

fancied successive stone, bronze and iron ages, but another fact is equally interesting and more puzzling to naturalists. He has unearthed "billions" of cockles and mussels, "found in all the strata prehistoric debris," but no longer existing on the shores of the Hellespont or the Aegean Sea. His first hypothesis was that the Trojans, being ignorant of all coloring matters save purple, had used the shells to ornament their walls. Further investigation failed to sustain this idea, for the inner house walls consists of yellow clay washed with a solution of white clay. The Doctor congratulated himself that his explorations have been partly made under the observations of the officers of the British ship *Pallas*. He has shown them what he is doing, and the evidence for some of his disputed theories, thus refuting the objections of those who alleged, among other things, that he had been working among Priam's pigsties. He may not be correct in all his inferences, but he has already accomplished so much, and is now going on with such energy and under such increased advantages, that most valuable fruits may be anticipated from his future researches. His present campaign was to end with the cold weather, about December 1."

For the Christian Messenger.
Trimeter versus Dimeter.

Thanks to our friend C. D. R., of Wolfville, for his kind notice of my Latin effusion. There ought to be truth and justice in his correction of my "Grammar," coming, as his communication does, from the regions of "Acadia"; and especially as a private note from a gentleman occupying a prominent place in Education, has pointed out the same error. But I would that either or both these friends had given their authority, for I am still of opinion that "the measure of Toplady's hymn is Trochaic Dimeter Catalectic, [it] named according to the ancient [Latin] method," and that my performance "is in the same measure," "consisting of three Trochees, and a caesura,"—i. e., an additional syllable. Now all my Latin and Greek authorities, and I have looked over quite a pile, testify without a dissenting voice, that in *Iambic, Trochaic and Anapaestic*, measures, two feet count for a metre, or measure, and that a complete verse of *Trochaic Dimeter* contains four complete Trochees; and that a catalectic verse, is just one syllable short. Now if two syllables count for a foot, and two feet for a metre, and the word *Dimeter*, simply means two measures, all of which I suppose to be true, it does not require much knowledge of Latin or English, to infer that my statement is correct. Especially as it is directly affirmed by all the Greek and Latin Grammars I can lay my hand on.

But they change everything in these days. I may be wrong after all. One is constantly reminded of the would-be doctor, who while adjusting his "cataplasm" to his patient's right side, so as to cover the region of the heart, was reminded that the heart lay at the left side. "Tut, nonsense," was the answer, "it used be formerly, but we doctors have changed all that." Perhaps they have also changed the Multiplication Table, so that twice two are no longer four, and twice four no longer eight. Come on, Professor Jones, tell us which is right, C. D. R., or S. T. R.? or are we both "right, and both wrong"?

I would like much to see that Greek translation referred to.

Yours truly,
SILAS T. RAND.
Hantsport, Jan. 24.

The Bible Illustrated.

In the preface to "The Bible and the Newspaper," a little book by the Rev. C. H. Spurgeon, the celebrated preacher, says: "The worlds of nature and of providence are full of parallels to things moral and spiritual, and serve as pictures to make the written book of inspiration more clear to the children of God." These words were brought to the writer's recollection the other day as he was reading "Some Curious Histories," from *Chambers's Journal*. This journal has given on various occasions interesting accounts of curious losses and subsequent recoveries of rings and other articles of value. The examples given have been gathered from trustworthy sources. The instances quoted below will be read with considerable interest in connection with the miracle of the staler or tribute money, as recorded in Matthew xvii. 24-27. The writer of the article in question makes no reference

to the Bible incident, but the Christian reader will very readily associate the following narratives with the Gospel record. They may be looked upon as supplementary to similar instances referred to by French and other biblical scholars:—

In the *Scotsman* of January 9th, 1878, a correspondent gives this curious instance of the loss and recovery of a ring: "About three weeks ago two gentlemen were out fishing on Loch Eriboll, northwest of Sutherlandshire, and one of them dropped a valuable ring into the water. Last week a fisherman on the same loch had amongst his haul a pretty large cod, and inside it was found the identical ring safe and sound. The fisherman was banded a pound note on his returning the ring to the owner."

"Fifty years ago, or thereabouts, Admiral X. was in command of one of His Majesty's ships on the Mediterranean station. He always wore an antique ring of rare workmanship and very great value; it was curiously engraved with Arabic or Egyptian characters (a ring that nobody could possibly mistake.) One day, when on deck, in giving some orders, he lifted his hand and it fell overboard. Of course he concluded that he had seen the last of his favorite ring; but a few weeks afterwards he received a letter from a friend, Captain C., who was stationed at Gibraltar, and who had heard of his loss, telling him he had found the ring in the following singular manner: He was buying some fish, when on the vendor's finger he saw the ring, which he at once recognized. (As I said before, it was one it was impossible to mistake.) He inquired of the woman how she got it, when she directly answered, "Sir, it is very odd, and perhaps you will hardly believe me, but I found it inside a fish I was cleaning." I need scarcely add that Captain C. bought the ring, and returned it to his old friend, who, you may be sure, was more careful of it after his adventure, having a double value for it."

J. CLARK.

The Christian Messenger.

Halifax, N. S., January 29, 1879.

THE CANADA TEMPERANCE ACT.

Temperance men in Nova Scotia do not regard this Dominion Act as much in advance of our own Local Statute. We have not examined the Act but judge from the following which we extract from an editorial in the last number of the *Alliance Journal* that there will not be so much stir made to get a vote upon it as there has been in some other places. "The Canada Temperance Act gives no privilege or power that we do not possess under our Local Act. An election gives only to every ratepayer the privilege of saying "Yes" or "No"—and that privilege he now has without leaving his own doorstep. The only difference being, the one is verbal and the other by the cast of the ballot.

Our own act, it is said, has proved a failure. It has not. It has been evaded you say. Of course it has, and the world has not yet arrived at that perfect state when evasions of law will be unknown. Is every law a failure because it has been evaded? We hope no one will say so.

We say, and are in a position to prove, that the law has been as successfully operated as any law, on any statute book, in any country. Whole districts of this city are without licensed liquor shops through that law. Time after time the would-be rum-seller has been baffled by earnest temperance men with counter petitions. More than one rum-seller has been driven from the field after a hopeless conflict with enemies not of theirs, but of the traffic.

We want more working, and less talking. We have heard of an old colored brother, who told his flock that he felt he could talk more good in five minutes than he could do in a year. Let us take an inward look, and see how far the old brother's case is ours. Talk is cheap, very cheap; but when it comes down to hard work; when money has to be subscribed; when temperance literature is to be circulated for the education of the people; when ward committees have to be organized to meet the vested interests of the "licensed victualers;" when the disgusting scenes of Toronto are to be enacted here; when the temperance men have to meet, on the one hand, the indifference of the moderate drinker, and on the other the determined opposition of all "grades" of the rum business; when, in fact, we put off the gilt and glitter of our present state, and face the stern realities of a contest with men, many of whom have proved themselves utterly unprincipled, and whose very existence depends upon their baneful business,—we say when all this comes, something

more than talk will be required; and it will be well for the friends of temperance to pause before risking a defeat, the disastrous nature of which will not be atoned for by years of even greater success than we have yet achieved.

And here let us say we do not speak thus because of the prospect of defeat; but we are under the impression that even if we won we might be no better off than we are. Our own act suits our circumstances in many ways. Grant that there are defects in it. Let us remedy the effects in it. Grant that there are loopholes for the violators of law to crawl through. Let us close up those loopholes. If our houses leak, we do not tear them down and build anew. We repair the defective place. Let us do the same with our license law; and not throw away what we have, in a vain effort to get a law, the advantages of which are perhaps more imaginary than real."

SUGAR REFINING

is a matter that has lately been much discussed in connection with our fiscal arrangements. It was formerly carried on at Montreal but of late this dominion has been largely dependent on Great Britain and the United States.

The last number of the *Scientific American* has a good illustrated article on the subject. We have made a brief abstract which will convey some idea of this important industry:—

"One of the best thermometers of a nation's prosperity is the sugar it consumes. In epochs of great financial depression and commercial stagnation the consumption is small as compared with periods of general prosperity. Indeed the proportionate consumption of sugar is so accurately distributed with respect to national prosperity or depression that it really constitutes a true gauge of both. It is also a good test of civilization and cultured taste—the more civilized nations consuming the most, and the consumption decreasing in regular ratio through the less cultured and semicivilized nations to the barbaric. The sugar industry ranks about seventh among American industries.

In the United States the sugar business is both an agricultural pursuit and a manufacturing industry. Louisiana is the largest grower of sugar cane among any of the Southern States, though Texas and Florida swell the aggregate annual yield considerably.

The quality of all sugar is determined by the amount of saccharine it contains. The yield of saccharine from sugar cane is much superior to the yield from any other fruit or vegetable. The amount obtained from sugar beets is next to that obtained from the cane, and hardly distinguishable from it when refined. Besides these two sources sugar is derived from dates, sorghum, maple trees, and corn. There are three varieties of sugar known to commerce and readily determined by experts; i. e., the Muscovado, the clayed, and the centrifugal. The first two are made according to old methods, the last is the modern improvement.

Sugar comes in a very crude state from the plantations, intermixed with dirt, sand, bits of cane, fungus, and animalcula infinitely more repulsive than those of our midsummer croton, it has to undergo a thorough refining to throw off all these impurities and yield an article fit for commercial and domestic use. This industry utilizes the services of an army of 15,000 men; profitably employs \$25,000,000 capital; and dispenses in wages \$9,000,000 annually.

The refinery takes the "raw sugar," in all its varieties, and first of all, dissolves this crude article in large mixing vats, each holding 2,500 gallons. About 46 parts of water is added at a temperature of 110°. The heated liquor is run from the tanks, and received into filter bags arranged underneath, which strain out all dirt, sticks, and coarse impurities. The strained liquor is then run into the bone-black filter, where it comes in contact with the bone-black, and is entirely decolorized. At this point the processes diverge for the production of Soft and Hard sugars. In the former the decolorized sugar is taken to the Vacuum Pan, and is cold-boiled to a grain from 2 to 6 hours, according to the quality. Valves on the bottom of the Vacuum Pan discharge the grain-liquor into large receptacles over the centrifugal machines.

These machines are among the most wonderful modern inventions for expediting the manufacture of Soft sugar. They consist of a strong steel basket, holding 230 pounds, inside of which is a sieve finely perforated. The sieve is between the basket and the plate to protect the latter. The whole is protected by a wrought iron curb, within which the basket revolves with its contents at the rate of 1,000 revolutions per minute, and the centrifugal action forces the sirrup through the perforations, which are too small for the passage of the sugar grain, into the curb. The sugar after undergoing this process is emptied into wagons underneath the centrifugal machines, and dumped into bucket elevators, which run up over a powerful fan, that throws the sugar against a partition near by,

and cools and mixes it at the same time, after which the sugar is ready for barreling.

The processes for manufacturing Hard sugar are the same up to the time the raw liquor goes into the Vacuum Pans. It is boiled in a slightly different manner. After running into a receiver from the Vacuum Pans the mass is filled into conical iron moulds, 4 feet in height and 12 inches in diameter across the mouth. Each has a hole in the bottom like a flower pot. The moulds are allowed to stand in the filling room downstairs for 12 hours, with the holes plugged up, so as to allow the sugar to cool a little and "set." They are then hoisted up into the drying rooms, and the plugs are taken out of the bottoms. They are placed on "bedsteads" and drain. After all the sirrup runs off that will, the top of the moulds are brushed smooth, and a saturated solution of white sugar and water is poured on top and percolates through the Titlers (as the contents of the moulds are called), carrying off the remaining sirrup. The discolored tips are now cut off, and they are placed into large ovens, heated by steam to 110°, where they are one week, coming out ready for the crushing, pulverizing, and sawing process. In the former the Titlers are crushed into irregular shape; in the second, it is finely pulverized; in the saw mill the titlers, which are like columns of granite, are sawed through horizontally into wheels, laterly into strips, and then are chipped into cubes.

Soft sugar, by the use of the centrifugal machine, is refined in twenty-four hours, while hard sugar requires a fortnight.

The establishment of Havemeyers & Elder of Williamsbury, L. I., has had an existence of half a century. It employs 1,000 hands, turns out a million and a quarter pounds of sugar daily. The accusation of adulteration made by certain parties against several of our largest refiners of sugar has, according to Mr. Wells' recent report on the subject, no foundation in fact. Careful tests have been made by the highest chemical authorities, which seem to verify his statement.

THE LATE MRS. GEORGE DEWITT.

A large number of our readers were well acquainted with Mrs. DeWitt, particularly before her marriage, and she was highly esteemed by all who knew her. Our acquaintance with her was mostly as the amanuensis of her excellent father, Wm. H. Chipman, Esq., Deacon of the Baptist church at Bridgetown, our warm-hearted friend and agent there. With such a parentage and early Christian training, and receiving the grace of God in early life, perhaps it might be expected that a devoted Christian character, such as she had, would be developed.

It has been with deepest regret that we have learned from time to time of her sinking condition and probable early departure. Her Christian work at Bridgetown will not soon be forgotten by that community. Rev. George Armstrong writes an excellent obituary notice of her in the *Visitor*. From this we make an extract or two that will be of interest to those who were acquainted with Mrs. DeWitt:—

While attending school at Nictaux she experienced the power of saving grace, and gave her heart to Christ, was baptized by the late Rev. W. G. Parker, then in the full tide of glorious revival. On returning to Bridgetown, Miss Chipman united with the church of which the writer was pastor, and immediately entered on an earnest, active course of Christian work and progress. She exhibited intense interest in the study of the Scriptures, and strong desire for the salvation of souls. The church, the Sabbath School, and the world felt the influence of her spirit, life and testimony.

When on her marriage she left with her husband, Dr. DeWitt, the home of her youth for her new home in Chester, the blessing of her parents, pastor, and the whole people, followed her.

In a letter written to the church at Chester, Dec. 21, 1878, to be read after her decease, she thus recounts her struggles and victory:

"Come ye that love the Lord and I will tell you what he has done for my soul."

"Those that seek me early shall find me."

What precious words! I have proved them true. I was 14 years of age when I first found Christ to be the one altogether lovely, and he has proved faithful to the end, and soon I will be with him in glory. Bless the Lord and all that is within me, for what he hath done for my soul. I thought I would like to tell you what I have experienced the last few days.

Ever since I have been in a decline I have felt very timid about dying, even up to Monday of this week. I then had an ill turn after going to bed, had I been dying I could not have had a greater struggle for breath. I felt as though I could not die just yet. I had been under a cloud all that day, so that I began to wonder if I was really a child of

God, an impression I never had when in health. I felt that I was too unworthy to enter that heavenly home and should be so happy as to enter there I would be ashamed to look my Saviour in the face. The next day's experience was similar. When I retired at night I was in such bodily distress I could not let my husband leave the house, fearing another ill turn. I resolved to try what prayer would do and asked the Lord to take away my suffering and let me spend a comfortable night, that I would doubt no more, and that it might be a token that I was his child. I called mother and asked her to make the same request and leave me in the dark alone, and told my husband I was sure my prayer would be heard. As I prayed the promises flowed in upon me as fast as I could think; all at once I saw a beautiful calm river lying before me, not a ripple on its surface, resembling the Annapolis river of Wilmot, much wider; each bank was lined with beautiful trees. Across the river stood a form robed in light, such a soft bright light. The surroundings were all illuminated. I saw no face and no hand beckoning me. I heard no voice neither was there any boat to carry me across, but I did not think of these things at that time, so anxious was I to get to him for I felt that he was my Saviour come for me, even me. Soon it faded away and all was dark. The vision is still before me, and ever since I have felt that my cup was running over with happiness. I have given up all earthly things, even my dearest earthly friends, and can leave the world without a tear, and when Jesus calls me I can go. Still I am willing to wait my appointed time and suffer all his will.

Although my sufferings are great and I am very much prostrated, yet I feel that each day brings me nearer heaven and I shall soon be in glory.

Farewell, Mr. Skinner, I trust you have already awaiting you a crown studded with many bright stars, but go to work with great earnestness that many more may be added to it.

Farewell, Christian friends, my voice will not again be heard in this house. My dying charge to you is to wake up out of your sleep and go to work for your Master. Make the fourteenth chapter of John your study and trust implicitly in its precious promises. I wish each to choose one soul to pray for and plead with that soul to seek the Saviour, and the Lord may pour you out a blessing such as was never known in this place.

"If grief in heaven might find a place And shame the worshippers bow down, Who meets the Saviour face to face 'Twould be to wear a starless crown."

May God bless the Sunday School, the efforts and labors of the teachers. May each work more earnestly to bring souls into the Master's vineyard. May God's blessing rest upon dear sister Jessie Smith who teaches the little ones, who has taken so much pains with my dear little son Stanley; it is my request that she will keep him in her class as long as she possibly can and ever try to lead his young soul to Christ.

Farewell, my dear friends in Christ. Farewell!

HATTIE DEWITT.

Rev. I. J. Skinner adds:

When sister DeWitt, with her husband became identified with the church in Chester, she expressed a strong desire to be useful. Accordingly she connected herself with the Sabbath School, where she won the esteem and affection of her class as well as of the School generally. The Conference and prayer-meetings were never neglected when she could attend, and her exercises were of a nature that indicated deep-toned piety, and her communications were often a blessing and comfort to many. She continued faithfully to discharge her Christian duties in the church and Sabbath School until failing health compelled her to retire from the employment which she dearly loved. During her last illness, which was protracted and painful, although generally hopeful, yet she had her seasons of despondency, and death sometimes seemed a terror to her. But as she approached the dark river, she was favored with bright visions beyond, which dispelled all her fears, and she longed for the hour to come that would release her from suffering, and permit her to pass over to the "other side."

So great were her bodily sufferings, towards the close, that she sent a message by me to the meeting on Sunday morning, requesting the prayers of the church that she might be speedily released from her excruciating pains, and permitted to go home to the rest above. That night, (December 29th) about 12 o'clock, she sweetly passed away. She selected two hymns to be sung at her funeral. The 116th, commencing "Jerusalem my glorious home," etc., and the 117th, "On Jordan's stormy banks," etc. She wished no funeral sermon with special reference to herself, but selected a text, Prov. 8: 17, from which she desired a sermon to be preached to the young.

Rev. E. M. SAUNDERS, pastor of Granville Street Church, is preaching a series of sermons from the Book of Revelation on Sunday evenings. His text last Sunday was from chapter ix. 20. He takes a wide range giving the early history of the church of Christ, the rise of the Roman Catholic Church, and of the Mohammedan power.

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