

April 30, 1940.

L. A. PARK

2,198,948

RAFTER AND BRACE SQUARE

Filed Aug. 12, 1939

2 Sheets-Sheet 1

Fig. 1.

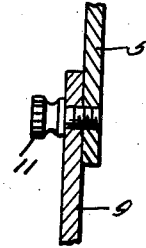
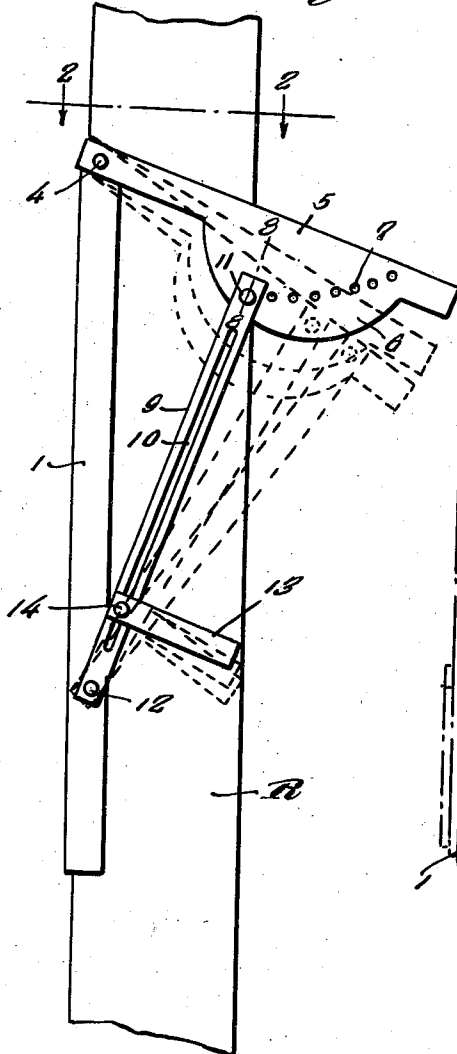


Fig. 8.

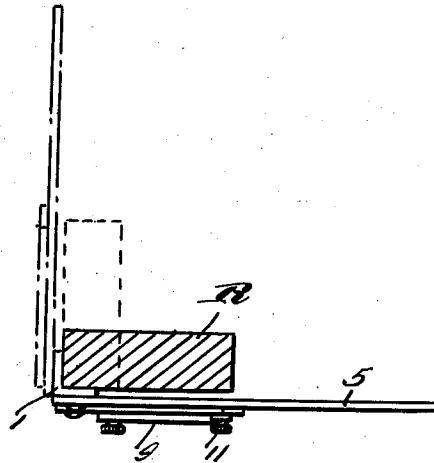


Fig. 2.

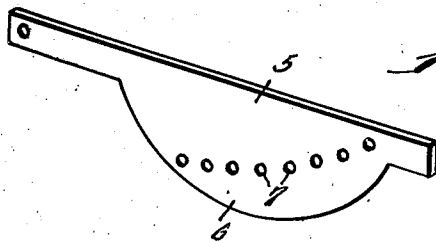


Fig. 7.

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Fig. 3.

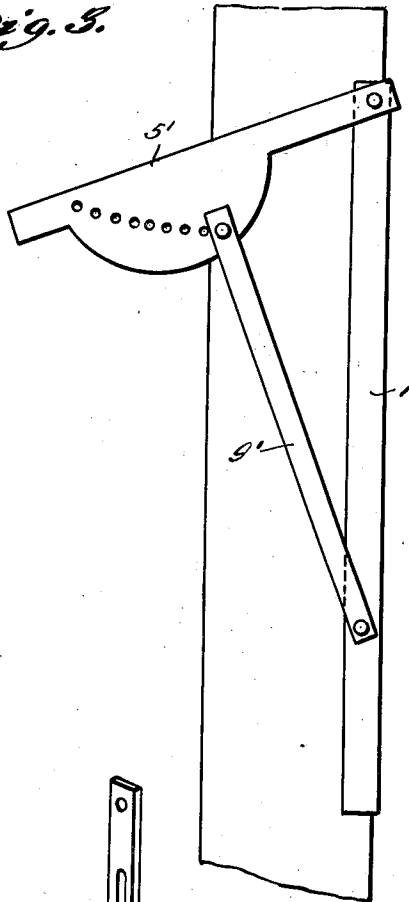


Fig. 4.

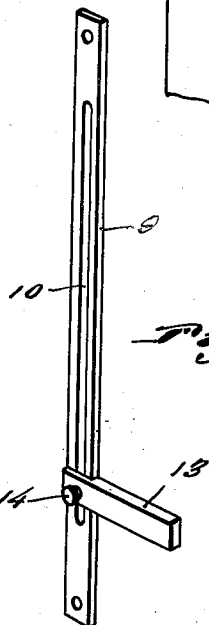
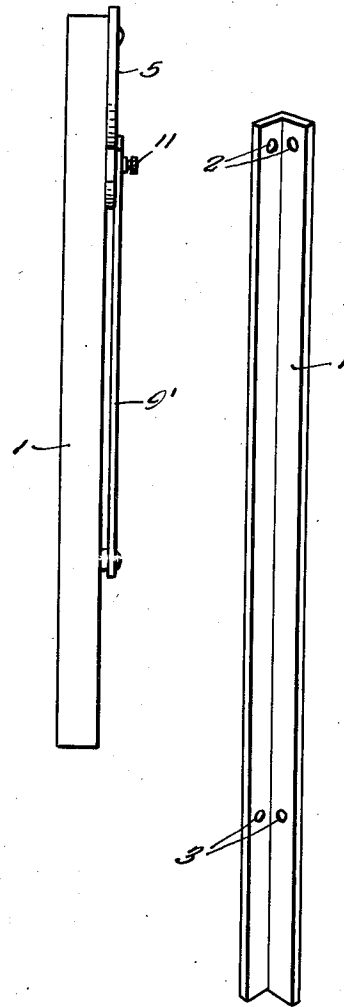


Fig. 6.

Fig. 5.

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UNITED STATES PATENT OFFICE

2,198,948

RAFTER AND BRACE SQUARE

Leon Abbett Park, Frenchtown, N. J.

Application August 12, 1939, Serial No. 289,873

2 Claims. (Cl. 33—98)

This invention relates to a rafter and brace square, the general object of the invention being to provide means whereby one can readily mark off where rafters are to be cut at the desired pitch, with means attached to the square for indicating where the heel or bottom cut of the rafter is to be made.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which—

Figure 1 is a view showing the device placed on a beam and showing the different layouts or positions to which the parts are to be adjusted.

Figure 2 is a section on the line 2—2 of Figure 1, but showing in dotted lines how other parts can be attached to the device for cutting hip or valley rafters.

Figure 3 is a view with the upper parts attached as shown in dotted lines in Figure 2.

Figure 4 is a view looking toward the right edge of Figure 1.

Figure 5 is a perspective view of the angle bar which forms the supporting member of the device.

Figure 6 is a view of the slotted bar which carries the heel marker.

Figure 7 is a view of the pivoted member having the straight edge for marking the pitch on the rafter.

Figure 8 is a section on the line 8—8 of Figure 1.

In these drawings the numeral 1 indicates an elongated bar of angle iron which forms the body of the device and this bar has a pair of holes 2 in one end and a pair of holes 3 adjacent the other end, either one of the holes 2 being adapted to receive a pivot pin 4 for holding the pitch indicating arm 5 to the member 1. The upper edge of this arm is straight to provide a straight edge and a substantially semi-circular portion 6 is formed on the lower edge intermediate the ends thereof and this part is provided with an arcuate row of holes 7 which are provided with suitable graduations to indicate different pitch. A slotted bar 9, the slot of which extends longitudinally as shown at 10, is fastened by a thumb screw 11 to the arm 5 by en-

gaging the screw with any one of the holes 7 these holes being threaded to receive the screw. The lower end of the bar 9 is connected by a pivot 12 with a hole 3 and as will be seen in Figure 1, by placing the screw 11 in different ones of the holes 7 the pitch of the arm 5 will be changed as will be the inclination of the bar 9 and the inclination of a foot marker bar 13 will be also changed. This bar 13 has a clamping screw 14 passing therethrough into the slot 10 so that by adjusting the screw the bar 13 can be held in any desired position in the slot 10. When the device is to be used for cutting hip or valley rafters then an arm 5' and a bar 9' are fastened to the opposite flange of the angle iron 1 from that to which the parts shown in Figure 1 are connected, as shown in Figure 3, these parts 5' and 9' being similar to the parts shown in Figure 1 excepting that the bar 9' is not slotted as it is not necessary for this bar 9' to carry the marker bar 13. Thus with the device constructed and arranged as shown in Figure 1 rafters such as shown at R in Figure 1 can be cut at one end to any desired pitch and the other end cut at the required place for the heel. As before stated each hole 7 would be marked with figures indicating the pitches which they will indicate when the arm 5 is adjusted thereto.

The following is how the device is used. When cutting rafters the builder or carpenter always knows what pitch he is going to have, therefore, say he is going to have a $\frac{1}{2}$ pitch of course he would set the device for that pitch for every hole has its mark as per pitch. In a one-third pitch roof of course the run of the rafter is 14.42 inches per foot.

If building was 20 feet wide then the rafter would be 12 feet 1 inch from ridge to outside of plate.

Having described the invention, what is claimed as new is:

1. A rafter and brace square comprising an elongated bar of angle shape in cross section, an arm pivotally connected to one end of the bar and said arm having its outer edge straight and an arcuate part on its other edge, said arcuate part having an arcuate row of holes therein, a bar, a set screw passing through one end of the bar into anyone of the holes in the arm, means for pivotally connecting the other end of the last-mentioned bar to the angle iron bar adjacent the other end of the angle iron bar, said second bar having an elongated slot therein, a heel marker bar having a hole in one end thereof and

a clamping screw passing through said hole into the slot.

2. A rafter and brace square comprising an elongated bar of angle shape in cross section, an arm pivotally connected to one end of the bar and said arm having its outer edge straight and an arcuate part on its other edge, said arcuate part having an arcuate row of holes therein, a bar, a set screw passing through one end of the bar into anyone of the holes in the arm, means for pivotally connecting the other end of the last-mentioned bar to the angle iron bar adjacent the other end of the angle iron bar, said

second bar having an elongated slot therein, a heel marker bar having a hole in one end thereof and a clamping screw passing through said hole into the slot, said arm and second bar being connected to the outer face of one of the flanges of the angle bar and the other flange of said angle bar having pivot holes adjacent its ends, one pivot hole being adapted to receive the pivot of a second arm and the other pivot hole the pivot of another bar for connecting the second arm to said other flange of the angle bar.

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