

CHIGNETO POST AND BORDERER.

SACKVILLE, N.B., DEC. 7, 1882.

Commercial Advantages of Chignecto Ship Railway.

No. 2.

A large and profitable trade has grown up between the ports of Bay of Fundy and Boston and New York and other Atlantic cities. This trade exists in spite of the fact that the United States abrogated *quasi* Free Trade with these colonies nearly a decade ago and taxed heavily nearly every provincial product entering her markets. Every fifth pound of butter we send, goes to grease Uncle Sam's governmental wheels; every fifth bushel of oats, every fourth bushel of potatoes, every third ton of coal, goes to swell the revenues at the expense of our producers and shippers, who thus pay millions of taxes into the United States Treasury. But burdened with these onerous taxes, the trade flourished and grew until 1879, when the Dominion of Canada took a hand at killing it off, by placing heavy duties on those classes of American manufactures used in Canada. Still the trade had vitality enough to live and thrive. The tonnage out from Bay of Fundy ports to United States and other countries respectively in 1880 was as follows:

FROM NOVA SCOTIA.	To United States.	Other Countries.
Amherst,	16,242	14,123
Antigonish,	15,262	16,372
Barrington,	2,109	480
Bridgetown,	1,256	—
Connoville,	4,239	—
Digby,	5,527	5,205
Londonberry,	674	415
Parvboro,	5,965	7,096
Weymouth,	14,857	5,492
Windsor,	17,977	—
Yarmouth,	21,213	7,876
	165,728	61,364

NEW BRUNSWICK.	To United States.	Other Countries.
Campobello,	4,813	—
Dorchester,	7,472	—
Hillsborough,	16,075	1,870
Sackville,	4,313	2,900
St. Andrews,	7,285	—
St. George,	2,225	2,708
Moncton,	1,252	465
St. John,	224,242	231,138
	267,777	238,578
	165,725	61,364
	433,502	299,942

From this it will be seen that out of 744,444 tons outwards, no less than 433,502 tons cleared for United States ports. The tonnage inwards would be approximately the same, making out of about 1,500,000 tons inwards and outwards, nearly 900,000, absorbed by the U. S., leaving 600,000 for Great Britain and all other countries. It is manifest to any one that the resources of the North Shore ports, the products of the forest, the farm and the sea offer as wide a field for trade with the United States as the Bay of Fundy ports, and that it is only the peninsula of Nova Scotia that offers any natural obstacle to the North Shore ports participating in the United States trade in an equal degree with the Bay of Fundy ports. The gross tonnage outwards of the undermentioned North Shore ports during 1880 was 200,000. Were these ports as favorably situated with regard to trade to the United States as the Bay of Fundy ports, the returns would show 120,000 tons cleared for the United States, or a total inwards and outwards of 240,000 tons! But what is the actual state of North Shore trade direct with the United States? It may be said not to exist at all—the total tonnage out in 1880 being only 2,001. The following are the figures for a number of ports on the

NORTH SHORE.	To United States.	Other Countries.
Bathurst,	1,456	10,116
Carleton Place,	826	108,362
Chatham,	826	18,447
Dalhousie,	218	18,447
Newcastle,	66	18,447
Richibucto,	—	8,727
Shediac,	—	—
	2,001	198,208

Quebec and St. John are strikingly similar; both are great lumber ports, their staple exports are lumber, and were they situated equally favorable, respecting United States trade, their clearances to that country would bear the same proportion they do to other countries. But what are their actual figures? The tonnage outwards to sea from Quebec in 1881, in Canadian vessels, was 295, measuring 140,054 tons. Of these only 7 vessels measuring 592 tons cleared for U. S. There were 884 British vessels registering 1,093,226 tons, of these not one cleared for U. S.

Where, we ask, could stronger evidence be shown of the tremendous obstacle offered by the Nova Scotia peninsula to the extension of North Shore trade southwards—a barrier that is practically insurmountable except by piercing the isthmus of Chignecto, and avoiding 600 miles of dangerous navigation around an iron bound coast.

Counter Election Trial.

A. E. Killam, Esq., was served at Hampton, on behalf of the Respondents in the Westmorland Contested Election case, with the notice and particulars provided for by Sec. 32 of Chap. 5 Consolidated Statutes of Contested Elections. The section provides that the respondents may, ten days before the day fixed for the trial of the petition against them, serve the unsuccessful candidate with a notice and particulars of bribery and other corrupt practices committed on behalf of the unsuccessful candidate at the same election.

Importance of Statistical Information.

We are glad to see that the importance of more reliable statistical information is beginning to be realized by those who are in a position to help forward the organization of such a department. The Farmers' Association of New Brunswick have by resolutions, more than once, we think, urged upon the Government the duty of making some systematic effort in reference to yearly agricultural statistics, but so far neither the Government or the Board of Agriculture have apparently thought the subject worthy their serious attention. The Province of Ontario is awake to the importance of statistical information. Mr. ARCHIBALD BLAIR, of the Ontario Legislature, last winter laid on the table of the House a report prepared by himself on the desirability and feasibility of organizing an efficient system of collecting information relating to agricultural operations throughout the Province. The report referred to the useful work accomplished by the agricultural commission and the importance of continuing in a systematic way the collection of agricultural facts and information. It treated also of the value of grain and live stock statistics, and of crop reports, in protecting farmers against the devices of speculators and in securing to them a fair return for the products of their industry. It also showed what had been done in Great Britain, France, Belgium and other European countries, in the Australian colonies and in the United States, in the way of collecting agricultural statistics, and briefly sketched the system in operation in these countries. The concluding portion of the report was devoted to an exposition of the system recommended as the best for Ontario, the information most desirable to be procured and the machinery for collecting it most promptly and accurately. Some of the means suggested for the purpose are agricultural societies, school boards and the local bodies receiving annual subsidies from the Government. As a result of Mr. BLAIR's efforts in connection with others, Ontario has established a bureau of statistics of various industries called the Bureau of Industrial Statistics. Their report of the harvest of that province has just been published and is giving great satisfaction to the Ontario farmers. In comparing the crops of Ontario with nine of the wheat growing states of the American Union, Ontario stands first in wheat. Of the nine States in comparison, Kansas is the only one that comes within anything like close quarters, and she did not raise as much this year by seven bushels per acre. In barley Ontario stands second, Dakota taking the lead by one bushel per acre. In oats Ontario stands fourth, Dakota, Minnesota and Iowa, these in Oct., 248,091 bushels—an increase of 110 per cent. The value of the present year's crop at the current average market price, is as follows:—

Wheat.....	838,056,500
Oats.....	14,000,000
Barley.....	8,000,000
Corn.....	7,000,000
Rye.....	1,000,000
Total.....	887,819,500

The above estimate of this year's crop will place as much value in the hands of the farmers as the crop of 1881, the increased yield making up for the decline in price, a fact that should cause the minds of any who are fearing a panic from the low price of grain in Europe.

Got the Inside Track.

Our voracious contemporary the *Transcript* has got it warlike on the Times on the hip at last. On such subjects as the Tariff, the surplus, the monopolies and the merits of Mr. Wood, M. P., the valiant *Times* came up to the line smilingly whenever time was called, and when the *Transcript* attempted to asperse the reputation of the *Times* for veracity, the latter raised a war-whoop, waved his bloody knife and danced around as if he would like to have the heart's gore of his amiable up-street contemporary. Then the latter, who is somewhat of a "strategy chap," suddenly changed his tactics, abandoned Mr. Wood, M. P., and "Mr. Wood's organ," and commenced singing psalms of praise to Sir ALBERT SMITH. He aggressively insists that the world never possessed such a wonderful legislator and statesman! This has dumfounded the *Times*. It refuses to accept its contemporary's challenge and carry the political fight to the chamber of a sick man. It is not to be deceived into the ungenerous and unbusinesslike proceeding of entering the political life and actions of an opponent wrestling the bed of sickness. Hence, the *Transcript* waves his flag in triumph over the field of battle.

On Monday both houses of Congress convened at Washington, and the President's message, among other things, recommends the enlargement of the free list, particularly those of cotton, iron and steel, and a substantial reduction of the duties upon those articles, and upon sugar, molasses, silks, woolen goods. The surplus revenue for the past year is \$148,000,000.

Mt. Allison Agricultural Course.

Prof. Goodwin's Third Lecture.

Agricultural Chemistry.

You have now had the opportunity of learning the properties of two air-like substances; and I have occasionally used words which are generally applied to those substances which are like air. We shall then understand the word *gas* to apply to any substance which is like air in its general properties, for example in allowing any solid body to pass easily through it. Substances can as a rule exist in three different states.

THREE STATES OF MATTER.

This piece of ice is solid; if I warm it, it melts, i. e. becomes a liquid; if the warming be continued until the water boils it soon disappears into the air; it has become a gas. If the air were suddenly cooled down below freezing point the water vapor in it would become solid as snow. When a solid is left to itself on a flat surface it has no tendency to spread or in any way to alter its shape. A liquid will to a greater or less degree spread out in a thin layer. We cannot build water up into a hill as we can snow. Solids do not have any tendency at all to alter their shape. Liquids change to suit the form of any vessel in which they are put, but show none of that capability of filling any space which is characteristic of gases. I have here in this tube a portion of air cut off from the rest by the mercury which rises some distance into the tube. The tube, closed at the upper end, has its lower open end plunged far down into the mercury. The air now fills all the space inside the tube which is not filled with mercury. If I raise the tube out of the mercury the space above is increased, and, as you see, the air in the tube has expanded to fill an increased space. If it were possible to extend this tube a mile or so up into the air, the gas inside would still expand so as to fill the space completely; but of course it would be very much rarified, i. e. thinner as people commonly say. Liquids have none of this tendency to expand, until they are boiled off into vapours. Vapours of liquids have all the general properties of gases such as hydrogen and oxygen, and we can use the word *gas* to include both substances which are under all ordinary circumstances air-like, and those which are generally liquid but boil into vapours when heated. We can call steam a vapour or gas.

We will now discuss what was first noticed and described many years ago.

THE SPRING OF AIR.

and as there are some boys in my audience I shall use a familiar illustration and try to avoid hard words. You know how a hollow rubber ball bounces, no matter how thin the rubber is. You know this, but did you ever ask yourselves the cause of it? It is in the springy because the air with which it is filled is springy. Those of you who have amused yourselves with blowing soap-bubbles may have noticed that when they come down to the surface they go dancing about the lightly springing from anything they happen to touch. They are filled with air and the air is springy, elastic. When air is squeezed, pressed, its bulk gets smaller, and that, too, just in proportion to the pressure used. When the ball is thrown down it is "bounced" in, and the springiness of the air causes the dent to be filled out again, and the filling out causes the ball to shoot away from the floor. It is just so with the soap bubbles. I show you the actual squeezing of the air by an experiment ready here, but first you must learn that the atmosphere in which we live has weight. Filling this long tube with mercury I put my thumb over the open end, turn the tube upside down, and put the end closed by my thumb into this dish of mercury. Now, on taking away my thumb, you see the mercury fall a short distance, but a column about thirty inches high remains above the surface of the mercury. This was nothing but mercury in the tube at first and there has been no chance for air to get in. Now, what is there in this space above the mercury? Nothing, as far as we know. It is a vacuum, a place with nothing in it. A second question is, what keeps the mercury in the tube from falling down into the vessel below? If the mercury in the tube be watched day after day it will be seen to sink lower and lower, and rise higher and higher. The man who first made this experiment, had the tube carried to the top of a high tower and it was seen that the mercury sank lower and lower as the tube was carried up the tower.

ATMOSPHERIC PRESSURE.

If I pour some water into the dish on the surface of the mercury, that in the tube rises higher, the water by its weight has pressed it up. This gives us the explanation sought. Something is pressing on the mercury in the dish and driving it up into the tube, and that something is the air. Air is very light, but it has some weight and as there are many miles of it above us, it has altogether weight enough to balance the thirty inches of mercury. Of course, the higher we rise the less air there is above us, and the lower, therefore, does the mercury sink. Changing weather also causes changes in the weight of the air and thus the barometer rises and falls, for this instrument is a barometer. Now we are ready to see how air gets into the tube as it is pressed. In this glass tube bent in the form of a J with the long limb open and the short one closed, there is a little mercury at the bend cutting off the short limb full of air. That air is pressed upon by the rest of the air above it, and I shall now double that pressure by pouring in about thirty inches of mercury into the longer limb. You see that the air has been squeezed up to about half its original size. I can also show you that air expands

when it is heated and contracts when it cools. This is true of all gases and to this rule there is no exception. You see that the heat of my hand is enough to drive the colored liquid down this tube by the expansion of the air in the large round knob on the top. When I take my hand away the liquid rises again as the air cools and contracts.

Let us now examine more closely the air in which we live as in an ocean. We know already that it is a mixture of oxygen, the supporter of combustion, with another gas. If a piece of phosphorus be set on fire and then covered over with a glass jar dipping into water, it goes on burning only so long as the oxygen lasts and then goes out, since no more air can enter. A burning match thrust into the gas left after the phosphorus stops burning is put out, but the gas of nitrogen the oxygen. It is then neither combustible nor a supporter of combustion. This gas is called

NITROGEN.

and we see that it forms about four fifths of the original volume of air. The other fifth was oxygen and was used up by the phosphorus. If we lived in an atmosphere of pure oxygen we would be in a continual fever, for like the match we would begin to burn faster and faster until we should be consumed. The first would be the most and set fire to everything combustible on earth, and in fact the whole world would soon be in one vast conflagration. Mixed with four parts of nitrogen the oxygen would be so hot that they would melt the stones and set fire to everything combustible on earth, and in fact the whole world would soon be in one vast conflagration. Mixed with four parts of nitrogen the oxygen would be so hot that they would melt the stones and set fire to everything combustible on earth, and in fact the whole world would soon be in one vast conflagration. Mixed with four parts of nitrogen the oxygen would be so hot that they would melt the stones and set fire to everything combustible on earth, and in fact the whole world would soon be in one vast conflagration.

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Personal and Political.

—The Duke of Edinburgh is to be promoted to the rank of vice-admiral.

—The Rev. Mr. Hogg, of Moncton, has taken legal proceedings against Mr. G. P. Thomas for slanderous language in the police court. —It is now announced that the Princess Louise will spend the winter in British Columbia, the Marquis returning to the Capital in January.

—The Governor General spent St. Andrew's Day in San Francisco, and a magnificent reception was given him by the city and the Province. A. A. Bliss, formerly a member of the Brunswick Legislature from Albert Co., and an extensive book and show manufacturer at Halifax, died this week.

—Hon. Mr. Aikens was sworn in as Lieutenant Governor of Manitoba on Saturday, and assumed the duties of the office. The St. John bond holders' meeting was held at the Hotel de Ville, and the Hon. Mr. Aikens was sworn in as Lieutenant Governor of Manitoba on Saturday, and assumed the duties of the office.

—Senator David Davis lives in a veritable palace, in the centre of a beautiful estate, in the city of New York. He has been in Dalhousie a little more than a year and has managed to get on with about \$2,000 to meet it. He will make an independent and promising member in the Local Legislature.

—Among the congratulatory messages received by Governor Campbell, of Massachusetts, was one from some of his one-time foes in Memphis, Tenn., worded in this wise: "General B. F. Butler: Glory to God in the highest! We do not believe now that you stole any spoons at all. But if you did, you would not have your trouble yourself about returning them; not for anything in the world."

—The Archbishop of Canterbury passed away quietly, and apparently without suffering, in the presence of the members of his family, on 2nd Dec. He remained in a semi-unconscious state until 11 p. m., when he spoke his last words, "It is coming, it is coming." He was then seized with a sharp spasm, and did not speak again. The Archbishop was born in Edinburgh on the 22nd of Dec. 1811, was the youngest son of the late sheriff Crawford Tait of Harviestown, Clackmannanshire. He was at one time Head Master of the Royal Grammar School, and Bishop of London, then Archbishop of Canterbury. He was noted for his zeal and piety in all his walks through life.

—To Dr. Siemens's August address before the British Association we are indebted for some interesting facts and figures relating to the important matter of shipping. The very remarkable degree to which wooden ships are becoming supplanted by those of iron and steel is shown by the fact that on the 30th of June last, the number of the former building or contracted for in the United Kingdom was 55 with a tonnage of 5,095, of the latter, 725 with a tonnage of 1,226,731. And it is worthy of note that, as iron has been rapidly rendering wood obsolete for ship-building purposes, so the United Kingdom has long been superseded by what is called mild steel. By the use of this, shipbuilders can save 20 per cent. in the weight of the hull with a proportionate increase in its carrying capacity.

It combines with strength of 30 per cent. superior to iron, such extreme toughness, that in the case of collision the side of the vessel has been found to yield or bulge several feet without showing any signs of rupture. The fact that, of the 726 metal ships mentioned above, 6,100 with a tonnage of 176,551, are of this material, will show how rapidly it has increased since its introduction into shipbuilding in 1878.

The total value of the merchant shipping of the United Kingdom, estimated to be £126,000,000 sterling. Of this huge sum, £90,000,000 are invested in steamers footing up 3,008,988 tons, and £35,000,000 in sailing vessels with a tonnage of 3,688,000. During the past year there were lost 1,007 British owned ships worth £10,000,000, 870 being sailing vessels and 137, steamers.

Sale of S. H. & P. Railway.

The Spring Hill and Parrsboro Railway, probably the worst built Railway in Canada, and the most inefficiently run has, the public will be delighted to hear, to have a change of ownership. It has been sold by the bond holders, at 50 cts. on the dollar, to Robert C. Leckie, Esq., of Quebec, who represents a Syndicate comprised of English and Canadian capitalists. It is the intention of the Company to lay steel rails, to rebalt the road, refit the Stations, and make an extension to West Bay, where they will build a large loading pier. It is also said that the new Company intend opening the East Spring Hill line to the spring. The St. John bond holders, whose interest has been purchased, are understood to be D. V. Roberts, H. B. White, John Boyd, R. P. McGivern, W. H. Thorne & Co., Geo. Smith, Geo. H. Foster, John McMillan, James R. Reid, Kegan Bros., A. Chipman Smith, Edwin Fisher, C. A. Macdonald, James L. Dunn, John Holden (representing the Merritt Estate).

New Advertisements.

FUR COATS!

MEN'S RUSSIAN BEAR COATS; MEN'S RACCOON SKIN COATS; LADIES' RACCOON DAY JACKETS.

Most desirable articles for comfort, and very cheap.

J. L. BLACK.

Laces, Plumes, Flowers.

We have just received a Fresh Supply of 150 Pieces Laces and Trimmings.

That sold so readily. Also:

Blk. & White Ostrich Feathers, Plumes & Tips.

FLOWERS & TRIMMINGS.

In Silks, Velvets, Ribbons and Velveteens.

J. L. BLACK.

Flour, Meal, &c.

Of following Brands:

SNOWDRIFT, 'MAJOR,' & 'LOTUS.'

The Highest Grade Patent Made.

At Bottom Rates.

J. L. BLACK.

Pleasure Goods.

Toboggans, sleds, snowshoes, skates, &c.

FOR SALE AT LOWEST PRICES.

J. L. BLACK.

Caps and Hats.

25 DOZEN

Ladies' and Gent's Caps and Hats.

Ladies' Plush, Fur and Straw Hats.

Ladies' Fur, Plush and Cloth Caps.

Gent's Fur Caps.

In Seal, Otter, Beaver, Hair Seal, Coyote, Plush, Cloth, Fur and Felt.

FOR BOYS, YOUTHS AND MEN.

J. L. BLACK.

Sleigh Robes and Wraps.

BUFFALO ROBES, lined and trimmed; BLACK WOLF ROBES; GREY WOLF ROBES; WOOL WRAPS & RUBBER HAND DO.

J. L. BLACK.

STEEL and CHAIN.

4 TONS

Sled and Sledge Steel,

FROM 3/4 to 5 INCHES.

Chains, of all Sizes.

J. L. BLACK.

Pork!

Pork!

WE WILL BUY

30 Tons PORK in Carcass,

AT FULL PRICES.

J. L. BLACK.

KEROSENE OIL.

75 Casks Kerosene Oil,

FOR SALE LOW.

J. L. BLACK.

WANTED!

Socks and Mitts

AND

HOMESPUN CLOTH.

J. L. BLACK.

Clothing, Shirts, &c.

Men's, Boys' and Youths' Over-Coats.

Do. do. do. Ulsters.

Do. do. do. Suits.

Under-Shirts & Drawers.

OVERALLS & FROCKS.

HEAVY SHIRTS, &c., &c.

J. L. BLACK.

Sugar and Molasses.

15 casks Choice Molasses.

10 barrels Molasses.

10 casks Porto Rico Sugar.

J. L. BLACK.

Ladies' Attention.

WE HAVE JUST OPENED 1 CASE

Black Cloth Jackets.

Black Cloth Jackets,

(Beautifully Tailored).

LIGHT COLORED WALKING JACKETS.

Ladies' Ulsters,

Large Assortment, from \$4 to \$12.

In Great Variety.

Buttons and Trimmings to Match.

J. L. BLACK.

New Advertisements.

Lingley Hall Lecture.

PROF. GOODWIN will deliver a Lecture in Lingley Hall on

Thursday, 14th Instant.

Subject: "The Organic World."

Doors open at 7 p. m. Lecture to commence at 7.30. Proceeds to be devoted to the College Building Fund. Admission, 25 cts.

Lingley Hall Lecture.

REV. RALPH BRECKEN, A. M., of Halifax, will deliver a Lecture in Lingley Hall on

Thursday, 7th Instant.

Subject: "A Week in Paris."

Doors open at 7 p. m. Lecture to commence at 7.30. Proceeds to be devoted to the College Building Fund. Admission, 25 cts.

Christmas Cheer!

Supper and Refreshment Table!

THE LADIES of the Methodist Church, Upper Sackville, will hold a SUPPER in the TOWN HALL, on

Wednesday, 20th Inst.

Doors open at 5 p. m.