

These half-courses now merge into one and will be ready to join up with the main work, after which the hazel sway can be fixed.

With the two barges almost completed, the method of turning the apex is shown. The two sways seen are a continuation of those which secure the bunches in the barge.

Bunches of reed are laid right over the apex and the two hazel sways are bent down and cut off to the required length.



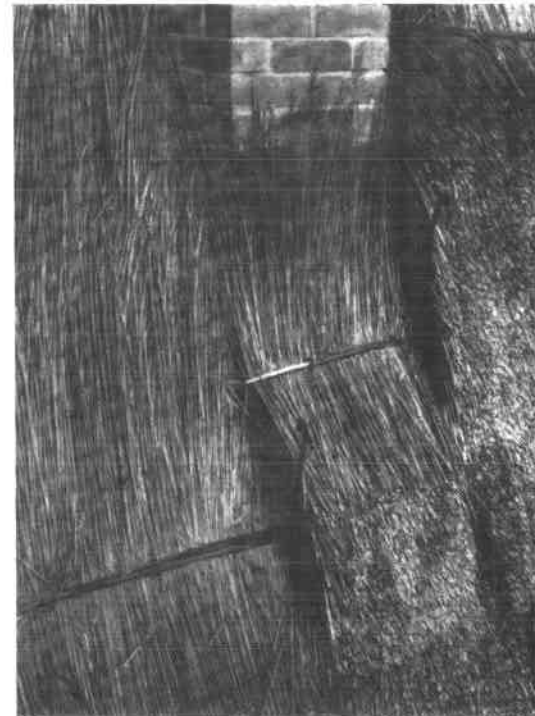
It will be noted that these two sways do not finish at the apex but instead each overlaps the top by 12" (300 mm), where a secure fixing can be made.

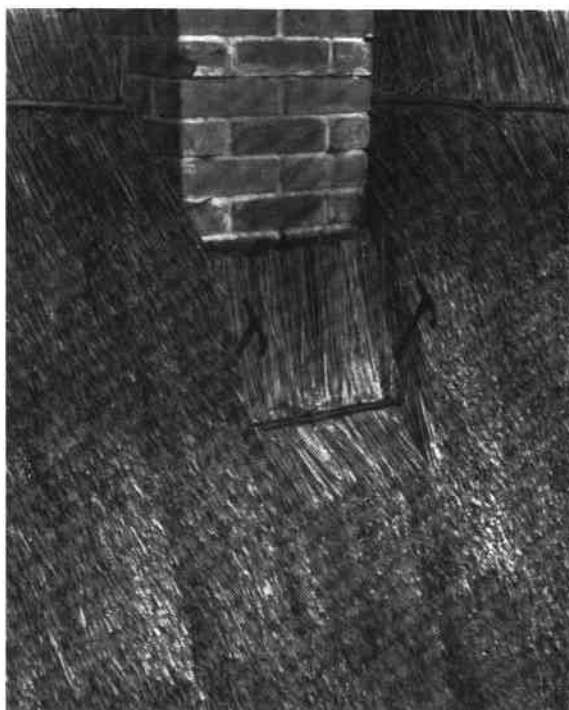
It is convenient to show at this stage how the courses abutting the ridge-chimney are arranged. Although these last courses are interrupted by the chimney, the strength of the finished work need not be affected.

The illustration shows three courses which have finished on the right-hand side of the chimney, and the last hazel sway to pass uninterrupted in front of the chimney.

A useful addition at this point is the small roll cut to the width of the brickwork and tied to the top batten in front of the chimney. This roll makes a solid base into which spars are driven later on.

It is essential that ample thickness of reed is carried through in front of the brickwork and it is therefore suggested that two small courses are fixed at this point. Selecting medium-length reed the first small course is laid and fixed with a short sway, allowing the tops of the reed to run up the brickwork when dressing.





In continuation another full course is laid on the left-hand side of the chimney, and after this has been swayed down, the second small course is laid in front of the brickwork. This is also fixed with a short sway, but 12" (300 mm) hooks may be necessary for fixing in order to reach the rafters.

Another full course may now be started on the left-hand side of the chimney and the hazel sway fixed. Superfluous tops of the chimney-course are now cut off at a point below the level of the finished thatch surface, using the brick joint as a guide to straightness.

The topmost course of all is finally laid beside the chimney, care being taken to maintain the same level as the opposite side. The cavity between the two needles will be dealt with under the heading of ridging, at a later stage.

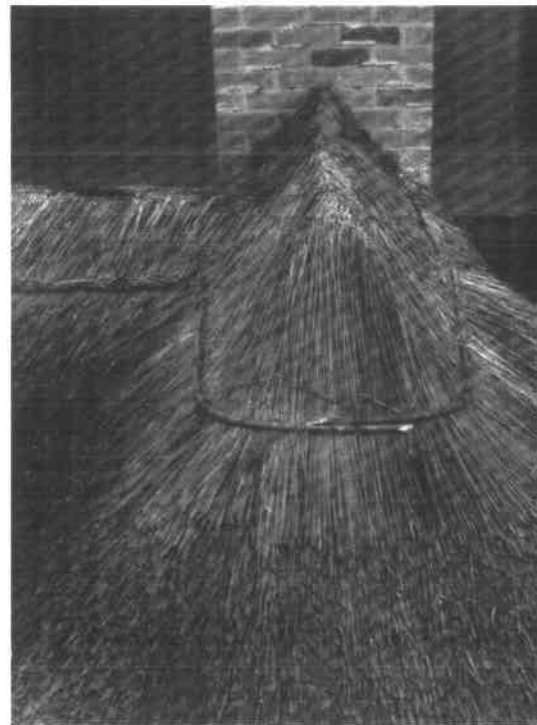


Now that all the courses are completed on the second side, the remaining tops are the next to be cut off. The knife is held at the appropriate angle whereby it is in pitch with the reed on the first side.

This method of cutting the superfluous reed produces a very narrow top, whilst at the same time a gradual build-up has been taking place, which now provides more than 12" (300 mm) of material above the ridge-board.

The roof has now reached the stage when the sedge skirts can be laid. The sedge is applied to the ridge in 'yealms', which can be taken direct from the bunch as delivered, provided it is still green. If the sedge has become dry and hard it should be treated in the same way as long straw, by shaking it into a bed and at the same time applying the required amount of water. Ideally the sedge should be left to soak for twenty-four hours after which it can then be drawn and yealmed for use.

The illustration shows the first yealm being laid on the gable and having sufficient overhang to allow for cutting.

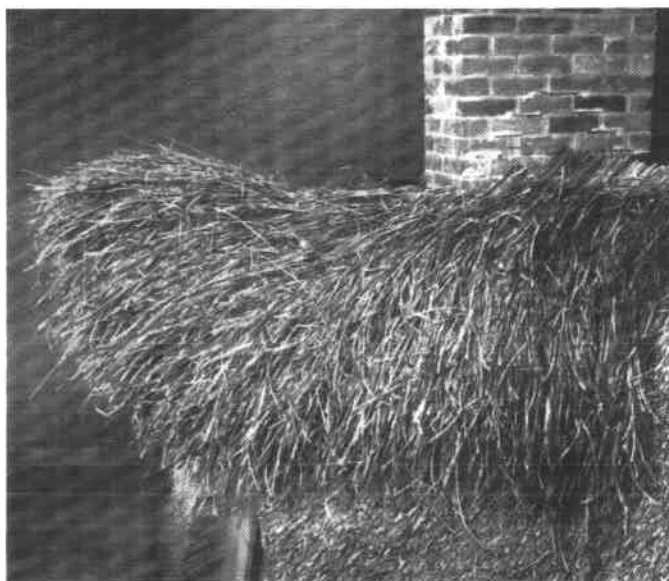




Each yealm is fastened with spars which are driven into the reed.

Further yealms are laid on both sides of the gable. Emphasis is placed on the way the needles are used to keep the sedge tightly together.

The layer of sedge is continued right over the apex, in equal thickness.

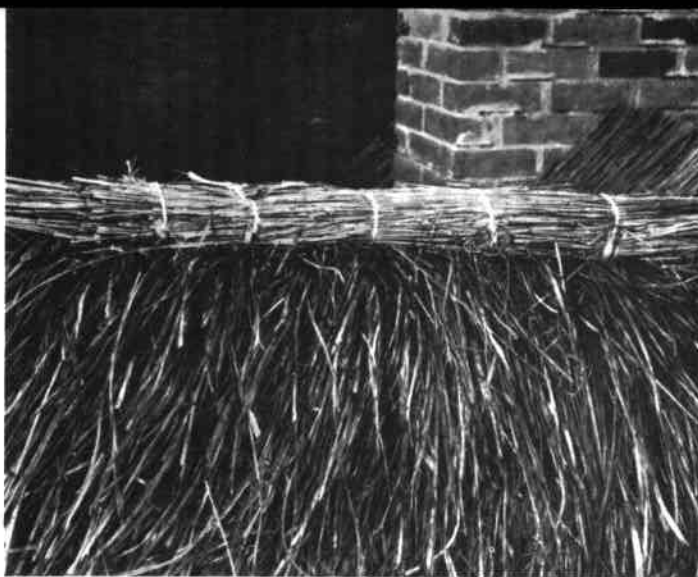


Care is taken when laying the skirts or side courses, to ensure that the sedge is positioned sufficiently low if an ornamental pattern is desired, as it is from this course that it is cut.

A portion of the skirt-course is laid.

This lining course is recommended as an optional extra by which to reinforce the ridge and thereby increase its wearing qualities. It also levels up the hollow on either side after the skirt-course is laid.





This small roll, fixed with spars which are driven firmly into the larger roll beneath, has the effect of reducing the apex to a very narrow line, and simultaneously provides a solid base upon which to lay the final ridge-course.



There are several methods used in laying a ridge but the 'turnover' type described is considered to be the best. The ring-headed needle has been inserted in the centre of the ridge, approximately 2' (600 mm) from the edge of the sedge overhanging the gable. Straddling the ridge the thatcher takes an ample yealm of sedge which he places centrally across the apex.

This yealm will undoubtedly have a thick end and also a thin end. To counteract this, half of the yealm is reversed, thus making both ends equal.



## Water reed



Both ends of the yealm are then drawn out in order to make the course longer.

A good double handful is gripped firmly on both sides and bent across the roll by forcing the hands together. This is repeated throughout the whole yealm and each portion is pushed forward as tightly as possible.

A second needle is inserted centrally in the roll and used as a lever with which to force back the whole yealm into its tightest position.







The lower ends of the course are then worked into line with the sedge overhanging the gable.

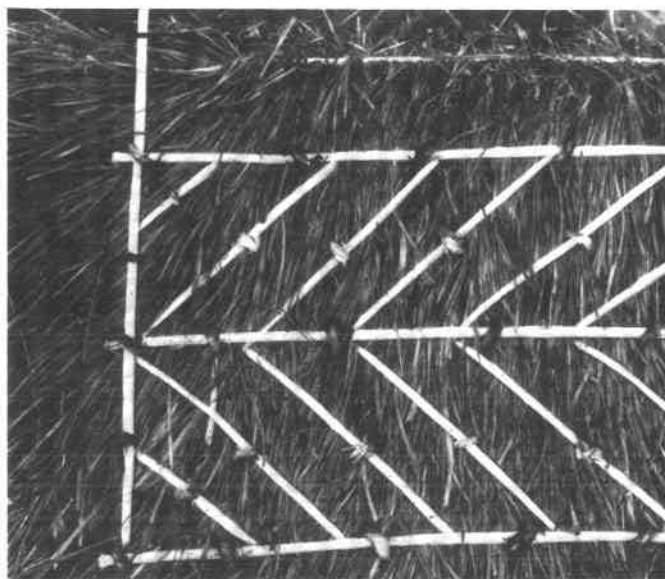
It is now necessary to start the top ligger. This is placed centrally on the ridge and is fastened by driving spars into the roll beneath. Notice how the spars enter at an angle rather than vertically, in order to avoid making a gap.

The operation previously described is repeated with each yealm until the whole ridge is laid, the topmost ligger being fixed as the work proceeds. This tightens and levels the ridge.



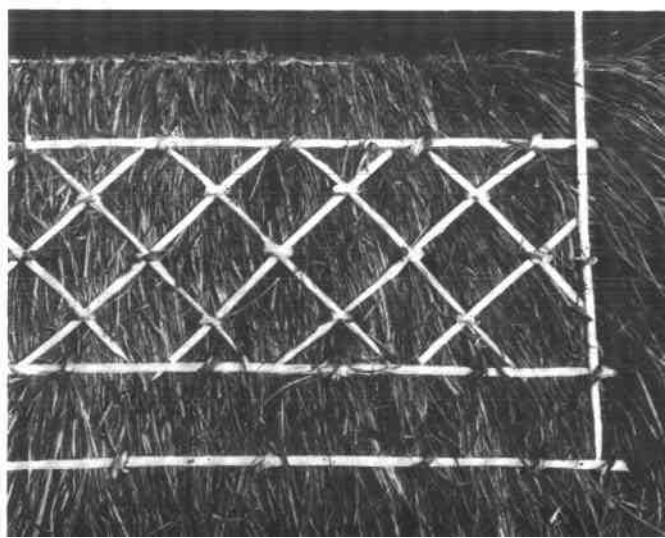
It is usual to complete all the sedge laying in one operation, but for the purpose of this manual the method of finishing off the ridge and gable is described next.

There are various patterns which can be created with the careful use of liggers and cross-rods, but if the herring-bone design is required then three liggers are fixed in position, usually about 12" (300 mm) apart. This may vary according to the type of roof.



A vertical ligger is fixed immediately above the barge-board, which will be approximately 6" (150 mm) from the finished cut-edge. Cross-rods are then inserted under the horizontal liggers at 6" (150 mm) intervals, each rod being fastened down tightly with a spar.

An equally pleasant design is the triple-diamond pattern, which also requires three horizontal liggers, but in this case the spacings are 18" (450 mm) and 6" (150 mm) respectively. Cross-rods are also spaced 6" (150 mm) apart.

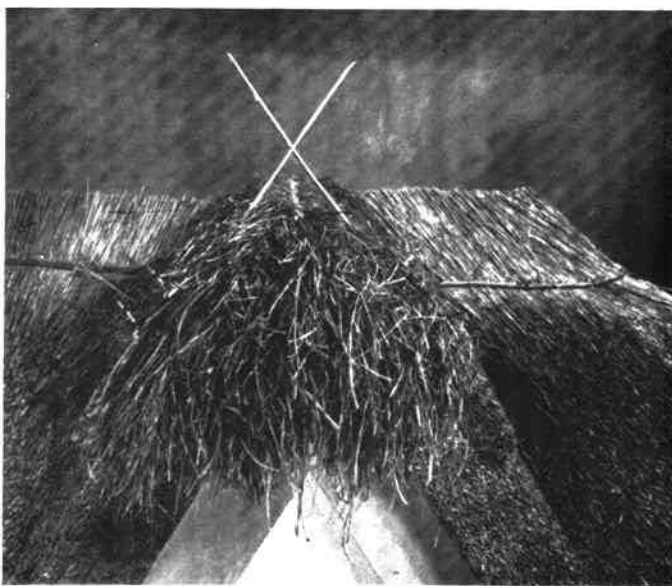


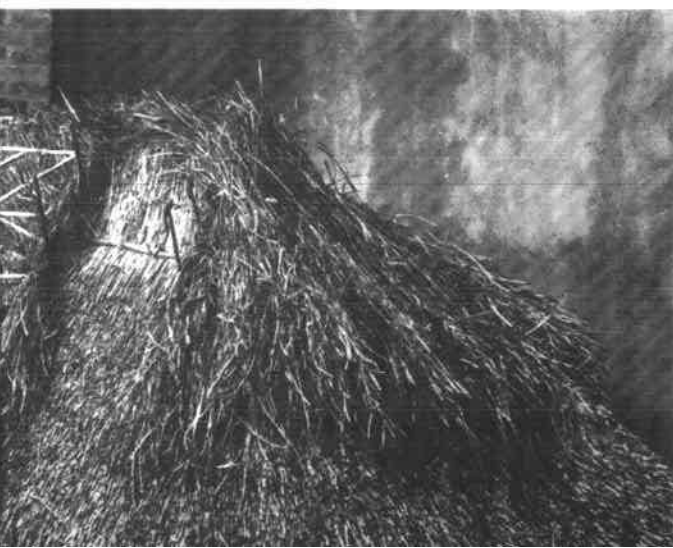
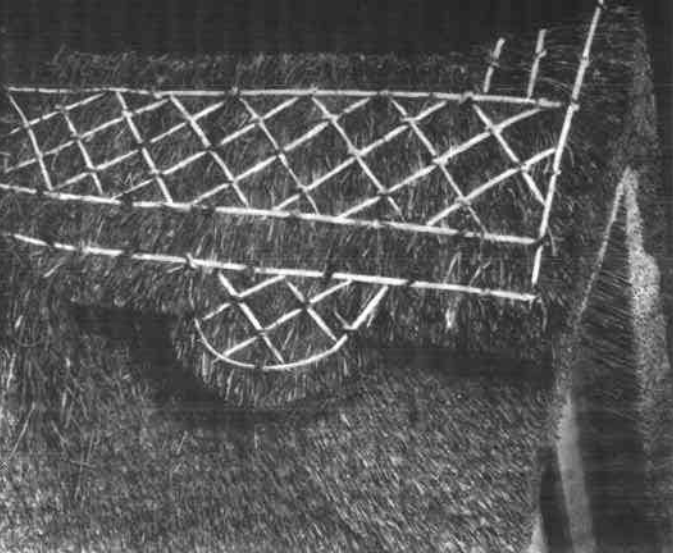


The long knife is used in an upward direction to cut off the lower portion of sedge which overhangs the gable on both sides.

Raising the gable-end or pinnacle is next to be shown. This is the lower triangular portion between the two liggers which must be filled up with sedge.

After the liggers have been sparred down the top ends are cut off to the required length. The sedge at this point is now tight and firm and may be cut off cleanly with the long knife.





The small knife is used to cut the straight portion and the scallop, after which any ragged stalks may be trimmed off with the shears.

A method of turning the ridge at the hipped end is now described. Starting with the skirt or pattern course again, a full yealm is laid, thick end down, each side of the angle, always using the needles to keep the work tight.

The opposite hip angle is treated in the same way and the small remaining portion is filled in.



The skirt-course is laid as far as the valley. An occasional spar holds the course at this stage.

A thin lining course and a small roll bring the ridge to the point where it is ready for the final course.

The centre of the roof is again marked with the ring-headed needle. From the straddle position the thatcher works a yealm of sedge to make both ends equal.

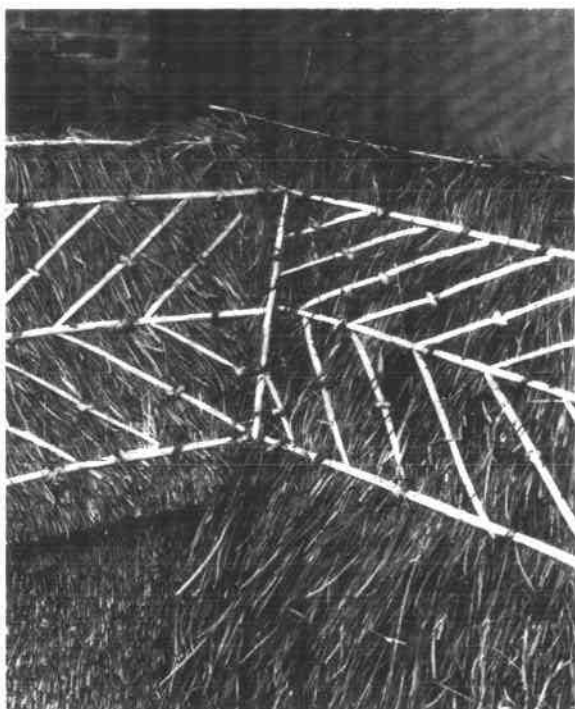


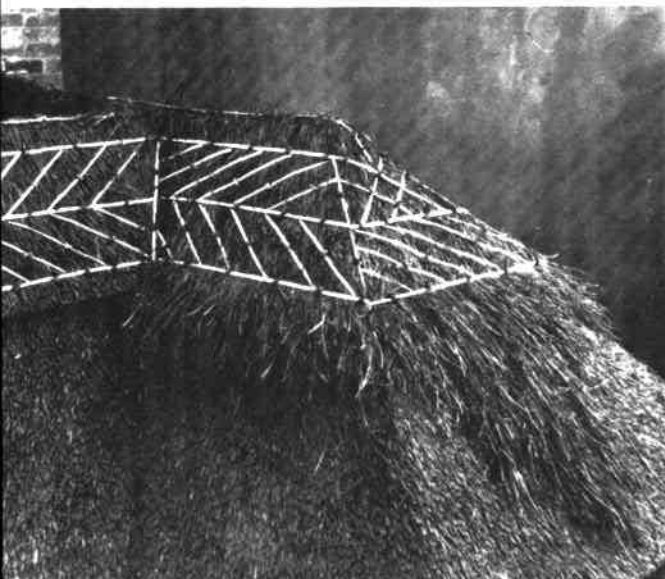
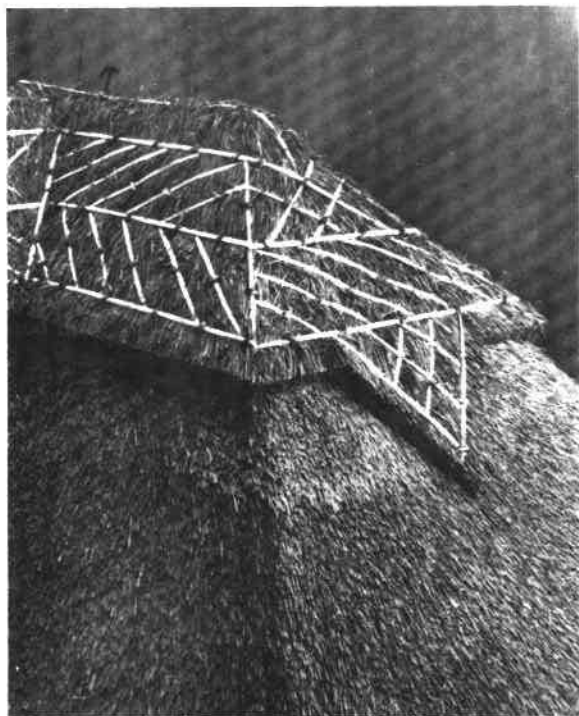


By bending the sedge round the needle, it is brought into line with the hip angle on both sides.

The ridge-course is laid in the manner described previously. By fixing the topmost ligger the apex is levelled out.

The herring-bone pattern is completed to the valley.

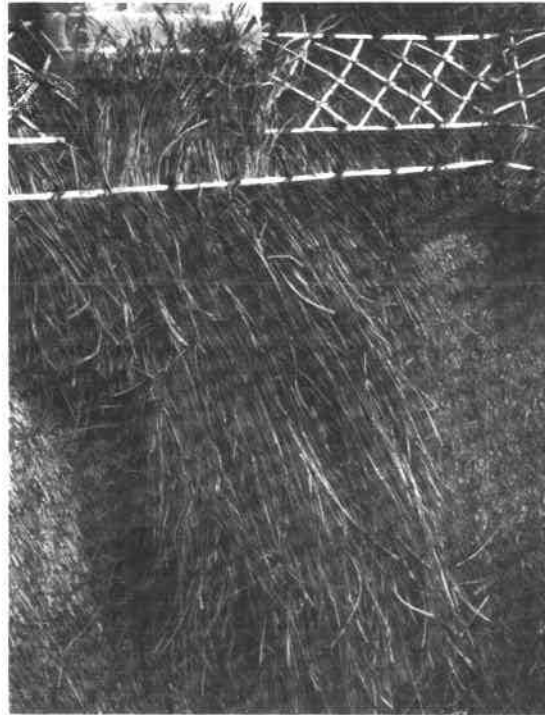
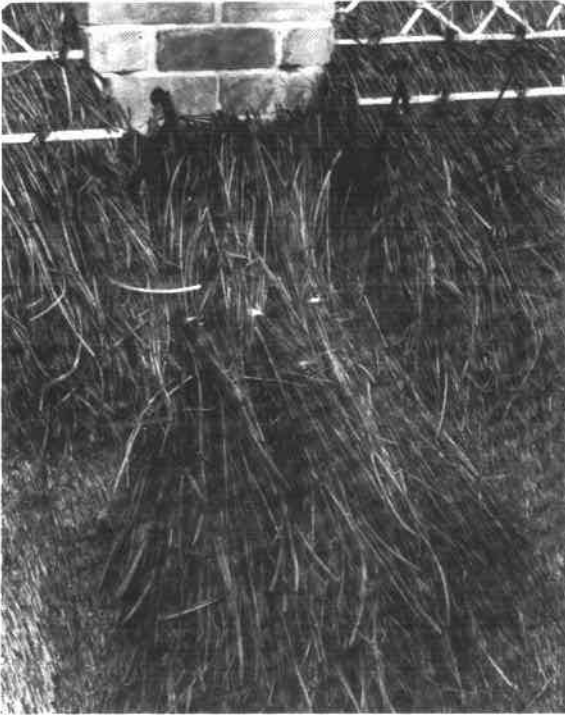




The hip-end is sparred down and ready for cutting. In the event of a single point being required to improve the appearance of a hipped end, an extra layer of sedge can be worked under the skirt-course to suit the shape required.

After the liggers have been sparred down, the point can then be cut as shown on page 166. It is of particular interest to note how the sharp angles formed in the sedge ridge correspond with those in the reed on the main roof.

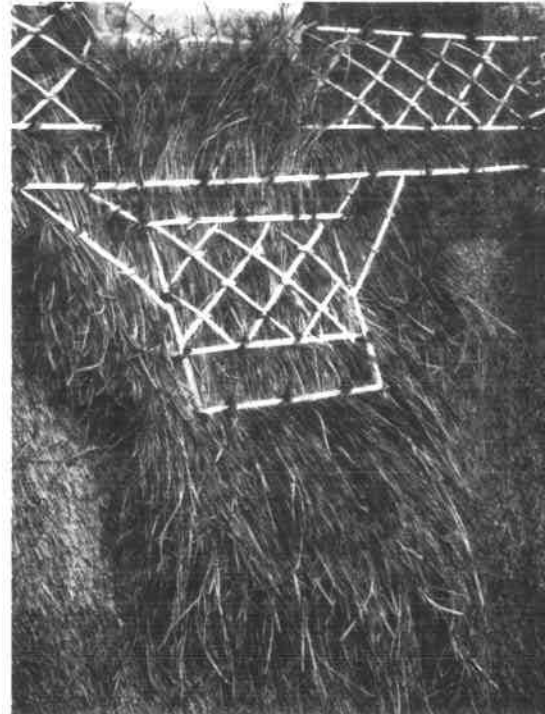
With this ridge liggered and sparred down on both sides of the chimney-stack, the next task is to complete the portion between the two needles indicated, usually referred to as a chimney piece or apron.



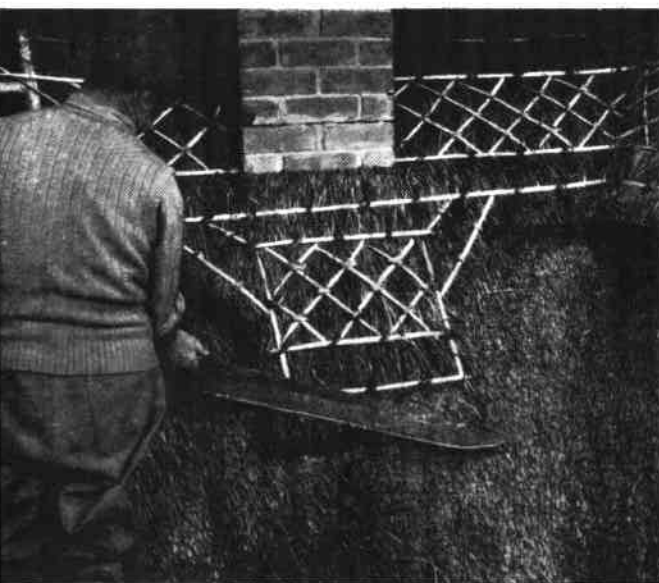
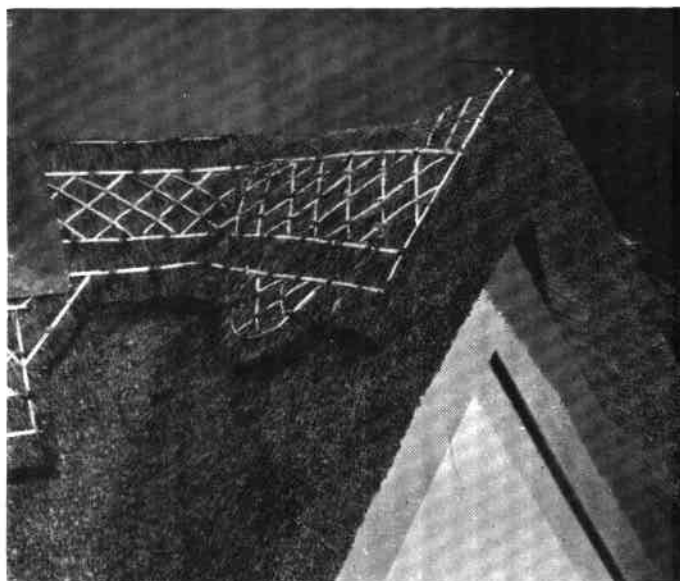
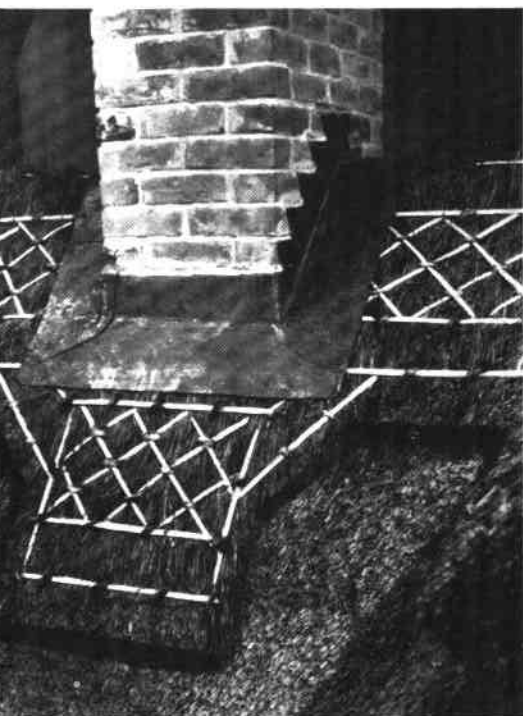
The first layer of sedge is worked into the cavity and held in position by several spars driven into the reed.

A second layer of sedge is applied to such a thickness as will bring it up to the level of the course on either side. Sufficient sedge should be allowed against the chimney. The lowest ligger in the ridge formation is continued right through, the spars being driven into the tight roll beneath.

The triple-diamond pattern shown in the ridge finish is repeated in this chimney apron, which is now ready for cutting out to the required shape.



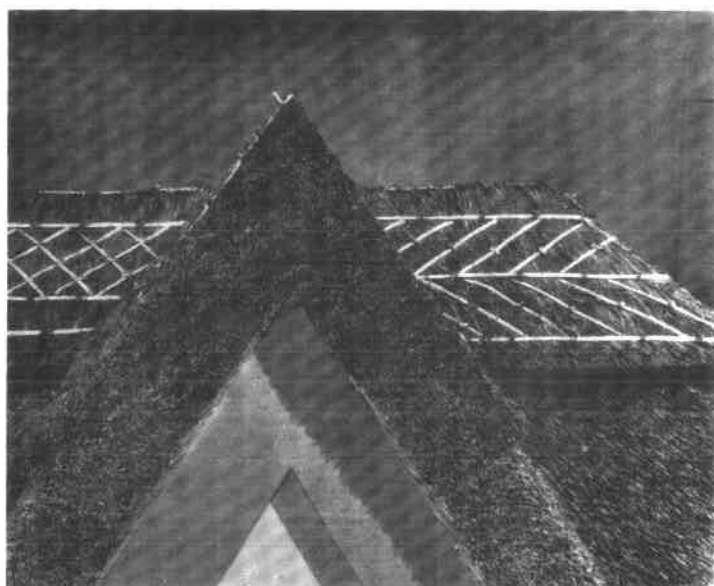
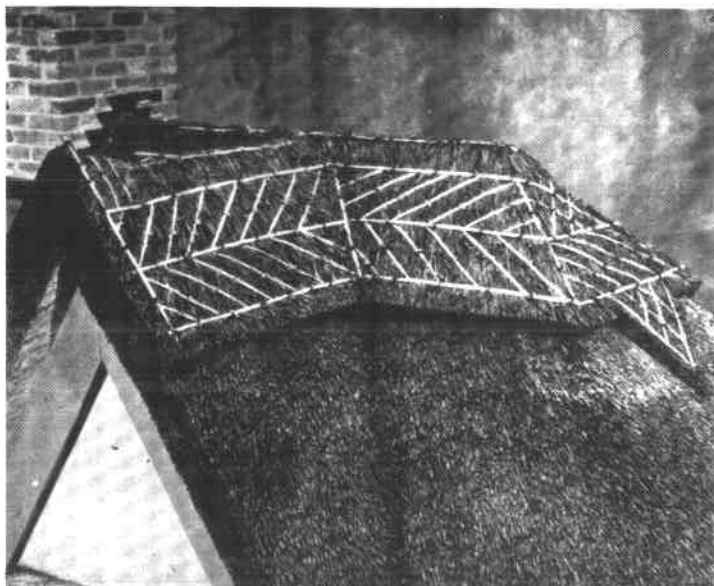




Having used the small knife with which to cut out the pattern, the work is often improved by slicing off with the long knife the ragged surface which may occur below the bottom ligger. This produces a sharp, clean line, adding greater definition to the finished ridge.

Although it is possible to make a water-tight junction between the thatch and the chimney where oversailing courses are provided in the brickwork, lead flashing undoubtedly presents a sound, trouble-free finish and also reduces wear caused by the weather.

Now that all the work on the ridge is finished, the main reed thatch is re-dressed and cleaned down with the leggett.



The finished work, showing the top of the  
hipped end, valley and gable.

The top of the gable when completed.



### REPAIRING WATER REED

When a roof has been newly thatched, an arrangement can be made with the thatcher, whereby he inspects the roof every two or three years. Any slight defects appearing can then be corrected with the minimum trouble and outlay. The time will come, however, when a completely new ridge is required.

After stripping off the remaining portion of the old ridge, the entire roof area is dressed and cleaned down with the leggett, removing any moss which may have grown on that part of the roof which has a northerly aspect. Any holes in the main reed coating can be repaired by drawing down the reeds around the affected parts, and inserting small bunches of new reed which have been shortened to the appropriate length. The old and new reed is then dressed in together, level with the main coating.

It will be necessary to fix a new reed roll to the apex of the roof, after which the ridge can be applied, using sedge or good quality wheat straw. The whole roof area should then be lightly dressed and all eaves and barges levelled.

Extra protection can be given to a new ridge by covering it with  $\frac{3}{4}$ " (19 mm) mesh wire netting.





*A garden entrance and wall thatched with reed grown in Glamorganshire.  
Sutton Manor Estate, Sutton Scotney, Winchester, Hants.*



Hazel growing on the stool.

THE term 'spar-making' is a general term used to describe the preparation of hazel or willow used in the process of thatching a roof, whichever material is used. It includes spars which are the twisted lengths used as pegs, liggers which are runners fixed to the exterior of the thatch, and

sways which are the long rods used for binding each course of thatch.

Whilst a considerable amount of willow is undoubtedly used in some counties, owing to its local preponderance, there is nothing to equal nut hazel in both quality and durability. The output of many acres (hectares) of hazel coppice goes to the making of spars, and in some counties it has developed into a definite industry ancillary to that of the thatcher. The coppice should be well cultivated and maintained and growth of some six or ten years is best suited to this purpose.

Spar-making is an art which needs considerable practice before proficiency is obtained. A number of alternative methods, varying from county to county, are used in their making.



Hazel rods ready for trimming and cutting into lengths.

The long lengths of hazel are cut into pieces 28" (700 mm) or 30" (800 mm) in length and are then referred to as spar-gadds. One is shown being trimmed with the spar-hook, in preparation for splitting.

This method of splitting shows the gadd resting on a small block, whilst the spar-hook is inserted centrally at the thinner end.





Applying pressure on the spar-hook in a leverage motion the gadd is split down the centre with a gentle well regulated cleaving action. The thumb of the left hand will indicate if the split is running true.

A gadd is split into two halves.

The spar-hook is inserted, this time splitting off a triangular section equal to one-third of the half-gadd. This means that a gadd with a 2" (50 mm) diameter butt will make six strong spars.

