

**MARINE INSURANCE.**—The Cleveland *Plaindealer*, of a late date, has the following article on marine insurance:

"With the desire to improve legitimate underwriting on our inland waters, made worthless through the efforts of the 'Columbian Marine Insurance Company,' seconded by other companies, the officials of thirty-six companies consummated an organization for the purpose of protection to the capital so important to lake commerce, and adopted a tariff that experience had taught was only fair and just to both parties. A uniform tariff it was soon ascertained distributed the business, and companies who heretofore had controlled a large share of it, by reason of accepting risks at less rates than others would, were dissatisfied with the proportion they found they could control, when competing at even rates, and accordingly ignored their pledges. The result of such faithlessness has been the immediate reduction of rates to a point so low that seekers for insurance may well hesitate before taking certificates of any company that dares take such an extreme course. Companies are writing on ordinary B 1 vessels from Milwaukee to Cleveland at the absurd rate of  $\frac{1}{4}$  per cent. The entire gross premium for assuming the liability of \$30,000, with all its attendant dangers, is seventy-five dollars. Deduct commissions, taxes and expenses, say twenty-five per cent, and the net premium for the risk is \$56.25. It would take the premium of nearly six hundred cargoes to pay the total loss of one. The cargo of the propeller City of Detroit, which recently sunk in Detroit river, was insured for \$20,000, \$10,000 in each of the two companies competing at twenty cents on the one hundred dollars from Milwaukee to Buffalo. Each company to receive twenty dollars less commission and expense for insuring the safety of \$10,000. The accident involved a loss of \$3,000 or more to each company. It will take the premiums of four hundred cargoes to pay this one loss. One of the companies is still endeavoring to make up the loss through competition, having since its destruction insured from Toledo to Buffalo at nine cents on the one hundred dollars. At this, less commission and expenses, they got the enormous sum of seven dollars and fifty cents for assuming the risk of ten thousand dollars, it requires no mathematician to tell that it would take the premiums of over thirteen hundred cargoes to pay the total loss of one. Can any one for a moment doubt the result to capital that so madly competes for business?"

### Mining.

**LAKE SUPERIOR MINES.**—Montreal Mining shares, which were quietly ranging from \$2.25 to \$2.75, have suddenly gone up to \$3.50, the latest quotations asked by sellers, and considerable sales have been effected at \$2.75. The cause of this great increase is the reported discovery of a very rich vein of silver ore in the Company's mines in the Lake Superior region. Some time ago, we believe, Mr. Thomas Macfarlane was sent to explore the location and report concerning its prospects. He sent down a number of rather poor specimens of ore. Last Monday he telegraphed the welcome news to the Hon. Thomas Ryan, President of the Company, that he had discovered a remarkably rich vein on another location called "The Woods," in the vicinity of Thunder Cape. Mr. Macfarlane also sent specimens of the new vein to the Company's offices, and they will probably shortly be opened for inspection. The newspaper published by the Press Association Excursionists gives the following particulars:—

"On the 10th inst., the richest vein yet discovered was opened at Wood's location near Thunder Cape, by the Montreal Mining Company, under the superintendence of Mr. Thos. Macfarlane, chief Director of the exploring party in the employ of that Company. The vein is seven feet wide, and of unknown extent otherwise. But one blast was made which threw out 1,200 lbs. of the richest ore yet discovered—the native silver being therein plentifully discerned by the naked eye. The ore

thrown out by the blast is estimated by competent persons to be worth \$400."—*Gazette*.

**GOLD IN NEW BRUNSWICK.**—A few days ago we received a visit from a Mr. Thomas W. Langstaff, of Woodstock, Carleton county, New Brunswick, who exhibited some specimens of gold obtained in that county from washings of alluvial deposits with specimens also of gold-bearing quartz, apparently very rich, whether examined by the naked eye or by means of a microscope. None of it has yet been assayed to test its actual value. The specimens compare favorably with those we have seen from California.

Last fall Mr. Langstaff and others associated with him, having discovered what they considered unmistakable indications of gold, and having purchased from the provincial government over thirty square miles of territory, made a test of one portion of the purchased territory. All of it is on the eastern branches of the St. John river in three countries, those of Victoria, Northumberland, and Carleton. The test was made in the latter county, about twenty-seven miles from Woodstock, on the Shicktehawk, a branch of the St. John. A party, of whom an experienced California miner was one, proceeded to the locality selected for the experiment, where a sluiceway, made of boards, being twelve inches in width by nine inches in depth, and about two hundred feet long, was erected. "Riffles" had been fitted into the sluice at its lower end, and about three cubic yards of sand and gravel were shoveled into the upper end. At the lower end, which was between twenty and thirty feet below the upper, there had been placed a small quantity of quicksilver for collecting the minute particles of gold which might otherwise have been carried off with the sand by the force of the current. With these rude appliances there was produced nearly ten dollars' worth of gold, which we have seen. This gives a yield of over three dollars per cubic yard of earth, dug on the margin of the stream, the workmen not even wetting their feet. Besides this, a nugget was picked up worth some four dollars. One of the party, an old Peak miner, "panned" out in fifteen minutes a handsome show of gold, and declared that the deposit fully equalled any he had seen in his experience. The next day a boy of fourteen washed out his day's diggings, carrying home the commingled sand and gold and finishing the panning at home, which yielded over three dollars in pure gold. Yet it is believed by experts who have examined and tested this locality on Shicktehawk and others comprised in the purchase that the former does not present so favorable indications as those on the Muniac and Serpentine. All this country is well wooded, the soil is fertile, and the streams never failing, in many cases affording excellent waterpower.—*Scientific American*.

**METALLURGICAL TREATMENT.**—The process of amalgamation still generally prevails in the mining districts enumerated. It consists in reducing auriferous rock to a fine powder by means of stamps, arastras, Chilian mills, or other mechanical contrivances, and subjecting it to a continuous agitation with mercury, with water enough to give a pasty consistency to the mass, the object being to expose as fully as possible the fine particles of gold and silver to the attractive power of the mercury, with which they form an amalgam easily separated by subsidence in the lighter pulp of earthy matter of which the ore consists. The amalgam thus obtained on being subjected to moderate heat in an iron retort gives up its mercury, which passes over the vapor and is condensed again in another vessel, the metal being left in the retort.

In the case of pyritic ores, however, it is found that the process of amalgamation is seriously retarded by the impurities with which the gold and silver are associated. Probably the ores of Colorado do not yield by simple amalgamation an average of 20 per cent. of their assay value. A previous process of desulfurization is therefore indispensable, and how best to accomplish this is the problem which has occupied the attention of metallurgists for

many years. Many methods have been advised, the majority of which being merely empirical have had but an ephemeral reputation.

The opinion is widely prevalent that smelting—the attack of gold or silver bearing ores by fire—will be the final and indispensable expedient of separating the precious metals from its matrix. If smelting works on a large scale could be established in all the mining Territories, there would doubtless ensue a sub-division of labour in the business of gold and silver, as is now the case in iron mining. The miner would limit his efforts to raising ore from the mine, and the smelting furnace would afford a market where the ore might command its price, which would be better for all parties than the method hitherto pursued, of raising and reducing ores under one administration.—*Com. Taylor's Report*.

**NOVA SCOTIA GOLD RETURNS.**—The following are the returns from the gold-mining districts for last month:—

Place.	Quartz crushed.		Yield of Gold.		
	Tons.	Dwts.	Oz.	Dwts.	Grs.
Waverly.....	1035	12	239	0	1
Uniacke.....	201	19	146	3	7
Sherbrooke...	636	10	236	4	16
Tangier.....	22	0	15	6	0
Wine Harbor.	224	9	240	0	22
Oldham.....	65	18	50	4	9
Renfrew.....	600	0	347	0	0

**THE CILLAS MINE.**—Mr. F. W. Terrill has just shown us a very fine specimen of grey and yellow copper ore taken four feet from the surface, at the above mine. Judging from the weight it must be very rich in metal. Assays by Dr. Girdwood, of specimens taken from the same mine have yielded at the rate of \$26 silver, \$20 gold, to the ton, and 8 per cent copper.—*Sherbrooke Gazette*.

—An important mechanical contrivance for the separation of the precious metals from the matrix has just been patented in England, and is briefly referred to in a letter from Mr. W. T. Rickard to the *London Mining Journal*. The invention will be shortly protected and put in operation here, and from the opinions of experts it is likely to prove extremely valuable.—*Halifax Mining Journal*.

—A description of the Anglo-Saxon mill at Madoc which appeared in our columns should have been credited to the *Mercury* of that place.

**INTERNATIONAL COMMERCIAL CONVENTION.**—A call has been issued for an International Commercial Convention, to be held at Portland, on the 4th of August next, to take into consideration the various plans and measures now before the country, to increase the facilities of intercourse and trade by land and railway between the interior and the Atlantic seaboard, the adoption of measures to relieve commerce of unnecessary burdens, and secure unrestricted freedom of trade upon the continent of North America. Particular measures to be considered:—

1. The completion of the Atlantic and Pacific Railway from Halifax to San Francisco by the most direct route.
2. The completion of the Northern Pacific Railway from St. Lawrence water to Puget's Sound.
3. The Niagara Ship Canal, the Champlain Canal, and new lines of railway from the navigable waters of the lakes to the seaports of New England.
4. The adjustment on liberal terms of the regulation of trade on the continent.
5. Such arrangements of lines of ocean steamers between San Francisco and China, and across the Atlantic Ocean, as shall secure means of communication between Europe and Asia, across the Continent of North America by connected lines of railway and ocean steamers,—as regular and as convenient as those between city and city upon the same continent—on the completion of the lines of railway now built, or in progress, between Halifax and San Francisco.