May 25, 1965 P. N. NELSON 3,184,800

RAFTER SUPPORT

Filed Oct. 23, 1961 2 Sheets-Sheet 1

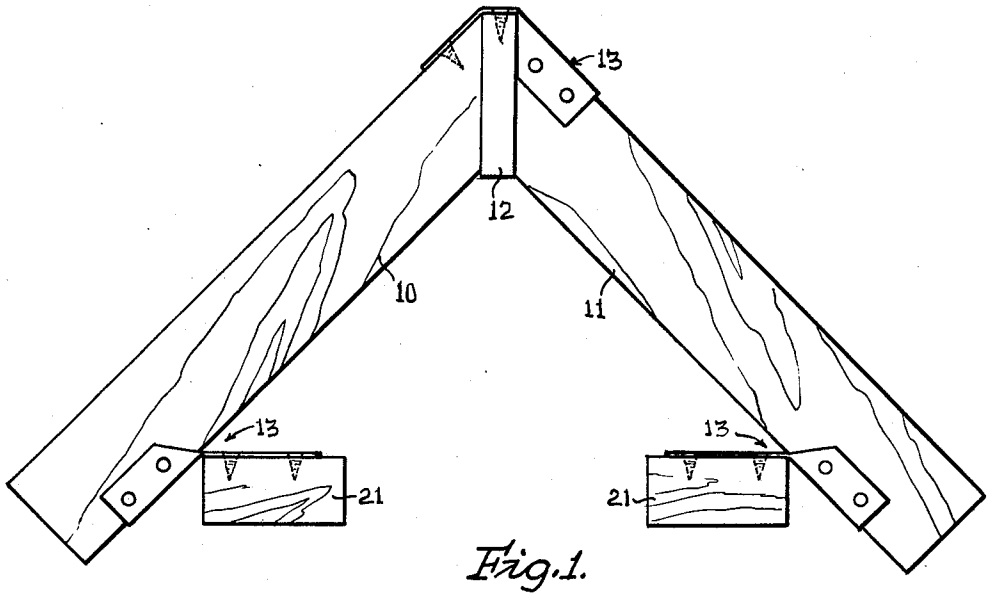


Fig. 1.

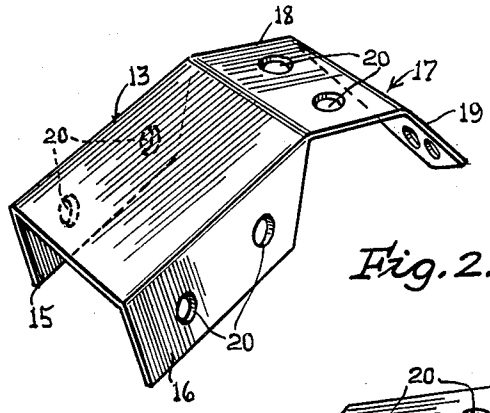


Fig. 2.

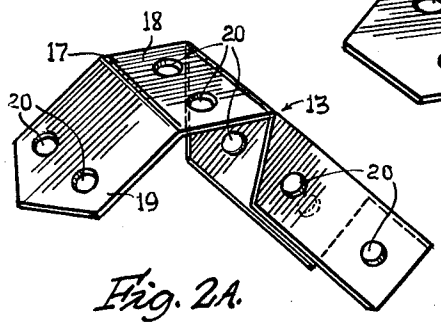


Fig. 2A.

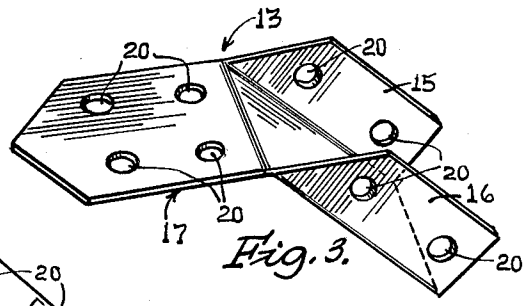


Fig. 3.

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RAFTER SUPPORT

Filed Oct. 23, 1961 2 Sheets-Sheet 2

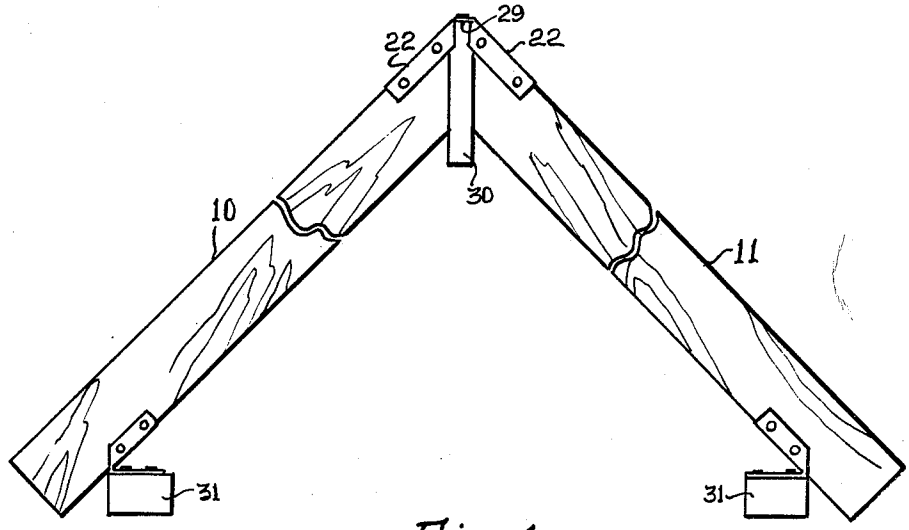


Fig. 4.

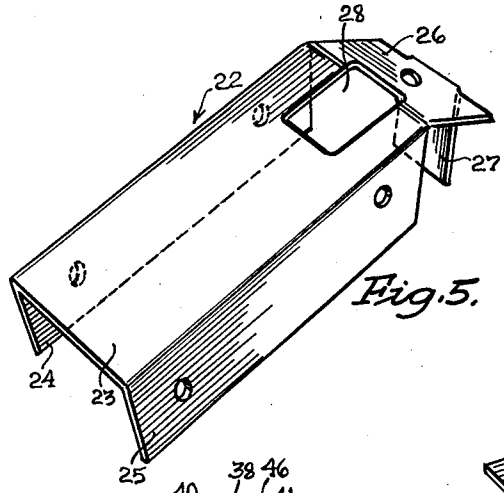


Fig. 5.

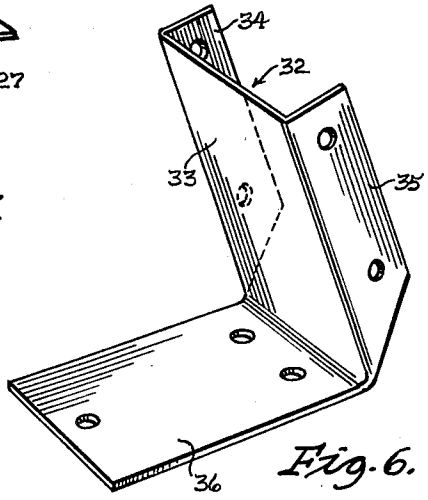


Fig. 6.

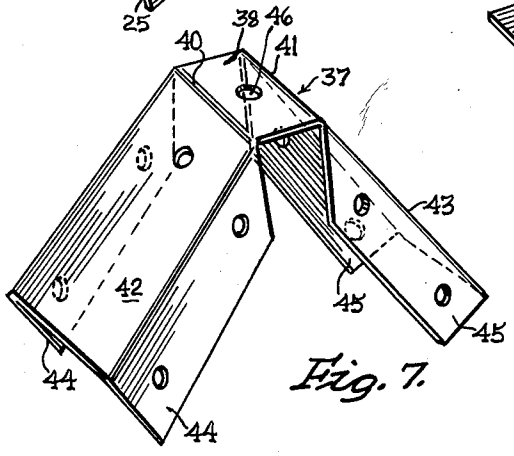


Fig. 7.

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3,184,800

RAFTER SUPPORT

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Filed Oct. 23, 1961, Ser. No. 146,999
1 Claim. (Cl. 20—1)

My invention relates to a new and useful improvement in a rafter support and more particularly to a metallic support that is utilized for connecting wooden rafters together in proper relation with respect to each other and to the longitudinally extending roof ridge poles and base plate members.

A principal object of my invention is in the provision in a rafter support of this character of an arrangement of parts which when utilized for the purpose contemplated will impart greater strength to rafters connected to and supported thereby.

The principal object of my invention is in the provision in a rafter support of this character of an arrangement of parts which when utilized for the purpose contemplated will impart greater strength to rafters connected to and supported thereby.

Another object of my invention is in the provision in a rafter support which eliminates the necessity of notching the lower ends of each rafter as it is installed. The rafter support materially adds to the structural strength and stabilization of each rafter connected to the base plate and ridge pole of a roof skeleton.

A further object of my invention is in the provision in a rafter support of this character of a configuration that provides a universal type support that may be utilized to support and connect the rafters together or to a base plate, or to a ridge pole.

Yet another object of my invention is in the provision in a rafter support of this character that is easy to use and install, adds to the structual strength of the rafter, increases the efficiency of installation of rafters and is economical in manufacture.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings showing the preferred form of construction, and in which:

FIG. 1 is a fragmentary side elevational view of rafters supported and connected together through the use of my invention.

FIGS. 2 and 2A are perspective views, from opposite sides, of my rafter support as it is used to connect the rafter ends together, or to a ridge pole.

FIG. 3 is a perspective view of my improved rafter support showing it in its preferred form for connecting the rafter to a base plate.

FIG. 4 is a side elevational view of a modified form of rafter support.

FIG. 5 is a perspective view of a modified form of a rafter support for connecting rafters to a ridge pole.

FIG. 6 is a perspective view of a modified form of rafter support for connecting the rafter to a base plate.

FIG. 7 is a perspective view of a modified form of a rafter support for connecting the same to a ridge pole.

This invention relates to a rafter erection support which is utilized to connect rafters together or to a ridge pole, or to a base plate member. In roof constructions, a skeleton is formed comprising a plurality of rafters that define the pitch of the roof and upon which the roof itself is installed.

The present system of constructing these rafters is to attach the same together or to a ridge pole by means

of toe nailing. The under side of each rafter adjacent one end is notched to provide a seat which is positioned upon longitudinally extending base plate members.

The present invention removes the necessity of notching the rafters and provides a more suitable and secured method of connecting the rafters together or to a ridge pole.

In FIG. 1, I disclosed oppositely disposed inclined rafters **10**. Corresponding opposite ends of the rafters **10** and **11** are obliquely cut so as to sit in facial abutment upon opposite side surfaces of a ridge pole **12**. Mounted upon the rafter **11** is a rafter support **13**. This rafter support **13** as viewed in FIG. 2 comprises a U-shaped body portion providing a medial plate **14** having opposite side flanges **15** and **16** extending from corresponding oppositely disposed longitudinal edges.

A substantially flat tongue **17** laterally extends from one end of the medial plate **14**. This tongue **17** is of a length greater than that of the medial plate **14** so that a portion **18** of the tongue **17** may be bent so as to lie in facial abutment upon the upper edge of the ridge pole **12**, while the remaining portion **19** of the tongue **17** extends beyond the ridge pole **12** and is caused to lie in facial abutment with the top edge surface of the rafter **10**.

The side flanges **15** and **16** as well as the portions **18** and **19** of the tongue **17** are provided with suitable nail receiving openings **20**. By the use of nails or the like the rafter support may be connected to oppositely disposed rafters **10** and **11** and ridge pole **12** as shown in FIG. 1.

Referring to FIG. 3 I show the rafter support **13** in a condition whereby it is utilized to connect the underside portions of the rafters **10** and **11** to longitudinally extending base plate members **21**.

In connecting the rafters **10** and **11** to the base plate **21**, the rafter support is placed upon the rafter with the flanges **15** and **16** embracing opposite sides thereof. The medial plate **14** lies in facial contact with the underedge surface of the rafter. The tongue **17** has been formed so as to lie upon the open exposed surface of the base plate member. In actual erection of the rafters the rafter supports **13** are first connected to the base plate members **21** by having the tongue **17** thereof nailed thereto. The rafter is then placed between the side flanges **15** and **16** with the edge surface of the rafter sitting upon the medial plate **14**. That portion of the support **13** is then connected by means of nails to the rafter itself.

Referring to FIG. 4, I show a fragmentary side elevational view of the modified form of rafter support. Each of the rafters **10** and **11** of FIG. 4 carry adjacent their cut end a rafter support **22**. This rafter support **22** comprises a medial plate **23** provided along the opposite longitudinal edges with corresponding side flanges **24** and **25**. Extending angularly from one end of the medial plate **23** is an extension **26**. This extension is provided at one edge with a depending tongue **27** of a width less than the width of the extension **26** and medial plate **23**. Formed in the medial plate **23** adjacent the end that angularly carries the extension **26** is a rectangular opening **28** of a size corresponding to the size of the depending tongue **27**.

The rafter support **22** is connected to the cut ends of the rafters **10** and **11** as shown in FIG. 4. The medial plate **23** lies upon the exposed edges of the rafters **10** and **11** and the side flanges **24** and **25** embrace the opposite sides of each rafter. The support **22** that is carried by the rafter **10** has the extension **26** thereof lying upon the top edge **29** of the ridge pole **30**. The depending tongue **27** is positioned between the cut end of the rafter **11** and its corresponding side surface of

the ridge pole 30. The depending tongue 27 is positioned between the cut end of the rafter 11 and its corresponding side surface of the ridge pole 30. The rafter support 22 that is carried by the rafter 11 has its medial plate 23 and side flanges 24 and 25 positioned adjacent the cut end of such rafter. The extension 26, however, lies upon the upper surface of the extension plate 26 of the support 23 carried by the rafter 10.

The tongue 27 of the support 22 of rafter 11 extends through the opening 28 formed in the medial plate 23 of the support 22 carried by the rafter 10. This tongue 27 extends between the cut end of the rafter 10 and its corresponding side face of the ridge pole 30. Thus the supports 22 that are carried by the rafters 10 and 11 interlock in supporting relation with respect to each other and the ridge pole 30.

FIG. 6 shows a modified rafter support that may be used to connect the rafters 10 and 11 to the base plate members 31 of FIG. 4. This rafter support of FIG. 6 comprises a U-shaped body 32 having a medial plate 33 provided along opposite longitudinal edges with side flanges 34 and 35. The medial plate 33 is provided with a substantially flat extension 36. In employing the rafter support of FIG. 6, the extension 36 is connected to the base plate member 31 with the U-shaped body portion 32 positioned so as to receive between the side flanges 34 and 35 thereof the rafter to be supported thereby.

In FIG. 7, I show a further modification of the rafter support utilized for connecting the cut end of the rafters to a ridge pole or the like. This rafter support 37 includes a substantially rectangularly shaped medial plate 38. Extending from opposite longitudinal edges 40 and 41 thereof are correspondingly formed U-shaped rafter connecting bodies 42 and 43. Each of the rafter connecting bodies 42 and 43 are provided with opposite side flanges 44 and 45, respectively. In utilizing the support 37 in FIG. 7, the medial plate 38 is connected to the top edge of the ridge pole by means of a nail driven through an opening 46 formed therein. Each of the rafter connecting bodies 42 and 43 embrace opposite corresponding cut ends of the rafters to be supported thereby. The side flanges 44 and 45 of each of the bodies 42 and 43 are connected to the side faces of such rafters.

The rafter supports as hereinbefore described not only make the erection of rafters simpler and easier but is quicker and less complicated than the present method. The rafter supports remove the necessity of notching the rafters for connection to the base plate members. It provides a more satisfactory connection between the cut ends of the rafter than heretofore achieved through the toe nailing of same.

The rafter supports of this invention give greater strength and stabilization to rafters and roof constructions.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claim.

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

A pair of rafter erection and supporting brackets for connecting a pair of roof rafters to opposite sides of a ridge pole, a ridge pole and first and second rafters angularly disposed with respect to said ridge pole, first and second brackets each comprising,

(*a*) a metallic body having a medial plate portion providing along opposite longitudinal edges spaced apart parallelly extending lateral flanges,

(*b*) an extension member extending from one end of said medial plate portion of said body and angularly disposed with respect thereto,

(*c*) an insert tongue of a width less than the width of said extension member carried by and depending from the free end of said extension member,

(*d*) said medial plate portion of said body having formed therein adjacent said one end of said body an opening of a size equal to the width of said insert tongue,

(*e*) said lateral flanges of said body of said first bracket embracing therebetween said first rafter and the flanges of said second bracket embracing therebetween said second rafter, with the extension member of said first bracket being in overlying abutment with the upper longitudinal edge of said ridge pole with its insert tongue inserted between said ridge pole and said second rafter, and with the extension member of said second bracket being in overlying abutment with the extension member of said first bracket with its insert tongue inserted into the opening in said first bracket and between said ridge pole and said first rafter, and

(*f*) means for connecting said flanges and said extension member to their respective roof rafters and to said ridge pole.

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