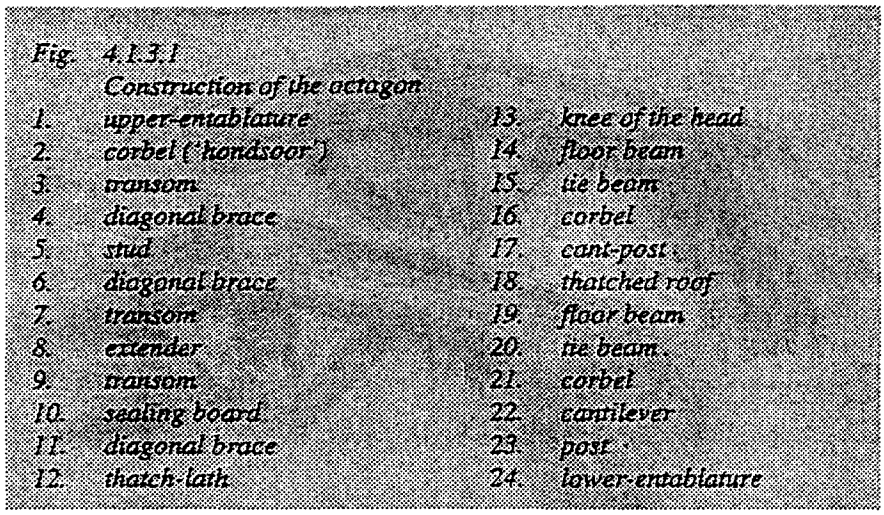


Fig. 4.1.3.1
Construction of the octagon

1. *upper-entablature*
2. *corbel ('hondsoor')*
3. *transom*
4. *diagonal brace*
5. *stud*
6. *diagonal brace*
7. *transom*
8. *extender*
9. *transom*
10. *sealing board*
11. *diagonal brace*
12. *thatch-lath*
13. *knee of the head*
14. *floor beam*
15. *tie beam*
16. *corbel*
17. *cant-post*
18. *thatched roof*
19. *floor beam*
20. *tie beam*
21. *corbel*
22. *cantilever*
23. *post*
24. *lower-entablature*

cant post

4.1.3 Wooden octagon

lower entablature, entablature pieces

The octagonal mill is shaped like a regular octagon. The base is made up of the *lower entablature*, which consists of eight broad plates, the *entablature pieces*. These pieces are linked together. Mills without an entablature also exist.

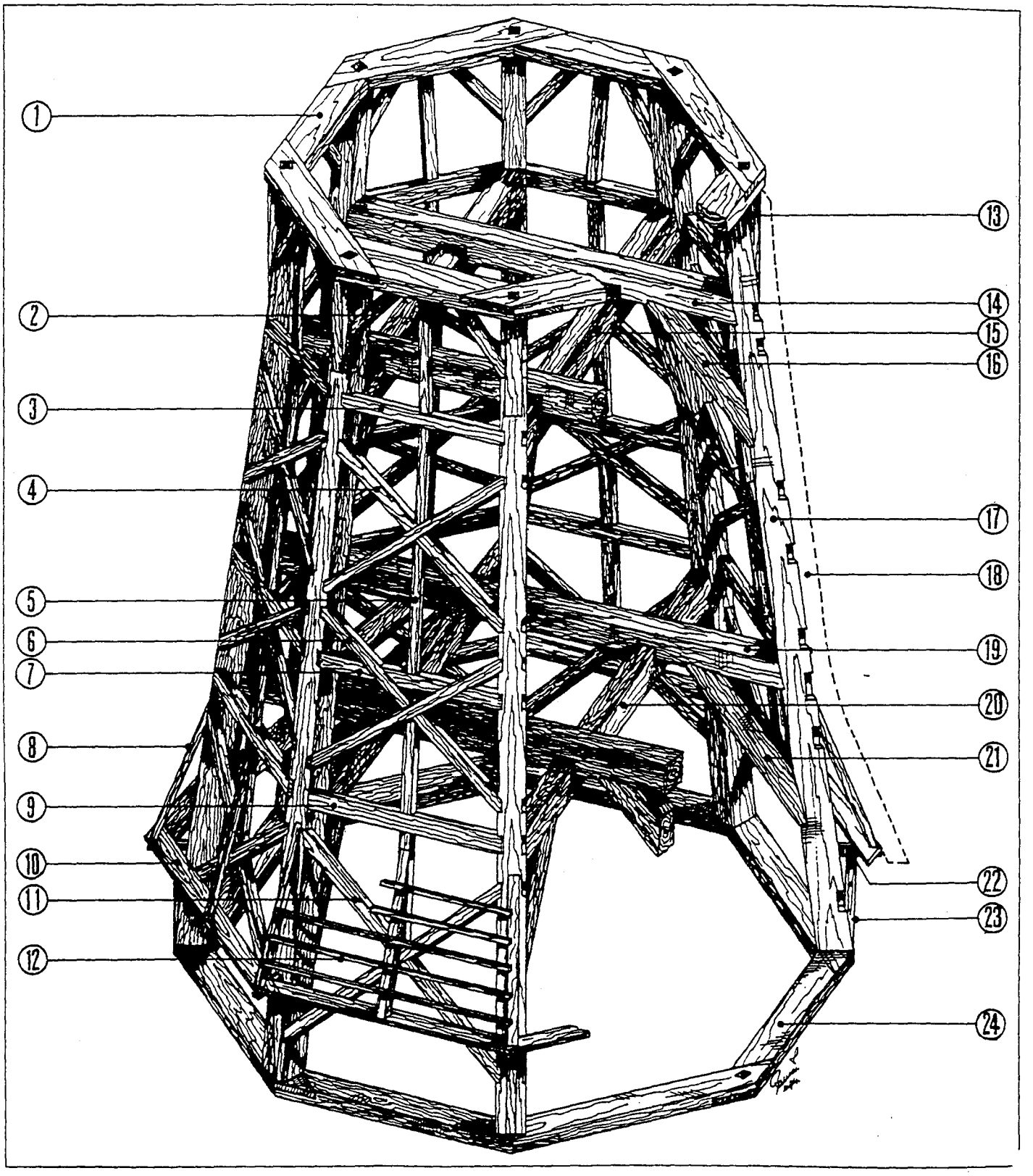
cant posts
upper entablature

On the eight sides, obliquely pointing inwards, are the *cant posts*. At the top, these posts are connected to the *upper entablature*.

tie beams, joists

girders

Between the two entablatures are the cant posts. These are connected to each other by two or three layers of *tie beams*, which together form the *joists*. At the junctures are the lower, fixed tie beams, which are connected to the two upper ones, the loose tie beams. The tie beams are also called *girders*.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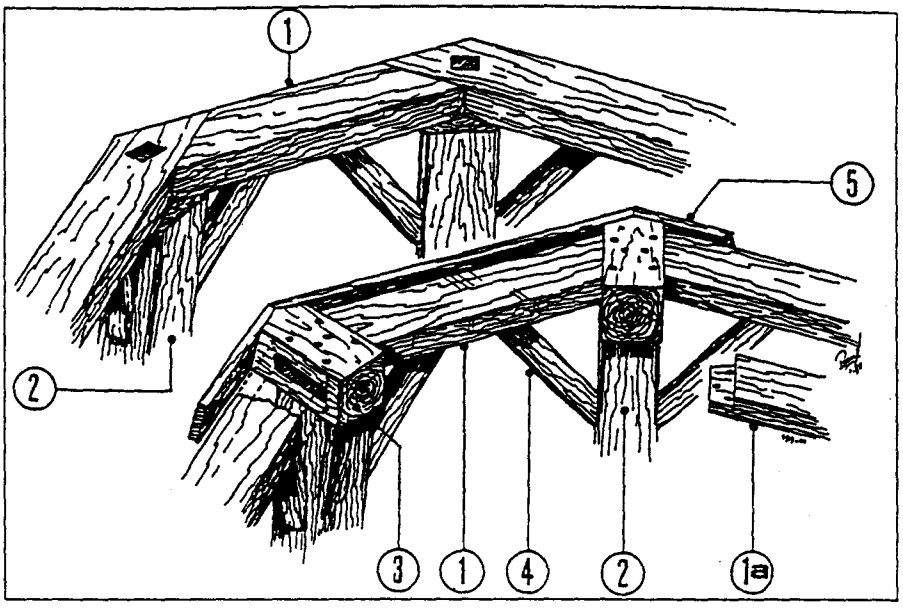

Fig. 4.1.3.2
Examples of the upper-entablature
1. upper-entablature
1a. entablature with block
2. cant-post
3. block
4. corbel
5. thatch (sealing-) board

floor joists, floors
corbel

The *floor joists* rest on the tie beam layers. The *floors* are supported on the joists. In each corner, between a cant post and a tie beam, there is a *corbel.*

transoms
diagonal braces
studs

The cant posts are connected horizontally to each other by two or more *transoms* and by *diagonal braces*. Both the transoms and the diagonal braces are often connected to each other by *studs*.

knee of the head, cut water
cantilevers, extenders

The *knees of the head* or *cut waters* are connected to the outside of the cant posts under the overhanging upper entablature corners. Together with the *cantilevers* and the *extenders* placed on them underneath each cant post, this gives the octagon its 'tailored' shape. On or under the cantilevers, parts have been placed as a covering. These parts are called the *sealing boards*. The whole unit is faced all round.

sealing boards

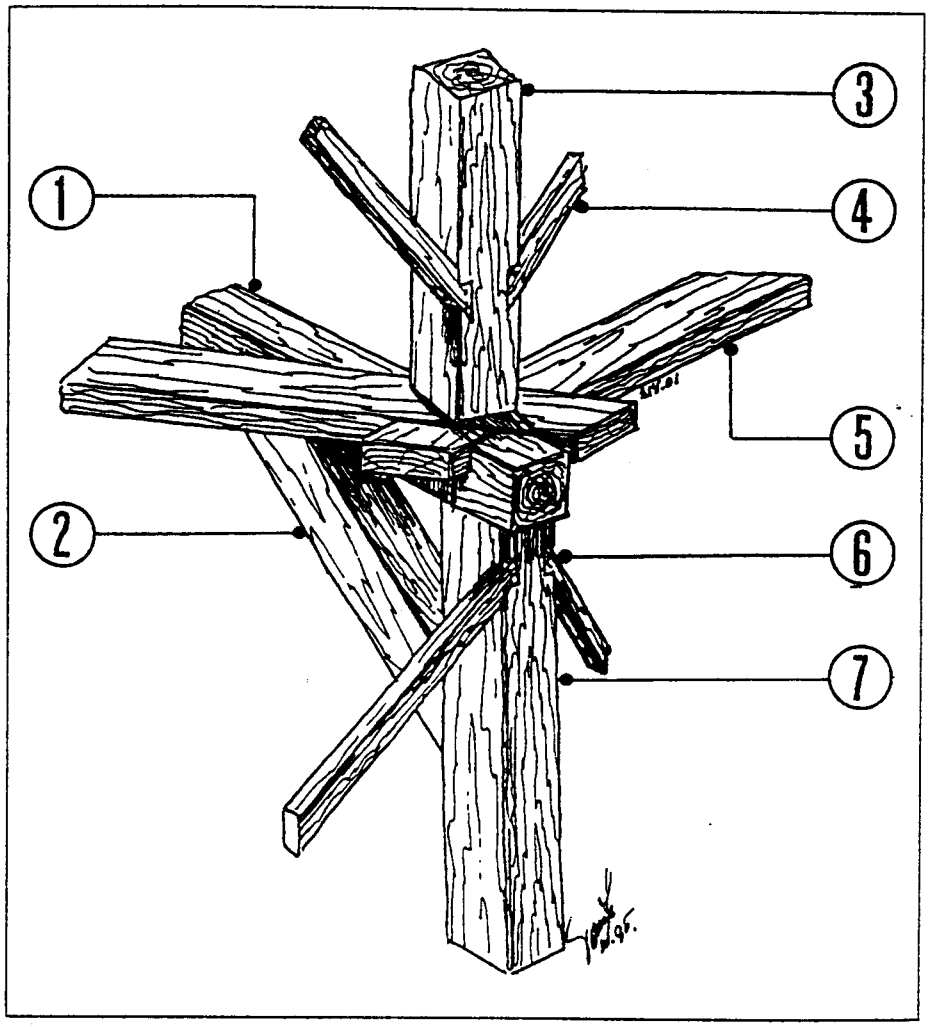

Fig. 4.1.3.5
Transition of the wooden under-octagon to the upper-octagon

1. *tie beam*
2. *corbel*
3. *upper cant-post*
4. *diagonal brace*
5. *'intermediate' entablature*
6. *diagonal brace*
7. *under cant-post*

4.1.3.a Roundel

roundel
upper part

To allow the mill to catch a good wind, the mills were built higher in towns and villages than in the countryside. Stone mills were built simply to the required height, but the wooden octagons were erected on a stone or wooden *roundel* and had a transition from the roundel to the *upper part* of the mill. In a stone roundel the lower entablature was placed in a recessed edge in or on the wall. In a wooden mill the wooden roundel merged via an *intermediate entablature* into the upper part of the mill (Fig. 4.1.3.5). Some mills had *continuing cant posts* which were so long that an intermediate entablature was not needed.

intermediate entablature
continuing cant posts

4.1.3b Mill on a shed

undersquare

Many industrial mills have sheds next to the mill or built round the base. Occasionally the upper part of the mill rests on a heavy wooden cube-shaped structure called the *undersquare*. The upper tie beams of this structure serve as an intermediate entablature. The mill machinery is located in the undersquare.

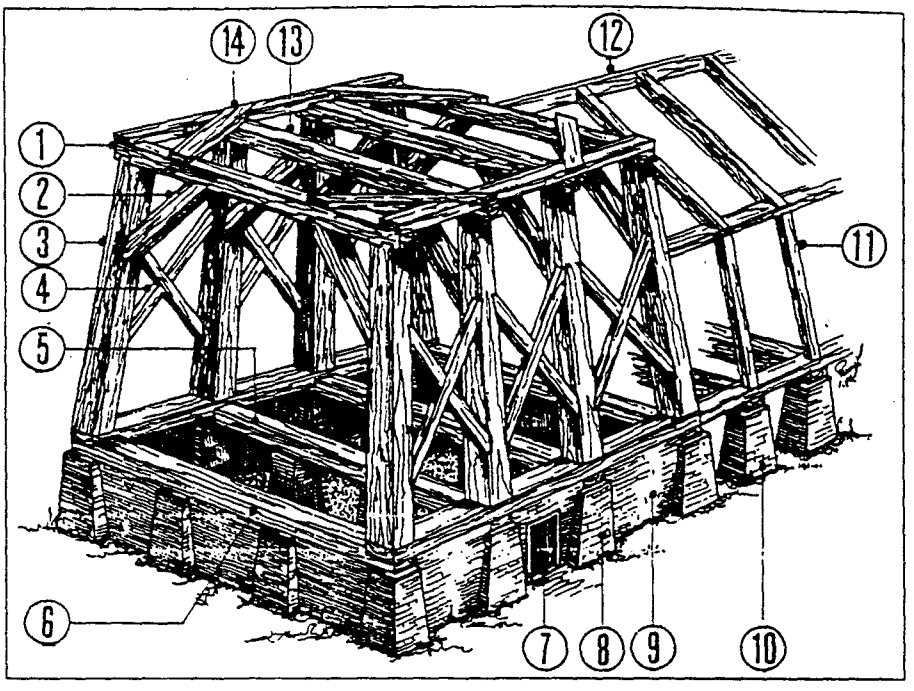

Fig. 4.1.3.8
Construction of an under-square with shed (saw-mill)
1. tie-beam
2. corbel
3. corner post
4. diagonal brace
5. floor joist
6. under entablature or sill(s)
7. cot door
8. pier
9. cot wall
10. pier
11. shed post
12. roof ridge
13. joist
14. intermediate entablature

4.1.4 Reefing stage

stage, gallery

Because a miller had to operate the sails, luffing gear and brake rope during grinding, a *stage* or *gallery* was built round high-type mills. The stage is usually octagonal in shape, on most round stone mills too (Fig. 4.1.4.3).

ledgers
inner fastening
outer fastening

The *ledgers* (or *girders*) are mounted in the trunk at the required height. Sometimes they rest on a ring of beams placed round the mill: the *inner fastening*. The ledger ends project about 3.5 meters from the mill and rest on a ring of beams: the *outer fastening*. This is supported by braces. Occasionally there is no outer fastening, so that each girder has its own brace. In stone mills or mills with a stone roundel, the braces rest in the wall or on *corbels* which project out of the trunk. In all wooden and some stone roundels, the braces rest on a ring of beams built round the trunk: the *lower fastening*.

corbels

lower fastening

auxiliary braces, crow's feet
drip laths

The number of braces can vary. Especially in the northern part of the country, the stage is supported merely from the corners of the cant via an outer fastening always present in these mills. From the eight braces, the outer fastening is then further supported by *auxiliary braces*: the *crow's feet* (Fig. 4.1.4.3). The bottom of the braces is often provided with *drip laths* to prevent water from seeping into the mill.

stage boards, stage planks
stage railing

The ledgers are covered by *stage boards* (or *'planks'*) which are mounted about 2 cm from one another to help discharge rainwater. A *stage railing* has been placed along the edge of the outermost stage elements. The railing usually slopes obliquely outwards.