

(No Model.)

W. PAINE. Sr.

BRACE AND SUPPORT FOR JOISTS OF BUILDINGS OR OTHER STRUCTURES.

No. 457,664.

Patented Aug. 11, 1891.

Fig: 1.

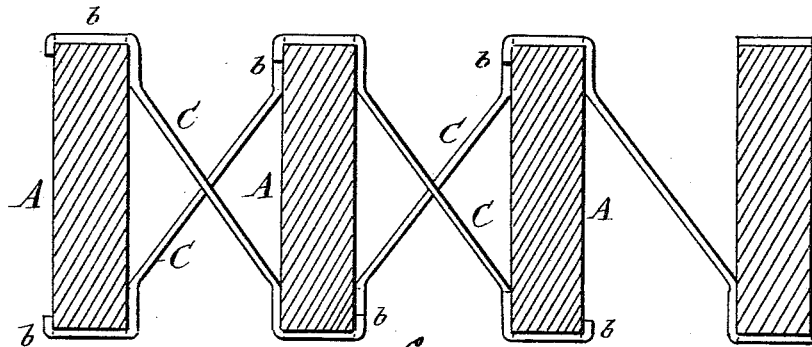


Fig: 2.

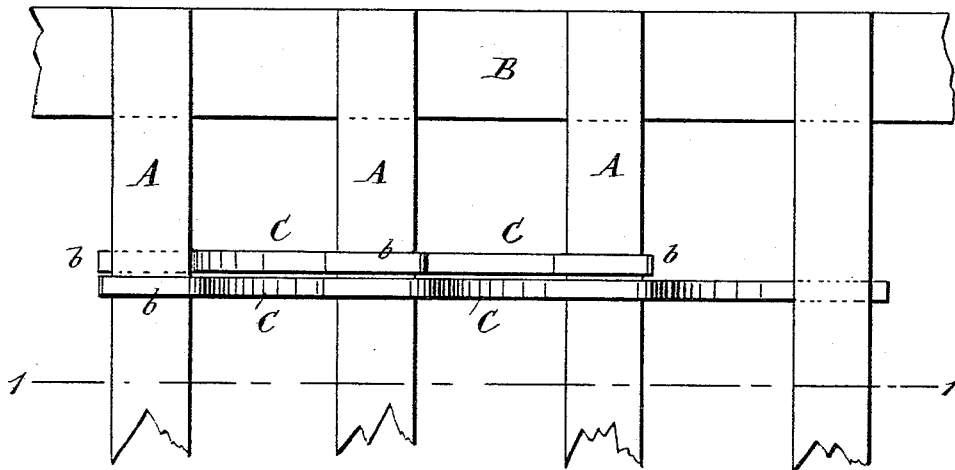


Fig: 3.

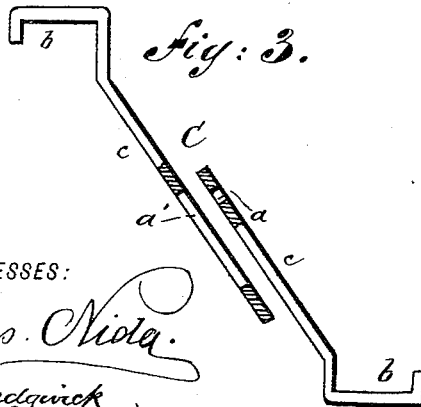
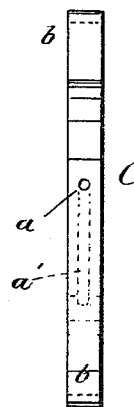


Fig: 4.



WITNESSES:

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WILLIAM PAINE, SR., OF BRAINERD, MINNESOTA.

BRACE AND SUPPORT FOR JOISTS OF BUILDINGS OR OTHER STRUCTURES.

SPECIFICATION forming part of Letters Patent No. 457,664, dated August 11, 1891.

Application filed October 15, 1890. Serial No. 368,173. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PAINE, Sr., of Brainerd, in the county of Crow Wing and State of Minnesota, have invented a new and useful Improvement in Braces and Supports for Joists of Buildings and other Structures, of which the following is a full, clear, and exact description.

This invention relates to bridging for joists—that is, braces and supports designed to tie or hold the beams or joists upon which the boarded floor of a structure, as a building, bridge, &c., is laid together, and to support the weight evenly upon all the joists; and the invention consists in the novel construction of such braces and supports, and combinations of the same with the beams or joists, substantially as hereinafter described, and more particularly pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a transverse section of a series of beams or joists with my improved braces or supports applied. Fig. 2 is a plan of the same, showing also one of the sills upon which said joists or beams rest or are let into. Fig. 3 is a side view showing the brace or support made in sections and before said sections are joined together, and Fig. 4 is a face view of the same.

A A indicate a series of the beams or joists in part upon which the boarded floor of a building is designed to be laid, and B is one of the sills in part, upon which the beams or joists rest or are let into.

C C are the bridging braces or supports for tying or holding the beams A A together at their proper distance apart and for stiffening or strengthening them. These braces or supports C C, which are made of iron rods or bars of any suitable shape in transverse section, are zigzag, so that when applied they diagonally cross each other between the intermediate beams and are constructed with bent

ends *b b*, and with a bend or bends between their ends to form seats adapted to clip or overlap and receive within them the upper and lower faces of the beams or joists A A, thus firmly binding and holding the latter in various directions. The last joist or beam of the series may only have one brace, transversely of the beams, applied to it, as shown in Figs. 1 and 2. Of course viewed in direction of the length of the beams any number of braces C arranged at suitable distances from each other may be used. In Figs. 1 and 2 each of these braces or supports which lie one beside the other between the beams is represented as made all in one piece, but in some cases each one will be made in two pieces or sections *c c*, intermediately of their length, adapted to fit the one body section or part over the other in their diagonal arms or portions, and provided with a longitudinal slot *a'* and bolt-hole *a* at such parts for the insertion of a bolt, or like fastening, to unite the two sections together, as shown in Figs. 3 and 4. By this latter construction each brace or support C may be shortened or lengthened to adapt them to beams or joists arranged at different distances apart.

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

1. A joist or beam brace consisting of a zigzag bar or rod of iron provided with seats adapted to receive and clip over the upper and lower faces of the joists or beams, substantially as described.

2. The herein-described brace, consisting of two sections *c*, each provided with a bent end *b*, and adapted to clip or overlap the upper and lower faces of the joists or beams, one section being apertured and the other slotted to receive a bolt, and by means of which the sections are adjustably secured together, as specified.

WILLIAM PAINE, SR.

Witnesses:

M. K. SWARTZ,

WM. M. DRESSKELL.