South Joggins, and of the great thirty feet seam of the Picton coal series, whose innumerable laminæ have all been subjected to careful scrutiny, and have shown unequivocal evidence of land surfaces accompanying the deposition of the coal. Microscopical examination has proved that these coals are composed of the materials of the same trees whose roots are found in the underclays, and their stems and leaves in the roof shales ; that much of the material of the coal has been partially subjected to subaërial decay at the time of its accumulation; and that in this, ordinary coal differs from bituminous shale, earthy bitumen and some kinds of cannel, which have been formed under water; that the matter remaining as coal consists almost entirely of epidermal tissues, which being suberose or corky in character are highly carbonaceous, very durable and impermeable by water, and are, hence, the best fitted for the production of pure coal; and finally, that the vegetation and the climatal and geographical features of the coal period were eminently fitted to produce in the vast swamps of that period precisely the effects observed. All these points and many others have been thoroughly worked out for both European and American coal fields, and seemed to leave no doubt on the subject. But several years ago certain microscopists observed in slices of coal, thin layers full of spore cases, a not unusual circumstance, since these were shed in vast abundance by the trees of the coal forests, and because they contain suberose matter of the same character with epidermal tissues generally. Immediately we were informed that all coal consists of spores, and this being at once accepted by the unthinking, the results of the labours of many years are thrown aside in favour of this crude and partial theory. A little later, a German microscopist has thought proper to describe coal as made up of minute algæ, and tries to reconcile this view with the appearances, devising at the same time a new and formidable nomenclature of generic and specific names, which would seem largely to represent mere