

GAS IGNITION BY SPARKING.

The "Colliery Guardian" is an old-established trade paper whose editorials are always worth reading, and in this issue we reproduce an editorial which is in effect a summation of what is known, or more correctly what is not known, regarding the ignition of mine gas and dust clouds.

The reference to the possibility of sparking originating from frictional electricity is interesting when considered in relation to the recent dust explosion at the Port Colbourne grain elevator. Canadian readers will also be interested in the parallel drawn between the behaviour of a certain roof strata in the Minnie Pit, where 155 men lost their lives by a dust explosion, and the occurrences reported by Mr. J. T. Stirling and Sir John Cadman after investigation of the circumstances attending the Bellevue Mine explosion in Alberta.

The incident reported by the Chief Inspector of Mines for India, in which a flash of lightning ignited an explosive mixture of gas and air, is reminiscent of a well-authenticated incident in the Pictou Coalfield in 1893 mentioned in Hon. Robert Drummond's book* on the mines of Nova Scotia. "During an electrical storm lightning ran down the shaft, the hoisting steelrope acting as a conductor. The lightning set the gas on fire, but did little other damage. The fire did not continue." The two occurrences seem fairly parallel.

While no very definite conclusions are expressed by the writer in the "Guardian", one thing grows increasingly plainer as successive colliery explosions occur, which is, that coal dust represents the greatest danger to life of any conditions existing underground. It is the chief predisposing cause of colliery explosions, and when these disastrous phenomena occur, it becomes the chief agent of their extension and propagation.

In the Minnie Pit explosion, as in the Port Colbourne disaster, and in thousands of other explosions that could be cited, there may have been frictional electricity, or unsuspected sparking from siliceous rocks, or other obscure and little understood phenomena, but, if the dust cloud had not been there, there would have been no explosion.

THE MINERAL WEALTH OF NEWFOUNDLAND.

Apropos of the contention in the "Journal" of October 1st that Newfoundland badly needs a government geologist, the "Mining Journal" of London gives prominence to an interview with Sir Edgar Bowring, High Commissioner of Newfoundland, upon his return to London, which it will be noted is in general agree-

ment with these contentions. The "Mining Journal" correctly summarises the situation when it states that Newfoundland "does not yet know what she possesses in mineral wealth". A quotation from the interview seems timely and is given below.

"One of the most promising of Newfoundland's future prospects is connected with the wide and varied mineral wealth located from time to time, and it is strongly felt that the attention of enterprising mining pioneers, provided with adequate capital, would commence an era of great prosperity.

"The geological age of the Newfoundland rocks is largely pre-Cambrian, with Cambrian, Silurian, Devonian, and Carboniferous series, subsequently greatly planated by ice-action in post-Pliocene time. Whether the occurrence of fossil forms intermediate between those of America and those of early Palaeozoic Britain justifies the view that Newfoundland is a palaeontological stepping-stone between the two Provinces is a question for the specialist. What is certain is that the mineral wealth of the country is varied and great, and that it goes far beyond the copper, which, as our readers are aware, has been extensively worked since 1864, and the iron deposits which have been vigorously worked for many years by the great Canadian coal and iron companies. Chromite, nickel, antimony, lead, manganese, gold, and silver occur generally over extensive areas, and the coal deposits, which are expected one day to give a large output, have been sufficiently proved to warrant the most favourable expectations. The extent of the deposits at Codroy Valley and Bay St. George, to mention two of the coal-bearing areas, has not yet been accurately determined, but it has been proved that a huge Carboniferous syncline or trough underlies practically the whole of the Bay St. George district. The coal is of excellent quality, and one of the seams in the latter area is 4 ft 2 ins. in thickness. Oil shale also exists, and oil is produced, but it is noteworthy that the electricity produced by water-power is cheaper as a luminant than oil, and is used even in the smallest towns.

Notwithstanding that many reports have been made as to individual districts, Newfoundland does not yet know what she possesses in mineral wealth. A geological survey is now in progress, which will doubtless add materially to our knowledge."

If, as is stated, an adequate geological survey of Newfoundland is in progress, there can be little doubt but that the reward will be in exact proportion to the effort expended, and the announcement, if confirmed, is welcome and encouraging.

"If he play, being young and unskilled, for shekels of silver and gold,

Take his money, my son, praising Allah. The kid was ordained to be sold."—Certain Maxims of Hafiz.

"From the strictly national point of view, dependence on another nation for an indispensable raw material spells subservience, unless the dependent nation is prepared to face the consequence of a stoppage of the importation of this raw material.

"The dependence of Central Canada on United States coal is a cogent reason for the development of the coal mines of Nova Scotia to a point where, should for any reason the coal supply of central Canada be imperilled, the mines of our easternmost province could fill the breach."

—Extract from a memorandum prepared by the Editor, about 1916, for submission to Sir George E. Foster, Minister of Trade and Commerce.

* Minerals and Mining, Nova Scotia, pp. 343, q.v.