No. 876,187. PATENTED JAN. 7, 1908.

H. H. HORNSBY.

JUNCTION BOX.

APPLICATION FILED MAY 12, 1906.

Fig. 1,

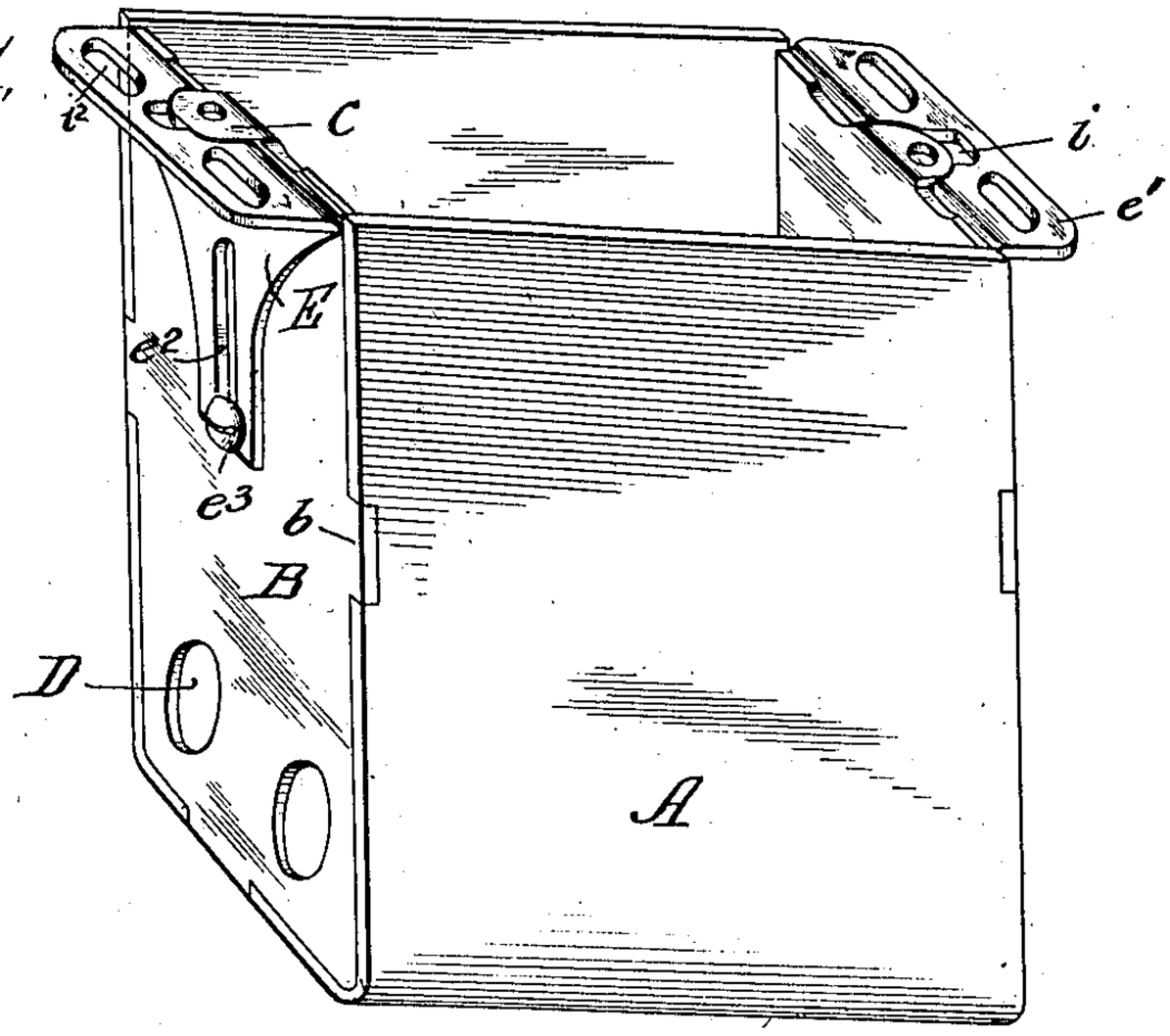


Fig. 4,

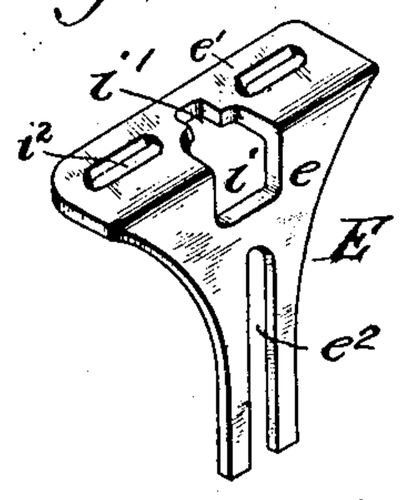


Fig. 2,

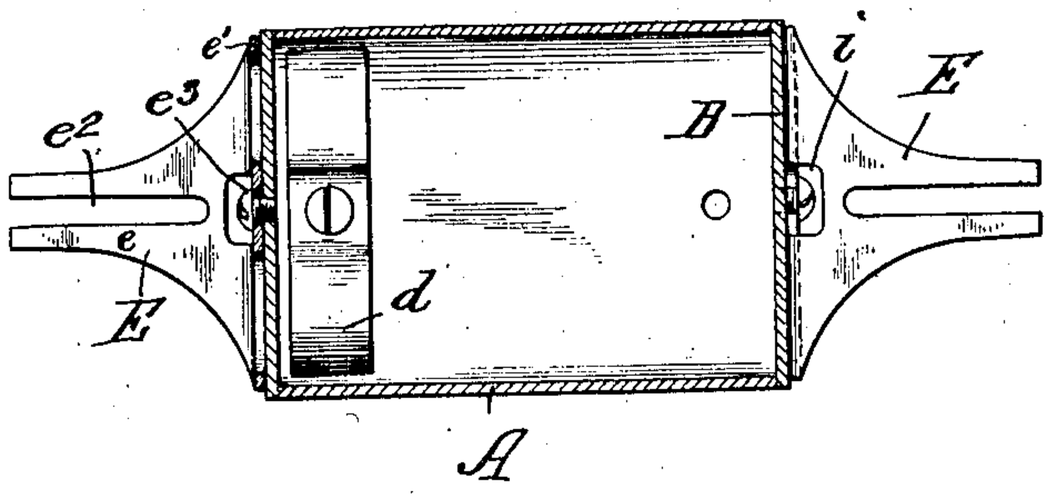
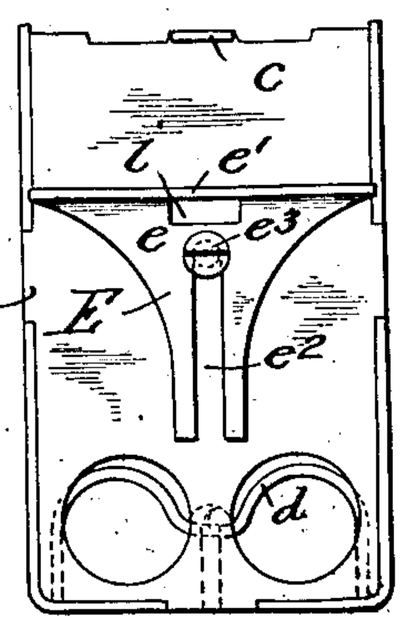


Fig. 3,



WITNESSES:

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JUNCTION-BOX.

No. 876,187. Specification of Letters Patent. Patented Jan. 7, 1908.

Application filed May 12, 1906. Serial No. 316,465.

To all whom it may concern:

Be it known that I, HARRY H. HORNSBY, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Junction-Boxes, of which the following is a specification.

This invention relates to junction boxes of the type now in common use in equipping a building with an electric lighting system, as for instance, those adapted to be mounted in the wall of a room and to receive and support a switch.

The object of the invention is to improve the construction of such boxes with respect to the means whereby they are secured to the supporting structure.

In installing junction boxes of this character, the forward edge should be approximately in the same plane as the surface of the plaster. However, the plaster would afford an insecure support for the box and if nails or screws were driven through the plaster and into the lathing or other woodwork, the plaster would probably be cracked or broken away adjacent to the opening for the box. I therefore provide means for securing the box directly to the woodwork and since different conditions prevail in each installation with respect to the thickness of the plaster and the arrangement of the woodwork, I make this securing means adjustable relatively to the box itself. For this purpose I employ a pair of brackets of peculiar shape such that they can be secured to the box in various positions affording a wide range of adjustment and when the proper positions have been found and the brackets secured to the box, the brackets may be fastened to the woodwork in the usual manner to support the box.

I have illustrated the preferred embodiment of my invention in the accompanying drawings in which

Figure 1 is a perspective view, Fig. 2 a modified section on the line 2—2 of Fig. 3 and Fig. 3 an end view of the box showing different positions of the brackets and Fig. 4 is a perspective view of one of the brackets.

Referring to the drawings, the box is of rectangular form and of such size and shape as is best adapted for the use to which it is to be put. It is preferably formed of one or more sheet-metal blanks which are cut to the desired shape and bent to form the walls of the box. Thus a single piece A may form the bottom and two of the sides of the box and two pieces B may form the other two sides. The pieces B may have tongues *b* at their edges entering grooves in the edges of the part A and when the parts are assembled the tongues *b* may be spread to force the metal thereof into hard contact with the sides of the groove, thus uniting the parts to form a strong and rigid structure. At the upper edge, ears C may be provided integral with the side walls and bent so that their upper faces lie in the plane of the top of the box; these ears may have threaded openings therethrough by which the cover-plate may be secured thereto. The walls of the box have openings D therethrough for entrance of the electric conductors and a clamp *d* may be secured to the bottom of the box and arranged to grip a conductor entering through an opening D.

Adjustably secured to each of two opposite sides of the box is a bracket E having a body portion *e* and a flange *e'* turned at substantially a right angle to the body *e*. In the body *e* is a long slot e^2 extending lengthwise thereof and a screw e^3 is adapted to extend through this slot and into a threaded opening in the wall of the box and thus secure the bracket to the box in the position illustrated in Fig. 1 or in that of Fig. 3 or in any position intermediate of those two. The material of the bracket is cut away at *i* adjacent to the middle of the bend joining the body *e* and flange *e'*, to form in the flange a cut-away portion of substantially the same shape and size as the ears C; the bracket can therefore be moved upward until the upper surface of flange *e'* is in the plane of the top of the box, the ear C lying within the opening *i*, as illustrated in Fig. 1. Adjoining the cut-away portion *i* is an additional offset opening *i'* of a size sufficient to receive the shank of screw e^3. On either side thereof the flange *e'* is slotted at i^2.

In installing the box, an opening is made in the wall of sufficient size for the box to be inserted therein and at the sides thereof the plaster is cut away to expose the lathing or other woodwork for a distance equal to the width of the flanges *e'*. The operator then determines the position of the brackets E relative to the box which is necessary to support the box in the proper position. This can be conveniently done by loosening screws e^3, inserting the box in the opening and pressing the brackets back until the

flanges e' abut against the woodwork. The box is then withdrawn and the screws e^3 tightened up to hold the brackets in the positions thus found and the box is re-inserted in the opening and nails or screws inserted through the slots i^2 and into the woodwork to hold the box in position. The slots e^2 are of considerable length and the adjustment thereby afforded from the position illustrated in Fig. 1 to that illustrated in Fig. 3 is ordinarily sufficient to provide for the varying thicknesses of plastering. If this is not sufficient, however, an increased range can be obtained by loosening the screws e^3 removing brackets E and securing them to the box with flanges e' against the walls of the box and the body portions e extending outward therefrom in either of the two ways illustrated in Fig. 2. This is readily done by moving the parts relatively so that the heads of screws e^3 pass through the openings i and then causing the shanks of the screws to enter the openings i'. Then by tightening the screws the heads thereof engage flanges e' adjacent to openings i and hold the brackets firmly to the box. In this way the brackets can be secured to the box either with the body portions e above the screws e^3 as indicated at the right of Fig. 2 or with the portions e below the screws as illustrated at the left of that figure, thus giving two adjustments additional to those afforded by slots e^2. By this construction, the securing devices for the box are applied directly to the woodwork so that breaking of the plastering about the opening for the box is avoided and the boxes can be readily secured in the desired position as for instance, that in which the top of the box lies in the plane of the surface of the plastering, even though the thickness of the plastering varies to a considerable extent. Furthermore, in cases where it is necessary to cut away woodwork to receive the securing means for a box, the depth of these cuts does not have to be accurately gaged as the adjustment of the brackets will compensate for any inaccuracies.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A junction-box having integral outwardly turned ears at the upper edge thereof, brackets at the sides of the box, said brackets having slots therein, screws extending through said slots and entering threaded openings in the sides of the box, and outwardly extending portions on said brackets formed to facilitate securing them to the woodwork of the supporting structure and cut away to provide openings in which said ears are received, substantially as described.

2. A junction-box having integral outwardly-turned ears at the upper edge thereof, brackets at the sides of the box each having two integral portions, one lying at an angle to the other, a slot in one of said portions and an opening in the other, and screws each adapted to extend through either the slot or opening in one of said brackets and to enter a threaded opening in the side of the box, each of said brackets being formed to facilitate securing it to the supporting structure and to provide an opening in which one of said ears is received, substantially as described.

3. A junction-box having integral outwardly-turned ears at the upper edge thereof, brackets at the sides of the box each having a slot therein and an integral portion extending outwardly from the box, and a screw extending through the slot in each bracket and securing the bracket to the box with said outwardly-extending portion either above or below the screw, said outwardly-extending portion on each bracket being formed to facilitate securing it to the supporting structure and to provide an opening in which one of said ears is received, substantially as described.

This specification signed and witnessed this tenth day of May, 1906.

HARRY H. HORNSBY.

Witnesses:
PETER L. QUINN,
H. M. DAVIS.