

A PAPER UPON BREAD.

Mr George G Nasmilh, B. A, chemist, of the Provincial Board of Health recently read a paper before the Natural Science Association of Toronto University on "Bread," from which the following extracts are made:

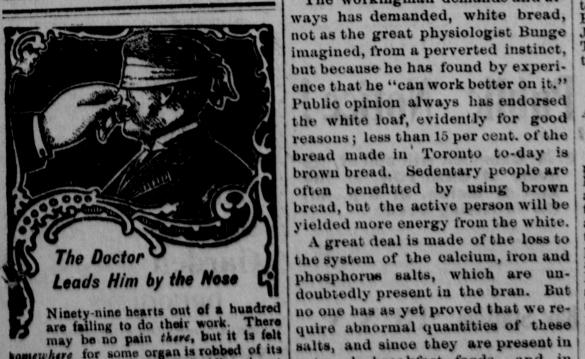
The cereals and the products derived from them form the basis of all human nutrition; in all climates and in every class of society bread of some kind is the one food in general use, and forms the nucleus around which almost every diet is construct-

ed. The various cereals are of much the same composition, but wheat flour makes a much better quality of bread than flour from any other cereal, because it possesses a substance, gluten, upon which its bread making qualities depend, and one obtainable from no other cereal. Oats, maize or rye, for example, do not possess gluten, and, therefore, do not make good

bread. If wheat flour is made into dough and this kneaded in a stream of water, the starch granules are gradually washed away and a grey rubbery mass is left, the gum obtained by chewing wheat. It is this elastic substance that entangles the gas bubbles, given off by the yeast organism in bread making, so that the whole mass becomes light and

White flour is obtained by grinding the endosperm of the wheat grain, that is, all of the wheat grain left when the branny coats and germ are milled out, and thrown away. Whole | cent. more nourishment to the body wheat flour is white flour plus the inner branny coats, especially the aleuron layer. Graham flour consists of the entire grain ground up.

Wheat bread is more nearly a perfect ration, and will maintain life longer than any other single food; because its tissue forming constituloss occurs. Of course, in certain afents, the proteids (gluten), and its energy yielding portion, the earbohydrates (starch), are nearly in the portions demanded by the system. The human body demands from the food daily about 100 grams of protein, 50 food, eat what agrees with you; it is grams of fat, and 450 grams carbohydrate. In 100 grams of bread there



bemewhere for some organ is robbed of its proper need of blood by this insidious heart failure, and distress follows. Common sense says, cure where the trouble and pain

DR. AGNEW'S HEART CURE, because it begins at the blood's distributing ergan, healing that rapidly and making it strong and able, quickly sends strength and health to every other organ. It is the only way that combines science and sense and relieves and cures.

HENRY AKEY, of Peterboro, Ont., writes ; "I suffered with my heart, nerves and general debility. The best electors said I must die within a month. On my wife's advice I tried DR. AGNEW'S HEART CURE. Relief from the first dose. I am fully cured. Weighed 128 pounds

## Aching Joints

are 7.8 grams of assimilable protein,

1.3 grams fat, and 53.1 grams carbohydrate, so that to get the neces-

sary amount of protein from bread a

man would have to eat about 1,300

grams of bread-about 3 pounds-a

day. This would give 35 grams too

little fat, and 240 grams too much

carbohydrate, but since fat and car-

bohydrate are both energy formers,

and to a certain extent interchange-

able, the variation from a standard

diet is not great. We have instinct-

ively recognized these facts by eating

our bread with butter-a fat-or taking

it with milk, which contains a large

amount of proteid and fat, or eating

it with cheese, which is proteid and

BROWN BREADS.

bread, because they contain much

less available nutriment, weight for

weight, than it does. Text-books

and medical men religiously reiter-

ate the statement, disproved years

ago, that the best part of the wheat

grain is milled out and thrown away

in the bran. There is absolutely no

foundation for the wild claims made

by the whole wheat crank; in fact,

all the evidence is in favor of the

It is true, that whole wheat con-

tains more protein than white flour,

but then, "we live not by what we

eat, but by what we digest." We

can eat hay, but not digest it. The

fact is, that the protein in the bran

and so called aleurow layer is en-

closed within cellulose walls; human

beings cannot digest cellulose, and,

tions to pass through the alimentary

flour bread as from white. For in-

stance, a number of people were fed

on bread and milk, and by accurate

gested; while in graham bread only

77.6 per cent. of the protein, and 881

In one case, for example, a student

the carbohydrate of the bread. Num-

erous experiments always yield ex-

Obviously, then, anyone who says

that white bread is poor food is sim-

ply ignorant of the subject in ques-

tion: experimental evidence proves

that white bread yields eight per

than graham bread, which is made

from the whole wheat; not only so,

but the branny particles, by irrita-

ting the intestinal walls, and thus

promoting peristalsis, hastens other

foods too rapidly through the intes-

tine, so that complete absorption

cannot take place, and considerable

fections of the alimentary tract this

increased peristalsis is of benefit,

and many people take brown bread

for this reason. As with every other

The workingman demands and al-

imagined, from a perverted instinct,

but because he has found by experi-

ence that he "can work better on it."

Public opinion always has endorsed

reasons; less than 15 per cent. of the

bread made in Toronto to-day is

brown bread. Sedentary people are

often benefitted by using brown

bread, but the active person will be

yielded more energy from the white.

The science of nutrition bids fair to

become something more than a

name; within the past fifteen years

a great deal of work along the line of

metabolism and food investigation

has been done, but we know very

little about them yet. Domestic

loss is immaterial.

meat may be another's poison."

actly the same results.

white article.

Brown breads are inferior to white

In the fingers, toes, arms, and other parts of the body, are joints that are inflamed and swollen by rheumatismthat acid condition of the blood which affects the muscles also.

Sufferers dread to move, especially after sitting or lying long, and their condition is commonly worse in wet

"I suffered dreadfully from rheumatism, but have been completely cured by Hood's Sarsaparilla, for which I am deeply grate-ful." MISS FRANCES SMITH, Prescott, Ont. "I had an attack of the grip which left me weak and helpless and suffering from rheumatism. I began taking Hood's Sursaparilla and this medicine has entirely cured me. I have no hesitation in saying it saved my life." M. J. McDonald, Trenton, Ont.

Hood's Sarsaparilla Removes the cause of rheumatism-no outward application can. Take it.

be things unknown.

## THE ILLS OF WOMEN.

Reliable and Safe Cure for Womanly Ills is Found in Ferrozone-A Remedy that Always Gives Satisfaction and Never Disappoints.

If troubled with painful irregular-ities, dizziness, faintness, excitability, nervousness, remember there is a remedy that if regularly and persistently used, will cure all these ills. Its name is Ferrozone.

therefore, the enclosed food is not available to us. I have digested thin sections of wheat grain with artifithe crimson fluid, makes it strong and capable of supplying nourishment to the body. It quiets the cial gastric juice for two days, and have invariably found the cell connerves, banishes excitability and tents to be unaltered when examin- headache.

pass off regularly and without pain tract with precisely the same results. or distress. Being prepared in tab-It has also been found, from numer- let form, Ferrozone is both convenient and simple to use, and no unous experiments on human beings, certainty as to the proper quantity that there is not as much food abor dose can ever arise sorbed from whole wheat or graham

A Montreal hospital nurse, who has used Ferrozone herself, and has seen also the benefit that other suffering women have derived from it, writes: "I have nursed and treated physiological chemical methods, it all form of female disorders, and was found that on the average 85 per from my personal experience, must say that Ferrozone is a remedy about which all womankind should know. cent. of the protein, and 97 per cent. of the carbohydrate of the best white It is reliable and sure, and will give prompt and satisfactory results. As flour is digestible. In whole wheat 80.5 per cent. of the protein, and 94 a builder of muscle and tissue, I know per cent. of the carbohydrate is di- nothing to equal Ferrozone. I have found it good to build up a weak appetite, and consider it a splendid medicine for the blood and nerves. I have no hesitancy in endorsing per cent. of the carbohydrate is di-

of misery and weakness any longer. aged 23 was fed on bread made from Ferrozone will make you strong and well, just as it has done for thouspatent flour and milk, for a space of ands before you; all druggists recomtwo days, gaining two pounds in mend and sell Ferrozone, at 50c a see an era of prosperity in Hindosweight in that time. He consumed box, or 3 boxes for \$1.25. Get a box tan such as it has never before to-day from your druggist, or N. C. Polson & Co, Kingston, Ont. 1.9 pounds bread and 44 pounds of milk per day, digesting \$5.6 per cent. of the protein and 96.7 per cent. of

#### March Canadian Magazine.

There is a wealth of good reading matter in the March Canadian Magazine. The Hon. Clifford Sifton writes of "The Needs of the Northwest,' pointing out that the period of experiment has passed, and that the settler who now goes to the west goes with a certain and absolute prospect. The needs of the west are population, transportation, a liberal land policy as regards settlers and provincial autonomy for the Territories. Professor J E Le Rossignol deals with "Railway Subsidies in Canada and the United States," and shows how much more extravagant Canada has been than her neighbor, Cornwall" in an article which is profusely illustrated. J M Jackson writes of "Ice-boating on Toronto literally a fact that "what is one's Bay," and Katherine Hale tells some interesting things about Albani, the three excellent short stories by Philip Marche, Hubert McBean ways has demanded, white bread, Johnston and Frank Banbury Ford. not as the great physiologist Bunge The departments are even better

## LIFE'S LITTLE ILLS

the white loaf, evidently for good GREATEST AMOUNT OF SUFFERING.

It is every day ills that distress most—those which seize you suddenly and make you irritable, impatient and fault finding The root of these troubles lies in the blood and nerves, and you cannot get rid of them until A great deal is made of the loss to the blood has been made rich and the system of the calcium, iron and pure, and the nerves strengthened while the Northwestern takes rank and soothed. Dr Williams' Pink with the greatest of the great railphosphorus salts, which are un- Pills will do this, and will do it more doubtedly present in the bran. But speedily and with more lasting reno one has as yet proved that we require abnormal quantities of these salts, and since they are present in eatmeal, breakfast foods, and, in tem badly run down. She was pale, fact, almost every vegetable and animal food we eat, the so-called her Dr Williams' Pink Pills, and after using six boxes, she is a strong, healthy girl. I gladly recommend the pills in similar cases."

These pills cure all blood and nerve troubles, such as anæmia, neuralgia, indigestion, heart trouble, rheumatism, St Vitus' dance, partial paralysis, kidney troubles and the weaknesses which afflict women. Be sure you get the genuine pills with the full name "Dr Williams' Pink science is a direct result of laborious laboratory investigations; let us hope that it has come to stay, and that dyspepsia and such kindred ailments, directly due to lack of knowledge of the principles of cooking and ledge of the principles of cooking and

BRIGHT PROSPECTS OF IN-DIAN EMPIRE.

BY JAMES K. PATTERSON, LL.D., LEX-INGTON, KENTUCKY.

Not long since Lord Curzon of Kiddleston, Viceroy of India, was the guest of honor at a public entertainment in Calcutta. He dwelt upon the happy results likely to follow the great Durbar recently held in Delhi, which, for magnficence and splendour, surpassed anything ever witnessed in India. He dwelt upon the prosperity of the grea British dependency due to the pax Britannica, which prevails from the Himalayas to Cape Comorin and from the Bay of Bengal to the Indian Ocean. He recounted with pleasure the agencies by which agricultural industry is improved, irrigation works nutrition, will, fifty years from hence, constructed, new industries introduced, and lines of railway built. He alluded to the increasing disposition of wealthy inhabitants of the Peninsula to take stock in public enterprises and large investments made in remunerative undertakings. In the early fifties of the last century, when railways were introduced into India, no native would invest a penny in them. Indeed the first railways were built under a Government guarantee, even British capitalists doubting the success of an enterprise so utterly new and alien to Hindoo ideas. Many believed that the bar-It is used by thousands of women riers of caste would prove insuperwho have experienced its great strengthening powers, and they would not be without it for ten times traffic might, except for Europeans, he practically nil. These apprehenbe practically nil. These apprehen-Ferrozone is primarily a blood sions have happily not been realiz-maker. It drives all impurities from ed. The difficulties of caste have been silently and steadily overcome. High and low caste travel on the same train, Hindoos and Mussulmen ignore their differences in race and ed under the microscope. Similarly investigators have allowed thin section the section of the se creed. Millions of passengers and chandise are transferred thousands of miles with the ease and safety and satisfaction of a British railway. Native capitalists no longer hesitate to invest in railway stocks and bonds and in Government securities. They readily take shares in tea plantations, in cotton spinning mills, and in a variety of other mercantile ventures which not one of them would

have touched fifty years ago. Lord Curzon estimates the unemployed and hoarded wealth of native capitalists and men of leisure in India at 825 Croses of Rupees, a sum nearly equal to four billions of our money. It has long been known that a large part of the coin and bullion exported to the Asiatic continent Don't continue to exist in a state finds its way to India, but few suspected that such immense treasures

> The next half century is likely to known. Continued peace begets confidence, and confidence stimulates progress. The hoarded treasure

#### Relieve those Inflamed Eyes! Pond's Extract applied t. equently with dropper or eye cup. the congestion will be removed and the pain CAUTION!-Avoid dangerous, irritating Witch Hazel preparations

represented to be "the same as" Pond's Extract which easily sour

and generally contain "wood alco-

hol," a deadly poison.

will find its way to the banker, the Frank Yeigh describes the "Strange broker and the investor. Under Stone Monuments of Brittany and conservative British management adequate returns will be assured. Taxes will be lightened, lands will be better cultivated, canals and railways will cheapen transporta-Canadian prima donna. There are tion, sanitary engineering will diminish epidemics, and irrigation will go far to prevent or mitigate the horrors of famine.

Since 1853 (when railway construction began) over 25,000 miles of railway have been constructed, ARE THE ONES WHICH CAUSE THE some of them of great length. The Bengal-Nagpur is 1609 miles long, the Burmese line 1777 miles, East Indian 1934 miles, the Great Indian Peninsula, Indian Midland, Rajputana . Malma, Rohilkund - Kumaon, Southern Indian and Eastern Bengal, each over 1500 miles in length; ways of the world, being no less than 3743 miles long.

The export and import trade of India last year amounted to over £225,000,000.

Truly Great Britain may be justly proud of her Great Indian Dependency, and proud of her successful administration, which has made it the brightest jewel in the Crown of the King Emperor.

Any business firm that can succeed in getting into the public view may readily eclipse another firm of ever greater proportions that does not take pains to keep to the front in public attention. - John Wanamaker.

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ST. JOHN LETTER.

Matters political have engaged the attention of St John for several weeks, and since the election of last | Saturday the pot is boiling as fiercely as ever. Of course the defeated claim that they were defeated by bribery, intimidation and personifipast my teens, I have never been gone to the States. able to detect much difference in political parties. All are made up of much the same stuff and it is fair to infer that if one is corrupt, the other is the same. It was a great mistake in the Opposition to claim that the Government-was "doomed" when every disinterested onlooker knew that its defeat was almost certain. The result is greatly to the advantage of the province and to St John in particular, and the Opposition will do well to swallow its medi-

= in the House!

ill prove a faithful, honest and trustworthy

FAMILY PHYSICIAN.

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Foe Colics, Diarchaea, Chills, Rheu-

matism, Sprains, Neuralgia,

Toothache, Cramps, Sore Throat,

&c., &c., it never faile.

For sale everywhere. Price 25 eta per bettle.

MCGALE'S BUTTERNUT PILLS FOR

YOUR LIVER AND BOWELS.

For sale everywhere, 25 cts per box, or

Limited. Montreal, Canada.

Sole proprietors, THE WINGSTE CHEMICAL

cine and look pleasant, for after all it makes little difference, except to the very few who make their living by politics, who is in or who is out.

Mr Parker, a tailor, of this city, disappeared last Saturday and no trace of him can be found. He is about 28 years old and leaves a wife to whom he was married about a cation, but though I am considerably year ago. It is suspected he has

Walter Parks, engineer of the stone crusher at Gilbert's Island. was caught in a revolving belt last Tuesday and instantly killed. He was 28 years old and leaves an aged mother, who depended on him for

David Komiensky of this city has been found guilty on wen counts of obtaining goods on false pretences from Montreal perchants.

At the reading of the report on the Ferrie trust at St Philip's A. M. E. church last Wednesday evening the police had to be called into preserve

William Sinelair, a respected citizen, who was at the polls last Baturday died last Wednesday aged 74

The owners of stramer Lake Superior will begin breaking her up where she lies rext Monday.

Petty hurgiaries are of almost nightly occurrence in the north end of the city.

It is not creditable to the farmers of the province that this spring Saint John has had to send to Ontario for beef, pork, poultry, butter and eggs. EDWARD EDWARDS.

St John, March 7. Chase's Olinim at the act of and absolute care for reland every form of it also bleeding and protructing piles.

the manufacturers have guaranteed it. See testinoplals in the daily press and ask your neighbors what they think of it. You can use it and set your money back it not cured. 60e a box, at all defense of Femanson, Batter & Co., Terunto. Di Ohase's Ointment

There is no better medium, in my opinion, for bringing your goods under the notice of the public, than newspapers. - Sir Thomas Lipton.