SEMI-WEEKLY SUN, ST. JOHN, N B. MAY 26, 1900.

DR. WILLIAM BAYARD Urges a Vigorous War Against Consumpt on, the Greatest Enemy of the Human Race.

men,-The Honorable Mr. La-Billois, representing the government, having requested me to address you, upon "Bacteria in Relation to Dairy upon "Bacteria in Relation to Daily Products," I cheerfully accept the task, believing, as I do, that the germs to the test. While the test is not inin those products are largely responsich sickness and death; also ble for much sickness and death, also believing that by the adoption of prop-er precautionary measures, such sick-ness and death will be very largely lessened, and possibly abolished. I al-lude more particularly to the use of milk, man's food from his cradle, and I might say to his grave. It will not be disputed that food so universally used should be wholesome and contain nor. should be wholesome and contain no- | well ventilated stable, affording not

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the necessary exposure to its sur- as it depreciates the quality of the roundings, it will absorb thousands. milk. And let such exposure continue for \$ hoid fever, diphtheria, cholera, scarlet hold fever, diphtheria, cholera, scarter horns give the most sugar. The activity fever, small sox, etc., a person drink-ing it will probably take the disease. Many other germs are found in milk, yield is about 600 gallons. Caused by disease in the animal, or produced by decomposition. Time and stage of Milking—Cows are usually milked twice a day, the morn-

produced by decomposition. It may be asked, what is a germ? The word is a popular term to designate microscopic living beings. It matters not whether these beings are animals or plants, so long as they are so small that the microscope is neces-sary in order to see them. The term Microbe signifies microscopic life. The udder. term Bacteria conveys the same meaning, but they form one large group of germs. They are the smallest living beings known to science, the simplest of plants, male up of a single cell each a perfect individual, growing and multiplying entirely by itself. Each cell multiplies by its division into two, reaching its adult age in less than half an hour. This sub-division continuing, it is a simple arithmetical calculation to shew that, starting with one single cell, there will be in 24 hours no less than 17 million descendants of that original cell, and so light and small are they that it would take 500 million of them to weigh one grain. Under the microscope bacteriae pre-

spherical, like a marble, and are de- not fit for use until at least four days signated Micrococci; others are rod-

erculin test performed by a veterinary surgeon upon every animal. If any are diseased, they should be immediately separated from the others. And no animal should be added to the herd without having been submitted fallible, is is so nearly so as to be a crime in those who neglect it. Indeed it should be repeated through the herd

should be wholesome and contain no-thing injurious to health. Let us see what are the facts? Milk taken from the udder of a healthy animal without exposure to the sur-rounding atmosphere does not contain germs, and, if hermetically sealed, will keep indefinitely. But it possesses such remarkable power of absorption that, during the process of milking, with milk. Breed of the Cow-Some breeds yield

or 10 hours in a comparatively warm quality, others quantity. Alderneys atmosphere, laden with germs of typ- and Jerseys yield the most fat, Shorthorns give the most sugar. The aver-

> ing's milk generally being the larger in quantity, and poorer in quality. The milk which is first drawn, known as the fore-milk, contains very much less fat than that last drawn, known as the strippings. This is due to the partial creaming taking place in the

Age of the Cow .- Young cows give less milk, while cows from 4 to 7 years old give the richest milk, and less milk is given with the first calf. Cows usually become milkers in the third year. After the 14th calf they yield, namely. as a rule, little or no more milk.

Time of Year,-The poorest milk is yielded during the spring and early summer months, the richest during the autumn and early winter. Mental and Physical Conditions under which the Animal is Kept,-If the cows are worried or driven about the quantity and yield of the milk is re-

duced. If they are kept warm and well fed, the quantity and quality of the milk is increased. ents differences in form. Some are Since Time of Last Calving,-Milk is

after parturition, and does not become

shaped and are called Bacilli. normal until a mosth has elapsed. Now, what are the bacteria with How Should the Milk be Taken?— which we have to contend in dairy Assuming that the udder and the body products? The most deadly of them of the animal is perfectly clean, and are the tubercle bacilli, the cause of the body of the milker is covered with consumption, and that dreadful diar- a washable sack, and his hands well noca so fatal to infantile life. Dis- washed, the milking should, when

eases of milk. Thus it may be ropy, slimy, blue, soapy, red, yellow and putrifying; in each case the disease appears to be caused by one or more organisms, which are derived from its surroundings. And their presence can be absolutely avoided by proper cleanlinesa.

For practical purposes it may be said that milk growing rapidly sour is bad. If a sample coagulates within twelve hours, while kept in a cool room, it may be classed as defective. And the presence of colostrum in it is a ground for its immediate condemnation. This may be detected by the existence of long elastic yellowish threads in it. Cream is obtained from the milk in three different ways. One called Devonshire cream, by warming the milk in shallow pans for several hours, when the cream rises to the top more rapidly than if it is allowed to stand at a room temperature. Owing to the par-tial steralization that it has undergone it contains fewer germs, and keeps sweet loager. It should contain about 60 per cent. of butter fat. One, by allowing the milk to stand over night in shallow pans and skimming in the morning. It should contain about the same percentage of butter fat. The other by centrifugal separation. By this process about five per cent more of butter fat is usually obtained, but it seldom reaches the consumer without dilution with milk, and often thickened with gelatine, thereby reducing the butter fat to 45 per cent. Hence the necessity for a cream standard. Borax and boric acid sweetened with saccharine are often added to it as preservatives.

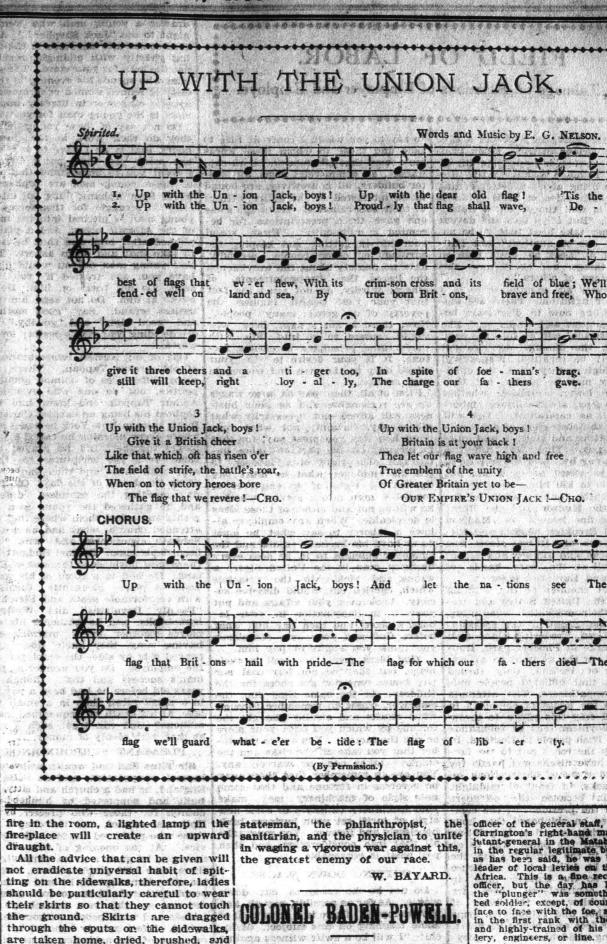
As I have already explained to you milk posseses such marvelous power of absorption, that it practically cannot be delivered from the cow, without containing thousands of germs, received from its environment, during the process of milking. They are more or less harmless. But it is when the animal is laboring under tuberculosis that the dreadful "tubercle bacilli" contained in the milk perform their deadly work.

Hence the parant who gives his child milk without taking the precaution to assure himself that the animal from whence it comes is in good health, and in default of that knowledge, neglects to take the next best precaution

STERALIZATION,

commits a crime. Indeed he should make it an imperative rule that no milk be used in his house without having been steralized, for it is hard to say when diseased germs may not exist in milk.

Steralization is easily accomplished. All that requires to be done is to place the milk in the inner cooker of -a double-cooker, surround it with boiling water, keep the water boiling until | ting on the sidewalks, therefore, ladies the milk arrives at the temperature of should be particularly careful to wear 160, denoted by an ordinary ther-mometer being placed in it. Keep it the ground. Skirts are dragged at that temperature for 20 minutes, through the sputa on the sidowalks, then pour it into wine bottles, previously steralized by remaining ten minutes in boiling water, cork them with duced into the household. cotton wool, and place them in cold water until used. Milk so treated is lungs, if the soil is suitable, and if they 1 keen



His Fitness for Command-His Power to Deal With a Momentous Military Crisis

officer of the general staff, and Sir Frederick Carrington's right hand man as deputy ad-jutant-general in the Matabele war, all these in the regular legitimate busine as has been said, he was the o leader of local levies on the w leader of local levies on the west const of Africa. This is a fine second for a cavalry officer, but the day has long passed since the "plunger" was something of a feather-bed solier; except, of course, when brought face to face with the foe, and he new stands in the first rank with the most intelligent and highly-trained of his brethren in artil-lery, engineers, or line.

Col. Baden-Powel) has many accomplish-ments, based on natural gifts. He can wield the brush and pen as well as the sword. He is a first-rate artist, chiefly in black and white but her no mean knowledge of color white, but has no mean knowledge of color, and he is ambidextrous; can draw with either hand—a rare power. His fluency as a writer of good, vigorous English is well known from his books, of which he has written several-technical, sporting and pro-fessional. His notes on "Pig-sticking," his manual of cavalry instruction, and works on reouting and reconnoissance are both use-ful and interesting, while in the last Ashanti and Matabele campairs he acted as war rui and interesting, while in the last Ashanu and Matabele campaigns he acted as war correspondent for an illustrated paper. Yet, more, he is an amateur actor of the first crder, and when there is no more serious work afcot has done much to enliven garrison life by his taking part in amateur the-atricals. All who served with him at Malta will remember him as the life and soul of the place, a leader of the revels at the paland especially in his researches into the ancient history of their knights. A good man all round, Baden-Powell has also lived so far under a lucky star, and that goes for much in the dread business in which he is engaged.

serted that the germ theory is a fad immediately corked with cotton-wool, of the doctors. Such a remark could and placed in cold water and kept only

IGNORANCE,

or the motive of the vendor to make a few extra dollars, regardless of con-

sequences. Yes, gentlemen, that deadly germ may, and do often exist in dairy products, is as true as that you are before me. Daily experience is impressing the fact upon the public mind. And the day will come when the disbelievers will be ashamed to acknowledge their disbelief. An impressive incident was brought to light in London when I was last there in 1892. The inspector found 294 cases of scarlet fever in one of the most healthy districts in the city. Each family was supplied with milk from the same dairy, and from the cow, that which is generally upon investigation, a case of fever was used by man, is a dense white opalesfound to have existed in the house of cent fluid, often having a yellowish the dairyman, and the milk had been tinge. It has a bland and sweetish taste. exposed to the atmosphere of the It consists of water, fat, casien, alhouse. This was remedied, and no bumen, milk-sugar, and mineral saits,

I will now give you a practical il- and sodium, together with phosphates lustration of the difference between of potassium, calcuim and magnesium, good and bad milk upon infantile life. with traces of sulphates, and numerous In New York during the warm months germs, which enter it during the proof July, August and September, 1894, cess of milking from its environment. the mortality of infants under two years of age, was 64 per cent, mostly taken by a delicate hydrometer. The from cholera infantum, and diarrhoea. | sample should be moderately shaken, The children were fed almost exclus- so as to distribute the cream throughively upon milk. A noble philanthrop- out it. Its gravity may vary from ist, by the name of Straus, believing numerous causes, as dilution with the milk to be the cause, undertook, water, hte ten:perature of the sample, at his own expense, to furnish daily the number of hours after it has been a supply of 6 ounce bottles of whole- | drawn, bacteria contained in it, dissome steralized milk to each of 700 ease in the animal, etc. The gravity children, with the result that in less of milk when in its natural state, genthan one month the morality was re- erally falls between 1029 and 1034, and duced 10 per cent, and from recent re- averages 1032. When it ranges at 1026 ports, it stands 30, instead of 64.

It is a well established fact that the milk from a tubercalous cow will pro- is added its gravity will be 1027; if 20 not know; but experience teaches us fall. that the children of consumptives and The general average composition of

He sees a horse running away he solids. hurriedly gets out of its path. I want Milk Standard,-There is no legal him to avoid diseased milk as he would standard for the purity of milk in this the run-away horse. This he can do if province. Few substances are more he will follow the simple directions frequently adulterated, and various

given. To have wholesome milk it must be mated that from 3 to 20 per cent of all be laboring under the disease. Hence will be shortly enacted.

eases responsible for one-seventh of all practicable, be carried on in the open the deaths that take place in the civ- air, the animal standing on a material ilized world. It has been claimed that capable of being thoroughly washed, our forefathers used milk without this as on concrete or cement. The site result. True, our forefathers used chosen should be near a plentiful supmilk, but, ignorant of the result, they ply of water. The milk should be resuffered in a much greater ratio than ceived in vessels recently steralized, we do at present. It has also been as- preferably glass bottles, and should be

EMANATE FROM THE GROSSEST means the straining may be largely strainer is seldom properly steralized); also the accumulation of all kinds of

precautions are not taken.

the only article found in nature which combines in proper proportions all the necessary elements to secure good nutriment for the young, and very often for the aged. Its general characteristics are the same in all animals.

GENUINE MILK

new cases appeared in the district. consisting of chlorides of potassium The specific gravity of milk may be it is very poor, or water has been added to it. When 10 per cent of water

duce consumption in an adult, and per cent it will be 1024; if 30 per cent., various tuberculous diseases in chil- it will be 1021; if 40 per cent it will be dren. But why it will produce disease 1018; if 50 per cent, it will be 1015. Skim in one and not in another? We do mill will shew the same proportionate

those debilitated from various causes | cow's milk is as follows: Water 87.6 are more liable to take the disease. per cent.; fat 3.6 per cent., milk-sugar We also know that pigs fed with such 4.8 per cent., proteids 3.3 per cent, minmilk very often die of the disease. | eral matter 0.73 tenths of one per cent. Every reasoning man will avoid The total solids should be about 4.1 of dry, he necessarily re-inhales the danger when he becomes aware of it. fat 8.8 of solids, not fat, and 12.9 total germs. Therefore, every receptable in

drugs added to make it keep, many of

To have wholesome milk it must be them highly injurious to the consumer. The reception of the expectation of them highly injurious to the consumer. must bear in mind that tuberculosis is ; that from 11 to 14 per cent. of all milk a very prevalent and a very contagious sold has been found in some measure disease among cows. It has been esti- adulterated. Separated milk from which the cream has been removed by cows in America have the disease. It the centrifugal separator is too often patients should, by all means, live in is claimed that 75,000 in the state of added to genuine milk to dilute it, New York have it. And I have been hence its nutritious properties are seriinformed that herds have been found cusly impaired, the same may be said in this Province in which every animal of the addition of water. It is there- pure. They did not fear loose windows, had the disease. The cow may look fore hoped that in the interest of the well and feed tolerably well, and yet public and the honest milk vendor, one the only safety lies in having the tub- There are very many so-called dis- the top, day and night. If there is no! In conclusion let me appeal to the

Milk exposed for sale in restaurants isms, as I have already explained to or railway stations should always be kept in closed vessels.

I will now say a few words to you upon that wide spread disease consumption, a disease always with us, stealing upon its victim like a thief in the night, leaving death and desolathere until used or delivered. By this tion in its path, and causing more deaths than any other three diseases prevented (a desideratum, for the combined. It has occupied the master minds of the medical profession since. the time of Hippocrates, who lived in filth, so often found in milk when such the year 460, to the present century, yielding various views and theories, Milk may be defined as the fluid some supporting its contagious charwhich is secreted in the lacteal glands acter, others that it is transmitted of all animals for the nourishment of from parent to child, all admitting its their young. An actual knowledge of deadly nature, but nothing certain as its chemistry was not known until the to its cause. This knowledge was relatter part of the 18th century. It is served for Robert Koch, a German bacteriologist, who, in March 1852 announced to the world his discovery of the bacillus tuterculosis, a rod-like germ, as the cause, and declaring the disease to be contegious. Other investigators have established the correctness of his statements.

> Anmed with this information, it is now the universal belief that the disease is transmitted from man to man, by the germs contained in the expectoration of a consumptive, by drinking the milk of a tuberculous cow. by eating the meat of a diseased animal, when not properly cooked, and possibly by several other modes of conveyance.

> Hence the prevention of the spread of this dreadful disease lies in the proper destruction of its germs, and the avoidance of the use of any substance containing them, as badly cooked meat or milk. I wish to impress this great necessity upon the minds of all, and to urge in the strongest language I can command that the advice I give may be strictly followed.

> The germs are not disengaged from expectoration until it becomes dry and pulverized, when they are disseminated through the atmosphere and inhaled. You have seen the motes dancing in the sunbeams crossing a room. Every mote is a dust particle, which may carry numbers of bacilli. While the germs are not conveyed by the breath, the sufferer is a menace to those with whom ne associates. when his bair, clothes, or hands, are soiled with the expectoration. Consequently for his own protection, and that of others, he should be scrupulously clean. For while he is throwing off millions of germs in his expectoration, if he allows it to become which he expectorates should contain water or a solution of carbolic acid and water. Consumptive patients who wish to prevent transmitting their dis ease to others, will carry and use receptables that have been devised for

of rooms, etc. THOSE WHO ARE COMPELLED to live in company with consumptive

the open air as much as circumstances will permit. The atmosphere of their bedrooms cannot be too fresh and winter or summer. Unless the weather is very cold, a window in the room that the recoveries in them range should be lowered a few inches from from 30 to 60 per cent.

are not destroyed by existing organ you, they multiply amazingly, blocking up the air passages, and ultimate-

cleaned, and thus infection is intro-

When the germs obtain access to the

ly forming pin-head solid bodies, which again change their characters and become cavities, when, what is common ly called consumption, is established. Let us suppose a young person to be losing flesh, strength and color, with oppressed breathing upon ascending a hill or stair, chilly in the morning, increased heat, and frequent pulse in. the evening, perhaps, followed by perspiration at night, with slight hacking cough in the morning. At this stage of the trouble the stethoscopic signs are not, as a rule, to be depended upon, but such symptoms point strongly to

fluid. If pocket handkerchiefs are used to receive it, they should, before becoming dry, be placed in carbolic acid solution, one ounce to a gallon of

water, and boiled. The vessel containing the expectoration shculd receive the same treatment. It is not contended that pure air alone will cure consumption, but it will very much aid his physician, who will also order appropriate treatment for the stage of his disease. Consumptive patients can be treated at their homes, provided their apart-ments can afford them a large supply of pure air, and then follow strictly the advice given. In default of that, they should, by all means, enter a sanator

ium, affording them, as it will, the best chance of recovery. The room in which a consumptive has lived, or died, should on no account be occupied by another without being thoroughly disinfected.

TO DO THIS

the ceiling should be lime washed, the paper should be removed. in default of that, well rubbed with fresh bread and the debris burned: the floors and woodwork well washed with a solution of corrosive sublimate and permanginate of potash, a heaping teaspoonful of each to a gallon of soft

the reception of the expectoration. 1838 was 38 in 10.000 living, in 1896 it

(Ian McAllan in the London Mail.)

A young man, with the light, foxy hair and the naturally sanguine complexion (when not sunbrowned, as it is in his case, by tropical and South African climates) that tropical and South African climates) that takes off years, he does not look his sge, which is but a few months more than 42. He has the sparse, sinewy frame that is deemed essential to a cavalry officer; he is bately above the middle height; he can hardly be called handsome; but he has a hardly be called handsome; but he has a keen, bright face, which is pleasing if not firely featured. Strength of purpose is seen in his firm mouth. calm resolution in his pale, quiet eyes. While he can on occasion de and dare to the utmost, striking out with knock-down effect if he sees an advan-tage, he can wait for it, and this quality of patience, of unshaken self-reliance in ardu-ous affairs, is just that on which we may place our hopes just now. Baden-Powell has himself given us an in-sight into his character in the words he

but such symptoms point strongly to consumption. And he should without fail consult his physician, who will examine his expectoration. If ne germs can be found he probably has not got consumption. If they exist his physician will direct him to have his roor thoroughly cleansed and purified, if it is not already in that state, end kept day and night at a temperature of about 55 by an abund-ance of pure fresh air. To eat the best he can obtain. When his strength will permit, to take moderate daily ex-ercise in the open air. Not forgetting to let the sputa from his lungs be re-ceived in a vessel containing some fluid. If pocket handkerchiefs are



Mafeking garrison), we might have little dot bts of its successful resistance. They are one and all salted, tested, hard-bitten specimens of that great class of British ad-venturers so numerous on the South Afri-can frontier.

BADEN-POWELL.

spoonful of each to a gallon of soft water. All bed and other clothing disinfected by steam or fumigation.
In my early day consumption, when once established, was considered incurable. It was a question of time how long the victim would last. Happlly the change since that day has been great indeed. The death-rate in 1838 was 38 in 10,000 living, in 1896 it was 13.05, or a diminution of nearly two-thirds. If every individual can be induced to believe the advice given, and follow it, I have no doubt that in the near future the mortality will be reduced ten-fold.
Sanatcria for the treatment of the disease have been established in all civilized countries, and we hope to have one in this province. From the records of those institutions we learn that the recoveries in them range from 30 to 60 per cent.
In conclusion let me appeal to the

Wornout Nerves So Weak she Couldn't S'eep or Work

-Hands Trembled-Could Scarcely Walk - Restored by Dr. Chase's Nerve Food

Mrs. Margaret Iron, Tower Hill, N. B., writes:-"Dr. Chase's Nerve Food has done me a world of good. I was so weak that I could not walk twice the length of the house. My hands trembled so that I could not carry a pint of water. I was too nervous to sleep, and unable to do work of any kind.

"Since using Dr. Chase's Nerve Food I have been completely restored. I can walk a mile without any inconvenience. Though 76 years old, and quite fleshy, I do my own housework, and considerable sewing, knitting and reading besides. Dr. Chase's Nerve Food has proved of inestimable value to me

Dr. Chase's Nerve Food is the world's greatest restorative for pale, weak, nervous men, women and children. In pill form, 50 cents a box, at all dealers, or Edmanson, Bates & Co., Toronto. Don't cough, use Dr. Chase's Syrup

of Linseed and Turpentine, 25 cents a bottle.

CARTER MEDICINE CO. WINS.

Obtains Injunction In Case Involving Simulation of Labels.

Brent Good, president of the Carter Medicine company, yesterday received a telegram from his lawyers in Chicago, Messrs. Lowden, Estabrook & Davis, informing him that a final injurction, with costs, had been granted against the Chicago Label and Box company. This company makes a specialty of manufacturing labels, boxes, etc., for druggists. The Carter company has been following them through the courts for two years on the complaint that the label company was making simulations of the labels of Carter's Little Liver Pills. They have now obtained a final injunction, with costs, and the costs are very large, as the case has been submitted to a master in chancery for a final accounting. The Carter Medicine company has

been the first and only one to prosecute printers or engravers who have prepared such labels and wrappers. It marks a new departure in infringement cases, and their victory is one of great importance to the whole "proprietary trade." and also of interest to retail druggists .- New York Press. • May 2, 1900.

