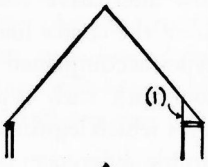
Ia COUPLED-RAFTER ROOF

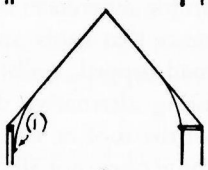
(I) ASHLARED



In the 'box-frame' type of carpentry structure, a ridge-purlin is abnormal in rafter single roofs.

Ib ARCH-BRACED COUPLED-RAFTER ROOF

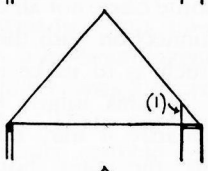
(I) DEEP ARCH-BRACED



The word 'deep' signifies that the arch-braces start below wallplate level.

Ic CLOSE-COUPLE RAFTER ROOF

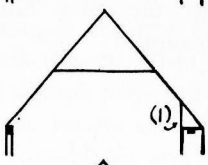
(I) ASHLARED



Pairs of rafters are tied together at their base by light members of similar dimensions.

Id COLLAR-RAFTER ROOF

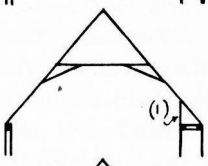
(I) ASHLARED



May have a second, upper, collar-rafter.

Ie BRACED-COLLAR RAFTER ROOF

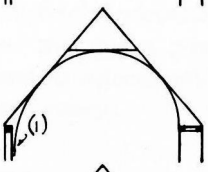
(I) ASHLARED



May have a second, upper, collar-rafter. The braces are straight. See (f) below.

If ARCH-BRACED COLLAR-RAFTER ROOF

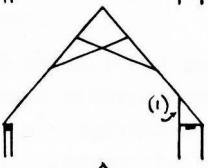
(I) DEEP ARCH-BRACED



May have a second, 'upper', collar-rafter.

Ig SCISSOR-RAFTER ROOF

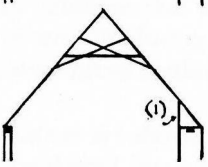
(I) ASHLARED



The scissors sometimes are curved. Normally they occur at every pair of rafters.

Ih SCISSOR & COLLAR-RAFTER ROOF

(I) ASHLARED

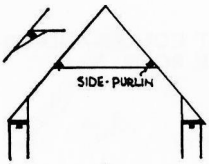


A combination of the (d) and (g) types.

FIG. 4. **I.** Rafter Single Roofs.

IIa TRAPPED-PURLIN COLLAR-RAFTER ROOF

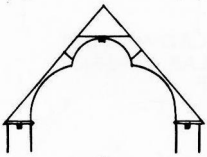
(I) ASHLARED



The side purlins are trapped between the angles of the collar-rafters and the common rafters.

IIb ARCH-BRACED, CLASPED-COLLAR-PURLIN RAFTER ROOF

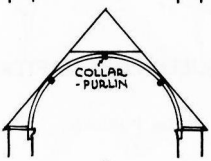
(I) ASHLARED



May have two collars and various forms of arch-brace to clasp the collar-purlin.

IIc ARCH-BRACED CLASPED-PURLIN RAFTER ROOF

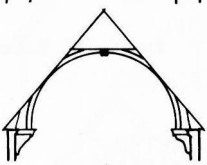
(I) DEEP ARCH-BRACED



May have two collars. The purlins are held in position by arch-braces, which are heavier at bay intervals.

IId FALSE HAMMER-BEAM, CLASPED-COLLAR-PURLIN RAFTER ROOF

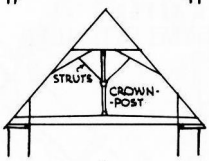
(I) ASHLARED



The arch-braces clasping the collar-purlin occur only at bay intervals.

IIe CROWN-POST RAFTER ROOF

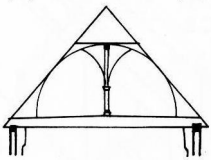
(I) ASHLARED



May have two collars.

IIf CROWN-POST ARCH-BRACED RAFTER ROOF

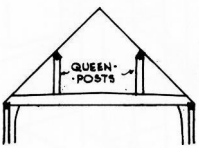
(I) ASHLARED



May have two collars.

IIg QUEEN-POST RAFTER ROOF

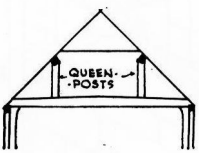
(I) ASHLARED



The queen posts may not be precisely vertical.

IIh QUEEN-POST COLLAR-RAFTER ROOF

(I) ASHLARED

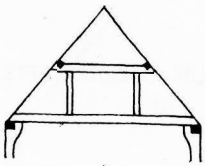


The collar may be a little way above the side-purlins.

FIG. 5. **II.** Rafter **Double** Roofs.

IIi QUEEN-STRUT COLLAR-AND-TIE-BEAM RAFTER ROOF

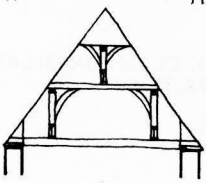
(I) ASHLARED



A collar-beam supports side-purlins trapped in the angles made with the common rafters.

IIj QUEEN-AND-CROWN-POST DOUBLE-COLLAR TIE-BEAM RAFTER ROOF

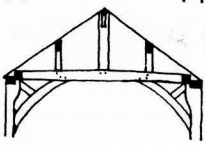
(I) ASHLARED



Similar in principle to (i), above, but a light upper collar is supported upon a collar-purlin and crown-post.

IIk KING-AND-QUEEN-POST RAFTER ROOF

(I) WIND-BRACED RIDGE PURLIN



There is no principal-rafter.

FIG. 6. **II.** Rafter Double Roofs (*continued*).

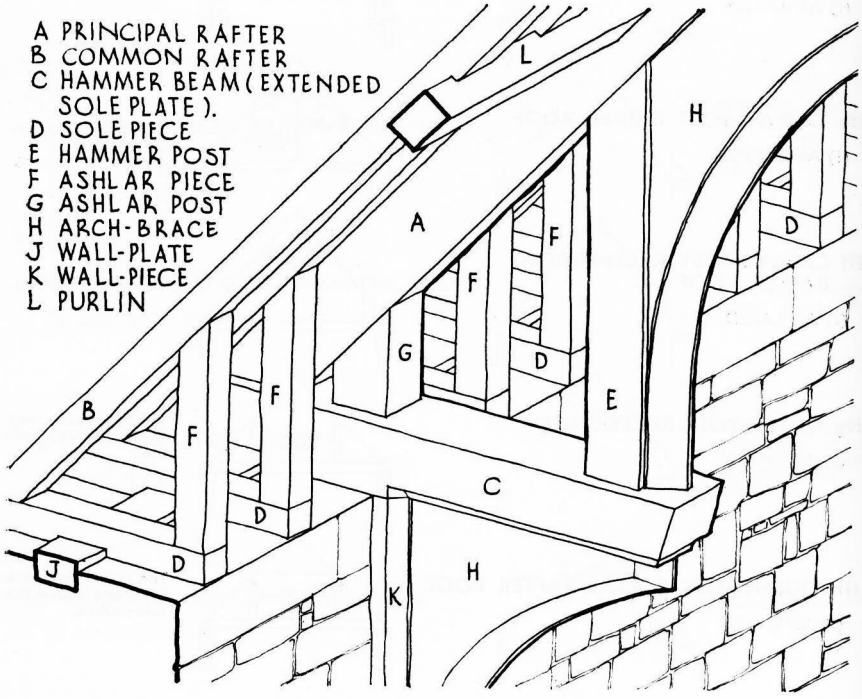
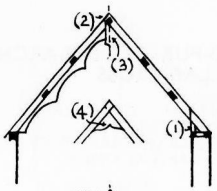


FIG. 7. Ashlaring: Butt-Purlin Hammer-Beam Truss.

IIIa B.P. COUPLE TRUSS

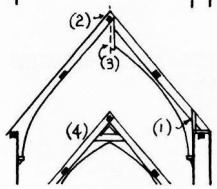
(1) ASHLARED
(2) RIDGE-PURLIN
(3) KING-PENDANT
(4) YOKE



A yoke sometimes may be almost a collar-beam.

IIIb B.P. DEEP-ARCH-BRACED COUPLE TRUSS

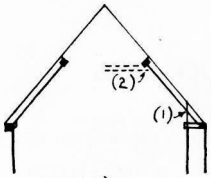
(1) ASHLARED
(2) RIDGE-PURLIN
(3) KING-PENDANT
(4) YOKE



A yoke sometimes may be almost a collar-beam.

IIIc B.P. TRUNCATED COUPLE TRUSS

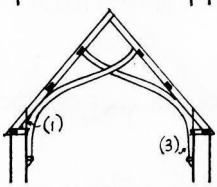
(1) ASHLARED
(2) COLLAR-RAFTER OR COLLAR-BEAM (THE TRUSS THEN BECOMES A TRUNCATED COLLAR TRUSS)



The principal-rafters become common-rafters above the side-purlins.

IIId B.P. SCISSOR-TRUSS

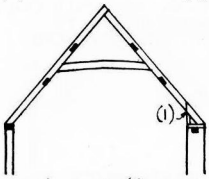
(1) ASHLARED
(2) RIDGE-PURLIN
(3) DEEP-ARCH-BRACED



Scissor-braces may be straight, arched or ogee.

IIIe B.P. COLLAR-TRUSS

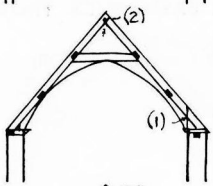
(1) ASHLARED
(2) RIDGE-PURLIN
(3a) UPPER 'VEE' STRUTS
(3b) UPPER KING STRUT
(3c) UPPER KING POST



May have two collar-beams.

IIIf B.P. ARCH-BRACED COLLAR-TRUSS

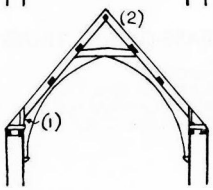
(1) ASHLARED
(2) RIDGE-PURLIN
(3a) UPPER 'VEE' STRUTS
(3b) UPPER KING STRUT
(3c) UPPER KING POST



May have two collar-beams.

IIIg B.P. DEEP-ARCH-BRACED COLLAR-TRUSS

(1) ASHLARED
(2) RIDGE-PURLIN
(3a) UPPER 'VEE' STRUTS
(3b) UPPER KING STRUT
(3c) UPPER KING POST

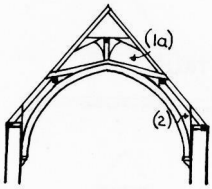


May have two collar-beams.

FIG. 8. **III.** Butt-**Purlin** Open Trusses.

IIIh B.P. TRAPPED-PURLIN DEEP-ARCH-BRACED COLLAR-TRUSS

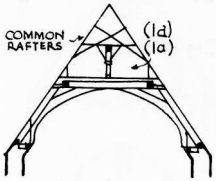
(1a) UPPER CROWN-POST (2) ASHLARED
(1b) UPPER COLLAR-RAFTER ONLY
(1c) BRACED UPPER COLLAR-RAFTER ONLY
(1d) UPPER SCISSOR RAFTERS ONLY



The side-purlins are sustained by the arch-braces. The principal-rafters sometimes are reduced in size in the upper part of the roof but still are heavier than the common-rafters.

IIIi B.P. TRUNCATED ARCH-BRACED COLLAR TRUSS

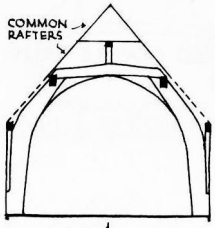
(1a) UPPER CROWN-POST
(1b) UPPER COLLAR-RAFTER ONLY
(1c) BRACED UPPER COLLAR-RAFTER ONLY
(1d) UPPER SCISSOR-RAFTERS ONLY
(2) ASHLARED



The upper part is a rafter roof. The collar may be in twin parts, trapping the side-purlins between them.

IIIj B.P. BASE-CRUCK TRUSS

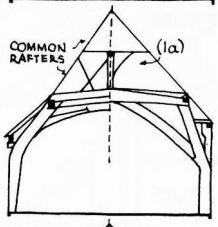
(1a) UPPER-CROWN-POST
(1b) UPPER COLLAR-RAFTER ONLY
(1c) BRACED UPPER COLLAR-RAFTER ONLY
(1d) UPPER SCISSOR-RAFTERS ONLY
(2) 'RAISED' (ABOVE 5 ft. FROM FLOOR)



The upper part is a rafter roof. The side-purlins are trapped on top of the base-crucks by the collar-beam.

IIIk B.P. TWIN-COLLAR BASE-CRUCK TRUSS

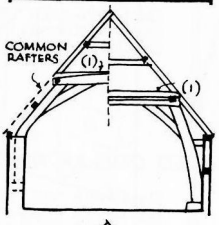
(1a) UPPER CROWN-POST
(1b) UPPER COLLAR-RAFTER ONLY
(1c) BRACED UPPER COLLAR-RAFTER ONLY
(1d) UPPER SCISSOR-RAFTERS ONLY
(2) 'RAISED' (ABOVE 5 ft. FROM FLOOR)



The side-purlins are trapped between the halves of a double collar. The upper twin sometimes is smaller than the lower. Two versions are shown.

IIIl B.P. CARRIER BASE-CRUCK TRUSS

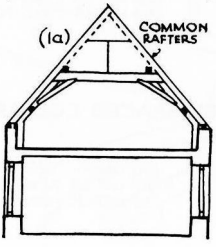
(1) TWIN MAIN COLLAR-BEAM
(2) 'RAISED' (ABOVE 5 ft. FROM FLOOR)



The base-cruck supports an upper truss frame which may become a rafter-roof near the roof apex. The main collar is often double. Two versions are shown.

IIIm B.P. UPPER BASE-CRUCK TRUSS

(1a) UPPER CROWN-POST
(1b) UPPER COLLAR-RAFTER ONLY
(1c) BRACED UPPER COLLAR-RAFTER ONLY
(1d) UPPER SCISSOR-RAFTERS ONLY

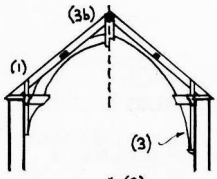


The side-purlins are trapped in the acute angles above the upper base-cruck.

FIG. 9. **III.** Butt-Purlin Open Trusses (*continued*).

IVa B.P. FALSE HAMMER-BEAM COUPLE-TRUSS

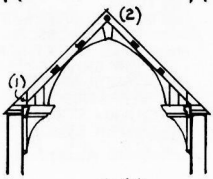
(1) ASHLARED
(2) RIDGE-PURLIN
(3) DEEP-ARCH-BRACED
(3a) YOKE
(3b) KING PENDANT
(3c) KING BLOCK



Arch-braced, but has neither hammer-posts nor collar-beam. Two versions are shown.

IVb B.P. HAMMER-BEAM COUPLE-TRUSS

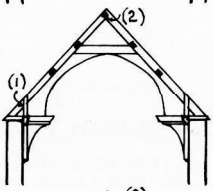
(1) ASHLARED
(2) RIDGE PURLIN
(3a) YOKE
(3b) KING PENDANT
(3c) KING BLOCK



Has hammer-posts but no collar-beam.

IVc B.P. FALSE HAMMER-BEAM COLLAR-TRUSS

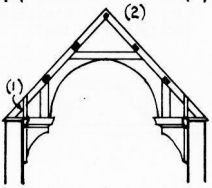
(1) ASHLARED
(2) RIDGE-PURLIN
(3a) UPPER 'VEE' STRUTS
(3b) UPPER KING STRUT
(3c) UPPER KING POST
(3d) KING PENDANT
(3e) KING BLOCK



There is a collar-beam but no hammer-posts: various arrangements above the collar-beam. See (3).

IVd B.P. HAMMER-BEAM COLLAR-TRUSS

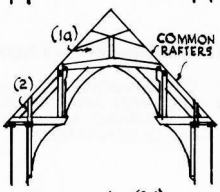
(1) ASHLARED
(2) RIDGE-PURLIN
(3a) UPPER 'VEE' STRUTS
(3b) UPPER KING STRUT
(3c) UPPER KING POST
(3d) KING PENDANT
(3e) KING BLOCK



Has a pair of hammer-beams, a pair of hammer-posts and a collar-beam: various arrangements above the collar-beam. See (3).

IVe B.P. HAMMER-BEAM QUEEN-POST TRUSS

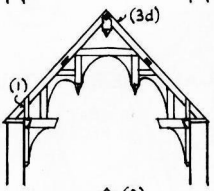
(1a) UPPER CROWN-POST
(1b) UPPER COLLAR-RAFTER ONLY
(1c) BRACED UPPER COLLAR-RAFTER ONLY
(1d) UPPER SCISSOR-RAFTERS ONLY
(2) ASHLARED



Resembles a queen-post truss except in lacking a full tie-beam. A collar connects the hammer-posts and secures side-purlins. The truss-frame is independent of the common rafters forming the roof-covering.

IVf B.P. DOUBLE HAMMER-BEAM TRUSS

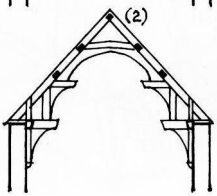
(1) ASHLARED
(2) RIDGE-PURLIN
(3a) UPPER 'VEE' STRUTS
(3b) UPPER KING STRUT
(3c) UPPER KING POST
(3d) KING PENDANT
(3e) KING BLOCK



There are two stages of hammer-beams and hammer-posts. The hammer-posts are sometimes continued downwards as pendants.

IVg B.P. FALSE DOUBLE HAMMER-BEAM TRUSS

(1) ASHLARED
(2) RIDGE PURLIN
(3a) UPPER 'VEE' STRUTS
(3b) UPPER KING STRUT
(3c) UPPER KING POST
(3d) KING PENDANT
(3e) KING BLOCK

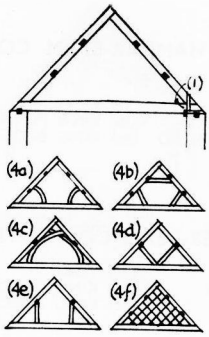


There are two stages of hammer-beams but no hammer-posts in the upper stage; only arch-braces stiffening the collar-beam.

FIG. 10. **IV.** Butt-Purlin Hammer-Beam Trusses.

Va B.P. TIE-BEAM TRUSS

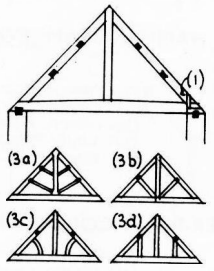
(1) ASHLARED
(2) RIDGE-PURLIN
(3a) KING-PENDANT
(3b) KING-BLOCK
(3c) YOKE
(4a) LOWER ANGLE-STRUTS OR BRACES
(4b) TRIPLE ANGLE-STRUTS OR BRACES
(4c) SCISSOR-BRACES
(4d) 'VEE' STRUTS
(4e) QUEEN STRUTS
(4f) DIAPER STUDS



May have a ridge-purlin, sometimes wind-braced from a king-block or pendant. All tie-beam trusses may have angle-struts or braces from the walls to the underside of the tie-beam. Various arrangements of subsidiary infilling members are employed, as indicated.

Vb B.P. KING-POST TIE-BEAM TRUSS

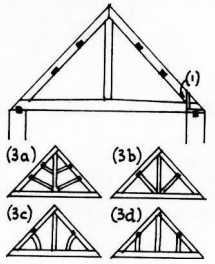
(1) ASHLARED
(2) RIDGE-PURLIN
(3a) FISH-BONE KING-POST
(3b) TWIN ANGLE KING-POST
(3c) CURVED ANGLE-BRACES
(3d) QUEEN-STRUTS



The principal rafters are received by the king-post at the truss apex, the king-post passing between them. There may be a ridge-purlin, sometimes wind-braced from the king-post.

Vc B.P. KING-STRUT TIE-BEAM TRUSS

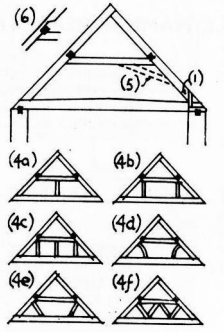
(1) ASHLARED
(2) RIDGE-PURLIN
(3a) FISH-BONE KING-STRUT
(3b) TWIN ANGLE-STRUTS
(3c) CURVED ANGLE BRACES
(3d) QUEEN-STRUTS



The principal rafters meet at the truss apex and the king-strut stops against their underside. There may be a ridge-purlin, sometimes wind-braced from the king-strut.

Vd B.P. COLLAR-AND-TIE-BEAM TRUSS

(1) ASHLARED
(2) RIDGE-PURLIN
(3a) UPPER 'VEE' STRUTS
(3b) UPPER KING-STRUT
(3c) UPPER KING-POST
(3d) KING PENDANT
(3e) KING BLOCK
(3f) YOKE
(4a) LOWER KING-STRUT
(4b) QUEEN STRUTS
(4c) LOWER KING-AND-QUEEN-STRUTS
(4d) LOWER ANGLE-BRACES
(4e) LOWER ANGLE-STRUTS
(4f) LOWER 'VEE' STRUTS
(5) BRACED COLLAR
(6) RECESSED PURLINS

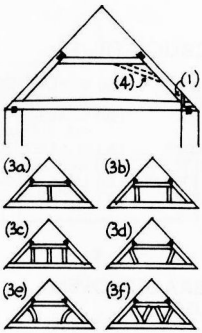


May have from one to four collar-beams. When there is more than one collar, category (4) does not apply. The side-purlins are sometimes recessed into the undersides of the principal-rafters (6).

FIG. 11. V. Butt-Purlin Tie-Beam Trusses.

Ve B.P. TRUNCATED COLLAR-AND-TIE-BEAM TRUSS

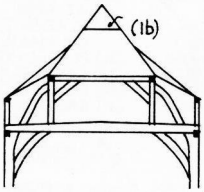
(1) ASHLARED
(2) UPPER 'VEE' STRUTS
(3a) LOWER KING-STRUT
(3b) QUEEN STRUTS
(3c) LOWER KING-AND-QUEEN-STRUTS
(3d) LOWER ANGLE STRUTS
(3e) LOWER ANGLE BRACES
(3f) LOWER 'VEE' STRUTS
(4) BRACED COLLAR



The principal rafters become common rafters above the upper side-purlins. When there are two pairs of side-purlins, the principal-rafters diminish above the topmost pair, stayed by angle-struts from the top of the collar.

Vf B.P. QUEEN-POST TRUSS

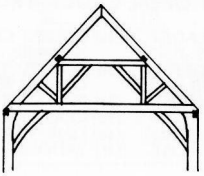
(1a) UPPER CROWN POST
(1b) UPPER COLLAR-RAFTER ONLY
(1c) BRACED UPPER COLLAR-RAFTER ONLY
(1d) UPPER SCISSOR-RAFTERS ONLY



The Queen-post frame is completely independent of the common rafters, giving direct support only to the side-purlins. The side-purlins abut the flank of the frame.

Vg B.P. QUEEN-STRUT TRUSS

(1) ASHLARED
(2) RIDGE-PURLIN
(3a) UPPER 'VEE' STRUTS
(3b) UPPER KING-STRUT
(3c) UPPER KING-POST
(3d) KING PENDANT
(3e) KING BLOCK
(3f) YOKE



The principal-rafters form an essential part of the truss-frame, which is more elaborate than Vd (4b) in having angle-struts (above the tie-beam). There can be more than one pair of side-purlins.

FIG. 12. V. Butt-Purlin Tie-Beam Trusses (*continued*).

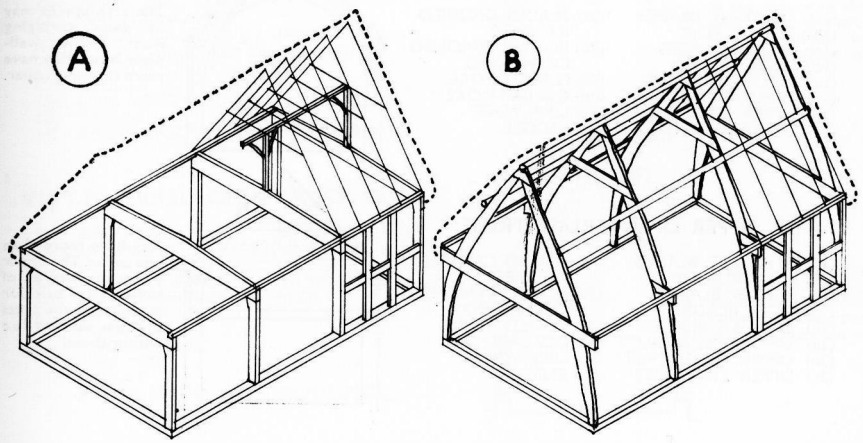
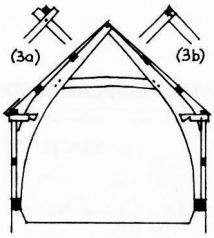


FIG. 13. Comparison of Box-Frame and Cruck-Frame types of structure.

VIa T.P. OPEN CRUCK-TRUSS

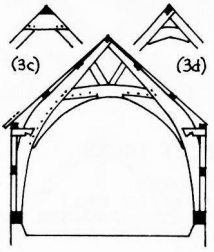
(1a) STRAIGHT BLADES
(1b) BOW BLADES
(1c) ELBOW BLADES
(1d) OGEE BLADES
(1e) SINUOUS BLADES
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING-POST
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR YOKE
(3e) LINK YOKE
(3f) SADDLE



May have more than one collar. Cruck-spurs, not invariably used, sometimes give effective support to the wall-plates; at others, merely hold the side-walls rigid.

VIb T.P. ARCH-BRACED OPEN CRUCK-TRUSS

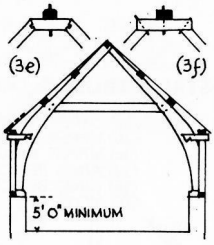
(1a) STRAIGHT BLADES
(1b) BOW BLADES
(1c) ELBOW BLADES
(1d) OGEE BLADES
(1e) SINUOUS BLADES
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR-YOKE
(3e) LINK-YOKE
(3f) SADDLE



Arch-braces usually, but not invariably, are 'deep', i.e. rise from below wall-plate level.

VIc T.P. RAISED OPEN CRUCK-TRUSS

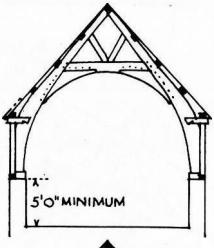
(1a) STRAIGHT BLADES
(1b) BOW BLADES
(1c) ELBOW BLADES
(1d) OGEE BLADES
(1e) SINUOUS BLADES
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR-YOKE
(3e) LINK-YOKE
(3f) SADDLE



May have more than one collar. Collars may be tenoned, halved or dove-tailed to the truss-blades.

VId T.P. RAISED ARCH-BRACED OPEN CRUCK-TRUSS

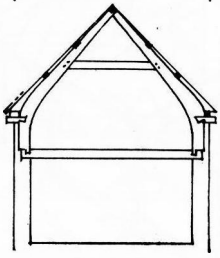
(1a) STRAIGHT BLADES
(1b) BOW BLADES
(1c) ELBOW BLADES
(1d) OGEE BLADES
(1e) SINUOUS BLADES
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR-YOKE
(3e) LINK-YOKE
(3f) SADDLE



The arch-braces may be 'deep', springing from below wall-plate level. May have more than one collar.

VIe T.P. UPPER OPEN CRUCK-TRUSS

(1a) STRAIGHT BLADES
(1b) BOW BLADES
(1c) ELBOW BLADES
(1d) OGEE BLADES
(1e) SINUOUS BLADES
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR-YOKE
(3e) LINK-YOKE
(3f) SADDLE

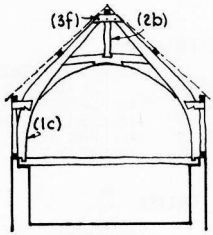


May have more than one collar. The upper side-walls may be of timber or of brick or stone, with the truss blades embedded within them.

FIG. 14. **VI.** Through-**Purlin** Open Trusses.

VIf T.P. ARCH-BRACED UPPER OPEN CRUCK-TRUSS

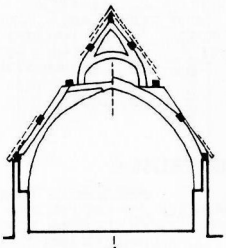
(1a) STRAIGHT BLADES
(1b) BOW BLADES
(1c) ELBOW BLADES
(1d) OGEE BLADES
(1e) SINUOUS BLADES
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR YOKE
(3e) LINK YOKE
(3f) SADDLE



May have more than one collar. The upper side walls may be of timber or of brick or stone with the truss-blades embedded within them.

VIg T.P. CARRIER ARCH-BRACED TRUSS

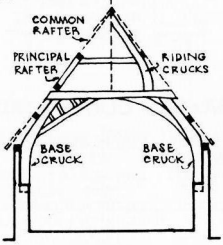
(1) ASHLARED
(2) RAISED (DEEP-ARCH-BRACE SPRINGS ABOVE 5′ 0″ FROM FLOOR)



Two versions are shown. A lower frame, which is either a T.P. truncated deep-arch-braced collar-truss or a complete open-cruck truss, supports a minor cruck-truss at a higher level.

VIh T.P. CARRIER BASE-CRUCK TRUSS

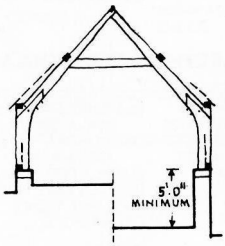
(1) UPPER 'VEE' STRUTS
(2) RAISED (BASE-CRUCKS SPRING ABOVE 5′ 0″ FROM FLOOR)



Two versions are shown. A base-cruck truss carries either a B.P. truncated couple-truss or a small full-cruck truss on its back.

VIi T.P. JOINTED OPEN CRUCK-TRUSS

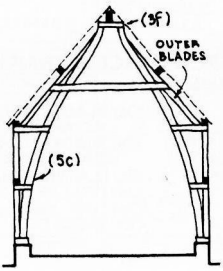
(1) ARCH-BRACED
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR YOKE
(3e) LINK YOKE
(3f) SADDLE
(4) RAISED (ABOVE 5′ 0″ FROM FLOOR)
(5) 'UPPER' CRUCK TRUSS



There is some variety in the nature of the joint, but it regularly occurs at or near the elbow of the crucks.

VIj T.P. STILTED OPEN CRUCK-TRUSS

(1) ARCH-BRACED
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR YOKE
(3e) LINK YOKE
(3f) SADDLE
(4) RAISED (ABOVE 5′ 0″ FROM FLOOR)
(5a) BOW BLADES
(5b) ELBOW BLADES
(5c) OGEE BLADES
(5d) SINUOUS BLADES

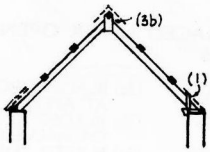


Usually spindly. Height markedly greater than width. Normally has two pairs of cruck-spurs.

FIG. 15. **VI.** Through-Purlin Open Trusses (*continued*).

VIk T.P. COUPLE TRUSS

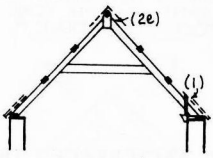
(1) ASHLARED
(2) DEEP-ARCH-BRACED
(3a) KING PENDANT
(3b) KING BLOCK
(4a) BLADES CROSSED AT APEX
(4b) BLADES TENONED OR HALVED
(4c) PLATED YOKE
(4d) COLLAR YOKE
(4e) LINK YOKE
(4f) SADDLE



Pairs of truss-blades inclined together, carry a varying number of pairs of purlins.

VII T.P. COLLAR TRUSS

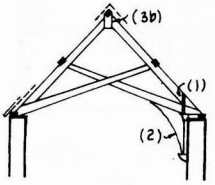
(1) ASHLARED
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(2d) KING PENDANT
(2e) KING BLOCK
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR YOKE
(3e) LINK YOKE
(3f) SADDLE



May have more than one collar.

VIm T.P. SCISSOR TRUSS

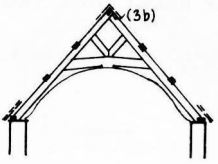
(1) ASHLARED
(2) DEEP-ARCH-BRACED
(3a) KING PENDANT
(3b) KING BLOCK
(4a) BLADES CROSSED AT APEX
(4b) BLADES TENONED OR HALVED
(4c) PLATED YOKE
(4d) COLLAR YOKE
(4e) LINK YOKE
(4f) SADDLE



Scissor-beams spring from wall-plate level, intersect centrally, and proceed thence to stiffen opposite truss-blades.

VIn T.P. ARCH-BRACED COLLAR TRUSS

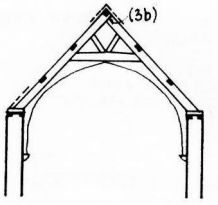
(1) ASHLARED
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(2d) KING PENDANT
(2e) KING BLOCK
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR YOKE
(3e) LINK YOKE
(3f) SADDLE



The arch-braces start at or above wall-plate line. There may be more than one collar.

VIo T.P. DEEP-ARCH-BRACED COLLAR TRUSS

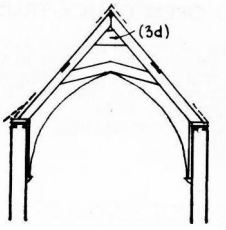
(1) ASHLARED
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(2d) KING PENDANT
(2e) KING BLOCK
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR YOKE
(3e) LINK YOKE
(3f) SADDLE



The arch-braces start below wall-plate line. There may be more than one collar.

VIp T.P. DEEP-ARCH-BRACED CRANKED-COLLAR TRUSS

(1) ASHLARED
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(2d) KING PENDANT
(2e) KING BLOCK
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR YOKE
(3e) LINK YOKE
(3f) SADDLE

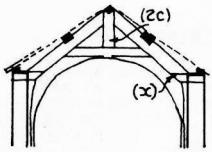


The collar rises in the centre almost as much as its own height, sometimes more, and is very sharply angled. The timbers are very heavy.

FIG. 16. **VI.** Through-Purlin Open Trusses (*continued*).

VIIa T.P. STUB TIE-BEAM COLLAR TRUSS

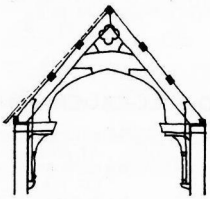
(1) ASHLARED
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(2d) KING PENDANT
(2e) KING BLOCK
(3a) BLADES TENONED OR HALVED AT APEX
(3b) PLATED YOKE
(3c) COLLAR YOKE
(3d) LINK YOKE
(3e) SADDLE



Has short lengths of tie-beam (x), suggesting hammer-beams.

VIIb T.P. FALSE HAMMER-BEAM COLLAR-TRUSS

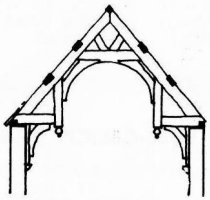
(1) ASHLARED
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(2d) KING PENDANT
(2e) KING BLOCK
(3a) BLADES TENONED OR HALVED AT APEX
(3b) PLATED YOKE
(3c) COLLAR YOKE
(3d) LINK YOKE
(3e) SADDLE



Has hammer-beams, but no hammer-posts: only arch-braces.

VIIc T.P. HAMMER-BEAM COLLAR-TRUSS

(1) ASHLARED
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(2d) KING PENDANT
(2e) KING BLOCK
(3a) BLADES TENONED OR HALVED AT APEX
(3b) PLATED YOKE
(3c) COLLAR YOKE
(3d) LINK YOKE
(3e) SADDLE



Has hammer-beams and hammer-posts. The latter are sometimes continued downwards as ornamental pendants (as shown).

FIG. 17. **VII.** Through-Purlin Hammer-Beam Trusses.

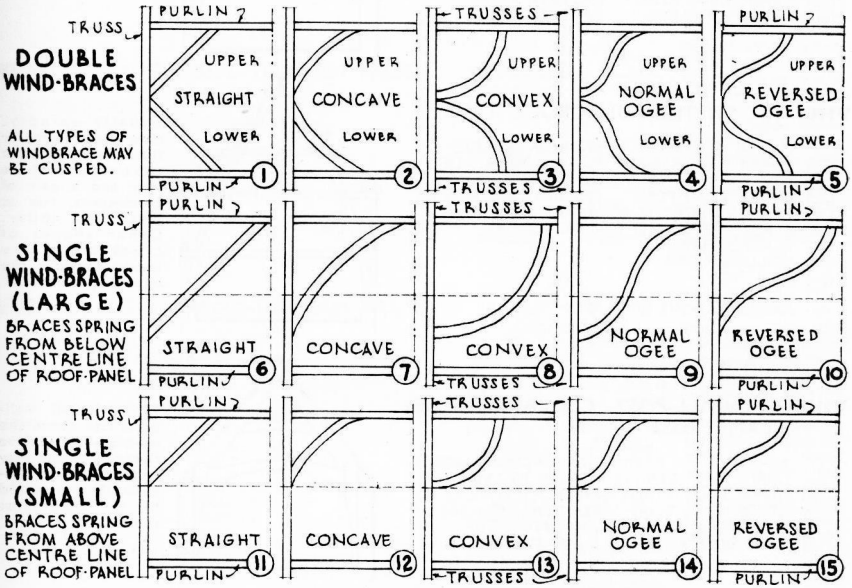
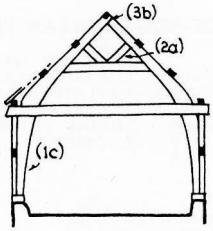


FIG. 18. Types of Wind-Brace (From Trusses to Side-Purlins, Wall-Plates, or Ridge-Purlins).

VIIIa T.P. FULL-CRUCK TRUSS

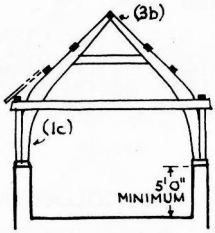
(1a) STRAIGHT BLADES
(1b) BOW BLADES
(1c) ELBOW BLADES
(1d) OGEE BLADES
(1e) SINUOUS BLADES
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOLK
(3d) COLLAR YOKE
(3e) LINK YOKE
(3f) SADDLE



A tie-beam truss may have more than one collar.

VIIIb T.P. RAISED FULL-CRUCK TRUSS

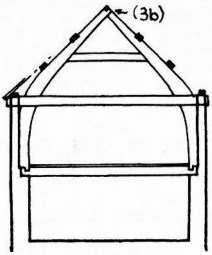
(1a) STRAIGHT BLADES
(1b) BOW BLADES
(1c) ELBOW BLADES
(1d) OGEE BLADES
(1e) SINUOUS BLADES
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR YOKE
(3e) LINK YOKE
(3f) SADDLE



A tie-beam truss may have more than one collar.

VIIIc T.P. UPPER FULL-CRUCK TRUSS

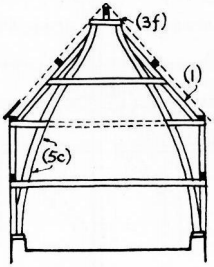
(1a) STRAIGHT BLADES
(1b) BOW BLADES
(1c) ELBOW BLADES
(1d) OGEE BLADES
(1e) SINUOUS BLADES
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR YOKE
(3e) LINK YOKE
(3f) SADDLE



A tie-beam truss may have more than one collar.

VIIId T.P. STILTED FULL-CRUCK TRUSS

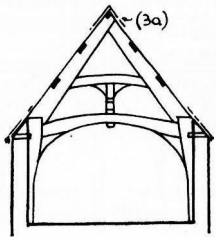
(1) OUTER BLADES
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(3a) BLADES CROSSED AT APEX
(3b) BLADES TENONED OR HALVED
(3c) PLATED YOKE
(3d) COLLAR YOKE
(3e) LINK YOKE
(3f) SADDLE
(4) RAISED (ABOVE 5' 0" FROM FLOOR).
(5a) BOW BLADES
(5b) ELBOW BLADES
(5c) OGEE BLADES
(5d) SINUOUS BLADES



Usually spindly. Height much greater than width. May have two tie-beams or one only and a pair of cruck-spurs. Has at least one collar. Other shapes of cruck-blade are known, besides the ogee shape shown.

VIIIe T.P. WALL-POST, COLLAR-AND-TIE-BEAM TRUSS

(1) ASHLARED
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(2d) KING PENDANT
(2e) KING BLOCK
(3a) BLADES TENONED OR HALVED
(3b) PLATED YOKE
(3c) COLLAR YOKE
(3d) LINK YOKE
(3e) SADDLE

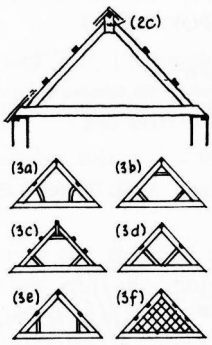


The principal wall-posts rise above the tie-beam and receive the truss-blades. May embody alien elements, as is instanced by the crown-post shown.

FIG. 19. **VIII.** Through-Purlin Tie-Beam Trusses.

VIIIf T.P. TIE-BEAM TRUSS

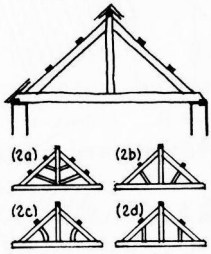
(1) ASHLARED
(2a) BLADES TENONED OR HALVED
(2b) KING PENDANT
(2c) KING BLOCK
(2d) COLLAR YOKE
(3a) LOWER ANGLE-STRUTS OR BRACES
(3b) TRIPLE ANGLE-STRUTS OR BRACES
(3c) TRIPLE ANGLE-STRUTS OR BRACES: UPPER STRUT JOINED BY KING PENDANT
(3d) 'VEE' STRUTS
(3e) QUEEN STRUTS
(3f) DIAPER STUDS



All tie-beam trusses may have angle-struts or braces from the walls to the underside of the tie-beam. Purlins may be sunk partly or wholly into the upper sides of the truss-blades, or ride upon them, requiring varying treatments at roof apex and base. Various arrangements of subsidiary infilling members are employed, as indicated. Roof pitches vary between *C* 55°-30°.

VIIIg T.P. KING-POST TIE-BEAM TRUSS

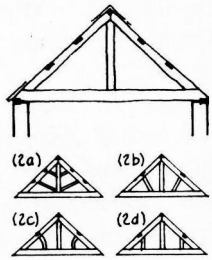
(1) ASHLARED
(2a) FISH-BONE KING-POST
(2b) TWIN ANGLE-STRUTS
(2c) CURVED ANGLE-BRACES
(2d) QUEEN STRUTS



The truss-blades are received by the king-post at the truss-apex, the king-post passing between them. Purlins may be sunk partly or wholly into the upper sides of the truss-blades, or ride upon them, requiring varying treatments at roof apex and base. Roof pitches vary between *c.* 55°-30°. The (2a) version occurs only with steep pitches.

VIIIh T.P. KING-STRUT TIE-BEAM TRUSS

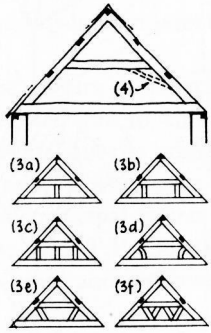
(1) ASHLARED
(2a) FISH-BONE KING-STRUT
(2b) TWIN ANGLE-STRUTS
(2c) CURVED ANGLE BRACES
(2d) QUEEN STRUTS



The truss-blades meet at the apex, and the king-strut stops against their underside. Purlins may be sunk partly or wholly into the upper sides of the truss-blades, or ride upon them, requiring varying treatments at roof-apex and base. Roof-pitches vary between *c.* 55°-30°: The (2a) version occurs only with steep pitches.

VIIIi T.P. COLLAR-AND-TIE-BEAM TRUSS

(1) ASHLARED
(2a) UPPER 'VEE' STRUTS
(2b) UPPER KING STRUT
(2c) UPPER KING POST
(2d) KING PENDANT
(2e) KING BLOCK
(2f) COLLAR YOKE
(3a) LOWER KING STRUT
(3b) QUEEN STRUT
(3c) LOWER KING- AND QUEEN-STRUTS
(3d) LOWER ANGLE-BRACES
(3e) LOWER ANGLE-STRUTS
(3f) LOWER 'VEE' STRUTS
(4) BRACED COLLAR

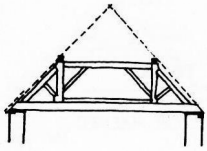


May have more than one collar, in which case categories (3) & (4) do not apply. Side-purlins may be sunk partly or wholly into the upper sides of the truss-blades or ride upon them, requiring varying treatments at roof-apex and base. Roof pitches vary between *c.* 55° and 30°.

FIG. 20. **VIII.** Through-Purlin Tie-Beam Trusses (*continued*).

VIIIj T.P. QUEEN-POST TRUSS

(1) ASHLARED
(2a) UPPER CROWN-POST
(2b) UPPER COLLAR-RAFTER ONLY
(2c) BRACED UPPER COLLAR-RAFTER ONLY
(2d) UPPER SCISSOR-RAFTERS ONLY



The side-purlins are through-purlins, standing upon the queen-posts, which receive the collar and the truncated blades.

FIG. 21. **VIII.** Through-Purlin Tie-Beam Trusses (*continued*).

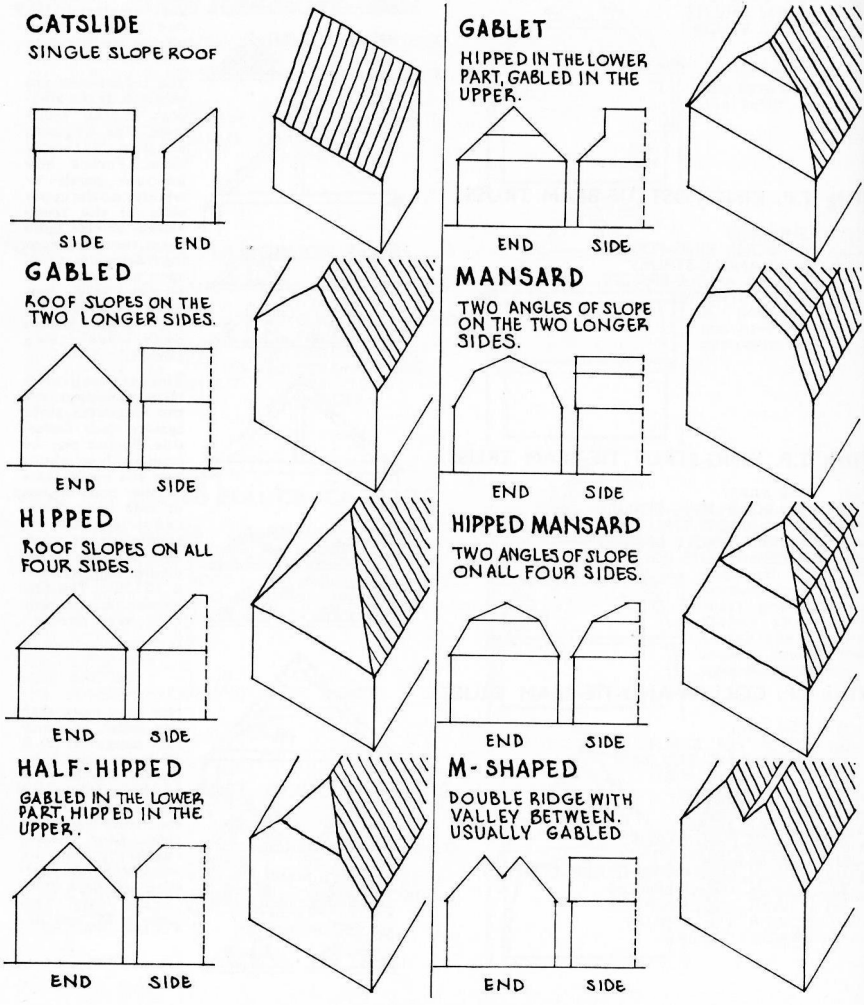


FIG. 22. Types of Roof Formation.