

It will be seen at G, that the 4-in. by 2-in. bearer or carriage cannot be continued to the floor but is supported by a trimmer which is secured to the newel and built into the wall. Therefore, other means of support must be obtained for the winders; hence the provision of a bearer immediately below each of the risers of the second and third steps. As shown at A, C and D, a 3-in. (or 4-in.) by 2-in. bearer, marked "1," is housed into the newel and wall string, and its outer face is in line with that of the riser of step "2" immediately above it (see also G). Similarly, the outer face of bearer "2" is directly below that of the third riser. The treads, because of their maximum width, have to be jointed; these are preferably ploughed and tongued (known also as "cross-tongued") joints and are shown at A and C and by faint lines at D; they are similar to those detailed at D and E, Fig. 39. The short returned wall string is tongued and grooved and nailed to the main wall string, the upper edge of which is cut to a curve or easing. These strings must be increased in width to accommodate the winder treads, and the joints between the boards used to build up the string are also ploughed and tongued (see B, C and G).

SPECIAL STEPS

The bottom step at least of a stair is often specially shaped. This adds greatly to its appearance. Several of these finishes are illustrated in Fig. 39.

SPLAYED STEP.—The application of this step is shown in the part plan and elevation at A and is detailed at D and E. The bottom step projects beyond the newel. Its riser is in three pieces, the vertical edges of which are mitred, ploughed (grooved) and glued hardwood tongued. The nosing of the tread is shaped to conform. The outer ends of the two bottom steps at J, Fig. 29, are splayed and constructed in this manner, and both ends of the two steps at the foot of the central flight at N are similarly treated (see also C, Fig. 29, D, Fig. 32 and A, Fig. 34).

A splayed step may also be formed by constructing the riser as described below.

BULL-NOSED STEP (see part plan and elevation at B and the details at G, H and J).—The round end of the step consists of the riser (which is in one piece and has its thickness reduced near the end to enable it to be bent round a wood block shaped to the required quadrant curve), a shaped scotia board (if required) and the tread shaped at the end to conform. The curved portion of the riser is called a *veneer*, as it serves as a thin covering to the block. Its reduced thickness depends upon the curve; the sharper the curve, the thinner the veneer; in the given example the thickness is approximately $\frac{1}{2}$ -in., although for clarity this has been exaggerated in the details. The block strengthens the riser and prevents the veneer from being damaged. This block must not be in one piece only, as this would tend to shrink to such an extent as to leave a space between it and the veneer; the latter would then be readily damaged because of lack of support. Accordingly, the block is built-up of three or more pieces, and, in

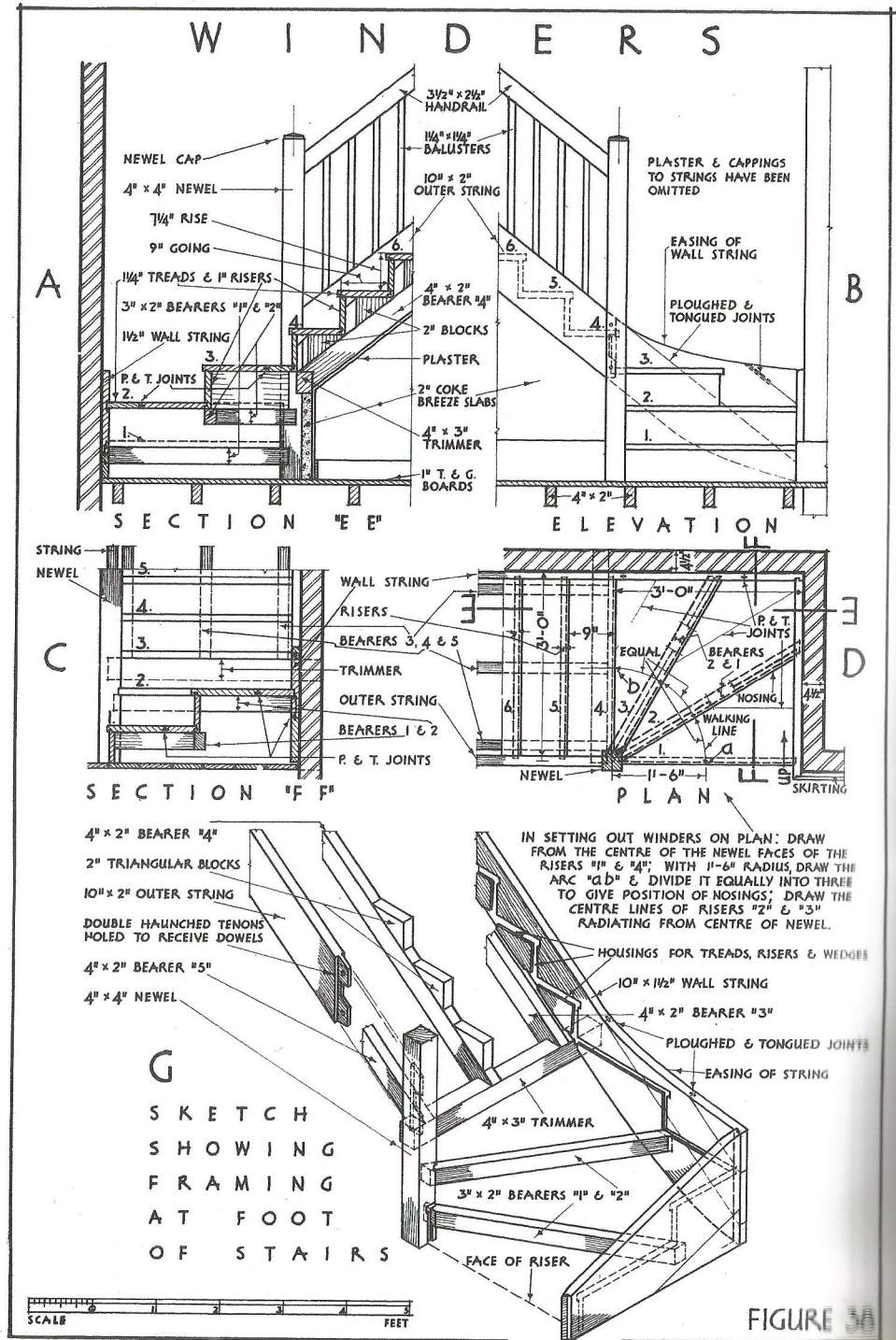


FIGURE 38