

Nov. 9, 1937.

F. J. TRUMPOUR

2,098,263

CRIBBING SADDLE

Filed Oct. 8, 1936

3 Sheets-Sheet 1

Fig. 1.

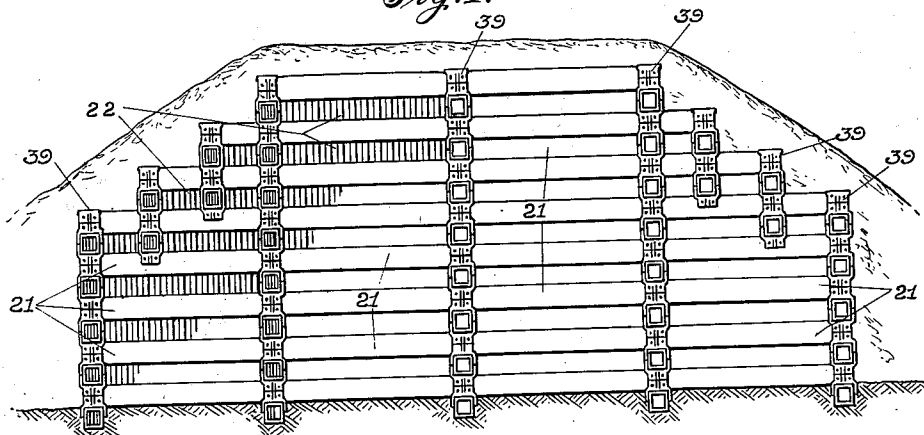


Fig. 3.

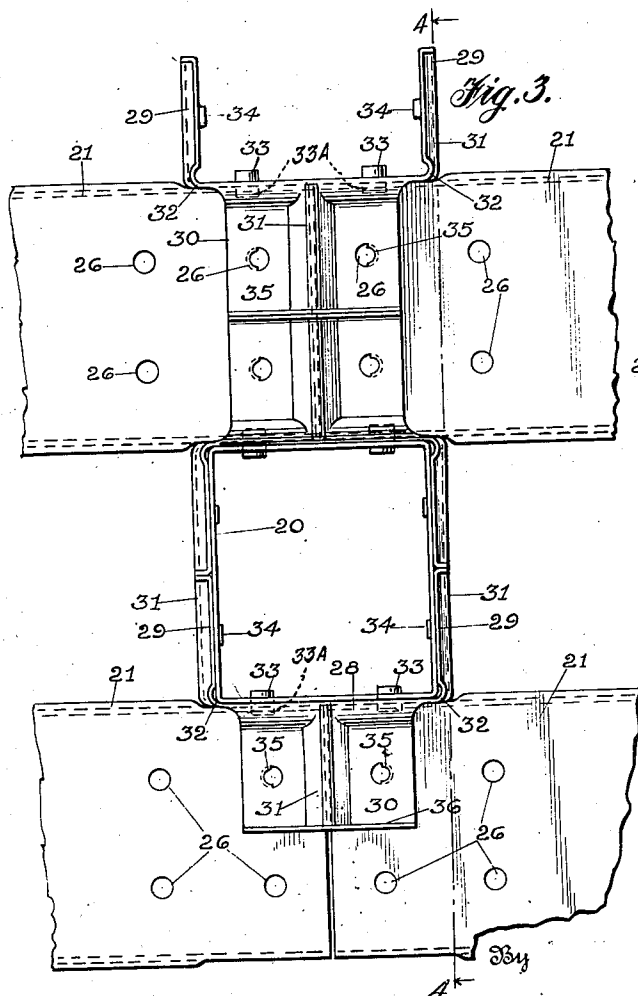
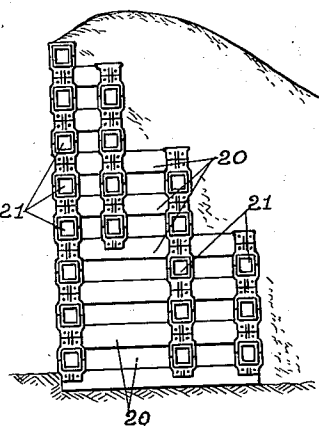


Fig. 2.



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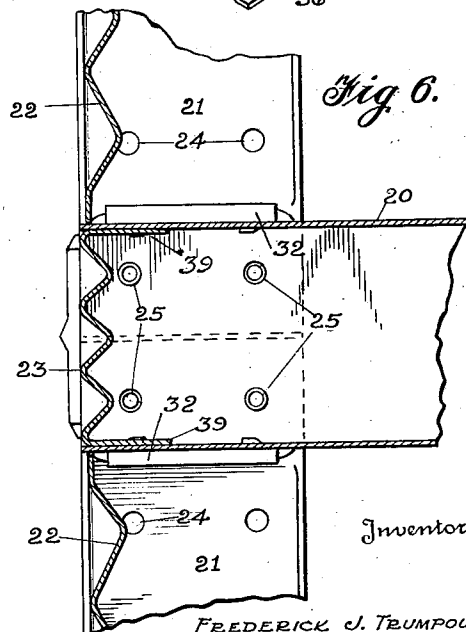
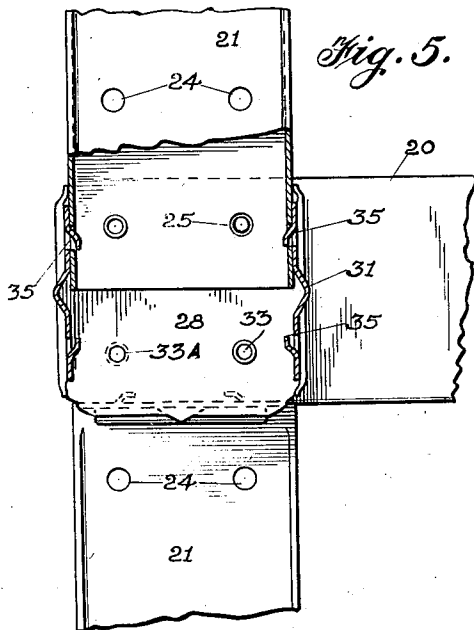
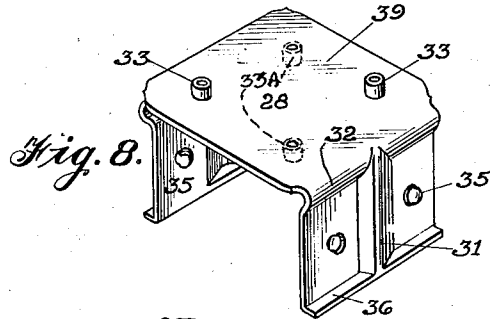
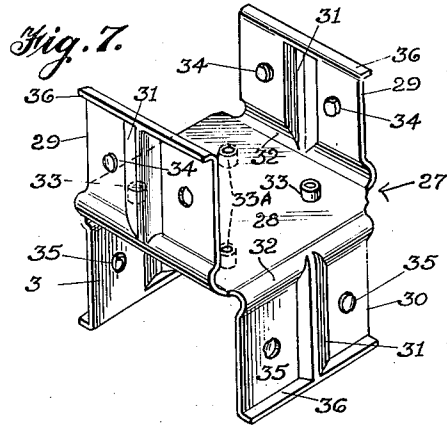
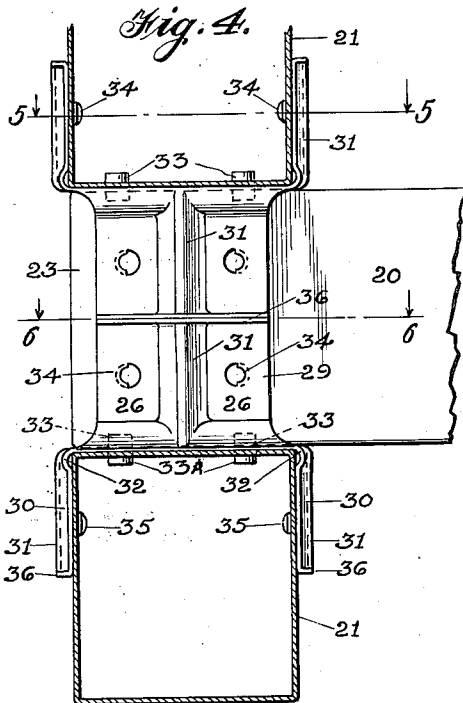
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3 Sheets-Sheet 2



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3 Sheets-Sheet 3

Fig. 9.

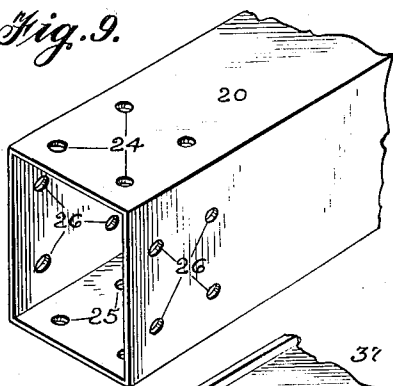


Fig. 10.

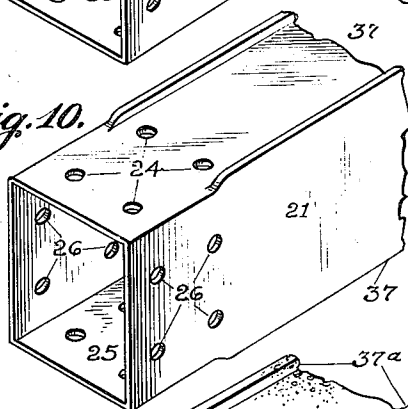


Fig. 11.

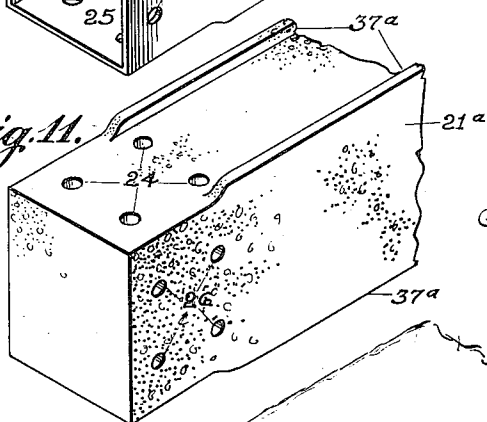


Fig. 12.

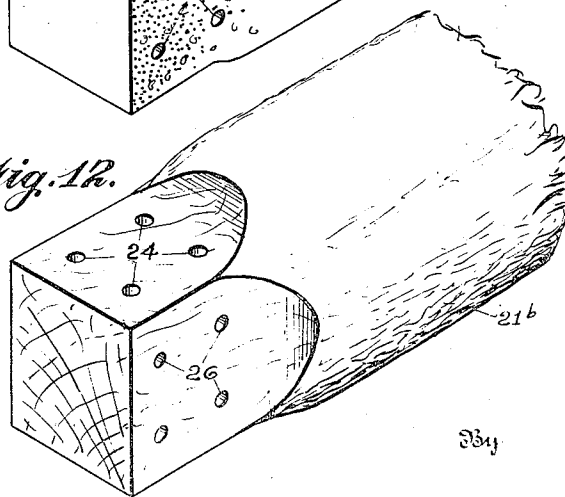


Fig. 13.

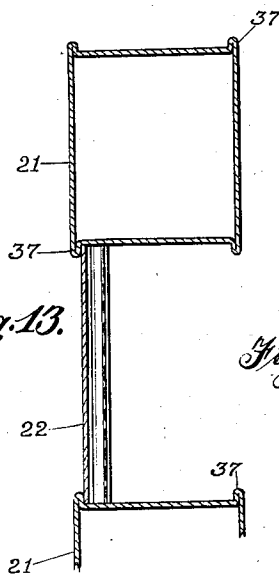


Fig. 14.

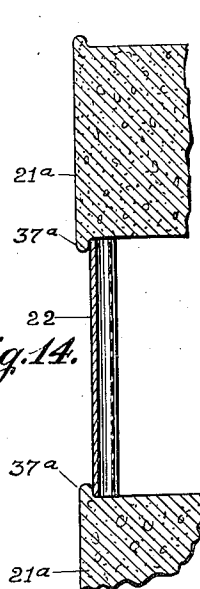
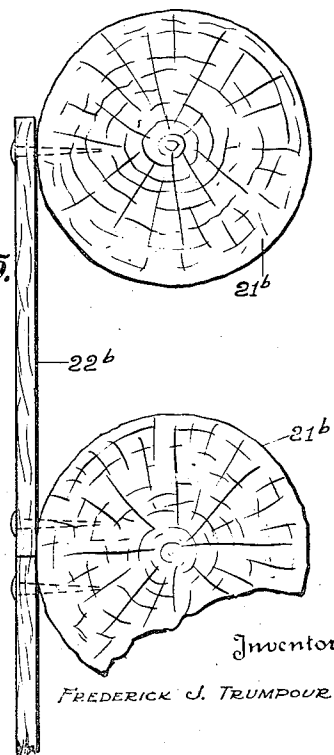


Fig. 15.



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CRIBBING SADDLE

Frederick J. Trumpour, Forest Glen, Md.

Application October 8, 1936, Serial No. 105,521

5 Claims. (Cl. 61—47)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein, if patented may be manufactured and used by or for the Government for governmental purposes without the payment of any royalty thereon.

5 This invention relates to cribbing and more particularly to an automatic locking cribbing connection or saddle, adapted when forced into place, to secure and firmly retain the headers, stretchers and fillers in their relative positions and prevent
10 accidental displacement of said parts, regardless of the various strains and stresses to which structures of this character are subjected. Further, to provide a cribbing connecting saddle that requires no bolts or nuts or other separate securing
15 means, will automatically spring into place, and, should the occasion arise, may be caused to release the cribbing members above mentioned and permit the disassembling of the entire cribbing structure, without damage to the saddles or said
20 members, all of which may again be repeatedly used on temporary projects or left as a permanent structure.

25 An object in view is to provide simple, durable and inexpensive means for securing cribbing members together, that may be stamped from a single sheet of steel or other appropriate material, that will permanently secure the cribbing members together against accidental displacement, and will when desired, permit the separation of same
30 without the damage of any of said parts when wrecking is desired.

35 A further object is to provide a cribbing that may be rapidly erected without the use of tools of any description and be disassembled with the use of only a few wedges and a sledge, neither of the above requiring skilled labor, and the latter with practically a 100 percent salvage value.

40 A further object is to provide a saddle that will securely connect adjacent portions of the headers, stretchers, and fillers together, against movement in any direction and provide a cribbing structure having practically a smooth outer face.

45 Another object is to provide a saddle that is of such a construction that will, when the parts of the cribbing are assembled, rest one upon another, thus removing the vertical pressure on the ends of the cribbing units, and relieve the tendency to crush same, the combined saddles providing a
50 continuous vertical column from the bottom to the top of the cribbing structure particularly where the saddles are used. Saddles of the form shown and described thereby permit the use of hollow metal headers and stretchers of comparatively light gauge, and avoid the necessity of an

expensive reinforcing method formerly practiced when hollow members were used.

A further object is to provide a supporting and securing saddle that may be struck from a sheet of metal and shaped in a single operation, and if
5 necessary, used a number of times should the cribbing be a temporary structure. Again, to avoid the use of bolts or nuts which represents not only a saving in cost but the inconvenience of loss of parts and cost of transportation.
10

A further object is to provide uniform perforations in headers and stretchers and saddles that render them reversible and facilitate rapid and accurate assembling of the parts.

Other objects and advantages will appear in
15 the following description and be particularly pointed out in the appended claims.

A preferred embodiment of my invention is shown in the accompanying drawings wherein:

Fig. 1 is a front elevation of my improved cribbing structure.
20

Fig. 2 is a vertical section of Fig. 1.

Fig. 3 is an enlarged detailed face view of three saddles, a header and parts of two rows of stretchers.

Fig. 4 is a side view, with the stretchers in section, of the lower portion of Fig. 3.
25

Fig. 5 is a section on line 5—5 of Fig. 4.

Fig. 6 is a similar view on line 6—6 of Fig. 4.

Fig. 7 is a detailed perspective view of a saddle.
30

Fig. 8 is a similar view of a cap member, which is a saddle with one pair of the spring locking members removed.

Fig. 9 is a detailed perspective view of one end of a preferred form of header.

Fig. 10 is a similar view of a stretcher.
35

Fig. 11 is a similar view of a stretcher formed of cement.

Fig. 12 is a similar view of a stretcher formed of wood.

Fig. 13 is a vertical section through adjacent stretchers and a filler.
40

Fig. 14 is a similar view, the stretchers being formed of cement.

Fig. 15 is a similar section, the stretchers being formed of wood and the fillers being planks spiked to the face of the stretchers.
45

Reference now being had to the drawings in which similar numerals indicate corresponding parts in all the figures of the drawings. The
50 cribbing consists of four units, namely, the headers 20, the stretchers 21 and the fillers 22. When hollow steel headers are used, closures 23 of vertically corrugated steel, as seen in Fig. 6, are provided to close the outer ends of the headers.
55

The ends of the headers and stretchers, and wherever a saddle is to be placed, regardless of their intermediate cross sections, are square, said square surfaces are provided with groups of apertures as shown at 24 and 25 in the top and bottom surfaces respectively, and at 26 in their sides. Said groups of apertures on the four surfaces are arranged in squares of equal size, pairs of each group being spaced equal distances apart, and one-half of said distance from the edges of their respective surfaces, and the extreme end of said cribbing unit.

As shown in Figs. 10, 11, 13 and 14, a bead 37 is formed along the edges of the stretchers, adapted to retain in place filler members 22, preferably formed of vertically corrugated metal.

Figs. 11 and 14, show stretchers 21^a of cement having filler retaining beads 37^a and Figs. 12 and 15, show round wood stretchers 21^b and plank fillers 22^b spiked to the face of the stretcher; all forms may be used with the improved saddle.

The saddle 27 is preferably cut from sheet steel or other appropriate metal, and shaped as shown, and consists of a plate 28 having practically a square outline equal in size to the squared end portions of the cribbing units, and is adapted to rest between adjacent ends of pairs of stretchers and the squared portion of a header.

Projecting from plate 28 in opposite directions, are pairs of spring locking members 29 and 30 extending upwardly and downwardly respectively. Said members are provided with stiffening ribs 31, flanges 36 to provide enlarged contact surfaces between adjoining saddle members. A bulge or curved portion 32 at the base of said spring locking members is provided to facilitate the assembling of the parts and diminish the tendency of the locking members, after repeatedly springing them in and out of locked positions, to break off of the plate 28 at their connecting portions.

Plate 28 of the saddle is provided with four lugs 33 and 33-A, preferably struck from the metal and located to correspond with the apertures 24 and 25 in the top and bottom of the square surfaces at the end of the headers and stretchers. Said lugs may be of tubular or other cross section, and prevent horizontal slipping of the parts in all directions in the following manner: Diagonally arranged pairs of lugs 33-A extend downwardly and are adapted to seat in two diagonally arranged apertures of the four apertures 24 in the end of a header member 20 as shown in Figs. 5-6-9-10-11-12. The other two diagonally arranged lugs 33-33 in plate 28, extend upwardly, one of said lugs is seated in an aperture 25 in the lower face of a stretcher, and the other is seated in an aperture 25 in the lower face of an adjoining aligning stretcher. With the above arrangement of the parts, the plate 28 secures the top of a header and the lower surfaces at the ends of two adjoining stretchers together.

The spring locking members 29 and 30 are provided with lugs 34 and 35 respectively, projecting inwardly and said lugs may be struck or extruded from the metal and are adapted to further firmly secure the cribbing elements in place.

By reference to Figs. 3-4-5-6, it will be seen that a saddle is seated over the adjacent ends of two aligning stretchers, the lugs 35 of the spring locking members 30 being seated in pairs of apertures 26-26, nearest to the ends of two aligning stretcher units. Lugs 35 are in the form of ratchets positioned in such a manner as to prevent horizontal movement of aligning stretchers

in opposite directions. Spring locking members 29, as shown at the lower portions of Figs. 3 and 4, extend up on opposite sides of a header unit 20, lugs 34 being seated in the lower pair of apertures 26 in the sides of a header.

The spring locking members, as stated above, are provided with stiffening ribs 31, and also with flanges 36, at their outer ends, adapted to contact with corresponding flanges of adjoining saddles, thus providing for a dual functioning of the improved saddle, which is not only to provide an effective locking means between the elements of the cribbing, but also an uninterrupted and substantial supporting column from the base to the top of the cribbing, that will prevent crushing of the cribbing units. Said benefits are obtained by forming the spring members one-half of the vertical dimensions of the ends of the headers and stretchers. It will be further noted that the plate 28 of the saddle is square, the spring plates are all the same width and one-half the length, and the lugs all correspond with the apertures in the headers and stretchers, thus providing for interchangeability of position of the saddle, the headers and stretchers, thereby providing for speed in erecting or disassembling.

As shown in Figs. 1 and 6, when hollow cribbing units are used, vertically corrugated closures 23 having spring end members 39, may be forced into the open outer ends of the headers, to exclude foreign matter from the interior of same, to further assist in preventing crushing of the cribbing members and improve the appearance of the exposed face of the cribbing structure.

The cap shown in Fig. 8, is simply a saddle with one pair of spring locking members removed, which may be sprung into place at the top of a column of saddles.

Having fully described my invention, what I claim and desire to secure Letters Patent is:

1. A cribbing structure comprising stretcher and header units having rectangular portions in cross section, a plurality of apertures arranged in the faces of said rectangular portions, a saddle having a plate portion adapted to lie in a substantially horizontal position between the rectangular end portions of adjacent stretchers and a rectangular portion of a header, said plate portion having lugs projecting in opposite directions adapted to engage apertures in said stretchers and header to prevent movement of the ends of the stretchers longitudinally of the header and the separation of the ends of said stretchers, pairs of spring locking members extending vertically in opposite directions from said plate portions a distance equal to one-half the vertical cross section of the rectangular portion, having lugs adapted to engage apertures in the rectangular portions of said stretchers and header to prevent relative movement of said parts, flanges arranged at the ends of said spring locking members adapted to come into contact with corresponding flanges on adjoining saddles to relieve the crushing effect on the stretchers and header.

2. A cribbing structure comprising rectangular stretcher and header units, apertures arranged in the faces of said units, a stamped metal reversible saddle having a plate portion adapted to lie in a horizontal position between adjacent stretchers and a header, said plate portion having lugs projecting in opposite directions adapted to engage apertures in said stretchers and header to prevent movement of the ends of the stretchers longitudinally of the header and the separation of the ends of the stretchers, pairs of spring lock-

ing members extending vertically in opposite directions from said plate portion of a length equal to one-half of the vertical dimension of the stretchers and header, having lugs adapted to engage apertures in the side faces of said stretchers and header to prevent relative vertical and horizontal movement of said parts, said spring locking members having strengthening flanges at their outer edges adapted to engage with adjacent saddles to provide a vertical weight supporting column of superimposed saddles.

3. A cribbing structure comprising rectangular stretcher and header units, apertures arranged in the faces of said units, flanges arranged along the upper and lower edges of said stretcher units, stamped metal reversible saddles having plate portions adapted to lie in a horizontal position between the ends of adjacent stretchers and a header, said plate portions having lugs projecting in opposite directions adapted to engage apertures in said stretchers and headers to prevent movement of the ends of the stretcher longitudinally of the header and the separation of the ends of the stretchers, pairs of spring locking members extending vertically in opposite directions from said plate portions, one-half of the vertical dimensions of the ends of the stretchers and the headers and having lugs adapted to engage apertures in said units and filler plates arranged between the stretchers in contact with the inner face of said flanges adapted to support the stretchers and prevent escape of earth between said stretchers.

4. A cribbing structure comprising hollow rectangular stretcher and header units, apertures arranged in the faces of said units, and flanges arranged along the edges of said stretcher units, a stamped metal reversible saddle having a plate portion adapted to lie in a horizontal position between the end portions of adjacent stretchers

and a header, said plate portion having lugs projecting in opposite directions adapted to engage apertures in said stretchers and header to prevent relative movement of said parts, pairs of spring locking members extending vertically in opposite directions from said plate portion one-half of the vertical dimensions of the ends of the stretcher and header units having lugs adapted to engage apertures in said units and extend through apertures in the header beyond the inner facing of said unit and a closure having perforated extensions adapted to enter the end of the header and engage said projections on the spring locking members.

5. A cribbing structure comprising stretcher and header units provided with rectangular portions at weight supporting points and apertures in the faces of said rectangular portions, a one piece pressed spring metal saddle having a plate portion adapted to rest between the rectangular portions of adjacent ends of stretcher and header units provided with lugs extending in opposite directions adapted to engage apertures in the upper faces of abutting ends of adjoining stretchers and the under face of a header, pairs of spring locking members extending vertically in opposite directions from the edges of said plate one-half the vertical thickness of the rectangular portions of adjacent stretchers and header, having lugs adapted to engage apertures in the sides of said rectangular portions of said stretchers, and the sides of the rectangular portion of the superimposed header, and flanges arranged along the sides of said spring locking members remote from said plate for engagement with corresponding flanges of saddles below and above same, all adapted to prevent relative horizontal and vertical movement of the headers and the stretchers, and provide a weight supporting column.

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