installed by the mason as the work proceeds. There are a variety of products and methods from which to choose, depending largely on the kind of fixture or material to be attached and the type of masonry involved (*see Fig. 7-21*).

The most common method of attaching wood trim items such as baseboards or chair rails is to place *wood nailing blocks* in the vertical joints as the mason builds the wall. These blocks should be of seasoned softwood, creosoted to prevent shrinkage or rot. They should never be placed in horizontal joints. *Galvanized metal nailing plugs,* with or without fiberboard inserts, provide better construction and are easily set into the joints during construction. *Toggle bolts* and *double-threaded fasteners* can be used only with hollow masonry units, and are installed after the wall is completed. *Wood plugs with threaded hooks* can be used with either solid or hollow masonry. The plug may be built into the wall or driven into a hole drilled after construction. *Plastic or fiber plugs* can also be used with solid or hollow units. They are placed in holes drilled into either the mortar joints or face shells of the masonry. *Expansion shields* and *wedge-type bolts* may be used with solid or grouted masonry. Newer attachment methods include pins or fasteners rammed or driven into solid masonry with a power tool or gun, and direct adhesive or mastic application.

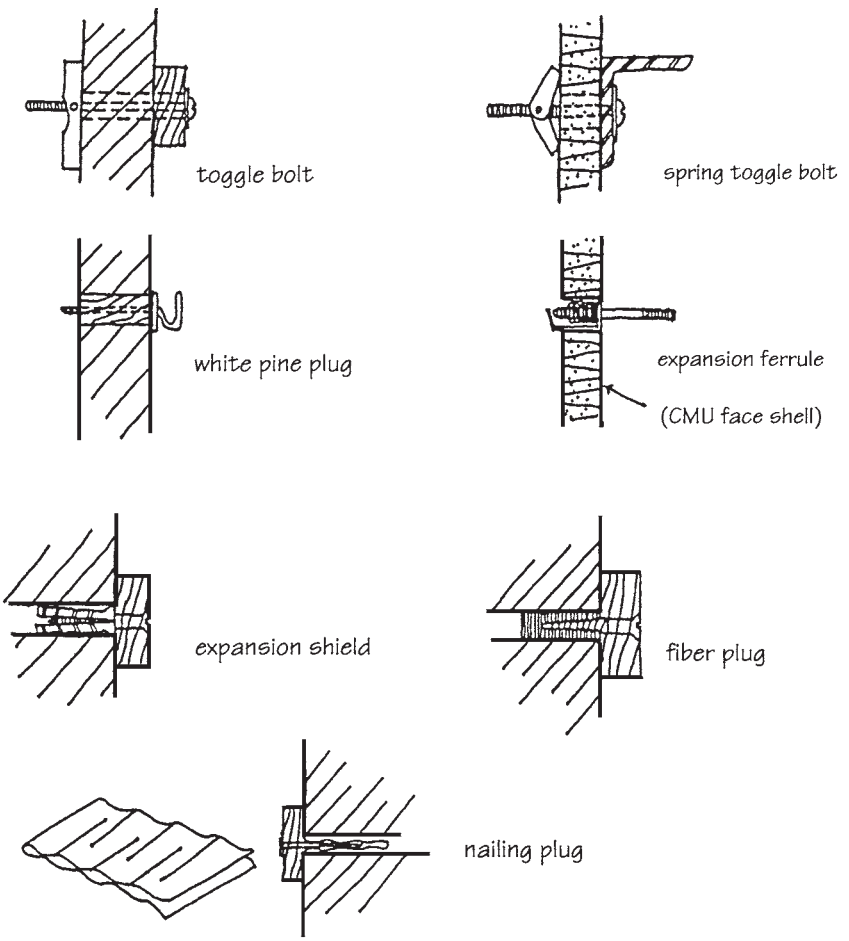

Figure 7-21 Masonry fasteners. (*From* BIA Technical Notes, *Vol. 2, No. 10.*)

Wood furring strips can be attached using nailing blocks, metal wall plugs, or direct nailing into mortar joints with case-hardened "cut nails" (wedg-shaped) or spiral-threaded masonry nails. Special anchor nails may be adhesively applied to the wall, or porous clay nailing blocks may be inserted into the bonding pattern (*see Fig. 7-22*). Metal furring strips are attached to the wall by tie wires built into the mortar joints or by special clips designed for this purpose.

7.4 MOVEMENT JOINT FILLERS

Concrete masonry moisture shrinkage and clay masonry moisture expansion, along with reversible thermal movement, are accommodated through special jointing techniques which allow movement without damage to the wall. Control joints for concrete masonry are designed as stress-relieving contraction points, and must extend completely through the masonry wythe. Preformed rubber or PVC shear keys transfer lateral loads across the joint while allowing it to open as the masonry shrinks (*see Fig. 7-23*), and should have a high-durometer hardness. Softer materials such as neoprene rubber sponge are used for expansion joints in clay masonry walls, where brick masonry expansion will compress the filler as the joint closes. Expansion joint fillers are used only to keep mortar out of the joints during construction, and should have a compressibility at least equal to that of the sealant which will be used.

7.5 BAR POSITIONERS

Proper structural function of reinforced masonry and proper interaction between grout and reinforcement require that the reinforcing bars be located in the position required by the design. Accurate positioning requires the use of special accessories or special units (*see Fig. 7-24*) which are capable of holding the reinforcement in place during grouting operations.

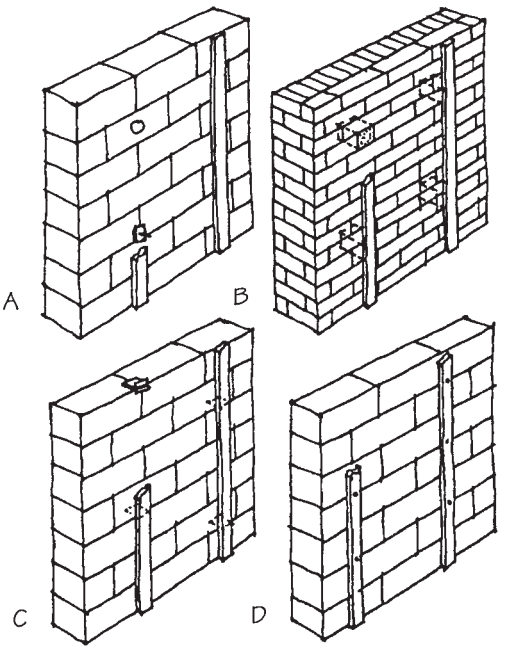

Figure 7-22 Wood furring strips. (*From* BIA, Technical Notes, *Vol. 2, No. 10.*)