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THE DAILY EXAMINER

JANUARY 10, 1898

SCIENTIFIC MISCELLANY.

SUGAR IN BEETS—HEARING SOUND—ALL EARTH TREMORS TO BE RECORDED—ATMOSPHERES OF THE PLANETS—A NOVELTY IN BOILERS—WHERE TUBERCULOSIS IS UNKNOWN—INFLECTION AND CONTAGION—MELTING METALS UNDER PRESSURE.

The old view that the quality of sugar beets depends on the number of developed leaves and the length of life of the plant has been confirmed, according to Friedrich Strohmmer in a paper to the London Chemical Society. Sugar is produced in the leaves passing through the leaf stems to the roots. The production of sugar depends on the amount of light and the form and position of the leaves are of importance. Yellow light causes the greatest development of roots, blue or chemical rays the largest percentage of sugar. Field experiments have proven that sugar production begins at an early stage in the leaves, but is greatest from the beginning of August to the middle of September.

Some curious experiments have been reported by Mr. Howard Swan, a London linguist and electrician. These have shown that a certain slow-moving phosphorescence, which under suitable conditions appears in the dark within the eyeball or nerves of the eye, is sensitive to sound and is thrown by it into various movements which are evidently subject to definite laws. If the sound is a word the phosphorescent film tends to form a geometric problem.

The scheme of Mr. John Milne of scattering earth tremor observatories over the globe is being carried out. Recording apparatus is to be established at Toronto, Harvard, Philadelphia, Victoria, B. C., two stations in New Zealand, Batavia, Madras, Calcutta, Bombay, Mauritius, Cape Colony, Argentina, San Fernando, New and probably other places.

From observations last year in seven states, reported by Prof. F. H. Bigelow, it appears that stations on the southern end of the Appalachian mountains, in central Georgia or Alabama, have better prospects of favorable weather for viewing the total solar eclipse of May 28th, 1900, than other places on the septic track.

The question of atmospheres upon the planets and satellites of the solar system has been investigated theoretically by Dr. Johnstone Stoney, of the Royal Dublin Society, who has reached some most interesting results. He has proven mathematically that the outward motion of the molecules of any of the gases under the highest lunar temperatures would be sufficient to overcome gravitation on the moon, which must therefore be left entirely destitute of an atmosphere. The attraction of the earth is insufficient to imprison free hydrogen, and helium, though supplied in small quantities by hot springs,

etc., for a like reason has failed to accumulate in our atmosphere. The calculations show further that water vapor cannot be retained by Mercury while even nitrogen and oxygen would probably escape into space, leaving none of the atmospheric constituents of our world except possibly argon and carbon dioxide. The most striking conclusions—in view of recent speculations—concern Mars, which is found to be incapable of retaining water, and whose atmosphere must consist mainly of nitrogen, argon and carbon dioxide the polar snows being frozen carbonic acid and vegetation and canals as known to us being impossible. Jupiter, from its mass and rate of rotation can prevent the escape of every gas known to chemists, Saturn, Uranus and Neptune can imprison any gases more firmly than the earth, but may be unable to hold hydrogen, although Saturn may detain helium. Venus, moreover, being the earth, has an atmosphere heavily laden with water vapor.

The novel steam generator of Mr. J. H. Knight an English engineer, consists of a coil of steel tubing heated in a suitable furnace. Irregular steam production and liability to obstruction by deposits from the water are the usual objections to boilers of this kind, but it is claimed that these difficulties are overcome by the use of steel balls which move freely in the tube for a short distance. This checks the flow of water in the lower coils, causing the steam to come off quietly, while the constant movement clears away all scale.

A farming community of sanitary habits at Saint Owen, a suburb of Paris, consists of 98 families of 511 members, and is remarkable from the fact that no case of consumption among them has been known within anybody's memory. The people rarely mix with those of other sections.

Infectious diseases are those due to the introduction into the body of some disease producing agent, and much confusion arises from the fact that all contagious diseases are infectious, while not all infectious diseases are contagious. Knowledge gained chiefly during the last twenty years shows us that an essential condition of infection is that the disease-producing agent shall be a living organism, capable of reproduction in the body of the infected individual. It matters not, says Dr. Geo. M. Sternberg, whether this living organism is large or small, whether it belongs to the animal or vegetable kingdom, whether it is located in the skin as in scabies, in the muscles, as in trichinosis, in the lymphatics as in erysipelas, in the solid viscera as in amoebic abscess of the liver, in the intestines as in cholera, or in the blood as in relapsing fever, the introduction and multiplication of the living infectious agent constitutes infection. A disease is contagious when it is transmitted from the sick to the well by personal communication or contact. Small pox, scarlet fever, measles, diphtheria, influenza, etc., are infectious diseases which are contagious; while malarial fevers, typhoid fever, yellow fever, cholera, pneumonia, peritonitis, etc., are infectious diseases, which are not ordinarily contagious.

On imbedding a piece of metal in a mortar of chemically pure aluminum oxide thoroughly dried, and then subjecting to a high temperature, H. Bishop, of Wiesbaden, has noticed a remarkable retardation of melting. A rod of silver, which should melt at 1830 degrees F., was solid until 2730 degrees was reached; and palladium, which should melt at 2730 degrees, was still unaffected at 2900 degrees. It is explained that the melting points of the metals are raised by the pressure due to contraction of the jacket of aluminum oxide on heating.

Glue containing bichromate of potash is suggested by Pro. Schweizer, a German chemist, as a waterproof cement for glass. A well-known property of bichromated gelatin is that of becoming insoluble on exposure to light.

An African fat, used for domestic purposes, is the oil of a species of beetle. It resembles hardened coconut oil.

WHY AND WHEREFORE.

I know not whence I came,
 I know not whither I go,
 But the fact stands clear
 That I am here
 In this world of pleasure and woe,
 And out of the mist and murk
 Another truth shines plain—
 It is in my power
 Each day and hour
 To add to its joy or its pain.

I know that the earth exists,
 It is none of my business why.
 I cannot find out
 What it's all about—
 I would but waste time to try.
 My life is a brief, brief thing,
 I am here for a little space,
 And while I stay
 I would like, if I may,
 To brighten and better the place.

The trouble, I think, with us all
 Is the lack of high conceit:
 If each man thought
 He was sent to the spot
 To make it a bit more sweet,
 How soon we could gladden the world,
 How easily, right all wrong
 It nobody shirked
 And each one worked
 To help his fellows along.

Cease wondering why you came;
 Stop looking for faults and flaws;
 Rise up today
 In your pride and say:
 "I'm part of the first great cause,
 However full the world,
 There is room for an earnest man;
 It had need of me
 Or I would not be—
 I am here to strengthen the plan."
 —Ella Wheeler Wilcox, in Form



A woman cannot be too careful of her health. Her happiness as maid, wife and mother is dependent upon it. Every woman should realize that her general health depends upon her health in a womanly way. When a woman complains of being sluggish, dizzy, nervous and despondent the average doctor attributes these symptoms to heart trouble, or disorders of the liver. He is not right once in ten times. When a woman feels this way she is usually suffering from weakness or disease of the organs distinctly feminine. Dr. Pierce's Favorite Prescription is the best of all known remedies for suffering women. It acts directly on the delicate and important organs that bear the burdens of maternity. It makes them strong, healthy and vigorous. Thousands of women who were weak, nervous, fretful and unhappy wives are today happy, healthy, helpful and robust as the result of the use of this marvelous remedy. It is the discovery of an eminent and skillful physician, Dr. R. V. Pierce, for thirty years chief consulting physician to the Invalids' Hotel and Surgical Institute, Buffalo, N. Y. During those years, with the assistance of a staff of able physicians, he has prescribed for many thousands of all women. He will gladly, without charge, answer letters from suffering women. The "Favorite Prescription" is for sale by all good medicine dealers and nothing else is "just as good."

Sister Eliza L. de Falcon, of Corpus Christi, Nueces Co., Tex., writes: "This is to tell you that I have been ill for twenty-one years and was finally cured by your medicine, 'Golden Medical Discovery' and 'Favorite Prescription.' I was completely cured after taking this medicine."

Gray's Syrup of Red Spruce Gum
 For Coughs, Colds, Bronchitis, Sore Throat, etc.
 KEENE, WATSON & CO., PROPRIETORS, MONTREAL.

A... Watch
 Makes a very acceptable and useful Xmas present.
 We are showing a nice assortment of reliable time-keepers at
VERY LOW PRICES
 We will be pleased to have you call and examine our Watches before purchasing, as we may save you \$ \$ \$
 We Guarantee Every Watch.
W. N. TANTON
 JEWELER
 Gt. Geo. St.

He Now Calls Elsewhere.
 She—Poets are born, not made, you know.
 He—That's right. If I were you, I would turn my attention to fancy work.
 —Detroit Free Press.

His Personal Choice.
 "Preferring creditors is all right if a man can afford it," old Gottrox remarked reflectively, "but for my part I prefer debtors."
 —Town Topics.

The Hand For Me.
 The hand that lends enchantment to the harp strings may be fair;
 The hand that woots the sweet guitar
 And makes the music there
 May be a slender one and soft
 And beautiful to see,
 But the hand that rolls the doughnuts is
 The little hand for me!

The hand that is ablaze with gems
 May be the hand for you;
 For some one else the hand that sweeps
 The ivory keys may do;
 The hand that goes with millions off
 Is beautiful to see,
 But the hand that rolls the doughnuts is
 The little hand for me!

My Beesie's arms are soft and round,
 And she is plump and fair.
 She's been away to cooking school
 And learned some wonders there.
 Oh, others' hands may be as small
 And beautiful to see,
 But the hand that rolls the doughnuts is
 The little hand for me!
 —Chicago News.

Hood's Pills
 Cure sick headache, bad taste in the mouth, coated tongue, gas in the stomach, distress and indigestion. Do not weaken, but have tonic effect. 25 cents. The only Pills to take with Hood's Sarsaparilla.

Neuralgia
 In the head is almost invariably caused by decayed and abscessed teeth. Don't suffer needlessly when you can be relieved in a few hours and cured in a few days by the careful treatment we will give you.
DR J AYERS
 DENTIST.
 Painless Extraction of teeth

Operative and Prosthetic
DENTISTRY
DR. J. P. MURRAY,
 145 Queen St.

It's a great Satisfaction
 To find by the liberal patronage given us that we have pleased our customers, both as to quality and price.
 We intend to study their wants in every way during 1898 as in the past.
G. H. TAYLOR
 JEWELER.
 North Side Queen Square.

Sale of Old Cathedral
 I am instructed by the Cathedral Building Committee, to sell by Public Auction on Friday, the 14th day of January, inst., at the hour of 2 o'clock, p. m., the Old St. Dunstan's Cathedral, as it now stands on its present site. Also all timber used as underpinning beneath the church; and also a quantity of Stove Pipe and several Base-burner Stoves.
 R. BEARSTO, Auctioneer.
 Jan 4—31 eod.

LEGAL CARD.
Mathieson & Bentley
 Barristers, Solicitors, Etc
 OFFICES—
 Cameron Block, Charlottetown
 Main Street, Georgetown.
MONEY TO LOAN
 J. A. MATHIESON, W. E. BENTLEY,
 Georgetown, Charlottetown.
 Jan 3—law & Ex & Pat 3 mos; w Jo. & Watchman 3 mos.
Bottled Joy.
 Empty bottles wanted, cheapest cash price paid for all kind of empty bottles.
 JOHN P. JOY,
 Victoria Cafe, Gt. George St.

ladies' jackets

The balance of our stock of above all new; this fall's importation with the exception of six
 We offer them at sacrifice prices to clear at once
 It will pay any buyer to see them
T. J. HARRIS, London House

LOST.
 A large Gold Ring, with three links on it; lost some time before Xmas. The finder will be rewarded by leaving it at
McKAY WOOLEN CO'S
 High Class Tailors.

Three Reasons
 Why you should buy your Furniture from us.
 1st.—Our variety is unsurpassed, as we buy our goods from specialists in each line.
 2nd.—We buy nothing but the best.
 3rd.—We sell our good furniture at the price of cheap.
PROVE US
JOHN NEWSON,
 Seller of Good Furniture.
 Stranger to Poor Furniture.

What are You wearing
On Your Feet This weather?
 There is style in footwear as there is in hats. Each year Rubbers and Overshoes are modelled to fit all the fashionable shapes of boots.
 We are showing all the best shapes in Ladies' and Gentlemen's Overshoes, also Girl's and Children's. Knitted Overstockings for Children and Girls.
W. H. Stewart & CO

THANKS
 To our many friends, who helped us do such an excellent trade during the past weeks.
VERY LOW PRICES
 still continue on nearly all lines, for a few days.
G. F. HUTCHESON
 Opp. J. D. McLeod's.

A CROUP CUPE
 is what many a mother is looking for; something absolutely safe and reliable, that will disarm her terror of that dread rattling, strangling cough, so fearful to the mother, so fatal to the child. Ayer's Cherry Pectoral is a croup cure that can be relied on. Thousands say so.
 Mrs. W. J. DICKSON ("Stanford Breleth") writes from Truro, N. S.:
 "That terror of mothers, the startling, croupy cough, never alarmed me so long as I had a bottle of Ayer's Cherry Pectoral in the house."
 "We have used Ayer's Cherry Pectoral in our family for years. Once when our boy had a severe attack of croup, we thought that he would die. But we broke up the attack by using Ayer's Cherry Pectoral."
 E. H. COX, Machuville, La.
Ayer's Cherry Pectoral
 No charge for consultation by letter with our physician. J. C. Ayer Co., Lowell, Mass.