

THE TIDES ON THE BAY OF FUNDY

To the Editor of the Scientific American: Referring to the article in your paper of December 9, 1882, headed "Blomidon," these high tides, and the still higher ones we often hear of them having perished me from youth, I set out last summer to study their peculiar phenomena, before venturing to take a party of my friends in the steam yacht. The following course was sailed over: From this city to Halifax, N. S., standing well out to sea; thence eastward to Cape Sable, at Yarmouth; across the inner mouth of the Bay to Grand Manan Island; up the coast of New Brunswick to St. John and Truro; at the head of the bay; down the coast of Nova Scotia to Annapolis, which river and several others I ascended, thus circumnavigating the entire sheet of water, which is about 180 miles long by an average width of 40 miles. Soundings and deep sea and surface temperatures were taken during the cruise. A week was spent at Kingsford, Nova Scotia, on the beautiful Basin of Minas, a few miles from Cape Blomidon and Cape Split.

These tides are, as you say, one of the wonders of the world. They are caused, as are also the tides of this region and of the North Atlantic, by the cold Gulf Stream, pouring from the Arctic Ocean by Smith Sound, Baffin's Bay, and Davis Strait, along the Labrador, and through the Strait of Bellefleur, which discharges into the Gulf of St. Lawrence. These cold, heavy currents hug the coast line as they run. On doubling the southeast corner of Nova Scotia at Cape Sable, they strike for the first time the warm and lighter waters from the south, and drive the latter before them toward the point of least resistance, which is up the Bay of Fundy. At its mouth, opposite Cape Sable, the tide rises 6 feet; opposite Digby, 28 feet; at St. John, 38 feet; at Windsor, 45 feet; and when ebb, a bucket could not be filled with water in the harbour; at Truro, 60 feet; and at ebb the red clay bottom is exposed for a distance of 35 miles. These measurements refer to spring tides, which are highest. But the belief which so generally prevails, that the tide assumes, as it rushes onward with loud roar and great velocity, a high, almost vertical wave, or "bore" as it is termed, which even draws into its vortex such animals as may stray near the beach, is wholly erroneous. There is no bore or tidal wave in the Bay of Fundy. Navigation there is neither dangerous nor difficult, unless it be from fog or ice. In the absence of storms, the tides, ebb and flow, are accompanied by scarcely a ripple. Even at Cape Split, where the Bay suddenly contracts to a width of about 3 1/2 miles, the "waves" will not measure one inch in height. What can have been the origin of this fable, which has not only obtained general credence among many, but is even accepted by men of science without question, and is yet chimerical and man's dream? Probably the very trifling bore which does really exist on two small tributaries of the bay, the Pettitcodiac and Shubenacadie. The bore on the former river is measured at Moncton, N. B., 30 miles E. N. E. of St. John, and found it just 3 1/2 feet high, with a travel up stream of 6 miles per hour. It is caused by the last of the ebb tides being met and repelled by the flood. It is a narrow stream confined by almost vertical banks. I cannot close this hastily written sketch without adding that the British people of the Lower Provinces are reasonably courteous, and quite as honest and honorable as any among whom I have ever traveled.

P. J. McCOURT, M. D. New York, Dec. 9, 1882. Horsford's Acid Phosphate AS A NERVE FOOD. DR. J. W. SMITH, Wellington, O., says: "I have used it advantageously in impaired nervous supply."

An Australian Tom Thumb has been on exhibition in England. His real name is David John Armstrong. He was born in 1851. He is 3 feet 2 inches in height and weighs seventy pounds. His limbs are in perfect condition. He is very intelligent.

A SINGLE box of Mack's Magnetic Medicine will prove to any sufferer from nervous prostration or weakness of the generative organs, that it is the best and cheapest medicine ever sold for this class of disease. Read the advertisement in another column and send at once for the great Brain and Nerve Food. [Jan 25 2wks eod wly]

Special Notices.

We will introduce our Club Work on and after the 1st of February for two months, COOK & Co., over the Apothecary's Hall. [Jan 29 3i]

Go right at once to Dorsey, Goff & Co.'s, and buy a right pair of Boots.

ANY person in want of a cow to fatten can get one for cash, or in exchange for a good milk cow. She is now in good condition. - R. K. BRACE.

Who would be without light, in the dark ages, when you can get a five gallon tin of best American Kerosene at the Diamond Grocery for two dollars? - D. MACEachern & Co. [Jan 2]

FRESH North River Oysters at the Union House. ff

OUR Club Tickets will be sold by the leading druggists, and bookstores, COOK & Co., over Apothecary's Hall. [Jan 29 3i]

SLEIGHS FOR SALE. - A few new and second-hand sleighs for sale by P. H. TRAINOR, Kent Street, opposite the Rocklin House. [Jan 27]

THE CARNIVAL. - Bremner Bros. just received Ladies Costume Plates. Ladies and gentlemen wishing to attend the carnival can procure these for 25 cents.

R. B. HEUSTIS sells Walnut, and Designs for Fret Sawing, very cheap. [Jan 16 1m]

GET your Carnival Suits Photographed and Colored by COOK & Co., photographers. [Jan 29 3i]

MINISTERS, LAWYERS, Teachers and others whose occupation gives but little exercise, should use Carter's Little Liver Pills for torpid Liver and biliousness. One a dose.

SLEIGHS repaired and painted at the usual low prices, at P. H. TRAINOR'S, Kent Street. [Dec 27]

BUY a good Fret Saw Machine cheap of R. B. HEUSTIS. [Jan 16 1m]

CANDIED PEEL. - One owt. Keller's just received at BEER & GOFF'S, wholesale and retail. [Dec 27]

A LARGE stock of Fur Caps, at cost, at D. A. BRUCE'S. [Dec 21 wly tf]

PEARLINE for sale at BEER & GOFF'S. [Dec 6]

POTATO FARINA (very choice) at BEER & GOFF'S. [Dec 6]

If you wish to get a good Wringer, buy the Imperial of R. B. HEUSTIS. [Jan 16 1m]

CALL at the Farmer's Grocery for good Tea Molasses, Kerosene Oil, Vinegar, Raisins, Currants and Confectionery, cheap. [Jan 4 wly]

LADIES Skating Boots at Dorsey, Goff & Co's.

EVERY customer, big or small, gets five per cent. discount for cash off shelf goods. Accounts paid monthly five per cent. off. The Family Grocery is, without a doubt, the place to get value for your money. [Jan 23]

Coke. Coke.

COKE is considered to be one of the best and cheapest kinds of fuel for BASE BURNER STOVES and particularly suited for the DENMARK SOFT COAL STOVE, now so much in use. A first-class quality of Coke can now be had at the Gas Works, for ten cents per bushel. [Ch'town, Jan 9, 1883. - 1m wtd]

PARSONS' PURGATIVE PILLS

MAKE NEW RICH BLOOD, And will completely change the blood in the entire system in three months. Any person who will take 1 Pill each night from 1 to 12 weeks, may be restored to sound health, if such a thing be possible. For curing Female Complaints these Pills have no equal. Physicians use them in their practice. Sold everywhere, or sent by mail for equal letter-stamps. Send for circular. I. S. JOHNSON & CO., BOSTON, MASS.

DIPHTHERIA CROUP, ASTHMA, BRONCHITIS.

JOHNSON'S ANODYNE LINIMENT (For Internal and External Use). CURES Chronic Rheumatism, Chronic Diarrhoea, Chronic Dysentery, Cholera Morbus, Diseases of the Spine and Lame Back. Sold everywhere. Send for pamphlet to I. S. JOHNSON & CO., BOSTON, MASS.

MAKE HENS LAY

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, 1 teaspoonful to 1 pint food. Sold everywhere, or sent by mail for 5 letter-stamps. I. S. JOHNSON & CO., BOSTON, MASS.

CHRISTMAS AND NEW YEAR SUPPLIES

"CHEAPSIDE."

In choice Family Groceries, comprising in part, - TEA, warranted very choice. SUGARS, in Granulated, Refined and Porto Rico. COFFEE, Java and Jamaica. Molasses, bright and heavy. FRUIT, in Green Grapes, London Layer, Black Basket, Finest DeHeas and Valencia Raisins, Currants, Almonds, Nuts, etc. CONFECTIONERY, assorted. CANNED GOODS, in Pine Apple, Peach, Tomato, Green Peas, Baked Beans, Salmon, Lobsters, Corned Beef, etc. Lime Juice, Lemon and Raspberry Syrups. Soda, Wine, Fruit and other Biscuits. CHEESE (superior) York Factory. Corn Starch, Potato-Farina, Candied Peels, Macaroni, Vermicelli, Tapioca, Sago, Essences, Vinegar, Spices, etc. PICKLES, Mixed, Chow-Chow, Household and French Capers. Apples, Onions. CHOICE FAMILY FLOUR. Oatmeal, Cornmeal, Buckwheat Flour, Pearl Barley, Split Peas, Beans, etc.

A splendid assortment of Glassware. Lamps, a large variety, from 30c. to \$6 each. GLASS SETS Pitchers, Goblets, Tumblers, Celery Glasses, Water Carafes, Butter Coolers, Preserve Dishes, etc. Cruet Stands, China and Glass Bouquet holders, Epergnes, Toilet Sets, Lustres, Moustache Cups and Saucers, etc., suitable for Christmas and New Year's Gifts. LOOKING GLASSES, a large assortment to select from. Fancy Flower Pots and Shades. Shelf Hardware. Knives and Forks (Dinner and Dessert). Carvers and Forks, (good quality). Pocket Knives, Scissors. Tea Table and Dessert Spoons. Tea Trays, in sets and separate. Bath Room Sets. Brushes, Table Mats. Blower Stands, Sets Skewers. Toasting Forks, Ladles. Jelly and Pudding Moulds. Rolling Pins, Basting Spoons. Cake Turners, Egg Boilers. Teapot Stands, Can Openers. Shelf Brackets, Bird Cages. Hooks, Stair Rods.

HANDSOME SLEIGH ROBES, WHIPS AND BELLS. CHILDREN'S SLEIGHS AND SKATES. KEROSENE OIL, in 1, 2 and 5 gallon cans. HENRY BEER.

Charlottetown, Dec. 11, 1882. - Saw, wly pat

DETERMINED TO SELL.

D. A. BRUCE, MERCHANT TAILOR, Having imported an unusually Large Stock, of excellent value is prepared to make

Suits and Overcoats to Order, AT PRICES LOWER THAN THEY HAVE EVER BEEN OFFERED FOR ON THIS ISLAND.

THE STOCK CONSISTS OF Nap Cloth, Beaver Cloth, Worsted Cloth, Scotch Tweed, Canadian Tweed (355 Patterns to select from.)

And all kinds of Cloth usually found in a First-Class Tailoring Establishment.

Perfect Fits and Good Workmanship Guaranteed OUR READY-MADE CLOTHING, Manufactured on the Premises, IS OFFERED AT BETTER VALUE THAN IMPORTED.

A Large Assortment of FUR and CLOTH CAPS, FELT HATS, Men's and Boys' UNDERCLOTHING, 1600 White and Colored SHIRTS, COLLARS and CUFFS (American), at Clearing-out Prices, and a full line of

GENTS' FURNISHINGS Intending Buyers will find it to their advantage to call and examine our Goods and Prices. D. A. BRUCE, 72 QUEENSTREET. Nov. 22, 1882 - 2m mon wed sat wly.

WINTER WEAR.

D. A. BRUCE, MERCHANT TAILOR, HAS JUST OPENED

100 FUR CAPS, 200 CLOTH CAPS, FROM THE FINEST TO THE CHEAPEST QUALITIES, AND IN THE LATEST STYLES.

— ALSO — FUR COATS, IN COON AND ASTRACHAN, These Goods must be sold, and are offered at the lowest prices. Call and see for yourselves. Charlottetown Nov. 21st, 1882 - 2m sat to th wly

TEA, TEA,

Lately Received ex "Erema" and "Alpha" from London. WARRANTED EXCELLENT QUALITY. For Sale in Half-Chests and 5, 10, and 15 lb Tin Caddies (with screw tops). VERY CHEAP. Beer & Goff. Ch'town, Dec. 6, 1882. - Saw

Prince Edward Island RAILWAY.

TIME TABLE NO. 19. WINTER ARRANGEMENT. To take effect on the 29th Nov., 1882.

TRAINS OUTWARD.

Table with columns: STATIONS, MIXED, MIXED, MIXED. Rows include Ch'town, Royalty Jc, N Wiltsh's, Hunter R'r, Bradalbe's, Coty Line, Freetown, Kensington, Summ'side, Miscouche, Wellington, Port Hill, O'Leary, Bloomfield, Alberton, Tignish, Royalty Jc, York, Bedford, Mt. Stewart, Georgetown, Mt. Stewart, Morell, St. Peter's, Bear River, Souris.

TRAINS INWARD.

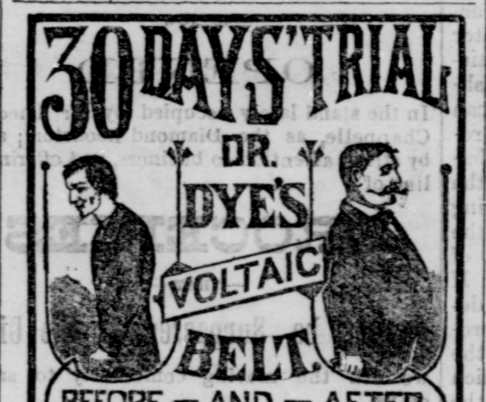
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L. B. ARCHIBALD, Superintendent. Railway Office, Charlottetown, Nov. 25, 1882. dy ex dy pat pres her sum jr 6i

WOOD. WOOD.

Nice Pine Kindling and Hard Wood FOR SALE, At Woodyard between Baptist Church and Skating Rink. WM. BURHOE. Ch'town, Dec. 23. - eod 1m pd

30 DAYS TRIAL DR. DYES' VOLTAIC BELT



BEFORE - AND - AFTER Electric Appliances are sent on 30 Days' Trial. TO MEN ONLY, YOUNG OR OLD. WHO are suffering from NERVOUS DEBILITY, LOST VITALITY, LACK OF NERVOUS FORCE and VIGOR, WASTING WEAKNESS, and all those diseases of a PERSONAL NATURE, resulting from ANEMIA and OTHER CAUSES. Speedy relief and complete restoration of HEALTH, VIGOR and MANHOOD GUARANTEED. The grandest discovery of the Nineteenth Century. Send at once for illustrated Pamphlet free. Address VOLTAIC BELT CO., MARSHALL, MICH.

\$500 Reward! WE will pay the above reward for any case of Liver Complaint, Dyspepsia, Sick Headache, Indigestion, Constipation or Costiveness we cannot cure with West's Vegetable Liver Pills, when the directions are strictly complied with. They are purely Vegetable, and never fail to give satisfaction. Sugar Coated. Large boxes, containing 30 Pills, 25 cents. For sale by all Druggists. Beware of counterfeits and imitations. The genuine manufactured only by JOHN C. WEST & CO., "The Pill Maker," Chicago and Toronto. Free trial package sent by mail prepaid on receipt of a 3 cent stamp. Sold by FRASER & REDDIN, and all Druggists. aug 14 - dy & wky 1v.

DR. SMITH'S GERMAN WORM REMEDY

DR. SMITH'S GERMAN WORM REMEDY has been used by thousands of persons, who universally endorse our claim for it as a pleasant, safe, reliable and prompt remedy for the removal of stomach and seat or pin worms from child or adult. It is easy to take; never fails; absolutely harmless, and requires no after-physic. Sold by THE SMITH MEDICINE COY., 45 ELBURY ST., MONTREAL, AND TROY, N.Y. PRICE - 25 CTS. SOLD EVERYWHERE.

SOLD IN CHARLOTTETOWN AT Apothecaries Hall, Aug. 1 - eod, wky.

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A POSITIVE CURE Without Medicines. ALLAN'S SOLUBLE MEDICATED BOUGIES.

Patented October 16th, 1878. No. 1 will cure any case in four or less. No. 2 will cure the most obstinate matter of how long standing. No nauseous doses or cubers, or oil of sassafras, that are certain to induce dyspepsia by destroying the stomach. Price \$1.50. Sold by all druggists mailed on receipt of price. For testimonials send for circular. P. O. Box 100. J. J. ALLAN, CO., 82 John St. N. Y.

Indubitable Evidence (Condensed) From Doctors' Druggists, etc.

Some of the additional home evidence since publication of last paper: GIVING ENTIRE SATISFACTION. I find that your medicine gives entire satisfaction, and which was not so valuable a remedy for the kidneys. J. B. MOORE, 111 Lime Lake, N. B.

Gentlemen, - Your Pad has been of service to some of my patients already. Jno. MALVERN, Enterprize, N. B.

BRIGHT'S DISEASE CONQUERED. Gentlemen, - Five years ago I felt a bag of grain, which caused weakness, back, and also brought on the Bright's disease, and which caused me considerable in weight. After using your Pad for six weeks, I gained 15 pounds, pain and weakness has left me. I have been yet in the doctor's hands, but not been for my using your Kidney Pad. Signed, W. F. FRENCH, Tamworth, N. B.

THE ONLY PERMANENT CURE. Gentlemen, - I was troubled with back, and could not retain my urine, from painful inflammation of bladder. I have been treated by a dozen doctors to no purpose, but have used Special Pad six weeks. The pain and inflammation are gone and I am cured. Your Pad is the only cure for kidney trouble. ALL PRAISE THEM HIGHLY. J. A. FRASER, M.D., of Woodville, N. B.

Gentlemen, - An accident 12 years wrenched my back. I could hardly ever lift anything. The Pad from Mr. Jas. Aylsworth has nearly made as strong as I ever was. I know it is being used, and all praise them highly. J. W. FRENCH, Enterprize, N. B.

Gentlemen, - Your Pad is helping me dreadfully. My complaint is inflammation of the kidneys. J. H. WOOD, 146 St. John's St., N. B.

Prices - Child's Pad, \$1.50. Regular \$2.00. Special Pad for Chronic \$3.00. JOHN KNIGHT, sole agent Georgetown, N. B. J. A. GOUBILL, sole agent Summerside, N. B. JOHN J. ARSENAULT, Digby, N. B.

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Health is Wealth. DR. E. C. WEST'S NERVE AND BRAIN TONIC, a guaranteed specific for Dizziness, Convulsions, Fits, Nervous Headache, Nervous Prostration, the use of alcohol or tobacco, Mental Depression, Sadness of the resulting in insanity and leading to decay and death, Premature Old Age, Loss of Power in either sex, Losses and Spermatorrhoea caused by exertion of the brain, self-abuse or over-mental. Each box contains one month's treatment. One dollar a box, or six boxes for five dollars; sent by mail prepaid on receipt of price. We guarantee six boxes to cure any case. With each order received by us, boxes, accompanied with five dollars, we send the purchaser our written guarantee to refund the money if the treatment does not effect a cure. Guarantees issued by FRASER & REDDIN, Druggists.

Opposite P. O., Charlottetown. Sole Agents for P. E. I. JOHN C. WEST & CO., Sole Proprietors, Toronto, Ont. dy wky 1v

GUARANTEED CATARRH CURE

NO CURE! NO PAY! A Local and Constitutional Treatment. Two Distinct Medicines, one for the Nasal Passages, Head, Throat and Lungs, the other on the Liver, Kidneys and Blood. INSTANTANEOUS, ECONOMICAL, SAFE, RADICAL TREATMENT. SOLD BY ALL DRUGGISTS. PRICE, 75 CTS. If not found satisfactory, the price paid will be refunded. Some chronic or obstinate cases of long standing may require from three to six packages to effect a permanent cure.

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