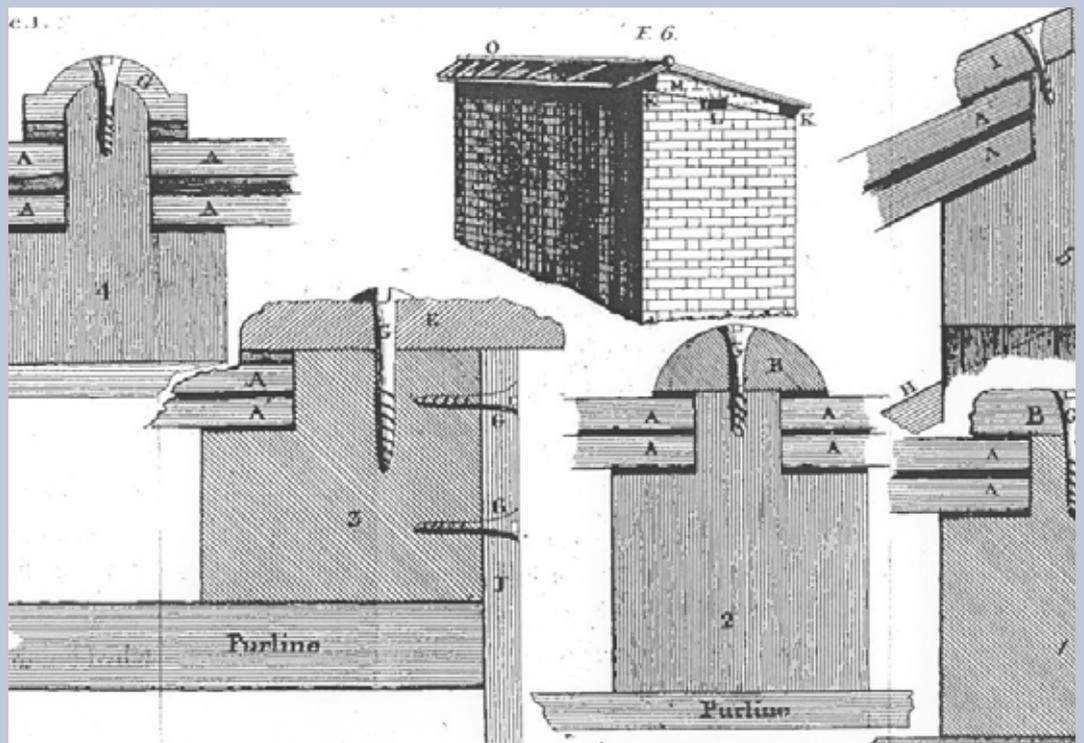


PATENT SLATING



Stone Roofing
Association

In 1772 Charles Rawlinson of Lostwithiel, Cornwall was granted Letters Patent for a New Invented Method of Covering Roofs with Slates. The method was promoted by the architect James Wyatt and used on many buildings in the UK including the Reform Club in London (Charles Barry, 1841), Penoyre House near Brecon (Anthony Slavin, 1848) and the church of St Michael in the Hamlet, Aigburth, Liverpool (Thomas Rickman 1815). Some Horsham stone roofs use a similar system.



THE PATENT SYSTEM

Rawlinson must have been familiar with the large rag slates of north Cornwall and it is interesting to speculate that he realised that only a small part of the slates is necessary for keeping rain out - that part which underlies the perpendicular joints of each pair of slates. On 'normal' slating the full width of the slate is needed because they are not very wide but really all that is needed is sufficient width to provide the necessary side lap.

By laying the slates single lapped and simply butting up the sides, the perpendicular joints are left open but leaks are prevented by bedding slate strips in a 'mastic' or glaziers putty. This means that over almost the whole roof there is only one layer of slate - a saving of nearly 50%. However the system relies on the bedding mastic to be water-proof and a failure to maintain these seals has led to the eventual downfall of all these roofs and the adoption of various additional (but un-necessary) precautions such as underlays when relaying them.

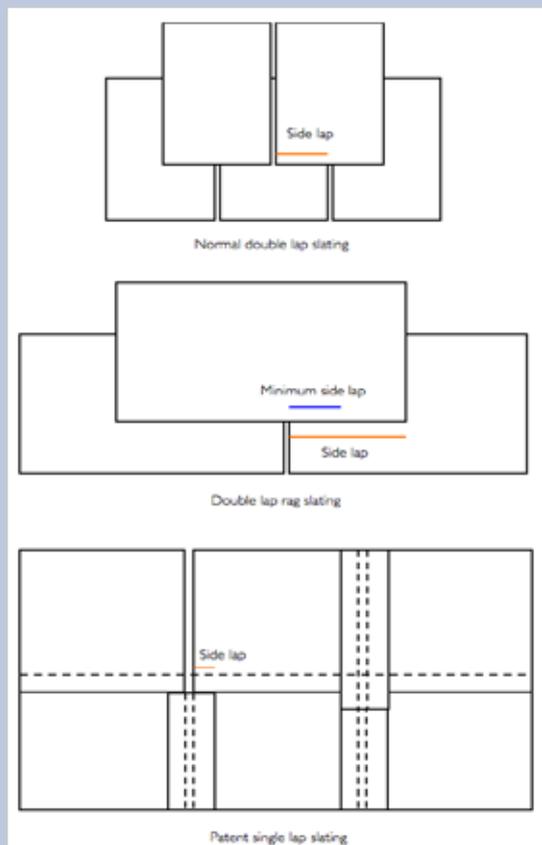
The capping strips and ridges are held in place with screws.



RIEGATE

CORNISH RAGS

ST MICHAEL IN THE HAMLET



JOINT SEALING

In the original patent several recipes are given for the sealing medium. This is the one recommended for buildings near the coast where the weather is more extreme.

To make a hundred weight, take 66 lb. of best whiting, 12 lb. of sea coal or wood ashes sifted very fine, 10 lb. of hard brick or tile sifted fine, 6 lb. of white lead; put all into an iron pot, and heat it over the fire, till the moisture is entirely evaporated. Keep it stirring all the time; and when well dried, put to it three quarts of boiled, and six quarts of raw, linseed oil.

Mix the above with the hand in a tray, or on a board; then well beat it till it becomes tough and soft; mould it thoroughly with the hand, and examine whether all the parts are well incorporated; if they are, it is fit for use.

Although Rawlinson undoubtedly thought he had invented something new, what he hadn't realised was that the technique is ancient and is seen in Ireland, Scotland, Norway and Sweden see Lapping systems.



PATENT SLATING IN CORNWALL

NORWEGIAN HELLETEKING

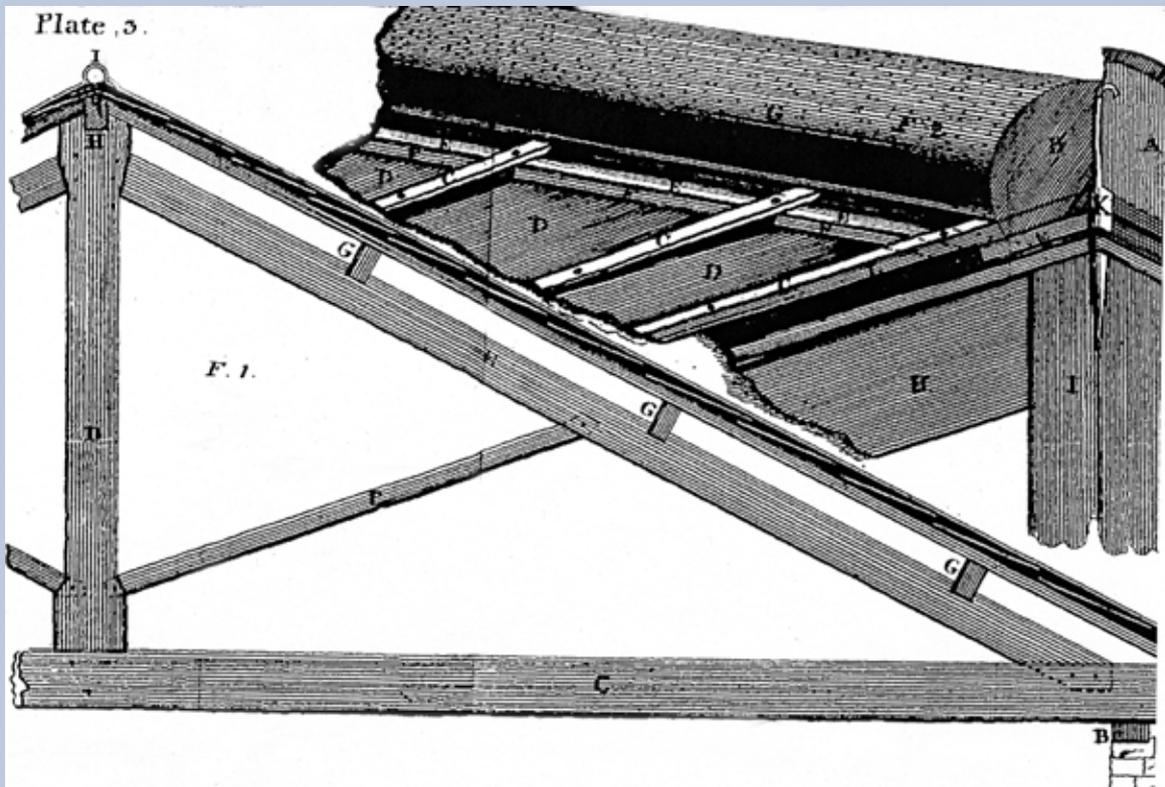


ST MICHAEL IN THE HAMLET

St Michael's in Liverpool was built by John Cragg owner of the Mersey Iron Foundry, Tithebarn St, to a design by Thomas Rickman. Described by English Heritage as one of the earliest and most thorough uses of industrial materials in a major building it used modular sizes of slates to span the cast iron roof trusses forming the ceiling soffits and roof covering.

In the view of the interior the underside of the cast iron rafters and the butt joints in the slate ceiling can be seen. In the view below the ceiling slabs are sitting on the bottom flange of the cast iron rafters





RAWLINSONS PATENT



© 2012