Farm Building Construction

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LAST month's article in this series described various roofing materials. This article discusses the outside sheathing of a building, which is complementary to the roofing in providing total protection from the elements, and also deals with different types of flooring.

TO fulfil their function as a protection from the elements, materials used for sheathing must not only be waterproof in themselves, but they must lend themselves to fixing in a manner that will prevent penetration of moisture at joints to the timber framing. Any such penetration would quickly set up conditions favourable to fungus growth and decay, which consequently would cause rapid deterioration of the load-carrying part of the structure.

Sheathing materials should also have good insulating properties.

Timber frame buildings must be covered on the outside with approved weather-resisting materials. These may be metallic materials, timber, asbestos cement materials, cement plaster or stucco, or brick or concrete veneer.

Timber Sheathing

Timber is the most widely used sheathing material. The hitherto abundant supply of indigenous species particularly suitable for weatherboarding made its almost universal adoption inevitable. Time has established the practice of weatherboard construction securely, but with the decreasing supplies and rising costs of native timbers alternative sheathings, particularly those using cement and concrete in some form, are being more widely used.

The suitable indigenous timbers are not now so readily available and any prejudice against alternative materials must be submerged. This is all to the good, as most alternative materials available have a much greater degree of permanence.

The recommendations of the "New Zealand Standard Code of Building By-laws" concerning timber sheathing are as follows:—

"Weatherboarding shall be either sawn to not less than $\frac{7}{8}$in. finished thickness or run from material not less than 1in. thick, and in the latter case shall have a minimum thickness on any reduced edge of $\frac{3}{8}$in., or two boards may be skew cut from $1\frac{1}{2}$in. thick timber and rebated so as to be in continuous contact with the stud throughout. Boarding of smaller dimensions may be used provided that the outside face of the studs is first closely sheathed with boards of not less than $\frac{5}{8}$in. thickness.

"Horizontal joints in external boarding shall be either rebated to a depth of 1in. or lapped not less than $1\frac{1}{4}$in.

"If external boarding is placed vertically, the individual boards shall be placed not further apart than $\frac{1}{4}$in They shall be weather grooved within $\frac{1}{2}$in. of each edge and the whole joint covered with a double-grooved 3in. by 1in. batten or alternatively some other approved method of weathering to the satisfaction of the Engineer shall be adopted".

Early forms of weatherboard were rebated on the opposite sides of each edge to give a close-fitting overlap. The rebate on the top edge was finished in a radius to ensure moisture run-off.

This method, known as rusticating, can be seen on older buildings.

The newer method is to bevel one side of the board only for approximately half its width. The corner of the opposite edge is also chamfered to help moisture run-off. This method is shown in the diagram on page 67.

The reason for the chamfer on the outside edge of the concrete foundation illustrated in Fig. 4 of the first article in this series is also shown in the diagram. The first weatherboard is fixed with its bottom edge below the top of the concrete foundation. The damp course material may or may not be bent over to come under the weatherboard.

Heading photograph by National Publicity Studios.