THE CARLETON-PLACE HERALD.

Vol. VI. CARLETON-PLACE, CANADA WEST, DECEMBER 20, 1855. No. 14

NOTICE.

THE Business of Wool Carding and Cloth Dressing, carried on at the Clyde Mills, under the name of Drummond & Ross, will, for the future be carried on in the name of Drummond only, to whom all debts and dayments are to be made.

DRUMMOND & ROSS.
Jne 1, 1855. [12-a.

NOTICE.

A MEETING of the Board for the examination of Teachers, will be held in the School House, at Carleton-Place, on Thursday, the 20th inst., at 10 o'clock, A. M.

R. BELL, Chairman.
Carleton-Place, 4th Dec. 1855. 12-g

POETRY.

FUNERAL POMP.

Poor corpse in costly vestments laid,
Bedecked, bedizened and arrayed,
And to a careless crowd displayed!

Poor corpse I will not gaze on thee;
In life a stranger, what can be
Thy pallid, death-cold clay to me?

O mockery! a motley crowd
Praising the fashion of a shroud,
Or whispering censure half aloud!

Sweet friends, I pray you when I die,
Let not one cold or careless eye
Come and gaze on me where I lie.

Bedeck me not with costly gear,
Nor yet to grace my simple bier;
Bring other than the gift sincere.

Some pale small floweret of the spring,
Or summer's sweetest blossoming,
Or autumn's faded tribute bring.

But yet, for loves sweet sake I pray,
Compose my limbs, then gently lay
The poor, worn tenement away.

Enough that round me as I sleep,
Those whom I loved should come to weep,
And kiss the lips they cannot keep.

And if one boon be granted me,
In answer to my life-long plea,
What time ye thus bend over me.

My face so sweet a smile shall wear,
Ye cannot choose but linger there.
And say, behold her answered prayer!"

POPULAR CHEMISTRY.

Why is electricity beneficial to plants?

Because electrified seeds pass more rapidly through the first periods of vegetation, than such as are not electrified; and electrified roses flower more rapidly and abundantly. Plants with pointed leaves and spines attract electricity.

Why is the cutting down of forests found to diminish the quantity of rain?

Because it is supposed to diminish the attraction for clouds.

Why do leeches die suddenly at the approach of or during storms?

Because of the congulation of their blood, caused by the impression of the atmospheric electricty.

LIGHT AND FLAME.

Why may light and air be said to constitute a portion of our earth?

Because of their absorption by the earth. Thus, the light emitted by burning coals, (which are generally admitted to be of vegetable origin) has undoubtedly been condensed in them by a process of nature which bids defiance to conjecture.

Why does a fire give out warmth?

Because the heat is radiated; there being but little connection with the immediate conducting power of the air; thus if a concave metallic mirror be held opposite the fire, a heating and luminous focus will be obtained.

Why are certain rays of the sun termed decomposing?

Because they have a tendency to interfere with the chemical constitution of bodies. Besides this kind of rays, it is ascertained there are two others; the calorific, or heating trays; and the luminous or colorific rays, which produce vision and color.

Sir H. Davy has, in some general facts of great interest, traced an analogy between the effects of the sun's rays and the agencies of electricity.

Why are the terms red-hot and white-hot used?

Because when bodies are rendered luminous by great elevation of temperature, the light which they emit often appears dependent upon the heat to which they are subjected,

Why are light and heat necessary to the existence of plants?

Because, in the sunshine decompose the carbonic acid gas of the atmosphere, the carbon of which is absorbed and becomes part of their organized matter, and the oxygen, which is the other constituent is thrown off.

Why do not plants flourish in the dark?

Because no oxygen is then produced by them, and no carbonic acid absorbed.

Light exercises a very remarkable influence upon the irritability of the sensative plant.

Why are certain bodies said to be phosphorescent?

Because when heated to a certain point below incandescence, (and exceedingly high temperature without the production of any gas) they become luminous, without undergoing combustion. Oil, wax, spermaceti, and butter, when nearly boiling are luminous.

Why are other classes of phosphorescent bodies called solar phospbori?

Because they become luminous when removed into a dark room after being exposed to the sunshine. Of this description are Canton's, Baldwin's and the Bologman phosphorus, the latter named from its discovery by a shoemaker of Bolognia.

Wöhler, a German chemist, recommends as likely to give phosphorus at a very cheap rate, to distil, by a strong heat, ivory black with half its weight of fine sand and charcoal powder. A silicate of lime is then formed, and the carbonic oxide and phosphorus come over.

Dr. Bache, of Philadelphia states, that at the temperature of sixty degrees Fahrenheit, or upwards, carbon in the form of animal charcoal, or lampblack, causes the inflammation of a stick of phosphorus powdered with it; the effect takes place either in the open air, or in a close receiver of a moderate size.

The phosphorescence of fish has already been noticed, and attributed to animalculæ during putrefaction; whereas, from the experiments of Canton, and of Dr. Hulme, it appears that "sea-fish become luminous in about twelve hours after death, that it increases till putrefaction is evident, and then it decreases."

y may flame in general be regard-uminous gaseous matter?

ause hydrogen gas probably furthe purest flame which can be ex- for the flames of bodies which uch light, derive that power from natter which is intensely ignited fused through them, and which in y flames as of gas, tallow, wax, , consists of finely divided char-

Ure, speaking of the nature ame, and of the relation n the light and heat which compose :

e flames of combustible bodies all cases, be considered as the tion of an explosive mixture of able gas or vapour with air. It be regarded as a mere combustion urface of contact of the inflamma- tter."

fact is proved by holding a taper ce of burning phosphorus within made by the combustion of alcohe flame of the taper or of the rus, will appear in the centre of e, proving that there is oxygen nterior part.

does spirit of wine sometimes h various colored flames.

se of its admixture with various es. Thus, from borax it acquires sh yellow tint; nitre, and the salts of baryta, cause it to burn and those of strontia give it ful rose color; copper salts impe green.

SWEDISH ALLIANCE.

istory of Sweden is interesting n sake: Gustavus Adolphus made ing to all Protestants; every by has been fired with the almost courage of Charles the XII.; sts with Russia in days gone by, warmest sympathies now; position on the map of Europe, influence it might at present conjunction with the Allies, lead nore to direct our eyes to it, and Marshal Canrobert to Stockh fervent wishes for the success ssion.

a phrase can ever with accuemployed, it may be truly said eden is the natural enemy of

ng with the Vasa dynasty es- in 1523, we find the doctrines eformation spreading with such that in 1528 the Confession of was adopted the faith of the kings, nobles, burghers and all accepting it at the diet of us. In 1587, a war for the f the Protestant doctrine became , and was not successfully ter- ill 1604, when the Popish con- as crushed. In 1630 Gustavus , as Captain-General of the t League, landed at Pomerani, ears afterwards fell fighting for t Lutzen,

99, Charles XII. finding Den- and and Russia joined in a gainst him, he at once rushed emies, compelled Denmark in s to sue for peace, crossed the feated Peter the Great at Narva marching into Poland, captured and Cracow, and deposing one hroned another. In 1718, this nary man was killed, and in 1721 sted kingdom made peace with losing Ingria, Livonia, Esthoelia and other provinces, and thenceforward a second-rate n 1741, Sweden was again at its growing rival, and in 1743 s again proclaimed, and a part d ceded to the latter.

this time the Muscovites conld all they could to weaken hber, but found no excuse for until the year 1789, when once more successful at the tle of Viborg, but were defeated asund, with a loss of 42 ships, ys after in the July of 1790. year peace was declared with- to either side. In 1807, Russia Sweden, seized Finland, and hery, obtained possession of . Two years passed, and she Aland islands, and at the peace Finland remained permanently ds.

it evident that for a century , Sweden has, in spite of splens, gradually waxed weak at f her mighty foe, and each of has been doubled, inasmuch as e to swell the power of the is.

Peter the Great conceived his obtaining access to the Baltic, on did not extend westward e Ladoga lake, but he perse- d slowly driving the outnumbered before him, he wrested from vince after province, and his carrying out his policy, have this noble people of as much as they now hold.

Russia satisfied yet? A glance p will convince every reader s not, and will never be if she chance of absorbing Sweden . Let the reader cast his Finland and he will see that, f the Czar in his last conquest wed by him as the first step further move. This acquisition Waranger Firod on the a, in the seventieth degree of itude, so that the frozen coast but valueless to him. It does Russia an Atlantic Power. If, Finmark could be annexed to that sea would then be open; eets would then menace Eu- all the world, at present they within the Baltic, and when ailed spread their canvass on sea. Let her, however, but text for marching westward Euara Lake, and she will esrself on an open coast with bors, into which the Highway ious casts her waves, and from edient flotillas might be sent keep all governments in the ld as well as the Old?, in per- atchfulness. That this vision autocrat's mind, cherished as st of his predecessors, cannot ned; and if, in addition to its ment he were permitted to Dardanelles and occupy Con- e, he might become what he is at power at sea as well as by then Finmark were by any means annexed to Russia, Sweden would inevitably follow. The whole coast of Norway would lie open to the Atlantic fleets, while the Swedish shores on the Baltic could be swept by those which issued from Cronstadt, and the millions and the resources of Norway, Sweden and Denmark would be obedient to a Russian sceptre, Prussia would lie in the hollow of Alexander's hand, and at any moment, 3 days would bring his nithless crews to the mouth of the Thames, or the port of Calais.

A most interesting communication from a Norwegian on this subject, appeared in a recent number of the *Times*. He tells us that Russia has never lost sight of Finmark, but that in 1840 she secretly spied the land, and in 1840 or '47 she actually tried to coax Sweden to give her the coast up to Waranger Fiord. Since then the commotions of Europe have occupied her, and now she can do nothing but struggle against victory.

We have now said enough to show our readers that Sweden can have no liking for Russia when she looks at the past, and may well tremble when she thinks of the future. Russia lowered her in the scale of nations, and Russia will yet, if she can, blot her out as she has already blotted out Poland. Surely, then, the policy of Sweden is to join the Western Powers. That she has not done so before now, has surprised many; and yet, for her caution, it is not difficult to discover cogent reasons. Thus, there is in Stockholm now, as there has been for a century past a pro-Russian party, bribed by the Czar to control and influence the Swede, and this party has doubtless done something for its paymaster.

Sweden remembers, likewise, past losses and humiliations; and when we read the tales which engaged all ears within two years about the marvellous military power of Russia, we do not wonder at her unwillingness again to enter the lists with such an antagonist.—The question, moreover might well be asked, why should Sweden war with the Autocrat, and risk fresh defeat, and mayhap, ruin? She had no particular interest in an Eastern difficulty. She was, indeed, interested in checking Muscovite aggression, but the Allies, having proclaimed distinctly and truly, that in commencing this war they sought no territorial aggrandisement, and Sweden having nothing to fear in the Bosphorus, saw no likelihood of gain by fighting on the Baltic. Thus the declaration of the Allies shut her out from any league with them at the first, and must still shut her her out, if the original intention of the war be rigidly adhered to. But on the other hand, if the Western Powers see that the real weekness of Russia is necessary to the safety of the world, the way to a Northern alliance lies open; and in that case, Sweden may be invited to help them, not merely in harrassing her hereditary foe, but in stripping her of those possessions which, by foul treachery, she so recently acquired. Anything short of an offer to aid in the re-conquest of Finland, can scarcely induce the court at Stockholm to chance a contest. But, and if the Allies be willing that such an attempt be made, then we can see why the Swede should join them; if not, he had better be neutral as in times past, for war to him would only lead to expenditure and bloodshed, while the advantages would be so remote as to be more than counterbalance by the cost and the danger.

To offer such terms to Sweden, would indeed be to depart from the original plan of the war; this, however the Allies reserved to themselves an entire liberty of doing, if the interests of their cause demanded such a change. While then they would be in every sense justified in proposing a permanent occupation of Russian territory, in the north or in the south, it is most evidently their wisdom to attempt this.

No treaty will bind the Czar. The only way to bind him is to take from him the power of aggression, and this can be done by the retention of the Crimea, and the occupation of Finland. Let then such terms be offered, and the Swedish nation may be roused; and let them rise in their might, and Russia will be driven back from the Baltic, and once more made to feel that for her despotism there is and can be no European outlet.

Doubtless a Swedish alliance for such an end, would be a prodigious gain. The Swedes are a very brave, a very hardy, very noble race. In 1830 the population of Sweden and Norway amounted to 4,259,772, and in 1845 it had increased to 4,645,007, so that we may believe it at present to number not less than 5,000,000. The extent of their regular army we have no means of ascertaining, but their military force as a whole, is estimated to amount to 144,000 men; while in their Navy they have not fewer than 167 ships of one kind or another, manned by 30,000 seamen.

The kingdom of Sardinia had 4,997,322 of a population in 1852, and the Western Powers hailed their adhesion as a great gain; and no less would we rejoice to know that Sweden had joined her fortune to theirs, for she would not only win back her ancient renown by struggling now, but would mightily aid in hastening the close, and perfecting the results of the great contest. We wish Marshal Canrobert all success in his important mission.

CREATIVE POWER OF A MECHANIC.—An engineer in England being examined at a trial, where both the judge and counsel attempted to brow-beat him, made use in his evidence of the expression of "the creative power of a mechanic;" on which the judge rather tartly asked what he meant by the "creative power of a mechanic?" "why, my lord," said the engineer, "I mean that power which enables a man to convert a goat's tail into a wig."

SUDDEN DEATH.—On Saturday morning a person in the employment of Mr. Edward L. Perkins, when on his way from his house in Lower Town to his work in Upper Town, was taking sick in Central Ottawa. It commenced with vomiting and before a conveyance could be procured by his son, who was with him at the time, he expired. He had been complaining for some time previously. It is supposed he burs a blood-vessel, as he threw up a large quantity of blood.

HOME MANUFACTURES—SUGAR REFINERY.

From the Montreal Herald.

Most of our readers are acquainted with the large mass of buildings with the tall chimney which rears itself on the south-eastern bank of the Lachine Canal, and which is know as Redpath's Sugar Refinery; but, probably, very few are acquainted with the nature of the processes there carried on, nor of the extent of transactions, commercial and industrial which are involved in the prosecution of such an undertaking. As they are alike interesting in themselves, and in other influences upon the commerce of the country, and especially of this city, we propose here to give some account of a visit we recently paid to the establishment. The situation of the Sugar House is in one of the finest business localities of the city, being upon a basin of the canal, opposite the planing and sawing mill of Mr. Ostell. We understand that it is expected that the Canal will hereafter be depended at the lower portion near the basins, and in that case a ship from the West Indies will be able to lie in this basin and at once discharge her sweet cargo into the stores of the Sugar Refinery, while she loads wood goods at the other side from Ostell's mills. The proprietor, however, has taken care to have more than one string to his bow in the share of easy communication with the rest of creation. He is not only on the great highway of navigation on one side, but within very easy distance on the other, of the Grand Trunk Railroad from which it is probable he will lead a branch into his yard, as he has secured a very considerable portion of the land lying between his present establishment and the Railway Station.

On entering the premises we found ourselves in a large court yard, the outer walls enclosing a lot of between two and three acres of land, surrounded by high and substantial brick walls. Round the inner side of the wall are ranges of buildings to the extent of nearly five hundred lineal feet, which are being fitted up for warehouses, a cooperage, a blacksmith shop, a stable, and a gas house, where will be made the gas to light all the premises. A considerable quantity of gas is, indeed, constantly evolved in one of the processes of the establishment, but is at present comparatively wasted by being employed only to increase the heat of the steam-boiler furnace. The manufactory, standing well detached from these surrounding buildings, consists of a brick edifice of several stories in height, consisting in two parts—the refining house covering some 11,000 feet of ground, and the reburning and boiling houses covering as much more—making the extent of ares occupied by the main building, some 22,325 feet.

We have already mentioned that the refining house is several stories high. The object of this attitude is to enable the sugar to descend gradually from the first stage of refinement to the last, without too frequently returning upwards. This will be understood shortly. We ascended to the top of the establishment, just under the roof, to which place the large steam engine on the ground floor was engaged in hoisting up the raw material. These casks being speedily emptied by two men with shovels, their contents were rapidly passed down two holes to the 6th story below—all but that portion of sugar which adhered to the sides of the hogsheads, and which could not be easily cleaned out with the shovels. This being done, the casks were rolled to another part of the loft and turned over a pipe from which issued a stream of steam. The steam quickly dissolved the remains of the sugar, which, when in a melting condition, ran down through a hole in the iron saucer on which the cask was standing, and was conveyed away, by a pipe, to join the main body, which we had seen previously disposed of by shovels. The casks, by this process, were thoroughly cleaned of all the saccharine matter which adhered to them.

Following the sugar down to the sixth story, we found in two large vats, mixed with just enough water to transform it into a fluid, and being then slowly boiled. Beneath these vats is a large iron box, with a hole above to admit into it the boiled sugar, and a very considerable number of holes below into which nipples are screwed, the extremities of which pass through the floor to the sixth story, to which we now descend. Here we found that each nipple from the iron receiver above was furnished with a bag some six feet in length; but which we are told contained a great many yards of material arranged in intricate folds. These bags are so many strainers. The liquor runs through them, and in its passage leaves the coarser impurities, after which it is passed down to the fourth floor, where a further purification is effected by sending the liquor through boxes filled with closely packed animal charcoal.

The animal charcoal is made by the burning of bones, and the process is merely one of filtration, such as that to which charcoal is so frequently applied as a clenser of water. Of course the charcoal in no respect combines with the sugar, but only takes up the coloring matter held in solution in the sugar before the matter has passed through it. The result is, that liquor which went into the charcoal of a dark drown color, comes out nearly white. We make this explanation, because we understand a most absurd impression has been felt in some quarters against the Montreal sugar on the ground that it is made of bones! The objectors were of course unaware that they could buy no refined sugar, which had not been made by the same process, and probably believed in good faith that the bones used in the manufacture were in some way or other ground up into white powder, and then mixed with the West Indian material. Such a deception could, of course, be at once detected, if practiced, by the sediment at the bottom of a tea-cup.

This filtration is, we believe, the last process strictly of purification; the remaining processes having for the object the crystalization of the sugar, and the separation of those portions of it which are not capable of crystalization. The first of these processes is the building, which is now done *in vacuo*, as it is found that excessive heat is injurious to the crystals, and as boiling can be produced *in vacuo* at a lower temperature that elsewhere. The *vacuum* is produced by air pumps worked by a large steam engine below. From the boiler the liquid, now much thickened by evaporation, descends to another heated receptacle called, on some principle like that by which dreams go—we mean contraries—"the cooler." It is kept, we believe, at a higher temperature than the boiler, in as much as at this stage of the process that some objection to great heat as in the last stage, does not apply. In the cooler the liquor is kept constantly stirred, and after remaining there a sufficient length of time, is conveyed in ladle-full to the moulds. These are large vessels of the shape of a sugar-loaf, having a hole closed with linnen at the small end. They are set upright—the small end downward—each one in a hole in the floor. These holes are arranged in rows in the direction of the length of the building, and below them—that is to say, under the roof of the next lower story and between the beams—are small iron gutters. In the Montreal Refinery these little gutters are some four miles in length. The viscous liquor being thus poured into the moulds, is there allowed to cool and crystalize; the syrup, which consists of that part of the sugar which will only imperfectly crystalize, running off through the bottom of the moulds into the gutters, and being thence conveyed into the appropriate receptacle, is reboiled, and becomes 'yellow bastards.' The crystalizing portion of the sugar, which remains in the moulds, gradually cools and becomes hard; after which the smaller loaves, such as are intended for sale in that shape, are shaken from the moulds and brought to a machine, which We may call the sugar-baker's lathe. This finishes the point at the top of the loaf, and at the same time takes off any portion of the sugar which may still remain wet from the syrup not having been thoroughly drained off. The loaves are then packed in white paper and exposed to the heat of 150° Fahrenheit, and subsequently put into the outside blue paper in which they appear for sale.

Of the loaves made in the larger moulds a considerable quantity is broken up in order to make what is sold for broken loaf sugar. This is done in a mill, with a number of knives set upon, a revolving upright. There is of course a great deal of dust created in this process, which is reground and is then passed through boulters, made like flour boulters, and the coarser sort being sold for ground sugar, the very finest, from which all suspicion of grit has been removed, is disposed of to the sugar-plum makers.

After having remained a certain time in the moulds, and after losing a portion of the syrup, but without being throughly hardened, the sugar may be turned out in that form which may be known as White Bastards. In that stage it has undergone precisely the same processes of purification as the loaf-sugar; but it contains about two per cent of saccharine matter, which will not crystalize, and which, therefore, gives it a granulated instead of a compact and hardened shape.

Having described the processes which go on in this large establishment, it may be well to say a few words of the extent of the business transacted there. Work was begun last January, but owing to delays and impediments in fitting up machinery, not more than nine months' work has really been done. In these nine months 8,000,000 lbs. of sugar and 50,000 gallons of molasses has been refined all of which came direct from the West Indies to the proprietors, and most of it by ship to the wharves. The remainder, which arrived during the winter months, came by way of Portland and the railway. The present machinery is capable of turning out yearly 40,000 barrels of 2 cwt. each, and the quantity can be doubled with a very small outlay. The extent of the advantage to the trade of Montreal may be best understood from the fact that the value of the raw material used last year, at present prices, was £170,000, and that of the manufactured article about £200,000. The difference of £30,000, of course, represents the expenditure in the city in wages, &c., and the profits of the manufacturer. We trust that a large share of the £30,000 will come to the spirited gentlemen who has created this new enterprising amongst us, entirely with his own means and his own energy, but some few items of the outgoings will show that in sugar baking, as in most other pursuits, the old sayin, "it is not all profit," is perfectly applicable. In the first place, we understand the outlay of fixed capital in buildings, &c., amounts to the same £500,000—a tolerably handsome annual cost in the way of interest. Then there is fuel used to the extent of 20,000 chaldrons annually, required, of course, seven vessels—last year there were seven—to visit our port for the purposes of this one factory. The cooperage is another little item which reaches some £4000; and the wages come to about £7000 a year. There are about 100 hands employed in the Refinery, and most of them are men and the heads of families, so that this establishment alone may account for a population of 400 or 500 persons.

It is almost unnecessary to point out the advantages to commerce which may be expected from a regular trade from the West Indies and Halifax. Vessels, after discharging their cargo in Montreal will either lead flour to Newfoundland, and thence fish to the West Indies, on their return voyage; or, as we have hinted above, will take 'shooks," sugar-boxes, &c., direct from thence to the sugar plantations.

With these details our readers, when they again look up on the big building between the canal and the railway station, will, no doubt, form more definite ideas than some of them hitherto done of its objects and utility.

ERECTION OF A BRIDGE OVER THE RIVER NITH.—At a meeting of the North Dumfries Council, last week, it was moved by Dr. McGeorge, seconded by Mr R. Marshall, and carried:—Resolved, That Mr. Farrell, bridge builder of Paris, be appointed by this Council to furnish a plan and specification for the erection of a bridge over the river Nith, at Ayr, to this Council, at its next meeting; said bridge not to cost over *seven hundred pounds*, which sum Council pledges itself to pay for the erection of the said bridge, and that Messrs. Dolman, Wyhe, Manly, and Bleck be appointed by the Council, to let the bridge, and to superintend the said work on behalf of the Council."

SALTPETER KING.

The Scientific American says.—The British Government has officially prohibiting the exportation of saltpeter from the East India Company's territories to any other ports than Liverpool and London. The Government has also ordered all vessels that were loading in England with saltpeter and nitrate of soda for the United States to discharge the same. The ship *Catharine*, of New York, Captain Edmunds, which was loaning at London for Boston, had been ordered by government to be discharged of the saltpeter on board.—These actions of the British Government afford some evidence that saltpeter can explode, that is when properly mixed with charcoal and sulphur, forming that compound called "gunpowder." Were the supply of saltpeter suddenly stopped it would very soon *explode* the war in the Crimea; take saltpeter on any side *it will explode*.

Owing to the scarcity of saltpeter in the country, our powder mills we understand are not able to run full time, and some of them are about to stop. As we receive all our supply of this useful article from abroad, and are therefore dependent on other countries it would be no more than an act of wisdom to offer rewards for the discovery of deposits of it at home; or the discovery of a substitute for it to be used in making gunpowder.

IMPROVEMENT IN THE TELEGRAPH.

Mr. Amos Kendall, in a letter to the *Union* (Washington,) states that the most serious obstacles to telegraphing operations is *imperfect lines* He says:

"Telegraphing by electricity is yet a new art and to me it is rather a wonder that so much has been accomplished than that there are defects yet to be remedied. Nobody at first and few still appreciate the importance of great strength in the posts and conductors. With sufficient strength there, and a perfect insulation, we should with Morse's apparatus, have the means of making as perfect a telegraph as the world will probably ever see.—Improved lines, and not new instruments are what need. Improvement in every other respect would follow.

The line of the Washington and New Orleans telegraph was built, under my direction, by Mr. William H. Heiss, Superintendent and is of unusual strength with an improved insulation. The working of a line 171 miles long, with a main battery of one cup only at each end is believe to be wholly unprecedented. Yet this has been done on this line."

BRINE A POISON.

M. Reynal of the Veterinary School at Ayort, France, has communicated to the Imperial Academy of Medicine the results of investigations upon the poisonous properties acquired by brine after a considerable length of time, in which pork or other meats had been salted or pickled. The poisonous properties he states are acquired in two or three months after the preparations of the brine and its use then mixed with food for any length of time, even although in small quantities may produce death. A simple solution of salt in water, after the same length of time does not produce the same effect. The poison acts as a local irritant, exciting violent intestinal congestion and inflammation. It likewise increases the secretion of the skin and kidneys, and exerts a direct effect upon the nervous system, giving rise to trembling, loss of sensation convulsions &c. Experiments were tried with it in the Veterinary School upon horses, dogs and pigs. As brine is sometimes used a second time for pickling and for other purposes these facts should be remembered.

No brine should be used a second time without being boiled; still we cannot but think that M. Reynal has carried the matter a little too far. Will some of our professors of medicine make the experiments in order to test the correctness or incorrectness of M. Reynal's conclusions.

COFFEE LEAF AS A BEVERAGE.—Why do we use the berries or beans of coffee for making a drinking beverage while we only use the leaves of the tea plant. In Sumatra, prepared coffee leaves, as stated in Prof. Johnston's "Chemistry of Common Life," is the only beverage of the people. A Mr. Ward, who resided in that country for a number of years, states that with "a little boiled rice and an infusion of the coffee leaf, a man will support the labor of the rice field for days and weeks successively, up to the knees in mud under a burning sun or drenching rain." He states that he was induced to adopt it as his own daily beverage, and his practice was to take two cups of a strong infusion of it with milk in the evening as a restorative after the business of the day. He found immediate relief from hunger and fatigue by its use. His bodily strength increased and the mind was left clear and active. The natives of Sumatra prefer the leaf to the berry—they believe it is more nutritious, and they do not plant it for the bean as is done in Brazil and Java. If the leaf of the coffee plant is so excellent, let some of our merchants inspect some of it and give it at least a fair trial.

LEAD AND IRON PIPES,—The daily *Times* of the 30th ult., in an article on the above subject, describes very correctly the difference between the two kinds of pipe for conveying water pointing out the advantages and disadvantages of each. But as it discribes only small pipes for domestic use of course it only refers to lead and wrought iron pipes the latter being liable to rust and decay rapidly.

If small cast-iron pipes could be made as cheap and neat as the wrought iron kind they certainly ought to be preferred to all other pipe. They are not liable to rust like those made of wrought iron and they are more safe than lead inasmuch as salts formed by the action of pure water on lead are poisonous.

THE RAPID GROWTH OF CANADA.

(From the New-York Herald.)

In the Eastern Hemisphere, States are the growth of centuries; in the Western Hemisphere they spring into existence with a rapidity which keeps pace with the growth of individual man. A thousand years after the Saxon Conquest, we find England just beginning to emerge from barbarism, and to become powerful. It was only in the age of Columbus and Vespucius that the Spanish Kingdoms of internal strife coalesced into a mighty monarchy. It was not till the reign of William and Mary in Britain, that Prussia was elevated to the dignity of a Kingdom, and numbered among the great powers of the earth. In America, however, the case is different. Here, populous states suddenly appear in regions which, a little while before, were overshadowed by the forest and ruled by the Indian.

On the shores of the Pacific, California, which is now a powerful republic, was, less than twenty years ago, a lonely wilderness; and at the opening of the nineteenth century, hardly one of those opulent and prosperous commonwealths that adorn in our days the banks of the Mississippi and her tributaries. Nor is it alone in that part of the American continent which is under the dominion of the United States Government, that communities spring up and prosper with a rapidity utterly unknown in Europe. Even in that portion of our Western world which is still in colonial dependency, there may be found instances of progress in material wealth and well being which almost rival anything in that line that democratic America can exhibit. Canada will serve as an example of what they have been doing for the last quarter of a century, beyond the St. Lawrence and the Lakes. Canada East, or *French* Canada, has long been settled; but the settlement of Canada West, or *British* Canada, has been comparatively recent. As it is from the enterprise of the latter, however that the prosperity of the whole have almost altogether sprung, we shall mark the growth of the Western Province ere we proceed to illustrate that of the entire colony.

The first and great essential to the improvement of a country, is population. Without men till the land and develop its natural powers, it must remain unproductive and valueless, no matter what may be its fertility and capabilities. Accordingly, we find that immigration and increase of population preceded and produced, in the case of the Canadas, that improvement and prosperity which have so much surprised economists and statisticans.

In 1829 Western Canada was sparsely and thinly populated. Its whole population at that period numbered only 157,000. In 1854, however, the number of its inhabitants was widely different—it then amounted to 1,327,000 a very tolerable increase in the short space of 25 years.

But if the population of Western Canada increased greatly in the above named period, the real and personal estate of the people still more increased. In 1829 the total assessable property of that Province was estimated at only £2,500,000, whereas, in 1854 it amounted to no less a sum than £50,000,000, exclusive of the value of public lands, public timber and minerals!

We now proceed to illustrate the commercial and industrial progress of the two Provinces of universal Canada, by contrasting the amount of their imports and exports in 1833 and 1853. The amount of a nations exports and imports is an excellent criterion by which to judge of the extent of its business and the greatness of its wealth. Let us gauge the prosperity and well-being of Canada by this test: In 1833 the sum total of her exports and imports amounted to but £2,082,567; in 1853 they reached the sum of £13,945,684, which was nearly SEVEN times their amount in the former period. The commerce and wealth of Canada must have consequently increased nearly seven-fold, according to our criterion, in the short term of 19 years!

From all these facts it is evident that our brethren beyond the Lakes now St. Lawrence have not been slumbering and idling in these latter days; and that in population, agriculture, commerce and opulence, the growth of Canada has been unprecedently rapid and vigorous for a Colony and Province.

THE LATEST EUROPEAN INTELLIGENCE.

From the Paris Correspondent of the Times, Nov. 23.

The following is our Paris correspondent's letter, dated yesterday, 6 p. m.:—

The intelligence which has reached me to-day, and which I consider to proceed from a good source, not only confirms what I mentioned in my letter of yesterday relative to Sweden, but is of a still more satisfactory kind. It is affirmed in quarters likely to be well informed that General Canrobert has completely realized all the hopes excited by his mission to Stockholm: and some, to their ardent satisfaction, even declare that the result has surpassed all expectation. Without going so far, I believe it may at last be positively affirmed that Sweden have engaged to adhere to the alliance of France, England, and Sardinia; and not only this, but Denmark has declared that she will follow the example of Sweden, and accept for herself the same engagement. This is not all. I learn also that Prussia, acting on her own spontaneous movement, has positively made propositions of peace to Russia; that these propositions have been made through the instrumentality of Count Munster, who was formerly and for a considerable time Military Commissioner or Plenipotentiary at the Court of Stockholm, who followed the Czar to the Crimea to submit them to him. It is not said that these propositions have been accepted or taken into serious consideration by the Czar; but they are described as precise and pressing, and it is added that even should the Emperor refuse they will be pressed on him again and again more energetically and without relaxation.

This resolve of Prussia is, of course, to be traced to the panic inspired by the success of General Canrobert's mission, the promised adhesion of Denmark, the possibility of the occupation of Courland by the allies, and an anticipated rising of