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THE DISPA OH Jan 3 1916.

DISPATCH. Published by The Estate of Charles Appleby. K. Appleby - - - Business Manage

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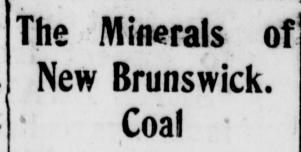
The solar System

The Sun Continued

We are more concerned about the sun's function of providing us light and heat than any theory of what it may be composed. Wo live directly or indirecty on the products of the earth, and de pend largely on past and present vegetation for artificial heat. The energy producing elements of food and fuel were stored up through the influence of the sun. The energy of fuel is well ill-"ustrated by the saying "George Stephenson drove his locomotive by buttled sunbeams "

There is a marked difference between the light and heat rays of the sun. It is we'l known that sunlight consists of the blending of several separate colors which may te shown by an ordinary prism; but the heat rays are invisible and are not shown by refraction. They are sometimes called the dark rays of the sun.

The solar radiation of heat energy is enormous, and it is impossible for us to know or measure the temperature of the body of the sun. It is estimated that if the surface of the sun were coated with ice four thousand feet thick it would melt in one hour. The cause of sola" heat is known to us only by theory. It is unreasonable that it is heat in less than three thousand years. province. Nor is it a mere hurning mass for ics



Coal is compressed and mineralized vegetable matter, that formed in immen quantities in the Carboniferous Era.

This vogetation grew in vast swamps about the mouths of rivers and in shall low lakes or Carboniferous seas.

If we imagine some of our plants enlarged to the size of trees, we may get a conception of the plant life of that period. Then our common ferns were giant tree ferns growing densely togeth er. The large calamites were the ances tors of the plant we call the horsetail. Our club moss was a large tree with clinging foliage.

The vegetation accumulated several hundred feet deep in the swamps of the river deltas and shores forming peat bogs which in time changed to coal.

The varieties of coal differ according to the degree of bituminization and the amount of violatile or gaseous matter contained in each. The evolution passes from peat to lignite or imperfect coal, then to soft or bituminous coal, and lastly Anthracite or bard coal, which contains the highest percentage of car bou, and the lowest percentage of gase ous matter and water.

Pressure hastens the change so we find hard ccal in the folds of the Rocky Mountains; and an inferior grade of soft coal in the plains of Alberta.

The coal of Peunsylvania in the Alleg hany Mountains is Anthracite while that of Nova Scotia is bituminous. The dif ference is not due to age but pressure due to the folding of the earths crust. Soft coal burns with more flame than hard coal because it contains more gas es. It is used more extensively in steam engines than hard coal.

Much might be said of the fossils found in ccal beds, and of the various stratifications of different types of coal, merely the cooling of a hot body, for it but we shall proceed to the more prac has been shown that it would lose its tical description of the coal fields of this

The coal of the Province of New Brun

Important Announcement

\$10. VALUE FOR \$1.00

We have set apart this page of OUR PAPER for a SCHOOL and It will contain SPECIAL INFORMATION along FARM Section. the line of work prescribed for the public school as well as the gen era principles of agriculture as outlined by the specialists at work on its diff er ent branches.

A column will be devoted to questions and answers on points that may arise in school work.

CONTESTS in ordinary school work with SPECIAL PRIZES We will make a SPECIAL OFFER to any will be arranged for later. school applying with a club order of six pupils or upwards.

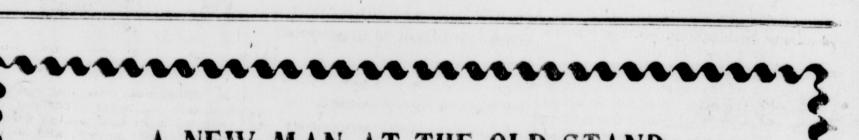
Here is an OPPORTUNITY to secure the ADVANTAGE of a local paper, and a store of useful information beside.

NEW SUBSCRIBERS and ALL making inquiries respecting this section.

THE DISPATCH

Box 296

WOODSTECK, N. B.



temperature would lower in a much the sun is slowly contracting, and this contraction generates as much heat as is given off. 'I his shrinkage is calculated to be about one hundred and eighty feet a year. This is so slight compared with the immense girth of the sun that it would take six thousand years to show any decrease in size to us; but there must come a time when this contraction will cease and the body of the sun begin to cool, but it is reckoned that it will take at least ten million years before the sun becomes too cold to support life on the earth. Lord Kelvin was an advocate of the contraction theory to account for the heat of the san and the underground heat of the The theory was first advanced earth. by Helmholtz in 1854, and holds sway with the foremost scientists of today.

The contraction theory is in accord with the Nebular hypothesis, of the formation of the solar system; that is the sun and planets were formed from Ne bula matter by the process of contraction caused by the force of gravity; that from a vast and chaotic mass of infinite fine particles of gaseous matter an orderly system developed.

Finland

Finland is that portion of Russian ferritory on the Baltic Sea between the Gulf of Bothnia and the Gulf of Fin land. Its name has the same meaning as Fenland although but a small port ion consists of actual marsh; but it is level in general and contains many skes. There are fine forests of Conifers and a yearly quota of timber is added to the Baltic export. Agriculture is important supporting a splendid mass of peasants. Finland approaches · Deamark in the quality of its dairy products

The country is regarded as part of Scandinavia as it was first inhabited by the scandinavians before the coming of the eastern people.

Geologically it rests upon the same soomerged plateau as Sweden and was tor a long period under the government of that country, so its people are more related to the Swedes in customs, temperament and manner of life than to any other nation, although nominally the territory is a part of Russia. The Lists in tuis declaration. population numbers nearly three mil itons, mainly the descendants of certain Turanian tribes from the far east, and related to the Mongols and Manchus. They belong to the first wave of East.

swick belongs to the Acadian field. shorter period The best theory is that During the Carboniferous age the pro vinces of New Brunswick and Nova Scotia was a great river delta on the eastern side of the porthern land. The area of this field is estimated to be thir ty six thousand square miles.

The middle Carboniferous contains the principal coal seams. This is found in Nova Scotia but is lacking in the

Continued to p-ge 1

Socialist Paper **Talks Plainly**

London, Jan. 2 .- A dispatch to the Daily News from Rotterdam says:

The most significant of all the new year articles in the German press is that of Verwarts, entitled "Peace Year, 1917." It gives an am zingly frank picture of Ger many's internal positioa, attackthe Prussian gaspel of force, and declares the task for the future is to find the road from war Sabeialsin to peace Socialism. A funtteing that it requires courage o describe 1917 as the peace year, the paper says: "Aiready montally wounded, the beast of war roar aloud once more. His death agony will perhaps last four months and we shall have to carry on the strug gle, but it must be in a double sepse a struggle in defense against the enemy and a straggle for peace. There can be only one more short, fical fight and the year 1917 will te the greatest in the history of the world's history, for it will

again bring us peace." It is quite clear, Vorwart's is really saying that Germany will oave to make peace soon. It defee the snuexationists and militar-

New York, Jan. 2 .- In its leading editorial, this morning, the Times, under the caption "Eaforc-

Concluded on page 8 Conclude d on nege 5

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