

manager—have up a splendid rig on the land just across the road from the widow McDonald farm, and we were permitted to see the drill in operation, and also witnessed the performance of "drawing the tools," pumping, etc. When we were there the drill had gone down about three hundred feet—the result of a few days' work, and it is calculated that the well will be completed in about three weeks. Mr. Thomson, the operator, considers the indications good, and hopes to obtain a show of oil very soon. The derrick is 25 feet in height; the drill cuts an eight inch hole, and is worked with a cable—a system of drilling, which, although now in Cape Breton, is the favorite in the great Pennsylvania oil fields, and is said to be the most effective mode of sinking wells. The well-house contains all the necessary equipments for saving labor, and the great machinery is worked by operators Thomson and Murray, with a few assistants, in an astonishingly smooth manner. The writer further says—"The Bay View House," Whyoomagah, thirteen miles distant from the oil location, presents the appearance of a veritable Mining Exchange just now. While we were there on Friday and Saturday last the following gentlemen directly interested in the Cape Breton oil and mineral fields made the "Bay View" their headquarters: Dr. Rae, Mineralogist, of New York; Mr. Roberts, of Boston, owner of the Bay of Fundy stone quarries; Mr. Fowle, of Fowle & Carroll, Boston, who is largely interested in the Oil Company of which Mr. Loughhead is manager; Mr. Theodore Hale, a mining expert, recently from Colorado, and who has explored the mining districts of Nevada and California; Capt. Nelson, of Halifax, who anticipates operating upon territory held by him in the vicinity of the Lake. J. S. Loughhead and Major Smith, are the resident managers of the oil wells at the Lake.

A syndicate of Boston capitalists has been formed for the purchase of a valuable mining property on Chaudiere River, in the Province of Quebec. This new corporation is to be capitalized at 50,000 shares, and will be known as the Boston and Chaudiere Gold Mining Company. Work on the property is to be commenced immediately.

Mr. Munson is shipping thirty cars of iron ore per week from the Sixsmith mine at Madoc, and Messrs Coe & Mitchell make a weekly shipment of twenty-five cars from the Hematite mine, and will increase this shortly to fifty cars weekly. The Seymour mine is also being worked extensively.

OTTAWA VALLEY.

Mr. Garrett, geologist, Ottawa, states that a mine of red jasper, banded with beautiful yellow tints, has lately been developed in the township of Hull, and the jasper being a silicate is capable of receiving a fine polished surface. This mineral is used chiefly for urns and jewellery.

Mr. Garrett also reports the discovery of a galena mine, in the Township of Fitzroy, bearing pure ore at 80 per cent. The deposit is said to be large and not many miles from the city of Ottawa.

A very extensive deposit of iron pyrites is also reported, at Le Faveur village, from which ten thousand tons could be supplied forthwith, at a very moderate cost, as the mine is said to be within one mile of the Ottawa River. This is very opportune, as should the French capitalists now in the Ottawa Valley region buying up large quantities of Phosphate of Lime, as well as phosphate mining locations, for the purpose of manufacturing superphosphates, commence work on the large scale proposed, the iron pyrites will come in just at the right time and place.

THE RAINS AND THE LUMBERMEN.—We (St. John Sun, Nov. 2, understand that the great rains have had the effect of bringing to the ponds of the Bay mills, from St. John to Albert County, all the logs which had been hung up awaiting a freshet. Those mills will accordingly have a good Fall's sawing.

We also learn that the Grand Falls jam of logs started again yesterday at 3 p.m., and the logs were running all the rest of the afternoon. A telegram to the Sun states that the Aroostook Falls jam had broken and the logs were running past Andover at 9 yesterday morning.

DOM PEDRO, Emperor of Brazil, wished to test a certain railroad brake. He had one adjusted to a car, and started off for a trial trip. The engineer soon saw what seemed to be a big rock on the track ahead, and applied the brake, stopping the train within a few feet of the obstacle, which proved to be of pasteboard.

The Greatest Steamships of the World.

(N. Y. Journal of Commerce.)

The Great Eastern, 18,910 tons, 2,600 horse power, was built at London, begun in 1854 and finished in 1858, by J. Scott, Russell & Co. Length 670 feet 6 inches, breadth of beam 82 feet 8 inches, depth of hold 45 feet 2 inches; owned by Great Eastern Steamship Company, London and Liverpool. It is difficult to state her precise cost, since the company engaged in her construction failed soon after she was launched and before she was fitted up and sold the hull (if we remember rightly) for £160,000, much less than it had cost. We once saw a statement that she had cost, when ready for sea, \$3,880,000, but we have no means of verifying the figures. The total loss of money on this steamer up to 1875 was estimated at one million pounds sterling.

Arizona, 5,147 tons, 1,200 horse power, built on the Clyde in 1879, by J. Helder & Co. Length 450 feet 2 inches, breadth of beam 45 feet 4 inches, depth of hold 35 feet 7 inches.

City of Peking, 5,079 tons, 1,000 nominal horse power (effective 4,500), built by Delaware Shipbuilding Company, of Chester, Pa., in 1874. Length 450 feet, breadth of beam 48 feet, depth of hold 38 feet 5 inches. Owned by Pacific Mail Steamship Company, New York.

City of Tokio, 5,079 tons, 1,000 nominal horse power (effective 4,500), built by J. Roach & Son, Chester, Pa., in 1874. Length 402 feet 8 inches, breadth of beam 46 feet 9 inches, depth of hold 34 feet 6 inches. Owned by Pacific Mail Steamship Company, New York.

Germanic, 5,008 tons, 760 nominal horse power (effective 3,500), built by Harland & Wolff, at Belfast, in 1874. Length 455 feet, breadth of beam 45 feet 2 inches, depth of hold 33 feet 7 inches. White Star Line.

Hooper, 4,935 tons, 400 nominal horse power; built on the Tyne in 1873 by C. Mitchell & Co. Length 338 feet 2 inches, breadth of beam 55 feet, depth of hold 34 feet 6 inches. Owned by Hooper Telegraph Works, London.

Paraday, 4,908 tons, 500 nominal horse power; built on the Tyne in 1874 by C. Mitchell & Co. Length 360 feet 4 inches, breadth of beam 52 feet 3 inches, depth of hold 34 feet 7 inches. Owned by Liemans & Co., London.

There are also between 40 and 50 other ocean steamers ranging between 4,000 and 5,000 tons. The Hooper and Paraday were both built for cable laying, but are now employed in general freighting business. The Furnessia, launched at Barrow 20 inst., is the largest steamer now afloat next to the Great Eastern, but the cable telegram announcing her launch does not give her dimensions. She is an Anchor line boat. The steamer Alaska, now building on the Clyde for Guion line, is to be 6,500 tons. Her owners say that "her dimensions will be; Extreme length, 500 feet; breadth of beam, 50 feet, and depth of hold from main deck, 38. There will be 150 state-rooms in the first cabin, and the saloon will accommodate 350 passengers. The second cabin will contain berths for 50 persons and on the after end of the main deck will be quarters for 120 steerage passengers. The Alaska will have a capacity for carrying 2,000 steerage passengers if necessary. Her engines will have a greater power than those of any vessel now sailing the Atlantic. She will be a great improvement on the Arizona, of the same line, which is now the fastest ocean steamship afloat. Her boilers will be heated by 54 different furnaces. The Alaska will, in good weather, be able to cross the Atlantic in six and one-half days. No expense will be spared in trying to make her the finest as well as the swiftest, steamship plying between Europe and New York. She will carry four masts and will be provided with two smoke funnels."

Besides the above there are now building the City of Rome, for the Inman line, to be 8,500 tons; the Servia, for the Cunard Line, to be 7,500 tons, and the Catalonia for the same line, to be the same tonnage. The White Star Line have also a new steamer building to be named the Majestic, to be larger than any of their ships now afloat.

THE London Telegraph says that in consequence of the advance in value of many securities held by the Glasgow Bank, the liquidation is likely to show much better results than were at one time anticipated, and those shareholders who have not their calls in full will be handsomely remunerated.

Wood Pulp.

There is an extensive demand growing up in England just now for wood pulp, and Mr. James I. Fellows, the inventor of the hypophosphites tonic, sends from the city of London to the St. John Sun, several items regarding the enterprise. We have no doubt but that the business might be made profitable in Canada, and Mr. Fellows's hints, if adopted may prove useful in time. Wood pulp being cheaper than rags for the manufacture of paper, its superior advantages in the material point of economy must be at once apparent. Indeed so great are these advantages that we are told, no wood country should ignore them. Pure water and good water power are essential, Mr. Fellows says, for the manufacture of this article, which is now revolutionizing, in a measure, a particular branch of industry and trade. The ordinary "soft" woods, such as poplar, basswood, white wood, spruce, fir, cedar, pine, as well as birch maple and hemlock, may all be used with the greatest economy and advantage. Norway, Germany and Sweden, have for several years enjoyed this trade, and have found ready markets in England and in France. There seems no good reason why Quebecers should not embark in an enterprise which promises steady business and large returns, particularly as it is an undertaking for which we are particularly well fitted in every way. The French purchase pulp with only 8 per cent of moisture, while in England no objection is made to buying an article which is composed of 50 per cent of moisture.

In the manufacture of pulp a power equal to one hundred horse is required; a drying house and steam rooms are also necessary. Mr. Fellows believes that saw-mill power could be better and more profitably employed in this new work, than in making deals or boards. "The immense banks of saw dust annually low burnt or set afloat in the streams," he adds, "could be worked into this industry."

The Printer and Stationer of London says with regard to the mode of manufacture of this article:—

"The wood in the forest is cut in lengths of 5 feet. The bark is taken off by hand, in order to be done most carefully. In this state the wood is sent to the mill, where it is once more examined, so that no dirt or bark may follow it into the machines.

"The first operation in the mill is the mechanical cutting procedure, performed in a strong and extremely powerful cutting machine. The wood is cut in lengths of 3 to 4 inches, and then crushed in a large bast mill.

"The boiling of the wood is done in three horizontal cylindrical rotary boilers, of 5 feet in dia., 32 feet long, holding about one ton of dry pulp each, revolving on six rollers, making one revolution in about three minutes. The pressure used is about 110 to 130 lb. per square inch.

"When the pulp is boiled the unboiled knots are taken away by rotary knotters. The washing of the pulp is done in rag engines, the knives of which only beat, but do not cut the fibre.

"When the pulp is washed, it once more passes through some very fine knotters, of the usual model; then it comes to the sand traps, pulp presses, drying cylinders, and pulp cutters, and then it is ready for packing.

"The black liquor is evaporated by the company's own system. About 75 or 80 per cent of the caustic soda used is, by this system, recovered.

"The fuel for the mill is peat, and some wood. The peat is taken from their own peat bogs. The peat making, in summer time, occupies four steam engines and one water wheel, representing about 60 horse-power, fourteen peat machines, and about 160 workmen. The pulp mill occupies about 100 people, and the power used is about 100 horse-power. The pulp is packed with iron ropes and hessian, into bales of 1-10th of a ton gross weight. The production is about 100 to 105 tons per month.

"The price in the English market ranges from £10 to £12 10s. per ton, and prices are advancing."

From all we can learn on this subject, the more are we satisfied, that it presents a most attractive side to the capitalist. Even coarse saw dust may, with advantage, be utilized in the manufacture of the pulp. We hope our readers will look into this question, and see if a new industry cannot be started that will provide work for many operatives, and at the same time, open up a new channel of trade with England and France. The matter will bear close investigation.

"How to the Lir."

A LUMBERMAN'S SONG.

Going through the woods my lads
The ringing axe we swing,
And as we ply our merry toil
This cheery stave we sing:
"Let true oye guide each sturdy stroke
True heart and hand combine;"
And "whoresoe'er the chips may fall,
How to the lino!"

Life's a bush of varied woods
And cross is oft their grain,
But axe and wedge will cleave the knots
And part the log in twain.
The line of duty, fairly traced
By Nature's own design,
Will keep us straight, my lads if we
How to the lino.

Hard our lot as lot may be,
Spare our fare at boat is,
Yet our slumber's sounder far
Than his, who wears a coat is.
This one honest rule we seek,
In shadow or in shine,
"Aye, whoresoe'er the chips may fall
How to the lino."

He who wields the trusty steel,
To how a path through life,
Must bear a single heart to guide
His action in the strife.
Then let us pray that, come what may,
This law be yours and mine,
[Tis He, who bosses all the gang],
"How to the lino."

CHORUS, How to the lino, my lads
How to the lino!
Whoresoe'er the chips may fall
How to the lino!

Captain Eads' Ship Railway.

The Scientific American of this week contains two full page illustrations of Captain Eads' proposed railway for transporting ships with their cargo across continents.

Captain Eads claims by his plan to be able to take loaded ships of the largest tonnage from one ocean to another across the Isthmus of Panama, as readily as can be done by a canal after the Lesseps plan, and at a much less cost for engineering construction.

The project is certainly bold and ingenious, and the projector anticipates no serious difficulties in carrying forward his enterprise. The engravings referred to in the Scientific American show the proposed construction of not only the railroad, but the appliance for transferring the ships from the water to the rail.

In addition to the largenumber of engravings, illustrative of engineering works, inventions and new discoveries which appear weekly, the Scientific American has, during the past year, devoted considerable space to illustrating and describing leading establishments devoted to different manufacturing industries.

This feature has added very much to the attractiveness and usefulness of the paper. More than fifty of the most important industrial establishments of our country have been illustrated, and the processes of the different manufactures described in its columns. The Scientific American has been published for more than thirty-four years by Munn & Co., 37 Park Row, N. Y., and has attained a larger weekly circulation than all similar papers published in the country. The publishers assure the public that they have not printed less than 58,000 copies a week for several months.

Shooting at Balloons.

English papers report some experiments, lately made at Dungeness, which show remarkable success in reducing the efficiency of military balloons. An ordinary service balloon was used, and after it had risen to a height of 800 feet was fired at with an 8 inch howitzer at a distance of 2,000 yards. The gunners were not instructed as to the precise range, but were required to find it for themselves. An 8 inch shell was accordingly fired into the air as a trial shot, and this, despite the novelty of the target, sufficed to supply the gunners with the necessary information. The next shot brought down the balloon. The projectile was a sharpnoll shell, and the fuse had been so well timed that the shell burst just in front of the balloon, projecting something like 300 bullets through the fabric, and causing its immediate descent.