

EPARTMENT IS DESIGNED TO FURNISH INFORMATION SUITED TO THE REQUIREMENTS OF THE BUILDING TRADES. READERS ARE INVITED TO ASSIST IN MAKING IT AS HELPFUL AS POSSIBLE BY CONTRIBUTING OF THEIR EXPERIENCE, AND BY ASKING FOR PARTICULAR INFORMATION WHICH THEY MAY AT ANY TIME REQUIRE.]

Building Construction

196

LAST month we stated that, if Mr. Kidder, author of "Building Con-

struction and Superintendence," would permit we would present to our readers a few extracts from Vol. 2 of his work which has just been issued. We are pleased to say we have received the permission sought, and further, through the courtesy of his publisher, Wm. T. Comstock, New York, we have secured reproductions of the illustrations, which are presented herewith along with the accompanying text.

(From page 187.) "LARGE skylights, wooden Skylights. and those having a gable or hipped

roof, can be made much better of galvanized iron or copper than of wood, but small skylights or glazed scuttles, when necessary for lighting an attic room, may be constructed of the latter material when not within the fire district. Such skylights usually consist of a glazed sash through which light is admitted, and the frame on which the sash rests, and to which it is usually hinged. When on a pitched roof the skylight or sash is usually placed parallel with and about eight inches above the roof. The proper method of constructing such a skylight is shown in section in Fig. 167. An opening is first framed in the roof by means



of header and trimmer rafters and the frame spiked to the inside of the opening. This frame should be made of 2 inch or $2\frac{1}{2}$ inch plank, $11\frac{1}{2}$ inches wide. Quite often the frame is made of 6 inch or 8 inch rough plank, nailed on top of the roof, the inside flush with the rough opening, and the opening and frame cased with finished boards or ceiling. This method, however, is not as good as the one shown, as the wide planks add to the stiffness of the frame and opening, and prevent the two from separating.

The sash is framed together in the same way as window sash, but should have no cross bars or muntins, and the lower rail should be made so that the glass will pass over it. The rails and stiles should be 2 inches wider than the thickness of the frame, and a 7/8 strip should be nailed to the underside of the stiles, outside of the frame, to protect the joint. For economy in the glass, and also to stiffen the sash, the latter is usually divided into lights about 12 inches wide, by longitudinal muntins or sash bars, as shown in the isometric view. The glass is usually set in putty at the top and sides, but at the bottom the top of the glass is left free to shed water. If the length of the sash is not more than 36 inches each light should be of one piece of glass. When it is greater than this the lights may be glazed with two or more pieces lapped over each other (about 11/2 inches), as shown in the section." **** "The most important items in connection with a skylight of the kind shown are the flashing and provision for taking care of the condensation that always forms on the underside of the glass if the room below is warmed or occupied. Behind the top of the frame a gutter should be formed as shown, the board B being cut so as to be the highest at the middle and falling to each side. The lining of this gutter should extend well up on the roof, and should be turned over the edge of the frame into a groove which should be graded to drain off the water at the sides. If the sash is to open it should be hinged at the top and a strip of lead nailed to the top rail, as shown at H, to form a counter flashing. If the sash is stationary a simple fillet may be nailed to the underside of the sash above the frame. The sides of the frame should be flashed with tin (or zinc) shingles, the same as around a chimney, the flashing being carried to the top of the frame.

At the bottom of the frame it is better to use a wide piece of galvanized iron for the flashing, as shown at D. As the water forms on the glass it runs down until it strikes the lower rail and then drops into the gutter. For a small skylight the water in the gutter will evaporate so that it will not overflow, but in large skylights provision should be made for draining off the water by means of a small pipe carried through the frame. On large skylights, also, if made of wood, the sash bars should have a cross section like that shown by the enlarged section, gutters being formed at G to receive water that may run down on the sides of the bars. These gutters should empty into the gutter under the lower rail. Unless some such provision is made for receiving the condensation much trouble will be experienced by water dripping on the floor. The sash is usually fastened by a flat iron bar, provided with holes to slip over a pin,