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H. SPRINGOB

JOIST BRACE

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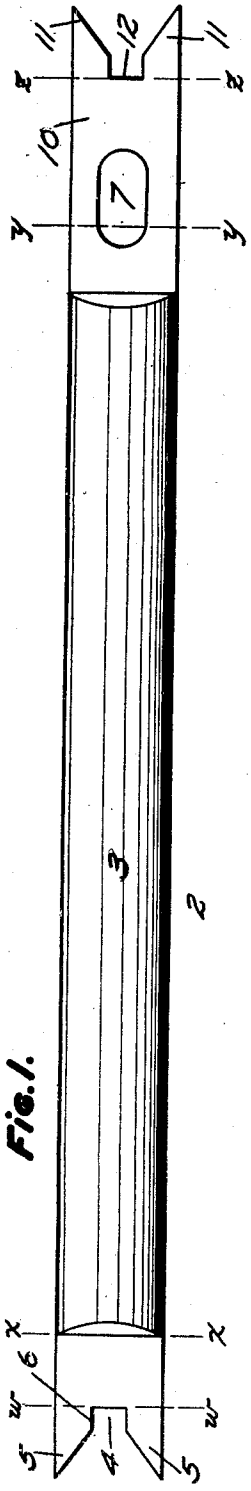


Fig. 1.

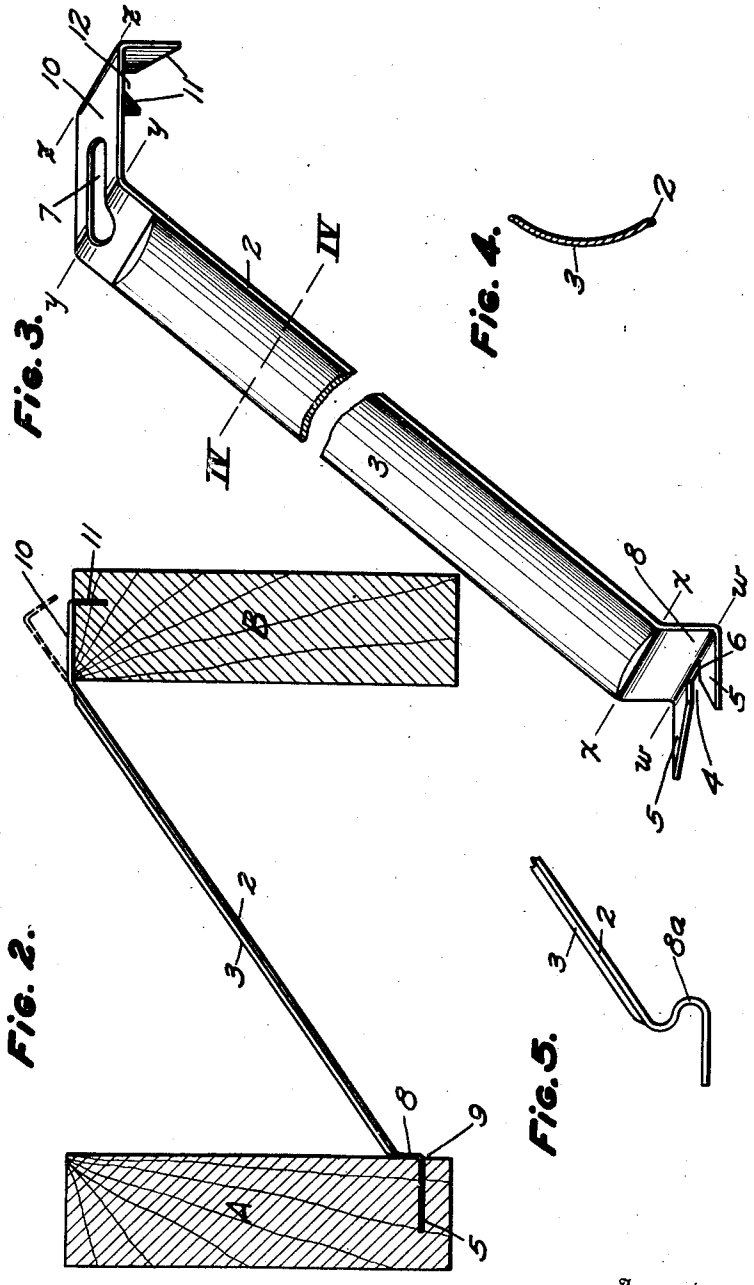


Fig. 3.

Fig. 4.

Fig. 2.

Fig. 5.

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JOIST BRACE.

Application filed May 19, 1926. Serial No. 110,056.

My invention consists of an improvement in joist braces, for bracing adjacent wooden joists, beams, etc., in building construction.

The device is made of a sheet metal blank, preferably a thin strip of steel, having end portions provided with piercing or driving prongs, constructed and adapted to operate in the manner hereinafter described.

In the drawings:

Fig. 1 is a plan view of the blank before bending;

Fig. 2 is a sectional view showing two joists with the brace applied;

Fig. 3 is a perspective view of the brace detached;

Fig. 4 is a cross section on the line IV, IV, of Fig. 3;

Fig. 5 is a detail edge view showing a modified construction.

Referring to Fig. 1 the blank from which the brace is made consists of a longitudinal strip 2 of thin steel of suitable strength and dimensions, preferably having an upwardly bowed or arched middle portion 3, for strength.

At each end the strip is cut out centrally as at 4 back to the line w, w, providing the inwardly tapering points 5 at each side of the middle space. The inner edges of the tongues thus formed extend backwardly in parallelism as at 6 and the end portions of the blank are preferably flat inwardly beyond the points for bending as shown.

At one end the blank is preferably cut out as at 7, somewhat weakening the metal in cross section, to facilitate bending.

As thus made the lower or bottom attaching end is bent at substantially right angles on the line w, w, providing a rear driving shoulder 8 by which the points 5 may be driven into the lower face of the joist A as at 9 clear up to the annular bend.

Shoulder 8 extends for a short distance upwardly, and the blank is bent obtusely on the line x, x, and then extends straight up to the other end where it is bent downwardly obtusely on the line y, y, across the weakening opening 7. The blank then extends for a short distance providing the flat straight portion 10 for a short distance to the line z, z, where it is again bent downwardly on said line at right angles as shown, with the points 11 at right angles to the similar points 5.

The bending of the points at each end is facilitated by extending the space 4 and 12 clear in to the bending cross lines w, w, and z, z, respectively.

As thus made the upper end is laid over the top of the joist B and the points 11 are driven in by hammering on the short flat portion 10 until clear down in holding contact.

The lower free end, which is somewhat resilient is then brought to position against the adjacent face of the joist A and its points 5 are driven in by striking shoulder 8 until firmly inserted as shown.

If desired the shoulder 8 may be rounded as at 8^a providing a hammering abutment, but in either case, the points are directly applied by the power of hammer blows from the rear and directly in line with the securing tongues.

Another manner of application is to leave the upper end of the blank straight without bending on the line y, y, as in Fig. 2, but with the securing points 11 bent at right angles on the line z, z.

In such case the points 5 are first driven in to the joist A with the upper end resting across the corner of joist B as shown in dotted lines in Fig. 2. The securing terminal is then hammered down by striking surface 10, thus driving the points 11 into the top of the joist, and firmly securing the brace in position.

It will be understood that the braces are to be applied in the general way of diagonal wooden braces as to arrangement, preferably crossing each other diagonally between adjacent joists, and with successive application between all the joists of a series.

The device is made from an original strip of suitable length and may be continuously flat, if desired, but is preferably bowed or corrugated for stiffness and rigidity. It is extremely simple and economical to manufacture, easily applied, and is very efficient in service.

The design or detail formation may be changed or varied by the skilled mechanic, but all such changes are to be understood as within the principle of the invention.

What I claim is:

1. A joist brace consisting of a metal strip provided with terminal driving points and a reversely bent driving shoulder at one end and a right angled bent pointed terminal at the other end.

2. A joist brace consisting of a metal strip provided at each end with terminal

driving points, the strip being reversely bent upon itself at one end to provide a driving shoulder, and bent upon itself at the other end to form securing terminals at right angles to the plane of the strip.

3. A joist brace consisting of a metal strip provided at each end with terminal driving points, the strip being bent upon itself at right angles inwardly of the points, and also reversely bent at an obtuse angle inwardly of one of said right angle bends to provide a driving shoulder.

4. A joist brace formed of a thin metal strip flat at each end transversely bowed between the ends, each of said ends having a pair of inwardly sloping points with an intervening rectangular clearance space, each pair of points being in opposite directions on the line of the inner edge of said clearance space, the blank being reversely bent adjacent one of said bends whereby to provide a driving shoulder.

In testimony whereof I hereunto affix my signature.

HERMAN SPRINGOB.