BY CYRUS EDSON, M. D.,

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Health Com . issioner, New York City. It is necessary, if one would understand the sanitary aspects of bread making, to fully comprehend the present theory held by scientists of germs The theory of disease germs is merely of those germs by medical men, a numerable experiments. Being this, the old term of a 'theory' has become a misonomer. A germ of a disease is a plant, so small that I do not know how to express intelligibly to the general reader its lack of size. When this germ is introduced into the blood or tissues of the body, its action appears to be analogous to that which takes place when yeast is added to dough It attacks certain elements of the blood or tissues, and destroys them, at the same time producing new substances

But the germs of the greater part of the germ diseases, that is, of the infec-

this sequence of events.

germs of disease are to be found in the objectionable yeast to an impure the air and dust. The longer any sub- baking powder will be a case of jumpstance to be eaten is exposed to the air. ing from the frying pan into the fire. the greater the chance that germs will. The best baking powder made is, a be deposited on it. Gread raised with shown by analysis, the ". oyal." and the part played by them in disease. Yeast is worked down or kneaded twice contains absolutely nothing but crean before being baked and this process of tartar and soda, refired to a chemithe name given to the knowledge had may take anywhere from four hours to cal purity, which when combined under ten. It has, then, the chance of col- the influence of heat and mois are proknowledge which is the result of in- secting disease germs during this pro- duce carbonic acid gas, and swing of working down or kneading during strength has been found superior each of which it may gather the dirt other baking powders, and as far as containing the germs from the baker's know, it is the only powder which wil nands. At no bread save that raised raise large bread perfectly. Its use with yeast, goes through this long pro- avoids the long period during which

> What is meant by "raising" bread is slaced near the fire produces an enormons growth of the yeast fungi-the

so good a chance of gathering germs.

It is well to sound a note of warning I have already pointed out that the in this direction or the change from

cess of raising and it has two periods done this, disappear. Its leaves up

cess of raising and kneading so no the yeast made dough must stand in bread save that raised with yeast has order that the starch may ferment and there is also no knewing necessary.

The two materials used in the Royal. worth a few words. The introduction cream of tartar and soda, are perfectly of the yeast into the moist dough and harmless even when eaten. But the he agaition of heat when the pan is are combined in exact compensating weights, so that when chemical action begins between them they practicall tions and contagions diseases, will devent germ" in other words. These disappear, the substance of both having been taken up to form the carbonic acts. od of using the powder insures the most thorough mixing with the flour. The proper quantity being taken, it is mixed with the floor and s pred ar unc in it. The mixture is then sifted several times and this insures that in every part of the flour there shall be a few particles of the powder. The sait and milk or water being added, the dough is made up as quickly s possible

> These are placed in the oven and naked. But the very moment the warmth and moisture attack the mixture of cream of tartar and soda, these two ingredients chemically combine and carbonic acid or leavening gas is evolved. The consequence may be seen at a glance, the bread is raised during the time it is baking in the oven, and this is the most perfect of all conceivable methods of raising it.

and moulded into the loaves.

Here then, there is no chance for germs of disease to get into the dough and thence into the stomach, more than being in the body of a human being, of a portion of the starchy matter of that the bread is necessarily as sweet as possible, there having been no time proper conditions. These conditions nutrent elements in the flour. The during which it could sour. This inare to be found in dough which is be- fermentation produces carbonic acid volves the fact that the bread so made ing raised with yeast. They are gas, and this, having its origin in every will keep longer, as it is less likely to be e attaminated by the germs that affect

It will be strange if the crowds of visitors to the world's fair do not greatly increase the number of contagious It needs but a glance to see that it is disease, which we will have to treat folly of follies to open a single channe mentation. If the mixture be a fore a close-grained mass, is now full of through which these germs may reach portion of the starch into glucose and condition is what we ordinarily call watch with the greatest care all that but the safest and best methods are employed in the preparation of our Now the cluten, which is also a con- soak into and attack it from all sides. food? To meit seems as though there could be but one answer to questions

I have shown the danger of using the evade the law. At the first sight the yeast raised bread, and with this I envelopes appear to have emanated The germs of cholera, as of typhoid without this destruction and without have shown how that danger may be from a tract society. - Cleveland fever, would, if introduced into dough, the 'kneading' process, which fills the avoided. The onnce of prevention Leader. without the long period during which nor expensive is certainly worth many I do not wish to "pose" as an alarmthe raising process goes on, the gain in
food and the gain in the avoidance of about it is that it may be relied on aiterval of shorter or longer duration most absolutely. Those who eat bread or biscuits or rolls made at home with gers which attend the use of yeast it is Royal baking powder may be sure they which has been raised with yeast certain that the vesiculating effect pro- have absolutely stopped one channel

> Note-Housekeepers desiring information in regard to the preparation o tute any other system of bread making the bread which, for sanitary reasons, we must have one which will give us.
>
> Dr. Edson so strongly urges for general use, should write to the Royal Baking Powder Company, New York.

> > A tall, elderly, refined-looking gontl .-

man went into a small post office in a

some questions relative to the register-

ing of a letter, and was very sharp v,

rudely and unnecessarily anubbed by a

young woman in attendance. He asked

way to answer an inquiry in a public

had been quite civil enough for him.

creasing mildness of manner, if sh

would favor him with her name. She

emphatically declined to do so. H

then said he thought he would tell her

his name, which, however, she declined

to hear, saying that his name was no

concern of bers. He calmly replied that

he thought it was, for he was the po-t

Ex-Treasurer F. E. Spinner, who has

more autographs to other people's hand-

than any man of his time, is to have an

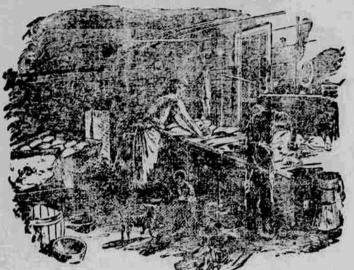
master general.

BREAD WITHOUT YEAST"-THE MOST PERFECT OF ALL CONCEIVABLE WAYS

OF RAISING IT.

chemically, but when we are working at rural region of England. He asked

and and an atkall which, if properly He asked her, with an ominously in-



"DISEASE GERMS FOUND THEIR WAY INTO THE YEAST BREAD."

provided always you give them the the flour-one of the most valuable warmth, moisture and the organic little particle of the starch which is it matter of the flour on which the germs, self everywhere in the flour, pushes the souring process. after certain changes, feed.

It is rece sary to remember at this itself room. This is what is called point that yeast is germ growth, and "raising the bread," when introduced into a mixture of glucarbonic acid gas and alcohol.

very much chance of the germs of typhus and of cholera reaching the stornachs of the people who eat bread But I have not the slightest cause to duced by it on the dough is to the last through which disease may reach them. Coubt that other diseases have been degree perfect. and will be carried about in the bread

I have me. joneneymen bakers sutsering from cutaneous diseases, workin the dough in the bread trough with their naked hands and arms. I have ne reason to suppose bakers are less dable to cutaneous diseases than are other men, and I know, as every housewife knows, yeast-raised bread must be worked a long time. This is an exceedingly objectionable thing from the standpoint of a physician, for the reason that the germs of disease which are in the air and dust and on stairways and straps in streets cars, are most of en c llected on the hands. Any person who has ever kneaded dough understands the way in which the dough cleans the hands. This means that any germs which may have found a lodging place on the hands of the baker before he makes up his batch of bread are sura to find their way into the dough, and once there, to fit d all the conditions necessary for subdivision and growth. This is equivalent to saying that we must rely on heat to kill these germs, because it in almost certain that they will be there. New, underdone or doughy bread is a form which every man and woman has seen.

It is a belief as old as the hills that the mass of dough. Now it is in no underdone bread is unhealthful. This reputation has been earned for it by the experience of countless generations, and no careful mother will wish her children to est bread that has not been thoroughly cooked. The reason given for this recognized unhealthfulness has been that the uncooked yeast dough is very difficult to digest. No one but a physician would be apt to think of disease germs which have not been killed during the process of baking as a cause of the sickness following the use of uncooked yeast bread. Yet this result from this cause is more than probable. I have not the slightest doubt that could we trace back some of the cases of illness which we meet in our practice we would find that germs collected by the baker have found their way into the yeast bread, that the heat nas not been sufficient to destroy them, that to at they have found their way into portion or carefully mixed and which eight foo monument, one ing \$10,000, to at they have found their way into portion or carefully mixed and which eight foo monument, one ing \$10,000, to at they have found that the call for our ser- will leave either an acid or an alkali in erected to his memory in Washington. encen and with it the colonies of germs,

aside the particles of the dough to give

come or at rch, in the presence of in its effects on the dough, purely me- Under these circumstances is it not warmth and moisture sets up a fer- chanical. The dough, which was bestarchy dough the yeast first changes a little holes, and when cooked in this us? Is it not the part of wisdom to then decomposes the glucose by chang light. This porous quality of bread en- we eat and drink, and to see that none ing it into two new substances, viz., ables the stomach to rapidly and easily digest it, for the gastric juices quickly stifutent of dough and moist starch, The fermentation of the dough, howaffords with the latter, an excellent ever, uses up a portion of the nutrient like these. nidus for the development of germs of elements of the loaf. If it be possible, disease as well as for the yeast germs. therefore to produce a light porous loaf find very favorable conditions for their the dough with germs and flith, and the germs is exceedingly plain.

But while we can easily see the dan-

It is apparent that if we are to substiwe must have one which will give us, first, mechanical results equally as good that is, that will produce minute bub-

bles of carbonic acid gas throughout

way difficult to produce carbonic acid

bread we must use such chemicals as

are perfectly healthful Fortunately

The evils which attend the yeast-

made bread are obviated by the use of

properly made, pure and wholesome

paking powder in lieu of yeast. Bak-

ing powders are composed of an sold

combined, should when they unite at

once destroy themselves and produce

carbonic acid gas. A good baking

powder does its work while the loaf is

in the oven, and having done it, disap-

But care is imperative in selecting

he brand of baking powder to be cer-

tain that it is composed of non-injur-

ious chemicals. Powders containing

alum or those which are compounded

rom impure ingredients, or those

which are not combined in proper pro-

these are not hard to find.

pears.

CURIOUS FADIS.

Oven 1,000 steamsh |- . re towers ng the four great ec an contes

Is A. D. (5 Tarjan built a magnicent stone berige across the Lanute 7.0 feet long.

o start a newspaper his mo her tried o dissuade him, be a ise there were dready two papers in America

S TENCE says that one cannot be stung by a bee if the person holdshis oreath. It would be more conductive to a man's moral welfare, perhap-, it he could hold his breath after gett ng st .ng.

Oz the human race 100,000,000 are well clothed, that is wear par-ments of some kind that will cover ialedness, 2.0,000,000 habitually go arked, and 70 ,00 0.000 cover only the middle parts of the body.

In Poten Guiana the women carry pon their persons uit the family say ngs in the shape of heavy bracelet inklets, necklaces, and even crowns of gold and silver. Weighty earrings, and hope rings, six or eight inches in Hameter, dangle from their nos s.

Ar tunerals in the city of Mexico no hearses are used. The street railway company has a monopoly of the funeral to tines. It rans tuneral cars, woite for hidden, black for adults, and monraers follow to tie cemet ry in a rially upnoistered

FRENCH ingenuity h scontrived an improved tone curring saw of remarkable en.eigney-a circular saw having its edge of with there diamonds in the same was as the straight blades: but as the strain on the diamond is a I in one direct on, the set ting can be made much ther.

KAVAGE of tigers. A man eater in India was known to have knied 105 per ple in three years, and an other kuled an average of 80 persons a year for the same period. A third caused thirteen villages to be abandoned and 250 square mites of land to be thrown out of cultivation.

Apparentty Sent by Sanctimonious Duns.

A bundle of puzzling envelopes was side-tracked in the city postonice on Tuesday. The envelopes were heavily bordered with brack. In the lefthand corner were three texts of scripture as follows. "Let Us Walk Honestry," Lomans xii. 13; "Lw. No Man Anything, ' Bomans xii, at "Many Days and A cars Shall Ye be Troubled," Isalah xxxii., 10. Then were flity of the letters, each bearing a _-cent stamp. The postonice au thorities decided that the epistles were being used by some of the many collection agencies and contained 'dons' to those to whom they were addressed. Accordingly the entire to Washington. The law specificthat requests for the payments of depts shall be sent neither on posta ards nor inclosed in envelops bear ng evidences of the contents. The supposed object or those sending out the envelopes in question was to cleverly

which in this case is neither difficult The Distance of Thunder-Storms. Although lightning and thunder s usually observed between the-e two phenomena, which is due to the fact that sound travels only at the ate of 1.100 feet per second while the pas age of light is a most instantaneous. B sed upon this fact it is no easy matter to tell at least approximately how many miles a

thunder-storm is away. A normal pulse will beat about one stroke to the second and by counting the pulse-beats curing the intervals of the lightning and the thunder the lapse of seconds is arrived at, and consequently the number of feet, which can be reduced to miles. For example: If thirty seconds clapse between the flash of the Eghtning and he crash of thunder the storm center is at a di tance of ...3, 000 teet, or about six and a half miles. An almost accurate c lculation can be made with using a watch with a minute dial. -St. Louis Post-Dispatch.

The Force of Gravity.

A steel red one-fourth of an inch square is known to be ab e to sustain a weight of about 7,500 pounds. The Canadian Eng neer takes this as ; basis to estimate the force of gravity in comprehensible terms and says:

Now, simp y to hold the moon in its orbit, we should have to have colo-sal bar of steel, stretching from the earth to the moon, whose section would be 87,500 square miles! area which would cover the three Maritime Provinces and leave 30, 0 squa e miles over. Or it, instead of one single bar, we should stretch a forest of steel bars, each bar one qua ter of an inch square, from the earth to the moon, we wou'd have to cover the entire surface of the earth on the side toward the moon with such bars at interval; of only six her if she thought that was a proper inche. Think of it! A forest of steel whose stems would be so close office. She said she thought that she together that a cat could scarcely squeeze through. This is what the force of gravitation' means."

Glass Printing Type.

The French ournid s speak of a new clud of type u ade of glass, which i tated to "remain clean forever. said to resist wear and tear bette han metal type, and that it can be a t with such sharp outlines as to rodu e very distinct impression vith g eat ease. The journal L atre, of Paris, is now being printed ith it.

A CONEY ISLAND salconist has in whited the "Rocket Punch." Tu ame is a misnomer. Rocket Punc es down, not up

Breskers Ahead

Auntie (ax ousls) - Do you thini you have had the proper training for a Doe man's wife?" f eet Grl-'Yes ndeed. Papa has:

given me any spending money worth Wine I is amin Francia proposed things charged."

> A Consection paper has an adversement of "a cottage to let, containing ix rooms and an agre of land."

TO CLEANSE THE SYSTEM

Life-tually yet gently, when convive or bil-mus, or when the blood is impure or slug-gish, to permanently ears habitual consta healthy netwity, withput tritining or weakening them, to dis. Theadache, cold-or levers use syrup of 1 gs.

Cemen as a Water Seire. An irrigating canal at R verside, Cal. shout twenty-two miles long, has been radually becoming unfit for use in its we've years of service, on account o toles bored in its banks by gophers The was e of water finally became so great a snort time ago that it was deaded to regr de the whole canal and cover the sides with cement. This work has been done at a cost of about \$120, 00 oy a firm of San Francis o contractors. The cement mortar was spread 11 inches thick, and was formed of one par cement and four parts of fice sand The work could only be done during the rainy season, when the water wa not wanted for irrigating purposes Since it has been finished it is four that the canal now delivers twice the amount of water that it did before -howing the loss due to leakage, friction, and in a less degree to evaporation, was

BEECHAM's PILLS quickly cure sick headache, weak stomache, impaired digestion constipation, disordered liver, etc.

at least 50 per cent.

Death From Fish Bite.

It is not generally supposed that: wound caused by the bite of a fish known as the pickerel is more than painful and some time in getting well. But the Karsas City Journal records the death of a man from such a cause. According to that paper, while Mr. T. E. Campbell, county clerk of Buchanan county, Mo., was removing a pickere! from his book during a fishing trip at Big Spring lake, In, last summer, the tish suidenly closed its jaws on his floger lacerating it considerably. The wound grew more and more painful, and a physician was consulted, who prenounced the man's system poisened by the bite. At the end of eight months sir. Campbell died, and his death was ascribed to the wound caused by the fish.

A. M. PRIEST, Druggist, Shelbyville, Ind., says: "Hall's Catarrh Cure gives the best of anisfaction. Can get plenty of testimonials, as it cures every one who takes it." Druggists sell it, 75c.

Those Wooden Nutmega.

There may possibly have been as original incident, among the many pedillers from Connecticut, of one who cheated by selling wooden nutmegs to ris customers, but provably not. The cost, in time and labor, of making such artistic frauds would more than balance the receipts. Doubtless the wooden natmegs must go with the basswood hams.

All the same, the joke has served the purpose of giving the old-time tin peddiers and clock peddlers from Connecti cut a bad name for superior cunning and trickishness. It served at least one good purpose in giving birth to one of he best toasts ever offered at a dinner -old now, and well known, but perfect in its way: "The Nutmeg State: Where can we find a greater?"-Hartford Times,

N. K. Brown's Essence Jamaica Ginger is pure, strong and reliable. None better made. 25 cts.

He Was beent-Minded.

There was once on absent-minded preacher in Maine, of whom a gossiping ady tells the Lawiston Journal. One Sunday he said excitedly at the close of a solemn discourse: "The chair will now pronounce the tenediction and I will ong the Doxology." The choir failed to respond beyond a faint soprano siggle, and the minister hastily exlaimed: "No, no! I should have said: I will now sing the benediction and the choir will please pronounce the Doxlogy." Before he could hazard another attempt the quartette came to the rescue with "Old Hundred," and the parson sat down to recover his wits beand the friendly shelter of the oldfastioned pulpit.

Ex-Sepator Hill of Colorado has made fortune by smelting gold and silver by a secret process of his owe, by which his big refinery in Denver is a de to do some of the best reflaing in the world. He is said to be one of the best judges of metals in the United States,

Rich Red Blood



rilla has proved its merit to me as it will to all who take it fairly." Mas. M. F. Tons, Niantic, Ct.

Be Sure to Get HOOD'S.

HOOD'S PILLS Cure Sick Headache. 25c M. N. U. No. 244--33 Lork, Nob.

MEN WRITING TO ADVERTISEUS

First Freeman (my n. down a newstenger) "It has been call that every mor can is a king to birthright; but ofter at , there's no to going being born

t-agenus brone" Second Freeman "What have you d grovered?"

Fast Freeman - The paper says that Emperor William . - ede ed the court grant nine to cut down their asrm as to lifteen minutes com

Not a Clear Breard.

Lawyer-"tre you acquainted with he prico er?" Witness-"I've known him for twenty

years." Lawyer - Have you ever known him to be a disturber of the public peace." Witness-"Well-sr-be used to be-

He'd Be Good.

long to a tife and'd um corps,"

O'd Bullion-"What proof have I that you will make my daughter a good husband?"

Suitor-'Look at your own bank so count, sir."

Stand and Deliver. Mrs. Helpem-"This is lovely! How iid you manage to collect so much

money for the cause?" Mes Sharpone-It was simple enough. I threatened to get up a charity concert, and set all the girls to practicing for it."

Ready for Business.

Tramp-"Piease, mum, if ye'll kindly nelp me on me journey, I'll be much oblegged."

Housekeeper-"Huh! On a journey, eh ?" Tramp-"Yes, mum; I'm goin' west

to start a bank. A monkey that died in Butte City,

Montana, wes such a pet that his owner induced an irreverent wretch to preach a sermon over the animal's remains.

"German Syrup"

I simply state that I am Druggist and Postmaster here and am therefore in a position to judge. I have tried many Cough Syrups but for ten years past have found nothing equal to Boschee's German Syrup. Thave given it to my baby for Croup with the most satisfactory results. Every mother should have it. J. H. Hobbs, Druggist and Postmaster, Moffat, Texas. We present facts, living facts, of to-day Boschee's German Syrup gives strength to the body. Take no substitute.



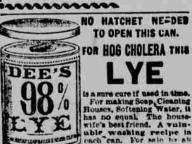
in the World! Distracted in the World I Ontal ogue A. J. TOWER, BOSTON, MASS.

Sheridan County, Wyoming, (only recently opened up for settlement by the completion of an extension of the Eurlington Railroad), offers greater and more profitable opportun-

ities to farmers, business men, investors and prospectors than any other section of the United States. Finest agricultural and stock-raising region under the sun. 270,000 acres of magnificent irrigated land, fertile :: the valley of the Nile.

A million more still Newer the comman. Brisk, rapidly-growing towns. Rich mineral fields less than a hundred miles from the county seat. Perfect climate, pure water, cheap fuel-coal and wood. Send for free descriptive pamphlet; thirtytwo pages with illus-

trations Northwest J. FRANCIS, General Passenger Agent, Burlington Route, Omaha, Neoraska.



TRADE-MARI

