

coal is the only fuel at present used; but the completion of the Intercolonial Railway will bring the coal-fields into direct communication with the Iron Mines. We may then expect an increased production of this valuable Iron. The Charcoal Iron at present produced is not surpassed by the best made in Sweden or Russia.

In New Brunswick the Woodstock Iron Works have resumed operations. The ore is mined in the neighbourhood, and smelted with charcoal. The Pig Iron is sold to W. E. Coffin & Co., and manufactured into a superior quality of Bar Iron at the Pembroke Iron Works, Maine. The capacity of the Woodstock furnaces is about 2,000 tons annually.

**Lead.**—The main shaft at the Galway Lead Mine, behind Peterboro, has reached a depth of more than one hundred feet, and a considerable quantity of galena has been produced. The works have been recently stopped, pending a sale of the property. The Company declared a dividend of ten per cent for the first six months of the year.

The Frontenac Lead Mine has been actively worked. The main drift is upwards of 400 feet in length, and shews galena all along. A trial of the crushing mill was made with the surface ore on hand. The vein averages ten feet in width, the gangue consisting of pure calc spar. The crushing yielded from 4 to 6 per cent of galena in the whole mass. The smelting hearths were run for a short time, and about fifty tons of pig lead shipped. At present work is confined to sinking the main shaft, while automatic dressing machines are being prepared, and improvements made in the smelting apparatus.

The Gaspé Lead Mining Company have, for the present, discontinued operations for want of working capital.

The massive deposits of galena, at the Lead Hill location in Black Bay, Lake Superior, are being worked to a small extent this winter.

In Nova Scotia a valuable discovery was made last September in Upper Stewiacke. The galena occurs in irregular masses in the lower carboniferous limestone. Assays of the ore gave 80 per cent lead, and 8 oz. silver per ton.

**Gypsum.**—The demand for calcined and land plaster in Ontario is increasing largely, and the Gypsum beds on the Grand River, in the neighbourhood of York and Caledonia, continue to be actively worked. Recent explorations at the former place have shown the beds to extend over a larger area than at first had been supposed. Over 100,000 tons of this mineral were shipped from Nova Scotia to the United States last year, and the trade is still increasing. Three fourths of this have been shipped from Windsor and adjacent ports. The Clifton Quarry is the most productive, and has probably yielded over 500,000 tons already, while the supply seems practically inexhaustible. The property was formerly owned by Judge Haliburton, (Sam Slick,) and was purchased by the present proprietor, Mr. Pellow, who had previously been in the Judge's service. A good deal of selenite, called by the miners isinglass is found here. The Wentworth Quarries near Windsor produce about 20,000 tons annually. Antigonish County yields a fine variety of Gypsum, called Alabaster. Immense quantities of Gypsum exist in various localities in Nova Scotia and in Cape Breton; whole mountains of it show themselves in the Bas d'Or, and along the western shores.

At Madoc, in Ontario, Gold Mining is still carried on. The Phoenix (old Richardson) Company, of Madoc, are sinking a shaft about 200 feet north of the old workings, in the expectation of striking the lead at about 130 feet from the surface. Mr. Dunstan, the Manager, has obtained gold in the characteristic carbonaceous matter at a depth of 103 feet in the old shaft. In the Township of Marmora, the Severn Mine, on Lot 6, in the 8th concession, is being worked at a considerable depth. The old Berry Crusher is at work at a mine on Lot 7, in the 9th concession of the same Township, where a few men are employed

getting ore. The Feigel Mine, on Lot 16 in the 11th concession of the same Township had been worked during the whole year. The stamp mill at this mine has been in more constant use than any other mill in the district. The gold at the above localities is contained in quartz and sulphurets, associated sometimes with calc spar and bitterspar, and at the Phoenix Mine with carbonaceous matter. The average yield per ton, so far, has not been high, and it appears that success will depend upon crushing large quantities at a cheap rate.

**Alluvial Gold Mining in the Chaudiere region** is still confined almost entirely to the Gilbert River, in the Seigniorship of Rigaud, Vaudreuil. The amount of gold taken out during the year amounted to rather more than \$20,000. Gold bearing veins continue to be discovered in the same Seigniorship, and stamp mills have been erected for reducing the quartz.

**SILVER.**—The Montreal Mining Company have had Mr. Macfarland at work again all summer on Lake Superior. In addition to surveying and exploring the Company's locations, he has been engaged in carrying on mining operations on an island in front of the Jarvis location, where he had discovered a valuable vein of silver ore. He has also erected a building, and sunk a shaft on the small island in front of Wood's location, Thunder Cape, where he discovered silver last year. Work was to be continued in this shaft all winter, comfortable quarters having been provided for the men and horses on the main land opposite. A number of barrels of silver-ore have been sent down from each of the above localities.

Owing to some difficulty with the American partners, the Shuniah Mine, near Fort William, has not been worked as was intended this season. The Thunder Bay Silver Mining Company prosecuted operations with a considerable number of men, and sent down several thousand dollars worth of native silver. They also erected a stamp mill, to be driven by water power, at the mouth of the Current river; but through some defects in the construction, it had not got into successful operation at the close of navigation. Some preliminary trials, however, proved the ore on hand to be rich in silver and easily reduced. Trials have been made of the rich iron and lead deposits, near the shores of Thunder and Black Bays, and extensive operations are contemplated in the spring.

The mines of this region are best known to the Americans, by whom it is expected, they will be principally worked.

**COAL.**—In Nova Scotia the depression in the Coal trade has continued during the past year. In the Autumn a strong impression prevailed that the American duty on Coal would be reduced to fifty cents per ton. This tended to revive a little speculation, and several undeveloped areas changed hands. Considerable exploration has also been done by Mr. John Campbell and others.

**Pictou County.**—At the Albion mine the extensive operations commenced in 1867 were completed in the early part of last year. A new portion of the great coal-field is now opened up. The Ford shaft reached the main seam at a depth of 840 feet. The engines, together with the machinery for pumping and hoisting, are now at work. For style, power and durability, there is nothing on the Continent to equal them. Soon after the completion of the work the shaft took fire. It was immediately closed and the fire extinguished, but not until considerable damage had been done. Operations were continued in the Dalhousie pit, from which the principal amount of coal was raised. The Albion mine is now in a condition to raise of itself more coal than there is demand for.

The Acadia mine, under the management of Mr. Jessie Hoyt, has been thoroughly developed. It is now in a position to produce 250,000 tons annually. The seam is 20 feet thick of pure coal.

The Intercolonial, under the management of Mr. James Dunn, has made good progress during the year. The machinery is very efficient, and the railway built by the Company to Middle

River, 7½ miles distant, affords great facilities for shipping. A large quantity of this coal has been shipped to Montreal during the past year. About \$250,000 has been spent by the Company in opening up the mine and constructing the railway. The whole arrangements display enterprise and skill.

The McBain area, which is one of the best in the Province, remains undeveloped.

The Nova Scotia, Montreal and Pictou and other Companies have done little or nothing during the past year.

Sir William Logan, assisted by Mr. Hartley, has given a great deal of personal attention to the examination of the Pictou coal fields during the past two seasons. His report and map will give a clearer understanding of their character.

**Cumberland County.**—At Spring Hill several new seams have been discovered—one of them 11 feet thick, and another said to be 14 feet. The coal is of excellent quality, containing only about 3 per cent of ash, and is therefore very suitable for iron smelting—systematic developments have been undertaken. The Intercolonial railway will pass through the centre of this coal basin, and afford new facilities for shipment.

Work is still carried on at the Joggins by Mr. Boggs, but the seams being small, and the coal of a poor quality, the operations have been of a very limited nature.

The Macon, New York and Acadia, Lawrence and other mines have remained unworked.

**Cape Breton.**—The old Sydney Coal being a great favourite, the mine has ready sale for all that it can produce. The works are being carried on far under the sea without any difficulty. A new pumping engine has been erected, and the sinking of the main shaft continued. The railway from the harbour has been extended to the new workings.

The Victoria, owned by Frazer, Paint and others, has shipped considerable quantities of coal during the year, of excellent quality. A railway and wharf are being built.

From the Block House Mine a large quantity of coal has been shipped to New York, and the work has been carried on with vigour. Two steamers are employed by the company in carrying the coal.

The production from the Gowrie Mine still keeps up. The shipping facilities are excellent, and the sale of the coal is vigorously pushed.

The Glace Bay, Lingan, Caledonia, South Head, International and others, have been pretty well opened up and equipped with the necessary machinery. Whenever a demand for coal arises they will be in a position to meet it promptly. Nothing of importance has been done in other districts.

Two rival lines of railway were commenced towards the end of the year, to connect the easterly coal-fields with Sidney Harbour. A New York Company, whose president is Mr. Moreton, cut the first sod in November. Mr. Duncan McDonald, of Montreal, is the contractor. The succeeding month, Mr. F. N. Gisborne arrived from London with a staff of engineers, and immediately set about the construction of a road, through the same locality. The Local Government held out an inducement to the Company who should first build a road—a grant of a valuable coal area—one mile square. Hence the rivalry. It appears, however, that the Government had no right to dispose of the mining lands as proposed. The location had been applied for in the usual form by Dr. Jennings and another. The Government refused the application upon the grounds that the area had been reserved, by an order in Council, for railroad purposes. The applicants protested against this division, and brought it before the Superior Court. The Chief Justice decided against the Government, so that neither of the rival Companies can obtain the coveted location.

Notwithstanding the heavy duty levied upon coal by the United States Government, the Nova Scotian coal-owners might have retained the market if they had shown sufficient enterprise. Had they been contented with the usual rates of English