

No. 704,424.

Patented July 8, 1902.

B. W. ALLEN.

JUNCTION BOX FOR ELECTRIC WIRES IN BUILDINGS.

(Application filed Feb. 26, 1902.)

(No Model.)

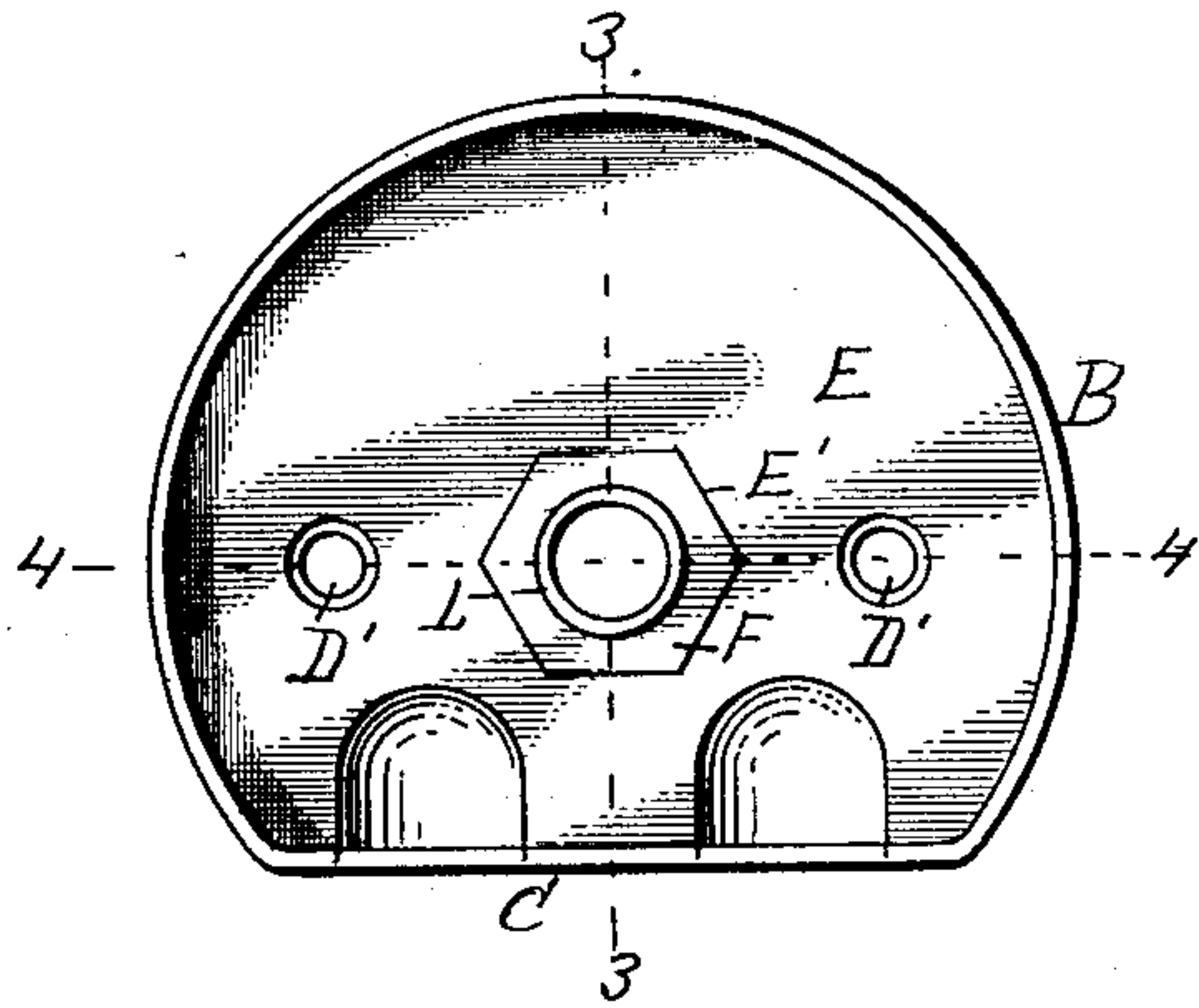


FIG. 1.

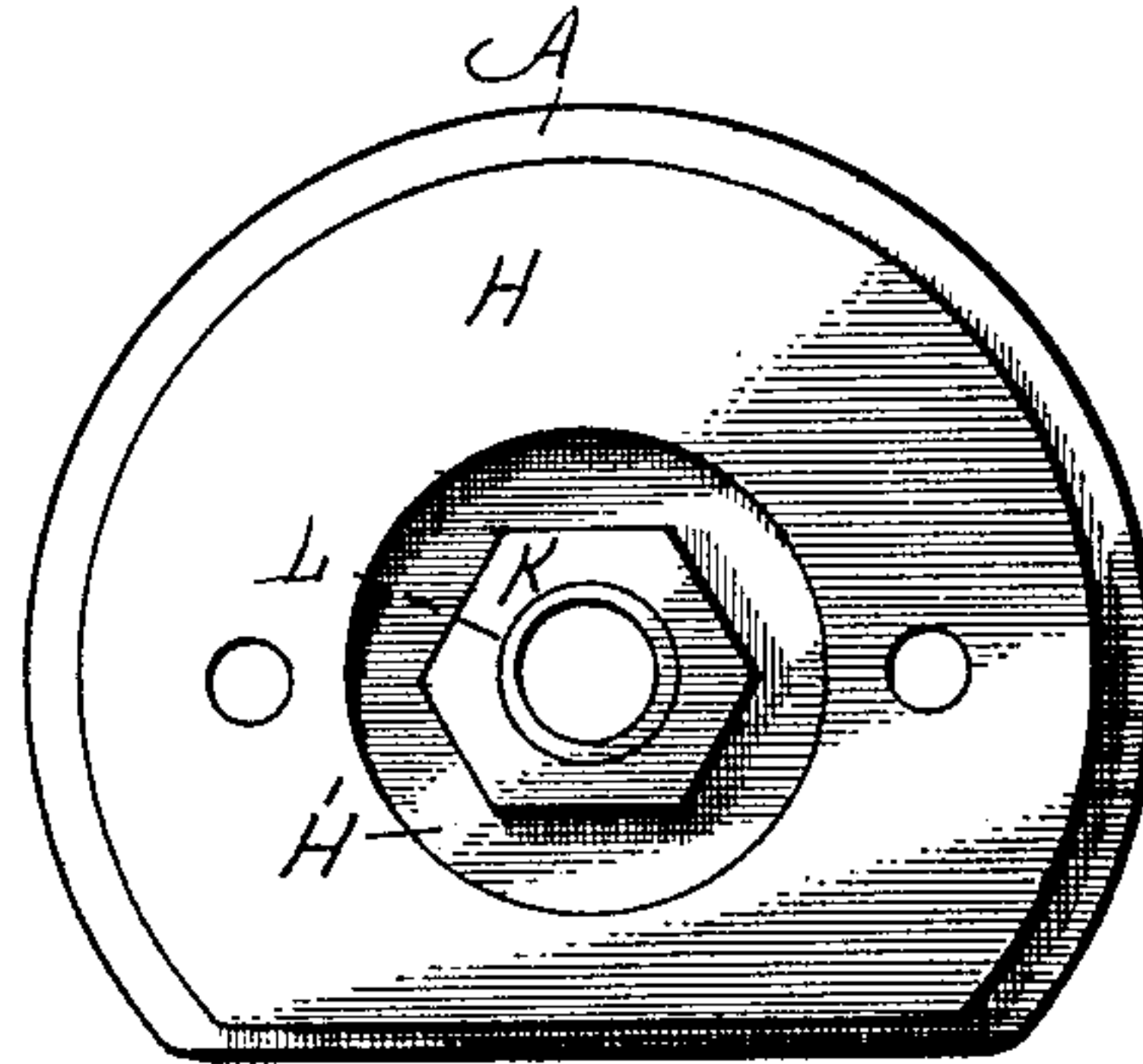


FIG. 2.

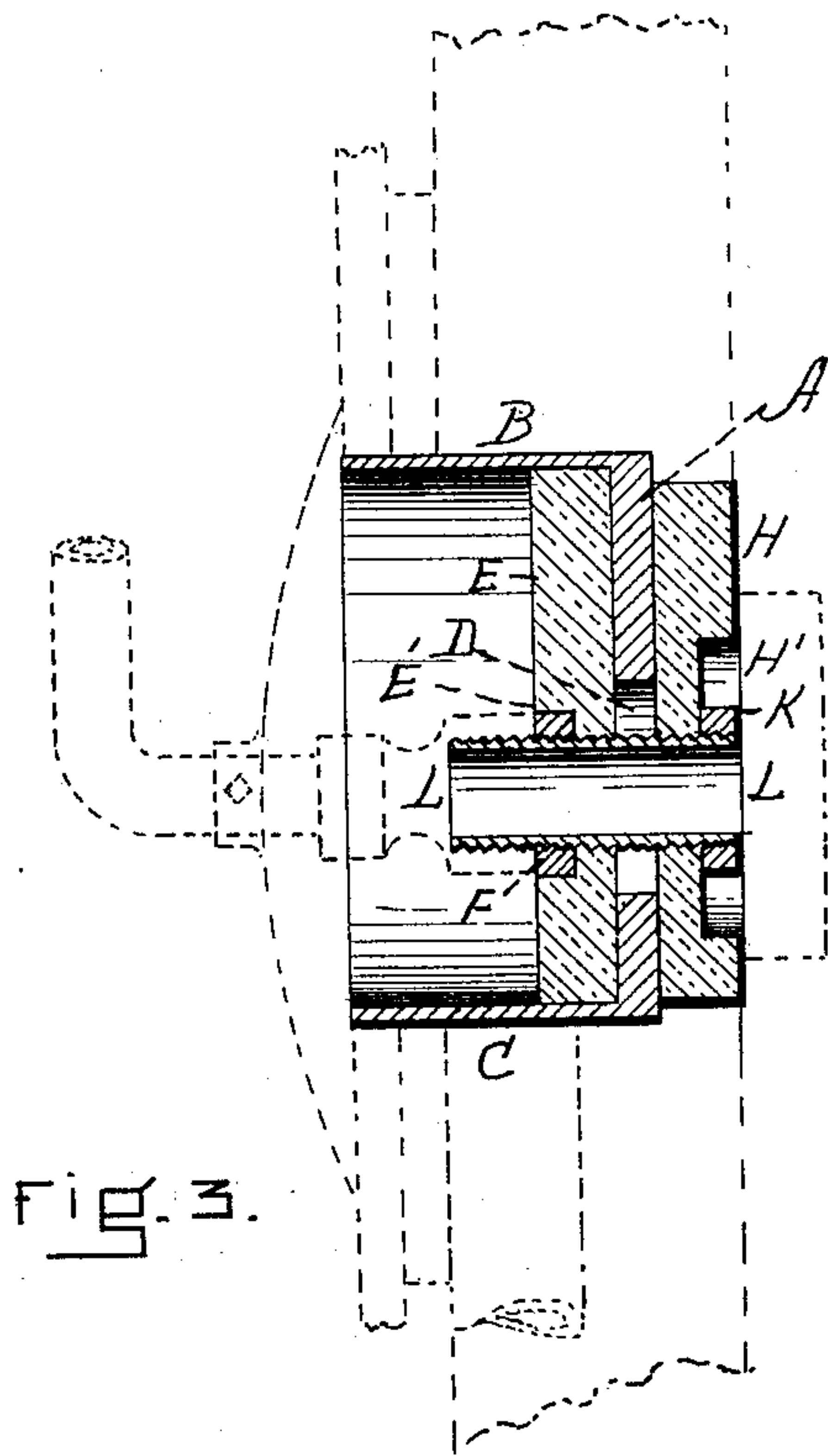


FIG. 3.

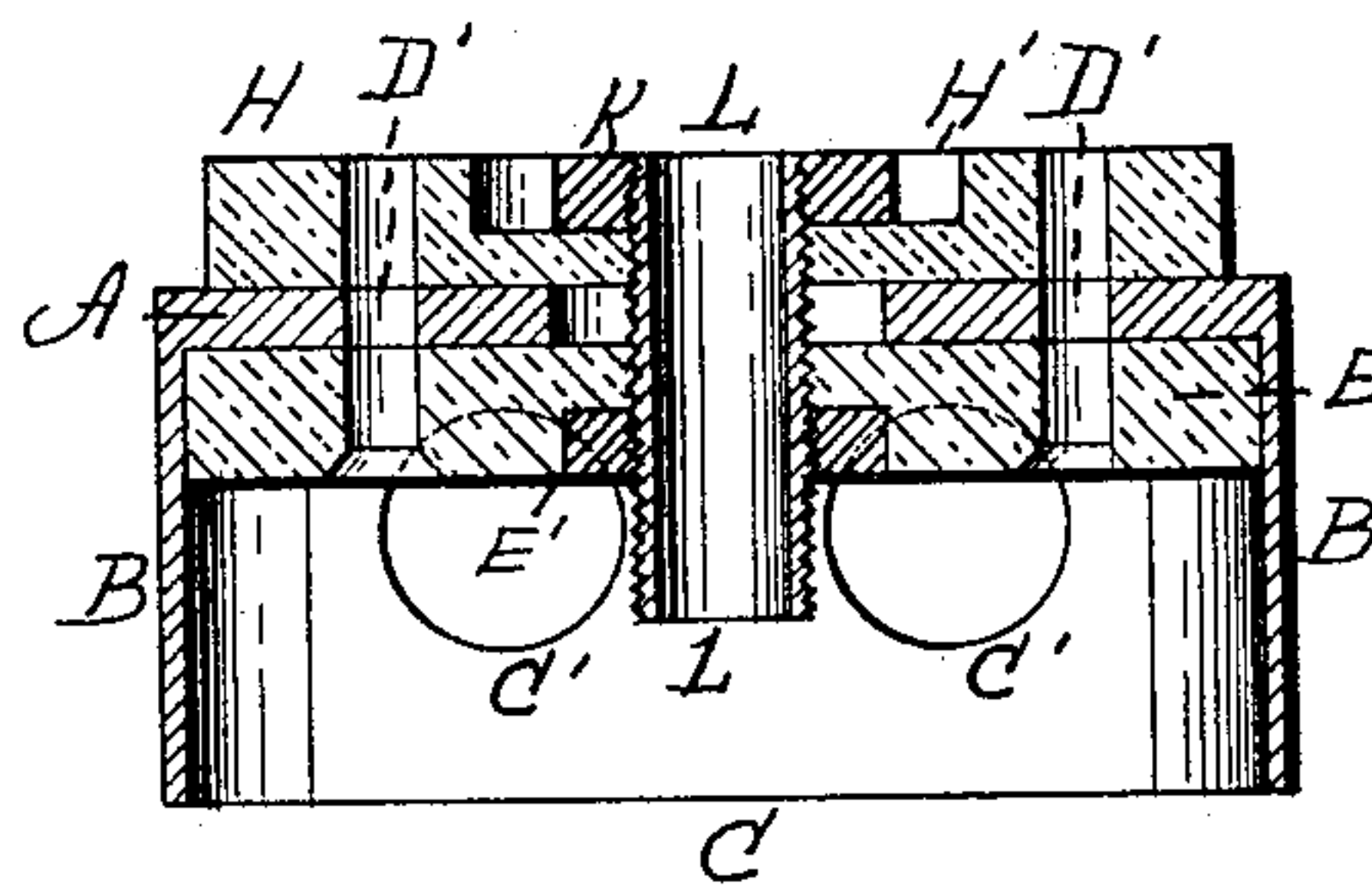


FIG. 4.

WITNESSES

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JUNCTION-BOX FOR ELECTRIC WIRES IN BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 704,424, dated July 8, 1902.

Application filed February 26, 1902. Serial No. 96,814. (No model.)

To all whom it may concern:

Be it known that I, BOYD W. ALLEN, a citizen of the United States, residing in Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Junction - Boxes for Electric Wires in Buildings, of which the following is a specification.

This invention relates to junction-boxes for introducing electric-light wires to the fixtures.

Junction-boxes, sometimes termed "conduit-boxes," are set in the walls, and the electric-light wires extend through them to connect with the fixtures, whether electric light or gas, and the wires must be properly insulated from the box to satisfy the requirements of safety. The ordinary construction at present is to provide an insulating-joint set centrally with relation to the box (which is metallic) and at a little distance inward—that is, toward the inside of the building—said joint being at the point where the fixture is secured.

In my present improvement I do away with the insulation at the joint and provide a free central nipple within the box, to which the fixture is to be screwed, said nipple extending through a large hole in the wall of the box, and a pair of slabs, of porcelain or other insulating material, around the nipple and on opposite sides of the wall of the box or conduit, so that the nipple is completely insulated from the box. By thus doing away with the insulating-joint a simpler and cheaper construction is provided and one in which the nipple is perfectly insulated.

The nature of the invention is fully described in detail below and illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation—that is, an elevation looking from within the building—of my improved junction-box or conduit-box. Fig. 2 is a rear elevation of the same. Fig. 3 is a cross vertical section taken on line 3, Fig. 1, the relative position of the wall and fixture being indicated by dotted lines. Fig. 4 is a horizontal section on line 4, Fig. 1.

Similar letters of reference indicate corresponding parts.

The main or metallic portion of the box consists of the vertical wall A, the semicircular inwardly-projecting flange B, and the straight horizontal bottom C, all made integral and

of the general shape of those now in common use.

The wall A is provided with a large, preferably round, and nearly central hole D and a pair of screw-holes D', and the base C is formed with a pair of holes C' for the electric wires. A slab E, of porcelain or other insulating material, fits within the box against the inner surface of the wall A and is provided with a hole registering with the central portion of the hole D, said hole being enlarged at its front end, and thereby forming a recess E' of suitable shape to fit around a nut F. Next the outer surface of the wall A there is another slab H, of porcelain or other insulating material, provided with a hole which registers with the central portion of the hole D, said slab being formed with a recess H' around said hole for the accommodation of a nut K, said recess H' being large enough to allow the nut K to turn therein. These nuts are on the externally-screw-threaded nipple L, which extends through the holes in the slabs E and H and through the central portion of the hole D, said hole D being much larger in diameter than the holes in the porcelain slabs, so that the nipple does not come in contact with the wall or any other part of the metallic box. The porcelain slabs are held in position on the nipple and against the opposite sides of the wall of the box by the nuts F and K, the former of which is held stationary by fitting into the recess E', the latter being capable of being rotated within the recess H'.

In practice the junction-box is secured in position in the wall by screws which extend through the portion A and through coincident openings in the two slabs, as indicated in Fig. 4, and the fixture is screwed directly to the nipple L, as indicated in Fig. 3. It is evident that an electric-light or gas fixture can be applied directly to the nipple and that no insulation is needed at that point, and no insulated joint whatever is necessary to connect the nipple with the fixture.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a junction-box of the character described, the metallic main portion comprising the wall A formed with the large hole D

and provided with suitable flanges B, C; a pair of slabs of porcelain or other insulating material held against the rear and front surfaces of said wall; and a nipple adapted to
5 receive a fixture extending through said porcelain slabs and through the central portion of the hole in the wall of the box, said hole being larger in diameter than the nipple, whereby the nipple is entirely out of electrical contact with the metallic portion of the
10 box, substantially as described.

2. In a junction-box of the character described, the metallic main portion comprising the wall A formed with the large hole D
15 and provided with suitable flanges B, C; the slab E of porcelain or other insulating material within the box and next the inner surface of the wall thereof; the slab H of porcelain or other insulating material next the

outer wall of the box; a nipple extending 20 through coincident holes in said slabs and through the central portion of the large hole D; and nuts on the nipple setting against the inner and outer surfaces of the inner and outer slabs respectively, the inner slab being 25 recessed around its hole to correspond in size and shape with the nut next said slab, and the outer slab being formed with a recess around its hole large enough to allow the nut next said slab to rotate, substantially as set 30 forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BOYD W. ALLEN.

Witnesses:

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A. N. BONNEY.