To all whom it may concern:

Be it known that Edward H. Chappuis, a citizen of the United States, residing at Marysville, in the county of Yuba and State of California, has invented certain new and useful Improvements in Foldable Roof-Brackets, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to roof brackets, and particularly to foldable roof brackets.

The general object of the invention is to provide a roof bracket which is so constructed that it may be folded into a very compact form, for transportation, storage or shipment.

A further object is to provide a roof bracket with a detachable platform or seat and in this connection to so form the seat that it may be folded upon itself and incise or partially surround the frame members of the bracket when they are folded.

A further object is to provide the seat with a plurality of hand holes so that it may be conveniently shifted and also so that it may be readily carried with the frame sections or base sections disposed within the folded seat.

Still another object is to provide a roof bracket wherein the base consists of longitudinally extending members connected to each other so that they may be folded against each other or laterally spread, and provide means whereby when the base sections are laterally spread they will have a downward divergent relation.

A further object is to provide means for supporting the seat, this means being adjustable so that the seat or platform may always be supported in a horizontal position without regard to the inclination of the longitudinally extending base members.

Still another object is to so construct these base members that they will engage and anchor upon the roof or other structure to which they are applied.

Still another object is to so construct the roof bracket that the parts may be shifted into operative relation or into inoperative relation, without the use of extraneous appliances.

A further object is to provide a device of this character which is very simple, has few parts and is cheaply constructed, but which will be thoroughly effective in use and adapted for use in a large number of different situations.

Other objects will appear in the course of the following description.

My invention is illustrated in the accompanying drawings, wherein:

Figure 1 is a side elevation of my improved bracket;
Fig. 2 is an underside plan view of the seat or platform;
Fig. 3 is a top plan view of the base portion of the bracket with the seat removed;
Fig. 4 is a top plan view of the seat folded, the base portion of the bracket being disposed within the folded seat;
Fig. 5 is a section on the line 5—5 of Fig. 4.

Referring to these drawings, it will be seen that my improved roof bracket comprises a base composed of the longitudinally extending metallic bars or strips, designated 10. These bars 10 are angular in cross section to provide an outwardly extending flange 11. This flange is slightly shorter than the members 10 and terminates short of the lower ends of these members. From the lower end of the flange upward for about one-half the length of the strips 10, each flange 11 is provided with upwardly and forwardly extending notches 12 forming a plurality of teeth. The remainder of the flange is plain. Each flange is also formed with a longitudinally extending slot 13.

Connecting the members 10 are the tie braces 14. There are two of these braces 10 disposed in intersecting relation, the braces being pivoted to each other by the rivet 15. It will be seen that this rivet 15 is not disposed at the middle of each brace, but that the lower ends of the braces are longer than the upper ends. The upper ends of the tie braces 14 are pivoted by means of rivets 16 to the respective bars 10, and the lower ends of the braces are longitudinally slotted as at 17 and passing through the lower ends of the members 10 are the rivets 18, which extend into the slots 17 and have sliding engagement therewith and pivotal engagement therewith. By reason of this construction the longitudinally extending members 10 may be shifted toward each other or spread apart and when spread to the full extent permitted by the braces 14, the rivets 18 will be in the lower ends of the slots 17 and the members 10 will be disposed in divergent
relation. The lower ends of the members 10 are downwardly and rearwardly bent or curved as at 19 and the lower edges of these portions 19 are serrated as at 20 to provide a secure anchorage for the seat supporting frame or base.

Pivoted upon the upper ends of the flanges 11 are the seat supporting bars 21, which are pivoted to the flanges 11 by means of rivets 22, these bars being disposed upon the outer faces of the flanges 11. Pivotally connected to the bars 21, inwardly of their free ends, are the supporting links 23, and passing through these supporting links are rivets 24, which extend into the slots 13 and have sliding engagement in these slots. Pivoted to the links 23 by means of the rivets 24 are the latches 25, which are formed of sheet metal, the material being bent upon itself for the greater portion of its length to embrace the flanges 11. Each of these latches is provided with the inwardly extending rivet 26, which is engageable in any one of the notches 12.

The seat or platform, which is designated generally 27 is formed in two sections and is preferably of wood, though it may be made of other material, these sections being hinged to each other so that they may be folded upon each other. These sections are preferably formed each with a pair of elongated hand holes 28 and the sections are connected to each other by strap hinges 29. These strap hinges extend across the entire width of each section and at the meeting ends the strap hinges are angularly bent as at 30, and connected to each other at the extremities of these angularly bent ends by means of the usual pintles, (see Fig. 5).

It will be noted from Fig. 2 that these strap hinges 29 are disposed in divergent relation to each other and at approximately the same angle to each other as are the members 10 and 21, when the members are spread apart. Attached to the sections of the seat or platform 27 and projecting from its inside face are the resilient latch members 31. These are formed of steel or other suitable resilient material and are angularly bent and attached by screws to the under face of the seat or platform and when the seat or platform is in place on the seat supporting bars 21, these spring latches engage beneath the edges of the bars. The bars 21 are formed with longitudinally extending recesses 32 on the under edges of the bars with which the spring latches 31 are adapted to engage and thus prevent the seat or platform from sliding longitudinally upon the seat supporting bars 21, the clips at the same time preventing the seat from being pulled off of the bars 21.

In the practical use of this device, it is, of course, placed upon the roof or other structure in an obvious manner, the serrated ends 19 being forced into engagement with the roof or structure and then the links 23 are adjusted to raise or lower the supporting bars 21 until they are horizontal, these links 23 being locked in their proper position by means of the latches 25, which by gravity drop downward so that the rivets 26 engage in the proper recesses 12. The bars 21 are thus locked against any further depression so as to support the platform or seat in a horizontal position. The platform or seat may be disposed on the bars 21 prior to the adjustment of these bars or may be placed thereon afterward. When the seat or platform is put in position, the resilient latches 31 engage with the bars 21, these latches engaging in notches 32 so as to prevent any sliding or longitudinal movement of the seat on the bars 21.

When it is desired to fold this bracket for transportation or storage the seat is removed and the members 10 are shifted toward each other, the rivets 18 riding up in the slots 17. The links 23 are folded down into parallel relation to and upon the members 10 and the bars 21 are folded down against the members 10. Thus the supporting structure is folded into a very compact form and because of the fact that the hinges 29 are formed with the angular terminal ends which separate the two sections of the seat from each other when the sections are folded, it is obvious that the base structure comprising the bars 10, 21 and 23 and allied parts may be disposed between the folded sections in the manner illustrated in Figs. 4 and 5.

For the purpose of holding the sections in folded relation, I mount upon one of the sections a resilient latch 33 which projects outward from the under side of the section and is preferably disposed at the edge of one of the hand holes so that when the sections are folded together in the manner illustrated in Fig. 5, this latch will project through the corresponding hand hole of the other section and latch the two sections in their parallel or folded relation.

This improved roof bracket is adapted to be used by carpenters, shinglers, painters, roofers and in many other different situations and is particularly convenient, because it may be folded into such compact form and so readily carried, the seat when folded holding the folded base structure in place. Having described my invention, what I claim is:

1. A roof bracket comprising a laterally contractible and expansible base structure including roof engaging bars, cross links each pivoted at one end to said roof engaging bars and having sliding engagement at its other end to the corresponding roof engaging bar, and platform supporting bars pivoted to the roof engaging bars for move-
ment into and out of parallel relation there- 
to, a platform engageable with but detach-
able from the platform supporting bars and 
formed in two sections foldable upon each other and when folded being adapted to 
inclose the contracted base structure, the 
sections being provided with hand holes to 
provide means for carrying the sections, and 
a latch attached to one of said sections and 
engaged through one of the hand holes of 
the other section to hold the sections in 
closed relation.

2. A roof bracket comprising a base struc-
ture composed of a pair of longitudinally 
extending roof-engaging bars, crossed tie 
bars pivoted at each one end to the longitudi-
nally extending bars, the opposite ends of 
the tie bars being longitudinally slotted and 
having sliding pivotal connection with the 
like ends of the longitudinal bars, and plat-
form supporting bars pivoted to the first 
named bars and adjustable to different 
angles with relation thereto.

3. A roof bracket comprising a base struc-
ture composed of a pair of longitudinally 
extending bars, crossed tie bars pivoted to 
each other and pivoted at each one end to the 
longitudinally extending bars, the opposite 
ends of the tie bars being longitudinally 
slotted and having sliding pivotal connection 
with the like ends of the longitudinal bars, platform supporting bars pivoted to the ends 
of the longitudinal bars and movable into 
glangular relations thereto, links pivoted to 
the platform supporting bars and extending 
toward the longitudinal bars and having 
sliding pivotal connection therewith, and 
latches holding said links in adjusted posi-
tions upon the longitudinal bars.

4. A roof bracket comprising a base struc-
ture composed of a pair of longitudinally ex-
tending bars, crossed tie bars pivoted to each 
other and pivoted at each one end to the lon-
gitudinally extending bars, the opposite ends 
of the tie bars being longitudinally slotted and 
having sliding pivotal connection with the 
like ends of the longitudinal bars, platform 
supporting bars pivoted to the ends of 
the longitudinal bars and movable into an-
glular relations thereto, links pivoted to the 
platform supporting bars and extending to-
ward the longitudinal bars and having slid-
ing pivotal engagement therewith, and 
latches pivotally connected to the last named 
ends of the links, the longitudinal bars being 
formed with a plurality of notches with 
said which said latches are adapted to engage 
to thereby hold the links and platform sup-
sorting bars in adjusted positions.

5. A roof bracket comprising a pair of 
longitudinally extending main supporting 
bars operatively connected to each other and 
having outstanding flanges, the flanges be-
ing longitudinally slotted and formed upon 
their upper edges with a plurality of notches, 
platform supporting bars pivoted to like 
ends of said flanges, links pivoted each at 
one end to one of the supporting bars, rivets 
extending through the other ends of the 
links and into said slots and having sliding 
rotative engagement therewith, and latching 
members pivoted to said rivets and hav-
ing transverse pins adapted to engage in 
said notches to thereby hold the links and 
the platform supporting bars in angular ad-
justed positions.

6. A roof bracket comprising a pair of 
longitudinally extending main supporting 
bars, angular in cross section to provide out-
standing flanges, a pair of crossed tie bars, 
each pivoted at one end to the longitudinally 
extending supporting bar and pivoted to-
gether at their intersections, said longitudi-
nally extending bars having slots with which 
the ends of the tie bars have pivotal and slid-
ing engagement, platform supporting bars 
pivoted to the like ends of the flanges on 
the main supporting bars, links pivoted to the 
platform supporting bars, the said flanges 
being formed with longitudinal slots and 
the links having members having sliding and 
rotative engagement in said slots, and means 
for locking the links in adjusted positions 
along said flanges.

7. A roof bracket including longitudinally 
extending roof engaging supporting bars, 
platform supporting bars operatively 
mounted upon said first named bars, and 
means connecting the first named bars and 
permitting them to be moved toward or 
from each other and when moved from each 
other causing the bars to take a divergent 
relation.

8. A roof bracket including longitudinally 
extending roof engaging supporting bars, 
platform supporting bars operatively 
mounted upon said first named bars, and 
means connecting the first named bars and 
permitting them to be moved toward or 
from each other and when moved from each 
other causing the bars to take a divergent 
relation, said means comprising crossed tie 
bars pivoted intermediate their ends to each 
other, the tie bars being pivoted at like ends 
to the respective first named bars and said 
tie bars at their opposite ends being longi-
dudinally slotted, the longitudinal bars hav-
ing rivets extending into said slots and slid-
ably engaged therewith, the pivot for the tie 
bars being disposed nearer the pivotal con-
nection of the longitudinal bars than it is to-
ard the opposite ends of the tie bars.

9. A roof bracket comprising laterally dis-
posed supporting bars operatively connected 
to each other for movement toward or from 
each other, platform supporting bars pivoted 
to the like ends of the first named bars for 
movement into or out of parallel relation 
thereto in a plane at right angles to the 
plane of movement of the first named bars.
means for holding the platform supporting bars in adjusted relations, and a platform in two sections having means for detachably engaging the platform supporting bars and holding them in laterally spaced relation, said sections being provided with stop hinges extending entirely across the sections, the confronting ends of the hinges being angularly bent whereby to space the sections from each other when they are folded into parallel relation to thereby permit the said supporting bars to be carried by said sections.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

EDWARD H. CHAPPUIS.

Witnesses:

RICHARD BEECHER,

MABEL MARBER.

Copies of this patent may be obtained, for $1.00 each, by addressing the "Commissioner of Patents, Washington, D. C."