

# Will Revolutionize the Smelting Industry

(Special to The Miner.)

VANCOUVER, B. C., Sept. 24.—Are we to be revolutionized? That question will soon be settled, for Judge Reed of Pittsburgh and his colleagues of that town, Messrs. Bagley and Lindquist, who are at Crofton Vancouver Island to witness the trial of the Garretson furnace which, if successful, will revolutionize the smelting industry of America. The inventors are C. S. and F. C. Garretson, father and son, and they worked on their furnace for ten years before it was started on its first trial Monday at the private blowing in of the Crofton smelter. That smelter has been put up by the Northwest Smelting and Refining Company, the principals of which are D. S. Forthingham and H. C. Bellinger, of Spokane and W. Breen of Butte, Montana. In mining circles the first on the British Columbia coast—as far as anything compared to the possible importance of the Garretson smelter—is as nothing compared to the possible importance of the Garretson smelter which, if successful, will cut down the cost of smelting to one-quarter of what it is today. It will do away with the necessity of using converter plant; in a word, the three present processes of smelting are combined and the whole operation takes place in one apparatus. It is needless to state then, that the eyes of the mining world are eagerly turned on Crofton today. F. C. Garretson, speaking of I have been working on it for nearly ten years. We got on to the subject through a mine in Mexico—a low grade and rebellious ore proposition—which we bought. We sent samples of the ore to seven metallurgists and they sent seven different kinds of advice, so it was pretty certain that of them were wrong. We finally decided that pyritic smelting was the best and we worked our furnaces and did much experimenting in a small way. Finally, about three years ago we developed the idea patented in the Garretson furnace as it is today.

"It is a little difficult to explain our system in a way intelligible to a layman, but I may say that the ordinary process of smelting involves the roasting and smelting of ore as separate processes to the converting of it. The ore takes six weeks in the roasting process, and in the case of a smelter treating 1000 tons of ore a day there would have to be 42,000 tons of ore which means the capital represented by its value tied up for the time being. The smelting process, however, the same in our furnace, but we utilize the sulphur and iron in the ore as fuel, which saves the cost of coke. In ordinary pyritic ore there are as many heat units as in coal.

"Further, we do away with the cost of the converter plant, which is the most expensive portion of a smelting plant. In cases where the ore is right—we do away with carbonaceous fuel and the cost of the Garretson process is, roughly, just one-fourth the cost of ordinary smelting.

"After roasting it is necessary to put the ore through another process, often through an ordinary water-jacketed shaft furnace, after which you have a 50 per cent matte to put into the converter to be blown into copper. In our furnace we take the raw ore as it comes from the mine, charge it into the top of the furnace and take out at the bottom blister copper, which is about 95 per cent metallic copper. After that it is only necessary to refine it electrolytically to eliminate what impurities remain and combine with the present process has been that a high grade product could not be made without taking a rich slag—too rich in mineral to be thrown away. Also it was not considered possible to convert in a water-jacketed converter without lining it with fire clay and crushed quartz, which has to be frequently replaced and is an expensive method. A number of systems of introducing silica into the converters have been tried, and they have been lined with refractory material such as magnesite, but it was found difficult to introduce the necessary silica so as to make it combine with the oxide of iron formed in converting.

"We obviate this difficulty by converting underneath the charge in the furnace, feeding an excess of silica in with the charge and converting by a row of tapers placed around the furnace. In this way we prevented all the silica from being taken up at the top and it is forced down by the weight of the charge above it as silica, into the matte where it is required.

"We are not claiming to do anything which is not entirely consistent with the laws of chemistry. We have simply combined the three existing processes, and the whole operation takes place in one apparatus. Pyritic smelting is an established fact. The reason it is not more in use is that in order to make a sufficiently high grade matte it is essential to run the furnace very slowly, and it is then liable to clog up. If the furnace is kept in good smelting condition it has to be put through the smelter again. In our furnace we are not particular what grade of matte we get, because converting is carried on in the same vessel.

"It has always been said that if you make a high grade product it means a rich slag, but we can make a rich product and get a clean slag because the making of the rich product is carried on below the slag level in the furnace, and before the slag goes out of the furnace it is cleaned by the low grade matte falling and being converted.

"We are creating an excess of heat by converting immediately under the smelting zone of the furnace. It is usually considered necessary in pyritic smelting to have a hot blast, and we avoid that by putting an excess of air in the converting tapers and allowing it to pass through the hot matte and slag into the smelter zone above, being heated in its passage.

"The Garretson furnace has never been a successful commercial operation, but sufficient experiment has been made to show that we are sure of the ground.

# ALL THE DETAILS ARE COMPLETED

NEW YORK, Sept. 27.—The Commercial Advertiser prints the following today:

"It was learned today on the highest authority that all the details of the Atlantic steamship combine which has been arranged by J. Pierpont Morgan are now practically completed, and the deal will be consummated and the full particulars be made public early next week."

George W. Perkins, who was at the French pier this morning to meet Robert Bacon, of the firm of J. Pierpont Morgan & Co., confirmed this in an interview to a reporter of this paper.

"We have been working on the details for some time," he said, "and have just completed all the arrangements. The contracts and working arrangements which are to govern the consolidated lines. A statement will be given to the press next week in which all the details of the arrangements will be given."

SOLDIERS RUN AMUCK.

Many of Them Arrested—Attempt Made at Rescue.

HALIFAX, N. S., Sept. 27.—A number of the Royal Canadian soldiers, who were disorderly on Barrington street last night, came into conflict with the police and serious trouble followed. Several arrests were made, but the police were not strong enough to disperse the 1000 people who gathered at the police station where the soldiers were and made threats to rescue them. The Imperial authorities were notified and 50 Royal Engineers were dispatched to the city hall in readiness for any emergency, while the Royal Artillery were ordered to patrol the streets. The Canadians soon after returned to their barracks and no further trouble occurred.

SAME OLD STORY.

Hunter Mistook His Brother for Game and Shot Him.

BURKE'S FALLS, Ont., Sept. 27.—While hunting in township Laurier, Wellington Middleton mistook his brother George for game in the bushes and shot him dead.

ILLINOIS CENTRAL PROSPERS.

President Fish Reports Increase of \$4,000,000 in Earnings.

NEW YORK, Sept. 27.—President Stuyvesant Fish of the Illinois Central Railroad issued his annual report yesterday, June 30, 1902, the company had earned \$40,821,030 gross and \$12,808,570 in net. The expenditures for "betterments and miscellaneous" out of current income were \$4,994,502. Total expenditures for betterments exceeded earnings by \$2,176,000. The report states that the Louisville division of the Illinois Central, 45 1/2 miles long, heretofore rented from the Louisville & Nashville Railroad company for \$60,000 a year, has been purchased at an option price of \$1,000,000. At the annual meeting of the 15th of next month, a vote will be taken on a proposition to merge all of the leased roads, aggregating 1000 miles, into the main corporation. Inasmuch as the present administration controls a large majority of Illinois Central stock, this merger is practically assured.

FOREIGN MISSIONS OUT OF DEBT.

NEW YORK, Sept. 27.—For the first time in several years the American Board of Foreign Missions has been able to close its year free from debt and with a balance to its credit in the treasury. On September 1 last year, the board had a debt of \$102,341.38. This has been entirely liquidated, the other expenses of operation have been paid and the board found on September 1 a credit balance of \$44,112. The total receipts for the year were \$345,195.35, including from churches and individuals \$278,786 and from the women's boards \$24,716.61.

The board is now preparing for its ninety-third annual convention, which will be held in Oberlin, Ohio, from October 14 to 17. The annual sermon will be preached by the Rev. Dr. Newell Dwight Billie of Plymouth church, Brooklyn, on the evening of October 14. One of the most interesting features of the assembly will be the laying of the corner stone of the Martyrs' Memorial, in honor of the missionaries of the Board who lost their lives in the Boxer uprising in China. Nearly all of these missionaries were graduates from Oberlin College and the memorial will be erected on the college campus.

It will be in the form of an arch, and will be placed near the west end of Tappan's Walk, directly in front of the main entrance to Peter's Hall. It will be of buff Indiana limestone and will cost \$20,000.

A BAND OF AROUS.

Have Killed 12 Servants and 16 Peasants.

BELGRADE, Serbia, Sept. 27.—A band of Arous, who in the Serbian territory, attacked the village of Miranovitsa, and killed after a two hours' struggle. Within a few months the Arous have killed 12 servants and 16 peasants and have wounded nine soldiers and 11 peasants.

Mrs. M. W. Simpson has returned to Rossland after spending some months in Toronto and other eastern points. Norman T. Macleod of Nelson was a subaltern officer in the Nelson company of the Rocky Mountain Rangers, and renewed old friendships with the Rossland military men while here.



## The Codest Corner

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No other heater will extract so much heat from the same amount of fuel, and few others have dampers to which the fire is so obedient.

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is simple to operate, easy to clean, needs very little attention, has self-acting gas dampers, and is in every way a modern heater.

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# McClary's

London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N. B.

## GROWTH OF FOUR YEARS.

Important Changes in This District—Wealth Developed.

Chris Eckstrom of Seattle arrived in town Wednesday afternoon over the Great Northern, and will probably locate in this town permanently. After looking over Morrissey he expressed the opinion that the town should have a rapid growth, as it was backed by substantial resources. "In fact," said Mr. Eckstrom, "South East Kootenay is today one of the best fields for business I have seen the past two years. During that time I have visited in a business way the northwestern states, Alaska, and portions of British Columbia, and I look upon this district, with its coal, timber, mineral, mines and competing railways as the best of all at this time. South East Kootenay has a great commercial future, and especially this portion with its magnificent deposits of coal.

"There may be those in this part of British Columbia who have the idea at times that this district has not progressed in a satisfactory manner. I left the district four years ago this summer, and the changes that have taken place since then are simply wonderful. At that time there was no Kimberley, Marysville, Cranbrook, Fernie, Morrissey, Elk, or Michel. Moyie was getting started, and Coal Creek was the only town in this part of the district. Since that time the coal mines have been developed by the expenditure of hundreds of thousands of dollars, and the town of Fernie, with the Michel and Morrissey camps, have been built up. The mines of Moyie have been consolidated and today it is conceded to be the largest silver-lead proposition known. The Sullivan and North Star mines have been developed and the smelter at Marysville is under way. The C. P. R. has been completed through to Cranbrook, the North Star branch, built from Cranbrook to Morrissey, the Great Northern built from Jennings, Mont., to Morrissey, and other roads being surveyed in the district. When one stops to think of what has been done in that brief period, and what now is bound to be done during the next four years, he is simply amazed at the wonderful possibilities of this district. I don't know of a better place for men with money to invest, or I don't know where one could find a section of country where good returns would be more assured. And this town of Morrissey looks good to me because I believe that it is bound to have a rapid growth. It is a grand opportunity for business men and is bound to be a thriving town." — Morrissey Miner, Sept. 20.

## THE DUTIES ON PULPWOOD.

Increase by United States Would Hit Canadians Hard.

TORONTO, Sept. 27.—The reported intention of the United States government to add 35 cents a ton on ground wood and 35 cents a ton on unground sulphite and soda pulp was discussed with interest around the parliament buildings yesterday morning. According to report, the United States considers that the regulations in Quebec and Ontario are equivalent to an export duty. In the former province the stumpage is reduced from 55 cents to 40 cents a cord, when the pulpwood is manufactured in Canada, while Ontario prohibited the export of all timber on crown lands. An official of the crown lands department said to a Globe reporter yesterday morning that if the statement of the true imposition of a duty on additional duty would certainly be a hard blow for a number of pulpwood exporters. There were not many in Ontario, but in Quebec and the other provinces the number was large, and they would consequently suffer most. Action of the nature stated to have been adopted by the United States would, he thought, be more likely to be a result of the Quebec stumpage rebate method than the system followed in Ontario. He did not think dealers in the United States would be hit to any great extent, as there was a good deal more pulp wood in that country than most people in Canada supposed.

Hon. E. J. Davis had not, he said, had time to look into the matter, and hardly cared to give an opinion without due consideration. Off-hand, however, he thought it more probable that the establishment of more paper mills in Canada, and (as the United States had a duty on paper) to the widening of the Canadian market in England and on the continent.

## GENEROUS OFFER.

Alderman Sorter Will Distribute 6000 Cords of Wood Among Poor.

TORONTO, Sept. 27.—Alderman Sorter has notified the city council that he has six thousand cords of wood within five miles of Toronto, which he will give to the city for distribution among the poor this winter in view of the scarcity of coal in the city. He will have the same cut and brought into the city.

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## BACK FROM LABRADOR.

Glazier Party Found a New River and Rich Minerals.

CHICAGO, Sept. 26.—The Glazier exploring party, which has just returned home after two months spent in Labrador, has added to the geographical knowledge of the interior of the frozen north by finding a hitherto unmapped river. The party was enabled to penetrate 100 miles into the interior by means of a boat. Deposits of mica, both white and black, copper and iron were found in the islands which fringe the coast. The commercial value of these discoveries is yet to be determined.

H. Ferrigno was the only member of the party from Chicago. He arrived home bearing a large collection of samples of the minerals and a number of curios purchased from the inhabitants. The expedition was headed by Colonel William Glazier of Albany, N. Y., who placed the source of the Mississippi river in Lake Glazier. George H. Clark of Winthrop, Mass., a member of Lieutenant Peary's expedition in 1892, was the second member, and in addition was a third member, and in addition was a third member, and in addition was a third member.

"We found the mouth of our river at the head of Nain Bay," said Mr. Ferrigno. "The tip came from a guide, who knew in a general way where it could be found, and we determined to follow it. We found the river a series of narrow lakes, about a mile wide and several miles long. They are connected by rapids so swift that we had to haul our boat up them by ropes. There are ten lakes in all, and the mountains rise from their sides to a height of 1000 and 2000 feet. At times it was difficult to find enough of a beach to camp on. The last lake we crossed was thirty miles long."

## "BEHOLD THE WRECK YOU HAVE MADE."

KBOKUK, Ia., Sept. 22.—The case of the Rev. P. J. Henness, before the Iowa conference of the Methodist Episcopal church, came very dramatically to an end early yesterday.

When Mr. Henness himself took the stand, he said it was evident to himself and to his attorneys that he was not to have a fair trial, and handed the parchment of his ordination to the committee, following with his resignation from membership in the church, as well as from the ministry. Turning to his wife, who was present, the unfrocked minister exclaimed: "Woman, behold the wreck of a man you have made!"

His wife broke down at this dramatic exhibition. The committee for the trial of Mr. Henness immediately closed its session, having lost its jurisdiction of the case by his action in placing himself outside the pale of the church.

Mr. Henness, after maintaining silence stubbornly for a year, said today that the reason that he left his wife was because of her continual "nagging," which broke down his health and rendered it impossible for him to do ministerial work.

The charge against him before the conference was his separation from his wife, whom he agreed to support, but refused to live with. No question of immorality was involved.

## POLISH AUTHOR'S ADVICE.

BERLIN, Sept. 27.—Henry Rieckelwitz, the Polish author, advised the Prussian authorities not to allow themselves to be driven into extreme acts or words through the anti-Polish agitation. He has addressed an appeal to the Polish people in which he says: "Hold fast to your Polishness—let no power on earth tear it from you. But avoid hatred of the present government's policy; it is morally a congestion of the Prussian head, causing temporary distress."

## PATH OF A CYCLONE.

East Coast of Sicily Deluged—Violent Submarine Agitations.

LONDON, Sept. 26.—A dispatch from Syracuse, Sicily, direct, says that the stream flowing through Modica, swollen by the recent terrific storm, suddenly overflowed and inundated the town, and that several houses collapsed and a number of families perished. The country in the vicinity of Modica is flooded, and the prefect, with a force of troops, has started for the place in order to render assistance to the sufferers.

SYRACUSE, Sicily, Sept. 26.—For 24 hours before the cyclone broke over the island a violent storm raged on the east coast of Sicily. The path of the cyclone was 125 miles long and everything in the line of the storm was destroyed. The sea swept the island for seven kilometres, doing enormous damage, while there were violent submarine agitations between Sicily and the main land. Along the railroad from Catania to Palermo the coast of Sicily was such that rails were torn up and buried around. It is reported from Modica that a hundred bodies have already been found, but that the number of dead swept away by the torrent is unknown.

The newspaper *Progreso*, expresses the belief that some 400 people have been killed. The torrent destroyed everything on the ground floor in houses in the lower portions of Modica. Bridges and roads have disappeared, and damage amounting to many millions lire has been done. The survivors of the catastrophe have taken refuge in the hills. A relief committee and search parties have been organized at Modica. The disaster is supposed to have been due to a marine waterspout.

The German steamer *Capra* was wrecked at Catania after a terrible struggle with the waves.

## BELIEVES SON INNOCENT.

Father of William Hooper Young so Expresses Himself.

PARIS, Sept. 26.—A representative of the Associated Press has interviewed Mr. W. Young, father of William Hooper Young, who is charged with the murder in New York of Annie Nelson Pulitzer, on the developments in the case against his son. Mr. Young said: "I am now convinced from my own cable advices that my son is innocent, and I shall do the utmost in my power to help him, while if I thought him guilty of such a horrible crime I would not move my hand to save him from justice. He is wayward, but he never had a criminal tendency. The only explanation to my mind which can connect him with the crime is that he fell under the influence of some designing person who perpetrated the murder and through whom my son acquired a guilty knowledge of the crime, or possibly became an accessory after the act."

## TRANSFERRED TO CHINA.

PEKIN, Sept. 27.—Simultaneously with the Russian transfer to China of the Shan Hai Kwan, New Chinese railroad, Sir Ernest Satow, the British minister, yesterday handed over to China the British portion of the Shan Hai Kwan railroad station, and the British are now transferring their shops and other works with the intention of making a complete restoration of the road at the earliest possible date.

## MAYOR WESTON DEAD.

NEWBURG, N. Y., Sept. 27.—Major W. H. Weston, president of the Central Hudson Steamboat company, died this afternoon.

## News & Notes

(Special to The Miner.)

GREENWOOD, T. Annie Larkin, who times of railway of Larkin House in C for several years in the restaurant on Monday and was a very active until some months after she lay in then she has been the greater part of in the Greenwood. Yesterday's train Greenwood L. B. E for the Vernon & company, and his Hodge were married.

(Special to The Miner.)

GREENWOOD, Montreal & Boston Sunset mine, at v shut-down caused age in the coke su ing operations, is to the company's s Falls. A sufficient maintained to sup of the smelter abov tom ores, and at t ively policy of fur being instituted a sinking the main a ing other develop the diamond drill on the lower levels wards and laterall ore bodies and as where sinking or done to best adv directors, J. N. G Munroe, both of M terday. A second in at the company increase its capaci treat larger quant and custom ore. A. C. Flumerfelt of the Granby & Co Smelting & Powe was here yesterday.

## SENATOR ON R

BOSTON, Mass. States Senator H. Lieutnant-Govern guests of the Ma can Editorial asso here this afternoon Senator Lodge. the burden of a tariff should not b this time. He decl to revise the tariff induce the business country to such a as possibly be con declared that the tariff revision.

Touching upon r ada, he maintained party had always p ment and had don been accomplished. The talker reciprocity not optimistic rega to be gained by reciprocity with G market of \$5,000,000 give the United market of only 7.0

## ALL-CANADA

Two Victoria Men English

(Special to The Miner.)

VICTORIA, B. C. Schofield and Ar Victoria's best ru been selected as Canadian rugby players in Nov months' tour of They will spend before leaving pr

## CHURCH

Knox Independent Vancouver, Joins

(Special to The Miner.)

VICTORIA, B. Independent Pres cover, one of th has decided to jo allists in a body, tional church one the city.

## STATEMEN

The Suit Against Vis

(Special to The Miner.)

VICTORIA, B. of Bodwell's soli statement of th that he had dro Prior is unfoun vigorously push Blair, minister ing arrangements Coast.

## TOURING T

GRAND FOR William H. Nich Nichols Chemical robes of preci reached here to Boundary district Granby smelter

## GRANBY

GRAND FOR During the wee Granby smelter Grand total treat