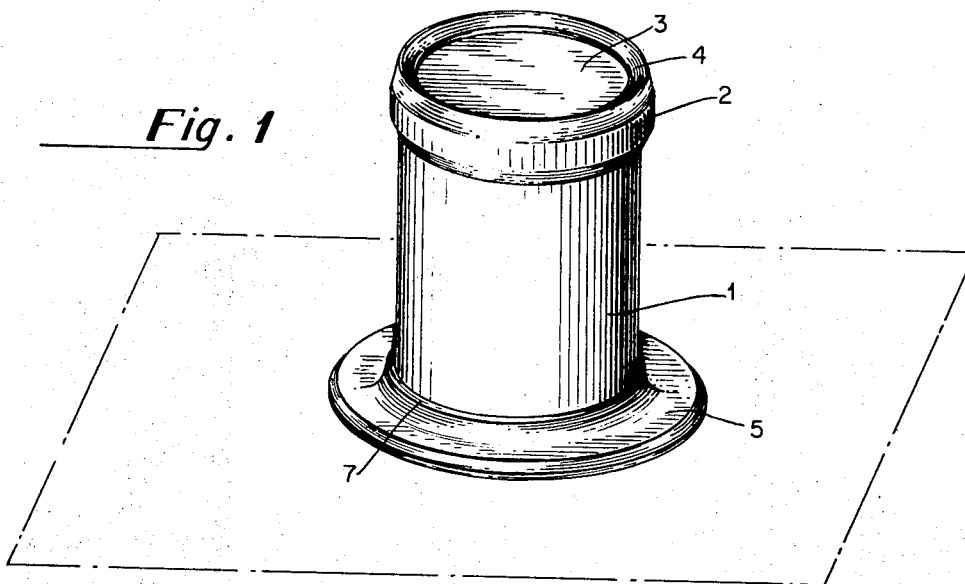
Nov. 24, 1970

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3,542,940

SERVICE FITTINGS

Filed Oct. 14, 1968



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3,542,940

SERVICE FITTINGS

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Filed Oct. 14, 1968, Ser. No. 767,161

Int. Cl. H02g 3/18

U.S. Cl. 174—48

4 Claims

ABSTRACT OF THE DISCLOSURE

A power or communication service fitting for use with electrical underfloor distribution systems comprising a tubular member for accommodating a power receptacle or a telephone Amphenol connector, the tubular member being threaded into an insert and extending upright from the floor, cap means closing the open end of the tube, including a disc and a ring holding down the disc, together with a decorative foot extending outwardly from the bottom of the tube in contact with the floor.

This invention relates to electrical underfloor distribution systems and in particular relates to improvements in service fittings to provide power and communication outlets for such system.

One of the objects of the invention is to provide an improved service fitting which occupies minimum floor space area without compromising its function of providing for a plurality of power or communication outlets.

Another object of the invention is to provide a service fitting which occupies a small floor space area and which extends a minimum distance above the floor without compromising its function of providing power or communication outlets.

Another object of the invention is to provide a service fitting having a plurality of power receptacles each aligned on the fitting body with respect to the threads connecting the fitting to the underfloor insert so that insertion or withdrawal of the power jacks will not rotate the fitting.

Another object of the invention is to provide a service fitting adapted as a telephone outlet yet extending only a short distance above the floor surface by providing for the telephone or Amphenol connector to be disposed partially within the insert and partially within the body of the fitting.

Another object of the invention is to provide a service fitting design to extend a minimum distance above the floor surface so as to present an object which is substantially less hazardous than the usual conventional fitting of comparable power and telephone capacity.

Another object of the invention is to provide a service fitting having a generally cylindrical shaped body and a sculptured top to make a pleasing ornamental shape nicely compatible with modern office decor.

A preferred form of the invention will be described below in connection with the following drawings wherein:

FIG. 1 is a perspective view of the fitting of the invention in assembled condition and particularly illustrating the esthetic features of the design.

FIG. 2 is a sectional elevational view of the fitting of the invention as mounted in an underfloor insert, the fitting shown being adaptable for use in providing for a telephone connection.

FIG. 3 is an elevational view partially in section showing a fitting of the invention provided with a power receptacle.

As shown in FIG. 1, the fitting in general comprises tubular member 1, closure cap means 2 comprising a disc 3 and a hold-down or retainer ring 4 and a foot 5 resting on the floor F. The foot 5 has a radially extending portion

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6 and an annular boss 7. The portion 6 has internal threads 8. The disc 3 rests on the top edge of the member 1 and extends across the opening to close off the same. The tubular member 1 has the lower end threaded as indicated at 9 in FIG. 2. These threads are for mounting the fitting in the underfloor insert as indicated in FIG. 2 where it will be noted that the insert 10 has internal thread 11 accepting the threads 6 of the tubular member 1. The threads 11 mate with the internal threads 8 on the portion 6 of the foot 5.

As mentioned heretofore, the fitting is adaptable both as a power and telephone outlet. The structure is essentially the same except for modification in the body and the disc.

When the fitting is used for power, the body is provided with a plurality of openings each of which is adapted to receive a conventional receptacle as indicated at 12. Preferably, two or three receptacles are used and in the event of two receptacles, the body has two openings 180° apart and with three receptacles, the body has three openings 120° apart.

With reference to the receptacle 12 in FIG. 3, it will be observed that the same is symmetrical with respect to the axis A of the tubular member. When a power jack is inserted or removed, the reaction goes through the axis so there is no tendency to rotate the fitting on the threads 11. This is highly desirable inasmuch as it is a necessary objective that service fittings be set up so that they will not rotate even with hard or sustained use.

The preferred receptacle is the type sold by Circle F Manufacturing Company, of Trenton, N.J., Catalog No. 1536. This receptacle is constructed so that it can be pushed into the opening in the body with the head of the receptacle engaging the outside surface and spring clips on the inside of the receptacle snapping against the edge of the opening to hold the receptacle firmly in place.

When the fitting is used for a telephone outlet, the receptacle openings on the tubular member are omitted. The disc is modified by being provided with an opening such as the opening 13 shown for the disc 14 in FIG. 2. The openings 13 has a grommet 15 to receive the cables from the telephone or Amphenol connector inside of the tubular member.

With the present invention it is contemplated that the Amphenol connector be disposed partially with the insert and partially with the tubular member. In this way the distance by which the fitting projects above the floor F is held to absolute minimum and this squat height is highly advantageous in that it presents a floor object which is of minimum vertical dimension to present a less hazardous object to personnel and to blend better with the surrounding media.

The disc 14 of FIG. 2 rests on the top edge of the body and extends across the opening to close off the same. The disc is held on the tubular member by the lip 16 of retainer ring 4.

As noted in FIG. 2, ring 4 has a second lip 17 which extends downwardly over the outer surface of the body and covers a groove 20 on the tubular member. A set screw 21 is threaded in the lip 17 and when tightened up projects into the groove 20 to lock the ring 4 (and the disc) in place.

Preferably, grounding means are provided when the fitting is used as a power outlet. Thus, the tubular member has a tapped hole carrying a ground screw 22 to which the outlet grounding wire can be attached.

The configuration of foot 5 has several important features. Not only does the foot contribute to the overall decorative and ornamental effect, but in addition provides a lateral stability to the tubular member by portion 6 by extending radially outwardly and bearing on the floor

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covering. Furthermore, the foot 5 covers up the irregular opening in the floor covering which is necessary to accommodate the tubular member 1. In addition, the boss 7 which extends vertically hides or covers unused portions of the threads 6. This permits a longer thread on the tubular member so as to compensate for varying depths of concrete and floor covering. For example, in FIG. 2 it will be noted that the portion 9a of the threads 9 is unused and this unused portion is masked off by the boss 7.

Before closing, it is pointed out the combination of the foot 5 and the sculptured effect of the cap 2 taken in conjunction with the shape of the member 1 are design coordinated to provide a pleasing ornamental effect which blends well with contemporary office decor.

What is claimed is:

1. A service fitting for electrical underfloor systems comprising:

- a tubular member formed with exterior screw threads adjacent one end and an exterior groove adjacent the opposite end, the threads being for use in securing the member to an underfloor insert with the axis of the member extending upright;
- a disc engaging said opposite end of the tubular member, the disc extending across the opening of the member to form a top cover;
- a retainer ring mounted on said opposite end and formed with a lip portion extending down over the outer surface of the tubular member and over said groove and a second lip portion extending over said disc and retaining the same on the tubular member, the first lip having a threaded aperture in alignment with said groove;
- a set screw threaded in said aperture and extending into said groove to thereby lock the ring on the tube and secure the disc in position; and
- a foot ring threaded on the tubular member, the ring forming a radially extending foot for bearing on the floor on which the fitting is used.

2. A construction in accordance with claim 1 wherein said tubular member is formed with at least one aperture for receiving a power receptacle.

3. A construction in accordance with claim 1 wherein

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said tubular member is dimensioned so that when the tubular member is in an insert, a telephone connector can extend partially within the insert and partially within the tubular member and wherein said disc has an opening with a grommet for accommodating passage of connector wires out of the fitting.

4. A service fitting for electrical underfloor systems comprising:

- a tubular member formed with exterior screw threads adjacent one end, the threads being for use in securing the member to an underfloor insert with the axis of the member extending upright;
- a disc engaging the end of the tubular member opposite said screw thread, the disc extending across the opening of the member to form a top cover;
- cap means mounted on said opposite end, the cap being formed with a first lip portion extending down over the outer surface of the tubular member and a second lip portion extending over said disc to retain the same on the tubular member;
- mechanism on said first lip securing said cap means to said tubular member; and
- a ring surrounding the tubular member, the ring having a portion forming a radially extending foot for the bearing on the floor on which the fitting is used and having an upwardly extending, annular boss, said portion having interior threads engaging said exterior threads on said tubular member and said boss concealing external threads on the tubular member not in engagement with the said interior threads.

References Cited

UNITED STATES PATENTS

1,815,741	7/1931	Richardson	174—48
2,512,041	6/1950	Steele	138—89 X
2,813,143	11/1957	Weston	174—48 X

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U.S. Cl. X.R.

138—89; 220—3.3