

Although some 17th-century window frames and sashes were of iron, windows with wooden frames, sashes, and glazing bars (muntins) became almost universal in the 18th and early 19th centuries. Beginning in the mid-19th century, industrialization made available mass-produced metal windows. These remained relatively rare until the 1930s; since then they have progressively increased in use and are now the dominant type of window in American houses.

Windows are an architectural luxury lacking in some modest folk houses. At least one exterior doorway is essential, however, to permit entrance and exit of the occupants. Originally the doorway served also as the principal "wind-hole" for regulating light and ventilation (hence the phrase: "Never again darken my doorway"). Doors for closing off the doorway are almost universally made of wood in American houses. Because single pieces of wood are never large enough to cover a full door opening, doors are always composite—that is, made up of many small pieces of wood. In the earliest and simplest form of the door, vertical planks are held together with horizontal strips called battens, which are nailed or screwed to the surface of the larger planks.

By the 18th century, more elaborate doors were becoming common. These paneled doors consisted of an exterior framework of relatively thick planks, carefully joined and interlocked, which supported thinner internal planks (or panels). Such doors combine the virtues of strength, light weight, and decorative appearance; they remain the most common type of door in American houses, although they have come to be increasingly replaced in this century by the flush door. Flush doors appear to be single, flat pieces of wood but are, in fact, of veneered construction. They are made up of large, thin sheets of wood that are first peeled from a log with a razor-sharp knife, then glued together to make a strong, composite unit (this same process also produces plywood panels, which have replaced wooden planks for many construction uses in this century). In more modest flush doors, single thin sheets of veneer are applied to the exterior of a solid or hollow framework of joined planks to make a sort of sandwich structure.

It is usually desirable for external doorways, when closed, to admit light into entrance rooms or hallways. Thus many doors are partially glazed with fixed glass panes, which are found in all the principal types—batten, paneled, and flush. Note also that additional glazing is often provided around the door in the form of side or overhead lights.

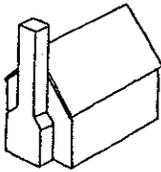
CHIMNEYS—Chimneys are hollow columns of masonry that provide a restricted exit for the smoke and fumes of internal cooking and heating fires. Houses have sheltered fires since the dawn of human civilization, yet chimneys are a relatively recent innovation, having only become widespread in modest English houses at about the time of the first American colonization. This innovation was brought to the New World, where chimneys became a standard feature of American houses. The simplest chimneys are constructed of wooden frameworks covered with a hardened coating of clay. Such chimneys require constant repair and become a serious fire hazard if the coating fails. Thus they are usually replaced by solid masonry chimneys as quickly as circumstances permit. Both brick and stone masonry are widely used in chimney construction, but brick is the preferred material since the regular shape decreases the chance of joint failures, and thus hidden chimney fires.

Although internal fires for heating and cooking are all but universal in American houses, chimneys are not. The first cause of their decline was the development of practi-

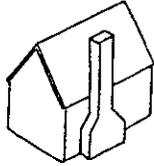
PLACEMENT

TYPICAL CONSTRUCTION

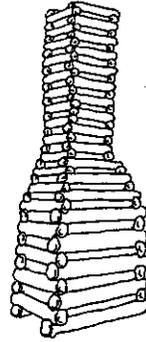
exterior



gable wall



cave wall

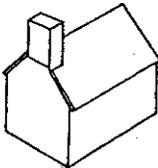


wood and clay

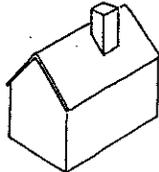


stone

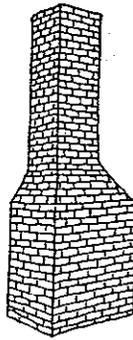
interior



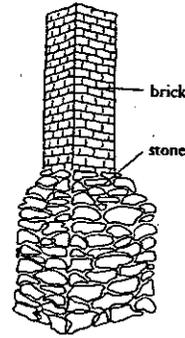
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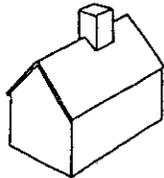
slope



brick



composite masonry

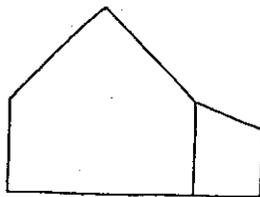
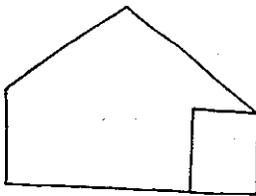


ridge

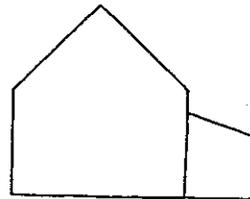
CHIMNEYS

principal roof

secondary roof



extended



dropped

PORCH ROOF CONSTRUCTION