

March 9, 1937.

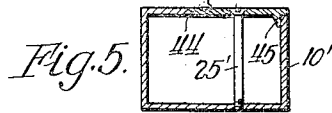
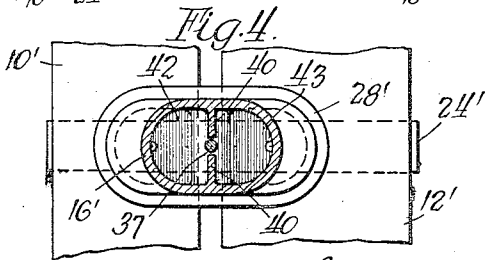
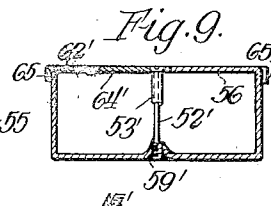
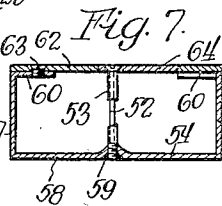
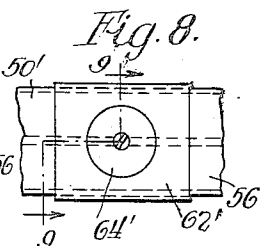
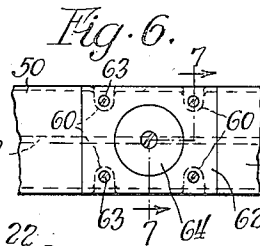
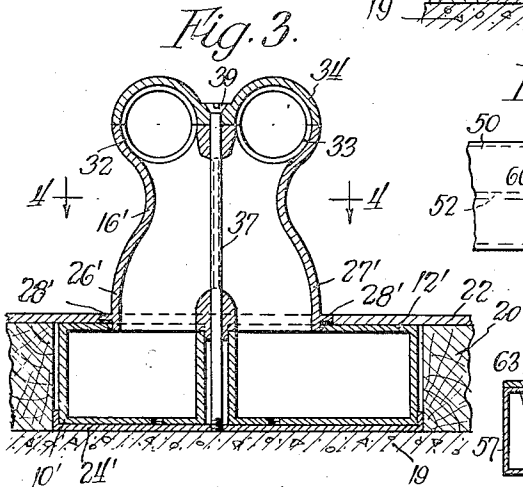
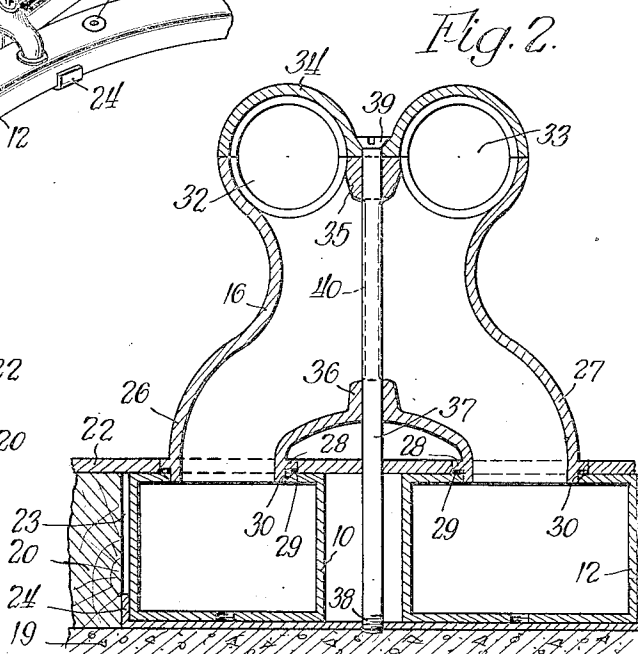
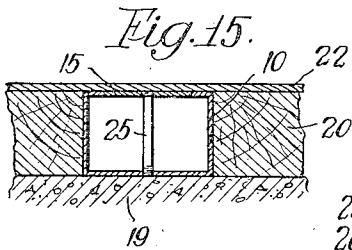
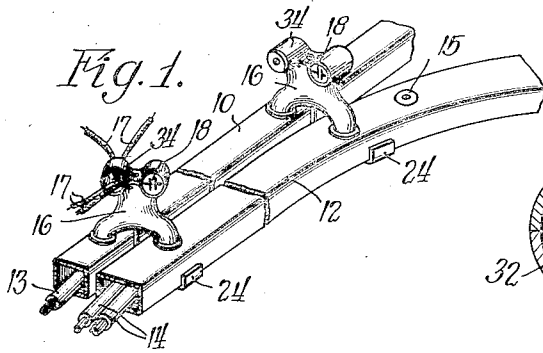
J. W. LEWIN

2,073,490

UNDERFLOOR DUCT SYSTEM

Filed Nov. 23, 1934

2 Sheets-Sheet 1



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March 9, 1937.

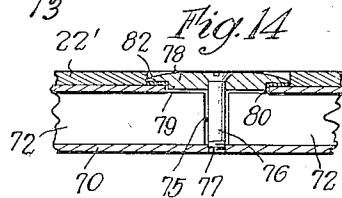
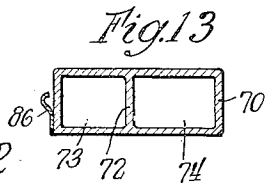
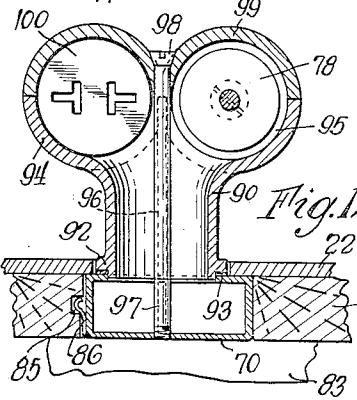
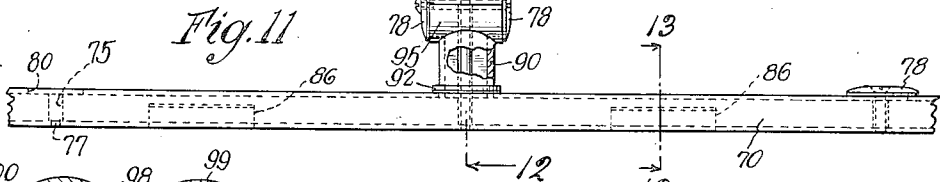
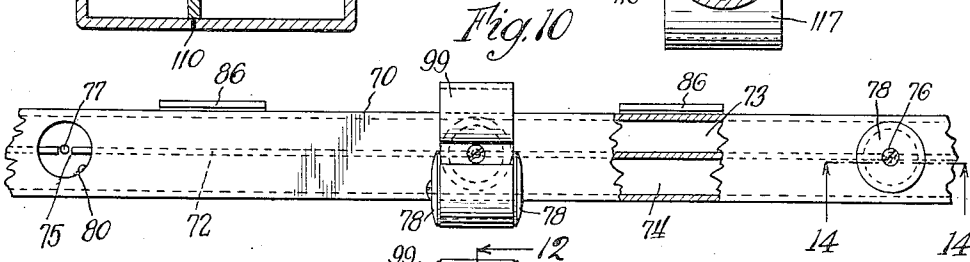
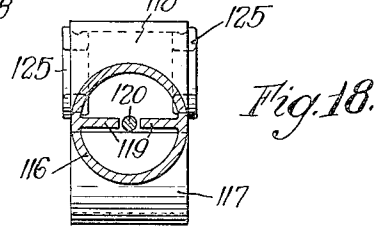
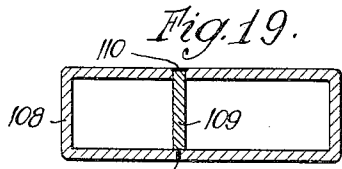
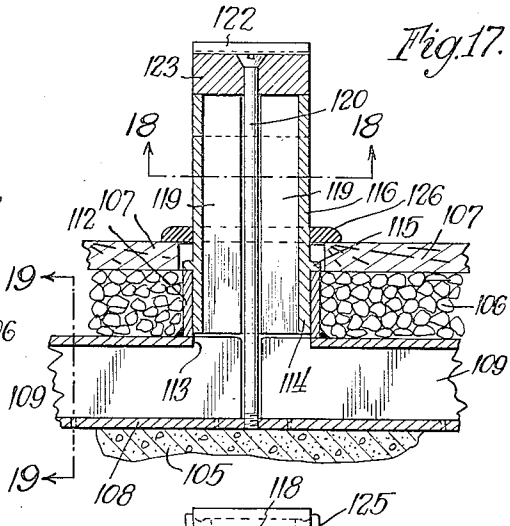
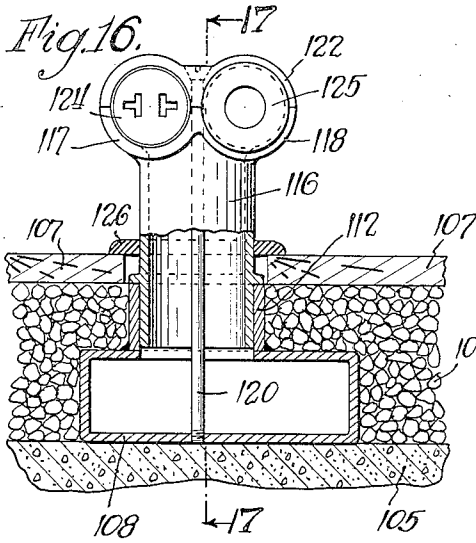
J. W. LEWIN

2,073,490

UNDERFLOOR DUCT SYSTEM

Filed Nov. 23, 1934

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,073,490

UNDERFLOOR DUCT SYSTEM

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Application November 23, 1934, Serial No. 754,422

21 Claims. (Cl. 247-3)

This invention relates to underfloor duct systems, and more particularly to duct or conduit systems for the electrical wiring of large office, mercantile, and manufacturing buildings, such systems preferably being adapted for installation in buildings during the course of their construction.

In buildings of this type, wherein multiple occupancy is inherent from the character of the building, great flexibility is required in such wiring systems in order to meet the various needs and desires of a large number of tenants, and these needs and requirements are constantly changing as the tenancy of the building changes. It is obvious that the wiring requirements for lighting, telephone service, electrical devices and other electrical apparatus necessitate an elaborate wiring system which can be readily varied or changed in accordance with individual needs. At the same time, the inherent dangers due to fire hazards, and the necessity for compliance with municipal and insurance codes impose rigorous requirements and limitations on the type of system that may be employed.

The floors of all such types of buildings, in general, are formed in much the same manner, usually comprising an arch or slab cast or built on suitable forms, and having a relative rough upper surface, which may be finished in several ways. For example, wooden sleepers may be placed on the slab, and wood flooring laid over the sleepers, the space therebetween being employed as a runway for the conduits or ducts of the wiring system. In more modern constructions, the finished surface usually comprises a finishing layer of cement mortar, over which linoleum or some similar product is laid to provide the necessary resilience, or a tile or other floor surface may be provided. Usually a cinder fill, comprising a cinder concrete with a small filling of cement, is interposed between the slab and the finishing layer, and the conduits or ducts are laid in this fill, either flush with the upper surface thereof or disposed a short distance below the upper surface.

The present invention, in its preferred embodiment, is directed to an underfloor duct system for electrical wiring in which two ducts, or a divided single duct, may be employed for carrying, in spaced relationship, the conductors of separate wiring systems, such as an electric light wiring system and a telephone wiring system, which are normally required to be carried in separate or spaced runways.

In such underfloor duct systems, some means must be provided for the purpose of bringing out the wiring connections from the duct at the floor level to the device or apparatus which is to be supplied with current, which is usually placed upon a desk, or mounted in a position spaced from the floor surface. Preferably, extensive cutting

through of the floor surface, with the customary patching thereof afterwards, is to be avoided. Further, it is desirable that a number of outlet openings, exceeding the probable demand for such openings, be provided so that there will always be an opening located adjacent to the position of the device or apparatus to be served.

It is a primary object of the present invention to provide an underfloor duct system having a plurality of openings spaced in definite relationship with respect to the length of the duct, and which are closed by suitable inserts or plugs, the ducts and plugs being disposed beneath the linoleum floor surface, or, if a cinder-cement fill is employed, being disposed within the fill and having suitable extensions or collars extending upwardly to a point adjacent the floor surface.

Another object of the present invention is the provision of novel securing means for securing the inserts or plugs in position to close the outlet openings of the ducts, and the provision of means providing for a water-tight closure to prevent entrance of water or the like to the duct containing the electrical conductors.

A still further object of the present invention is the provision of means providing for the disposition of two individual ducts in the same runway, with means for clamping the ducts in predetermined position, the clamping means, in addition, serving as a means for holding the inserts or plugs in position.

Another object of the present invention is the provision of a standpipe or outlet nozzle, adapted to be secured in the outlet opening of the duct when the insert plug has been removed, and which is provided with a Siamese outlet having separate passageways communicating with each portion of the duct, or with each of the two ducts.

The outlet nozzle of the present invention is provided with only a single securing member, whereby its assembly and installation is facilitated, and connection can thus be made with great rapidity and with relative simplicity.

In addition, the duct system of the present invention may be constructed so as to provide a relatively large opening at each of the outlets to facilitate drawing of the conductor through the duct, which opening is provided with a closure plate carrying the insert plug, the plate also serving as a support for the outlet nozzle when the plugs are removed to establish connection to the conductor in the duct.

Another object attained by the present invention is the provision of a divided duct, having separate passageways extending therethrough, which is formed with a single flat strip of metal punched previous to its formation into a duct to provide the desired outlet opening and slots for receiving the securing member. The duct is then bent into form to provide a duct having a central

or intermediate partition running lengthwise thereof within the interior of the duct to provide two separate runways in the duct.

Other objects and advantages of the present invention, such as the provision of an underfloor duct system of economical and simplified design, which provides an easily accessible system of the desired type having great flexibility, will be more apparent from the following detailed description, which, taken in conjunction with the accompanying drawings, will disclose to those skilled in the art the construction and operation of a preferred form of the present invention.

In the drawings:

Figure 1 is a perspective view of one embodiment of the present invention;

Figure 2 is a vertical sectional view taken through one of the outlet nozzles shown in Figure 1;

Figure 3 is a view corresponding to Figure 2, showing a modified type of outlet nozzle;

Figure 4 is a horizontal sectional view, taken substantially on the line 4—4 of Figure 3;

Figure 5 is a vertical sectional view of the duct shown in Figure 3, provided with a suitable closure plug;

Figure 6 is a top plan view of a modified form of duct;

Figure 7 is a sectional view of the duct in Figure 6, taken substantially on the line 7—7 of Figure 6;

Figure 8 is a view corresponding to Figure 6, of a still further modified form of duct;

Figure 9 is a sectional view taken substantially on line 9—9 of Figure 8;

Figure 10 is a top plan view, partly in section, of another form of duct structure;

Figure 11 is an elevational view of the duct and outlet nozzle shown in Figure 10;

Figure 12 is a vertical sectional view through the outlet nozzle and duct, taken on line 12—12 of Figure 11;

Figure 13 is a vertical sectional view through the duct shown in Figure 11, taken on line 13—13 of Figure 11;

Figure 14 is a sectional view through an outlet plug, taken on line 14—14 of Figure 10;

Figure 15 is a sectional view of a modified type of insert plug;

Figure 16 is a vertical sectional view of a modified type of outlet nozzle;

Figure 17 is a vertical sectional view taken on the line 17—17 of Figure 16;

Figure 18 is a horizontal section taken on line 18—18 of Figure 17; and

Figure 19 is a sectional view taken substantially on line 19—19 of Figure 17.

Referring now in detail to the drawings, in Figure 1 I have disclosed two separate ducts, indicated at 10 and 12, of generally rectangular form, which may extend parallel to each other, or which may branch off, as shown. Each of the ducts is adapted to carry an electrical wiring system, the duct 10, for example, carrying the conductor 13 providing for telephone connections or the like, while the duct 12 carries the conductors 14 providing for electric light service, or for other power service to electrical devices or apparatus. These particular classifications are, of course, optional.

At spaced intervals along the top surface of the duct, suitable outlet openings are provided, which are normally closed by closure plugs 15, the closure plugs being capable of removal to provide for insertion of the standpipe or outlet

nozzle connections shown generally at 16. These connections are adapted to provide for leading out of the conductors, such as conductor 17 leading from one side of the nozzle 16 and corresponding to a branched conductor extending from the conductor 13 supplying telephone service or the like. Similarly, the conductor 14 may be branched up through the outlet nozzle 16, and suitable plug receptacles, such as shown at 18, may be provided for the purpose of facilitating connection thereto of flexible conductors or cords leading to suitable electrical appliances or the like. It is apparent that the standpipe provides for interchangeable use of either outlet with either runway, and only a single standpipe need be employed for two separate circuits, whether one or two ducts are used.

Referring now in detail to Figure 2, which is a sectional view through one of the members 16, it will be noted that the concrete floor slab, or a similar floor surface, indicated at 19, is adapted to have formed on its upper surface, a suitable filler medium, which may comprise wood, or may comprise a cinder fill or the like, indicated at 22. The ducts 10 and 12 are disposed in a suitable runway 23 formed in the finishing fill or material 20, and may be held in suitable spaced relationship by means of a U-shaped clamping strip 24, which extends across the lower surface of the ducts 10 and 12, and is provided with upstanding end portions engaging the lateral outside surfaces of the ducts.

As shown more in detail in Figure 15, each of the ducts 10 and 12 is provided, at spaced intervals with respect to its length, with outlet openings preferably closed by suitable closure plugs 15, which closure plugs, in this embodiment of the invention, have a tapered exterior surface cooperating with a similarly formed tapered surface cut into the upper surface of the duct 10, whereby the closures or plugs 15 have sealing engagement within the openings in the duct, to provide water tight closures therefor. Suitable countersunk securing means 25, comprising a screw member or the like, are adapted to have threaded engagement in the lower or bottom wall section of the duct, and may be screwed thereto for holding the plug 15 in proper sealing engagement. When it is desired to make an outlet connection at one of the openings in the duct, the member 25 is unthreaded, allowing removal of the closure plate 15, and, inasmuch as these plates are located at definite distances with respect to the length of the duct, the linoleum need only be cut adjacent the opening 15, and therefore there is no difficulty entailed in locating the duct opening.

Referring again to the outlet nozzle 16 shown in Figure 2, this outlet nozzle has a Siamese opening at its lower end, indicated at 26 and 27, providing two separate inlets into the nozzle, and these inlets are provided, adjacent their ends, with annularly flanged collars 28, which are adapted to have bearing engagement above the upper surface of the ducts 10 and 12, there preferably being gaskets 29 interposed therebetween to provide suitable sealing engagement therewith. Extending outwardly from the collars or branches 28 are cylindrical projecting portions which engage within the openings 30 formed in the ducts 10 and 12, to center the outlets 26 and 27 therein, so that the conductors may be led from the ducts 10 and 12 through the outlets 26 and 27 and upwardly through the nozzle 16

to the outlet connections or openings formed at the upper end thereof and comprising the horizontal semi-cylindrical portions 32 and 33 formed in the member 16, which portions are closed by a cap member 34 adapted to have seating engagement thereupon, forming laterally spaced open-ended cylinders.

Extending centrally through the cap member 34, through an enlarged bearing section 35 at the upper end of the member 16, and through an enlarged bearing section 36 formed between the outlets 26 and 27, is a securing member 37, comprising an elongated bolt having a threaded end 38 adapted to thread into the clamping member 24 between the ducts 10 and 12. At its upper end, the member 37 is provided with a head portion 39, which has bearing engagement about the surface of the member 34 to clamp the same securely to the upper end of the member 16, and which is provided with a suitable slot for receiving a screw driver or other tool to facilitate threading of the member into the clamp 24.

Extending coplanar with the member 37 on opposite sides thereof are web portions, indicated in dotted lines at 40 in Figure 2, which serve to provide for definite separation of the two outlet chambers 26 and 27 and corresponding outlets 32 and 33, so that the conductors in the duct 10 are separated from the conductors in the duct 12 when they are led to the outlet portions 32 and 33 of the member 16. In this manner, complete and effective separation of the conductors is obtained, and this separation is continued at the upper end of the member 16, so that the telephone or similar conductors 17 will be in spaced relationship with the conductors leading to the plug receptacle 18 or similar instrumentality. It is to be noted that the single clamping member 37 holds all of the members in aligned position, and provides for positive pressure being maintained upon the gaskets 29 to secure sealing engagement of the flanges 28 with respect to the upper surfaces of the ducts 10 and 12, thus providing for water-tight connection thereto.

Considering now Figure 3, which is a view corresponding to Figure 2 of a modified form of outlet nozzle, the outlet nozzle 16' of this embodiment is provided with outlet openings 26' and 27', corresponding to the openings 26 and 27 of Figure 2, but the ducts 10' and 12' of this embodiment have their outlet openings formed in the upper surfaces of the ducts adjacent the inner surfaces thereof, these comprising only semi-cylindrical openings, and the flange 23' completely surrounds both openings, and comprises a single unitary flange formed adjacent the oblong end at the lower end of the member 16'. As will be noted, the ducts are disposed closer together in this embodiment, and, as shown in Figure 4, the flange 28' extends completely across the space between the two ducts. The member 16' is similarly provided with integral partitions 40 on opposite sides of the securing means 37, to provide for complete separation of the two passageways 42 and 43 extending upwardly through the member 16' from the ducts 10' and 12' to the portions 32 and 33 of the member 16', which portions are closed by closure plates 34, as described in connection with Figure 2.

As shown in Figure 5, the duct 10', when the outlet member 16' is not employed, has its outlet opening closed by a suitable plug member 15', comprising a semi-circular member having a peripheral tapered edge portion 44, and having a defining lip portion 45 engaging the inner lat-

eral surface of the duct 10 to align the member in position. Securing means 25' is employed to hold the plug 15' in position when the outlet opening is not in use.

The member 16' is adaptable for use when the ducts are spaced relatively closely to each other, and when the wide spacing of the outlet openings 26 and 27 of member 16 could not be suitably employed. However, it is to be noted, in connection with the embodiment shown in Figure 1, that the member 16 may be slanted angularly with respect to the ducts 10 and 12 in order to accommodate differences in alignment between the outlet openings in the ducts, without in any way departing from the scope of the present invention.

In Figures 6 and 7 a modified type of duct is shown, indicated at 50, formed from a suitable flat metallic sheet which is stamped or punched to provide an outlet opening therein of a size greater than the normal opening provided by removal of the insertable plug. In this embodiment, the duct includes a substantially intermediate vertically extending portion 52, which, at spaced intervals, is provided with a slot accommodating the securing means 53, and which is bent around to provide a bottom wall 54, an outside lateral wall 55, a top wall 56, shown in Figure 6, a second outside lateral wall 57, and a second bottom wall 58 which may be welded as shown at 59, to the first bottom wall 54 and the upwardly extending intermediate dividing wall 52. The securing means 53 is threaded at its lower end and is adapted to be threaded into a tapped opening formed at the meeting juncture of the walls 54 and 58.

Preferably the upper or top surface wall 56 of the duct 50 is provided with a rectangular cut-out portion, and the lateral walls 54 and 57 are provided with inwardly extending tab portions 60 having their upper surfaces lying flush with the lower surface of the top wall 56, a rectangular closure plate 62 being applied over the cut-out portion of the duct, and secured to the tabs 60 by means of countersunk screw members 63.

The cover plate 62 is provided with a central opening adapted to receive a closure plug 64, corresponding to the closure plug 15, which is held in engagement by means of the securing means 53 extending downwardly through the duct in a slot formed in the intermediate dividing wall 52.

When it is desired to gain access to the interior of the duct for pulling conductors therethrough, or for any other reason, the entire plate 62 is removed in order to facilitate entering into the duct. When it is desired to mount an outlet connection thereon, the plug 64 is removed by unscrewing in the securing member 53, thus providing an outlet opening, corresponding to the opening 30 of Figure 2, in which the outlet member, such as the member 16, may be secured.

In Figures 8 and 9 I have shown a modified form of construction, in which the closure plate 62' for the duct 50' is provided with downturned side wall portions 65, which locate the plate 62' positively with respect to the duct 50', and the plate, together with the closure plug 64', are secured in fixed position on the duct by means of the securing means 53' threaded into the bottom wall of the duct. When it is desired to either gain access to the duct or to provide an outlet nozzle connection thereto, the member 53' is unthreaded, thereby allowing removal of either the plug 64', or the plate, if desired. This provides a large opening through which conductors may be drawn

within the duct, and also serves as a supporting means for the outlet nozzle connections when they are mounted over the openings provided in the top wall of the plate.

5 Referring now to the embodiment of the invention shown in Figures 10 to 14, inclusive, in this embodiment of the invention I provide a duct member 79, comprising a single duct having a dividing wall 72 extending therethrough to provide two parallel runways 73 and 74 through the duct. At spaced intervals along the length of the duct, I provide slots 75 in the wall 72, which slots are adapted, as shown in Figure 14, to receive securing means 76 comprising a screw member threaded at 77 into the base or bottom wall of the duct 79, and at the top engaging a suitable closure plug member 78 which has a flanged shoulder portion 79 extending into an opening 80 formed in the top surface of the duct, and provided with a gasket member 82 having bearing engagement on the top surface of the duct for providing a water tight closure therewith.

The duct 70 is adapted to set upon a floor slab or surface 83, and suitable wood flooring, such as indicated at 84, is spaced apart to provide a runway for the duct. Preferably, the flooring 84 is of the tongue and groove type, as shown by the groove 85, and the duct member is provided with a spring tongue portion 86 adapted to have engagement within the groove 85, to lock the duct in position therewith.

A suitable finishing floor of linoleum or the like is indicated at 22', and extends partially over the duct, being cut away adjacent the plug 78, so that the plug position may be definitely ascertained. When an outlet connection is desired, the member 76 is unthreaded, so that the plug 78 may be removed.

As shown in Figure 12, an outlet nozzle or stand-pipe, indicated at 90, and having a flanged collar 92, is then inserted into position in the opening 80, the collar 92 bearing upon a suitable gasket 93 about the peripheral surface of the opening. The member 90 is provided with two semi-cylindrical outlet portions at 94 and 95, and is also provided with a central partition indicated at 96 in Figure 12, and which is slotted to receive the securing means 97 threading into the lower wall of the conduit 70. The upper end of the member 97 is provided with a head portion 98 bearing against a cap member 99 corresponding to the cap member 34 of Figure 2, which cap member completes the cylindrical outlet openings for the member 90, so that plug connectors or receptacles 100 may be mounted in one of the cylindrical portions, such as the portion 94, for connection to devices such as desk lamps, dictaphones, fans or the like, while the opposite cylindrical portion 95 may be provided with suitable connectors for leading out telephone wire connections or buzzer connections or the like.

If the openings at the opposite ends of the cylindrical portion of the outlet 95 are not to be used, the plugs 78, removed from the openings 80, may be employed for closing this outlet until such time as connections are to be taken therefrom.

With the Siamese connection as shown, the conductors in the duct 70 are separated at all times, since when passing through the neck of the member 90 the partition walls 96, together with the securing member 97, prevent any possibility of these conductors coming into contact with each other. At the same time, by the cylindrical construction of the outlet connection at the upper end of the member 90, connections can

be taken from opposite ends thereof, which further increases the efficiency of the outlet connection. The duct 70, if desired, may be a drawn tubular member, in which case the intermediate wall 72 is formed integral with the outer defining wall of the duct 70, or may be formed in any suitable manner, such as disclosed in Figures 6 to 9, inclusive.

Referring now to the embodiment of the invention disclosed in Figures 16 to 19, inclusive, this particular embodiment discloses a concrete floor slab indicated at 105, upon which is disposed a cinder-fill 106 formed of cinder concrete with a mixture of cement, and above this fill may be provided a floor surface, such as the wooden floor members 107, or a linoleum surface, as desired.

A duct 108, shown in detail in Figure 19, is provided, and is preferably formed of a sheet metal rectangular tube provided with an intermediate wall 109 which may be welded, as at 110, or otherwise suitably secured in position with respect to the duct 108. The duct is disposed directly on the top surface of the floor slab 105, and does not extend the entire height of the concrete fill 106. It is therefore necessary, in this embodiment of the invention, to provide spaced collars or sleeve members 112, which may be welded or otherwise secured about the openings 113 formed at spaced intervals along the lengths of the member or duct 108, and which at their upper ends are adapted to receive closure plugs corresponding to the closure plugs 78 of the embodiment shown in Figures 10 to 12, or the closure plug 15 shown in Figure 15.

The sleeves 112 extend up to the top surface of the cinder-fill 106, and, when an outlet connection is to be secured thereto, the outlet connection is provided with a depending cylindrical portion 114 of an external diameter equivalent to the internal diameter of the sleeve 112, and with a radially extending flange portion 115 limiting the downward position of an outlet connecting member 116, so that the member is disposed in rigid alignment within the sleeve 12.

The member 116 extends upwardly from the interior of the sleeve 112, and at its upper end is divided into semi-cylindrical spaced portions 117 and 118, corresponding to the portions 94 and 95 of the member 90. As shown in Figure 18, the member 116 is provided with inwardly extending partition walls 119 having a slot therebetween through which securing means 120 is adapted to extend. This effectually divides the member 116 in the same manner that the duct 108 is divided by the interior wall 109, and the intermediate wall 109 is correspondingly slotted to receive the securing member 120, which threads at its lower end into the lower wall of the duct 108.

Adapted to be mounted upon the upper end of the member 116 are a pair of spaced semi-cylindrical closure members forming an integral closure plate 122, which closure plate 122 corresponds to the closure plate 34 of Figure 2, or the closure plate 99 of Figure 12. The closure plate 122, shown in detail in Figure 17, is provided with an enlarged portion 123 serving as a bearing for the securing screw 120, to maintain this screw in alignment and provide a suitable bearing surface therefor. The screw 120 extends outwardly through the closure plate 122 and the member 116 between walls 119 to the lower end of the duct 108, and, upon being threaded into the lower wall of the duct 108, draws the closure plate 122 in tight engagement

upon the top of the member 116. Suitable plug receptacles 124 may be mounted in one of the cylindrical outlet connections 117, for the purpose of providing for connection of plugs from flexible electric cords or the like thereto, while the opposite cylindrical portion 118 of the member 116 may be provided with suitable bushings or sleeves 125 at opposite ends thereof, as shown in Figure 18, for the purpose of providing outlets for telephone service wires or the like. Preferably a suitable collar 126 is provided about the member 116, to close the opening in the floor surface 107 through which the member extends. This is optional.

While I have shown my invention as applied to a particular type of floor construction, it is to be understood that the invention is not to be thus limited, since the broad underlying principles of the same may be applied equally well to underfloor duct systems employed in connection with other types of floor constructions, since the particular type of floor construction has no controlling effect upon the operation or use of the duct system.

Also, it is to be noted that the system is adapted for use with either a single divided conduit, or with separate conduits, and is capable of flexibility in both design and in operation, since the outlet nozzles or standpipes may be disposed angularly with respect to the conduit, or may be disposed at any desired relative position with respect thereto.

Further, it is to be pointed out that the Siamese connection at the upper ends of these standpipe outlet nozzles provides for connection to either plug type receptacles for electric light service, or similar electrical service, or can be employed as outlet connections for telephone service wires or the like, thus providing a system which has great adaptability for complying with the particular needs or desires of the tenants in the building.

Having described my invention in accordance with the patent statutes, what I claim as new and desire to secure by Letters Patent is:

1. A concealed wiring system for buildings comprising a duct lying wholly within the floor structure and below the floor surface, said duct having a longitudinally extending partition wall dividing the same into two separate runways, said duct having spaced openings in its top surface communicating with both said runways, slots cut in said partition wall beneath said openings, and closure means for said openings comprising plate members extending across the entire top surface of said duct and secured thereto, said members having centrally disposed coplanar removable closure plugs provided with detachable securing means passing through said slots and engaging the bottom wall of said duct.

2. A concealed wiring system for buildings comprising duct means lying within the floor structure and providing two separate conductor runways, said means having spaced openings in the top thereof each providing an outlet for both said runways, closure means for said openings and extending coplanar with the top of said duct means, and screw members extending through said closure means and threading into the bottom wall of said duct means for detachably securing said closure means in position.

3. The combination with an underfloor duct system having a longitudinally divided duct provided with an outlet opening in the top surface thereof communicating with said duct on op-

posite sides of the longitudinal division thereof, of a closure member for said opening comprising a tapered plug having seating engagement in said opening and having the top surface thereof lying substantially flush with the top surface of said duct, and means extending through said closure means and duct for detachably securing said closure means in position.

4. In an underfloor duct system for electrical wiring, a duct having an intermediate partition dividing the same into two separate conductor runways, said partition being cut away at spaced intervals, said duct having openings in the top surface thereof at said cut away portions of said partition, closure means for said openings, and detachable securing means for said closure means extending through the cut away portions of said partition and engaging the bottom wall of said duct.

5. A duct for an underfloor wiring system comprising a substantially rectangular hollow conduit having an intermediate partition dividing said conduit into two runways, said conduit having spaced openings in the top wall thereof communicating with both said runways, said partition having a cut away portion below each of said openings, closure means comprising a plug fitting into each of said openings, and means extending downwardly through said plug and cut away portion and engaging in the bottom wall of said conduit for detachably securing said plug in position.

6. In a concealed wiring system for a building having a floor structure comprising a floor slab, the combination of a wiring duct lying on said slab, said duct having spaced openings in the top surface thereof, cylindrical collar members secured to the defining surfaces of said openings and extending upwardly to the top surface of said structure, closure means for said collar members, and means extending through said closure means and collar members and engaging in the bottom of said duct for detachably securing said closure means in position.

7. A concealed wiring system for a building having a floor structure including tongue and groove flooring lying upon a slab, and a linoleum floor thereon, comprising a duct member lying on said slab and having spring means for locking said duct with respect to the groove in said flooring, said duct lying below the linoleum flooring.

8. The combination with an underfloor duct system lying beneath a floor surface and comprising duct means having separate parallel conductor runways therein, said duct means having spaced outlet openings along the top surface thereof, of an outlet connection for leading out conductors from said runways through one of said openings comprising a standpipe having a central partition and engaging in said opening, laterally spaced outlet openings at the upper end of said standpipe, a closure plate extending over both of said outlet openings of said standpipe, and securing means for said standpipe bearing against the upper surface of said plate and extending downwardly through said partition and duct means and engaging in the bottom wall of said duct means.

9. A standpipe for an underfloor duct system comprising a depending cylindrical portion having an annular flange adjacent its lower end, vertically extending transverse partitions extending from diametrically opposite sides of said standpipe toward the center thereof, upwardly

opening semi-cylindrical portions on opposite sides of said partitions, and closure means for said standpipe comprising an integral member having downwardly opening semi-cylindrical portions engaging said first named portions to define two separate cylindrical open-ended outlets for said standpipe.

10. The combination with an underfloor wiring duct having separate conductor runways, of a standpipe providing outlet connection for said runways and having a central partition dividing said standpipe into two separate outlet passageways, and horizontal open-ended cylinders at the upper end of said standpipe, each of said cylinders communicating with one of said passageways.

11. In combination, a pair of conductor runways, a plurality of spaced openings in the top surface of said runways, a standpipe having the lower end thereof fitting into one of said openings, a partition extending vertically through said standpipe, and laterally spaced horizontally extending outlets at the upper end of said standpipe communicating with said lower end at each side of said partition.

12. In combination, in an underfloor wiring system, a pair of parallelly extending duct runways, said runways having spaced outlet openings in the top surface thereof, and standpipes adapted to be secured to said openings each comprising a hollow member having an extension at the lower end thereof adapted to fit into a corresponding opening in said runways, means at the top of said member providing laterally spaced outlets, means extending vertically through the body of said member partitioning said member into two vertical passageways, and securing means comprising a bolt engaging the top of said standpipe and extending downwardly through said member and between said runways and engaging the bottom wall of said runways for detachably securing said standpipe in position.

13. In combination, a duct having two separated conductor runways therein, an outlet opening in the top surface of said duct providing communication with both said runways, a standpipe engaging in said opening and having spaced lateral outlets, a partition dividing said standpipe to form two separate passageways therein from said outlet opening to said laterally spaced outlets, and a bolt extending downwardly through said standpipe for securing said standpipe in position over said outlet opening.

14. In an underfloor wiring system, duct means providing two separated conductor runways, a standpipe extending into the top of said duct means and providing two separated vertical outlet passageways, laterally spaced horizontally extending troughs at the upper end of said passageways, a cap member having corresponding laterally spaced inverted troughs forming horizontally extending cylindrical outlets with said first-named troughs, and means for detachably securing said cap member to said standpipe and said standpipe to said duct means.

15. In a duct having two separated conductor runways and having an access opening extending entirely across the top of said duct, the combination of a closure plate positioned over said opening and having a coplanar removable center plug, and securing means extending through said plug and engaging the bottom wall of said duct for

clamping said plate and plug in position over said opening.

16. A standpipe for leading out conductors from an underfloor wiring runway comprising a cylindrical body member divided into two vertical passageways, detachable means at the upper end of said body member providing laterally spaced horizontally extending tubular wiring outlets and including means preventing communication between said outlets, and means at the lower end of said body member providing for communication between said passageways and said runway.

17. A wiring system of the class described comprising two parallel duct runways having a longitudinally extending partition wall therebetween, said runways having spaced openings extending entirely across the top surfaces thereof, closure plates over said openings, and central removable plug members carried by said plates and providing access to both said runways, said plug members having means extending therethrough and through said partition wall and engaging the bottom wall of said runways for securing said plug members in fixed position with respect to said runways.

18. A standpipe for leading out conductors from an underfloor wiring runway comprising a body member having means at the lower end thereof providing for communication between said runway and the interior of said body member, a cap member mounted on the top of said body member and providing therewith two laterally spaced horizontal extending wiring outlets, and means in said body member and cap member separating said outlets and providing individual non-communicating passageways from said outlets downwardly through said body member to said runway.

19. In combination, an underfloor member having two separated conductor passageways therein, said member having an outlet opening at the top thereof providing communication with both of said passageways, a standpipe having separate vertically extending passageways communicating respectively with said separated passageways through said opening, laterally spaced outlet means at the top of said standpipe in respective communication with said vertically extending passageways, and means carried by said standpipe for detachably securing said standpipe to said underfloor member.

20. In combination, an underfloor member having two separated conductor passageways therein, said member having an opening in the top surface thereof communicating with both said passageways, a standpipe having the lower end thereof engaging over said opening, a partition extending vertically through said standpipe, and laterally spaced outlets at the upper end of said standpipe communicating with said lower end at each side of said partition.

21. An underfloor conductor member comprising a pair of enclosed separated parallel passages, said member having its top wall discontinuous at longitudinally spaced points to provide access to both said passages, a closure plate extending over and secured to said member at said points, and centrally located detachable means carried by said plate and providing a closure for an outlet opening extending over a portion of both of said passages.

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