June 24, 1958 O. BRODERICK 2,840,424

SHINGLING BRACKETS

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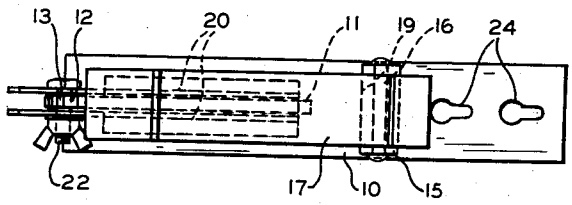


FIG. 4

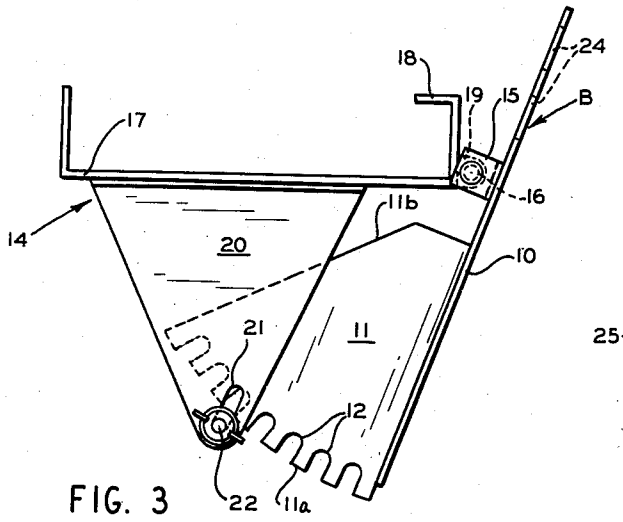


FIG. 3

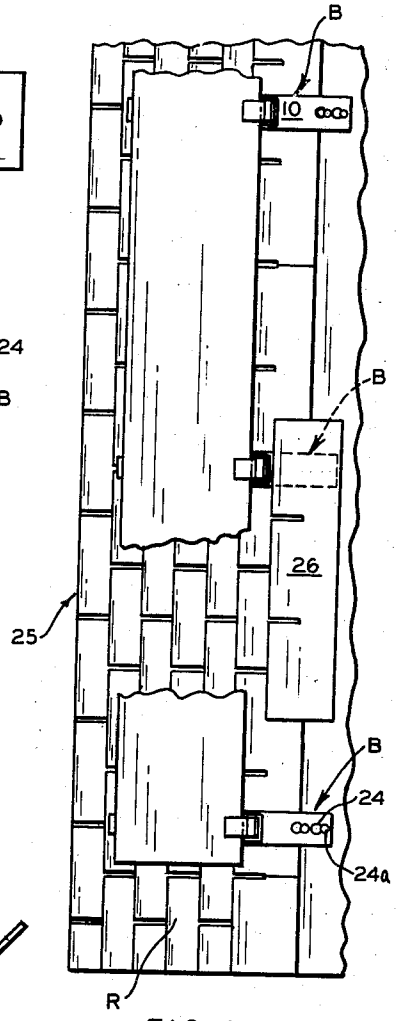


FIG. 1

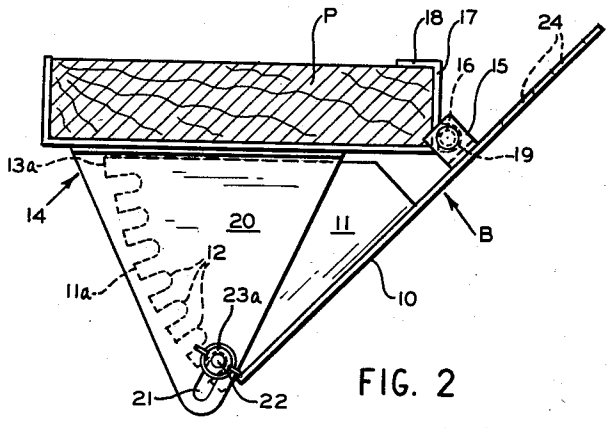


FIG. 2

INVENTOR.
OWEN BRODERICK.

BY
Fearman & Fearman.
ATTORNEYS

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SHINGLING BRACKETS

Owen Broderick, Saginaw, Mich.

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2 Claims. (Cl. 304—20)

This invention relates to shingling brackets and the like for supporting a plank or scaffold horizontally above a pitched surface such as a roof.

One of the prime objects of the invention is to design brackets which can easily be secured on a roof being shingled to safely support a horizontal plank on which roofers can stand and walk.

As is well known, most roof surfaces generally are pitched to such a degree that workmen who must move about thereon for a variety of reasons must be continuously alert to the danger of slipping and falling. During a shingling operation when bundles of shingles and other materials must be handled, the difficulty of maintaining a footing on a roof surface is, of course, greatly increased. While various crude supports of an impermanent nature have been constructed by workmen on the job to help them move about on a roof with greater ease and safety no one has to my knowledge designed a bracket possessing the advantages to be outlined.

A further object of my invention is to design a permanent type, plank supporting bracket suitable for use on surfaces of varying pitch which is adjustable according to the pitch of the particular roof or other surface to an angle permitting it to support a plank horizontally.

Another object of the invention is to design a bracket or brackets which can be very easily and simply secured to a roof and thence as easily removed therefrom for use on another roof.

A further object of the invention is to provide a bracket of light weight construction which is extremely strong and rugged in design and in no manner interferes with a shingling operation.

Another object of the invention is to design a bracket which once locked in position cannot slip out of adjustment to tip the plank which it supports and endanger the men and materials thereon.

A further object of the invention is to design brackets which very reliably support a plank or scaffold in a manner so that it cannot slip from the brackets.

Another object of the invention is to provide a bracket of the character described which is designed so that its adjustment to correspond with the pitch of the particular roof on which it is being used is a very easy matter and requires no tools of any kind or any disassembly of parts.

A still further object of the invention is to design a bracket which can be very economically manufactured and sold at a relatively low price on a quantity production scale.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawing, and more particularly pointed out in the appended claims, it being understood that equivalent changes may be made in the various elements which comprise the invention without departing from the spirit thereof or the scope of the appended claims.

In the drawings:

Fig. 1 is a fragmentary plan view of a partly shingled roof looking from one end thereof toward the other with the lower side edge of the roof at the left, a trio of spaced apart brackets being shown on the roof supporting a plank or scaffold.

Fig. 2 is an enlarged side elevational view of one of the brackets.

Fig. 3 is a similar view showing the bracket being adjusted to a roof of steeper pitch, the retaining bolt being shown in out position.

Fig. 4 is a top plan view of a bracket.

Referring now more particularly to the accompanying drawings in which I have shown a preferred embodiment of the invention a letter B generally indicates any one of my brackets which as shown in Figs. 2–4, each comprises a base plate **10** having a vertical segment plate **11** fixed thereon. In the interests of clarity the brackets are shown in Figs. 2 and 3 with the base plate **10** disposed at an angle as it would be if the bracket were mounted on a roof and only one bracket will be described since the brackets are identical. Formed in the arcuate edge **11***a* of the segment **11** of the representative bracket shown in Figs. 2–4 are a series of arcuately spaced recesses or notches **12** which define a plurality of teeth **13** and as will be seen these teeth **13** serve to support the plank supporting member **14** in adjusted position.

Provided on the front end of the plate **10** which extends forwardly a considerable distance beyond the segment **11** is a U-shaped bearing **15** having a pin **16** spanning its end walls as shown in Fig. 4. The member **14**, which includes a generally U-shaped plank accommodating strap **17** with one side wall turned inwardly as at **18** to form a retaining flange, has a bearing **19** formed thereon accommodating the pin **16** and clearly the member **14** will be freely pivotal on the base **10**.

Depending from the strap **17** are a pair of spaced apart triangular plates **20** which straddle the segment **11** and it will be seen that laterally aligned, elongated slots **21** are provided in the ends of the plates **20** which extend beyond the edge **11***a*. The slots **21** are of sufficient length so that portions thereof will always be outwardly of the edge **11***a* and will permit a bolt **22** which extends through the slots to be moved outwardly of any one of the recesses **12** and the edge **11***a* (see Fig. 3). A wing nut **23** is provided on the end of bolt **22** along with a washer **23***a* and clearly when the bolt **22** is moved in the slots **21** into one of the recesses **12** the wing nut **23** may be tightened down and the member **14** will be rigidly supported on the segment **11**. The tooth **13***a* at the upper end of segment **11** is sufficiently elongated so that the bolt **22** cannot be drawn past it when the latter is disposed in the outer ends of slots **21** and accordingly serves as a stop to prevent disengagement of the member **14** from segment **11**.

Provided in the front end of base plate **10** are a pair of keyhole slots **24** which permit the bracket to be readily nailed on the roof at **24***a* and thence disengaged therefrom in the usual manner, the heads of the nails **24***a* being, of course, of greater diameter than the reduced portions of the slots and of lesser diameter than the enlarged portions of the slots.

In practice the shingling operation proceeds from the lower side edge **25** of the roof R (see Fig. 1) toward the ridge thereof and after several courses have been secured in place two or more of the brackets B which I have described may be nailed to the roof, preferably into the rafters supporting the roof surface. The brackets B may then be adjusted until the plank supporting straps **17** are horizontal regardless of the pitch of the particular roof being shingled. If the wing nut **23** is loosened the pin or bolt **22** may be slipped outwardly in the slots **21** to the position in which I have shown it in Fig. 3. The member **14** is then free to pivot on pin **16** and when

the strap 17 is horizontal the bolt may be slipped into the adjacent recess or notch 12 and the wing nut 23 may be tightened down. Since the slot 21 is disposed at an angle relative to the notches 12 and restricts the mouth of a notch 12 so that the bolt 22 cannot pass out (see Fig. 2) the bolt 22 will not slip out of any of the notches 12 when a weight rests on the member 14 regardless of whether nut 23 is fully tightened down.

The brackets B in Fig. 1 are, of course, positioned in lateral alignment and it is a very simple matter to slip a plank under the flanges 18 of the straps 17 so that it is securely held therein. The weight supported on the plank P is not entirely borne by the bolts 22 but rather is borne jointly by the bolts 22 and pins 16 and these members are, of course, of sufficient strength so as to be capable of bearing many times the maximum weight which might be applied. The bolts 22 restrain the members 14 from pivoting about the pins 16 and transfer the weight applied directly to the rear end of the plates 10 and roof. If for some reason the bolt 22 should shear, the member 14 could not tip very far since the flat upper edge 11*b* of the segment 11 would be engaged by the undersurface of strap 17.

Since the front ends of the base plates 10 project forwardly they may be nailed into the unshingled section of the roof just ahead of the last course shingled and the next course may then lap over the front ends of the brackets as does the shingle 26 in Fig. 1. To release the brackets it will only be necessary to push them forwardly or upwardly until the nail heads securing them are out of the reduced portions of the keyhole slots 24 whence the brackets may simply be lifted up and withdrawn from under the shingles 26. Clearly in view of the design of the brackets it will not be necessary to nail the rear ends of the bases 10 to the roof.

It should be apparent that I have perfected a very practical bracket which can be used for other purposes than shingling wherever it is necessary to support a weight on a pitched surface. Obviously, however, the bracket which incidentally is preferably of all metal construction is particularly adapted to roofing operations and will find wide use in this field.

It is to be understood that the drawings and descriptive matter are in all cases to be interpreted as merely illustrative of the principles of the invention rather than as limiting the same in any way since it is contemplated that various changes may be made in the various elements to achieve like results without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. A shingling bracket for supporting a portion of a scaffold plank in horizontal disposition above a pitched roof surface comprising; a base plate adapted to be secured on said surface with its front end upward; a vertical segment on said plate having a curved rearward facing edge with circumferentially spaced notches therein defining a plurality of vertically spaced teeth; a plank supporting member hinged to said base plate intermediate its ends having a dependent section with a wall generally parallel to and alongside said segment; said wall having an elongated slot disposed to generally register with said notches when the plank supporting attachment is pivoted and said section swings said slot in an arc past said notches, with the slot having also an outer portion outward of said notches when the slot is registering therewith; clamping means extending transversely through said slot, in one position in said slot being accommodatable by one of said notches, and in another position being outward of the notches so that it is free thereof to permit adjustment of said section in an arc to register the slot with another notch; the slot being angularly disposed relative to the notches so that its top marginal edge restricts the mouth of the notch in which the securing means is disposed and prevents the clamping means from moving out of the said latter notch and the said section from pivoting downwardly even though the clamping means be relatively loose.

2. A shingling bracket for supporting a portion of a scaffold plank in horizontal disposition above a pitched roof surface comprising; a base adapted to be secured on said surface with its front end upward; a vertical wall on said base; a plank supporting member hinged to said base intermediate its ends having a dependent section with a plate generally parallel to and alongside said wall; one of said wall and plate having a curved free edge with circumferentially spaced notches therein defining a plurality of vertically spaced teeth; the other of said wall and plate having an elongated slot disposed to generally register with said notches when the plank supporting attachment is pivoted and said slot and notches have relative movement, with the slot having also an outer portion outward of said notches when the slot is registering therewith; clamping means extending transversely through said slot, in one position in said slot being accommodatable by one of said notches, and in another position being outward of the notches so that it is free thereof to permit adjustment of said section in an arc to register the slot and another notch; the slot being angularly disposed relative to the notches so that its top marginal edge restricts the mouth of the notch in which the securing means is disposed and prevents the clamping means from moving out of the said latter notch and the said section from pivoting downwardly even though the clamping means be relatively loose.

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