

TEMPORARY TIMBERING

Certain forms of timber construction are only required as temporary supports of work carried out during preliminary building operations or in the erection of permanent structures, after which they are removed. Timbering to support the sides of trenches which are to receive wall foundations, drains, etc., and that known as centering which is required to support arches during their construction are examples of this type of construction.

TIMBERING TO SHALLOW TRENCHES

The timbering of these excavations is done by the labourers as the work proceeds. The sizes and arrangement of the various timbers are influenced by the nature of the soil and the depth of the cutting. There are many different kinds of soil, but for convenience they may be divided into: (1) *Hard* (including rock and exceptionally hard chalk), (2) *Firm* (including hard chalk and dense gravel), (3) *Moderately Firm* (including soft chalk, loose gravel and compact clay), (4) *Loose* (including dry sand, soft clay, ordinary loamy soil and made-up ground), and (5) *Loose and Waterlogged* loamy soil and sand.<sup>1</sup>

TERMS.—The following are the various members which are used in timbering and are illustrated in Fig. 42:—

*Poling Boards.*—Members placed vertically next to the sides of the excavation or sheeting (see below); sizes vary from 7-in. by 1½-in. to 9-in. by 1½-in. and are from 2 to 4-ft. long.

<sup>1</sup> This division is purely arbitrary; some authorities have subdivided both sand and clay into a score or more different kinds for the purpose of assessing their bearing capacity.

*Walings, Wales, Waling Pieces or Planks.*—Members placed horizontally next to the earth or poling boards; various scantlings are 4-in. by 3-in., 4-in. by 4-in., 6-in. by 4-in., 7-in. by 2-in., 9-in. by 2-in. and 9-in. by 3-in., and from 8 to 14-ft. lengths.

*Sheeting.*—Members placed horizontally; of similar scantlings to poling boards and from 8 to 14-ft. long.

*Struts.*—Short lengths of timber driven down between poling boards or walings at a minimum distance of 6-ft. centres; are from 3 to 4-in. square, or they may be short ends of scaffold poles which are from 3 to 5-in. diameter.

Whilst spruce is often used for rough work of this nature, in practice old putlogs (horizontal members of scaffolding), scaffold poles, floor joists and wood which is unsuitable for better work is adopted.

A First Year Syllabus is limited to the disposition of the timbering of trenches which are approximately 3-ft. deep and which are known as shallow trenches. The following description may be applied to a trench, excavated in various soils, to receive the foundation shown at G, Fig. 10, and which is 4-ft. wide and 3-ft. 3-in. deep.

1. *Hard Ground.*—No timbering would be required (unless there were pockets of loose soil) for the sides of the trench would be self-supporting.

2. *Firm Ground* (see A, Fig. 42).—Whilst there would be little likelihood of the sides of a shallow trench caving in if left unsupported for a short time (hard chalk will retain a vertical face, 10-ft. high, until weather conditions begin to disintegrate it), it is sometimes necessary to provide a light support in the form of a pair of poling boards strutted apart at a *minimum* distance of 6-ft. centres. This distance is necessary to allow sufficient working space for the men engaged in constructing the foundation. Usually it is sufficient to use one

