

J. FOUNTAIN, JR. & B. JONES, JR.
FLOOR BOX.

APPLICATION FILED JULY 27, 1909. RENEWED JULY 15, 1911.

1,023,246.

Patented Apr. 16, 1912.

2 SHEETS-SHEET 1.

Fig. 1

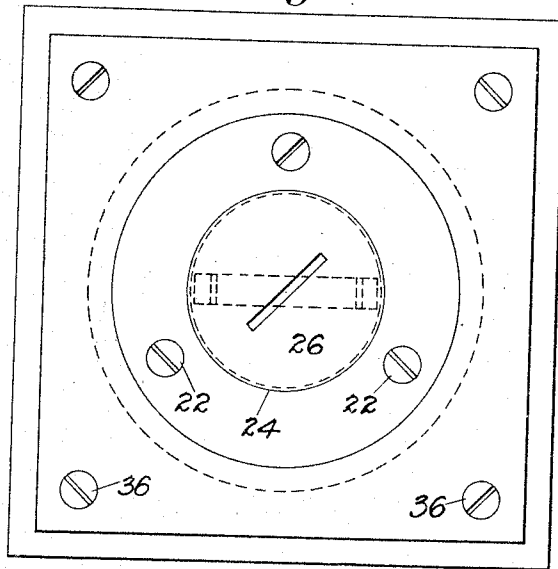
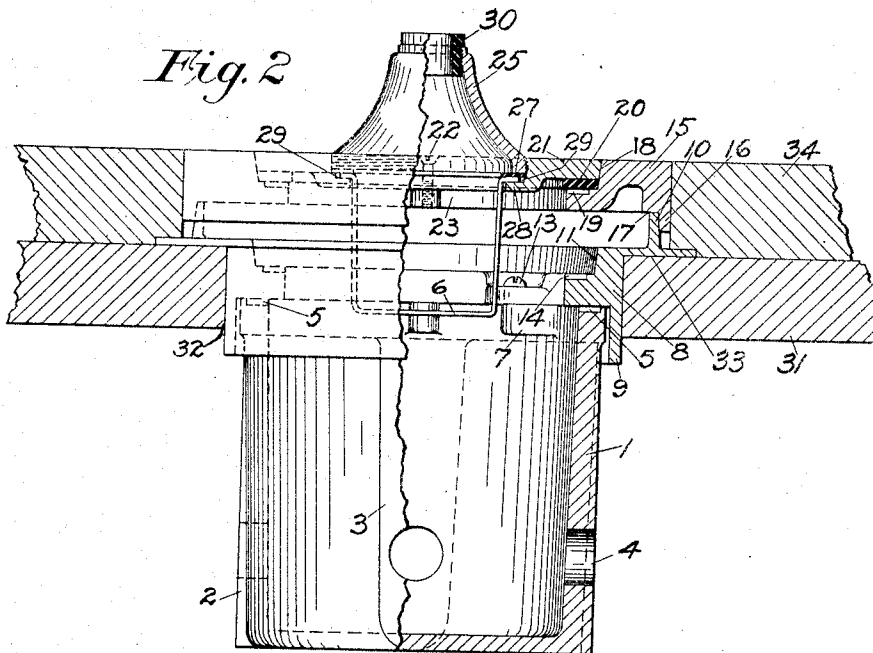


Fig. 2



Witnesses

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2 SHEETS-SHEET 2.

Fig. 5

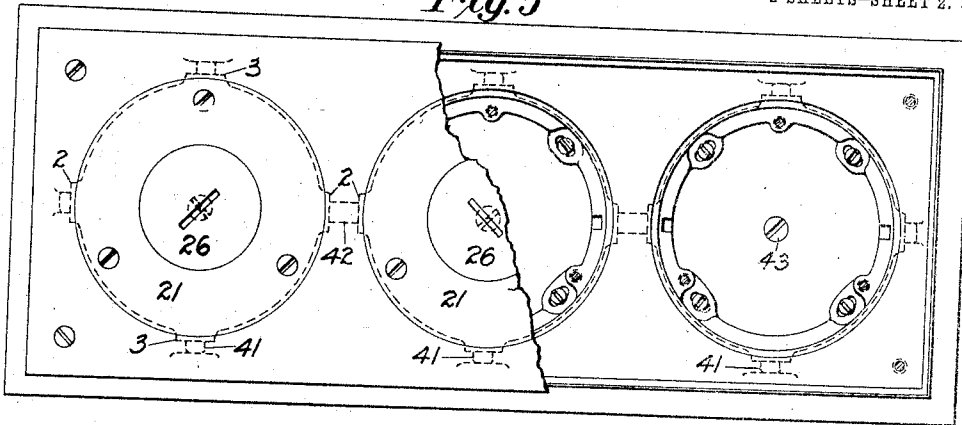


Fig. 6

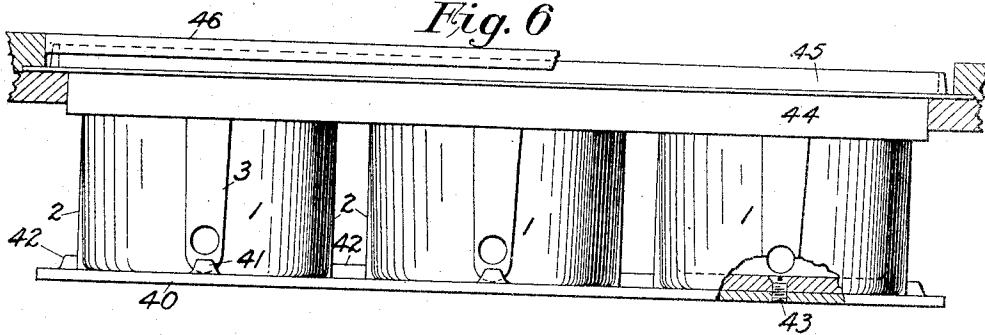
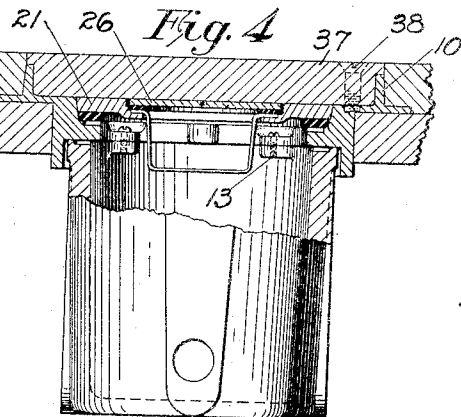
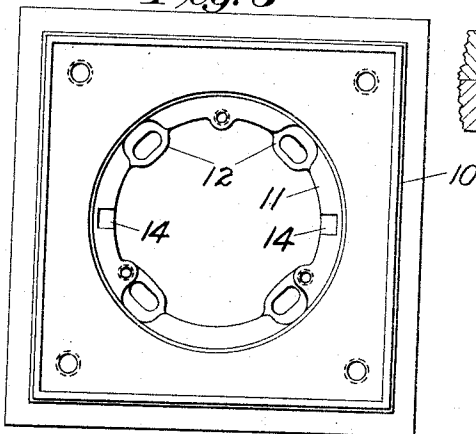


Fig. 3



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UNITED STATES PATENT OFFICE.

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FLOOR-BOX.

1,023,246.

Specification of Letters Patent.

Patented Apr. 16, 1912.

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To all whom it may concern:

Be it known that we, JOHN FOUNTAIN, JR., a citizen of the United States, residing in the city of Elizabeth, county of Union, and State of New Jersey, and BASSETT JONES, Jr., a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Floor-Boxes; and we do declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same.

In the installation of electric plants in large modern buildings, it has become the custom to provide the various rooms with electric fixtures known as outlet boxes and floor boxes, for the purpose of tapping the electric circuit to take off current for electric lights, telephone, annunciators, and the like. It frequently happens that after the building is completed and the electric plant installed, changes are required, whereby new fixtures are located and old ones abandoned.

It is the purpose of our invention to provide a fixture which may be permanently set in the floor of a building for connection with the electric circuit, whereby the various circuits running beneath the floor may be tapped and proper receptacles inserted for the taking off or conducting away of the electric current.

Our improvement has more to do with the class of electric fixtures which are located in the floors of office buildings and known now to the art as "floor boxes", and our main object is to provide means whereby the exposed portion of the box may be secured in position flush with the floor and present a neat and tasty appearance, and at the same time should it be required to abandon said floor box, the cover plate may be removed and the box covered over with the same material of which the floor is constructed, if desired.

In carrying out our invention, we make use of the structures hereinafter fully described and illustrated in the drawings, in which—

Figure 1 is a plan view of an "abandoned" floor box. Fig. 2 is a side elevation, partly in section, of the floor box ready for use and differing from Fig. 1 in having a so-called nozzle substituted for the flat in-

section plate hereinafter described. Fig. 3 is a plan view with the cover removed, showing the interior construction of the upper section of the box. Fig. 4 is a side plan view partly in section, showing an abandoned box covered with the floor material. Fig. 5 represents a top plan view partly in section, of a gang of three boxes; and Fig. 6 is a side elevation of the gang of boxes illustrated in Fig. 5.

Similar letters of reference refer to like parts throughout the specification and drawings.

Our improved box consists essentially of a cup-shaped main box body 1 of circular or polygonal form as desired. Upon its sides are formed in casting the bosses or "pads" 2 and 3, through which extend the apertures 4 for receiving the electric conductors to be connected up with some form of receptacle to be inserted in the box proper. The upper edge of the box body 1 is provided with a series of diametrically located sockets or recesses 5, opening inwardly into the box body proper. These are for the purpose of receiving a U-shaped bracket similar to that shown at 6, and more specifically hereinafter described. Projecting inwardly from the upper edge of the box is a plurality of screw-threaded apertured lugs 7. Setting over the upper edge of the box body 1 is an open cover 8 having the downwardly projecting flange 9 extending down somewhat over the upper edge of the box 1. This open cover is clearly illustrated in Fig. 3, and is provided with the up-standing flange 10 extending around its outer edge, and a circular recess 11, said recess 11 being provided with further depressed and slotted recesses 12. These slotted recesses are for the purpose of receiving screws 13 by which the cover 8 is connected to the lugs 7 of the box body 1. Located diametrically opposite each other in the circular recess 11 are the recesses 14 designed to receive a U-shaped bracket or hanger similar to that shown at 6. The recess 11 is provided with a circular edge beveled upwardly on the inside for a purpose hereinafter to be described. The upper portion of this cover plate is shown as square in the various figures, and projects laterally from the main body 8 of the cover to a considerable distance as clearly shown in Figs. 2 and 4, for a purpose hereinafter to be described.

The top cover 15 is designed to set over the flange 10, being provided with the marginal downwardly extending flange 16 and the inner ledge 17 for coöperation with the up-standing flange 10 of the open cover. This top cover is provided with a circular beveled recess 18 of the same size and depth as the recess 11 in the open cover 8. This recess is also provided with recesses 19 similar in all respects to the recess 14 of the open cover 8 and 5 of the upper edge of the body 1, and is designed to receive a U-shaped bracket similar to the bracket 6. Located in the bottom of this recess is a gasket 20 upon which is superposed the flat cover 21, said cover being provided with the plurality of screws 22, which are designed to secure the cover 21 to the top cover 15 as clearly illustrated in Fig. 1, lugs being provided in the open part of the top cover 15 for that purpose. It should be stated at this point that the top cover 15 has a circular opening 23 in its center to provide access to the interior of the floor box. The circular cover 21 is also provided with a circular central aperture 24, screw-threaded to receive either the nozzle 25 shown in Fig. 2, or the flat screw-threaded cap 26, shown in Fig. 1. A gasket 27 is provided in this opening 24 and upon the circular inwardly projecting ledge 28, for that purpose. This ledge 28 is further provided with recesses 29 to receive the outwardly splayed upper ends of the U-shaped bracket 6, heretofore referred to. When the nozzle 25 is screwed down into position, its lower edge will bear upon the outwardly splayed ends of this bracket 6 and thus hold the same in rigid relation with the other parts. The nozzle 25 is provided with the bushing 30 of hard rubber or other insulating material, this bushing 30 being centrally apertured to provide egress for the electric conductors which are led out from the floor box to any particular device, as for example, to a desk lamp, or to the telephone.

Our object in providing the various recesses 5, 14 19 and 29 is that it frequently happens that receptacles of various sizes are required to be used for various purposes, and corresponding means must be provided in the floor box for supporting the same, so that we may use any one of these recesses to receive a bracket similar to bracket 6, of requisite size to support such receptacle. We have not shown the receptacle in position, neither have we shown more than one of the brackets 6, but it will be clearly understood that the brackets to be carried in the sockets 5, 14 and 19 are exactly similar in shape and have the upper ends outwardly splayed as at 29, the only difference being in their sizes.

The floor boxes as we have described them are designed for location on the floor, as

shown in Fig. 2, wherein, 31 represents the rough floor or floor lining. In this case, the main body 1 is embedded in the cement with which the main body of the floor is constructed, after which the floor 31 is laid with an opening 32 therein to receive the cover 8, so that said over-hanging or outwardly flanged portion 33 of the cover 8 shall rest upon the upper faces of the rough flooring 31. If for any reason, the body 1 has not been accurately located or alined in the cement or beneath the floor 31, the slotted recess 12 in the cover 8 will permit of such adjustment, as to allow the open cover 8 to be correctly placed and adjusted, when the screws 13 may be screwed home, thereby securing the cover 8 in position and bearing upon the floor 31, the flanged portion 33 having sufficient width so that the top flooring can rest upon it. It may not even be necessary to screw the open cover 8 to the box body at all, and thus this open cover, together with the top cover, forms all the more an entirely independent member of the floor box, permitting lateral adjustment of the open cover within the limits determined by its flange 9, but not limiting the vertical distance of the cover from the box to an exact measurement. Then the top cover 15 may be put in position, and the top flooring 34 may be laid, so that it shall be flush with the upper face of the top cover 15 as fully illustrated in Fig. 2. This top flooring 34 may be of any of the various types of flooring used in modern construction, as for example, mosaic, terrazo, marble, slate or cement, or even wood flooring.

If at any time, it is desired to abandon the floor box for any reason, it is only necessary to remove the nozzle 25 and substitute for it the flat plate 26, when of course, the top of the floor box will be flush throughout the entire surface with the surface of the floor. If, however, it is desired to abandon the floor box for the present, and to remove all trace of the same from outward appearance, it is then only necessary to remove the top cover 15 by taking out the screws 36, lifting the cover out and setting a block of wood in its place if the floor is of wood construction, or if it is mosaic, terrazo or marble, the flat circular cover plate 21 may be removed from the top cover 15 and placed in the recess 11 of the open cover 8, as clearly illustrated in Fig. 4, thus closing up the interior of the floor box completely. Then the flooring such as mosaic, terrazo, marble, cement or the like may be laid over the circular cover 21 in such a way that all trace of the floor box is removed. If desired, a block of wood, such as illustrated in Fig. 4 at 37 may be properly shaped and located in position, as shown, being held therein by means of screws 38 screwed into the same holes which are pro-

vided for the screws 36. It will thus be seen that we have provided a floor box capable of performing all of the desired objects, having in view receptacles of various sizes to be supported by various sized brackets, such as bracket 6, and also provide means whereby the floor box may be temporarily abandoned, as in the substitution of the flat plate 26 for the up-standing nozzle 25, or where the exigencies of the situation require, the top cover plate 15 may be completely removed and the floor laid over the box, so as to completely remove all trace of the same from outward appearance. It is also obvious that another important feature of our cover box is the complete independency of the covers from the box body proper, so that the covers will be always flush with the floor without requiring particular vertical adjustment, and that the cover may be shifted horizontally in all directions within reasonable limits, so as to greatly facilitate and cheapen the setting of the cover into the floor by the carpenter.

It frequently happens that circuits for more than one purpose are necessary and must be provided for in a floor box. In order to reduce the cost of manufacture of floor boxes for such purposes to a minimum, and at the same time, provide against a multiplicity of parts, we sometimes construct the floor box in gangs as illustrated in Fig. 6, wherein, we have shown a gang of three floor boxes having independent box bodies 1 of exactly the same shape and configuration, and having the same characteristics as the box body 1 heretofore described. These we mount in gangs upon a templet 40, said templet being provided with a plurality of lugs 41 and 42, the lugs 41 being located diametrically opposite each other and near the edge of the templet and spaced apart just sufficient to receive the flat faces or pads 3. The lugs 42 are located in the center line of the templet, so as to bear against the lower ends of the pads or flat faces 2, as clearly shown in Figs. 5 and 6.

The box body 1 is held in position on the templet by means of screws 43, passing through the center of the bottom of the box and screwed into the templet 40. In this case, the open cover 44 is made to conform to the upper edges of the box body 1, and have the series of openings therein each similar to the single opening in the open cover 8, heretofore described. This cover 44 has the up-standing flange 45, similar in all respects to the up-standing flange 10, heretofore referred to. The top cover 46 is also similar in all respects to the top cover 15, with the exception that it is oblong, whereas, the top cover 15 is shown as square, the top cover 46 being also provided with the plurality of cover plates 26, in order to

give access to the interior of the box beneath.

We claim:

1. In a floor box, the combination of a box body, an open cover adjustably secured to the upper edge of said box body provided with a flange upon the under side of said cover loosely embracing the upper edge of said body, a top cover secured to said open cover and means in said top cover for supporting an electric fixture within said floor box.

2. In a floor box, the combination of a box body, an open cover adjustably secured to the upper edge of said box body provided with a circular flange upon the under side of said cover loosely embracing the upper edge of said body, a top cover secured to said open cover and means in said open cover for securing an electric fixture within said floor box.

3. In a floor box, the combination of a box body, an open cover adjustably secured to the upper edge of said box body provided with a circular flange upon the under side of said cover loosely embracing the upper edge of said body, a top cover secured to said open cover and means in the upper edge of said box body for supporting an electric fixture within said box body.

4. In a floor box, the combination of a cup-shaped box body having inwardly extending recesses in its upper edge, an open cover adjustably secured to the upper edge of said box body, said open cover having a downwardly extending flange to inclose the upper edge of said box body, and an outwardly extending flange to form a means for supporting said cover, a top cover secured to said open cover, said top cover having in its upper face a recessed aperture for receiving either an outlet nozzle or a closing disk, whereby said outlet box may be utilized for leading out electric wires or closed and abandoned for electric purposes.

5. In a floor box, the combination of a box body of cup-shape, said box body having lateral apertures through which electric circuit wires may be introduced into the interior of the box body, an adjustable open cover secured to the upper edge of said box body, said cover having means therein for affording a support to an electric fixture to be connected up with said electric circuits, a top cover secured to said open cover, said top cover designed to lie flush with the upper surface of a floor, said top-cover having a recessed aperture centrally located therein, and a conduit nozzle secured in said recessed aperture, whereby circuit wires may be out from said floor box.

6. In a floor box, the combination of a box body, an open cover adjustably secured to the upper edge of said box body, said

- cover being provided with an upstanding marginal flange on its upper side, and a downwardly extending flange on its lower side to embrace the upper edge of said box body, said cover having a circular opening, a recessed ledge surrounding said opening to receive a disk closure, and a top cover fitted to said upstanding flange and rigidly secured to said open cover.
7. In a floor box, the combination of a cup-shaped box body, a cover for said body, said cover having a central opening therein, a circular flange upon the underside of said cover loosely embracing the upper edge of said body, said cover extending laterally in all directions from said flange to form a supporting ledge therefor and a disk cover plate adapted to be secured in said opening to form a closure therefor.
8. In a floor box, the combination of a cup-shaped box body, a cover for said body, said cover having a central opening therein, a circular flange upon the underside of said cover loosely embracing the upper edge of said body, said cover extending laterally in all directions from said flange to form a supporting ledge therefor, a disk cover plate adapted to be secured in said opening to form a closure therefor, an upstanding marginal flange upon the upper side of said cover adapted to receive and support a section of the flooring in which said box is located.
9. A floor box, comprising a box body, a cover for said body provided with a flange upon the under side of said cover loosely embracing the upper edge of said body, said cover having means for supporting it independent of said box body.
10. A floor box, comprising a box body, an independently supported cover for said body provided with a flange upon the under side of said cover loosely embracing the upper edge of said body and means for adjustably securing said cover and body together.
11. A floor box fixture, comprising a box body, an open cover adapted to be adjustably secured to and supported independent of said box body, said cover provided with a circular flange upon the under side of said cover loosely embracing the upper edge of said body.
12. A floor box having a box body and a cover therefor supported independently thereof, said cover provided with a circular flange upon the under side of said cover loosely embracing the upper edge of said body.
13. A floor box having a box body and a cover therefor supported and held in place independently thereof, said cover provided with a circular flange upon the under side of said cover loosely embracing the upper edge of said body.
14. A floor box having a box body and a cover therefor supported independently thereof and adapted to be attached to said box body, said cover provided with a circular flange upon the under side of said cover loosely embracing the upper edge of said body.
15. A floor box having a box body, an open cover provided with a downwardly extending flange loosely embracing the upper edge of said body and a top cover for said open cover, said open cover supported independently of said box.
16. A floor box having a box body, an open cover provided with a downwardly extending flange loosely embracing the upper edge of said body, a top cover for said open cover, said open cover supported and held in place independently of said box.
17. A floor box having a box body, an open cover provided with a downwardly extending flange loosely embracing the upper edge of said body, a top cover for said open cover, said open cover supported independently of said box, but adapted to be attached thereto.
18. A floor box fixture, comprising a plurality of box bodies, with means for securing said bodies rigidly together, said bodies provided with a gang cover adapted to inclose said bodies and means independent of said bodies for supporting said cover.
19. A floor box fixture, comprising a plurality of box bodies, a templet to which said bodies are rigidly secured, a cover adapted to be adjustably secured to and supported independently of said plurality of bodies.

This specification signed and witnessed this 21 day of July, 1909.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."