in a few hours by the rapid evaporation incident to the region. These characteristics are especially pronounced in the central part of the area mentioned. The farming lands are situated on benches, sometimes two hundred feet or more above the level of the railway, which runs along the valley of the Thompson river, and at no great distance from the bank. Hay is the most valuable crop raised, and is used to winter cattle, and, with sufficient irrigation, several crops of it can be obtained in each season. Water has, therefore, been lavished upon the fields for nearly forty years, and has, in the opinion of the writer, been the cause of numerous land slides, one of the greatest of which occurred in 1881, when about 100 acres slid forward for nearly a quarter of a mile, falling in that distance about 300 feet, and completely blocking the Thompson river for about three days by forming a dam seventy-five feet or more in height. Many similar slides on a smaller scale have occurred since that date, but, generally, with slower movement and less disastrous effect. One of these is of large area and includes a portion of the railway line; it has required constant watching and has been a cause of much anxiety to the railroad officials, because, although its forward progress has been slow, it has begun to move, year after year, at a date about three months after the beginning of the irrigation season, and has continued moving for about the same period of time. In 1886 the Canadian Pacific Railway Company took legal proceedings against the parties irrigating the fields above this slide, and it devolved upon the writer to furnish the legal advisers for the Company with evidence to prove that the slide was due to the action of irrigation water. An investigation was made by the writer in consultation with Messrs. Stanton and Schuyler, who were employed by the Company, as experts in hydraulic engineering and, particularly, in irrigation practice, and with Mr. H. J. Warsap, manager of the Canadian Pacific Railway Portland Cement Works at Vancouver, an expert in clays. At the slides were found beds of clay so exceedingly dry and hard as to have the appearance of soft sand stone, and still retaining the marks of picks in the slopes of railway cuttings, where dressed many years ago. When a block of this dry indurated clay was placed in a soup plate and water dropped upon it, the clay absorbed 50 per cent of its own weight without any change of form or other visible effect, but when it had absorbed about 60 per cent of water, its structure completely collapsed, and it became as fluid as water. This was considered by us as conclusive