

## THE CANADIAN SHEPHERD.

Galt, the Town of Manufacturers, Hecarthy Receives the Liberal Leader.

Mr. Tarte Makes Some Interesting Statements as to Tory Boasting.

Galt Oct. 22.—When the Liberal leader and his friends arrived at Galt today they were given a most cordial reception. The visitors were met at the station by the Musical Society and City band, and a large number of citizens and visitors from the surrounding country. The officers of the Reform Association greeted the leader and those who accompanied him, and which Mr. Laurier was welcomed by the Reform Association chamber by the Reform Association. The address from the corporation was presented by Mr. A. McAusland, the acting mayor. As soon as the introduction was made, the introductions to Mr. Laurier took place, and subsequently he and other speakers for the evening were entertained at lunch by Hon. James and Mrs. Young.

At Brampton a large party had assembled at the railroad station to greet the Liberal leader as he passed through the town. The presence of Mr. Laurier and Mr. Tarte on the platform was greeted with cheers, and pretty little Miss Graham, daughter of E. C. Graham, stepped forward and presented the Liberal chief with a beautiful bouquet. A speech was delivered from Mr. Tarte, and he responded to the applause. Mr. Laurier also spoke briefly. At every station there were parties anxious to catch a glimpse of the Liberal leader, and at Galt the reception accorded him and Mr. Tarte was most cordial and enthusiastic. Among those who greeted the visitors were: Messrs. Jas. Innes, M.P., John McMillan, president South Wellington Reform Association; Alex. Stewart Dunbar of the Young Liberal Club, Guelph; G. W. Field, and many others. There were urgent calls for Mr. Tarte to speak, and he responded in a neat and appropriate speech. It was necessary to hold one meeting in the town hall and another in Fraser hall. About 2,000 people were accommodated, but even these 2,000 were unable to get within the doors.

The meeting was announced to begin at 7:45 o'clock p.m., but at 7 o'clock the town hall was filled to the utmost limit of its capacity and there was not even standing room left, and hundreds of people who did not anticipate the crush were turned away from the doors, through which the densely-packed crowd overflooded. In the great audience were scores of women who took no pains to conceal their appreciation of Mr. Laurier and the support he had received. The audience was enthusiastic. They were just as enthusiastic as the men folk, and it was regarded as a good omen, for, as the leader has gracefully and gallantly said: "If the ladies are with us God is with us and victory is with us."

There was a tremendous demonstration when the leader walked on upon the platform. Previous to his entry the great audience restrained its pent-up enthusiasm. But when the moment came it let itself loose. Such cheering there never was. The quality of the reception demonstration was such as to leave no doubt that it came straight from the hearts of the people. Besides being enthusiastic, the great assemblage was a thoroughly representative one. There were in it people from Preston, Hespeler, Woodstock, Brantford, Ayr, Elgin, and Guelph, and other points far and near. The country district about Galt was well represented.

The chairman was Hon. Jas. Young, president of the South Waterloo Reform Association. Near him sat Messrs. J. Israel Tarte, M.P., James Sutherland, M.P., William Patterson, M.P., Bowman, M.P., William Gibson, M.P., Thomas Bell, M.P., James Livingstone, M.P., James Innes, M.P., J. I. Platt, M.P., J. D. Moore, M.P. Others present were: Messrs. A. W. Falconer, A. W. Wright, M.A., L. Bawlinheimer, Rev. A. G. King, B.A., Rev. C. C. McLaurin, Robert Webster, Morris Sheldahl, Arthur Burnett, J. R. White, William Wallace, Robert Ferguson, M. Hallman, J. K. Cranston, Jacob Laschinger, R. T. Williams, Reeve McAusland, A. J. Stevens, M. S. McKay, Sylvester Moyer, Dr. McAllister, J. Hallman, James McCartney, W. S. Cameron, George Laird, Dr. Cameron, William S. Turnbull, Andrew Laidlaw, Dr. Thompson, Galt; G. W. Field, Guelph; A. E. McNally, Elgin; Isaac Grotz, William Parke, John Flynn, Wm. Jardine, Hespeler; Rev. J. S. Hardie, John McNab, Dr. Meldrum, Ayr; Dr. L. Seccord, president of the South Brant Reform Association; W. S. Philp, president of the Brantford Reform Association; John T. Havitt, president of the Brantford Young Men's Liberal Club; Ald. John Brown, Ald. W. G. Raymond, J. S. McLaren, Robert Lindsay, Brantford; J. G. Pequegnab, Wellington; Wm. E. Ross, W. H. Weber, Otto E. Presser, William Linton, Herman Becker, New Hamburg; M. A. Abbey, P. E. Shantz, Preston; John Meyer, Kossuth; James Hoel, Hespeler; G. Bittscher, New Dundee; R. C. Tye, Hagersville; H. T. Gardiner, editor of the Hamilton Times; John Crear, Hamilton; W. E. Paine, Toronto; J. Mahon, Robert Oliver, D. Welham, Campbellville, and A. Pattullo, Woodstock.

In his introductory remarks Mr. Young said that he was gratified to find that such an immense number of the most influential and intelligent inhabitants not only of Galt and the county of Waterloo, but of Brant, Wentworth and Oxford and Wellington had assembled to hear and honor the gifted and popular leader of the Liberal party, the Hon. Wilfrid Laurier, than whom he had never known a nobler and truer Canadian, nor one more deserving such a magnificent demonstration. One thing as Liberals they had reason to be proud of, the great ability and high personal character of their leaders. Where in political history could they find a more heroic figure than George Brown, a finer character than the late Chief Justice Dorian, a truer patriot than Alexander Mackenzie, a more brilliant and distinguished Canadian than Edward Blake? And yet he felt proud to be that they had in Wilfrid Laurier a worthy successor to these grand and brilliant men as leader of the Liberal party. He expressed the belief that this and other magnificent demonstrations

which have greeted Mr. Laurier throughout Ontario were hopeful omens for the future of the Dominion. The people have borne long with gross political abuses at Ottawa, but it has been because the hands of the electors have been tied by gerrymandered constituencies, stuffed voters' lists and systematic corruption of localities and individuals. The day of deliverance, however, seemed to be drawing near.

MR. TARTE.  
The pretty little daughter of Mr. Jas. Allan presented Mr. Tarte with a bouquet when he had been invited to address the meetings. Mr. Tarte, with true French gallantry, emulated the example of his leader, and the little maiden was kissed. Mr. Tarte, alluding to the Conservative critics, said that he did not claim to be an angel like Mr. John Haggart, nor did he claim to be an arch-angel, like Sir Adolphe Caron. He only claimed to be a plain Canadian and an honest man. Mr. Tarte read the following letter, which was written by Sir Adolphe Caron, in 1890, to one of the most prominent electors of Montmorency:

"Ottawa, April 17, 1890.—My Dear Mr. Rheume: As you are still, in spite of your great age, one of the leading spirits of the party in the county of Montmorency, I call your attention to the fact that Mr. C. Langelier is going to be a candidate against Mr. Desjardins for the local house. I know that you will do for Mr. Desjardins everything that it is possible to do, but it is important at the same time that the division should be represented in the house of commons by a man able to represent the interests of the Conservative party. I spoke to you last winter of our friend, Mr. Tarte, whom you know well, and who has now made a fight in your county. He has been asked by a great many of the electors to be a candidate in Montmorency. I hope our friends will view his candidature favorably, and as far as you are concerned, I hope you will do everything you can. (Signed) A. P. Caron."

Mr. Tarte said that behind him then there were ministers of the crown who had pledged themselves to help him. "When I started from the Union Club in Quebec for the county of Montmorency," he said, "I started after having lunch with Sir Adolphe Caron and after our agreement had been made between us that he would not oppose me. I give you the name of the party because I read in a paper this morning some statements that must have come from him." Mr. Tarte said that he had been in Montmorency, though these men had subscribed \$20,000 against him. Further on, the member for L'Islet said: "The evidence given by Mr. McGreevy before the committee of the house of commons was evidence contrary to the truth, beginning to end. Why was he set free? He was set free because he brought to Ottawa all the papers that we had not been able to lay our hands on. The knowledge that these papers had been brought to Ottawa was given to Mr. J. C. Patterson and other ministers. Mr. McGreevy was to publish in a day or two the most damning evidence that has ever been published, and the ministers set him and Connolly free. These are the facts." He challenged the ministers to ask for a new inquiry upon these facts.

Then Mr. Tarte took the charges levelled at him by the Toronto World this morning. "The Toronto World this morning," said he, "speaks of a certain transaction with which I was connected in relation to the Temiscouata Railway Company. In 1884 I became a shareholder in the Temiscouata Railway Company with three or four of my friends. I was not a member of the house of commons at that time, but a private citizen and a newspaper man. We required control of the company in the ordinary way of business. The company got subsidies from Ottawa and Quebec. One day we sold out our interests to Mr. John J. Macdonald and Mr. Boswell, who were backed by the Canadian Pacific Railway Company. We sold our interests for \$100,000. The Toronto World says I got \$30,000 out of it. Suppose that I got the whole of the \$100,000, there was no harm in it. I was selling my share in the company, one of the ordinary transactions of ordinary life, I am not bound to say what I know about it. There was an unwritten law in the Conservative party by which the friends of the party who were making money in large amounts of the kind were bound to give large amounts of that money or men in high places. What did we do? Out of the \$100,000 I speak after having thought it over: I never said a word about it before, but there is a time when public opinion ceases to be a virtue—out of the \$100,000, \$50,000 went in political subsidies. My friend Mr. Edgar, brought the question before the house of commons and he asked for an inquiry. Sir Adolphe Caron, who knows something about the Temiscouata Railway Company, and his colleagues, refused to grant the request made, and they changed that request into a position by which the inquiry was to be held before a court of justice in Quebec. Some of the last year were appointed by the Ottawa government were warned beforehand that if they put certain question questions certain ministers would get into trouble. I challenge the Ottawa government at the coming session to ask for the inquiry. I know the names of the ministers who got that money. I have not given these names, but I am prepared to give them if an inquiry is asked in the house of commons, and the Toronto World will be bound to its senses. I state to you that Mr. Maclean will have in a short time a full opportunity to prove the accusations that were made this morning in his paper."

In discussing the Manitoba school question, Mr. Tarte said: "We do not want to coerce Manitoba. We want justice, but we want justice in a reasonable way."

MR. LAURIER.  
In the course of his address, the leader said: "I venture to say that there is not an industry in the country that has been benefited by the N. P. You call yourselves the Manufacturers' Party. The reason you have woolen mills here, and you are also the Sheffield of Canada because you have large iron industries. There is a tax upon the raw material of the iron manufacturer, a tax of \$4 a ton on pig iron, and these representations under certain figures given by the minister of finance a duty of not less than 60 per cent. Do you imagine that the manufacturers of iron benefit by a duty of 60 per cent. put on their product? I know, however, that these figures are disputed. I read an article in the Mail and Empire, in which that

paper says I am all wrong in my figures, that the duty on pig iron does not amount to 60 per cent., but amounts to 31 per cent. Very well, I will accept the statement. I will not go through the figures. Let us suppose that the duty meant taxes his raw material only 31 per cent. Do you believe that the iron manufacturer has much to be thankful for to the government when the government taxes his raw material only 21 per cent.? I say that the raw material of the manufacturer ought to be free, but here we are not to have that, because raw material is taxed 31 per cent. Let us see how that works out. The duty upon agricultural implements is 20 per cent. That is the duty that the manufacturer of agricultural implements has upon the finished article. But if he has against him 31 per cent. on the raw material, do you think he is benefited by the tariff? I venture to say that the National Policy, instead of benefiting the manufacturer, has injured the honest, bona fide manufacturer. It has helped the monopolists and the combines, I don't deny, but it has injured almost every other industry. In the interest of the manufacturer, I denounce the N. P., in the interest of the farmer I denounce the N. P., and I venture to say that with a revenue tariff which will make as far as it is possible all raw materials free, the manufacturer of Canada, and of Galt especially, will be in a better position than they are to-day to buy and sell in the markets of the world."

## AWFUL LOSS OF HUMAN LIFE.

## The Enemy's Favorite Season.

## Victims of Rheumatism Taken off Every Day.

## Paine's Celery Compound a perfect Cure for Rheumatism.

Are you numbered in the vast army of rheumatism? If you are, be warned in time. This is the season most fatal to all who suffer from rheumatism. Already, alarm and consternation is spreading in the ranks of the suffering and disabled. To-day, sunshine cheers you; to-morrow, and succeeding days, cold, damp, chilling and piercing winds may bring you to the verge of despair from agonies and excruciating pains. Can you afford to go on bearing agonies that may prove fatal at any moment? Can you afford to experiment with useless remedies, and with scores of Paine's Celery Compound, and the wonders it has done for others? If you value life, make a trial to-day of the only medicine under heaven that can banish your terrible affliction. Each bottle of Paine's Celery Compound is full of life-giving virtue and power. It cannot fail in your case; a cure is guaranteed; what stronger promise can you desire? Your friends and neighbors have been cured by Paine's Celery Compound. Many of them lingered in pain for years, and failed with scores of medicines; but victory was theirs after using Paine's Celery Compound. Health, strength, perfect vigor and complete victory will also be yours if you take hold of the same great curing agent.

## DEBS WILL SOON BE FREE.

Meantime His Railroad Union Branches in All Directions.  
New York, Oct. 30.—Railroad men met in secret session at the Metropolitan Hall, Brooklyn, and organized a branch of the American Railway Union. The exercises were conducted by Director M. J. Elliott of the Union, who turned over the charter, which he had brought from Chicago. Over 200 railroad men from the elevated and surface roads, both steam and electric were present and joined the new organization. Mr. Elliott, with five other directors of the American Railway Union, were released from prison on August 22, since which time all of them have been traveling through the country organizing branches of the union. Mr. Elliott came east. Mr. Burns, having headquarters in Chicago, organized Illinois. James Hogan is stationed at Ogden, Utah. R. M. Goodwin in Montana. Sylvester Kehrer in Minneapolis and T. W. Rogers in Colorado.

Mr. Elliott last night said that Mr. Debs was cheerfully looking forward to his release on November 22, when he would visit all the branches of the union in the United States. Debs is very hopeful for the future of the organization and spends his time in prison in answering the correspondence of the order. Since August 22, Mr. Elliott has traveled through Indiana, Ohio, Pennsylvania, New York, Connecticut, Rhode Island and Massachusetts. He has established branches of the order in all of these states, the total number being thirty-one. He says that everywhere he has found the men anxious to organize. Of the thirty-nine branches, two have been organized in New York City, two in Jersey City and one in Brooklyn. The greatest secrecy is maintained about the working of the union, and all the meetings are being held behind closed doors. The founding of the union to east is looked upon by railroad managers with no little uneasiness, as the strength of the order is daily increasing, and the membership at present is said to be far from 175,000. Adolph E. Shafer has been named organizer for New York state. Director Elliott will leave for the west to-day, being well satisfied with the result of his labors in this section.

## IT WAS A FESTIVE OCCASION

A Texan Negro Burned for His Crime—The Fire Had to be Relighted.

Ladies and Children Arrayed in Holiday Garb Witnessed the Gruesome Spectacle.

Kilgore, Tex., Oct. 30.—At a point about four miles from Tyler was enacted a horrible tragedy, the very recital of which causes the hearer to shudder. A Mrs. Bow, who had been visiting her mother a short distance from home, was on her return met by Henry Hilliard, a negro. What occurred can only be told by the negro himself and the evidence given by the dead body of the lady. The ground shows that she had struggled hard and the condition of the body that told of a cruelty that had rarely been equaled by Jack the Ripper. After assaulting the woman, the negro deliberately cut her throat and then taking his knife ripped up her body.

When the crime became known a posse was quickly organized, led by Deputy Sheriff Smith. Tyler, who with lanterns in hand and guided by a hound tracked the negro to within four miles of this place, where they found him fast asleep in a cotton pen. The negro's clothing was stained with blood which he had attempted to wash off. The posse rushed back to Tyler with the negro who offered no resistance.

Soon after the officers had him handcuffed, a mob of some hundred men, heavily armed, arrived and demanded the immediate surrender of the prisoner, which was readily given. The mob then proceeded to the scene of the murder, where they arrived this afternoon at 3 o'clock. The crowd continued to gather at the scene of the crime until nearly 2,000 citizens of Tyler and vicinity were there. A few moments before the fiend was brought to the place, a meeting was held and a committee was appointed to investigate his identity. Witnesses were summoned and closely interrogated. The result was a thorough inquiry. In a few moments an officer appeared from over the hill, followed by 300 well-armed men. These, however, were overpowered and disarmed, and the negro, Henry Hilliard, brought before the committee.

He made a full confession, in substance as follows: "I was coming down the road and saw Mrs. Bow in the road, she was scared of me and I knew that if I passed her she would say I tried to assault her and I concluded that I could assault her and then kill her. I cut her throat and cut her in another place and left."

The negro then wrote a note to his wife and gave it to the sheriff. It read as follows: "I am arrested by Wm. Smith, you know what they will do with me. If I don't see you any more, good-bye."

After his confession a vote was taken as to what the mode of punishment would be. It was agreed to burn him and that he should suffer the penalty in the public square. The line of march was taken by towards Tyler and at 4 miles a crossroad crossed the main road, where no less than 7,000 people were assembled. Large crowds of ladies and children were congregated on the awnings surrounding the public plaza, and wagons, carriages, trees and buildings were converted into grand stands for the throngs. A scaffold was erected in the centre of the square. Wagons, laden with kindling wood, coal oil and straw, were driven to the scene and placed in position. The negro was given an opportunity to speak, but his last words were most inaudible. When he offered his last prayer, however, he could be heard for several blocks. He was then lashed to the iron rail that extended through the platform. Mr. Bow, the husband of the murdered lady, applied the match and the flames shot upward, enveloping the body in a sea of fire. The fuel presently gave out, but in a few moments the fire was started again. From the time the match was applied until the negro's death occurred was exactly fifty minutes. The I. G. & N. train was crowded with people from the town and the forces of the negroes witnessed the execution, and many of them expressed their endorsement of the circumstance. All the business houses and factories closed and the big cotton belt shops were deserted.

## BOUNDARY MINES.

A Visit to the Greenwood Camp—The Stenwind and Snowshoe.

The last said of the trail which leads through Skyline to Greenwood camp the better. It is only necessary to state for the information of the general public that to successfully make the journey two things are essential—an active horse and a good temper. And it is a matter of sincere regret that the gentlemen of the provincial legislature who so cheerfully voted for the borrowing of the large sum to be devoted towards erecting more comfortable quarters in which to carry on the weighty affairs of the country, could not have first been obliged to ride over the trail (say) three times from Bosshart's cabin to the Snowshoe claim before determining upon the advisability of saddling the province with a debt for a practically non-essential work, where money could have been spent with so much greater advantage to the country in other ways. Who can say how long the development of the Boundary Creek mines has been retarded by the failure of the provincial government to recognize a fact obvious in itself, that before towns can grow the country must be built up, and, however, fertile the country or rich in the resources of nature, until good roads and highways enable the settler of prospectors to make use of these natural advantages, progress is impossible. Although the government have built an excellent main trunk road through the district, it is now time that steps should be taken to appropriate funds for the purpose we have advocated on several occasions, the building of well graded roadways to the principal camps, and we trust these appropriations will appear in the very next estimates. Especially is a good road needed to Greenwood camp, where perhaps lie the largest deposits of copper-gold ore in the world. It cannot now be long before this fact is recognized. One of the

## By Chance

We might please any woman once, but when we please many women repeatedly—that is to say regularly—it stands to reason that our prices satisfy them. No change in the sugar market. A dollar buys 20 pounds. We are still bidding for your SOAP trade. Look at our window for bargains.

New Valencia and Loose Muscatel Raisins, Lemon Citron and Orange Peel,

Island Apples, \$1.15 a box. Pratt's Astral Oil, \$1.50 per tin. Ind. Coop Ale still on sale; only two nickels for a pint. Try a bottle of RUM and DANZIC SPRUCE for that cold.

DIXIE H. ROSS & CO., 127 Government Street

most noteworthy claims is the Stenwind

located on the 3rd of August, 1891, by Messrs. Atwood and Schofield. The claim has since had an interesting history. On the 23rd of July in the following year Mr. Atwood sold his interest to his partner for \$100—an insignificant enough sum, now the value of the property is beginning to be discovered. In 1892 Mr. Denzler bought a half interest in the claim, and when Mr. Schofield sold out in the beginning of this year to Messrs. Farrell and Midgeon for \$5000, he valued his share as worth \$10,000. This sum was later offered by Mr. Schofield's interest on a bond, a cash sum of \$1000 being given in the time of the transaction, and the balance to be paid in three equal instalments, extending over a period of twelve months. Since the transfer to Messrs. Farrell and Midgeon, active work has been in progress, upon which a large number of men have been employed. Shafts are being sunk at different points on the ledge, and we understand a thorough assay test is to be made. The main shaft is down some 50 feet and the showing at the foot is excellent. The assessment work of the former owners proved the ore body to be 60 feet wide, with a well defined foot wall. Sample assays which were made for them gave as high as \$40 in gold and 8 per cent. in copper; but from all accounts the ore shows in richness with depth. It is impossible to give at the present time a more detailed account of the progress of the work, due to the fact that Messrs. Farrell and Midgeon prefer that the matter should not be discussed, and refused to give any information.

Another claim, a little further up the trail is the Snowshoe, located by Mr. V. A. McDonald on the 18th of April, 1893, who sold to Mr. T. McDonald, in the following year for a small sum. Later Mr. Robert Denzler purchased a third interest. After seeing the immense size of the ore body, which, thanks to the energy and hard work of the proprietors, is for a considerable distance exposed to view, on the Snowshoe, one can have little doubt as to the future destiny of the claim; and as Mr. Denzler aptly remarked when such a view was expressed to him, the Snowshoe has all the "earmarks" to show that it will one day be a great producing mine. At the present time two parallel ledges have been discovered, and five crosscuts have been run, two on the upper ledge and three on the lower. The upper ledge does not appear to be more than 30 feet wide, but on the lower, incredible as it may appear, although a crosscut across the main ledge, where no less than 7,000 people were assembled. Large crowds of ladies and children were congregated on the awnings surrounding the public plaza, and wagons, carriages, trees and buildings were converted into grand stands for the throngs. A scaffold was erected in the centre of the square. Wagons, laden with kindling wood, coal oil and straw, were driven to the scene and placed in position. The negro was given an opportunity to speak, but his last words were most inaudible. When he offered his last prayer, however, he could be heard for several blocks. He was then lashed to the iron rail that extended through the platform. Mr. Bow, the husband of the murdered lady, applied the match and the flames shot upward, enveloping the body in a sea of fire. The fuel presently gave out, but in a few moments the fire was started again. From the time the match was applied until the negro's death occurred was exactly fifty minutes. The I. G. & N. train was crowded with people from the town and the forces of the negroes witnessed the execution, and many of them expressed their endorsement of the circumstance. All the business houses and factories closed and the big cotton belt shops were deserted.

## "We always fry ours in Cottolene."

Our Meat, Fish, Oysters, Sarcotoga Chips, Eggs, Doughnuts, Vegetables, etc.

Like most other people, our folks formerly used lard for all such purposes. When it disagreed with any of the family (which it often did) we said it was "too rich." We finally tried

## Cottolene

and not one of us has had an attack of "richness" since. We further found that, unlike lard, Cottolene had no unpleasant odor when cooking, and lastly Mother's favorite and conservative cooking authority came out and gave it a big recommendation which clinched the matter. So that's

why we always fry ours in Cottolene. Sold in 5 and 1 lb. pails, by all grocers. Made only by THE N. K. FAIRBANK COMPANY, Wellington and Ann Streets, MONTREAL.

TO MAKE GOLD MINING PAY.

How frequently mining companies totally ignore the concentrates in their gold ores, and allow them to escape. This is no doubt often due to the difficulties encountered in saving them, and to fear lest the cost of efficient machinery should prove to be excessive. Nevertheless, it is probably still more often owing to the belief that the concentrates could not be made to yield the gold which they contain, even if they were saved. Their recovery is certainly a bar to prosperity of many mines, and a careful consideration of how the pyritic material can be most profitably handled is a most important part of the duties of the mining engineer in charge.

The condition in which the gold occurs in pyrites has been much discussed by chemists and physicists, and is perhaps still a moot point. It was formerly supposed by the highest authorities to be pressed as a sulphide; then it was contended that, though really metallic, the gold was dissolved in the sulphides of the base metal, so that its state of aggregation was one of almost infinite fineness of division. More recently it has been shown by careful researches that gold in pyrites is entirely in the metallic form, and occurs in extremely thin plates gilding the faces of the crystals of sulphides of iron and other base metal compounds. It has been likened to the mortar in a brick wall, the whole being on so small a scale in nature that the edges of the gold films can with difficulty be observed with the aid of the most powerful microscope.

This fact as to the actual condition of gold in pyrites must be borne in mind when the problem of how to get it out is faced in particular cases. Concentrates are of all descriptions and of varying richness. Some concentrates contain but little gold except that existing in the state just described; other samples there may be a larger number of little free plates of metallic gold in addition; where amalgamating plates have not been well managed, they may contain but a small amount of gold, and mercury may also be present in the heavier parts of the ore. When the amount of free gold and amalgam is appreciable, the method generally to be adopted is that of grinding the sulphides of gold, and collecting the gold in the residue, and washing down the products, which is probably the best and cheapest method to be adopted, though in this case the percentage of gold recovered is seldom very high, and the residues ought to be collected and treated again in some other way. When the gold is in the metallic form, in pyrites this method is not to be recommended. It is true that excessive fine grinding, long continued, may result in the mercury being able to stretch out and collect together the little plates of gold released by the grinding of the pseudo-brick alluded to above; but the flouring and sickening and consequent loss of mercury often greatly increases the cost, and in many cases the yield of gold is even then unsatisfactory, the plates being protected from the attack of the mercury by some coating of a sulphurous nature, or possibly by pieces of the "bricks."

To facilitate the amalgamation of the concentrates have been roasted and the residue ground with mercury and a very little water, so as to make a very thick paste. For some reason, however, which has not been fully worked out, the yield is seldom higher than if the concentrates are amalgamated without being previously roasted. Doubtless much of the gold remains in the residue, and in many cases, in contact with the mercury; and if, as is usually the case, the stuff is not roasted quite "dead," the coatings of the gold are formed to a greater extent than before, and the loss is done than good.

At the present time, however, the best methods in use which can fairly be held to apply successfully to large classes of concentrates. They are, the treatment by smelting, by roasting and by chlorination, and by cyanide solutions. The first method is a little more costly, but for a smelting establishment requires the supply of great quantities of several different kinds of ore, of which the concentrates can only form one. If large amounts of galena are present, smelting, preceded by preliminary roasting, is certainly the most satisfactory method; but, except in a few localities in the west, and one or two isolated cases, lead smelting is impossible, owing to the absence of suitable ores, while pyritic smelting, though more widely applicable, is yet in its infancy. A pyritic smelter would doubtless be a great boon, but no single outlying mine could look forward to setting up one unsupported. Roasting and chlorination is more hopeful, as even so small a quantity as a few tons per week can be treated in this way at a profit, and as with smelting, the presence of large quantities of either copper, zinc, or lead is almost fatal to success, and the process requires some care and skill. Finally, the cyanide process, though not applicable to some varieties of concentrates, promises success in numerous cases. The percentage of extraction is usually good, but the decomposition of cyanide is occasionally considerable, but this method has been used with entirely satisfactory chlorination with certain classes of material.

In conclusion, the maxim may be reiterated that in gold mining no part of the values in the ore should be allowed to escape without an effort being made to recover it. The gold in the concentrates may not amount to more than two or three per cent. of the total quantity; but if it can be obtained easily with little cost by almost automatic machinery, its loss may make all the difference between success and failure, and in any case, in business, no profit is to be despised.