

NO "UITLANDERS" NEED APPLY.

Having ransacked the world's scientific centres and attained to that perfection where the metallurgical engineer is being requisitioned to solve close questions remaining unsolved, it is proposed by the leader of the Opposition to the Jamieson Administration at the Cape that South Africa shall proceed instantaneously to be self-sustaining in the matter of geologists, mining experts, miners, engineers and metallurgists.

No country has profited more fully than South Africa from the brain products of Freiburg, McGill, California and Stanford, Cornell, the Royal Schools of Mines, and technical institutes generally; nowhere has a higher premium been paid to the specialist. Becker, Molen-graaff, Williams, the Jennings, Hammond, Ross Browne, Corstorphine, Hatch, Webb, Yeatman, Iaverneh, Raymond, Webber, and others of more or less note, were commandeered by Hamilton Smith and his successors in the exploitation of the low grade bankets of the Witwatersrand and diamond mines of Griqualand West, Orangia and the Transvaal. Coarse crushers and the Californian stamp reduced exceptionally hard rocks to requisite meshes. The Home Country's improvised cyanide process released precious gold contents otherwise not economically extractable. Filter presses, conceived in Germany, rock drills, diamond drills, all the appurtenances of mining at great depths, were provided by foreign instrumentalities.

A section of South Africans, born in the sub-tropics, recognizes all this, and would have been worse off had it not been so, but it is the fatuous contention of those so holding, that diamonds and gold leaving that country offer no permanent substitute, consequently mining is to be measured, industrialism divorced from the prime factor of profit in the tonnage turnover, and ultimately the foreign authority is to be given "Paddy's Rise." Mr. Merriman, once a party to the Rhodes amalgamation of Kimberley interests, and now the leader of the Bond or South African party at the Cape, outlines this programme. Upon this platform he seeks to effect the federation of South African States. A Government monopoly in wines and liquors, together with training institutions precedent to the implied exclusion of foreign talent, completes the Merriman conception of the fitness of things. When this has been accomplished, he argues, there will be no occasion for outsiders. Nothing, however, is said of the competency of those undertaking all this to find the millions of fresh capital for which there is urgent demand from the directorates of non-producing or undeveloped properties which are unlikely to place a set of timbers until the Rand's credit improves.

Because the Witwatersrand is the greatest of gold-fields, its concentrated riches being so unique as to permit of large capital expenditure in the reasonable certainty of return on the same over a fixed period, anything pertaining to technical mining chiefs there employed is of international importance. The diamond mines of Kimberley have left little to be determined in the treatment of "blue ground" contained in the "pipes" or the recovery and classification of the gems. Economics in breaking rock and bringing it to mills, in expediting cyanidation, in secondary agencies, in promoting the efficiency of labor units, white and black, are still in the making. Recently stamp duties have been increased, extraction has attained to 95 per cent. and over of assay values. Stopping devices promise important curtailments in costs. Explosives are half what

they were ten years ago in the item of mining. Spraying and ventilation regulations have minimized the risks of phthisis.

Such are the benefits of interchanges of knowledge. Had Bantjes and Struben been left to their own resources their discovery of the auriferous "bankets" would have been insignificant. It was the adaptation of cyanide and what has followed, the enterprise of Fraser & Chalmers, Gates, Allis-Chalmers, Ingersoll-Sargent, the General Electric Company, Westinghouse, Sandycroft, Babcock, Koppel & Company, the Jeffrey Company, and hosts of others, that induced promoters to wisely and unwisely capitalize the Witwatersrand at £300,000,000 and more. Mr. Merriman was one of the beneficiaries of this industrial progression. He now takes the insular rather than the intercontinental view revealed in Rhodes scholarships and endowments and Beit bequests. Where he errs is, in the contention that South Africa has chapter and verse, precept on precept, for what its young men should know in order to supplant Canadian, American, British and German scientists. The sooner he unlearns or sets aside these conceits, the quicker will be the recovery of a gold-getting industry upon which international exchange markets are impinging.

Under the Milner Administration, counselled by a Technical Commission and Prof. Hele-Shaw of Liverpool, the Kimberley School of Mines was absorbed by the Transvaal authorities and became the nucleus of a high class collegiate institution for the benefit of young colonials and those employed in the mines. "Nowhere," said Prof. Shaw to the writer, "is there such a perfect training ground as the Witwatersrand. Here you have the most up-to-date mechanism, the most modern methods, an infinite variety of material for experimentation." The late Mr. Beit provided in his will for this Transvaal University. Hardly had his will been probated when it was proposed to locate this technical institution at Pretoria, thus throwing into disuse the ground previously donated by the member of the firm of Wernher, Beit & Company, the ramifications of which are worldwide. The historic rivalry between the political capital, Pretoria, and the industrial capital, Johannesburg, again asserted itself. Rather than do as Beit decreed, as Sir Julius Wernher in greater degree is now striving for in London, the disposition seems to be to accept the Merriman dictum that South Africa must be up and doing for itself—a proposal that is excellent in principle, though ill-advised when premised upon proscription, however remote that policy must be in its consummation.

Scientific living to learn has universal interdependencies. The outside expert and technical adviser does not always make the most efficient inside counsellor and friend. On the other hand, "the new man in the camp" commands respect. South Africa has the raw material with which to promote great enterprises. It has produced a dozen wealthy mining speculators—Robinson, Bailey and others—and several capable engineers and mine managers, among the engineers being Greathead, who first projected the London "Tubes." In the work of pioneering the sub-continent has distinguished itself, but when it is claimed that those colonies can become self-sustaining in matters of research and capital, Mr. Merriman might as well advise that Canada should do the same, that emigration is prejudicial, that scientific associations are unnecessary evils, that free trade in ideas is not to be entertained.