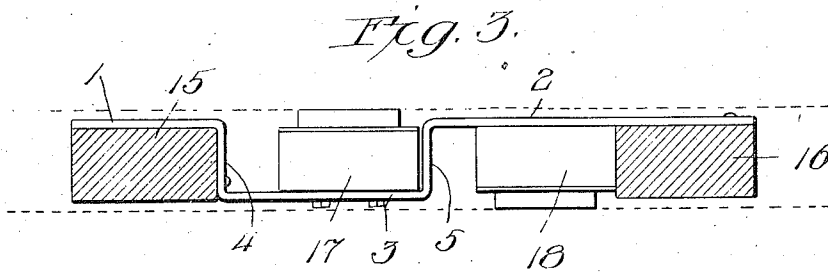
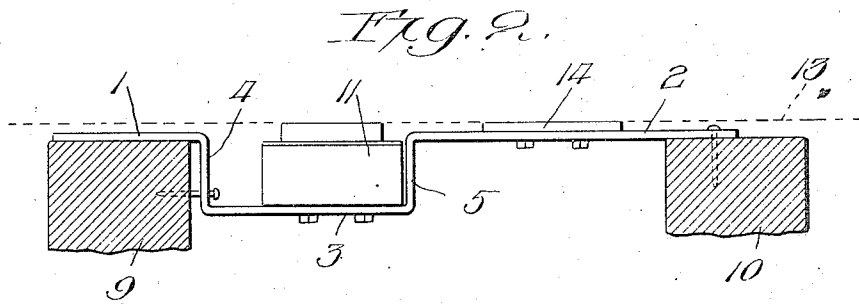
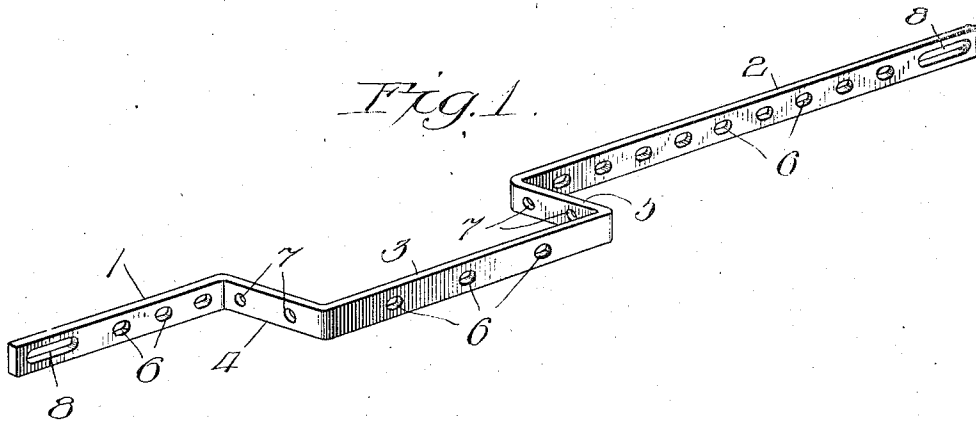


A. M. KNAUBER.
CONSTRUCTION CLEAT.
APPLICATION FILED MAR. 11, 1914.

1,168,889.

Patented Jan. 18, 1916.



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UNITED STATES PATENT OFFICE.

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CONSTRUCTION-CLEAT.

1,168,889.

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To all whom it may concern:

Be it known that I, ALEXANDER M. KNAUBER, a citizen of the United States, residing at Oak Park, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Construction-Cleats, and declare the following to be a full, clear, and exact description of the same, such as it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

The object of the present invention is to produce a simple metallic cleat adapted to support wall plates for pipes or conduits, connection boxes, switch boxes and, in fact, all the usual wall or ceiling attachments required in a modern building, under any of the numerous different conditions encountered in practice.

My invention consists of a simple bar, preferably perforated, of peculiar shape and, since this bar may be cut to pieces readily, it is possible to make therefrom angles, brackets, Z-bars, clips or clamps and braces of various sizes and shapes.

Consequently, viewed in one of its aspects, my invention may be said to have for its object to produce a simple universal construction cleat which may be transformed into a variety of supporting or holding devices by the simple act of properly cutting the cleat to pieces.

The various features of novelty whereby my invention is characterized will hereinafter be pointed out with particularity in the claims; but, for a full understanding of my invention and of its object and advantages, reference may be had to the following detailed description taken in connection with the accompanying drawing, wherein:

Figure 1 is a perspective view of my improved cleat; Fig. 2 is a section taken through two wall or ceiling joists or beams having secured thereto my improved cleat on which are supported two different kinds of attachments; and Fig. 3 is a view similar to Fig. 2, showing a different type of joists and the manner in which attachments may be supported to provide for fixtures on both sides of the wall containing the joists.

My improved cleat consists of a simple bar of iron or steel, preferably though not

necessarily of a comparatively flat rectangular shape; the bar having between its ends a lateral offset.

Referring to the drawing, 1 and 2 represent the end portions of the bar, 3 the laterally-displaced portion, and 4 and 5 the connecting pieces or legs between the member 3 and the end portions of the bar. The parts 1 and 2 are in alinement with each other and the part 3 is parallel thereto, while the legs or connecting pieces 4 and 5 are preferably at right angles to the parts 1, 2 and 3. In the preferred arrangement the displaced portion 3 is located nearer one end than the other, providing the cleat with a short arm, 1, at one end and a long arm, 2, at the other end.

The lateral displacement of the part 3 is of such that when an ordinary standard connection or switch box is secured thereto and the ends of the cleat are secured to two joists or beams with the displaced portion lying in the space between the joists or beams, the cover of the box will be flush with the plastering on the wall or ceiling in which the joists are placed. In other words, the lateral displacement of the part 3 may be said to be approximately equal to the depth of a standard electrical connection or switch box. The length of the part 3 is preferably made considerably greater than the width of a connection or switch box so as to permit a considerable range of adjustment of such a box along the part 3.

It will of course be understood that the width of the cleat is such that when the cleat extends diametrically across the top of the ordinary box which it has to support it will lie between the usual knock-out openings which are ordinarily distributed symmetrically about the center or axis in such boxes; thus avoiding interference with or the obstruction of all of such knock-out openings distributed around the center of the box.

In the preferred form the cleat is perforated for the reception of fastening means, both for holding the cleat in place and for securing to the same the attachments or fixtures adapted to be supported thereby. The perforations 6 in the arms 1 and 2 and in the member 3 are so spaced apart that they will register with the fastening means

or perforations in the attachments to be supported: at least within certain limits so that an attachment may always be placed approximately in any desired position along the cleat and there find holes or perforations to receive fastenings, the final small adjustments being made by shifting the cleat bodily. The holes or perforations 6 are preferably elongated somewhat in the direction of the length of the cleat. In at least one of the legs or connecting pieces, 4 and 5, I place one or more perforations, 7, and in at least one of the arms of the cleat and near the end thereof I place an elongated slot, 8. In the arrangement illustrated, each of the legs 4 and 5 is perforated and each of the arms is provided with one of the elongated slots.

The cleat is used as follows: Assuming 9 and 10 in Fig. 2 to represent two joists in a wall or ceiling in which it is desired to have a connection or switch box, the approximate position of the box with respect to the joists is first determined, the cleat is held against the joists so as to bring the part 3 between the joists and in a position to locate a box secured therein in approximately the right place. This will bring one of the legs or connecting pieces in contact with one or the other of the joists. In the arrangement shown it is assumed that the box 11 is to be located in such a position that the part 3 will be next to the joist 9 and removed from the other joists. A nail or screw, 12, is then driven through one of the openings 7 in the leg 4 and nails or screws are driven through the slot or slots 8. All of the nails or screws are left loose so that the cleat may be bodily shifted lengthwise a short distance to bring the box to the exact point desired. The nails or screws which fasten the members 1 and 2 to the joists are then driven in firmly and the nail 12 is driven in as far as it will go, tying the leg 4 securely to the adjacent joist although there may be a small space between the leg and the joist. The cleat is therefore held firmly in place and is positively held against a twisting movement. When the lathing and plastering is placed on the wall, the outlet through the cover of the box comes flush with the outer surface of the plastering indicated by the dotted line 13.

Where a device known as a wall plate, such as indicated at 14 is to be held in place, it is fastened on one of the arms of the cleat, and the cleat is adjusted in the manner previously described so as to bring this device to exactly the right point. It will of course be understood that any desired number of cleats may be placed between the same joists so as to place in a single panel, a wall or ceiling any desired number of boxes, plates or other attachments for electrical connections or fixtures or for pipes or conduits

and, where it is desired to aline a number of similar devices accurately this can be done quickly and conveniently.

In Fig. 3 I have illustrated a somewhat different condition, 15 and 16 representing two small joists or beams laid flat in a wall so as to produce a thin wall. In this case it is often desirable to have attachments in the same panel in both surfaces of the wall, that is on opposite sides of the wall. In this instance, the box for one side of the wall, indicated in dotted lines at 17 may be secured to the part 3 which lies between the joists while a box for the opposite side of the wall, indicated in dotted lines at 18, may be secured to one of the arms of the cleat and project entirely from a point just beneath the plaster on one side of the wall to the surface of the plaster on the other side.

It sometimes happens that a very strong support is desired for a fixture, that is stronger than will be afforded by a single cleat. In such case the workman can readily cut off one of the arms of a cleat and place the mutilated cleat between the joists, firmly securing the free leg to one of the joists and the remaining arm to the part 2 of the cleat to which the attachment is fixed.

It also often happens that a workman desires an angle or a Z-piece which it may be inconvenient to get. In such case he need simply cut up one of the cleats to obtain the desired shape and, when it is obtained it will already be perforated to receive fastening means. In the same way by cutting off one of the arms of the cleat a very satisfactory clamp or clip is obtained by means of which batteries or pipes may be clamped to a support.

It will therefore be seen that I have produced a cleat consisting of a single simple piece by means of which any of the usual wall or ceiling attachments may be accurately located and firmly held in place under any of the various conditions commonly encountered in building construction. It will also be seen that by reason of its peculiar construction, my cleat lends itself readily to being transformed into brackets, supports or clamps of various kinds by the simple operation of properly cutting up the cleat.

While I have illustrated and described with particularity only a single preferred form of my invention, I do not desire to be limited to the exact structural details thus illustrated and described, but intend to cover all forms and arrangements which come within the terms employed in the definitions of my invention constituting the appended claims.

I claim:

1. A construction cleat comprising a perforated bar having a portion between its ends displaced laterally and lying parallel

with the end portions of the bar, the laterally-displaced portion being connected to the end portions by legs extending at right angles to the end portions of the bar and being at a distance from said end portions approximately equal to the depth of a standard electrical wall connection or switch box, and the length of said displaced portion being considerably greater than the width of such a box, at least one of said end portions being considerably longer than the width of the aforesaid box, the width of the bar being no greater than the spacing between the usual knock-out openings distributed about the center of the aforesaid box.

2. A construction cleat comprising a bar having between its ends a portion displaced laterally a distance approximately equal to the depth of a standard electrical wall connection or switch box, the length of said displaced portion being considerably greater

than the width of such a box, and one of the end portions of the bar being longer than the displaced portion and the other end portion being shorter than the displaced portion.

3. A construction cleat comprising a narrow flat bar having between its ends a portion displaced laterally a distance approximately equal to the depth of a standard electrical wall connection or switch box, said displaced portion being considerably longer than the width of such box and being also longer than one of the end portions of said bar and shorter than the other end portion.

In testimony whereof, I sign this specification in the presence of two witnesses.

ALEXANDER M. KNAUBER.

Witnesses:

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