

The Thatcher's Craft



The Cott Inne, Dartington, near Totnes, Devon (cut Abbotsbury water reed)

The Thatcher's Craft

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| **Acknowledgments**

In producing this treatise on thatching, the Rural Development Commission is indebted to more people than it is possible to name.

We are particularly grateful to the late Mr. John Betjeman for writing the foreword, to Mr. Bragg and Mr. Alexander of Stanley Bragg and Associates, Chartered Architects, for their work on the chapter on roof construction, and to David Thomas for the chapter on the history of thatch.

The text was written by W. E. C. Morgan and F. W. Cooper and the photography was by V. Schafer. This edition has been revised by W. G. Trust and D. G. Wisbey. G. F. Carter designed the book and supervised the printing.

The Rural Development Commission is frequently asked to quote the length of life of the various thatching materials. We would like to point out that this cannot be given with any accuracy as it is dependent on so many factors, for example quality of crop and materials, weather conditions, situation with regard to prevailing winds and trees, and of considerable importance whether or not a skilled thatcher is employed.

For general purposes however the following is a rough assessment: Water reed, 50 to 60 years; Combed wheat reed, 25 to 40 years; Long straw, 10 to 20 years.

In this revised edition measurement is shown in both imperial and metric. Due to the nature of the materials a commonsense approach has been adopted, and measurements in metric have been appropriately rounded up or down.

Foreword by John Betjeman

ALL of us like the look of a village with thatched roof cottages gathered round the church and those snug collections of thatched farm buildings remaining in lonely combs or far off on the downs. These traditional and attractive ornaments of our landscape, seen in England in most counties south of a line joining the Mersey and Humber rivers, have come to be accepted all over the world as an essential part of English country scenery – what Henry James called 'unmitigated England'. Neither need thatch be connected only with the past; many property owners with a sense of beauty have had their new houses topped with this attractive material, knowing that they have chosen a roof-covering which will keep them cool in summer and warm in winter.

Over five hundred full-time thatchers in England and Wales are kept occupied today in maintaining and renewing these thatched roofs. The industry can thus claim to be of considerable importance in our country's economy.

The conversion of a thatched roof to a tiled roof is a very expensive business. This is because the pitch has to be different and new rafters and purlins of sawn timber must be substituted for the former rough timber supports. If a thatched roof is sheltered from the prevailing winds and not under tall trees whose rain-drippings cause moss to grow,

it can be more durable than is generally supposed. There are known instances of a water reed thatched roof lasting over a hundred years; a combed wheat reed thatched roof lasting fifty years; a long straw thatched roof lasting thirty-five years. Though these figures should not be applied generally, at least they indicate that where thatch exists it is better renewed than changed for some other material.

The Thatcher's Craft, the first complete book ever to be produced on this useful and fascinating craft, fills a long-felt gap in books on country crafts. It deals with the history of thatching, the stage-by-stage construction using long straw, combed wheat or water reed, and has chapters on materials, tools and roof construction. Thus it is an authoritative work which will be of great assistance to young men entering the trade and to architects, builders and householders. It should also appeal to all those who have a love of country pursuits, for it shows that the thatcher's tools are few and simple and that his material is provided by nature, but that these two are blended together with great skill to provide a roof-covering of real lasting beauty.

This remarkable book shows not only to thatchers but also to the outside world the skill and variety of the craft. I hope it will induce farmers and land-owners, in districts where thatchers and material

are available, to think twice before destroying an old roof. It may even encourage architects to consider this beautiful roof material for some of the

smaller buildings they may be erecting in country districts.

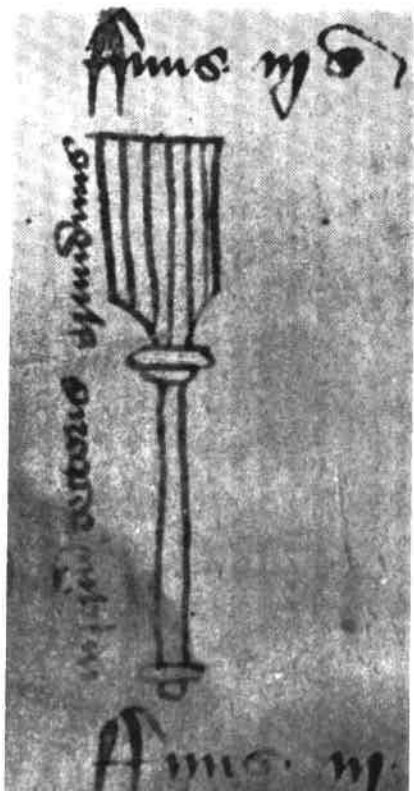
J. BETJEMAN

1 | Thatching - a brief history

THATCHING is the oldest of all the building crafts practised in the British Isles. Until the introduction of burnt clay, stone and slate as building materials, thatch in one form or another had no rival except turf or sods – with which it was sometimes used in conjunction. Wild vegetation such as reeds, rushes, broom, heather and even bracken was undoubtedly in use before the advent of cultivated barley, wheat

and rye straw, and today the marsh reed of coastal areas is still the most durable and highly-prized material. Even heather still survives as a thatching material in parts of the British Isles, though its use is now confined mainly to summer-houses and pavilions. All these materials had the advantage of being available ready for use and close to the site.

The craft of thatching as it is practised today has changed very little since the Middle Ages, and was almost certainly established before the Norman Conquest. A marginal sketch on a Court Roll of 1364 for the manor of Crowle in Lincolnshire illustrates a thatcher's legget or leggett very similar to those used in many counties today, while early accounts for familiar items such as ledgers, spars, broches, ropes and 'pakke threads' have also been published. Though mostly used on farm buildings and cottages, thatch was not unknown as a roofing material for more ambitious structures. Six acres of 'rushes' were bought at Willingdon, Sussex, in 1300 for thatching the hall and chambers of Pevensey Castle, and were carried there by seventeen carts.¹ Churches were – and still are – sometimes thatched, though there cannot be



¹We are indebted to L. F. Salzman's *Building in England down to 1540* (Oxford University Press, 1952) for this and much other valuable information.

many like that of Reydon, near Southwold, which, though thatched on the side away from the road which passed it, was tiled on the side visible to passers-by. This was in 1880, and it is curious that the parish authorities should at so late a date have regarded thatch as something unworthy, for thatch had been gaining fashionable attention for at least a century. In England the thatched cottage possessed many of the qualities of the 'picturesque' admired by connoisseurs in the latter part of the eighteenth century, and began to make its appearance in the work of popular artists like Morland, Wheatley and later Wilkie, Mulready and a host of lesser topographers and narrative painters. In France the hamlet in the gardens of the Petit Trianon placed the art of the thatcher on a new plane of fashion, and identified the thatched cottage with the new Romantic cult of nature. By the turn of the century the thatched *cottage ornée* was becoming an important feature of the English country estate. In 1811, the first year of the Regency, the famous thatched hamlet on the Blaise Castle estate near Bristol was built by Nash for Harford the banker.

The adoption of thatch by the wealthy as a picturesque adornment marks a new phase in its history. It began to happen at a time when thatch ceased to be the cheapest (and very often the only) available form of roofing for the greater part of the population. The commercial production of Welsh slate on a huge scale had begun by 1820, and the railways soon made this and other materials freely available for roofing in places where thatching was established. Moreover the French wars had raised the price of wheat and wheat straw to prohibitive levels, while machine reaping, with its damaging effect on the material, was to come later in the nineteenth century.

Thatchers, accustomed to working independently or as members of small family concerns, were ill adapted to meet large-scale commercial competition. Their craft is a solitary one, and until comparatively recently has survived without any sort of trade organisation. They have been able to benefit very little by technical advances which have

helped other trades, and have sometimes resisted those likely to benefit them. There have, however, been some innovations which, by improving the quality of thatching material, have helped the craft to survive in the face of every kind of competition. The first of these was the introduction of devices for combing wheat straw so as to produce the clean, straight stems known as wheat reed.¹ The use of an iron-toothed comb for this purpose is recorded as early as 1807 in Somerset, and since that time combed wheat or wheat reed has been widely used in Devon and other southern counties.

More recently the widespread adoption of the combine harvester has made it necessary to look round more urgently for other materials. The finest of these, the aquatic reed *phragmites communis*, which has been in use since prehistoric times, is traditionally associated with the county of Norfolk. This reed, which grows wild in sea-marshes and by rivers, has in the past been cut by hand. This work has to be done after frost has killed the 'flag' or leafage on the stems, and so has to be carried out in the sodden, frozen conditions of late January and February. In view of this it is not surprising that fewer and fewer men can be found to do it, and it was for this reason that, on the suggestion of men on the spot in Norfolk, a means of mechanical cutting was devised by the Rural Industries Bureau.² This method has now been extended to reed beds in many parts of southern and western England, and not only has much toil been eliminated, but regular harvesting has enabled the reed to grow straighter and cleaner. The adoption of this method should help to counteract the loss of the familiar wheat straw which has long been characteristics of thatching in Hampshire, Dorset and Devon. Reed, however, being a wild plant, was in use before these 'traditional' methods were cultivated, and it is strange that technical advances in farming should result in a return to the earliest thatching material of all.

¹Wheat was called 'rede' as early as 1534. Fitzherbert's *Book of Husbandry*.

²Rural Industries Bureau was incorporated into CoSIRA in 1968, later to become Rural Development Commission in 1988.

LOCAL building materials always form a harmonious feature in the landscape surrounding their place of origin. This is exemplified in the many attractive villages in the Cotswolds and in the Purbeck Hills, the pebble-constructed houses of the Norfolk coastal villages, and the mellow, multi-coloured slated roofs of Cumberland. However, the best example of all is seen in the large number of straw-thatched dwellings and other buildings to be found in the villages throughout our major corn-growing counties.

In former times, every farm had in the rickyard, large quantities of threshed straw. Much of this was required for a variety of agricultural purposes, but even so there was always a surplus of suitable straw available for thatching. Modern developments of farming, and the introduction of the combine harvester, have however seriously depleted the thatcher's source of supply.

The older varieties of wheat all produced good long straw, which not only provided ample bedding material for cattle, but also material for the form of thatch known as long straw thatch. These older varieties suffered however from various defects. The plants themselves were vulnerable to wind and rain, were easily beaten down, and were subsequently difficult to harvest. Scientific plant selection and breeding has now produced varieties

which, whilst having a heavier yield of grain, are borne on stalks which are less pliable. Fortunately there are still varieties which are available to the farmer, and which serve the dual purpose of providing both a good yield of grain, and straw suitable for thatching.

The strength and texture of the straw will, for thatching purposes, be greatly improved if the crop is cut whilst the stalk is still partially green. Threshing too, must be carried out skilfully, as the straw can be damaged if it is not fed carefully into the threshing drum.

It is a very common practice to stack the straw loosely after threshing, a practice which not only makes subsequent handling more difficult and laborious, but causes damage through buckling. Strong winds will also scatter loosely-packed straw, causing considerable waste. To avoid this it is advisable to use a single or double string tyer behind the threshing machine. The straw will then be confined in a very much smaller compass, and, more important to the thatcher, can be tightly bundled with the butt-ends more or less together. The slight increase in cost occasioned by this method, is more than offset at a later stage, when the straw has to be moved. In addition, a better price can be obtained for the bundled straw.

It is also more satisfactory to the thatcher to buy



Manor House, Easton, Cambridgeshire

properly regulated bundles which can be quickly and easily checked, rather than a load of loose straw of estimated weight.

Long straw thatch, with its own characteristics, can be distinguished readily from the other thatching techniques. It is applied to the roof in yealms, and is not dressed into position with a leggett. From even a short distance, a roof thatched long straw wise may be recognised easily by the way in which the eaves and barges are invariably decorated with a pattern of ligger and cross-rods. This distinctive feature is not shared by either of the reed-laying techniques.

A closer approach heightens another impression; the feeling that the roof-covering as a whole has been poured over the underlying structure.





A house at High Street, Brampton, Cambridgeshire

The Bedford Lodge, Old Warden Park, Biggleswade, Bedfordshire







Above: *The Cottage, Brook Street, Elsworth, Cambridgeshire*

Left, top: *'Popples', Brettenham, Suffolk*

Left, below: *Cottages at Bluntisham, Cambridgeshire*



One or two buckets of water are thrown across each layer of straw. The bucket should describe an arc, and the water will then be evenly distributed over the whole layer.

This process should be repeated, layer upon layer, always building on to the *back of the heap*. An occasional light beating with the fork tightens the heap and makes it more shapely.

When a sufficient quantity has been treated, it is known as the 'bed', and should then be allowed to steep for a few hours before use. By this time the straw has become well soaked.



Standing to the *front of the bed*, the operator uses the fork with which he rakes out the crossed straws and tidies up the area before beginning the yealming process. A 'yealm' is best described as a tight, compact layer of straw, approximately 18" (450 mm) wide and 5" (100 mm) thick, having both ends level.

Working from the extreme right-hand side of the bed, good double handfuls of straw are drawn out, one after another, and laid side by side on the ground.

Preparing the straw on the ground in readiness for laying on the roof is an important aspect of the work, and if carried out carefully and systematically will greatly assist the overall job.

The straw must first of all be wetted in order to make it flexible and less stubborn, and to enable it to be compressed when applied to the roof. This is done with a two-tined hay fork. A quantity of straw is taken from the load as delivered and thrown forward into a layer, using a shaking action to separate the bunches.





Walking slowly backwards, the thatcher continues this process throughout the complete width of the bed. The part of the straw which is grasped in the hands is known as the large end. The small end is that end nearest the bed. Care must be taken in laying the large ends in as straight a line as possible.



Bunches of the straw are then worked tightly together towards the feet to the required width of one yealm. By running the fingers through the straw the short waste will be removed.

Before the yealm is completed the superfluous straws are pulled out from both ends and returned to the side of the yealm.





The yealm is made with the bunches of straight straw side by side, so that by gripping it on both sides, it can be picked up in a tight layer. It is then placed in the yoke with the large end forward each time, until the yoke is full and contains six or eight yealms.

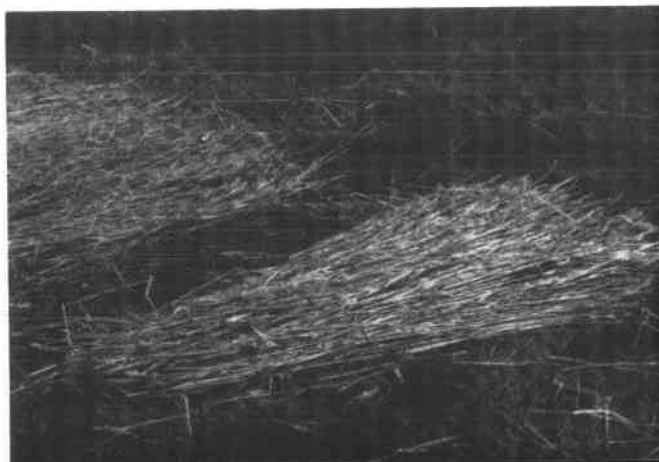
The full yoke is then secured across the top with a cord or leather thong, underneath which a quantity of hazel spars may be carried. The loaded yoke is hoisted on to the shoulder and is now ready for transporting to the roof, leaving the one hand free to assist in scaling the ladder.



The process of yealming has been described in detail and should be regarded as being of the utmost importance. Greater efficiency in all the work on the ground will result in a much-improved standard in the finished job.

There is, however, another phase of the work which is invariably carried out on the ground against the bed. This is referred to as making the bottles which are required in setting the eaves and gables.

A yealm, rather wider than usual is made with an exaggerated large end. It is then folded in halves making it double in thickness.





Whilst the bottle may be tied with strong twine, it can if preferred be secured with a twisted bond of straw.

A small handful of long straw is placed in the armpit where it is held firmly under pressure from the arm. Both hands may now be used in a twisting movement whereby a strong rope-like bond is made.

The straw bond is then firmly secured round the *small end* of the bottle.

Except for a little tidying up, the bottle is now ready for use.

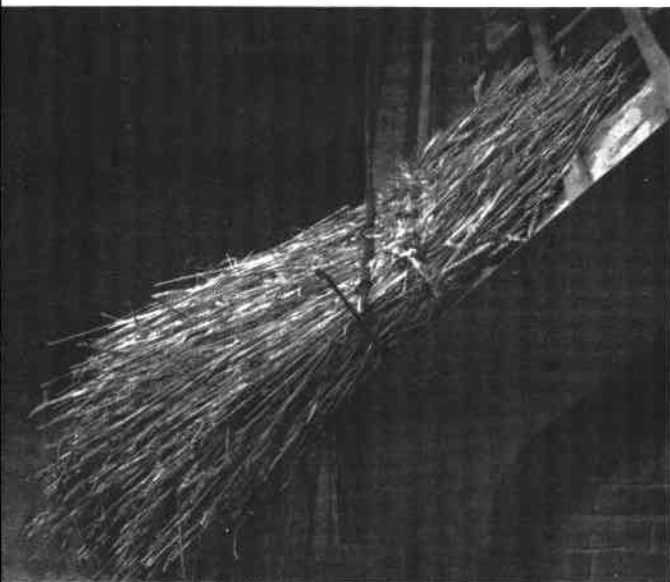
Long straw

Work on the roof is commenced by placing the first eaves-bottle at 45 deg. on the angle caused by the eave and the gable. It is held in position by lightly fixing, as a temporary measure, an iron hook on both sides. The bottle overhangs the eave-board by about half its length in order to provide ample scope for cutting a solid under-eave.

A second eaves-bottle is laid in position, and by running the hand between the two bottles, any crossed straws will be straightened out.

These eaves-bottles may, of course, be tied in with tarred cord, but the alternative method incorporating the hazel sway and iron hook is shown. The sway is laid across the bottles in the appropriate position, which will enable an iron hook to be driven into the rafter as low as possible.





Every effort should be made to provide a tight, solid eave, not merely for the sake of appearance, but also to facilitate the cutting operation at a later stage. Driving a long spar horizontally through one eave-bottle into the next, at a point just outside the edge of the eaves-board, will have the effect of drawing each bottle tightly together.

After several eaves-bottles have been laid, the position of the hazel sway in relation to the eaves-board, is clearly seen.

Once the corner is set it now becomes a simple matter to lift up the hazel sway to add more bottles, hooking the sway down and driving in the horizontal spar as the work proceeds.