

the combined width of both flights and a complete half-turn is necessary, it is known as a *half-space landing* (see Figs. 29, 32, 34 and 35).

*Line of Nosings* is that drawn to touch the projecting edges or nosings of the treads (see c, Fig. 30 and d, Fig. 31).

*Margin* is the portion of a close string (see p. 80) between its upper edge and the line of nosings (see d, Fig. 31). This term is also applied to the portions of treads and risers between the strings and the carpet or other covering.

*Newels or Newel Posts* (see Figs. 29, 32, 33, 34, 36, 37, 38 and 39) are substantial vertical members placed at the ends of flights to support the strings, handrails, trimmers and bearers. The upper moulded end is called the *cap* and the projecting lower end is known as a *drop*.

*Nosing* (see Figs. 30, 31, 32, etc.).—This is the front edge of a tread which projects beyond the face of the riser below it; it is also applied to the projecting upper member of an apron (see c, Fig. 32).

*Nosing Line* (see h, Fig. 31).—Drawn on a string for setting-out the steps and is the line set out at the required distance from, and parallel to, its upper edge along which is marked the intersecting points between the treads and vertical faces of the risers (see p. 84). It must not be confused with the "line of nosings" (see above) which is nearer to the upper edge.

*Open Well Stair*.—See p. 93.

*Pitch or Slope* is the angle between the line of nosings and the floor or landing.

*Pitch-board or Step-mould* is used for setting out the steps on the strings and is a thin wood triangular *templet* (*pattern* or *set square*). One of its sides is equal to the going, that at right angles to this is equal to the rise, and the remaining side gives the pitch of the stairs. That shown at e, Fig. 31 has, in addition, a "margin templet" (although its width is actually the distance between the edge of the string and the nosing line, see h), and a thin strip at right angles to it is maintained against the edge of the string and assists in ensuring accuracy in setting out. Two additional patterns, called a *tread templet* and a *riser templet* are required to set out the housings (see p. 84) of the treads and risers respectively (see f and g, Fig. 31); the width of the tread templet equals the thickness of the tread and that of the wedge, whilst the width of the riser templet is equal to the combined thickness of the riser and wedge. The application of these templets is shown at h (see also p. 84).

*Rise* of a step is the vertical distance between the tops of two consecutive treads (see f, Figs. 30 and 32), and the rise of a flight is the total height from floor to floor, or floor to landing, or landing to landing.

*Riser* is the front member of a step which is connected to the tread (see f, Fig. 30, etc.).

*Run*.—See "Going."

*Scotia* is a concave mould used to provide an additional finish to the nosing of a tread (see d, Fig. 31). A *scotia board* is cut from a relatively wide board and used at nosings of treads forming bull-nosed and similar rounded bottom steps (see Fig. 39).

*Soffit or Planceer* is the under surface of a stair which is often plastered (see c, Fig. 30, e, Fig. 32 and d, Fig. 36).

*Spandrel or Spandril* is the triangular surface, either plastered or panelled, between an outer string and the floor (see c, Fig. 32).

*Splayed Step*.—See "Steps."

*Stair*.—As stated on p. 78, this consists of a set of steps which leads from one floor to another. Stairs are classified as follows:—

(a) Straight Flight Stairs.

(b) Turning Stairs, including (i) quarter-turn, half-turn, three-quarter-turn and bifurcated, and (ii) newel and geometrical.

(a) *Straight Flight Stair* (see A, Fig. 29 and Fig. 30).—This continues throughout its entire length in one direction and may consist of a single flight only or two or more flights in its length which are separated by landings.

(b) (i) *Quarter-turn Stair* (see D, E, F and G, Fig. 29).—This type changes its direction either to the left or right, the turn being affected either by a quarter-space landing or by winders (see p. 80).

*Half-turn Stair* (see B, C, H, J, K and L, Fig. 29) has its direction reversed either by a half-space landing (as at B, C, H and K), or a quarter-space landing and winders, or two quarter-space landings and a short flight (as at J), or completely by winders (as at L), etc.

*Three-quarter-turn Stair* has its direction changed three times with its upper flight crossing the bottom one.

*Bifurcated Stair* (see M, Fig. 29) is a type common in public buildings in which it appears as a prominent feature. The bottom wide flight is divided at a landing into two narrower flights which branch off to the right and left. That shown is also known as a *double quarter-turn stair*; if each side flight is continued with an additional quarter-turn (as shown by broken lines at N), the complete structure is called a *double half-turn stair*.

(b) (ii) *Newel Stair* (see B, C, D, E, H, J and N, Fig. 29) has a newel at the foot and head of each flight of the stair. The newels are therefore a conspicuous feature.

*Geometrical or Continuous Stair* (see F, G, K, L and O, Fig. 29).—Both the strings and handrails are continuous and are set out in accordance with geometrical principles. A newel may, for reasons of design, be introduced at the bottom and top of such a stair, but is not an essential part of the construction. Those at G and L are also called *winding stairs*. Geometrical stairs, circular on plan and with the steps radiating from the centre, are called *circular* or *spiral* or *helical* stairs; the wall string of a circular stair may be octagonal on plan as an alternative to the more expensive circular form. An *elliptical stair* is of this type, the plan of its outer string being in the form of an ellipse with its wall string parallel to it.

Stairs in class (b) include the *dog-leg* (see B and H, Fig. 29 and Figs. 32, 34 and 35) and *open well* (see C, J, K and L, Fig. 29 and Figs. 36 and 37).

*Staircase*.—This, as previously stated, includes a stair and the part of the building which encloses it.