

ROOF DESIGN CONSIDERATIONS

From Ching: A Visual Dictionary of Architecture

ROOF

The external upper covering of a building, including the frame for supporting the roofing

My illustrations below the ones from Ching's book show examples of each roof type in front and side elevation.

Keep in mind that roof types can be combined in various ways.

gable roof
A roof sloping downward in two parts from a central ridge, so as to form a gable at each end.

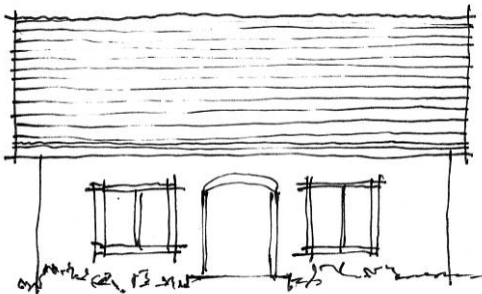
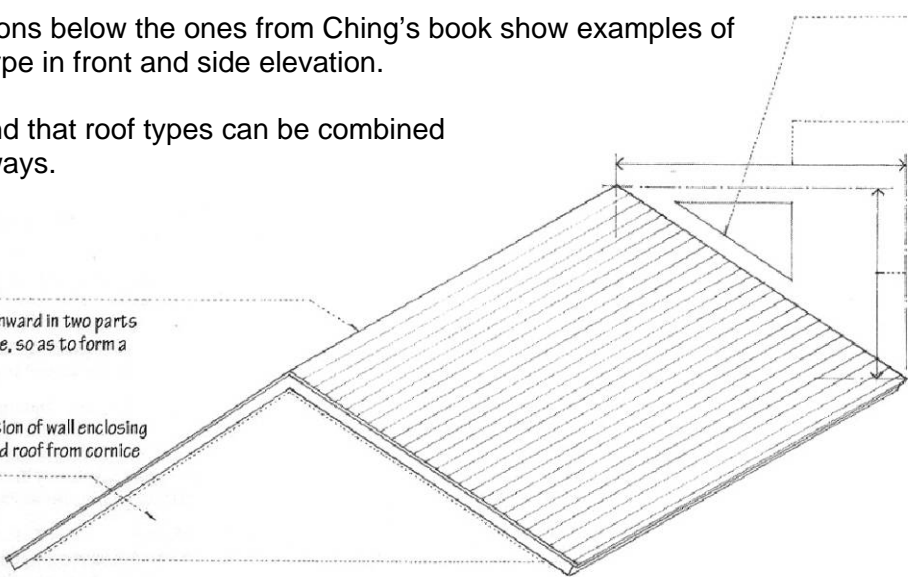
gable
The triangular portion of wall enclosing the end of a pitched roof from cornice or eaves to ridge.

pitch
The slope of a roof, commonly expressed in inches of vertical rise per foot of horizontal run.

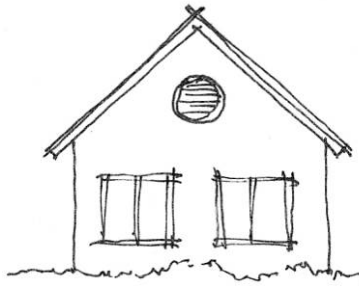
run
The horizontal distance from the eaves to the ridge of a sloping roof.

rise
The measured height of a sloping roof from the eaves to the ridge.

A typical proportion is 4" of Rise for every 12" of Run, shown as 4 : 12 or 4 : 1



FRONT ELEVATION



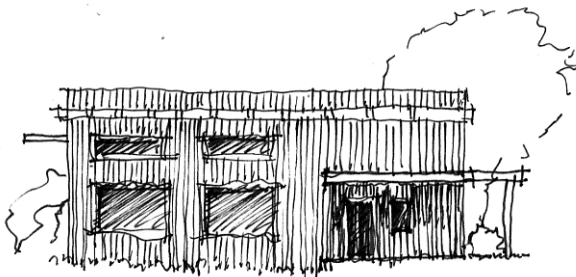
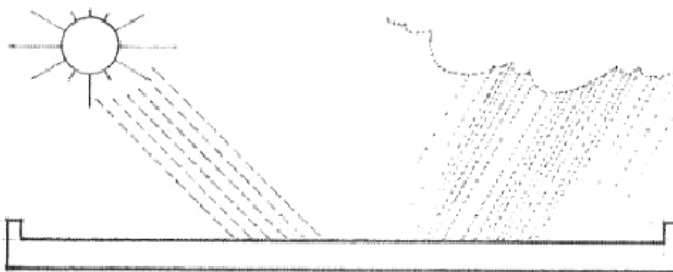
SIDE ELEVATION



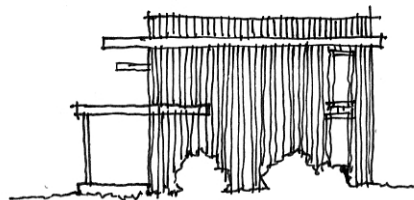
SIDE ELEVATION - VARIATION

flat roof

A roof having no slope, or one with only a slight pitch so as to drain rainwater.



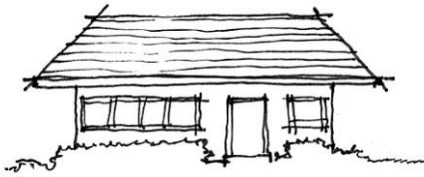
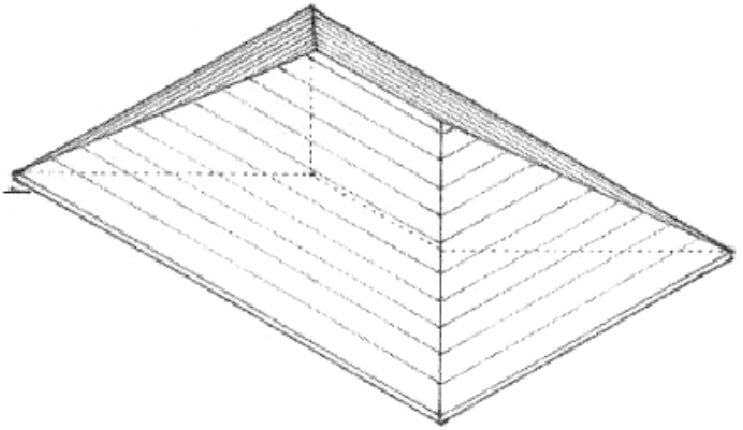
FRONT ELEVATION



SIDE ELEVATION

hip roof

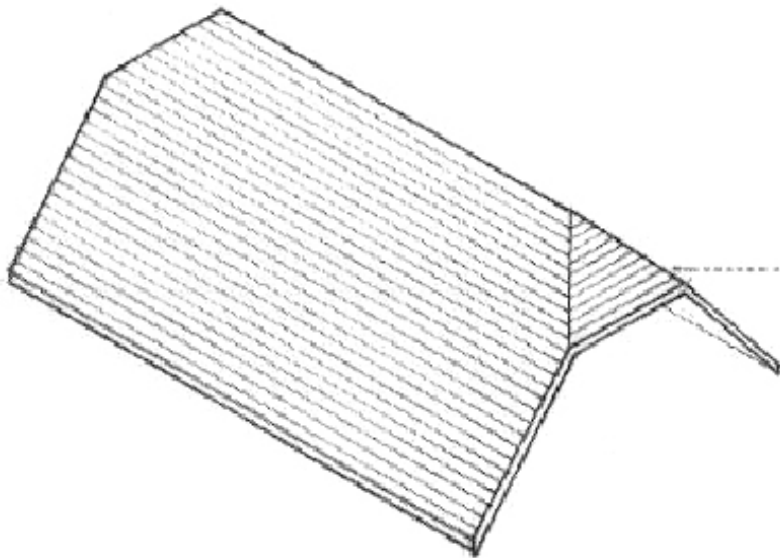
A roof having sloping ends and sides meeting at an inclined projecting angle. Also, **hipped roof**.



FRONT ELEVATION

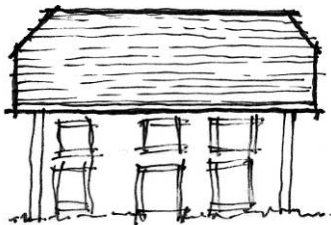


SIDE ELEVATION



hipped gable

A roof having a hipped end truncating a gable. Also called **jerkinhead**, **shreadhead**.



FRONT ELEVATION



SIDE ELEVATION

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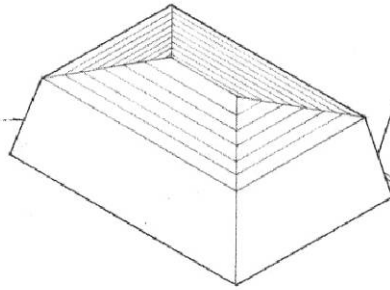
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curb roof

A roof divided on each side of the ridge into two or more slopes, as a gambrel or mansard.

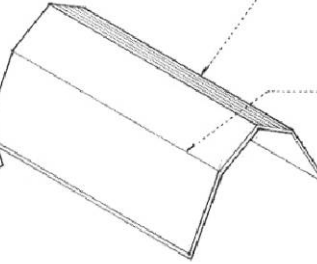
mansard

A roof having on each side a steeper lower part and a shallower upper part. Also called **mansard roof**.



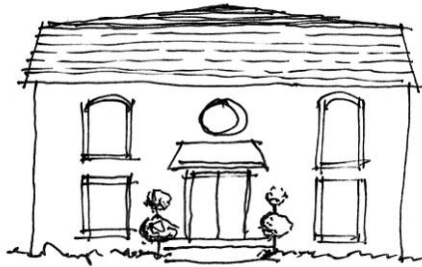
gambrel roof

A ridged roof divided on each side into a shallower slope above a steeper one.



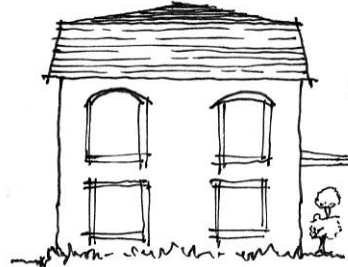
curb

The aris between an upper and a lower slope on a gambrel or mansard roof.

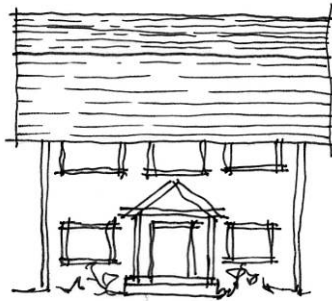


MANSARD

FRONT ELEVATION



SIDE ELEVATION



GAMBREL

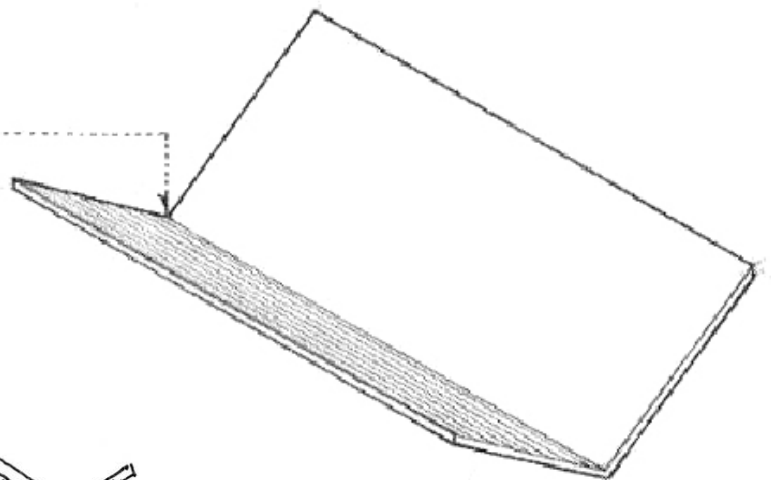
FRONT ELEVATION



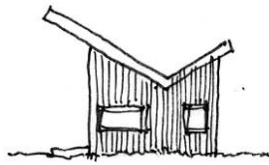
SIDE ELEVATION

butterfly roof

A roof having two slopes, each descending inward from the eaves.

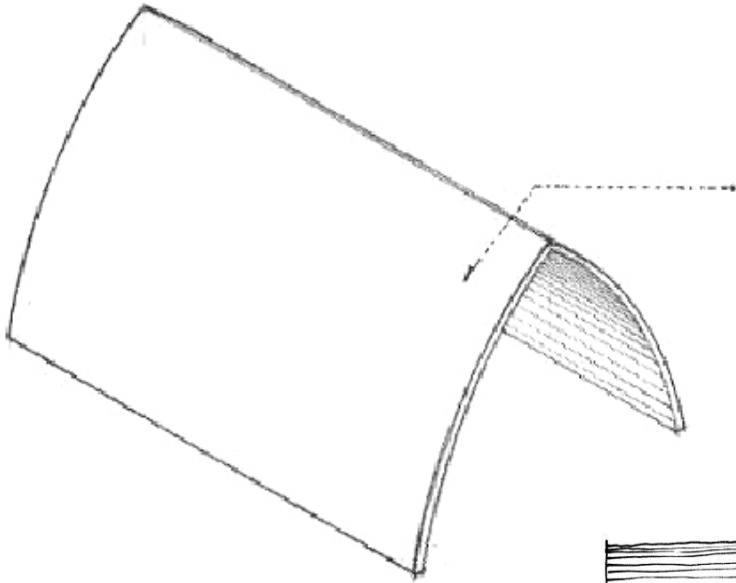


FRONT ELEVATION



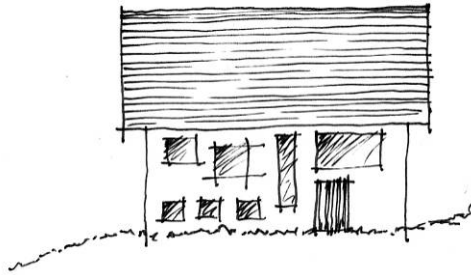
SIDE ELEVATION

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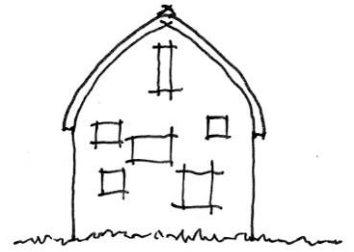


rainbow roof

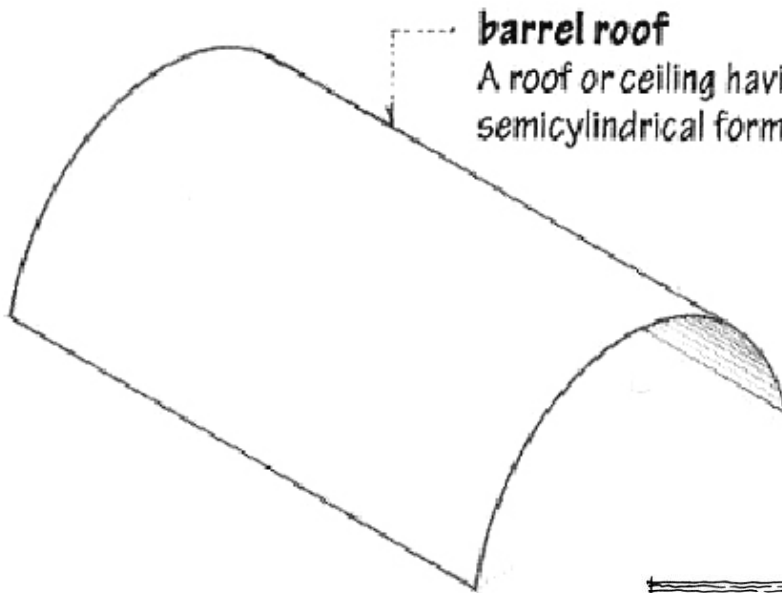
A gable roof in the form of a broad Gothic arch, with gently sloping convex surfaces.



FRONT ELEVATION

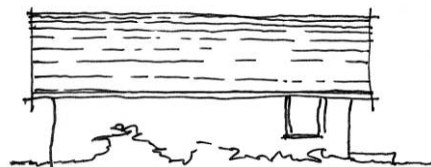


SIDE ELEVATION



barrel roof

A roof or ceiling having a semicylindrical form.



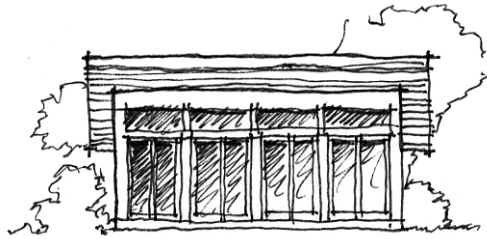
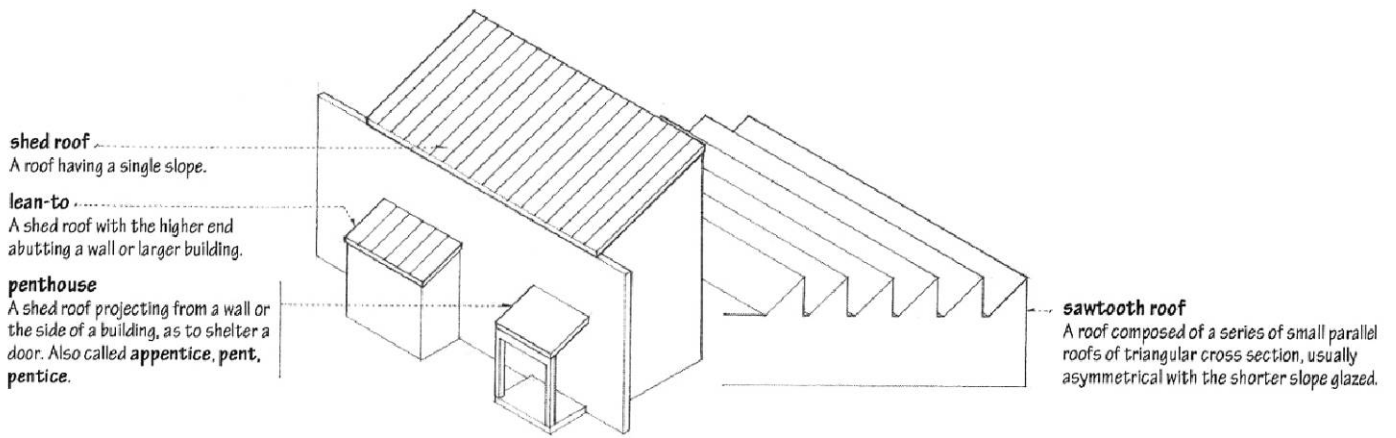
FRONT ELEVATION



SIDE ELEVATION

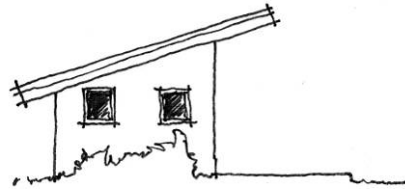
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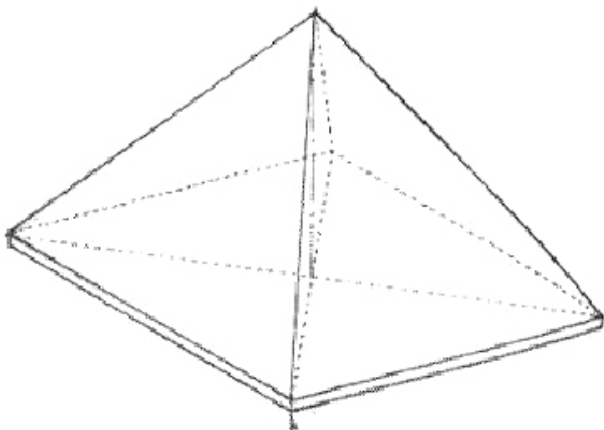


SHED ROOF

FRONT ELEVATION



SIDE ELEVATION



pavilion roof
A pyramidal hip roof.

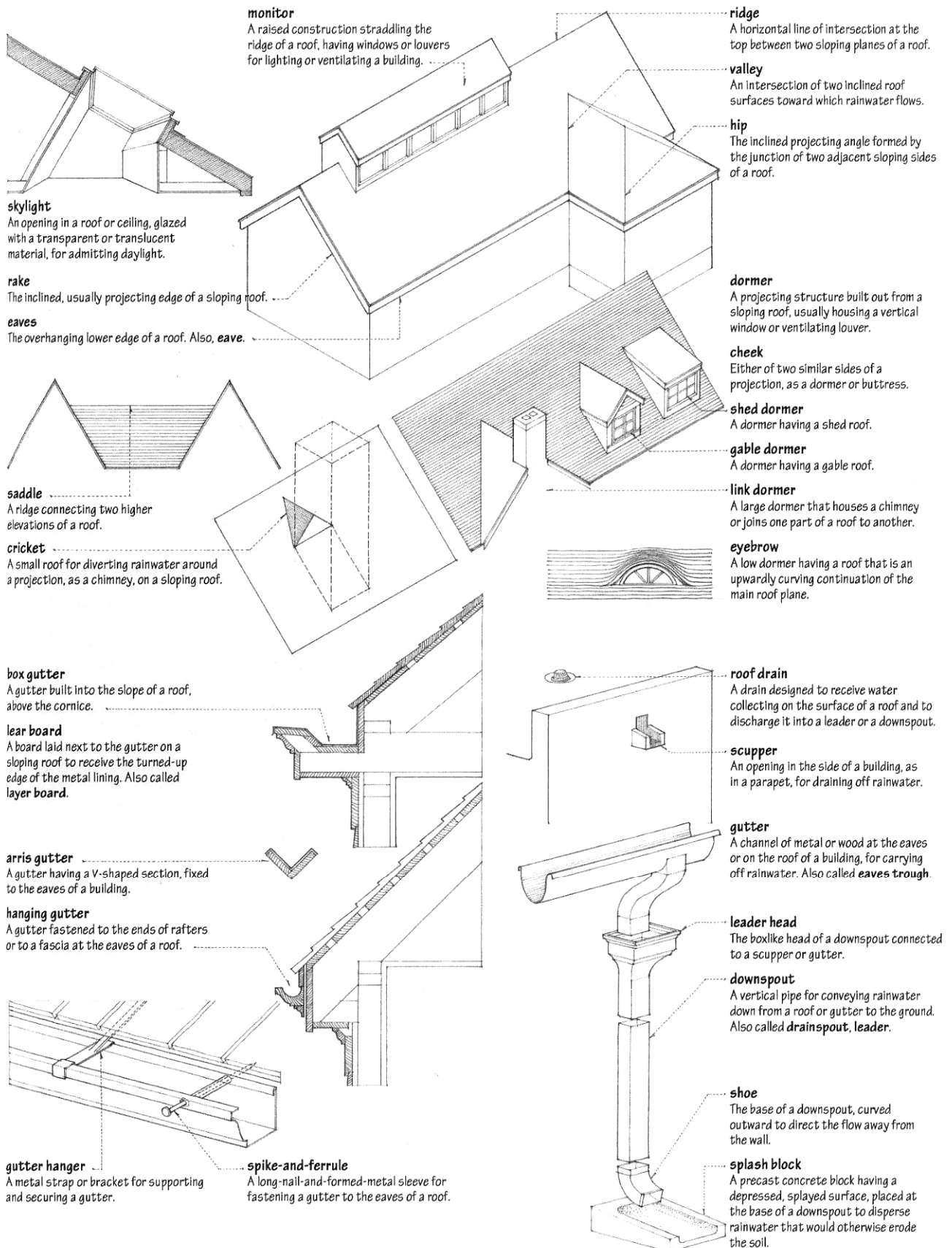


FRONT OR SIDE ELEVATION

ROOF DESIGN CONSIDERATIONS

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ROOF



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ROOF

blue label

A premium grade of red cedar shingle of clear, edge-grained heartwood.

red label

An intermediate grade of red cedar shingle having a limited amount of flat grain and sapwood.

black label

A utility grade of red cedar shingle.

undercourse

A row of wood shingles laid along the rake of a sloping roof with the butts projecting outward to give an inward slope to the surface shingles. Also called **undercloak**.

spaced sheathing

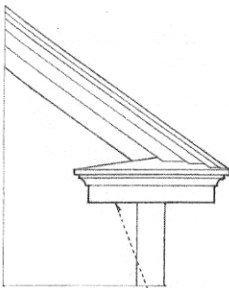
Roofing boards laid some distance apart to provide ventilation for wood shingles and shakes. Also called **open boarding**, **skip sheathing**.

Boston hip

The weaving of shingles at the hip or ridge of a roof. Also called **Boston ridge**.

weaving

A method of laying shingles on adjoining surfaces of a roof or wall so that shingles on each face lap each other alternately.



cornice return

The continuation of a cornice around the gable end of a house.

diagonal slating

A method of laying roofing slates with the diagonal of each tile running horizontally. Also called **drop-point slating**.

honeycomb slating

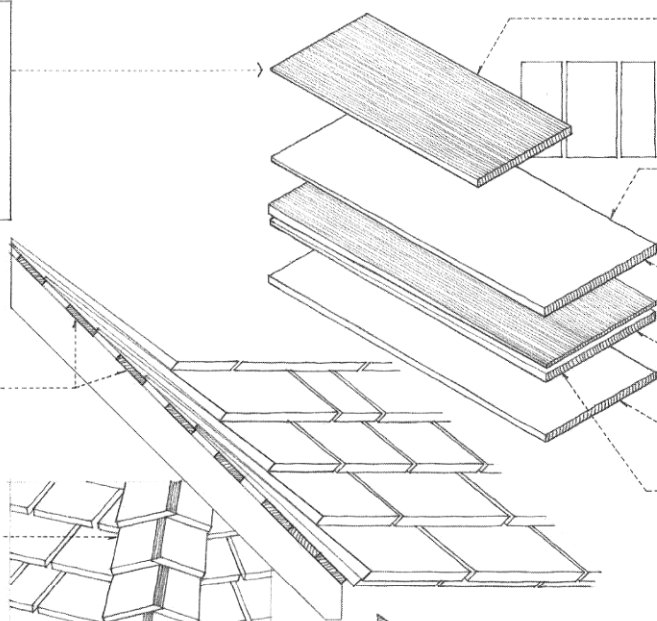
Diagonal slating in which the tails are cut from the roofing slates.

open slating

A method of laying roofing slates with spaces between adjacent tiles in a course. Also called **spaced slating**.

diminishing course

One of a number of courses of roofing slates that diminish in exposure, and sometimes width, from the eaves to the ridge.



dimension shingles

Wood shingles cut to a uniform size.

random shingles

Wood shingles of uniform length, but of random width.

shake

A thick shingle formed by splitting a short log into a number of tapered radial sections.

tapersplit shake

A handsplit shake tapered by reversing the block with each split.

handsplit-and-resawn shake

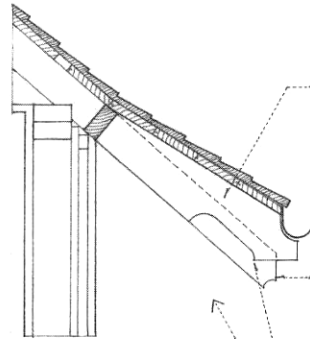
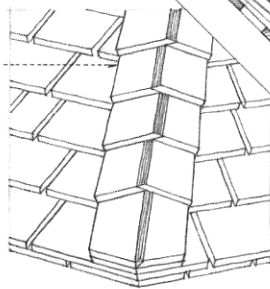
A tapersplit shake having a split face and a sawn back.

straightsplit shake

A handsplit shake of uniform thickness.

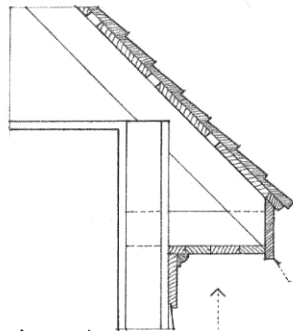
butt

The thick, usually lower exposed end of a wood shingle or shake.



sprocket

A strip of wood fixed to each rafter at the eaves in order to extend a sloping roof with a flatter pitch. Also called **cocking piece**.



fascia

Any broad, flat, horizontal surface, as the outer edge of a cornice or roof.

fascia board

A wide board set vertically to cover the lower ends of rafters or the joint between the top of a wall and the projecting eaves.

box cornice

A slightly projecting, hollow cornice of boards and moldings, nailed to rafters and lookouts. Also called **closed cornice**.

rafter tail

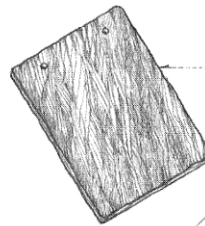
The lower, sometimes exposed, end of a rafter that overhangs a wall.

tail cut

A sometimes ornamental cut at the lower end of a rafter tail.

open cornice

An eaves overhang exposing the ends of rafters and the underside of the roof sheathing. Also called **open eaves**.

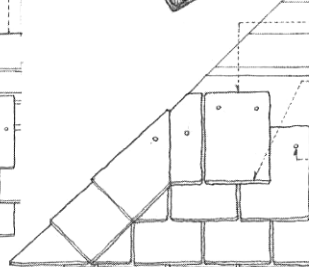
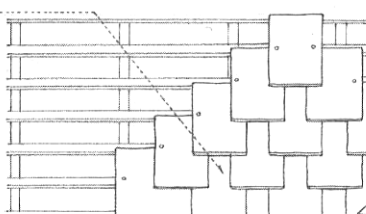
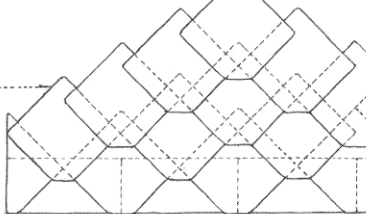


sized slates

Roofing slates of uniform width.

random slates

Roofing slates of varying width, often laid in diminishing courses. Also called **rustic slates**.



head

The upper end of a roofing slate.

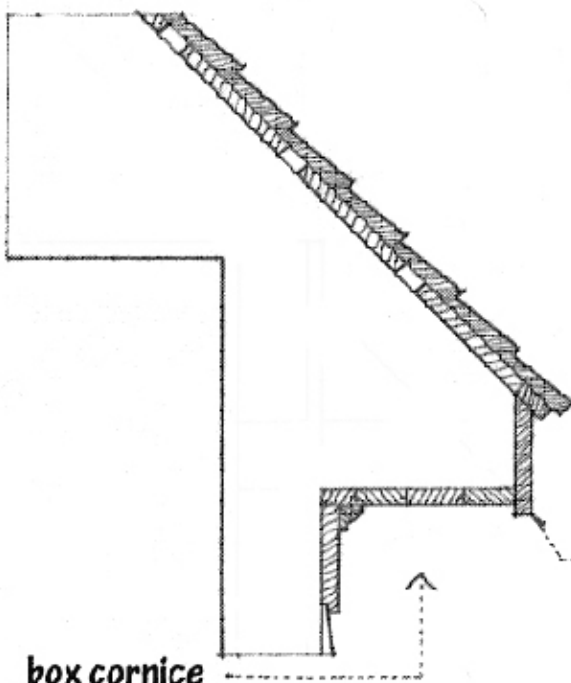
tail

The lower, exposed portion of a roofing slate.

slating nail

A copper nail having a large, flat head and a medium-diamond-shaped point, used esp. for fixing slates.

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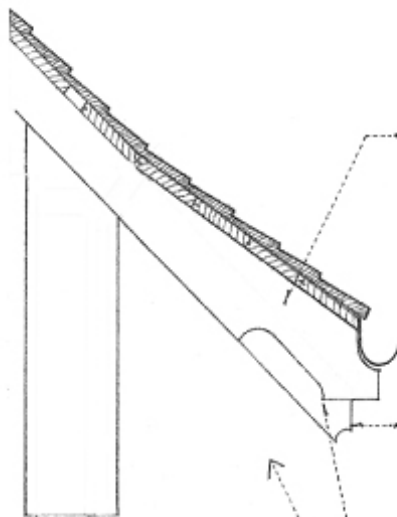
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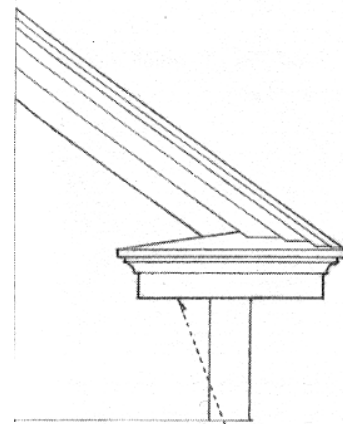
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