

The conquest of Peru by Chili, says a gentleman who spent several years in those regions, has been a serious blow to nitrate and phosphate mining in those regions. A tax has been laid on the Peruvian mines for ten years, and operators find it more to their interest not to work them, as they can at the end of that time renew operations without the hindrance of the tax and with the mines unexhausted.

Messrs. E. Balbach & Son, the well known smelters and refiners of Newark, N.J., have incorporated their business under the laws of New Jersey by the name of the "Balbach Smelting and Refining Company, Newark, N.J.," the corporation assuming all existing obligations and contracts. The firm state that while they have found it desirable to make this change in the form of conducting their business, it is their intention that in substance the old management and character shall continue.

A Pennsylvania legislator has introduced a bill to impose a tax of 1 cent per long ton of coal mined within the State, to establish a relief fund for the benefit of persons injured, maimed or killed in the employ of individuals, firms or corporations. Such a law would be a great injustice to operators and would furnish a precedent that might be followed to dangerous lengths. If coal operators should be taxed, why should not railroads also be compelled to insure their employes? Insurance is a very delicate subject, and not to be handled lightly or disposed of by any such wholesale means as that in the bill.

We have received a copy of the report upon the work carried on in the laboratory of the Geological Survey, from the date of the previous report to the end of 1889, by Mr. G. C. Hoffmann, F. Inst. Chem. F.R.S.C., Chemist and Mineralogist to the Survey. A great deal of valuable information is contained within its pages; analyses of different ores and minerals in the various provinces have been made, the results of which are therein embodied, and will be found of great interest to the mining community.

"Electric Mining Machinery" was the subject of an excellent paper read by Messrs. L. W. and Claude W. Atkinson, Assoc. M.M. Inst. C. E., before the tenth ordinary meeting of the Institution of Civil Engineers, held in London. The authors having been constantly connected with the application of electricity to mining during the past four years, spending a considerable amount of time underground, both in experimental work, and in teaching those who would have charge of electrical machinery, arrived at the following conclusions:—

(1.) That electric power was destined to become an important factor in mining mechanics, on account of: (1) The facility with which it could be used with machines which required to be moved from time to time; (2) the great economy in first cost and reduced cost of working owing to its efficiency being higher than that of compressed air, or any other medium of power transmission; (3) the smaller cost of

maintaining the cables, as compared with piping, on shifting floors in roadways, &c.

(2.) That the methods described were sufficient to obviate all objections to the use of electric motors in coal mining whether by excluding inflammable gases or by constructions which would allow of their safe combustion.

(3.) That the experiments, trials and practical work, extending over four years, showed that: (1) Electrical pumps might be used with advantage and economy for mine draining; (2) electrical coal-cutters could replace hand labor, with saving in cost, and increased production of coal; (3) electrical drilling machines were available in place of machinery worked by hand or compressed air.

There has been some discussion recently in England over the necessary qualifications of inspectors of mines, more particularly as to the length of time that applicants must hold first-class certificates as colliery managers before becoming eligible. This has drawn forth the following enumeration of the requisite qualities in an inspector from the *Colliery Manager*—which holds that such certificate should be held for five years before permitting of candidature—and may be regarded as the accepted opinion on the question:—

"An inspector of mines is a Government officer, who has to investigate all sorts of mining matters, and to report impartially to the Home Office the result of his investigations. He must make his inquiries and his reports with a due regard (1) to the interests of the owners of the mine under his observation; (2) to the interests of the responsible manager of the mine, of whose conduct in the control of it he may under certain circumstances have to give a critical account; and (3) to the interests of the miners themselves, for the protection of whose lives and limbs the extended system of inspection has been principally adopted.

"It will thus be seen that an efficient inspector must be possessed of sound practical knowledge, and have had a varied experience. His experience should be of that special kind which has made him familiar with the various branches of mining, and which has brought him into contact with the different classes of persons engaged in those branches.

"This varied experience cannot be obtained by any merely theoretical college training, nor by any amount of merely practical work in a mine.

"However successfully a student may master the several sciences that make up the knowledge of a competent mining engineer, he will be useless as an inspector of mines without having had abundant opportunities of putting his knowledge into practice. And however intelligent and industrious a miner may be in his method of getting coal, and however diligent in studying, after his labor in the mine, the most approved methods of ventilation, and the latest mechanical appliances and arrangements, he must have full opportunities of becoming practically acquainted with all these before he can possibly be capable of judging of their efficiency, or of making any useful report upon them to others."

Such are British ideas of an Inspector of Mines. Those of the Quebec Government may best be gathered from the appointment of Mr. Theophile Viau, of Hull, a *boot and shoe dealer*, as inspector for the counties of Pontiac and Ottawa—an appointment characterized by the *Free Press* as excellent! One hardly knows which to wonder at most, the lamentable ignorance of the government or the blatant idiocy of the newspaper. As for the official, knowledge of his new business is not to be expected or even hoped for from one so utterly devoid of capacity, training and experience. If we are to have a reign of petty tyrants over the province, it is hoped a little more common sense may be exercised in their selection elsewhere, but one, we are afraid, will be a fair sample of all. Bah!

The annual general meeting and dinner of the Gold Miners' Association of Nova Scotia, will come off at Halifax on the afternoon and evening of Tuesday, 10th prox. Science, Literature, Manufactures, Transportation, Trade—and possibly Politics—will all be prominently represented at the banquet, and every endeavor is being exerted to make the gathering a huge success. The *Review* hopes to be a humble participant in the epicurean joys of "boiled Bullion" "baked whin," "mashed fusees," "candied" tappets and the other unique dainties for which the feasts of the Association are so justly noted.

We heartily commend that wise proposition to establish a "Nova Scotia Institute of Mine Officials." A vigorous association having for its objects the discussion of the many questions affecting the best methods of mining the coal—ventilation, hoisting, screening, the safety and comfort of the miners, etc.—cannot fail to be of great practical utility to the operator and the coal trade of the Province. We trust the promoters will meet with that cordial recognition and co-operation to which this proposition is well entitled, and that it will speedily materialize into a strong and vigorous reality.

A bulletin on the anthracite coal regions of Pennsylvania has been prepared by Mr. J. H. Jones, special agent in charge of coal, under the supervision of Dr. David T. Day, of the U. S. Geological Survey. The coal fields are divided into five well-defined geological basins, but are classified for commercial purposes into three general districts, Wyoming, Lehigh and Schuylkill. The total production of anthracite coal in Pennsylvania during the calendar year 1889 was 40,665,152 tons of 2,240 lbs. (equal to 45,544,980 tons of 2,000 lbs.) valued at the mines at \$65,718,165, or an average of \$1.61½ per long ton, including all sizes sent to market. Of this, 35,816,876 long tons were loaded in railroad cars for shipment, 1,329,580 tons were used by employes and sold to local trade at mines, and 3,518,696 tons were consumed as fuel in the mines. In the amount loaded for shipment, is included unsaleable sizes temporarily stocked at convenient points near the mines and tonnage loaded into cars but not passed over railroad scales, as well as waste in rehandling in the various processes of cleaning the smaller sizes. The quantity reported by the transportation companies as actually carried to market, the usual basis for statistics of shipments, was 35,407,710 tons. The item of colliery consumption is somewhat indefinite, the coal being taken either from the current mining or from screenings, and used where needed, often without preparation, and rarely included in the accounts of the operator, being reported in most instances as approximate. For these reasons it has been excluded from the basis of valuation of the product of the mines.

The average number of days worked during the year 1889 by all collieries was 194—the suspension of mining being caused by the inability of the market to absorb a larger product