

(No Model.)

F. CAVALLARO.
BEAM AND GIRDER SUPPORT.

No. 508,280.

Patented Nov. 7, 1893.

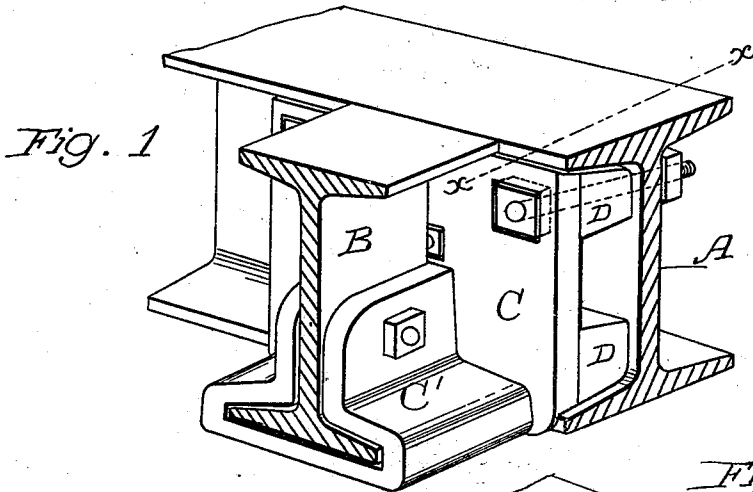


Fig. 2.

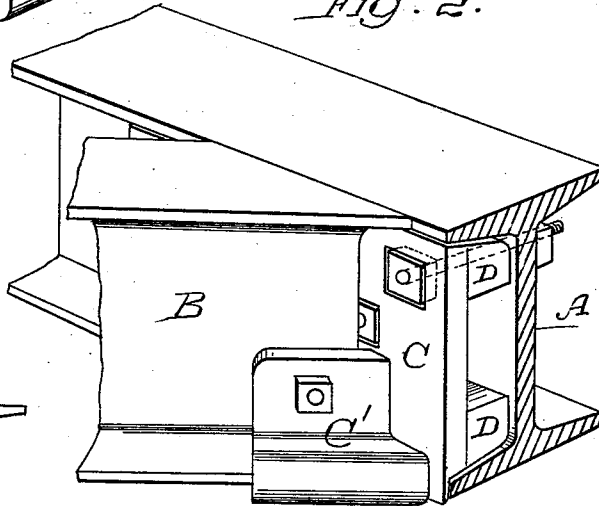


Fig. 3.

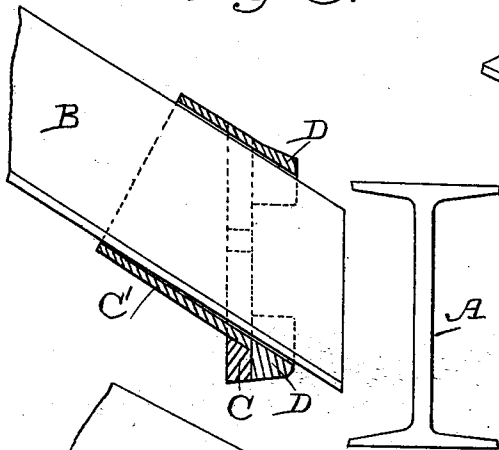


Fig. 5

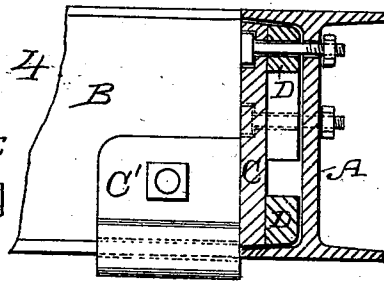
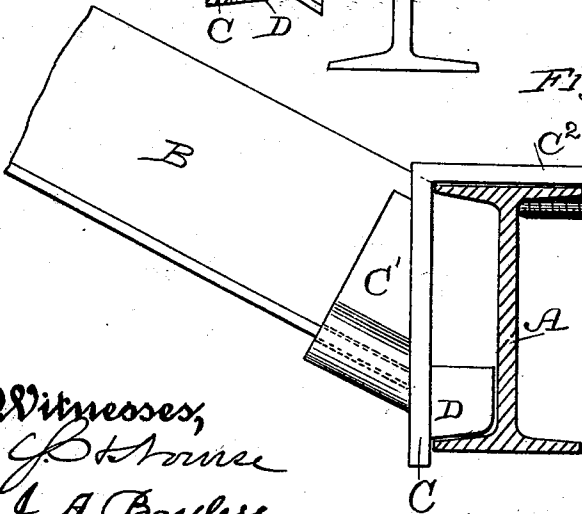


Fig. 4



Witnesses,
J. A. Bayless

Inventor,
Francesco Cavallaro
By Dewey & Co.
attys

UNITED STATES PATENT OFFICE.

FRANCESCO CAVALLARO, OF SAN JOSÉ, CALIFORNIA.

BEAM OR GIRDER SUPPORT.

SPECIFICATION forming part of Letters Patent No. 508,280, dated November 7, 1893.

Application filed April 12, 1893. Serial No. 470,068. (No model.)

To all whom it may concern:

Be it known that I, FRANCESCO CAVALLARO, a citizen of the United States, residing at San José, Santa Clara county, State of California, have invented an Improvement in Beam or Girder Supports; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a device for supporting the ends of beams or girders which abut against other beams or girders and at any angle thereto.

It consists in certain details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of my device. Fig. 2 shows an abutting beam at an acute angle with its support. Fig. 3 shows a roof beam with slotted plate and socket piece slidable upon the beam. Fig. 4 shows plate and socket piece supported from top of beam A. Fig. 5 is a transverse section of beam A and plate C taken through $x-x$ of Fig. 1.

The object of my invention is to provide an adjustable support for the abutting ends of beams or girders which are supported by other beams which they meet at an angle, either horizontally or inclined as in the case of roof trusses or beams.

A is the beam or girder, and B is the abutting beam or girder which it is desired to support from the beam A. The beam A may be either a T or I beam, or of other suitable or desired shape.

In the present case I have illustrated my invention as applied to the two first named forms.

C is a plate, from the face of which projects the socket piece or support C'. In the case of horizontal beams, this socket piece may be made with a channel adapted to receive the vertical web of the rib, and a horizontal channel at the bottom or top for the horizontal flange. This form is adapted to receive either a T or I shaped beam, the second flange in the latter case not being contained within the chamber of the socket piece, but the sides of this chamber are sufficiently high to steady the abutting beam, retain it firmly in position, and prevent any tendency to tip to one side or the other. This construction is es-

pecially adapted for the support of roof beams, in which case the socket is formed at an angle with the plate C as shown in Fig. 2, the angle corresponding with the angle at which the beams are to be set.

In Fig. 3 a slot or channel is made through the plate C, corresponding in direction and shape with the channel in the socket piece, and sufficiently large to allow the socket piece and plate to be slipped upon the beam which is to be supported, until the latter has been properly placed with reference to the supporting beam.

It will be manifest that the sockets which are made for the lower end of the beam, will incline upwardly, while those which are intended to receive the upper end would be reversed and inclined downwardly.

The plate C has extensions D projecting from the side opposite the socket piece, and these are adapted to enter the space between the top and bottom flanges of the supporting beam and are so shaped that, in the case of horizontal beams, the upper flange of a supported beam will be flush with the corresponding flange of the beam by which it is supported, so that any flooring or surface laid upon the top will be level. The abutting beam is secured by a bolt through the socket piece and the beam.

Bolt holes are made through the plate C and corresponding holes are made through the web of the supporting beam A for the reception of bolts by which the socket piece is firmly secured to the supporting beam, and the plate may be strengthened by forming it with a rib or thickened portion upon the rear side through which the holding bolts pass. It will be manifest that in the case of the inclined roof supports, these socket pieces, by reason of being channeled entirely through the back plate, can be slipped upon the beam, and when the latter is in the proper position with relation to its supports they are slipped down into their position upon the supporting beam and bolted thereto. This allows the beams to be introduced to their positions without twisting or bending them from side to side after the supporting beams are in position.

In Fig. 4. I have shown the plate C formed with an extension C² at right angles with its

upper edge and of sufficient length to pass across the top of the supporting beam A. From the edge of this extension which is farthest from the plate C, a short plate C³ extends down parallel with the plate C, so that it hooks over the opposite edge of the top flange of the beam while the lug or extension D on the lower part of the plate C fits against the inner edge of the lower flange of A. A screw bolt or bolts E pass through the parts C³ and when turned to press against the central rib, they lock the plate C and socket C' firmly to the supporting beam, without the necessity of making any holes in the latter. This construction enables the builder to place all of the beams A, and the roof supporting plates and sockets may then be attached by placing them from above, and secured without making any holes in the beam A. Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is—

1. The beam and girder support consisting of a socket piece having a channel formed in it corresponding in shape with and inclosing the flange and web of the beam to be supported, a plate forming the backing of the socket piece with inwardly projecting extensions adapted to enter between the top and bottom flanges of the beam support, bolts passing through the plate and the web of the beam support, substantially as herein described.

2. A support for roof beams, consisting of a socket piece having a groove or channel formed in it, shaped to fit the web and flanges of the beam to be supported, a back plate from which said socket piece projects at an angle, a slot made through said back plate corresponding in shape with the channel in the socket piece whereby the plate and socket piece may be slipped upon the beam to be supported, extensions projecting from the opposite side of the plate from the socket piece and adapted to enter between the top and bottom flanges of the supporting beam, and bolts passing through the holes in the plate and in the web of the supporting beam, whereby the roof beam is secured, substantially as herein described.

3. A support for iron roof beams, consisting of a socket piece having a groove or channel formed in it, shaped to fit the web and flange of the beam to be supported, a back plate from which said socket piece projects at an angle, an extension D adapted to rest upon the bottom flange of the supporting beam, and means for locking the plate to the supporting beam, substantially as herein described.

In witness whereof I have hereunto set my hand.

FRANCESCO CAVALLARO.

Witnesses:

A. S. MACKENZIE,
T. P. MCFARLAND.