

Among the cases quoted by Playfair in his further discussion of this subject, is the series of veins which accompany the junction of the granite and schist of Galloway. Sir J. Hall and Mr. Douglas, following the previous indications of Dr. Hutton and Mr. Clerk, traced the line of separation between the granite and schist all round a tract of country about eleven miles by seven, extending from the banks of Loch Ken westward; and in all this tract they found that wherever the junction of the granite with the schistus was visible, veins of the former, from fifty yards to the tenth of an inch in width, were to be seen running into the latter, and pervading it in all directions, so as to put it beyond all doubt that the granite of these veins, and consequently of the great body itself, which was observed to form with the veins one uninterrupted mass, must have flowed in a soft or liquid state into its present position.

Perhaps no better example of granite veins is known than in the mountain of Tornidneon, above Loch Ranza, which was examined by Sir J. Hall. From a careful personal survey of this case, in 1826, the following notes and diagram (No. 84.) are extracted. The junction of granite and a dark quartziferous clay slate, with rather wavy laminæ, takes place nearly in a vertical line, rudely parallel to the lamination of the slate. The granite at a distance from the slate is very coarse grained (composed of quartz, felspar, and mica, occasionally with cavities inclosing those minerals distinctly crystallised), and sometimes porphyritic; but where it touches the slate it appears fine grained and much more compact. Veins pass from the granitic mass in various directions: a great vein, which incloses fragments of slate, divides itself, and crosses at different angles the slaty laminæ, but is not ramified into many small strings. In the large vein the granite is coarse, but in the small veins it is fine grained.

The substance of granite veins is sometimes undistinguishable from that of the great mass whence they spring, as in some of the veins which surround the granitic