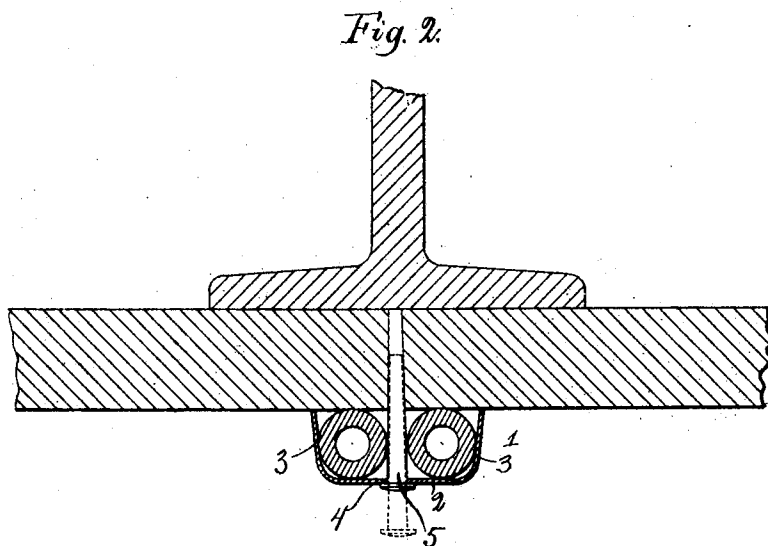
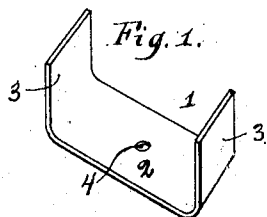


(No Model.)

D. B. BRONSON.  
CLEAT.

No. 503,193.

Patented Aug. 15, 1893.



Witnesses:

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# UNITED STATES PATENT OFFICE.

DOUGLAS B. BRONSON, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO  
THOMAS B. WRIGLEY, OF SAME PLACE.

## CLEAT.

SPECIFICATION forming part of Letters Patent No. 503,193, dated August 15, 1893.

Application filed February 14, 1893. Serial No. 462,260. (No model.)

*To all whom it may concern:*

Be it known that I, DOUGLAS B. BRONSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cleats; 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.

This invention relates to a novel device, which I term a cleat, adapted especially for securing the inside conduits to the ceilings and walls of buildings, and consists in the features of construction and combinations of parts hereinafter fully described and specifically claimed.

In the accompanying drawings illustrating my invention,—Figure 1 is a perspective view of a cleat constructed in accordance with my invention. Fig. 2 is a sectional view of the cleat fastened to a piece of tiling and holding two conduits of the cleat.

The building regulations of many cities now require that all wires for conveying electric currents shall be inclosed in what are known as inside conduits, that is, a stiff insulating tube, and that each wire shall be in a separate conduit. These conduits are fastened to the walls and ceilings and are then covered with the plaster. As a large amount of the wiring is done upon buildings having tile ceilings and walls, various devices have been employed, but principally a piece of wire that is inserted in a hole in the tile and "fished" out of another hole and then its ends twisted together around the conduits on the outside of the tile. As far as I am informed, these are the means now employed for holding these conduits. Said means are objectionable because of the trouble and time necessary in making two holes through the tile, in stringing the wire through said holes and then in twisting the ends of the wire, which is considerable owing to the number of fastenings necessary. Again, it is objectionable because the tiles are broken in making these holes, and as I am informed in wiring a room say where fifty fastening wires are to be employed, the tile will be broken in

about twenty-five cases, and this necessitates changing the fastenings. For instance, if the wires are being strung from the wall to the center of the ceiling, and about half way between the wall and the fixture in the center of the room a tile is broken, then all the fastenings that have been made must be removed and the location of the wires at the wall moved to one side and then carried forward again to the fixture to pass by the broken tile. This entails a great loss of time, as will be obvious, and of course is expensive. And still further, the broken tile must be removed and another tile inserted, which is expensive and amounts at times to a hundred dollars in one building. And further, a wire does not serve to hold the conduits rigidly in place, since they are often displaced by the plasterers and sag through the plastering, causing trouble and inconvenience. Another disadvantage of this manner of fastening inside conduits is that when a flat or shoe tile is laid against the flange of a floor or I-beam, it is impossible to string the wire because no space is left between the tile and flange of the beam, and it is one of the objects of my invention to overcome this objection in the manner hereinafter pointed out.

To obviate the above objections and to provide a fastening device that can be quickly applied without previous preparation of the tile and which will hold the conduits rigidly in place I employ a cleat 1, preferably of sheet metal, embracing a cross piece 2 and the legs 3 bent at an angle to said cross piece. About in the center of the cross piece a perforation 4 is made to permit the passage of a nail 5. The length of the legs 3 of the cleat is about equal to the diameter of the conduit to be fastened. The nail or pin 5 which I employ is, conveniently, an ordinary fence nail, and the size of the perforation 4 in the cleat is such as to permit the partial passage of such nail, that is to say, the nail will pass freely about two-thirds of its length through said perforation and then binds, so that considerable force is required to drive it therethrough up to its head.

The manner in which said cleat is employed is as follows: In Fig. 2 I have shown

two conduits secured to a tile ceiling, and it will usually be employed to hold two, as they usually run in pairs, except in the case of switch wires. The cleat is placed over the  
5 conduits with its legs embracing them and resting against the face of the tile. The nail is then passed through the perforation and between the conduits and is driven into the tile until its head rests against the outer face of  
10 the cross piece 2. The nail first passes in about as far as shown in full lines in Fig. 2 only against the resistance offered by the tile when it wedges in the perforation, and then by driving the nail forcibly it passes up to  
15 its head and wedges in the perforation and holds the cleat rigidly upon the tile. The nail further passes between the conduits inclosed within the legs of the cleat and by its size wedges between the conduits forcing  
20 them outwardly against the legs of the cleat. In this way it will be seen in the first place that the cleat is rigidly held against the tile, and then the conduits are held immovably within the cleat by being held between the  
25 cross piece and the tile and between the nail and the legs of the cleat. It is obvious that one conduit will be held just as immovably as two conduits.

Among the points of advantage I claim for  
30 this invention is that it is inexpensive, consisting only of a bent piece of sheet metal with a hole in it and an ordinary nail. It is also inexpensive to apply since no preliminary preparation of the tile is necessary, and it re-  
35 quires simply that the cleat be placed over the conduits and the nail driven in, thus obviating making two holes, stringing the wire and then twisting the wire, thereby requiring less time to apply, because independently of  
40 making the two holes and twisting the wire, the time required to insert the wire in one hole and "fish" it out of the other is considerable since the outside of the tile only is exposed and the wire must be bent before be-  
45 ing inserted and so manipulated from the outside to bring the end out of the other hole.

Another and an important advantage is the saving of the expense consequent upon break-

ing tiles before referred to, as the one nail driven into the tile does not break it as has  
50 been found in practice, and in this way more time is saved as the wiring can proceed without the interruption heretofore consequent upon breaking a tile and then removing the fasten-  
55 ing wires and going back and wiring in a new line. The conduits are held rigidly in place and cannot sag or be displaced by the plasterers as the nail holds tightly to the tile and the conduits are wedged in between the tile, cross-piece, nail and legs. The conduits can  
60 further, be secured to a flat or shoe tile that is placed against the flange of a floor or I-beam, where it is impossible to use the wire as above pointed out, as the nail can be driven into the tile and against the beam as shown  
65 in Fig. 2, and holds the cleat securely as found in practice.

It will thus be plainly obvious that my invention possesses many advantages over the devices now in use, and it has been found in  
70 practice that in the same space of time three times the amount of wiring can be accomplished with my invention as with the devices referred to.

I claim as my invention—

The combination with a device of the kind  
75 specified for securing conduits and the like and consisting of a cross piece 2 with a perforation 4 about midway between its ends, the length of said cross piece 2 approximat-  
80 ing twice the diameter of the conduit to be held thereby, and legs 3 on the ends of said cross piece 2, the length of said legs 3 approximating the diameter of the conduit to be held thereby, of a headed nail or pin 5 to pass  
85 through said perforation 4 and between the conduits held by the cross piece 2 and legs 3 and into the wall or the like to which the conduits are to be secured, substantially as de-  
90 scribed.

In testimony whereof I affix my signature in presence of two witnesses.

DOUGLAS B. BRONSON.

Witnesses:

HARRY COBB KENNEDY,  
RUDOLPH W. LOTZ.