



and u. The precautions which are taken to isolate the partitions from the floors should be noted; thus, the insulating pad at u is wider than the wood sill of the partition, and this prevents contact between the floor boards and the sill.

Two methods of providing discontinuity are shown at v and w. Each leaf of the former partition is let into a chase in the main wall. Whilst this increases the stability of the partition, a rigid connection is avoided because of the presence of the brown paper, and thus cracking of the partition is prevented if any unequal movement between it and the wall occurs. Alternatively, the chases may be packed with insulated quilt to prevent the transmission of sound. The caulking of the edges of the partitions shown at w is also effective in preventing the formation of sound paths.

As dry rot has occurred when sheets of wood fibrous insulating material have not been adequately ventilated—such as the inner boards at q and in the class of partition at w—care should be taken to ensure that only those boards not liable to decomposition are used in unventilated positions. Such defects are not likely to occur if sheets composed of asbestos, slag wool or similar inert material are used in unventilated cavities.

Doors are vulnerable to the transmission of sound from one room to another. They should be tight-fitting and as thick as possible. One type of door is shown at x. This is of the flush type (see Fig. 25) and consists of a skeleton wood frame (stiles and rails) covered at each side with a sheet of asbestos or similar insulating material, faced with plywood; if desired, the latter may be dispensed with and thicker sheets of asbestos (subsequently painted) employed. A good insulator, such as granulated cork, is packed to form a core. A sound-proof door in which granulated cork is employed is illustrated at e and j, Fig. 25. Draught strips, rubber or felt, are shown fixed at the rebate of the casing at X, Fig. 14. A draught excluder fixed at the bottom of the door will increase its efficiency. Any space between the casing and the partition should be filled with an insulating strip, as shown, or be tightly caulked with quilt.

Windows present a difficulty, and it is not possible to render them capable of totally excluding noise from heavy street traffic, etc. They should be close fitting, and therefore casements are more effective than the double hung sashed type. Double glazing is recommended and thick glass (such as 1/4-in. thick plate) should be used. Thus the window will consist of two solid frames, each glazed, with a 2 to 6-in. cavity between. The outer frame should be insulated from the inner, quilt pads or insulating strips being used between. These windows are preferably of the fixed type; when such are employed, artificial ventilation must be provided for the rooms concerned.

ROOFS

Single, double and framed roofs are described on pp. 68-81, Vol. I.

DOUBLE ROOFS.—Two examples of a double or purlin roof, not previously considered, are illustrated here in Figs. 15 and 16.

That detailed in Fig. 15 is often employed for roofs of houses in which attics