

No. 674,560.

Patented May 21, 1901.

H. ILL.
OUTLET BOX.

(Application filed Feb. 20, 1901.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1

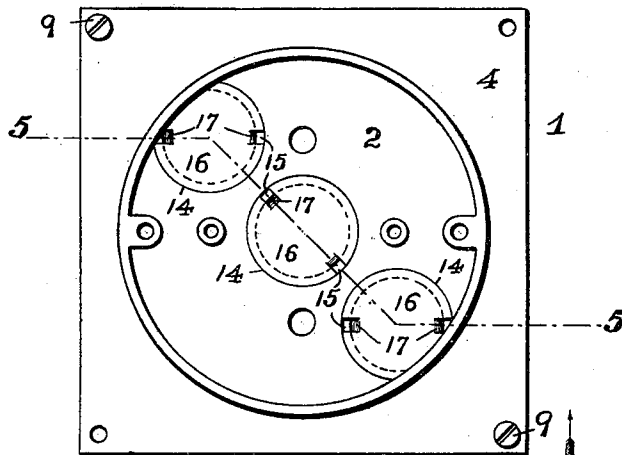


FIG. 2

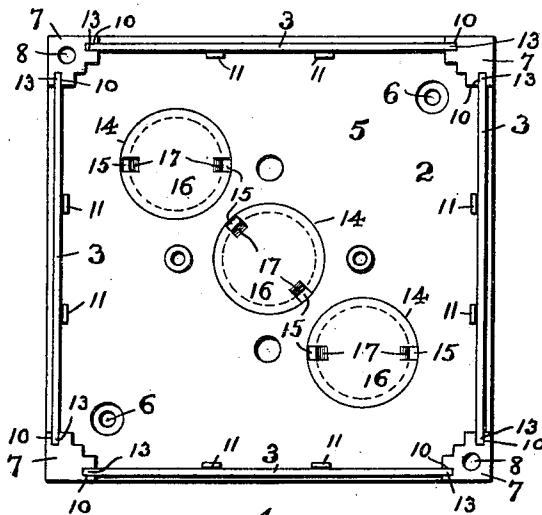
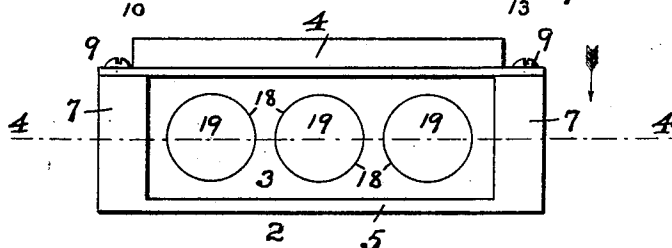


FIG. 3



WITNESSES:

Geo. S. Richards
M. B. Fraentzel

INVENTOR:

HENRY ILL,

BY
Fred C. Fraentzel
ATTORNEY

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2 Sheets—Sheet 2.

(No Model.)

FIG. 4

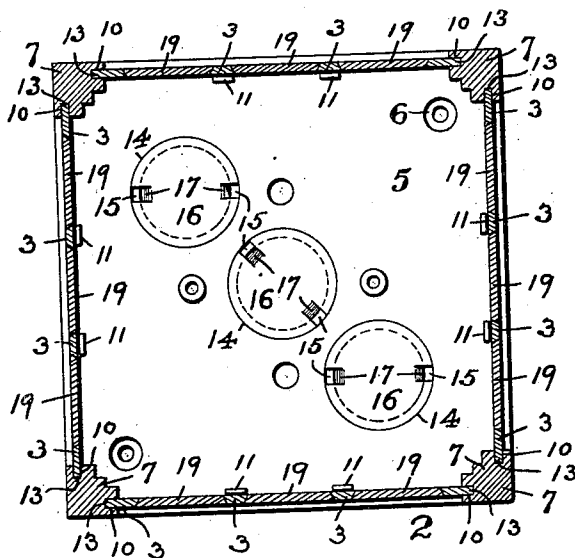


FIG. 5

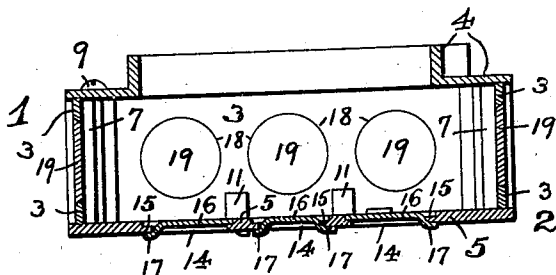
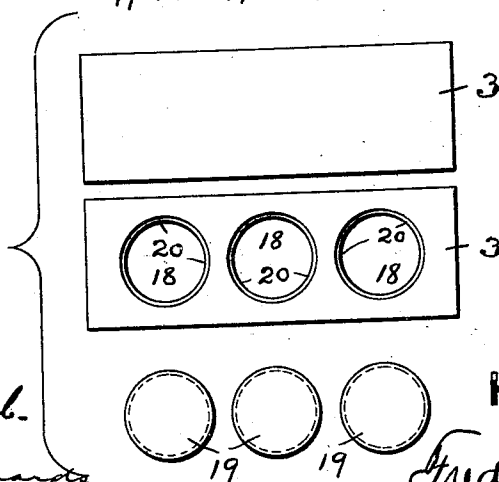


FIG. 6



WITNESSES:

Mr. B. Fraentzel.
Geo. L. Richards

INVENTOR:

HENRY ILL,

BY

Frank Fraentzel
ATTORNEY

UNITED STATES PATENT OFFICE.

HENRY ILL, OF NEWARK, NEW JERSEY.

OUTLET-BOX.

SPECIFICATION forming part of Letters Patent No. 674,560, dated May 21, 1901.

Application filed February 20, 1901. Serial No. 48,080. (No model.)

To all whom it may concern:

Be it known that I, HENRY ILL, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Outlet-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to numerals of reference marked thereon, which form a part of this specification.

This invention relates to improvements in outlet-boxes to be used in buildings and designed for making connections in the electrical wiring of buildings.

The present invention has for its principal object the production of a simple, economical, and novel construction of outlet-box which is to be employed as a fixture in the walls or ceiling of the box being of such construction that one or more openings can be easily and quickly made in the side or sides or in the bottom of the box by knocking or forcing out from said parts of the box certain plates or disks, and thereby providing openings for the reception and attachment of electric or gas fixtures.

A further object of this invention is to provide an outlet-box for the various purposes above stated which comprises a skeleton frame of cast metal and having its sides made of sheet-steel or other sheet metal secured in position to the uprights or posts of a base of the said skeleton frame during the process of casting the said skeleton frame, whereby when the box is completed the said skeleton frame constituting the base and side posts or uprights and the said sides are practically cast in one integral piece and are non-separable, although made of different metals.

A further object of this invention is to provide the said sheet-metal side or sides of the box previous to being arranged in the pattern for casting the skeleton frame with a hole or holes by having a portion or portions cut from said blank of metal in the form of a plate or disk and then again forcing the said

plate or disk back into the opening or openings in the blank, where it remains until knocked out or removed by the workman for the attachment to the box of a gas or electric fixture.

Other objects of this invention not here specifically mentioned will be more fully set forth in the following description of my invention.

This invention therefore consists in the novel outlet-box hereinafter fully set forth; and, furthermore, this invention consists in the several novel arrangements and combinations of the various parts of the box, as well as in the details of the construction thereof, all of which will be fully described in the specification and then finally embodied in the clauses of the claim which are appended to and form a part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a top or plan view of an outlet-box embodying the various principles of this invention, the same being represented with its top cover in position. Fig. 2 is a similar view of the said box with the cover removed, and Fig. 3 is a side view of the box. Fig. 4 is a horizontal section of the outlet-box, said section being taken on line 4 4 in said Fig. 3; and Fig. 5 is a vertical cross-section of the box, said section being taken on line 5 5 in Fig. 1. Fig. 6 is a collective diagrammatical representation of one of the blanks to be employed as a side for the box, said view representing in plan, first, a blank; second, the blank blocked out with the holes or openings, and, third, a representation of the plates or disks thrown out of said blank which are to be placed or forced back in their respective positions in the holes or openings in said blank.

Similar numerals of reference are employed in all of the said above-described views to indicate corresponding parts.

In the said drawings, 1 indicates the complete outlet-box, which consists, essentially, of a skeleton frame 2, sides 3, and top cover 4 of any suitable construction. The said skeleton frame 2, which is made of cast metal, is formed with a base 5, in which are the

usual screw-holes 6 for securing the complete box in position to any part of the building. This base 5 is preferably made square, as shown; but it will be understood that said base may be of any other suitable configuration in outline. At the several corners of the said base 5 the same is cast with uprights or posts 7, two or more of which may be provided with screw-threaded holes 8 for the reception of the screws 9, by means of which the top cover 4 is secured in position. The said uprights 7 are also formed with vertically-extending grooves or channels 10 or other suitable means for the reception of the end edges 13 of the sheet-metal side plates 3, which are integrally held in position and are connected with said uprights or posts 7 in the manner to be hereinafter more particularly described. The said base 5 is also provided with upwardly-projecting teats or lugs 11 at or near the edges of the base, which bear against the lower inner portions of the said side plates 3, when in position, to prevent warping or distortion of said plates, as will be clearly understood. The said cast-iron base may also be provided with one or more holes or openings 14, the upper and inner portion of each opening being of a larger diameter than the diameter of the lower portion of the opening or openings, whereby each opening 14 is provided with an annular shoulder 15, substantially as illustrated more particularly in Fig. 5 of the drawings.

Upon each shoulder 15 is placed a disk 16, which thereby fits into the opening 14 and closes the same, as represented in the several figures. That each disk or plate 16 may be held in place in its opening 14 in the cast-iron base 5 against accidental displacement, but also that each disk or plate 16 can be forcibly removed by the workman when he desires to make an electrical connection or desires to apply any other fixture to the box, each disk or plate 16 is formed with holding-tongues 17, forced out at the circumferential edge of the disk, as illustrated. When a disk or plate 16 is placed upon the annular shoulder or support 15 of a hole or opening 14 in the base 5, then said downwardly-projecting lugs or tongues 17 will extend below the outer face of the base 5 and can then be turned over or upset against the surrounding edge of the hole 14 for securely retaining the disk or plate 16 in position against any possible displacement unless forcibly driven from its position by the workman when he desires to apply a gas or electric fixture.

As has been previously stated, the sides 3 of the outlet-box are to be made of sheet-steel or other suitable sheet metal, each blank 3 being formed, by means of a cutting-die or other suitable machinery, with one or more openings or holes 18, formed by the removal of the plates or disks 19 from the main blank or plate 3, as will be clearly evident from an inspection of Fig. 6 of the drawings. The

cutting edge of the cutters of the die is such that each hole or opening 18 has its circumferential or marginal edge formed with an outwardly-extending taper, the circumferential or marginal edge of the disk or plate 19 which is cut from said hole being provided with a corresponding tapering edge extending in the opposite direction from that of the said hole or opening. Thus it will be clearly understood that as soon as the disk or plate 19 has been cut out and forced from the blank of sheet metal it can be immediately forced back in position in the hole 18 and held therein by the engaging contact between the circumferential or marginal edges of the disk or plate and the hole. It will thus be seen that before each blank is cast in position in the skeleton frame 2 such blank is provided with one or more holes or openings, in which is removably held a suitable disk or plate. These disks or plates 19 are sufficiently held in their positions in the holes or openings 18 in the sides 3 of the box to close the said holes or openings and can only be removed by a hard tap from a hammer or other tool when the workman desires to apply a fixture at the side of the box.

The manner of arranging the blanks of sheet metal in the sand so as to cast the uprights or posts 7 securely around the end edges of the blanks will be readily understood and need not be described here. Suffice it to say merely that when the cast-metal skeleton frame 2 has been cast then the sheet-metal sides 3 will practically form an integral and inseparable part of the said skeleton frame, and an outlet-box of neater appearance and a cheap construction greatly reduced in weight will be the result.

The number of and the manner of arranging the holes or openings in the sides 3 and in the base of the skeleton frame 2 and the number of closing disks or plates may be varied, as will be understood, the usual number of openings and plates or disks in each side and in the bottom of the outlet-boxes as furnished by the manufacturer being three; but any other special arrangement of holes and plates or disks may be provided, if desired.

The herein-described outlet-box can be secured in position in any part of a building—as, for instance, in the side walls, the ceiling, or in the flooring—and any one or more of the said plates or disks, either in the sides or in the base of the outlet-box, can be forced from its closing position for the admission into the box of a conduit or conduits containing the electric wires or for suitably affixing to the outlet-box a gas or other fixture.

I am fully aware that some changes may be made in the several arrangements and combinations of the various devices hereinabove described without departing from the scope of my present invention. Hence I do not limit my invention to the exact arrange-

ments and combinations of the several parts as described in the previous specification and as illustrated in the accompanying drawings, nor do I confine myself to the exact details of the construction of the various parts of the box.

I am also fully aware that the shape of the box as well as that of the holes or openings in its side and base and the registering plates or disks in said holes or openings may be varied at will.

Having thus described my invention, what I claim is—

1. An outlet-box for electric wires or other fixtures, comprising a base and posts of cast metal, sides to said box made of sheet metal and cast in position with said posts, one or more of said sides being provided with an opening or openings, and a plate or disk in each opening adapted to be removed therefrom, substantially as and for the purposes set forth.

2. An outlet-box for electric wires or other fixtures, comprising a base and posts of cast metal, said posts having vertical grooves, sides to said box made of sheet metal and cast in position in said grooves, one or more of said sides being provided with an opening or openings, and a plate or disk in each opening adapted to be removed therefrom, substantially as and for the purposes set forth.

3. An outlet-box for electric wires or other fixtures, comprising a base and posts of cast metal, sides to said box made of sheet metal and cast in position with said posts, one or more of said sides being provided with an opening or openings, each opening having a tapering marginal edge, and a plate or disk having a tapering marginal edge fitted in each opening and held therein by the engagement of said tapering marginal edges, substantially as and for the purposes set forth.

4. An outlet-box for electric wires or other fixtures, comprising a base and posts of cast metal, said posts having vertical grooves, sides to said box made of sheet metal and cast in position in said grooves, one or more of said sides being provided with an opening or openings, each opening having a tapering marginal edge, and a plate or disk having a tapering marginal edge fitted in each opening and held therein by the engagement of said tapering marginal edges, substantially as and for the purposes set forth.

5. An outlet-box for electric wires or other fixtures, comprising a base and posts of cast metal, and sheet-metal sides to said box, one or more of said sides being provided with an opening or openings, each opening having a tapering marginal edge, and a plate or disk having a tapering marginal edge fitted in each opening and held therein by the engagement of said tapering edges, substantially as and for the purposes set forth.

6. An outlet-box for electric wires or other

fixtures, comprising a base, having an opening or openings therein, each opening having an unbroken circumferential edge and an annular shoulder, a plate or disk in each opening, and holding lugs or tongues on each plate or disk extending downwardly through the opening and bent over against the outer circumferential edge of said shoulder, posts on said base, both said base and posts being of cast metal, sides to said box made of sheet metal and cast in position with said posts, one or more of said sides being provided with an opening or openings, and a plate or disk in each opening adapted to be removed therefrom, substantially as and for the purposes set forth.

7. An outlet-box for electric wires or other fixtures, comprising a base, having an opening or openings therein, each opening having an unbroken circumferential edge and an annular shoulder, a plate or disk in each opening, and holding lugs or tongues on each plate or disk extending downwardly through the opening and bent over against the outer circumferential edge of said shoulder, posts on said base, both said base and posts being of cast metal, said posts having vertical grooves, sides to said box made of sheet metal and cast in position in said grooves, one or more of said sides being provided with an opening or openings, and a plate or disk in each opening adapted to be removed therefrom, substantially as and for the purposes set forth.

8. An outlet-box for electric wires or other fixtures, comprising a base, having an opening or openings therein, each opening having an unbroken circumferential edge and an annular shoulder, a plate or disk in each opening, and holding lugs or tongues on each plate or disk extending downwardly through the opening and bent over against the outer circumferential edge of said shoulder, posts on said base, both said base and posts being of cast metal, sides to said box made of sheet metal and cast in position with said posts, one or more of said sides being provided with an opening or openings, each opening having a tapering marginal edge, and a plate or disk having a tapering marginal edge fitted in each opening and held therein by the engagement of said tapering marginal edges, substantially as and for the purposes set forth.

9. An outlet-box for electric wires or other fixtures, comprising a base, having an opening or openings therein, each opening having an unbroken circumferential edge and an annular shoulder, a plate or disk in each opening, and holding lugs or tongues on each plate or disk extending downwardly through the opening and bent over against the outer circumferential edge of said shoulder, posts on said base, both said base and posts being of cast metal, said posts having vertical grooves, sides to said box made of sheet metal and cast in position in said grooves, one or more of said

sides being provided with an opening or openings, each opening having a tapering marginal edge, and a plate or disk having a tapering marginal edge fitted in each opening
5 and held therein by the engagement of said tapering marginal edges, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 18th day of February, 1901.

HENRY ILL.

Witnesses:

FREDK. C. FRAENTZEL,
GEO. D. RICHARDS.