WORLD'S COAL GOING FAST

Beds Will Be Exhausted Within 150 Years.

Water Power Insignificant Substitute for Coal—How the Great

Deposits Were Formed.

[By G. T. Wright, A. M., in Chicago Record-Herald.]
Coal is the chief corner-stone of modera civilization. Nearly all the laborsaving appliances must have coal to make them effective. Outside of the muscles of men and animals the chief sources of power available for the use man are gravitation as it is set free in falling water and heat arising from the chemical combustion of coal. But waterfalls are stationary, and even with the ability to distribute their power through electricity, it is available as yet only over a limited area. If all the power of Niagara could be turned into electricity it could not profitably be distributed beyond the limits of Western New York, whereas coal can be carried to the ends of the earth and its power set free for use wherever it is needed. If the prairies of the west and the comparatively level regions the world over, where are found the best agricultural lands, were limited, as formerly, to water power for running their factories and mills, these would necessarily be few and insignificant. Such

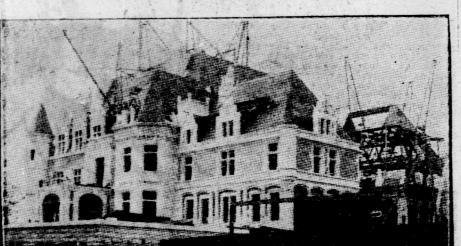
from the mountainous districts.

sand and mud, which, brought in from surrounding highlands, would have rendered it too impure for use. The character of the vegetation which supplied these great accumulations of coal is amply shown in the fossil forms which appear, especially near the top and bottom of the coal seams, while in some cases the entire stumps of trees are found still standing in place, with their roots penetrating into the under clay which supported the vegetation.

In Nova Scotia there are found no less than seventy-six seams of coal separated by beds of sandstone and shale. Each of these beds indicates a change of level which took place in the region during its accumulation. During the accumulation of the coal the swamp was so shallow that no currents of water could carry into it sand and gravel to interfere with the growth or to bury it. But after

carry into it sand and gravel to interfere with the growth or to bury it. But after a certain amount of vegetable deposits had accumulated there was subsidence of the area, allowing access to currents of water carrying sediment sufficient to bury the deposit of coal and furnish the basis for the growth of vegetation in another swamp on top of the accumulated sediment, and so the process went on indefinately, as long as the climate continued

ately, as long as the climate continued favorable, and these changes of level continued to proceed with the appropriate rate of rapidity. to indicate that the climate was at that time warm and moist and uniform, while that the air was much more fully charged with earbonic acid gas than it is at the with carbonic acid gas than it is at the present time. Of the coal plants of Great Britain about half were ferns, many of them growing to the size of trees, the most of which are trophical species. Indeed, during the coal period in Great Britain the proportion of ferns there to the other plants was far greater than it is in the tropier of the property of the prope than it is in the tropics at the present day, while tree ferns are now wholly confined to tropical regions. Abundant tropical forms of vegetation are found in the coal seams in Greenland and on Mel-ville Island as far north as the seventy-fifth degree of latitude; indeed, everywhere during the coal period the climatic conditions not only of the temperate zone, land, Detroit, Chicago, St. Louis and but of the arctic lands, were closely sim-Cincinnati would be impossible away liar to those of the present torrid zone. But, for man's use it was necessary not



Palace for a Steel Trust Millionaire.

Mr. Schwab's new house in New York.

hastening an ultimate but inevitable catastrophe. It is estimated by the highest authorities that the total available coal treasures of North America cover 220,000 square miles, with an avseams, which would yield 4,800 tons to therefore, that is possibly within of 300,000,000 tons, while the expansion alone we were mining but little short of 3000,000,00 tons, while the expansion of population and of business is demanding an increase at such a rate that two or three times that amount will soon be necessary to meet the annual demand. At the present rate of increase in the use of coal therefore. the entire amount accessible in North

than 150 years.

If we look to the rest of the world prospect is not more encouraging. The coal fields of Europe are mostly confined to small areas in England and the northwestern part of the continent. Spain, Italy, Greece, Russia, Scadinavia and the larger part of the German Empire are dependent on England for their coal. At the present rate of increased production these fields will be nearly exhausted in 50 years. The remaining great deposits of coal are ones will retain good health during and nature appear to such a one?

Totally different. Yet it is quite within equal, if they do not exceed, those in the United States. It may therefore be fortunate for the world that China is so slow in her development that her reserved sources of fuel shall yet be more advanced in civilization shall

The insignificant role which water power in this country can possibly play in keeping up our industries appears on brief Baby's examination of the facts. It is estimated cents a box by all medicine dealers, by the best authorities that if the entire or may be had direct by addressing rainfall over the State of Pennsylvania The Dr. Williams' Medicine Gressing "1. That the limitation of the universe rainfall over the State of Pennsylvania were utilized with a head of 150 feet, it would not yield one-tenth the amount of power that is now derived in that state alone from the consumption of coal. it on the most extravagant calculation it would not be possible to make avail able in that mountainous state one-tenth of this theoretical amount of water What then would be the conof those vast areas of the Missis

sippi Valley where water power is far But, for the moment, leaving aside these rather sobering reflections to the far-seeing statesman and philosopher, we existing limited amount of this useful picked up a small vocabulary of be developed near the boundaries are reach, and preserved for our use, reach, and preserved for our use.

Coal is an accumulation of vegetable royal personage is called a "man-man," matter which has decayed under water with, no doubt, a glance at Mr. Shaw's

where oxygen could not get access to the superman. Things that are expensive carbon to consume it and transform it are "expie," a tea gown is a "tagle" into carbonic acid gas, as it does in the open air. The conditions of the coal fields the meaning of a "nightie" scarce-therefore during the accumulation of the shrinks from the interpretation of "Rita" therefore during the accumulation of the shrinks from the interpretation of "un-coal must have been that of vast swampy shrinks from the interpretation of "un-regions, where there was not depth of dies" and "cossies," placing opposite

agricultural interests of the Missisippi Valley if they were compelled to dispense with steam threshers and steam traction engines and substitute in their places the work of innumerable droves of horses and mules.

only to have coal accumulate; it must be conditioned so as to be moderately stable in a moist atmosphere—hat is, in presence of oxygen and water. The spectroscope tells us that the sun consists, generally speaking of the causes which we can but dimly comprehend, at the close of the coal period the land all over that area, which had up to spectroscopic evidence that some stars compelled to face the fact that coal belongs to the limited and rapidly dismovement and began to rise. This eleval the same elements. appearing reserved stores of nature. In using coal the human race is intrenching upon its capital, and recklessly like and produced a number of dimination and produced a number of dimination in the surface also likely that many of them among when the federal which folded up the Allegheny Mountains and produced a number of diminations and produced a number of diminations are more or less like our earth, it is also likely that many of them among when the federal ishing waves, so to speak, in the surface of the land extending to the center of the

above the sea than erosive agencies went to work to dissect it and remove its more animals and man. On the whole, the But no sooner was this land elevated elevated portions. Consequently it is esthe acre. The total amount of coal, coal which was originally deposited over reach in America could not exceed 700,- carried away by the rivers, and hopel ssly while the one-tenth which remains is so while the one-tenth which remains is so word) consist of; but is there anyfolded up in the rocks that it is obtained with great difficulty. In the more central portions of the Mississippi Valley, however, the disturbance of the strata has of compounds of other elements, cap-

Health For Baby in Winter.

simple matter to obtain the rich deposits.

Winter is here now, and the baby ment will soon tell on his health. An occasional dose of Baby's Own Tablets will act as a safeguard during the winter months. If begun before the winter arrives mothers can be reasonably certain that their little ones will retain good health during Baby's Own Tablets cure indigestion, sweeten the stomach, break up colds, prevent croup, regulate the bowels, and keep baby healthy and happy. Concerning the Tablets, Mr. G. G. Sawyer, Clarenceville, Quebec, says: "I have used Baby's Own Tablets for my little girl, and find that they are the very best medicine that I can

Brockville, Ont. Remember, they are so lately as the middle of 1901 of so high

The Latest London Song.

don, is poking her pen into the "smart" set, and in the Gentlewoman she crit- limited universe. icises the language heard at restaurgrand stands of race courses and the will turn to the consideration of those grand stands of race courses and the interesting processes by which even the fashionable women's clubs. She has aterial has been brought within our "smart" slang. "Twe-est" means "dearest," and "diskie" is "disgusting." A ter enough to destroy the vegetation only a mark of interrogation.—N. Y. to admit of the intrusion of gravel, World.

Whooping Cough, Croup,

Bronchitis, Coughs, Grip,

Asthma, Diphtheria.

CRESOLENE is a long established and standard remedy for the diseases

indicated. It cures because the air rendered strongly antiseptic is carried

over the diseased surfaces of the bronchial tubes with every breath, giving

prolonged and constant treatment. Those of a consumptive tendency, or

sufferers from chronic bronchitis, find immediate relief from coughs or in-

CRESOLENE ANTISEPTIC TABLETS dissolved in the mouth, are effective and

flamed conditions of the throat. Descriptive booklet free.

MAN'S PLACE IN THE UNIVERSE

Is Our Earth the Only Planet Than Is Peopled?

Dr Wallace Stirs Englishmen to Discussion-Many Persons Dispute His Theory.

The theory that our earth is the only inhabited world, set forth by Dr. Wallace in "Man's Place it: the Universe," meets with little favor from leading British scientists, says a London cable. Sir Oliver Lodge says:

"It (the earth) may indeed be the The fossil plants of the coal period seem only inhabited planet of the solar system; that is not improbable, because the amount of coal accumulated shows for by far the greater part even of the earth's history it was, in the human uninhabited. The period of in a state at all corresponding to what

may be called a human period. "But to suppose that of all the myriads of solid bodies in space this particular lump of matter is the only one inhabited by intelligent beings seems to me-if, with all due respec to so great a man, I may so express

"I say nothing about Dr. Wallace's biological arguments, but I feel bound to say that his astronomical arguments appear to me to be of a futile description; and I would urge that whether we happen to be somewhere near the middle of the Milky Way cluster, or in some other part of it, at the present time, is a matter which makes no difference at all.

"The only gravitation that we effectively feel is the gravitation of the earth; the only active radiation is the radiation of the sun; and what our relation may be to the almost infinitely distant stellar components of our cluster is absolutely beside the mark, judgment, since they exert on our minds and intelligence; and their influence there is to suggest enormous possibilities of other existences than our own."

Sir William Ramsay writes: "I do not see the use of arguments where facts, the only possible premises, TUNUT. NEW CALITAL are wholly lacking. But perhaps the following considerations may interest your readers. Animal organisms consist mostly or carbon, hydrogen, nitrogen, oxygen, phosphorus, calium and sulphur, the compounds which these sulphur, the compounds which these haild up in living matter are

our earth, and, if so, they may well animals and man. On the whole, the probability is in favor of this notion; it is by no means absurd.

"Again, we know of consciousness only in association with carbon compounds, such as we and our fellow creatures (in the widest sense of that word) consist of; but is there anybeen less, and it is a comparatively able of existing at temperatures at which we should cease to exist?

"And again, is there anything absurd in supposing that consciousness may exist associated with forms of matter the existence of which we are just beginning to suspect? The fact is, we know next to nothing; moreover, all we know is necessarily related to ourselves, in so far will of necessity be confined to the house a great deal. Unless his constitution is rugged the close confineformed of elements other than those we are made of might be capable of exist-ence with different sense channels. "I should have thought that Dr. Wallace, whose belief in an unseen universe is well known, would have been the last man to write such a book as 'Man's Place in the Universe.'" at Oxford, giving his views before the

guaranteed to contain no poisonous an authority as Prof. Simon Newcomb. drugs—they cannot possibly do harm and always do good.

So lately as the inidate of 150 of So light an authority as Prof. Simon Newcomb. but even in the intervening eighteen months a new fact has come to light which weakens his arguments. "2. That there is no true center of the universe, even if limited, and even if there were we could not occupy it for millions of years will be a larger fraction

> "3. That no reason whatever has been given why life should not be developed in any part of the interior of even a limited universe, and that some reasons indicated for doubting whether it could not in accordance with accepted facts. H. G. Wells writes characteristically: altogether too fantastic for me. I know of no facts upon which a man can base either belief or denial in the matter. "Dr. Wallace neither proves nor disproves anything, and for my own part I am quite content to go on neither holding nor contradicting anything of the sort. It seems to me that it would be equally interesting and profitable to debate whether the general outline of the material universe is, or is not, exactly that of a common shanked metal button or of a saucer and lid, and whether one could a saucer and lid, and whether one could find anything precisely like a watchkey in extra-terrestrial space.
>
> "They did this sort of thing very much better in the middle ages, when they would bring all the resources of science to determine how many angels can stand upon the point of a needlé."

The Woman and the Gown [New Orleans Times-Democrat.] She is the wonder of the town, Miranda in her clinging gown. It fits her as a silken sheen It fits her as a silken sheen
That lies upon a nectarine.
There's not a wrinkle, not a fold,
Along its lines of pliant gold.
In queenliness and splendor she's
A vision of Hesperides.
And, like her gown, no furrow made
By introspection there is laid.
Mentality's wide signature
Has not been scrawled upon its pure
Smooth surface, which is glossy white
As almond blossoms in the light.
Her heart—I'm sure the heart of her
Is tightly laced, and cannot stir.
Emotion, passion, love alive

Oats for Canada's Breakfast Canadian



For over fifty years we have been buying and milling Canadian Oats. Persistent carefulness has made our product the standard at which other millers aim.

The standard of excellence of Tillson's pan-dried Oats is a high one. But we stick persistently to it.

It means more trouble and work in selecting our grain, but the result is large meaty oats full of nutrition.

Our pan-dried process and care in milling means more expense but the result is a rich, nutty flavor no other oats possess.

It costs us more money to produce Tillson's pan-dried Oats, but they don't cost you any more than the poor mushy kind.

Cook Tillson's pan-dried Oats according to the directions on the package and you'll have a wholesome, nourishing, breakfast dish.



Tillsons

No hulls.

No dust.

No black specks.

A food--not a fad.

OF ALL AUSTRALIA

Be-A Fine Site.

Although it has been reported in Ameri- York Times. ca and Europe that Tumut has been same elements as those of which the planets are built; and we have also no decision has yet been arrived at and AFTER YEARS OF probably will not be reached until after the approaching commonwealth elections, "It may be inferred that their planets by reason of the numerous conflicting

> process of being framed it was suggested that the site of the capital should be decided by a popular vote, but G. H. Reid and other New South Wales delegates refused to effectain the proposal, as it would cause Melbourne to be selected by an immense majority in Victoria, South Australia, Western Australia and Tasmania. On the other hand, the representatives of those states were determined that the seat of government should not be in Sydney. Ultimately a comnot be in Sydney. Ultimately a com-promise offered by Mr. Reid was accepted, to the effect that the federal capital should be in New South Wales, but not within a radius of 160 miles of the state metropolis. When the constitution was dopted it was understood that the state government would appoint a commission to report on the most sultable localities and then offer the same to the commonealth ministry for the purpose of making a selection. This was done, and after an examination of about forty proposed sites, Orange, in the western portion of the state, Yass and Southern Monaro were recommended as the most suitable Subsequently other reports of a descriptive character and illustrated with photographs, were issued, but still no decision as made, the state government insisting that the choice rested with the federal government, while the latter declared hat the state government should make a preliminary offer.
>
> According to the commonwealth con-

Wales territory granted to or acquired by the commonwealth, such territory to consist of not less than 100 square miles. It was also enacted that the commonwealth parliament should sit in Melbourne until it met at the selected seat of the federal government. The latter stipulation has government. The latter stipulation has been at the bottom of all the subsequent difficulty. The Victorians having secured Melbourne as the headquarters of the ommonwealth government, have not een sparing in energy or expense in emdeavoring to retain the advantage thus afforded them. Hence the delay in selecting a site for the capital. The longer the commonwealth ministry and parliament remained in the Victorian metropolis, the more difficult would it be to induce them to shift their quarters. Under the pressure of public opinion, however, the federal government caused fresh inquiries to be made, with the result that Tumutnot the township, but the district—was found heading the list.

The site is certainly a beautiful one. The area within a radius of twenty miles of the proposed capital is composed of 170,000 acres of rich chocolate-colored volcanic soil, and 30,000 acres of rich alluvial canic soit, and 30,000 acres of rich aliuvial prisoners and became pets. They spent flats, which have been cultivated for fifty years with little or no deterioration, while the more elevated portions consist of luxuriant grazing country. Failure of furnished amusement and means of pastcrops is unknown, even during the sever-est drought. At Adelmy, five miles distant, are the most extensive goldfields in the state. Chrome, iron and copper abound, and silver and tin are procurable in considerable quantities. From a com-mercial point of view the district has much to recommend it. The suitability of its soil for the growth of malting barley and hops bespeaks for it a great future in the production of ale, beer and other liquors, and with the advent of

Do you catch cold easily? Does the cold hang on? Try

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> It cures the most stubborn kind of coughs and colds. If it doesn't cure you, your money will be refunded.

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larger population, maize, the principal local crop, would be converted into corn, flour, maizens, maize meal and probably whisky. The unlimited supply of fruit increases the future wholesale production of sures the future wholesale production of jams, etc., while honey, at present almost ment of woolen mills, boot and shoe fac-tories, tanneries and other industrial works. The climate is delightful and good.—Sydney correspondence of the New

TERRIBLE AGONY

When the federal constitution was in Dodd's Kidney Pills Cured Ecker's Kidney Disease.

> One Doctor Treated Him for Bright's Disease. Anoth r for Gravel, but He Got No tire Atlantic seaboard. -They Cured Him Completely.

cure of Nicholas Ecker, a well-known villages lie buried under the salt marshes and highly-respected farmer living near St. John's postoffice, about ten miles from this city, has caused somewhat of a sensation in Felhan and Observations show that the Scandinavian Thorold Townships. For 29 years, Mr. Ecker was a terrible sufferer from Kidney Disease, and so wide-spread rate at the North Cape being nearly twice as much. The Pacific side of South he decided to make a statement for America is rising rapidly. Charles Darthe benefit of the public In condensed win, when on the Beagle, having been the benefit of the public. In condensed

"I had been a sufferer from Kidney of human handiwork were found buried Trouble for 29 years. I had the most among marine shell deposits at a height distressing Backache it would be possible for man to bear, Headaches, irri- Such observations as these, usually distation of the spine and at times an regarded by the non-scientific, become in-excruciating circular vain about the pressive to the average man when he lower part of the body. What I suffered no pen can describe.

of them a specialist. One said I had suggests that even the apparently catasstitution act, the seat of the federal government was to be within New South the third declared I was in a dangerous gravel, another Bright's Lisease, and trope events of geologic history, as writtee third declared I was in a dangerous ten on the pages of rock and stone, are

ment and started taking Dodd's Kidney Pills. I received help after using the second box and continued till I had taken sixteen boxes. when my troubles had vanished and I was again the second box and continued till I had taken sixteen boxes. When my troubles had vanished and I was again terruption of the habitable state of these them in order. enjoying the splendid vigor of earlier

Birds in a Penitentiary.

ary has been cast into the depths of gloom. It is all because a bird of bad omen has taken an unbidden home in that quarter, bringing with it, as the prisoners believe, the shadow of death. A few months ago two small black-

birds were captured by a life prisoner and given to one of the men in the mur-derers' row. The birds were fed by the prisoners and became pets. They spent time for five condemned men. A few days ago the blackbirds forsook murderers' row, it is said, and made friends with two burglars, who are serving comparatively short terms. Almost any day paratively short terms. Almost any day the birds may be seen sitting on the shoulders of the burglars while they are doing their work about the prison.

The birds were missed by those on murderers' row, but no significance was atdays ago, when a mourning dove flew into that part of the prison and perched upon the bars of the row. There it sat upon the bars of the row. There it sat and cooed until the prison rang with its dirge. Since then the bird has remained in the row, and day and night the ears of the condemned men have been greeted by its dismal song. The appearance of the bird, it is said, was looked upon by the murderers as a sign of evil, and one of them is said to have remarked that bad luck was surely coming to some one in the row. As if in fulfillment of this, the word came that Nick Haworth had been denied a new trial and must die. Then came the unexpected news to Mortensent that he had been denied another chance for his life, and that he, too, must face the executioner.

must face the executioner.

The bird still cooes, and each of the other three condemned men is waiting in anxious fear to hear what evil is coming to him.—Salt Lake Herald.

A CURE FOR RHEUMATISM.—The intrusion of uric acid into the blood yessels is a fruitful cause of rheumatic pains. This irregularity is owing to a deranged and unhealthy condition of the liver. Anyone subject to this painful affection will find a remedy in Parmelee's

Geological Observations.

The slow sinking of the Atlantic coast his disfavor with men who have been his disfavor with men who have been gists, but the definite measurements of the rate of that subsidence is a matter of scientific interest. As long are as 1882 scientific interest. As long ago as 1868 exclusive and quiet hour. the late Professor George H. Cook, state now eaten in the office. It is not brought over by a caterer, but is prepared in a chefing dish, by the financiar himself matter very fully, collecting numerous chaining dish by belie's Weekly. ment of the sea on the New Jersey shore. Later investigations made by the United States geological survey have demon-stated that this is no local occurrence,

Relief Till He Tried Dodd's Kidney Pills servations have been made. Along the the self-confessed bandit, who has been the Cured Him Completely. the land relative to sea level has been a days. St. Catharines, Ont., Dec. 4.—The serious matter during recorded history: and the waves now sweep over sub merged forests. On the other side of the rapidly-that is, geologically speaking coasts are being elevated at a mean rate one of the first to draw attention to the raised beaches on the coast of Chilt, where plaited reeds and other evidences "I was treated by three doctors, one stable. It brings home the great facts which underlie the study of geology, and

condition. None of my friends thought
I had much longer to live.

"At this stage I gave up other treatment and started taking Dodd's Kidand inversions of strata which charac mountains, had man been then in exist-ence, which he was not. Considerations such as these enlarge the imagination and serve, as astronomy does, to illustrate the poetry which lies often buried deep in dust, amid the dry pages of science.—Engineering and Mining Journal,

Detectives as Waiters.

Not long ago the story leaked out that ber of "shadowers" were employed at a princely salary. The duty of these shadowers consisted of hiring out as waiters at one of the various downtown cafes frequented by Wall street powers railroad magnates and other men of

affairs. In waiting upon their tables these detective waiters managed to be partieu larly attentive and humble, apparently

IS SLOWLY SINKING in seeming privacy across the luncheon table has in this way resulted in the other fellow getting the first move, and consequently a grand fiaseo on the state. consequently a grand fiasco on the stock market, and of the first man's well-laid

Facts That Are Shown By Recent apron and napkin, appears the quintessence of innocence. He is generally regarded in the light of a human automaton, but it has recently been discovered that the automaton has a splendid known to American geolo- once smitten but refuse to turn the other chafing dish by the financier himself.

for a physician and a priest. The officer sending the telegrams, Shehan, of but a condition characteristic of the en- Chicago, supposed that he had no reason to doubt that the men surround-In other parts of the world similar ob- ed are the accomplices of Gustav Marx,

> AN EXCELLENT FOOD, admirably adapted to the Wants of Infants."

SIR CHAS. A. CAMERON, C.B., M.D., Professor of Chemistry, R.C.S.I., Ex-President of the Royal Colleg. of Surgeons, Ireland.

For Infants,

Invalids, And The Aged GOLD MEDAL,

WOMAN'S EXHIBITION, London, 1900. DR. BARNARDO says:—

Village Home), and I have no hesitation in saying it has proved very satisfactory."— July 27th, 1901.

"We have already used Neave's Food in

two of our Homes (Babies' Castle and the

Russian Imperial Nursery Manufacturers :- JOSIAH R. NEAVE & CO.,

Wholesale Agents:-THE LYMAN BROS.

& Co., Lid., Toronto and Montreal.

Magazine

During 1903 the circu-Ganadian lation of THE CANA-DIAN MAGAZINE has increased with remarkable steadiness. The articles on FOR 1904 Canadian history have proved exceedingly attractive. Its

circle of readers is double what it was three years ago. The excellent Christmas Number has met with a splendid reception. The programme for 1904 will be sent to anyone interested on receipt of a post card addressed to 63 Yonge Street, Toronto. There will be a new historical serial equal in interest to "The War of 1812." The Short Stories will be more numerous and more varied in character. The general articles, Canadian and foreign, will be the best that have ever been presented by a Canadian periodical.