To all whom it may concern:

Be it known that I, Fred H. Ream, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented a new and useful Improvement in Metal Bridging for Floor-Joist, of which the following is a specification.

My invention relates to metal-bridging for floor-joist, of the class shown and described in my application for Letters Patent of the United States, filed February 27, 1913, Serial No. 751,078, by means of which floor-joist are braced and trussed to carry compression and tension strains.

The objects of my invention are: First, to provide a cheap, substantial and durable bridging-member, formed integral of a single strip of metal; second, to provide shoulders adjacent the middle of the bridging-member, adapted to bear against the sides of the joist, each of which shoulders is provided with a pointed prong, adapted to be forced into the joist, to retain the bridging-member in place; third, to provide pointed prongs on the opposite ends of the bridging-member, adapted to pierce the joist, to reinforce the fastening devices in the top of the joist; and fourth, to provide a hole, apertured through one end of the bridging-member, adapted to be engaged by a lever, to draw the bridging-member to place when applying the same to floor-joist. These, and other objects, will appear in the following description, it being understood that changes in form, proportion and minor details of construction may be resorted to, within the scope of the appended claims. I attain these objects by the construction and arrangement of parts, illustrated in the accompanying drawing, in which:

Figure 1. is a sectional view of a floor, supported by floor-joist, provided with my invention.

Fig. 2. is a side elevation of my invention, partly sectioned, and illustrating the method of applying the bridging-member.

Fig. 3. is a plan view of my invention.

Fig. 4. is a sectional view of a part of my invention, on the line I, I, in Fig. 5.

Fig. 5. is a vertical elevation of a part of my invention, showing the prong integral with the shoulder; and Fig. 6. is a plan view of a modified form of the prong, formed on the end of the bridging-member.

Similar reference numerals refer to corresponding parts throughout the drawing.

The numeral 1 indicates my improved bridging-member, which I preferably make from a strip of sheet metal, such as iron and steel, preferably galvanized iron, and which is of a length adapted to extend from the bottom of one floor-joist to the top of the two next adjoining floor-joist. A hole 2 is centrally apertured in the strip intermediate its length, and a hole 3 is apertured in the strip adjacent opposite sides of the hole 2.

The apertures are provided for the entry of fastening devices 4, which pierce the bridging-member and the lath or boards used in providing a ceiling. The terminal ends of the strip are each provided with pointed prongs 5, 5, and 6, 6, the tips of which are bent downwardly, to an angle a little in excess of a right angle, and adapted to be forced into the side of the floor 75 joist, as shown at 7, 7, in Fig. 2. A hole 8 is apertured in the strip, adjacent its one end, rearwardly of the prongs 6, through which hole a lever 9 is extended, to bear against the adjacent side of the joist, this provision enabling the bridging-member to be drawn to bear snugly upon the under edge of the joist resting on the middle of the bridging-member, after the opposite end of the bridging-member has been secured to the joist, as shown in Fig. 2. A plurality of small openings 10 are apertured in the strip, adjacent its opposite ends, through which fastening devices 11, such as nails, screws and the like, may engage the top of the joist.

From adjacent the middle of the strip, lengthwise considered, to adjacent the apertures 10, on both sides of the middle, the strip is indented and formed in angular shape, as shown at 12, in Fig. 3, for the purpose of providing rigidity to the portions of the bridging-member involved in the operation mentioned, the ends of the angular indentation being slanted, to provide the shoulders 13, 13, adjacent the middle of the strip, and the shoulders 16, 16, adjacent the terminal portions of the same, which shoulders 13, 13, are adapted to vertically bear against the adjacent sides of the joist, when the bridging-member is bent upwardly on each side of its middle portion, to form upwardly-extending arms 14, 14, and bringing the shoulders 16, 16, formed adjacent...
the upper ends of the arms, to bear against
the bottom of the floor, as shown in Fig. 1.  
The portion of the strip outwardly from the
shoulders 16, 16, on both upwardly-extending
arms 14, 15, is bent outwardly, to sub-
stantially lie in a plane parallel with the
floor. A pointed prong 17 is formed in-
tegral with each of the shoulders 13, 13, the
point of which is bent upwardly to an angle
a little in excess of a right-angle, and
adapted to be forced into the joist, when the
shoulders 13, 13, are bearing against the
joist, and for the purpose of retaining the
bridge-member in place prior to the fasten-
ing of the ends of the arms to the next ad-
joining joist, on both sides, the ends of the
arms are fastened at the time the floor is
laid, and as effectively as if the shoulders
had been pierced by nails or other fastening
deVICES penetrating the joist. The prongs
17 are formed in the face of the shoulders
13, 13, by a triangular incision through their
respective faces, the point of the prong be-
ing bent forwardly and downwardly, as
shown in Fig. 5.

To apply my bridging-member, the mid-
dle portion of the bridging-member is
placed to bear against the under edge of the
joist 19, the shoulders 13, 13, on the oppo-
site arms bearing against opposite sides of
the joist, and the outwardly-bent end of the
free arm 15 bearing upon the top edge of
the next adjoining joist 20. The lever 9 is
extended through the hole 8, to and against
the outside of the adjacent joist 20, and a
pressure is outwardly applied to the lever 9,
thus drawing the bridging-member tightly
to place, thus securely retaining the ad-
justment obtained. The overhanging por-
tions of the arms are then bent down against
the outer side of the joist, and the prongs 6,
6, forced to pierce the sides of the joist. A
bridging-member is similarly secured to
each floor-joist, when the floor is laid in the
customary manner.

The bridging-member is adapted to be ap-
plied without nails or fastening devices of
any kind, excepting the prongs carried by
the bridging-member, as above described.
The bridging-member is formed integral
throughout, providing in one single member
facilities for its application to floor-joist, to
effectively carry all compression and ten-
sion strains.

What I claim is:

1. In a joist bridging, a metal bridge mem-
ber consisting of a strip of metal formed
with an upwardly extending arm outwardly
of each side of the middle of the strip, each
of said arms being provided longitudinally
with a triangular shaped rib having its op-
posite ends beveled, the lower beveled end
of each rib being provided integrally with
a pointed prong extending outwardly sub-
stantially at right angles to said end of the
rib.

2. In a joist bridging, a metal bridge mem-
ber consisting of a strip of metal formed
with an upwardly extending arm outwardly
of each side of the middle of the strip, each
of said arms being provided longitudinally
with a tri-angular shaped rib having its op-
posite ends beveled, the lower beveled end
of each rib being provided integrally with
a pointed prong extending outwardly sub-
stantially at right angles to said end of the
rib, in combination with a pointed prong in-
tegral with each of the terminal ends of the
bridge members.

FRED H. REAM.

Witnesses:

ANNE L. GREEF,
CLARA KIMBALL.