

Apr. 24, 1923.

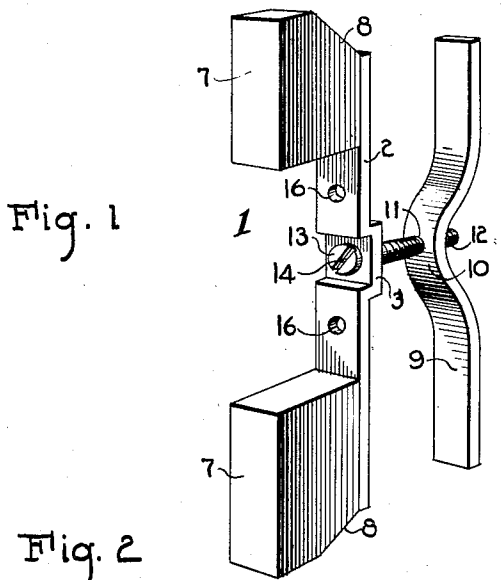
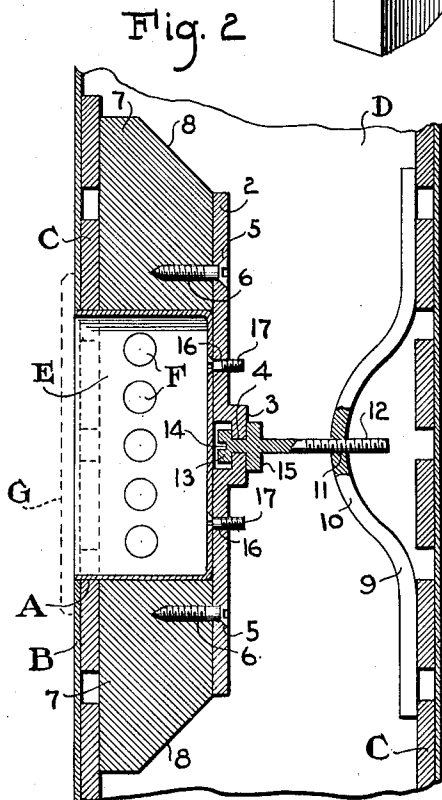
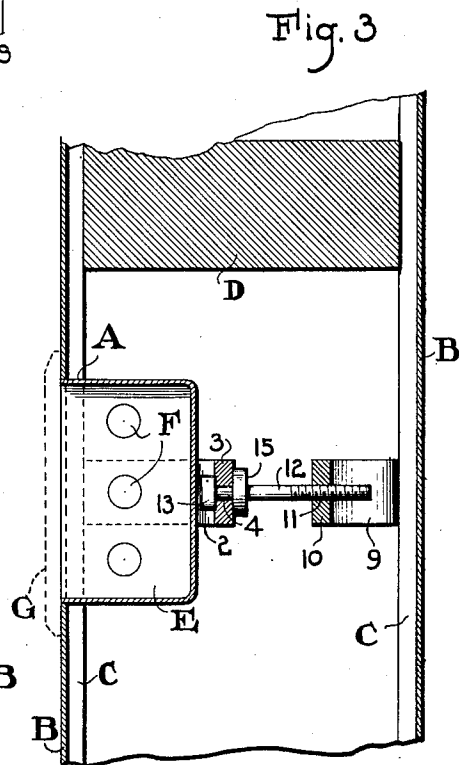
1,453,017

G. H. LINDELOF

WALL BRIDGE FOR SWITCHES

Filed March 22, 1922

2 Sheets-Sheet 1



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Fig. 4

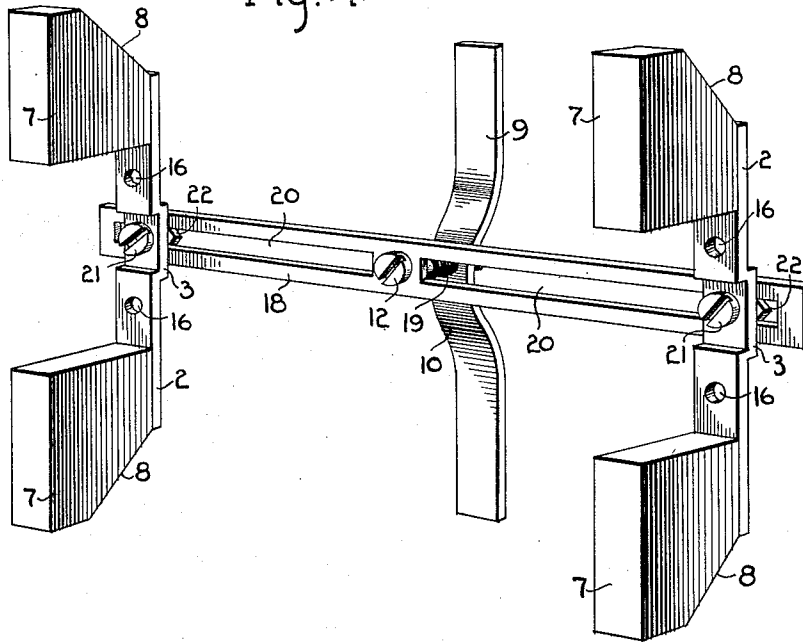
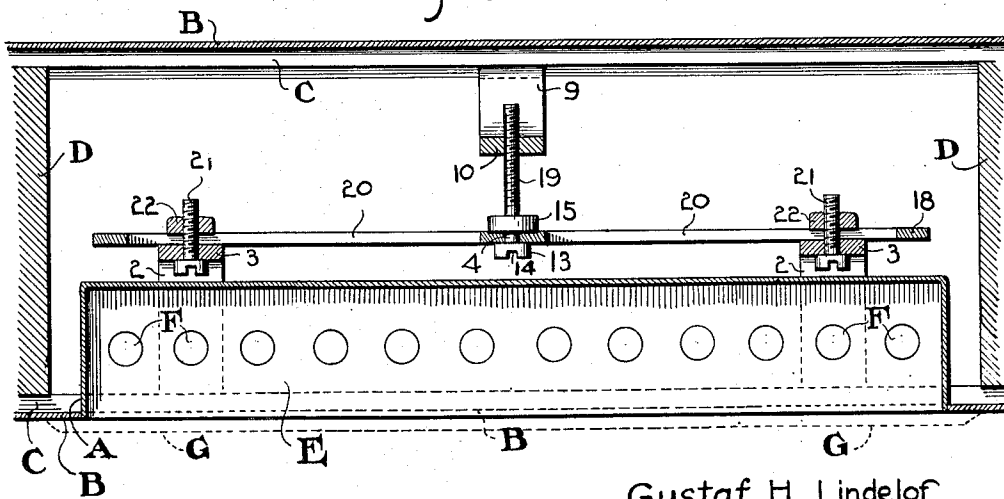


Fig. 5



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UNITED STATES PATENT OFFICE.

GUSTAF HERMAN LINDELOF, OF DE KALB, ILLINOIS.

WALL BRIDGE FOR SWITCHES.

Application filed March 22, 1922. Serial No. 545,813.

To all whom it may concern:

Be it known that I, GUSTAF H. LINDELOF, a citizen of the United States, residing at De Kalb, in the county of De Kalb and State of Illinois, have invented a new and useful Wall Bridge for Switches, of which the following is a specification.

This invention relates to wall bridges for switches.

10 The object is to provide a device in the form of a bridge or bracket which may be inserted into the wall of a building for the purpose of supporting switches, outlet boxes or similar electrical appliances.

15 In carrying out the invention, I provide a bridge or bracket, especially designed for use in wiring old buildings, or those already completed, the same having means for extending front and rear wall-engaging members to cause the same to impinge against the inner faces of the laths with sufficient force to support the said box or switch, the front member having a socket or seat for the box in alinement with the opening in the lath and plaster so that the same may lie flush with the outer surface of the wall for the ready application of the closure plate.

A full and complete understanding of the invention may be obtained from a consideration of the following detailed description, taken in connection with the accompanying drawings forming part of this specification, it being understood that while the drawings show a practical form of the invention, the latter is not confined to strict conformity therewith, but may be changed and modified so long as such changes or modifications mark no material departure from the salient features of the invention, as specifically pointed out in the appended claims.

In the drawing, in which similar reference characters designate corresponding parts throughout the several figures;

Figure 1 is a perspective view of a wall bridge for switches, outlet boxes or the like, constructed in accordance with the invention and designed to support a single box or switch;

Figure 2 is a vertical section through a portion of a wall between the studding thereof and showing the manner of applying the bridge and supporting the switch or outlet box in position;

Figure 3 is a horizontal section through the same;

Figure 4 is a perspective view of a double form of the invention;

Figure 5 is a horizontal section showing the double form in position in the wall and supporting a larger box.

In wiring old buildings, or buildings already completed, for electric lighting or other purpose, where it is desired to conceal the wires within the walls thereof, the wires in accordance with fire and building regulations, are usually required to be placed in a flexible, metallic casing capable of being readily threaded through openings bored where necessary, for the purpose. In order to install at any desired point in the wall, an outlet box or switch, the said flexible casing, known commercially as B. X., and by other names, is brought to close proximity to the predetermined location for the box, and the wires and casing extended through an opening formed in the wall by cutting through the lath and plaster at the said location. The casing is then cut off at the proper point with the wires extending beyond the end thereof a sufficient distance to facilitate connections with the switch or outlet box.

Difficulty has been heretofore encountered in providing for the rigid support of the box in the aforesaid opening, as it is almost impossible to reach through the relatively small opening for the purpose of applying nails, screws or other fasteners.

The present invention is designed to overcome these difficulties, and to provide a supporting device for the switch or outlet box which may be easily introduced through the opening in the wall and properly positioned with respect to the opening so as to receive the box, and by bearing at either side of the same against the inner faces of the laths through which the opening has been formed, and against the inner, opposed faces of the other laths, the said box is rigidly held in position within the opening without the use of screws, nails, etc., the outer open face of the box lying flush with the surface of the adjacent plaster in readiness to receive the usual closure plate for the same.

A single form of the invention is illustrated in Figures 1 to 3 inclusive, by which a small box is supported in the wall. This form comprises a front wall engaging mem-

ber 1 in the form of a metallic bar 2 preferably formed of strap iron bent to form an inwardly directed seat or depression 3 at its center, and having a smooth opening 4 located at the center thereof. Adjacent to each end of the bar 2, suitable apertures 5 are provided for the reception of ordinary countersunk screws 6, which enter into blocks or shoes 7, preferably formed of wood, and extending somewhat beyond the ends of the bar 2, the wood being preferably cut away or beveled, as at 8, from the end of said bar to the end of the block.

In opposition to the front wall engaging member 1 is a rear wall engaging member 9, likewise formed of strap iron or other suitable material, the said rear member being slightly longer than the front bar 2 and having its central portion inwardly bowed or bent towards the front bar, as at 10, and provided, at its center, with a threaded aperture 11, the outer or terminal portions of the rear member acting as spaced feet to bear against the inner faces of the laths.

A screw 12, threaded throughout the major portion of its length, is threaded into the opening 11 of the rear member and is provided, at its front end with a head 13 resting within the seat or depression 3, and provided with a screw driver slot 14. The head of the screw is retained within the seat or depression 3 by a shoulder or flange 15 secured to the shank of the screw in any desired manner, and bearing against the rear face of the seat or depression, as clearly shown in Figure 2 of the drawings. The threads of the screw extend from the flange 15 to the end thereof, while that portion of the screw traversing the opening 4 in the seat of the front bar is smooth, so that the same may be freely turned therein in either direction without any binding action.

At either side of the depression 3, and about midway between the same and the inner opposed faces of the end blocks or shoes 7, the front member 1 is provided with threaded screw openings 16, for a purpose to be explained.

In the use of this single form of the device, a hole A, the size of the box to be used is cut through the plaster B and lath C at the desired location in the wall, and preferably midway between the vertical studding D to be found in all frame structures, it being understood, of course, that the lath and plaster opposite the said hole A are left intact.

By running the rear member 9 up on the screw 12 to lie adjacent to the front member, the device may be contracted sufficiently to be introduced through the opening or hole A and held by one hand in a vertical position and parallel to the studding D, when the electrician may apply a screw driver to the screw 12, and by turning the

same in the proper direction, cause the front and rear bearing members to separate until the rear surfaces of the terminal foot portions of the rear bar 9 engages the inner faces of the rear lath B, while the front faces of the blocks 7 are forced against the rear faces of the front lath C, and by further turning of the screw sufficient frictional engagement of the device may be obtained for maintaining the device in position.

The switch or outlet box E, having the usual "knock-outs" F for the inlet of the wires, is then inserted into the hole 4 with the back or bottom of the box resting against the front bar 2, when the same may be secured therein by suitable screws 17 traversing appropriate openings in the box and engaging the aforesaid threaded openings 16 of said bar 2. The depth of the socket formed by and between the blocks 7, plus the thickness of the adjacent lath and plaster, is substantially equal to the depth of the usual box E, so that the open side of the latter is flush with the surface of the plaster, when the usual closure plate G is secured in position in any desired manner.

In Figures 4 and 5 of the drawings, a double form of the invention is disclosed, which is adapted to be used in places where longer outlet boxes are to be located, and it is to be understood that the device is adapted to be constructed to carry various sizes of these devices, if desired, without departing from the scope of the invention.

This double form comprises a pair of front wall engaging members 1 formed in all respects like the first described or single form of the invention, and a single rear wall engaging member 9 likewise constructed as first described, the difference in the two forms lying in the means for connecting the said front wall engaging members. This means consists of a normally horizontal connecting bar 18 formed of strap iron of a length to be placed lengthwise between two adjacent studs D, the said bar 18 being connected by a screw 19 formed and mounted similarly to the screw 12 of the first form, and having, at either side of the screw, longitudinally disposed slots 20 extending close to the ends of the said bar. These slots receive bolts 21 which are carried by the seats or depressions 3 of the front bars 2, and are provided with nuts 22 which may be turned to bind the bars 2 of the front members rigidly in any desired spaced relation within the limits of the slots 20. By turning the screw 19 in the proper direction, the front and rear wall engaging members may be caused to separate and engage in the desired manner, the screw driver being introduced through the opening A before the box E is placed in position therein.

From the foregoing it will be seen that a simple, cheaply manufactured wall bridge

for switches or outlet boxes has been provided, which may be easily applied in position through the hole in the wall provided for the same, and which may be readily manipulated to engage with the wall with sufficient frictional engagement to support boxes of various sizes without the use of screws, nails or other fasteners, which it is next to impossible to apply in such cramped quarters.

What is claimed is:

1. A wall bridge for switches, etc., comprising a pair of wall-engaging members, one member having blocks or shoes at its ends to bear against the inner face of the wall and span a hole in the wall made for the reception of the switch box, the space between the blocks or shoes being adapted to form a seat for said box, the other member being also adapted to bear against the inner face of the opposite wall, and means for adjustably and detachably connecting the two members to cause the same to frictionally engage the opposed inner faces of the same wall and support the bridge in position.

2. A wall bridge for switches comprising a pair of wall-engaging members, held in separation and adjustable toward and from each other, said members being adapted to be inserted through a hole in one face of the wall and arranged across said hole, one of the members having a socket or seat for the reception of a switch or outlet box to be placed into said hole, said member bearing on the inner side of said wall, above and below the hole, the other member engaging with the opposite wall, and means for forcing the members apart to frictionally engage the walls to support the box.

3. A wall bridge for switches comprising spaced wall-engaging members, said members each comprising an elongated metal bar, a screw-swivelled centrally of one bar and threaded centrally into the other bar, the latter being bent intermediate of its length towards the first bar, said first bar having a countersunk seat for the head of the screw and means at opposite ends of the bar to bear against the inner face of the wall, said screw having a shoulder or flange in opposition to the head to prevent dislodgement of the screw, while permitting the free turning of the same to cause a separation of the members for engaging the opposite inner faces of the laths of a wall and thereby support the device at the desired location.

4. A wall bridge for switches comprising spaced, adjustable wall-engaging members, the front member having spaced blocks or shoes, secured to its ends, and adapted to span a previously formed hole in the wall through which the bridge is introduced, the other member being bent at its center towards the front member to provide terminal feet to engage the rear portion of the wall, a transversely disposed swiveled adjusting screw connected with the front member, and in threaded engagement with the rear member whereby, when the screw is turned, the two members are caused to separate and bear against the opposite faces of the wall within which the bridge is placed.

5. A wall bridge for switches, outlet boxes, etc., comprising spaced, front wall-engaging members having recesses or sockets for said box, a longitudinal slotted bar connecting said members, the latter having bolts for binding the same in any desired spaced relation along said slotted bar, a screw swivelled centrally in the latter, a rear wall-engaging member bowed centrally toward the front members to provide terminal feet for bearing on the rear wall and having a threaded opening at the center for the threaded free end of the screw to cause the separation of the front and rear members to engage the wall for maintaining the device in position.

6. A wall bridge for switches, outlet boxes, etc., comprising a plurality of front wall-engaging members, each constructed with a socket or seat to receive the switch or outlet box, a rear wall-engaging member, a connecting bar for the front wall-engaging members, and a screw for joining the connecting bar at an intermediate point of its length to the rear wall-engaging member.

7. In a wall bridge for switches and other boxes, the combination with a plurality of front wall-engaging members, a bar connecting said members, means for connecting a switch or outlet box to said members, a rear wall-engaging member, and means for adjustably and detachably connecting the rear wall-engaging member to the connecting bar at an intermediate point of the length of the latter.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature.

GUSTAF HERMAN LINDELOF.