

### Materials for Thatching.

Three materials are in present-day use in the UK, these being Norfolk reed (common water reed), and corn varieties known as long-straw and wheat-reed. The strength of the stem is vital to successful thatching, and in fact modern wheat varieties have overcome many defects of older types. For long-straw thatching the strength of the straw is much improved if the crop is harvested whilst the stalk remains partially green. Norfolk reed in the UK is most highly regarded as a desirable and weather-proof thatch. Coming from the Norfolk marshlands, the reed grows from 3' to 8' tall. The best quality reed comes from beds which are cut regularly as this causes better stem growth. Harvesting occurs after the frosts come and blow the long leaves from the main stem. Reeds are sharp, and it is easy to understand how taxing and unpleasant was the task of the common reed-cutter. Cut reeds were bound in bundles called "fathoms" and often taken away in punts across the marshlands to a collection point.

Wheat reed is used unthreshed, but produces a thatch texture similar to the Norfolk reed. It is also laid "reed-wise" with the ends of the stems outward and given a similar close-cropped finish. On the other hand, long-straw thatch is laid in "lanes" of about 30" width and can be identified by the decorated eaves and ridges which help to hold it down. Compared with the other materials, long-straw thatch provides a smoother, more plastic and "poured-over" impression. It also requires a different laying technique and more preparation of materials on the ground before laying. To the layman, long-straw thatch appears much looser and floppier during laying, whilst the combed wheat-reed and Norfolk reed resemble the bristles of a strong yard broom in texture. These differences in material characteristics explain the finishing techniques where by the latter two thatches are precisely cut and trimmed for finish and effect.

### The Thatcher.

Thatching was once a skill common to all farm workers. thatchers as specialists, however, were independent workers who usually had an assistant on the ground, and had to cope with all kinds of weather. Thatching remained a solitary craft and until quite recent times there was no trade union or guild. Thatchers were able to be quite individualistic in their work and its decoration, and as a result both their equipment and methods were likely to vary in detail from craftsman to craftsman.

### Laying the Thatch.

Different thatching materials necessitated different laying and finishing techniques. However, basically,

thatch was held in place by either tarred yarn or by "sways". These were lengths of hazel which were laid across the thatch and were held down by iron hooks at a number of points in order to fasten the thatch to the roof. An alternative to the use of hazel sways was the similar use of willow in lengths called "withes". the thatcher laid the material from the bottom of the roof like slates, and also worked from right to left. In order to pack the material very tightly the thatcher used the long needles to lever the thatching material into place. Twisted lengths of hazel shaped like oversized staples and called "broaches" were sometimes used as temporary fixtures prior to permanent holding with sways. To obtain the required depth of thatch the initial eaves layer was covered progressively by other layers somewhat in the manner of tiles or slates.

In wheat-reed thatch, which is simply the straw of oats or wheat, the material is combed and bunched for convenience prior to laying. The combing was formerly a tedious task apparently usually done by the women. After combing the material was bunched ready for carrying up to the roof. During laying, the lanes or courses of thatch may be progressively trimmed and cut. A leggat was the tool used to dress the reed thatch into place.

Special skill and care was required with the ridge and areas where there was flashing as here the weather was most likely to penetrate. Flexible material such as long-straw or sedge was thus used. Essentially, layers of thatch were folded over the ridge and held down by sways and liggers in a decorative pattern which was often the "signature" of a particular thatcher. An alternative sometimes used was to cap the ridge with terra-cotta tiles.

#### Tools and Implements.

The tools used included:

- Rake - To comb the straw straight and smooth
- Leggat - To dress the reed into its final position
- Reed holder - To hold bundles of material on the roof area for use
- Yoke - For carrying long-straw material up to the roof

A range of needles and knives were used for fixing and trimming purposes.

The skill of the thatcher combined with the material provided by nature to provide a roof-covering of lasting beauty and attraction. Today, thatchers are kept busy maintaining and renewing the roofs of traditional cottages and other buildings. Their craft remains basically unchanged since the Middle Ages except for changes in methods of laying and securing the thatch so that improved weather protection and longevity are achieved.

#### Thatching in Australia.

Thatching was originally a craft with a local identity. Regional traditions as well as individual thatchers created visual differences in finish or ornamentation between areas. Undoubtedly, local conditions influenced these designs in much the same way as with the building of wagons. It is easy to see how this happened as for centuries agriculture provided an assured supply of suitable materials for thatching. Thatchers were able to work in a restricted local area and knew their customers well, whereas surviving craftsmen in the United Kingdom now travel widely.

This reliance upon readily available material seems to explain the experience with thatching in Australia. There was simply no established agriculture to provide a supply of material suitable for thatching. Indeed, local materials encouraged the widespread use of bark as an effective roofing material instead. Thatch was thus never as common in Australia as in Britain. Some early wattle and daub buildings were thatched with rushes or grass, no doubt following traditions brought from home. These efforts at thatching are marked today by the cove at Sydney called Rushcutters' Bay.

By and large, however, straw thatch was little used possibly due to fire risk as well as an obvious lack of material. It must also be remembered that by the 1820s slate was being produced in huge quantities and was brought as ballast in sailing ships. Corrugated iron also became available around this time. Both were no doubt attractive and more readily usable alternatives and probably inadvertently prevented thatching becoming a necessity. Thus, the thatching that did occur competed with slate, corrugated iron, and local materials such as bark. Thatching probably occurred only where these other material were unavailable, unsuitable, or too costly. Instances are known of the use of use of thatch, such as in an early school on French Island in Victoria, whilst in the sparsely-treed areas of the Wimmera wheat-belt in Victoria thatching was common on machinery sheds. These can still be seen today. The thatching of these buildings, however, could scarcely be compared with the

traditions in Britain. Whilst the results were serviceable, poor materials and lack of skill tended to produce an untidy result.

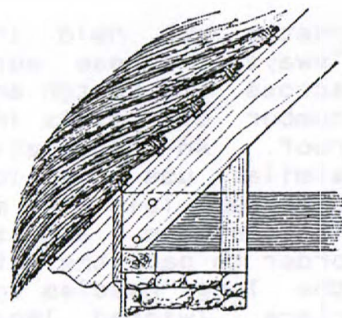
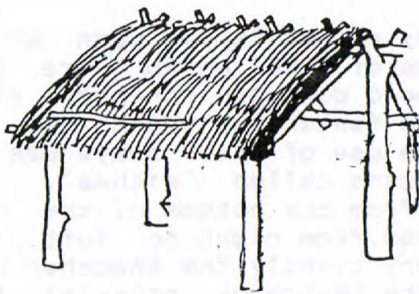
In South Australia John Dunn, the miller, noted that "Colonel Light had had a reed-thatched hut, which was burnt down in 1839, near where the slaughterhouse now is." (Stuart, p 23). Dunn recalls renting at this time a small hut with a reed roof for 8/- weekly, although "we had to hold an umbrella over our bed" (Stuart, p 31). he notes that Mr George Nairne at Hay Valley never paid rent, erecting instead a clod house with a grass thatched roof, the whole structure serving for many years. Around 1840, Dunn's son William was born in their partly roofed house at Mount Barker. John Dunn returned home after seeking help to find his wife lying calmly "gazing through the rafters of the yet unthatched house at a covey of parrots ..." (Stuart, p 39).

#### Longevity & practicality.

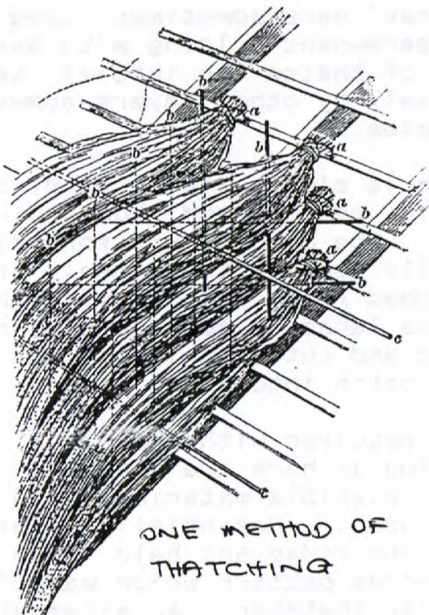
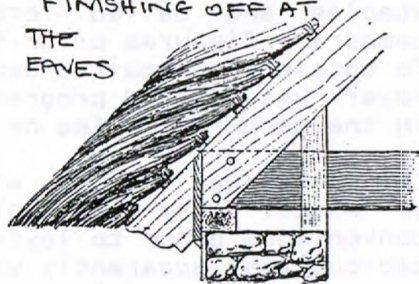
The threat of fire is commonly mentioned. However, the Rural Industries Bureau in the U.K. states that this risk appears to be overated by some due to prejudice as most fires occurred due to faults (eg. electrical), or negligence. Regular property, maintenance such as the cleaning of chimneys can today be combined with preventative measures such as the treatment of thatch with chemical retardants prior to laying.

Thatch was, as is, an amazingly long-lasting material. The quality of the raw material and the laying skill were probably the two key factors determining the life of thatch. However, the use of preventative devices such as laying galvanised wire netting to deter sparrows would also affect longevity,. Long-straw thatch apparently lasts about 10 - 20 years, whilst Norfolk reed thatch is suggested to last 70 - 100 years. Heather thatch, a poor quality material used in the islands north of Britain, was only a rough covering for farm buildings and lasted a very few years. As a roof-covering, thatch is eminently practical. It is light on the superstructure of the building although the roof is steeper than for slate or tiling, being a minimum 50 degree pitch. This is so that rain will easily drain down each straw or reed and off the eave. Apart from the roof pitch the other major requirements are to have well-projecting eaves and chimney-tops well above the roof surface. As there are not gutters, this extra projection helps ensure that water drains away from house walls. The arrangement of fascia boards and flashings is also particular in order to accomodate the average 12" depth of thatch, and this makes it a costly job if anyone wishes to convert to another form of roof covering.



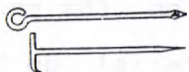


FINISHING OFF AT  
THE  
EAVES

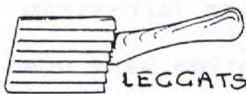


ONE METHOD OF  
THATCHING

BROACH

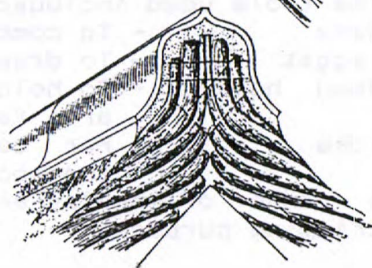
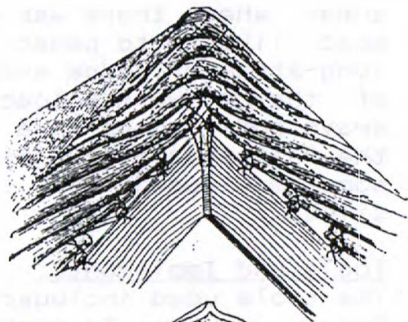


NEEDLES



LEGGATS

EAVES KNIFE



### Some Terminology.

Thatching as a craft had a quite specific language. Some of the terms used included:

Band	- A twisted length of reed or straw used to tie a bunch
Biddle	- An alternative name for leggat
Bottle	- A yealm tied at one end to form a bottle-shaped bundle for use along the initial eaves layer
Broach	- See "spar"
Cross-rods	- Ornamental hazel rods laid between liggers
Gadd	- A length of hazel prior to splitting for sways
Ligger	- 4' or 5' lengths of hazel used for the external decorative finish on the ridge or eaves
Scud	- A twisted rope of straw used to fix spars temporarily
Skirt	- Side course along a ridge
Spar	- A staple-shaped length of hazel twisted at the top & pointed at both ends. Used to fix cross-rods & liggers
Stulch	- A 2' 6" wide strip of thatch
Wadd	- Bunch of wheat-reed tied at the top to form a bottle shape and used for initial eaves and barge layer
Withe	- A ligger made of willow rather than hazel
Yealm	- Layer of dampened straw about 18" wide and 6" thick

Nigel Lampert  
September, 1991

### References:

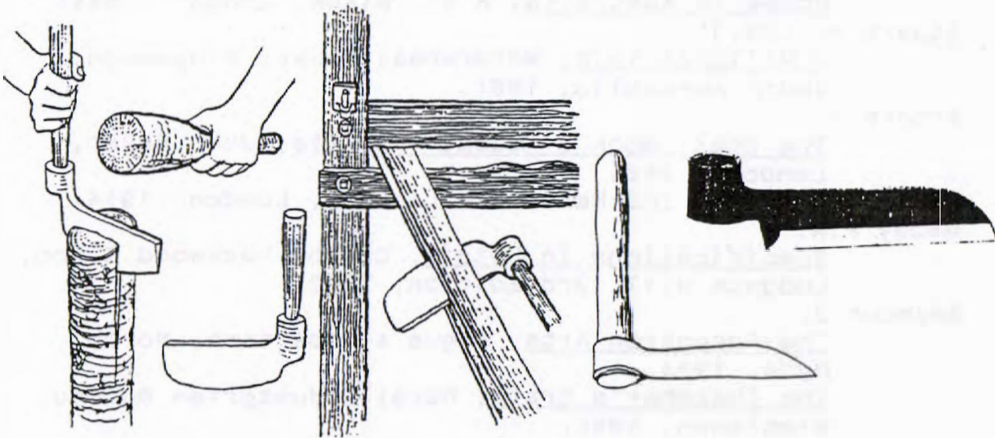
- Unstead R.J. & Henderson W.F.,  
Homes in Australia, A & C Black, London, 1969.
- Stuart A. (Ed.)  
A Miller's Tale, Waterwheel Books, Kingswood, South Australia, 1991.
- Arnold J.  
The Shell Book of Country Crafts, John Baker, London, 1968.  
Roofing, ICS Reference Library, London, 1914.
- Macey F.W.  
Specifications in Detail, Crosby Lockwood & Son, Ludgate Hill, 3rd Edition, 1922.
- Seymour J.  
The Forgotten Arts, Angus & Robertson, North Ryde, 1984.  
The Thatcher's Craft, Rural Industries Bureau, Wimbledon, 1960.

## BASIC TOOLS - THE FROE

by Watson Cutter

The most basic of tools whose designs have great antiquity are the axe, the adze, the chisel etc and the "fro" is no exception. The name "fro" goes well back into history and is derived from the Old English Saxon, High German, Gothic, Norse "fram" or "fra" meaning "from". The fro was already in use in Roman times for making shingles from oak. Strangely we have preserved the word "toward" by not "fromward" which in the literary sense meant "turned away". Fromward is the derivation of the word "fro" and the reference is specifically to the handle of this tool. The tool is also known as a frow, frower, frove, froward, fromard, frammer, or frummer in different parts of England and the Continent. These names were derived from the fact that this tool is always levered away from the user, never towards him. Other names are appended at the end of this article.

The fro resembles the letter 'L' in its general shape, the upright arm is the wooden handle, often made of ash or hickory, and the horizontal one the steel blade sharpened on the lower edge. It is in fact a wedge which can be levered. To obtain broad flat pieces from a round log without the use of a saw the early woodworkers resort to "cleaving", "rending" or "riving". Coarse cleaving was usually done with an axe but finer work was done with a "fro". When cleaving largish logs the cleaver grasps the handle with one hand to hold the "fro" in place, whilst with his other hand he strikes the metal blade with a wooden mallet or beetle so as to drive it through the wood. When smaller logs are being cleft the handle is used after the fashion of a lever once the split has begun, to extend it along the full length of the log. The size and weight of the "fro" vary with the class of work.





In 1622 the English complained about certain inconveniences suffered by persons who transported themselves from England to Virginia without adequate provisions necessary to sustain themselves. In this context the following woodworking tool requirements were considered necessary for a family of six.

Two Broad Axes	3s 8d a piece
Five Felling Axes	18d a piece
Two Steele hand saws	16d a piece
Two Two handled saws	5s a piece
One Whit saw set and filed with box file and wrest	10s
Two Hammers	12d a piece
Two Augers	6d a piece
Six Chissels	6d a piece
Two Percers stocked	4d a piece
Three Gimlets	2d a piece
Two Hatchets	21d a piece
<u>Two Froves to Cleave pale</u>	18d a piece
Two Hand Bills	20d a piece
One Grind Stone	4s
Nails of all sort to the value of	#2.

The use and importance of a froe was thus established in the New World.

The great merit of cleft wood is in its unbroken grain but one had to reject all defective wood which would not cleave freely. Cleaving was thus said to be a wasteful process compared with sawing which utilizes lower grades of timber to produce what was said to be less trustworthy goods. Another basic quality of cleftwood is that the change in shape of each piece when it shrinks on seasoning is reduced to a minimum. Sawn wood unless cut on the quarter or radius of the log shrinks unevenly as it dries out and this often leads to cupping, warping, splitting or other defects from which cleft wood is generally free.





The old craftsman would never saw timber lengthwise if he could not hew or cleave it but often the nature of his task e.g. cutting planks and boards of considerable width or thickness, left him no option.

Froes were used with great skill by many different craftsmen who could commence the split and carry it down great lengths following the grain by feel and reportedly by some, with their eyes shut. Craftsmen such as coopers, shingle cutters, fence and hurdle makers, axe and hammer handle makers, bodgers (chair makers) ladder makers, walking stick and bow makers considered the "froe" as one of their most essential tools.

Cleft handles for example were preferred in the mines on account of their great strength and reliability, for their grain was unbroken and they could withstand the roughest wear when used in pick axes or sledge hammers at the coal face.

As described above "froes" were valuable tools to the woodland craftsman. They are simple in design but not terribly easy to make. The process of forging took a considerable time to master. The secret was in the forge welding of the eye ensuring that the two pieces which came together were clean from oxidation and crud. If you would like to know more about the blacksmiths task read "The Woodwrights Shop" by Ray Underhill. Some times, particularly in older specimens of "froes" they may have a number of smiths' marks recording their visits to the forge each time they had to be re-steeled or have the eye reforged. Decorations found on old broad axes are sometimes to be found on "froes" demonstrating the degree of pride and value which the craftsmen placed on this tool.

While the primitive axe and hammer may have preceded the "froe" it was no doubt responsible for the production of better and more reliable handles for these implements.

#### Other names for a froe

Chit, Cleaving Iron, Flammara, Flamming Iron, Helpmate, Lath Axe, Lath River, Pole Axe, Ramhead, Rending Axe, Riving Axe, Split Axe and Cleaving Axe.

#### Acknowledgements

Dictionary of Tools - R.A. Salaman  
Woodworking Tools - Proudfoot & Walker  
The Complete Book of Tools - Jackson & Day  
Woodland Crafts in Britain - H.L. Edlin  
Country Crafts & Craftsmen - Gary Hogg  
A Trinity of Craftsmen - Freda Derrick  
Old Farm Implements - Philip Wright  
The Woodwrights Shop - Ray Underhill