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NATIONAL COLLEGE OF ART AND DESIGN

FACULTY OF DESIGN

DEPARTMENT OF FASHION AND TEXTILES

IRISH ROOF THATCHING

Particularly Counties Galway and Wexford

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**Submitted to the Faculty of Art and Design and Contemporary Studies in
candidacy for the Bachelor of Design : Fashion.**

1997



ACKNOWLEDGEMENTS

I would like to thank :

- Dr. Austin O'Sullivan of the Irish Agricultural Museum.
- The Staff at the Irish Folklore Commission, especially Bairbre Ní Fhloinn.

THATCHER

Bespoke for weeks, he turned up some morning
Unexpectedly, his bicycle slung
With a light ladder and a bag of knives
He eyed the old rigging, poked at the eaves,

Opened and handled sheaves of lashed wheat-straw
Next, the bundled rods; hazel and willow
Were flicked for weight, twisted in case they'd snap.
It seemed he spent the morning warming up:

Then fixed the ladder, laid out well honed blades
And snipped at straw and sharpened ends of rods
That, bent in two, made a white-pronged staple
For pinning down his world, handful by handful.

Couchant for days on sods above the rafters
He shaved and flushed the butts, stitched all together
Into a sloped honeycomb, a stubble patch,
And left them gaping at his Midas touch.

By Seamus Heaney

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INTRODUCTION

The Sheep's Head Peninsula of Bantry Bay in West Cork is a wild and beautiful place. One of the only parishes in Ireland without a public house, it is sparsely populated. The walk from the road to Dan Hummil's house is about 1 and a half miles of erratically laid stones. When you reach the end of the sometimes indistinguishable path, you are faced with the amazingly uninterrupted view of Bantry Bay. It is only on closer examination that you realise that four or five feet in front of you the grass suddenly slopes upwards at a somewhat unnatural angle. It is the roof of Hummil's house. Walk to the top of the slope, peer down and you can see in his big window that nestles on the top of the cliff. Each time I visit him, I am amazed by the unobtrusive and wholly organic nature of the roof. It blends into the landscape perfectly. This roof is made of turf, a method traditionally used in Ireland in previous centuries. However, due to the fast decay and disappearance back into the landscape of such roofs, once neglected virtually nothing remains and very little research can be done without photographic images or material evidence. Having for a long time been fascinated by roofs, I want to look at some aspect of them that has been better documented and preserved, which is thus more easily researchable in Irish history. The techniques and materials used in the thatched roofs that are still to be found dotted about our countryside today, in whatever state of repair, are a more obvious choice. A certain amount of written work has been done on this topic, e.g. The Thatched House (1976), by Estyn Evans and Vernacular Rural Dwellings (1994) by Patricia Lysaght and, most importantly, there are wonderful examples still in existence. Before I began research, the word 'thatch' had connotations of twee little touristic pubs and guest houses. So I looked 'thatch' up in the dictionary and was delighted to find out that it referred to any organic material used in the roofing of buildings. I was even further pleased to find out in Caoimhín Ó Danachair's The Questionnaire System (Ó Danachair, 1945, p.209) that the vast majority of Irish thatched houses had a layer of some other organic material, such as sod or heather under the outer covering of straw, flax or whatever else was used in the district. As I am a Fashion and Textiles student, the variety of materials used, together with the

wide variety of methods applied to secure these materials, fascinated me. The structures and surface textures created could so easily be transferred into wonderful weaves, knits, prints, etc.

I began to realise that there were very few books that documented thatch in Southern Ireland. Alan Gailey, Estyn Evans and their Northern contemporaries had, starting in the fifties, built up a large body of work that examined vernacular building, in general in the North of Ireland e.g. Evans' The Ulster Farmhouse (1955) and Gailey's The Thatched Houses of Ulster (1961) ; however it was very difficult to find any corresponding work that focused on the subject in the South. On the advice of the librarian in the National Library, I began sifting through the volumes of indexes to articles in Irish periodicals. Unfortunately, the majority of these are categorised in order of authors rather than subject matter. Ulster Folklife, established in 1955, a Northern Irish journal, still in print today, began to emerge as the main source of interesting articles on the subject. However two Southern publications began to crop up again and again : Bealoideas an Irish Folklore Commission publication started in the 1950's and The Irish Builder and Engineer, formerly called The Irish Builder and Technical Journal, and established in 1859. I gathered a large body of very informative work but it was all secondary. I wanted some primary sources.

I went to the National Archives where I was directed to the 1901 Census of Ireland. This Census was sent to the Garda of each district to fill out for each household in his community. A section of this document has to do with 'particulars of inhabited houses'. Under the heading of Roofs, each house's roof had to be slotted into one of the following categories;

- a) Was it slate, iron or tile or
- b) Was it of thatch, wood or other perishable material.

Interesting as this Census is in that it was filled out in respect of every household in Ireland, it gives no detailed information. The Archives knew of the existence of a survey of thatched roofs carried out by the Office of Public Works in 1987. However, there was no copy in the archives and the Office of Public Works was not sure where I could locate one due to recent Governmental departmental reorganisation.

Eventually, I located a copy in the Irish Folklore Commission, since 1971 a teaching department in University College, Dublin but it proved to be very disappointing. It did show wonderful photographs of every thatched house in existence in 1987, ruined or inhabited, in a particular county, they only managed to survey six of Ireland's twenty six counties. However, it gave little additional information, merely boxes ticked with those materials used in the walls, under the thatch and in the thatch, describing how the thatch was secured and stating whether the dwelling was inhabited or not. Then I was directed to a questionnaire on thatched houses sent out by the Irish Folklore Commission in 1945 : a whole shelf of large leather bound volumes. This questionnaire was sent to a number of people in each county, a large portion of whom were national school teachers. The questionnaire required the person completing it to provide information relating to the materials used to thatch in his or her local area : whether there was a layer of material between the wooden roof structure and the outer thatch, and if so, what was it; whether the roof was hip or gable; who did the thatching; how often and what means did they use to secure it to the frame of the roof. Then, most interestingly to me, there was a space left, in which the person was asked to describe in his / her own words how a local thatch was made. This section contains some wonderful descriptions and sketches. These questionnaires are stored exactly as they were returned to the Irish Folklore Commission, some in Irish, some in English, and some in a mixture of the two languages. They have not been altered, analysed or condensed in any way. These manuscripts gave me the personal and tangible information I was looking for. ✓

I visited the Irish Agricultural Museum in Johnstown Castle, Co. Wexford, where I met with the curator, Dr. Austin O'Sullivan. He helped my research by providing me with all the books, newspaper cuttings and other published material from his extensive agriculture related library. He also has a collection of thousands of slides he has taken over the years of agriculturally interesting subject matter all over Ireland, arranged county by county. Most interestingly for me, he spoke of what he knew of local Wexford traditions and techniques to do with thatching.

In order to focus my research within the limits of this thesis, I decided to look at two specific counties in Ireland; Galway and Wexford, two sea-boarded counties, but very different from each other. Galway on the West, ravished by the ever-present gales of the Atlantic, has a history of poverty, repression and hardship, so its houses called for materials and methods of construction that were locally available and of little use or value other than to protect their inhabitants from the elements. The resultant buildings were small, low and rounded, to offer as little possible resistance to the raging wind. Wexford, on the East coast faces the calmer Irish Sea. The idea of elemental protection, although ever-present on the island that is Ireland, was not so completely fundamental. Wexford has a more stable economic and social history, thus its houses evolved in a less desperately inventive way.

By selecting these two counties for study, the principal elements in Irish vernacular roofing can be studied. The combined roofs of both counties offer examples of almost every structure, material, method and finish to be found in Ireland; thus, two contrasting geographical roofing traditions together create a relatively complete picture of vernacular thatched roofing in Ireland as a whole.

CHAPTER ONE

BASIC ROOF STRUCTURE

All over Ireland, there is very little apparent difference in form between houses of the vernacular style. The plan is traditionally rectangular, one room deep, varying only in the number of rooms in its length. Each room opens one into the next, there is no common hall or corridor. Each room occupies the full width of the house. The length however, depends on the number of rooms, and varies considerably. One storey is the norm. This idea of one basic floor plan is in contrast to many other countries in which fundamental differences in the plans of vernacular houses may be found from region to region. (O'Danachiar, 1956, p.22)

This long rectangular shape had many superstitions attached to it in Irish oral culture : there is an old belief that a house, to be 'lucky', must not be more than one room deep. An old Donegal saying states that if you 'widen the house, the family will get smaller'. However there is a more plausible reason for the narrow plan and that is, that long lengths of timber to form wide roof-beams were not available, as the country had been almost denuded of forests by the end of the seventeenth century. Up until the destruction of her native forests by the seventeenth century, Ireland had had an abundance of timber for such purposes and some very early seventeenth century houses had larger roof spans. Ireland had been exploited as a resource for England's timber consumption. There were a number of specific events that together, depleted Ireland's once plentiful natural supply. The Great Fire of London in 1666, led to the use of considerable amounts of Irish Oak for rebuilding. A huge rise in population, growing intensity of farming (greater immediate profit could be gained from letting land for farming than from planting young trees) and the grazing of cattle, detrimental to tree growth, were other contributors. According to Claudia Kinmonth, these often inaccessible native forests provided cover for the dispossessed Irish landowners at the time of the Flight of the Earls. The British seemingly used this as a major reason for Irish forest clearance, saying it made the newly appointed landlords nervous about the security of their newly acquired estates (Kinmonth, 1993, p.10) Alternative sources of timber had to be found by the Irish. As the eighteenth century progressed, fossil timber became increasingly important. Hardwoods preserved in peat bogs were dug up and used in roof construction. By their nature, these pieces of timber were of

limited length and kept the houses to a modest depth. Towards the end of the eighteenth century, a marked change in movement of timber can be noted : Ireland's imports of timber from abroad began to outweigh her exports. Wood was being imported into Ireland from the Baltic, although it is only in more recent times that imported sawn timber has become cheap enough to be used in houses of every social stratum.

The simple, narrow rectangular floor plan used called for a simple sloped roof, i.e. a central ridge, and from this, an axis sloping down to the front and back of the house. Roofs of vernacular houses in Ireland have normally been carried out on one of two apparently different systems of arranging the various timbers, in order to provide support for the roof cover. The first is the truss system, which consists of side members or blades tied by a collar or collars. A yoke is often found at the apex and sometimes, a tie-beam at wall head height. Trusses span a dwelling from front to rear at bay intervals. On their backs, they carry horizontal purlins, either jointed timbers that span the length of the roof, or shorter lengths that span little more than a bay and are overlapped on the back of each truss. When describing trusses, it is best to distinguish between 'cruck' trusses and 'collar' or 'tie-beam' trusses, the latter being a derivative of the former. Cruck trusses spring from ground level or from some position between the ground and the heads of the side walls of the structure. Cruck blades may be continuous or may consist of a wall post portion pegged at its top end to the lower end of a roof blade. There is no real difference between continuous and composite cruck blades in so far as they both support the entire weight of the roof independently of the side walls of the structure (Fig.1). Collar or tie-beam trusses use shorter blades rising from the wall heads only (Fig.2).

The other system is based on an evolution of the truss system, and as such has no particular name. It consists of a horizontal ridge and purlins only - their ends being embedded in the gables and internal support walls, if there are any. Overlying rafters are often so insubstantial as to be little more than heavy laths (Fig.3)

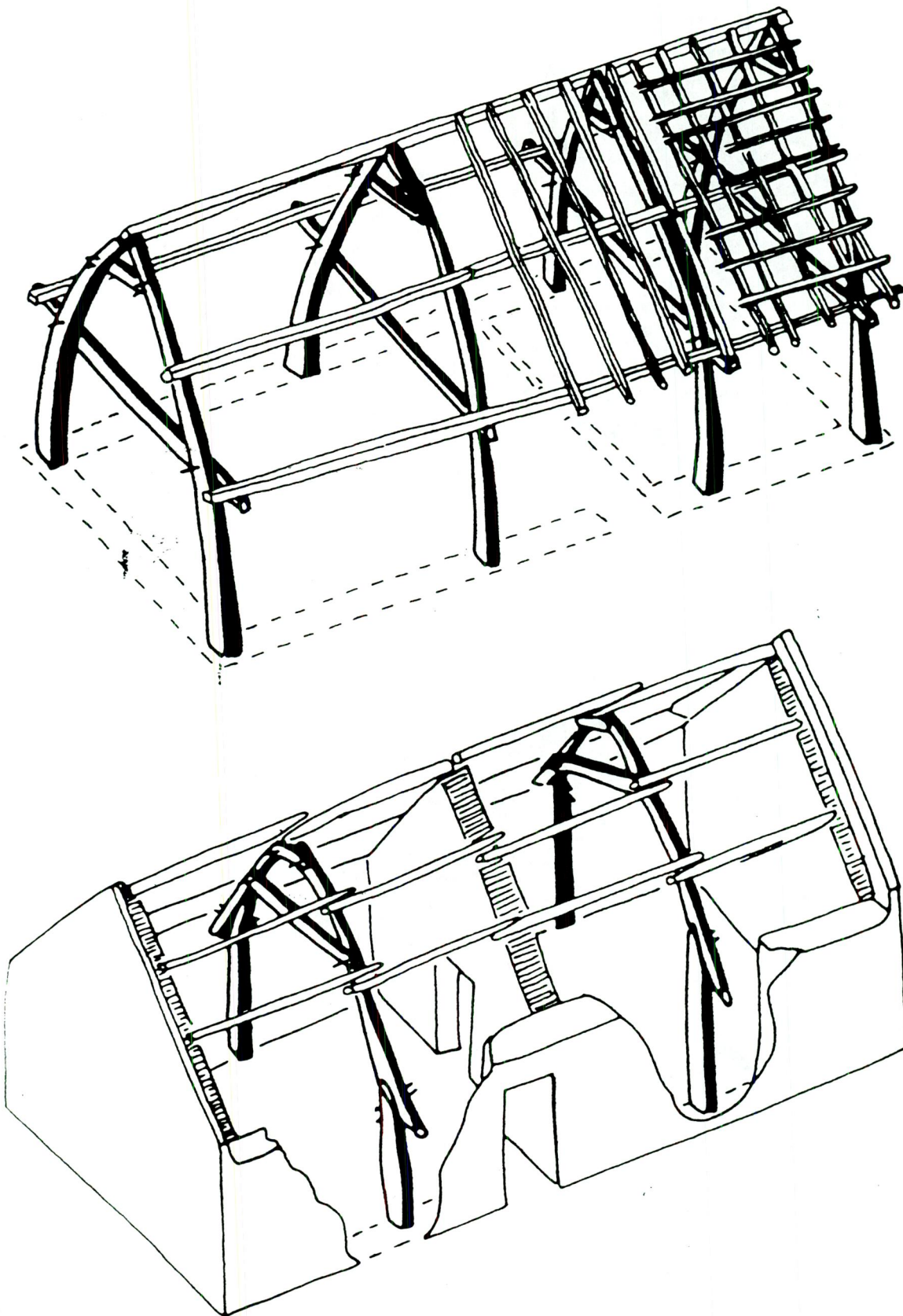


Fig.1: A) Continuous and B) Composite Blade Cruck Trusses

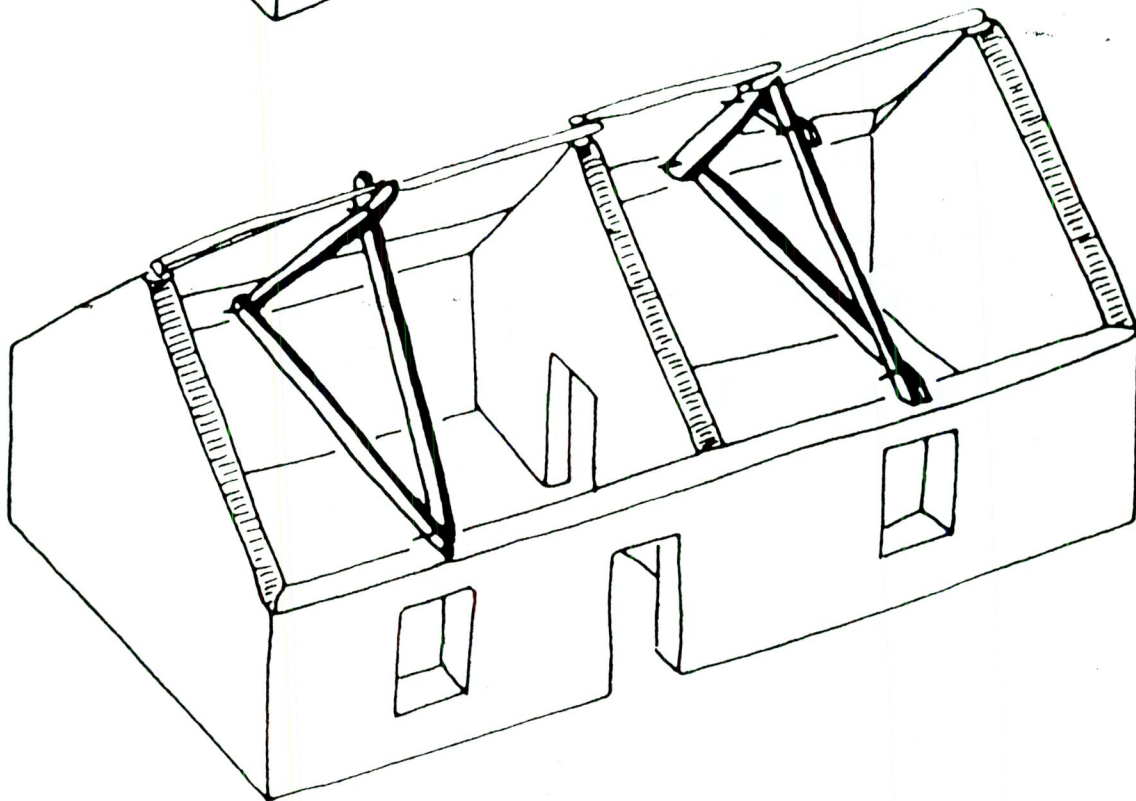
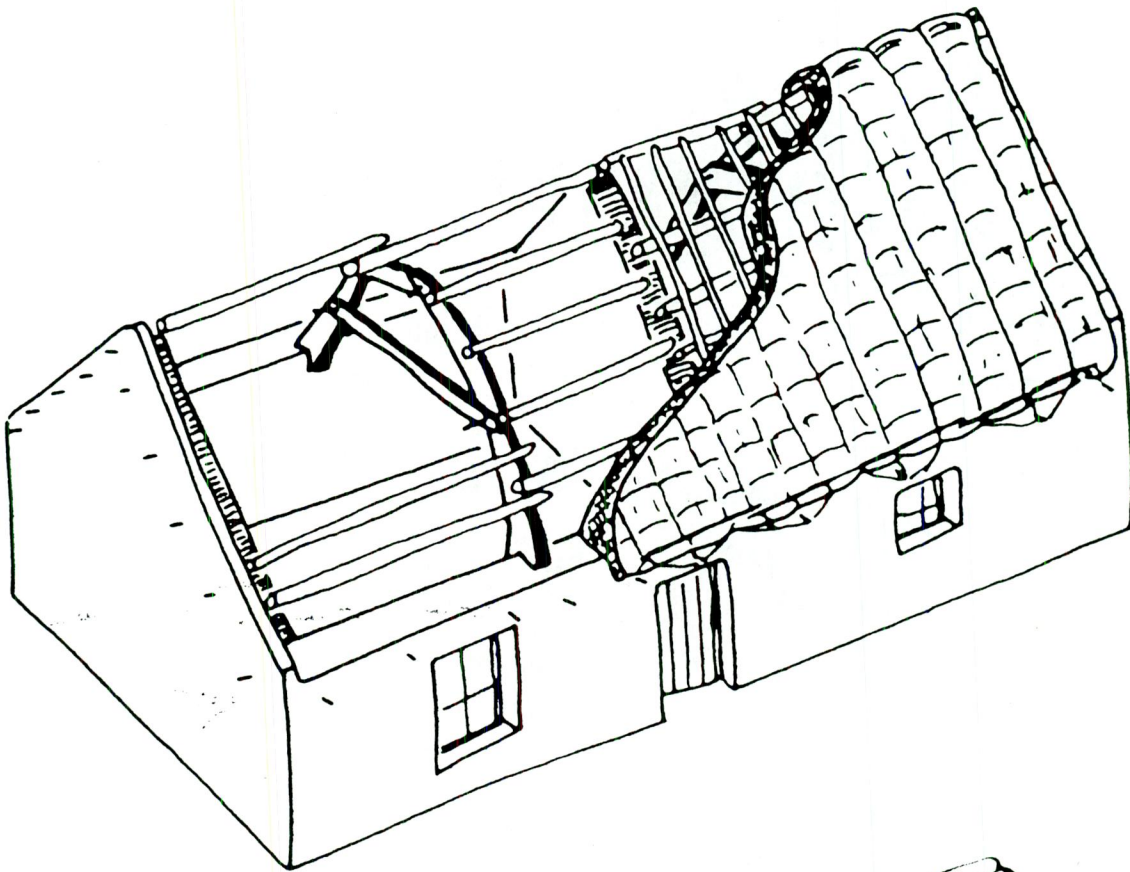


Fig.2: A) Collar and B) Tie-Beam Trusses

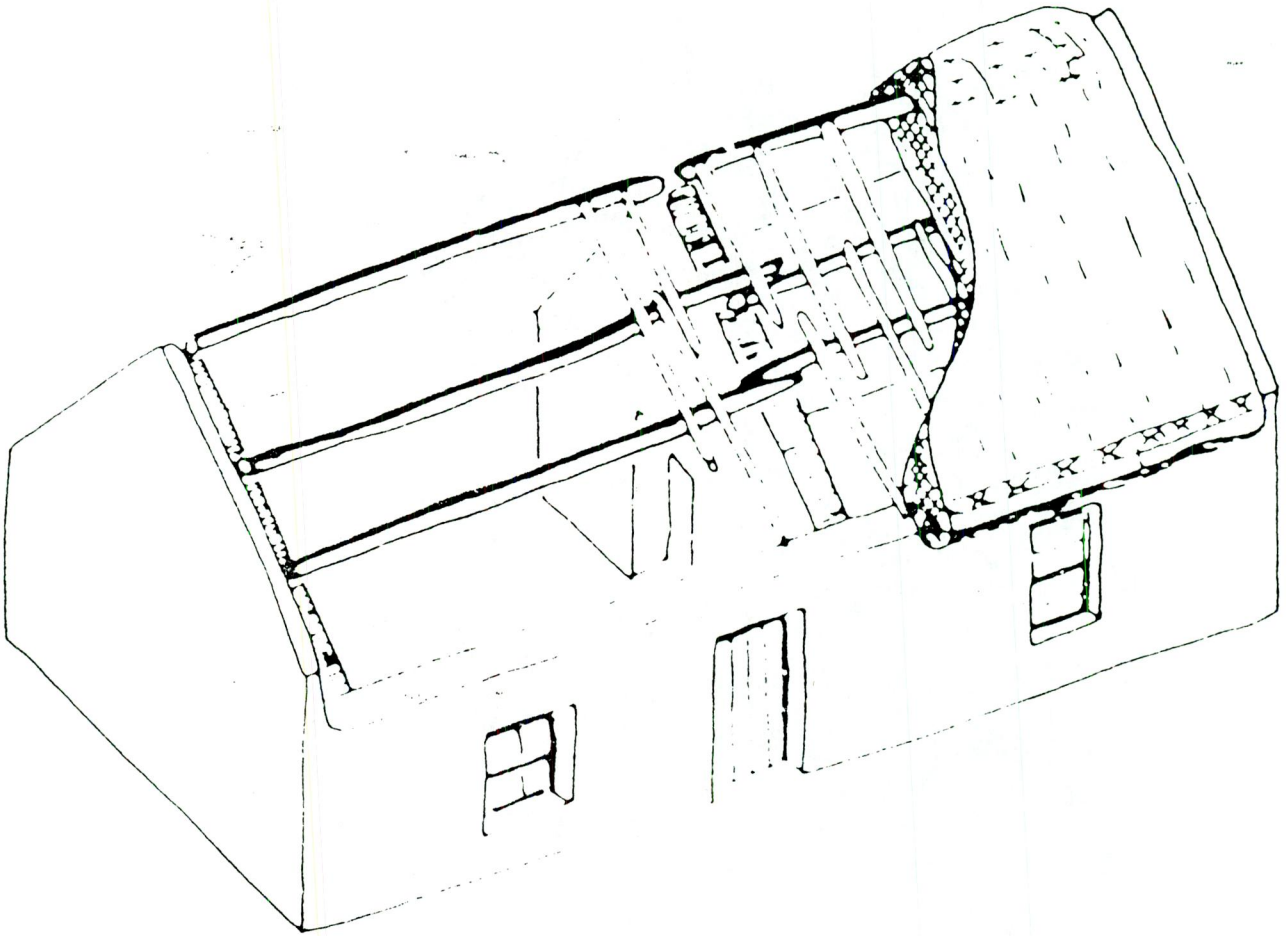


Fig.3: The Other System of Roof Construction

The overall finished form of an Irish vernacular roof is either gable (Fig.4) or hip (Fig.5). Both forms are described in the instructions given for filling out the 1945 Irish Folklore Commission Questionnaire :

Gable: Thatched roof slopes only at the front and back, and the gables rise up to the ridge of the roof.

Hip: The end walls of the houses are about the same height as the side walls, and the roof slopes down at the end as well as at the sides.

(Irish Folklore Commission Questionnaire, 1945, p.1)

A hip roof may be further broken down into a full or a half hip. A full hip roof is one in which the end walls of the house are no higher than the side walls, whereas in a half-hip, the end walls are somewhat higher than the side walls (Fig.5). Forms other than hip and gable are unknown in Ireland (Ó'Danachair, 1945, p.206).

The reasons why one form may predominate over the other in a certain area, see hip and gable distribution map (Fig.6), depends on a number of factors, such as local variations of climate, building materials used in the house and outside influences. Both gable and hip roofs exist in Wexford and Galway, although the majority of houses in Galway have gable roofs (Fig.4) and nearly every thatch in Wexford is hipped or half hipped (Fig.5). Why is this ? The major factors in answering this question are weather and materials. The walls of most of the houses in Wexford are made using mud or clay (Fig.7). Although very primitive-seeming, once used, by obeying a few rules, this material can be aesthetically quite indistinguishable from a stone wall and very durable; somewhere in the region of 180 of such dwellings are still standing (Office of Public Works Survey, Wexford 1987). The thatch on such a dwelling sticks well out from the eaves in order to carry the rain water safely to the ground without touching the walls. This essential overhang on mud walls makes mud-walled houses unsuitable on the windy West coast, where the thatch is trimmed flush with the eaves and securely tied down with ropes. Annual and thorough applications of whitewash built up a thick water resistant membrane which helped to keep the walls intact. If these mud walls remain damp for any length of time, they literally dissolve and flow away. The other restriction when working with mud / clay walls was that height was best avoided; thus the hipped roof was used,



Fig.4: A Gable Roof with Gable Walls, A) Flush with and B) Higher than Level of Thatch.



Fig.5: Hip and Half Hip Roofs

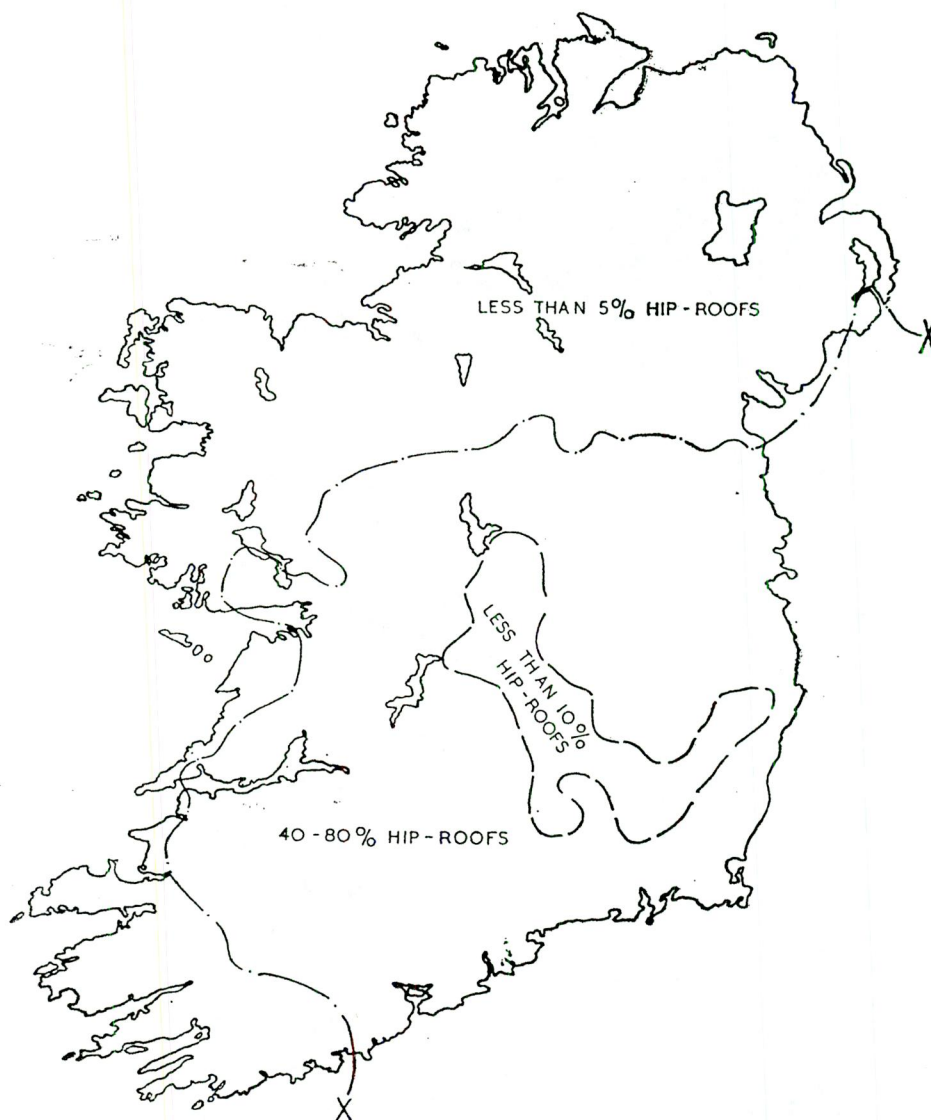


Fig.6

Hip and Gable Roof Distribution Map for Ireland



Fig.7: Mud Walls in Wexford

and particularly the half-hip which gave the illusion that the side walls were higher than the front and back without jeopardising the stability of the dwelling.

On the other hand, in Galway, where the majority of dwellings were built using stone, dry or with mortar (Fig.8) (of which, unlike roof timbers, there was a plentiful supply), gables were the norm. By employing the gable roof, the ratio between the two materials, stone and timber, was made favourable, hip roofs obviously requiring more timber than gables. The gable roof with only two sides was also easier to successfully anchor against the Atlantic gales that ravish the Western coast. For further protection, the gable ends were sometimes built up higher than the level of the thatch, to shelter it from the wind (Fig.4). Another general advantage of the gable over the hip, not specifically relevant to Galway, is that it allowed a simple one room structure to develop into several rooms, either by subdivision with internal partitions or by adding extensions at either or both ends.



Fig.8 Stone Walls in Galway

CHAPTER TWO

THE UNDER LAYER

All over Ireland a layer of sod was traditionally laid directly onto the roof timbers of a new house before thatching began. The idea of having a sod under-layer is deeply rooted in history : Irish cattle herders of the early seventeenth century built their booley (Summer pasture) houses of boughs covered with long strips of green turf. (Evans, 1976, p.51) The long sods made a portable roof which could be slung on a pole between two pack-horses. Sod is evident (e.g. in a number of plates in the Lawrence Collection of C.1880-1914, now in the National Library) to have been used as the sole covering of houses of the poor in various districts during the famine - a few surviving long enough to be photographed at the end of the nineteenth century. In more recent times, a layer of branches (thin laths or bog-fir supported by the purlins or common rafters of the roof structure) has had a layer of carefully fitted sod resting on it under the thatch. This under layer serves not only as an insulant, and damp course, helping to keep the house warm and dry in Winter and cool in Summer (a well thatched roof with a well fitted under layer is said to offer insulation from cold and noise equal to eight inches of fibre glass wool under slates or tiles. (Maude-Roxby, 1980, p.7), but also as a firm base into which the wooden pins (scollops) could be driven to keep the thatch material in place. (Buchann, 1957, p.25) However, a sod layer can also be found in a large number of dwellings in which the thatch is secured by an external network of ropes. Today, many thatchers disregard the technical necessity for an undercoat of sod, saying it has more to with tradition than necessity. (O'Neill, 1994, p.71)

The sods were cut in strips from carefully selected spots where a closely grazed sward gave a thick mat of grass roots. A sandy area was preferable, as it allowed the roots to be easily freed from any clay or earth that clung to them without damaging those fibres which bound the sod tightly together. In most cases, the sods were cut some two or three feet wide, about two inches thick, and generally two feet longer than the height of one side of the roof. They were lightly beaten with a spade to remove the earth and, after being left to dry, were rolled onto a stick and carried on two men's shoulders. Thomas Campbell described these as "scraws (they are rolled up like scrolls) but they would be better called hides for they are flayed of the earth."

(Campbell, 1778, in Evans, 1976, p.51) Carried up to roof level on two ladders, they were rolled off the pole onto the roof timbers, grass side upwards, to best grip the thatch. They overlapped at the ridge on the side away from the wind and, as they overlapped laterally, grooves an inch or so deep were cut at the sides of adjoining strips so that they were cleanly morticed together, achieving a waterproof join which helped to eliminate 'troughing' (water retention) in certain areas of the roof. If the strips merely overlapped at these joins, the thatch would in time become slightly ridged along these lines, breaking the even flow of water off the roof and causing 'troughs' or puddles on the thatch. If this happens, the straw / reed / rush in these areas begins to rot and the whole roof deteriorates. This in-built consciousness of the weather was never forgotten in Irish vernacular roofing; for example, the strongest purlins were put on the side that the wind-driven rain was most likely to come from, and the scollops were protected to as much of an extent as possible, the sun and wind in the summer making them dry and brittle and the relentless rain in winter rotting them. In these ways, a seemingly artless dwelling can be seen as a careful adaptation to local conditions. The vast majority of houses in Wexford used this method of underlayering, although there are a few exceptions. In some areas, scattered throughout the county, the first layer of thatch was sewn directly to the 'ribberies' or roof timbers. One house remains in Maygrass, South Co. Wexford, of which I have seen photographs taken at the end of 1996 by the Irish Folklore Commission, in which a matting of woven straw was used for the underlayer. It is the only example of such a technique left in Ireland, according to staff at the Irish Folklore Commission, although there is a fine example in the Kennixton House Folk Museum at St. Fagan's in Wales and, according to Ronald Buchann, (Buchann, 1957, p.22) such a covering was commonly used in thatched houses in southern England. Wexford, being on the East coast, was one of the areas of Ireland most exposed to British ideas drifting across the sea, and Buchann believes that this is how such an untraditionally Irish technique is to be found in Wexford. (Buchann, 1957, p.22)

The availability of materials in Galway presents a different under-thatch. Heather and furze were in more plentiful supply than sod in this rough, mountainous county, and of little value or use. Thus, the majority of houses in Galway have a layer of heather

or furze under the thatch, although a sod under-layer may still be found in certain areas of the county. Whether the under-layer was of sod, malting, straw, heather or furze, it was attached to the ribberies in the same way. The material was laid on the roof and then sewn to the roof structure using a *súgán* which I will describe in Chapter Five under the heading, 'roped thatch', or sisal (a Mexican plant whose fibres were often used to make cord and rope for export at a very reasonable price) rope, sometimes coated in tar by dipping to discourage rats and mice from gnawing their way through them. Seán Butler of Enniscorthy described this sewing technique when he filled out the 1945 Irish Folklore Commission Questionnaire on Thatched Roofs (unfortunately, this questionnaire did not require people to state their profession) : -

This is done with a thatcher's needle, an iron bar about three feet long and half an inch in diameter. There is a handle at one end and a point at the other and behind, there is a hole large enough for a straw rope to enter. The thatcher is on the outside and the helper inside. He shoves in the needle with the rope attached and the helper takes out the rope and pulls it all in. The thatcher pulls out the needle and shoves it in at the other side of the ribbery and the helper puts in the rope again, and it is pulled out by the thatcher.

Fig.9 shows the thatcher's needle mentioned above, together with some of his other tools.

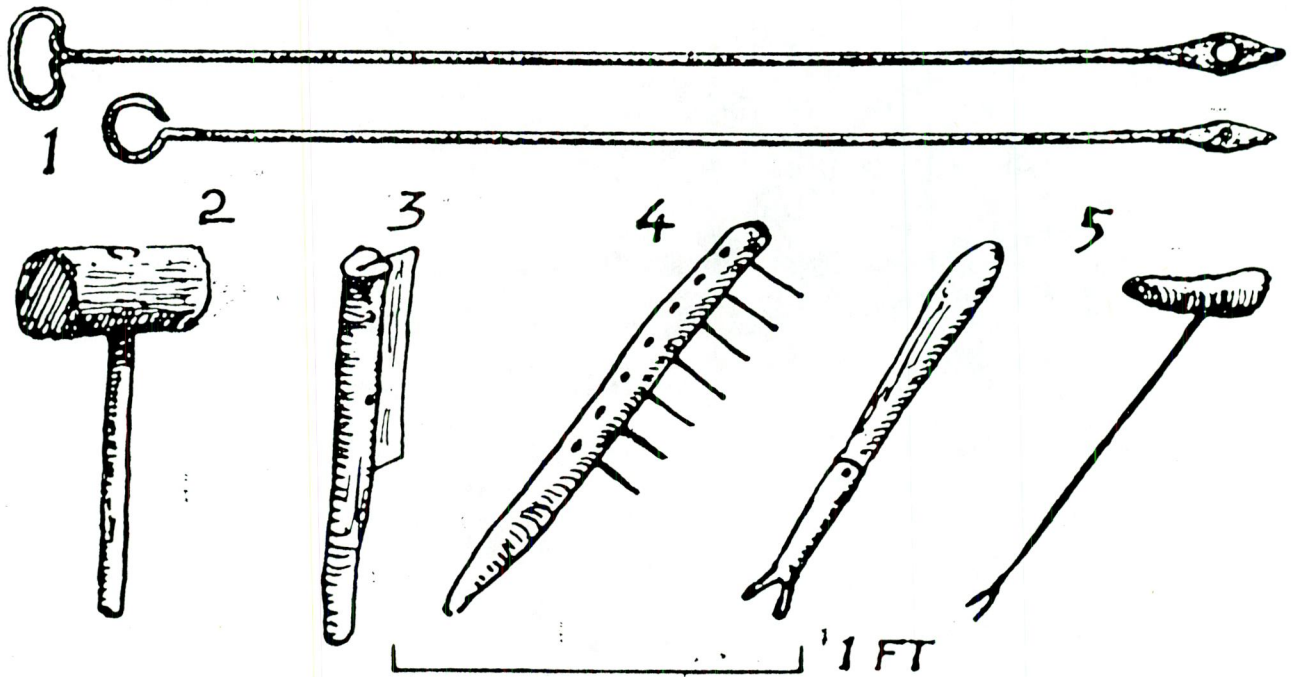


FIG. 15. Thatching tools. (1) Needles, the upper one for hay or fir ropes. (2) Mallet. (3) Trimming knife. (4) Rake. (5) Spurtles for stappling and patching. All from Co. Down except the last, from Co. Meath.

Fig.9: The Thatcher's Tools

CHAPTER THREE

MATERIALS USED IN THE THATCH

The length of time a thatched roof lasts depends on;

- The skill of the workmanship
- The pitch of the roof slope
- Local weather conditions
- Damage caused by birds, rats and mice
- The materials used

The majority of thatches in Ireland were done by the occupant and his enticed neighbours and friends;

‘The custom on such occasions is for the person who has the work to be done to hire a fiddler, upon which all the neighbours joyously assemble. . .’

(Hill, in Evans, 1976, p.46)

As J.M. Synge wrote of the Aran Islands,

‘From the moment a roof is taken in hand there is a whirl of laughter and talk till it is ended, and, as the man whose house is being covered is the host instead of an employer, he lays himself out to please the men who work with him.’

(Synge, 1979, p.156)

They all worked as a kind of neighbourly co-operative throughout most of rural Ireland, the professional thatcher finding most of his work in the towns and among the richer classes. It is thus that the skill of workmanship was so varied across the country, also the life span of the roof.

The higher the pitch of the roof slope, the faster the rain water runs off it. The faster the rain water runs off a roof, the less the likelihood of guttering and the thatch material rotting and leaking. A thatched roof must be at an angle of at least 45°. As the angle increases, the drainage may improve; however, the gravitational pull on the thatch material becomes greater, so a compromise must be found.

Harsh weather conditions generally shorten the life of a thatch; thus thatches in Galway tend towards shorter life spans than those in Wexford. However, other factors must all be considered too.

Birds searching for insects and rats and mice infesting a thatch, both tend to destabilise it. These menaces can be eliminated to a certain degree by various methods of preparing and treating the thatch material, as we will see.

The final and perhaps most influential factor in determining the length of time a thatch will last is the materials used. The material used to thatch a dwelling depends on: the wild growths and crops available naturally in an area and what the householder can afford (the relative cost of various materials varied from district to district).

The most common materials used in Ireland are straw and wheaten rye or oat; next would be reed or flax, and then rush or grass. There are even a few references to potato stalks and other rubbish being used by the very poor. (Kinmonth, 1993, p.6)

Of the straws, wheaten was the most widely preferred and it survives as the most commonly sought after material for thatch. It was so popular because it had a very long, clean strong shaft or stalk and needed very little preparation for use in thatching. A wheaten straw roof of good quality is said to last for eight to twelve years. However, as new higher yield strains of wheat were introduced, their suitability for thatching decreased, as the stalks were quite short and when harvested by the new combine harvesters, they were crushed. A crushed stalk would absorb moisture and rot quickly. The former pattern of cheap and plentiful supply of wheaten straw as a by-product of normal agricultural activity disappeared throughout most of rural Ireland, with the exception of some small isolated pockets, with the introduction of the thresher and new strains of traditional crops around 1930. In order to obtain suitable wheaten straw, this now had to be specifically grown and harvested by hand with a scythe, solely for the purpose of thatching. Thus, it became scarce and expensive.

Wheaten straw had always been by far the most popular material in Wexford where it grew plentifully, however, around the 1930's, oat straw began to take its place. An inferior material, it was rather softer, did not have the same life expectancy and its

stalks were three times as thick as those of wheat, giving a far less refined look to a finished thatch. It was widely available at a reasonable price in Wexford, thus it was used by the vast majority of people in the area especially the poor, and its bright yellow colour became a familiar sight in the Wexford landscape.

Wexford, being as I have written, one of the closest geographical points to Britain and Wales in particular, it being the nearest region to Wexford, began to be influenced by the British use of materials. British thatchers working in the county encouraged the use of reed. Reed, the tallest grass in Ireland, was naturally confined to the valleys of the Blackwater and Suir, but could occur in most sheltered lake shores and river mud flats. Large reed beds are to be found at Macmine and Kingsland Island on the Slaney in Wexford. Permission had to be sought from whoever had rights to the river or mud flats, to harvest these reeds, then the reeds had to be burnt and the following year's growth harvested for thatching from January to March. A good reed thatch can last up to twenty years, although it can be noted on many of the roofs in Wexford that it matures to a dull flat grey colour and lacks the warmth of appearance of the traditionally Irish materials.

Rushes were used in a handful of very poor dwellings in the more rugged areas of Wexford but not anything like as widely as in the extensive mountainous districts of Galway. In many of these areas, rushes and certain tough grasses such as *fionán*, *muiríneach*, *seis*, *cíb* and marram were used instead of straw. (Connolly, 1994, p.76) They were free, would grow in the worst conditions and were of absolutely no use for anything else. Unfortunately, they had quite a short life, three to four years.

We can see that wheaten, then oat straw were the most common materials in Wexford, with reed being introduced in houses near riversides and marshlands. On the other side of the country in Galway, the majority of the dwellings employed humble rushes and tough grasses with some slightly more affluent houses using straw.

If you did not have the land on which to grow a suitable thatch material, some arrangement had to be made with a farmer who grew the crop you wanted.

CHAPTER FOUR

PREPARING THE MATERIALS

If straw was being used in the thatch, it was always cut by hand and prepared by 'lashing' the sheaves against a wall, the back of a chain or a rock (Fig.10) in a labour intensive job to remove the ears of grain. However, as I have indicated, if the straw passes through a mechanical thresher, the stalks are crushed and useless for thatching. The sheaves were then 'drawn' by hand to remove the smallest straws; the straw was pulled into bundles of a uniform size, a bundle generally consisting of as much straw as a man was able to hold in both hands. The bundle was pulled asunder, the pulled pieces placed together and then pulled again and again. What fell out (the smallest straws) was called 'bruss', probably from the Irish word *brís* - broken, broken straw. The straw in its bundled state was sometimes treated with copper sulphate powder or bluestone to kill grubs and insects, which, as I have said, if present in a completed thatch encourage birds to come looking for them and thus upset the thatch. The bundles were often steeped in such a solution for a number of days, also making the bundles more pliable and easier to work. Alternatively, the bluestone could be applied on a damp day some time shortly after thatching was completed and reapplied at regular intervals, generally about once a year. This treatment also killed any mosses or algae that might have formed on the roof from close-by trees. At the time of the 1945 Questionnaire, this treatment was gaining popularity throughout Ireland, probably due to a wider knowledge of its advantages. For scollop and rope thatching, these bundles were just handed directly up to the thatcher on the roof at the time of thatching. If the roof was to be made using the thrust method, there were two options; the bundles could be divided and the smaller portions handed up to the thatcher who would fold them over and knot them ready for thrusting (Fig.11); alternatively, these smaller, knotted bundles (sometimes referred to as 'dulls') could be prepared in advance and left in a pile on the ground, waiting for the thatcher to arrive. If this was the case, on the day of thatching, they would be handed up to the thatcher, ready to be embedded in the underlayer of straw.



Fig.10: **Lashing Sheaves of Straw**



Fig.11: Dulls ready for Thrusting into Thatch

CHAPTER FIVE

METHODS OF THATCHING

There are three main methods of securing the thatch to the basic roof structure of houses in Ireland; first, the use of scollops or pins to literally pin the thatch to the underlayer; secondly, thrusting bundles of the thatch material into another layer of the same material; thirdly through an external network of ropes. The method using scollops or pins is found throughout the whole of Ireland in various levels of concentration. (Ó Danachair, 1945, p.209) The thrust method is confined to the East coast and the rope method to the West (see the distribution of methods of thatching map, Fig.12) Thus, in Galway, you find that the majority of housing uses a roped thatch, although there are those that use the scollop method; whereas in Wexford, the majority use thrust thatch with only a sprinkling of scollops to be found. I am going to start by describing scollop thatch as it is common to both counties Galway and Wexford.

Scollop Thatching

A scollop is a bent, sharpened rod which holds a bundle of thatch in place. They are usually made from willow or some other pliable material such as briar, hazel or snowberry; I have even heard of split bog-deal being used (Austin O'Sullivan). It must be possible to bend the material to such a degree as to make a pin, like a hair-pin, without it splitting. The ends of the scollop are then sharpened so as to firmly embed both ends in the sod layer below. A sod underlayer is always found in scollop thatches, and keeps the bundle of thatch securely in place. Although the term 'scollop' is used in most parts of Ireland there are regional variations used from time to time, e.g. 'spray' - Wexford, 'sáiteán' or 'bolt' - Galway.

About four hundred of these pins were needed for a medium sized roof, they were sometimes prepared by the occupants of the dwelling being thatched but could also be purchased in their hundreds at fairs and markets.

The thatcher begins at the right hand side of the roof, placing his ladder so that the breadth of one streak only remains to his right. A streak or *scrác* is a working area as wide as the thatcher can comfortably reach to one side of his ladder; this area runs in a



Fig.12: Methods of Thatch Distribution Map for Ireland

strip from eave to ridge. A prepared bundle of straw is laid on the roof, sheaf end facing the ridge and cut end at the eave. The bundle is then pinned to the sod or old thatch beneath, using a few scollops. Another bundle is thus secured beside the first and so on until the width of the streak is completed with its first layer; normally two bundles is enough. This first stage was described by Seán Cunningham of Ballyglum, Co. Galway in 1945 as follows:

“Thatch is put on in scrács about 15” wide and secured by hazel scollops, from 2’6” to 3” long - pointed at both of the ends.”

(Irish Folklore Commission Questionnaire on Thatched Roofs, 1945)

The next layer of straw is put on a little higher up, in such a way that it covers the scollops holding the first layer in place and is secured in the same fashion as the first. Each time the scollops are driven into the under material by a few, hefty blows from the thatcher’s wooden hand mallet. (Fig.9) The procedure is repeated, layer by layer, until the ridge is thatched. At the ridge, the bundles of straw are bent over and both ends secured to the roof with scollops.

The surface of the finished roof is trimmed using a sharp knife, often a portion of an old scythe blade embedded in a piece of wood, or even a sheep shears. In well-finished work, the scollops are hidden, for if exposed they tend to let water seep through the sod and although it is customary to leave a row exposed at the eaves and ridge and sometimes against the gable, if it is a gable roof. The exposed scollops are often arranged in lattice patterns; this is where the skilled thatcher can show off his skill in various regional and personal designs (Fig.13) which are practical as well as decorative. They serve to distribute the rain, particularly at the eaves, and further prevent guttering.

When rethatching a scollop thatch, very little of the existing coat is usually removed, only where the old coat is moss-eaten or water-logged. If the roof is only to be patched, then the new scollops will be visible. Fig. 14 is a detail of a scollop thatch roof.

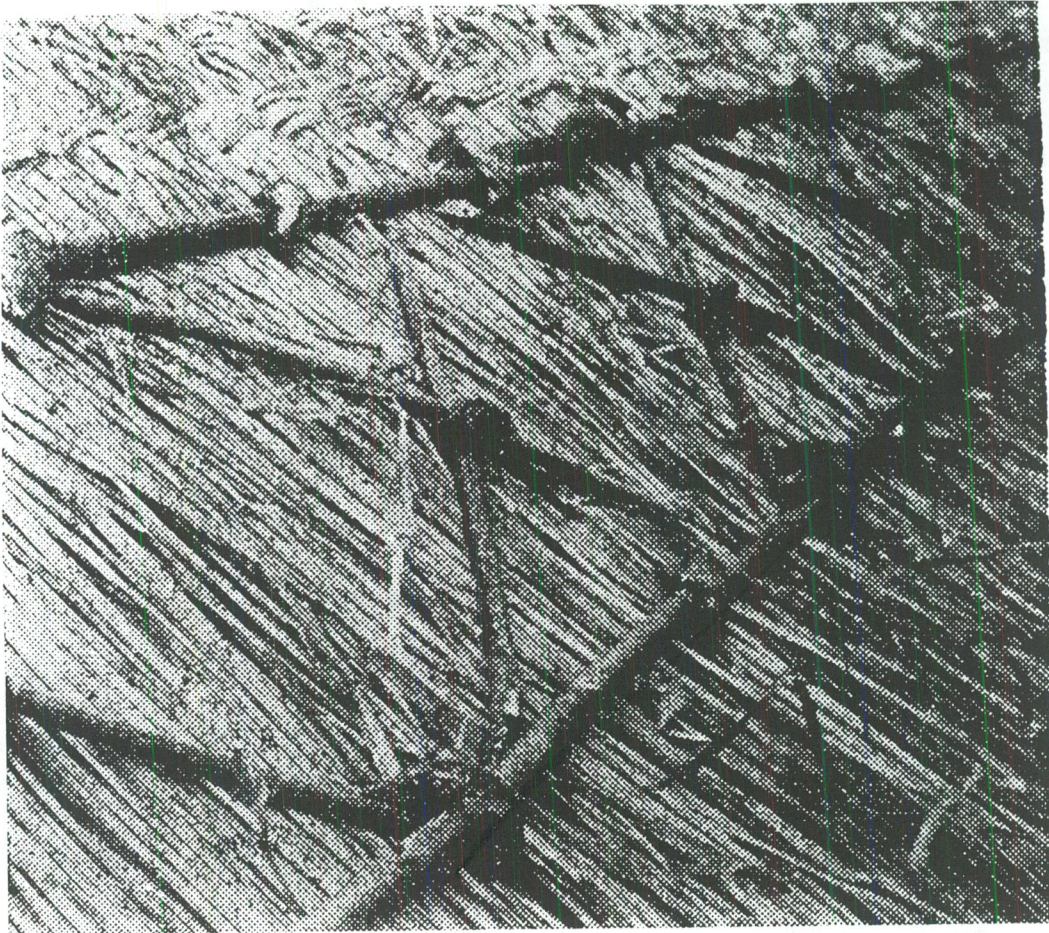


Fig.13: **Lattice Patterns with Exposed Scollops**

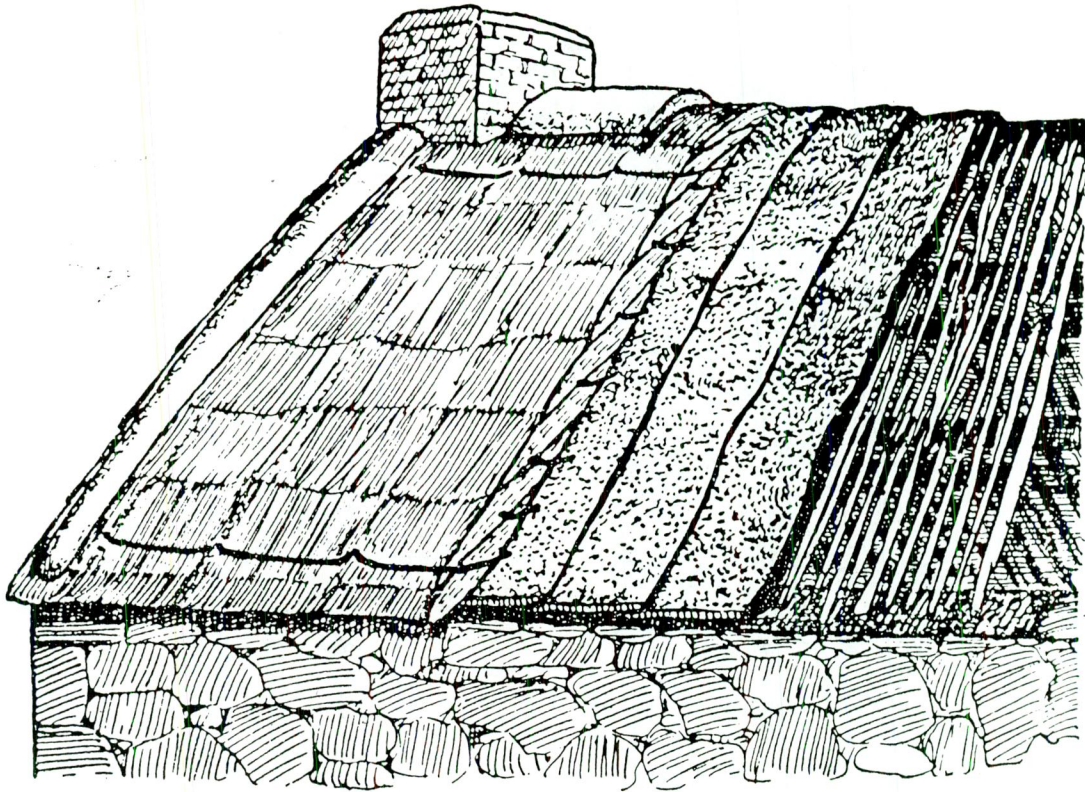


Fig.14: **Detail of a Scollop Thatch**

Thrust Thatching

In this method, a layer of thatch is always sewn to the roof timbers, as previously described, whether directly, or over a layer of sod. It is into this secured layer of straw that the bulk of the thatch is secured. The thatcher takes a fistful or 'dull' of straw and divides it into two, putting a little knot at the top; this knot anchors it into the layer below. Seán Butter of Enniscorthy describes how these prepared dulls are used to thatch the roof:-

"He holds the 'dull' in his left hand, then he gets the 'thruster' and presses the knotted top well in. The house is thatched in 'streaks'. Four fistfuls of straw laid side by side, shoven in with the thruster are the breath of a streak. Over the four fistfuls or 'dulls' are placed three others thus -

If they were placed directly over each other, the rain would enter. A good thatcher will put on four streaks in the day."

(Irish Folklore Commission Questionnaire on Thatched Roofs, 1945)

A 'thruster' or thatching fork, as it is also known, is a piece of wood about a foot and a half long with a notch at one end of it used for pushing or thrusting each 'dull' into the secured layer of straw below. (Fig.9) Mr Butter then goes on to describe how a thatch is smoothed and shaped in his area:-

"... the straw is sticking up and rough looking. Water is then brought up by the helper and the thatcher throws it on the new thatch. He then hammers it well down with the thatching rake and then rakes it."

(Irish Folklore Commission Questionnaire on Thatched Roofs, 1945)

A thatching rake consists of a number of large nails set in a piece of wood with a handle about four or five feet long. (Fig.9) It is used both to smooth the thatch and remove loose straws. This damping and beating is not necessary in other methods of thatch. It serves to push the knotted ends of the dulls into the layer of straw below, thus creating an even, external surface.

Roped Thatch

The thatch is not fastened to the roof directly underneath, rather it is held in position externally by a network of ropes that run over the roof and is held down by weights of fastened to the tops of the walls. Again, the thatcher leans his ladder against the roof, leaving only the width of a streak to his right hand side. Handfuls of straw are laid on

the roof at the eave above this and, partly covering the first layer, another bundle of straw is laid down, in the same way as a slate roof is made. This is repeated until the ridge is reached, when the thatcher moves his ladder the width of a streak to the left and repeats the process until this side of the roof is completed. Roped thatch is restricted to gable roofs. Such roofs, having only two flat surfaces, making it easier to secure the thatch with external ropes.

The ropes that are used to secure the thatch are generally made of the same material. These ropes, known as '*súgán*' ropes, are made by twisting the straw, hay or other locally available fibre with a reaping hook. (Fig.15) Michael Heffernan of Letterfrack describes how;

“On fine nights, the person twisting backs out the door into the street outside and when it is long enough it is rolled into a large ball. The hook is prevented from cutting the hands by holding a small portion of sedge where the hook revolves.”

(Irish Folklore Commission Questionnaire on Thatched Roofs, 1945)

Approximately one mile of rope was needed to secure a medium sized thatch; it is for this reason that 'hairy-Ned', an imported Mexican cheap sisal of two-ply cord, was increasingly used all over Ireland in the twentieth century.

A quantity of straw was spread along the ridge across the layers of straw already laid on. This was to prevent the securing ropes cutting into the thatch on the ridge - the point under most pressure. For the same purpose, a light sprinkling of straw is strewn across the rest of the roof before roping begins. The balls of rope are carried back and forth over the roof from the back of the house to the front, and vice versa, the ends being fastened securely each time. These rope ends may be fastened to stone or wooden pegs embedded in the front and back stone walls just below the eaves.

(Fig.17) As I have mentioned, the roped method is found in Galway and not Wexford, because the walls in Galway were of stone, which allowed these pegs to be securely held in place. Another method of securing these rope ends was to fasten each end to a stone weighing between three and five pounds, which lay on the thatch immediately above the eaves and kept the ropes taut, even when they stretched.

(Fig.18); however, leaks were often caused where they lay.



Fig.15: **Making *Súgán* Rope**



Fig.16: **Ropes Secured to Pegs Embedded in a Stone Wall**

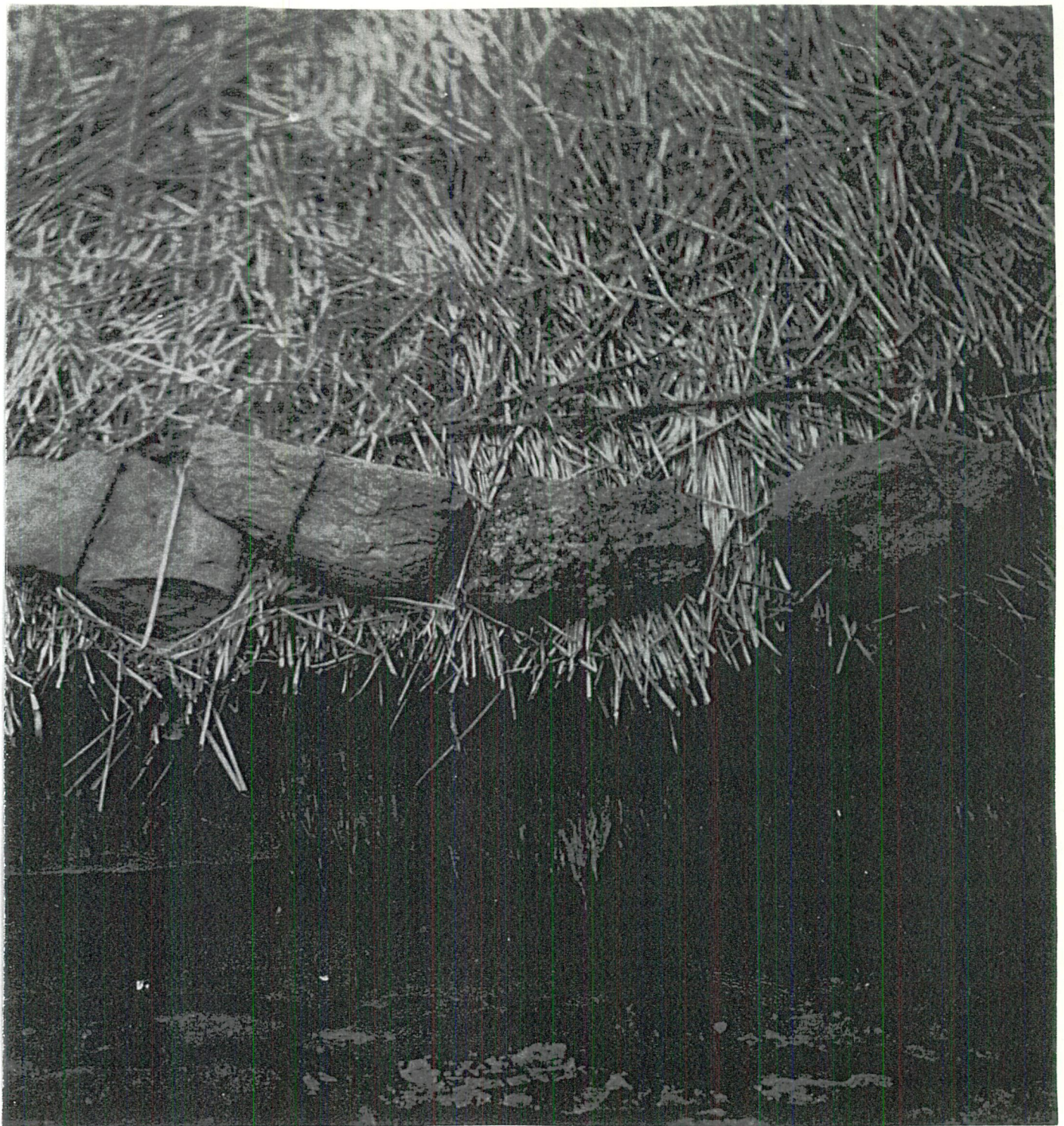


Fig.17: Ropes Weighted Down with Stones

Instead of stones, I have even seen plastic litre mineral bottles full of water or plastic bags full of sand used as weights.

The distance from one rope to the next is usually eight inches to one foot. When all the ropes in this vertical direction are secured, the horizontal ropes are laid on from gable to gable. The first of these ropes is laid on parallel to and one foot or fourteen inches above the eaves on either side and secured to pegs along the tops of the gable walls. (Fig.19) The next horizontal rope runs just below the ridge and is secured in the same way, as many horizontal ropes as were seen fit which were run across the roof and fastened to pegs along the gable walls. However, some houses in Galway were of such a design that both the gable walls rose above the thatch, protecting it from the wind; in these cases, the horizontal ropes were omitted completely.

More recently, a bought wire mesh, such as chicken wire, would be used instead of ropes (Fig.20); an old fishing-net is also occasionally to be seen on such a thatch. (Philbin Bowman, 1990, p.3) Fig.21 shows a network of external ropes, tied to pegs in the tops of the walls, holding a thatch in place beautifully in Co.Galway.

Each of these three methods of securing the thatch has its own requirements and advantages, which together with local traditions, make it more common in one county than another. The scollop thatch is by far the most widely used in Ireland as a whole; however, it does not stand up to the gale force winds for long and this is hardly used at all on the exposed sea board of the West coast, including Galway. The roped thatch, on the other hand, has been developed to withstand the wind. The gable ends reduce the thatched surface area, and if built above the level of the thatch, further protect the thatched surfaces. The network of ropes, either fastened to secure pegs or weighted down, make it almost impossible for the thatch material to be affected by gales and also helps to break the flow of rainwater. It is these factors that made rope thatching almost the sole method used in Galway.

A roped thatch requires a gable roof and thus it is just about ruled out in Wexford, because there are very few gable roofs in this country. In any case, Wexford does not have the desperate necessity for elemental protection that Galway does. The reason for thrust thatching being used in a majority of cases over scollop thatching in Wexford has more to do with tradition than any particular advantage.



Fig.18: Pegs Along the Top of a Gable Wall



Fig.19: A Bought Net Used to Secure a Thatch

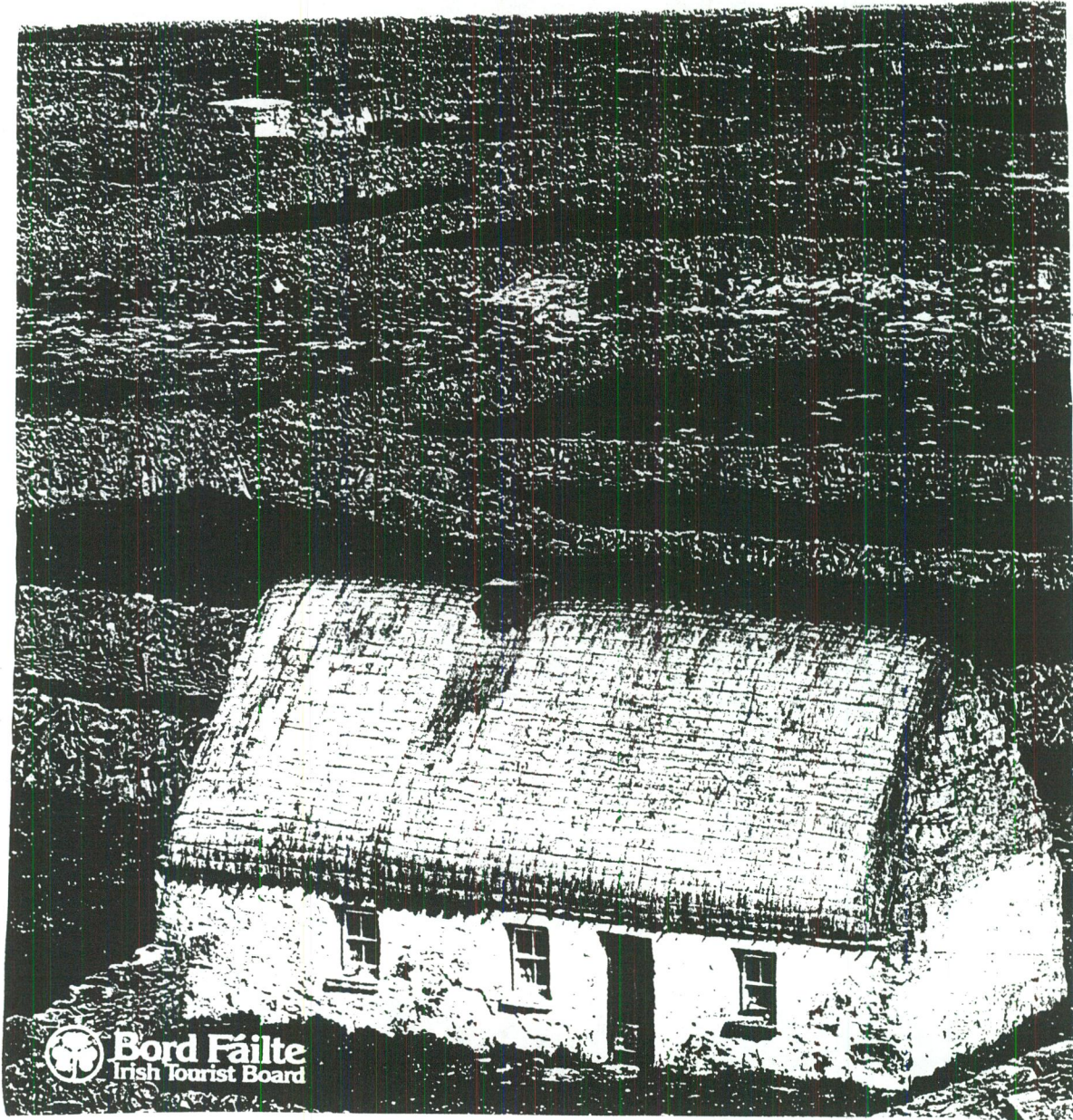


Fig.20: A Full Rope Thatched Roof in County Galway

CONCLUSION

As I have indicated, the South of Ireland has produced a shamefully small amount of research, analysis or writings to do with thatched roofs. A number of books such as Sybil Connolly's Irish Hands (1994), Jackson's Irish Cottages (1985) and Claudia Kinmonth's Irish Country Furniture (1993) have sections that deal with the subject but in no great detail or depth.

A number of surveys, questionnaires and reports have also been undertaken. The 1945 Irish Folklore Commission Questionnaire on Thatched Roofs is an interestingly informative manuscript of immense historical and cultural value that I feel gives more traditional information related to thatch in Southern Ireland than any other sources I have come across. Being over half a century old, it needs to be updated and contemporary comparisons made. One might have thought that the Office of Public Works would have taken a leaf out of this simple and effective manuscript when undertaking their 1987 Survey of Thatched Houses. However, it was not to be. They began a monstrous task which was to survey every thatched dwelling, inhabited or ruined, in each of the twenty six counties of Southern Ireland. Such an enormous task could only be carried out in quite a superficial and unprobing way. As it was, the survey was uninformative, incomplete, only dealt with six out of the twenty six counties and disappointing. This I believe had more to do with a bad brief and lack of funding than the interest and commitment of those carrying out the survey. In 1990, Ceann Tuí (the Irish Trust for Thatched Houses founded in 1988), undertook a review of the present state of thatching in Ireland with proposals for the 1990's. It concluded that a national survey of thatched houses must be undertaken as a matter of urgency, unfortunately, this has not happened yet.

A number of training courses have been set up by the likes of ANCO and Fás, to try and preserve and promote the skills of the thatcher. Professional Irish thatchers teach young enthusiasts their knowledge and skills on the roof. This is a great idea as there is no hope of reviving thatch if no-one has the skill to thatch a roof well.

A few Folkparks such as Bunratty in Co. Clare have opened around the country. Although profit through tourism was at the forefront of the establishment of this Park,

it is an extremely accurate source of Irish traditional culture. It includes a number of traditional thatched houses, taken from various regions in Ireland and re-assembled side by side in the grounds of Bunratty Castle. Being authentic, the houses are crammed with information that is preserved and protected in this environment.

Various schemes, grants and aids for the promotion of repairing, replacing and converting to thatched roofs have been established and faded out of existence over the years; however, none have been long-term enough, or well enough thought out and implicated to make a real difference. Thatch fulfils many of the conditions for E.C. structural funding aid to Ireland, it is; suitable to local economies, labour intensive, can be community based, can replace imports, has huge export potential, and is culturally relevant. (Rogers, 1991, p.10) A body is needed to make people aware of potentially available funding and promote its correct use.

None of these books, surveys, reports, Folkparks or grants have been conclusive. A solid and informative body of information, relating to thatch in Southern Ireland at the moment and in history is desperately needed. From this information a definite national strategy and long term plan could be logically and informatively concluded.

Thatch has a lot of advantages and disadvantages over other methods of roofing, such as insulation, aesthetic appeal, cost, labour intensity, and risk of fire. These would have to be looked at and weighed up against a background of accurate and well analysed research. Only then could one see the viability of really promoting and encouraging thatch as a method of roof cover in Ireland. I do not know if it would be viable or possible to encourage this. I would hope so, but I think it would take a concerted effort and interest, both at a governmental level and on the part of the Irish householder, and I fear they may both have become too lackadaisical and content with the way things are. I hope to be proven wrong.

APPENDICES

**The Irish
Agricultural
Museum**



The Irish Agricultural Museum

Johnstown Castle

Wexford

Telephone 053-42888

29/10/1996

Dear Ms Clarke,

I have a personal interest in thatch and thatching and have a fairly substantial collection (c 200) of colour slides of thatched buildings. I originally worked in vegetation survey and got the chance in the 1960-75 period to work in all the Irish counties. I photographed various thatched houses, rows of houses and outbuildings during the course of this work. I have a lecture prepared, entirely slide-based on thatched buildings in Ireland and Europe. However I have nothing published on the subject. A couple of years ago I put together a simple description on thatch and thatching with a student who was here for a while. I enclose the reference list from that project, which has yet to be typed up. I think we would have all

Back January 2nd.

Directors:

T. J. Maher (Chairman)

Austin O'Sullivan Ph.D. (Secretary and Curator)

William E. Murphy B.Agr.Sc. (Treasurer)

Mrs. A. C. Ball

Michael T. Connolly

Edward Culleton Ph.D.

Peadar Murphy

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DIENCEPHALON

of the publications mentioned in the list in an museum library. I am very busy until after Monday, November 11th. If you cared to contact me after that date we could discuss how to take your requirements further. You could possibly come down by bus or train for a few hours or else overnight to see what we have by way of publications and slides on Thatching. We do not have any public display in the museum on the subject as yet as the tools involved are rather few and uninteresting as against the blacksmith or cooper.

Sorry for the delay in replying but this has been a busy time. I am involved in organising conferences and general visitors to the Centre here as well as running the museum. I have also had to return to write a report on hill vegetation in relation to the R-E.P.S. scheme.

In haste

Yours sincerely,

Austin M.O'Sullivan



- 1/ Jacqueline Pearn - Thatch and thatching - Shire Publications³
- 2/ Celtic Journey - On Board Magazine - Irish Ferries
- 3/ Board of Agriculture and Fisheries - leaflet No. 236.
- 4/ Readers Digest - 1982 - Traditional Crafts in Britain -
Readers Digest Association limited.
- 5/ Ceann TuI - September 1990 - A lost Cause ? Review
of the present state of thatch and thatching in
Ireland.
- 6/ J Geraint Jenkins - 1965, 1978 - Traditional Country
Craftsmen - Routledge & Kegan Paul Ltd
- 7/ Jack Hill - 1979 - The complete practical Book of
Country Crafts - David & Charles.
- 8/ E. Estyn Evans - 1967 - Irish Folk ways - Routledge
& Kegan Paul.
- 9/ S.M. Haslam - 1972 - The Reed ('Norfolk Reed') - Macklin
Brown limited.
- 10/ Kevin Danaher - Ireland's Traditional Houses - Bord Fáilte
- 11/ Michael Higginbotham - 1992 - Survey of Thatched
Houses in County Wexford - The office of Public works.
- 12/ Michael Higginbotham - 1995 - Survey of Thatched
Houses in County Kilkenny - The office of Public works.

3/ Common Ground - June-July 91

4/ Jack Fitzsimons - 1990 - Thatched Houses in County
Meath - Kells Publishing Company.

Places to see:

1/ Buncatty Castle and Folk park -

2/ Heritage Park - Ferrycarraig, Co Wexford

3/ Many rural villages such as Kilmore Quay have
excellent examples of the thatched cottages.

Also:

• Colour slide collection of thatched buildings made
by Dr A. M. O'Sullivan between 1960 - 1995.

ULSTER FOLK AND TRANSPORT MUSEUM

CULTRA HOLYWOOD BT18 0EU Co. DOWN NORTHERN IRELAND

TELEPHONE: BELFAST (01232) 428428

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RAG/co

27 August 1996

Ms J R Clarke
5 Pigeon House Road
Ringsend
Dublin 4

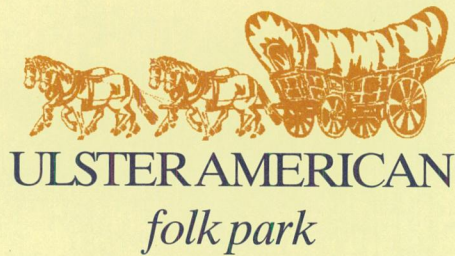
Dear Ms Clarke

In view of the very general nature of your enquiry on the roofing of Irish vernacular houses, the best advice I can give you is that you should refer to the appropriate part of my book Rural Houses of the North of Ireland (Edinburgh, 1984). The book is now out of print, but you should be able to get access to a copy in one of the libraries in Dublin - for example, I know that the R.D.S. library at Ballsbridge has it. Perhaps this will help you to refine your ideas.

Yours sincerely



Alan Gailey
Director



23 October 1996

Ms J R Clarke
51 North Great Georges St
DUBLIN 1

Dear Ms Clarke

The various sources most relevant to you are thatchers, Government agencies involved with thatching-grant administration, and a few publications in Ireland which at least refer in more than passing detail to thatching materials, styles and techniques.

The desk study should involve publications such as editions of Ulster Folklife (a periodical) and books such as 'Rural Housing in the North of Ireland' by Alan Gailey together with a quick look at 'Irish Folk Ways' by E Estyn Evans.

You could follow this by entering dialogue with Historic Buildings Branch architects regarding their experiences. This would be particularly useful at this time as an archaeological analysis of samples of thatch from randomly selected roofs in Ireland has recently been conducted by an expert from England. This has been done to identify the species of material being used and to date the use within a narrow time period. Even a rudimentary awareness of general economic and social conditions prevailing in Ireland over the past few hundred years may be helpful when explaining changing uses of material through time in a particular roof sample.

I hope this helps to clarify your task ahead. I would be interested in seeing a copy of your finished work. If you have more questions, please don't hesitate to ask.

Good luck.

Yours sincerely

Dr P Mowat
Curator

GLOSSARY

Bluestone (Copper Sulphate):	Chemical often sprayed over the thatch to kill any algae or insects and to deter birds.
Bobbins:	Small twists of straw placed in a row along the ridge.
<i>Brís</i> :	Broken pieces of straw that fall out of the sheaves as they are down.
Dull:	A bunch of straw knotted at the top, thrust in by the thatcher's fork.
Drawn:	The way in which the bundles of straw are pulled asunder and put back together repeatedly until all the <i>brís</i> has fallen out.
Lashing:	Repeatedly hitting a hard surface with the sheaves, removing the ears of grain.
Ribberies:	Roof timbers to which the under layer are sown. (Rafters)
Ridge:	Roof capping along highest part of roof; will vary from region to region and thatcher to thatcher.
Scollops:	Twisted hazel and willow twigs used as pins or pegs to hold down thatch.
Scraw:	Top layer of sod usually put over the rafters to keep a house insulated and to hold down the thatch.
Sheaves:	Bundles of straw.

Streak:

A strip of thatch from eave to ridge, put on by the thatcher each time he moves his ladder across the roof, usually measuring about three feet wide.

Súgán:

Hand made rope made by twisting straw or hay with a reaping hook.

Regional Variations

GALWAY

Streak	=	Stroke
Bobbins	=	Bobs / <i>Boibíní</i>
Scollop	=	<i>Sáiteán</i> or Bolt

WEXFORD

Scollop	=	Spray
Streak	=	<i>Scrác</i>

The derivation and historical relevance of these words is very hard to ascertain. I have looked in many dictionaries both Irish and English, but to little avail. No book nor article I have read on thatching has given such information either. The only way to find out where these words came from and why they are used would be by talking to someone who had had the information orally handed down to them.

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