

SPECIAL STEPS

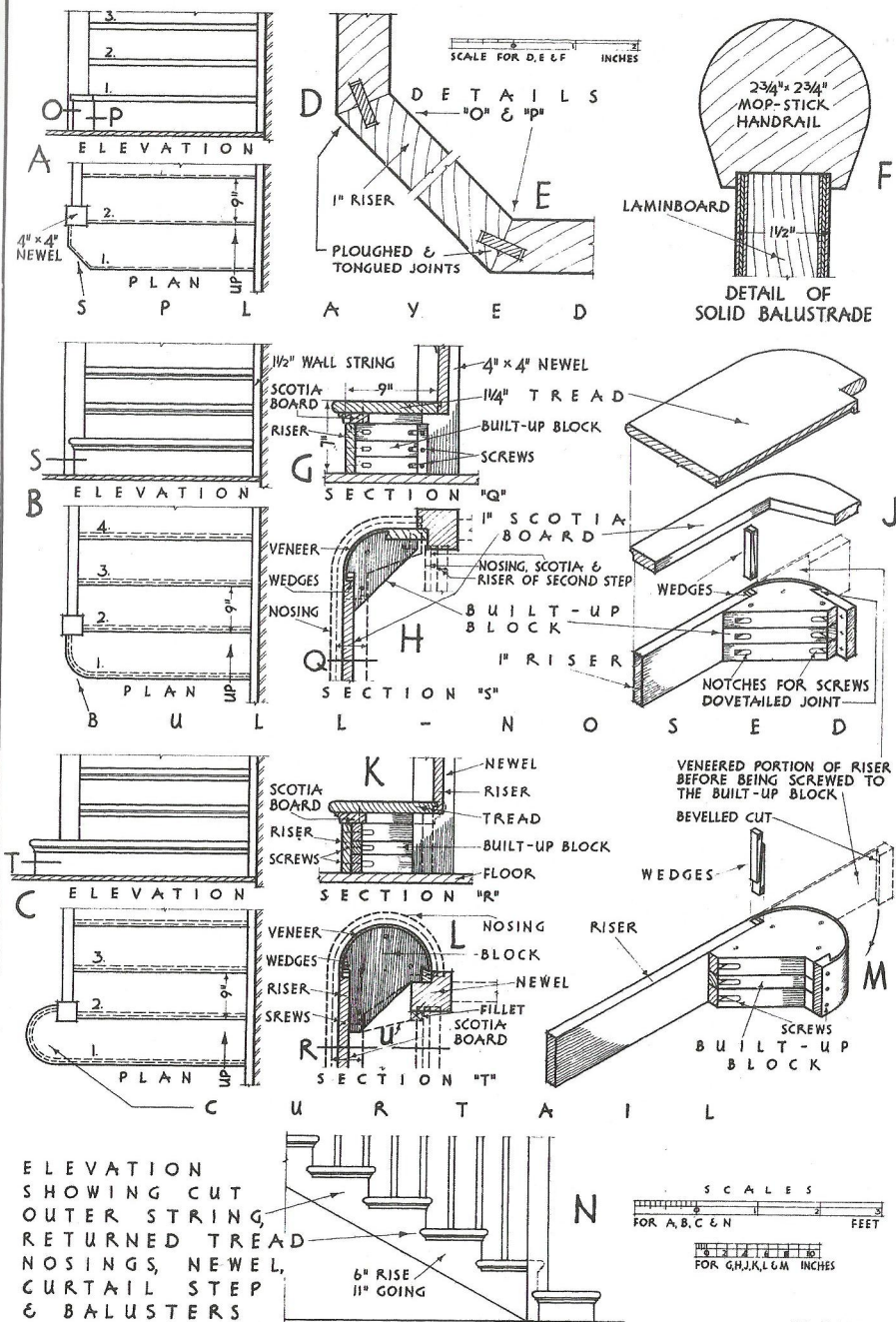


FIGURE 39

SPECIAL STEPS

order to reduce still further the liability to shrinkage, the pieces are arranged "cross-grained," i.e., the grain of one is opposite to that of the adjacent piece (see J and p. 102).

The step is constructed in the following manner: The block is built-up to the required height by gluing and screwing or nailing the pieces together, the top and bottom surfaces are planed flat and the block is cut to shape, as shown at H and J; the block is double rebated, one edge being square cut and the opposite edge (nearest to the newel) being bevelled cut or dovetailed. The riser (which should be of carefully selected straight-grained timber, free from knots) is then prepared by marking off the position of the bevelled and square cuts, the length of the veneer being found by placing the dovetailed edge of the block opposite to the corresponding mark on the riser and revolving the block on the back of the riser until the square edge of the block rebate touches the riser, which position is then marked; an extra 3/8-in. is measured on the riser to provide room for the pair of folding wedges. A marking gauge (see 4, Fig. 67, Vol. I) is now used and the thickness of the veneer marked on the riser. Cuts are made across the back of the riser to form the shoulders, and the chisel and router plane are used to remove the core and form the veneer. The cutting of the veneer is often done on the circular saw and sometimes on the band saw. The shape of the veneered end of the riser, before it has been fixed to the block, is shown by broken lines at J. The back of the veneer and the outer face of the block is then roughened by the toothing plane or file to give a key for the glue. The latter is now liberally applied to the back of the veneer (after its face has been wetted with boiling water) and the face of the block. With the dovetailed shoulder of the veneer engaging in the dovetailed rebate on the block, the riser is pressed against the block; the glued wedges are inserted and driven home in order to bed the veneer tightly on the block, and the latter is secured to the riser by means of screws from the back, the notches for these having been previously prepared.

The scotia board, after being reduced in width and shaped, is screwed to the riser and tread.

The foot of the newel is notched out, as shown, and the riser is screwed to it.

A bull-nosed step is also illustrated at D, Fig. 29, A, Fig. 35 and F, Fig. 36.

CURTAIL STEP (see C, K, L and M).—The construction of this semicircular ended step is similar to that described above. The back of the block is sometimes shaped as shown at U (see L) and a vertical fillet (shown crossed by diagonals) is screwed to it and the newel. The end of a curtail step may also be of a spiral form (see the bottom step at O, Fig. 29). Because of the side projection of this step it should not be used if the width of the floor at the side is restricted.

CUT STRING (see N).—This has been included to show the difference between it and all of the close strings illustrated. The upper edge of the string is notched out to receive the treads, and the moulded nosings are returned. There are usually two balusters per step, with a face of one vertically over a riser. This form of string is considered in detail in Vol. IV, as is the commode step (see F, Fig. 29) which has a curved riser built up with narrow vertical strips covered with a veneer.

Stone steps and stairs are detailed in Figs. 44 and 45, Vol. II, and described on pp. 115 and 117. Details of a reinforced concrete step are given in Fig. 46, Vol. II.

PLYWOOD

A brief description of the manufacture of plywood is given in Vol. I. As plywood is now one of the most important building materials, and its use, already