

variety, the rock is called a *muscovite granite*; a *biotite granite* contains the dark mica only; when both micas are present, it is known as a *muscovite-biotite granite*. A *hornblende-biotite granite* has a hornblende and dark mica content, and if hornblende without mica is present it is a *hornblende granite*.

The colour of granite is influenced chiefly by that of the felspar. The texture is also estimated by the size of the felspar crystals; thus, it is considered that granites containing felspar grains which exceed  $\frac{1}{8}$ -in. in length are coarse-grained, those having felspars between  $\frac{1}{8}$  and  $\frac{1}{16}$ -in. are medium-grained granites, and fine-grained granites have felspars less than  $\frac{1}{16}$ -in. long.

Granites are extremely hard, durable and strong. Those with plagioclase felspars and dark micas are relatively less durable than granites having orthoclase felspars and light micas. As described on p. 105, granites are capable of taking a high polish and are therefore easily kept clean when employed in polluted atmospheres. Owing to their great hardness, granites are difficult to work and are thus expensive. This accounts for their restricted use for building purposes. Their very high strength and durable qualities render granites the best natural stones for resisting high stresses and severe exposure; in addition, the rich

mottled or speckled coloured appearance of certain granites make them most suitable for decorative use, as for wall and floor coverings, pillars, etc. Granites have been used on many important buildings (for plinths, external walls of lower storeys, and dressings to principal entrances, etc.), for memorials, and for engineering works (including docks, sea walls, embankments, lighthouses and bridges). In districts near the quarries, granites have been used exclusively for the construction of external walls of buildings; thus, the external walls of most of the buildings in Aberdeen are constructed of this material. Granite, because of its hard-wearing quality, is used for kerbs of streets, and for the same reason it has been extensively employed for road setts, although this form of road paving is not now favoured on account of the noise from traffic which results when streets are laid with setts. It is also used for coarse aggregates for concrete.

The principal centre in England where granites used for building purposes are quarried are Cornwall and Westmorland (Shap). Scottish granites are worked chiefly in Aberdeenshire (the most important centres being Aberdeen and Peterhead) and Kirkcudbrightshire. The principal granite districts in Ireland are in counties Down, Dublin, Wexford and Wicklow. Norwegian

TABLE III  
GRANITES

REF. No. (see Fig. 33).	NAME OF GRANITE.	SITUATION OF QUARRY.	NAME AND ADDRESS OF OWNER.	CRUSHING STRENGTH (tons per sq. ft.).	WEIGHT (lb. per cub. ft.).	CHARACTERISTICS.
2	CORRENNIE	Alford, Aberdeenshire	John Fyfe Ltd., Blaikie's Quay, Aberdeen, Scotland	1700	162	A muscovite-biotite. Salmon red; medium grained.
8	CREETOWN	Fell Hill and Silver Hill Quarries, Creetown, Kirkcudbrightshire	Stewart & Co. Ltd., 25 Fraser Road, Aberdeen	1382	169	A biotite. White (when hammered) and bluish-white (when polished); fine grained.
64	DE LANK SILVER GREY	De Lank, St Breward, Bodmin, Cornwall	Cornish De Lank Granite Quarries Ltd., De Lank, Bodmin, Cornwall	1171	165	A muscovite-biotite. Light greenish-grey; medium grained.
3	KEMNAY	Near Aberdeen, Scotland	John Fyfe Ltd., Blaikie's Quay, Aberdeen, Scotland	1987	164	A muscovite-biotite. Light silvery-grey speckled with black mica; medium grained.
4	LOWER PERSLEY	Near Aberdeen, Scotland	George Hall, 17 Back Hilton Road, Aberdeen	1284	166	A muscovite-biotite. Light bluish-grey; fine grained.
1	PETERHEAD, RED	Stirling Hill, Boddam, Peterhead, Aberdeenshire	Heslop Wilson & Co. Ltd., Peterhead Granite Works, Boddam, Aberdeenshire	1286	175	A biotite. Brilliant red; coarse grained.
6	RUBISLAW	Aberdeen, Scotland	Rubislaw Granite Co. Ltd., Queen's Road, Aberdeen	1099	156	A muscovite-biotite. Bluish-grey; fine grained.
5	SCLATTIE	Bucksburn, near Aberdeen	A. & F. Manuelle Ltd., 59 Marischal Street, Aberdeen	849	160	A muscovite-biotite. Light bluish-grey; medium grained.
16	SHAP	Shap, Westmorland	The Shap Granite Co. Ltd., Shap, Westmorland	1500	165	A biotite. Greyish-pink ("Light Shap") and reddish-brown ("Dark Shap"); medium grained.
62 63	TOR BRAKE AND TOR DOWN	St Breward, Bodmin, Cornwall	Wm. Nankivell & Sons Ltd., St Breward, Bodmin, Cornwall	...	163	A muscovite-biotite. Silvery-grey; medium grained.