BY CYRUR EDSON, M. D., alth Commissioner, New York City.

s necessary, if one would underthe sanitary aspects of bread ng, to fully comprehend the pres-heory held by scientists of germs he part played by them in disease. theory of disease germs is nierely ame given to the knowledge bad se germs by medical men, a knowlwhich is the result of innumeraxperiments. Being this, the old of a "theory" has become a misnall that I do not know how to exintelligibly to the general reader ek of size. sed into the blood or tissues of ous to that which takes place when is added to dough. It attacks in elements of the blood or tissues, destroys them, at the same time

A germ of a disease is a plant, When this germ is inedy, its action appears to be an- enormous growth of the yeast fungi-These fungi effect a destructive fermentation of a portion of the starchy matter of the flour-one of the most neing new substance .. valuable nutrient elements in the flour.



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

nt the germs of the greater part of | The fermentation produces carbonic germ diseases, that is, of the infec- acid gas, and this, having its origin in and contagious diseases, will de- every little particle of the starch p or increase in number without which is itself everywhere in the flour, in the body of a human being, pushes aside the particles of the dough rided always you give them the er conditions. These conditions called "raising the bread." to be found in dough which is beraised with yeast. They are is, in its effects on the dough, purely mth, moisture and the organic mechanical. The dough, which was er of the flour on which the germs, certain changes, feed.

at that yeast is germ growth, and call light. This porous quality of n introduced into a mixture of glu- bread enables the stomach to rapidly or starch, in the presence of mth and moisture sets up a fertation. If the mixture be a starchy gh the yeast first changes a portion ie starch into glucose and filme. deposes the glucose by changing it If it be possible, threefore, to produce two new substances, viz. carbonic a light porous loaf without this degas and alcohol.

ow the glutten, which is also a conent of dough and moist starch, ords, with the latter, an excellent s for the development of germs of se as well as for the yeast germs, germs of cholers, as of typhoid r, would, if introduced into dough, very favorable conditions for their

do not wish to "pose" asan alarmnor am I willing to say there is much chance of the germs of us and of cholory reaching the nachs of the people who cut bread ch has been raised with yeast. But we not the slightest exuse to doubt other diseases have been and will carried about in the bread.

have met journeymen bakers, suf-

ing from cutaneous diseases, workthe dough in the bread trough h paked hands and arms. I have raton to suppose bakers are less ble to entancous diseases than any er men, and I know, as every houseknows, yeast-raised bread must be ked a long time. This is an exdingly objectionable thing from the adjoint of a physician for the period during which the raising pro- have absolutely stopped one channel ys and straps in street cars, are exceedingly plain, at often collected on the hands. But while we co man has seen.

It is a belief as old as the hills that The evils which attend the yeast-

ink of disease germs which have not pears. en killed during the process of bakrms collected by the baker have and their way into the yeast bread, at the heat has not been sufficient to stroy them, that the uncooked yeast ead has been eaten and with it the lonies of germe, that they have and their way into the blood and ing from the frying pan into the fire.

at the call for our services which The bast baking powder made is, as lowed, has rounded off this sequence

events.

SANITARY ASPECTS OF BREAD | stance to be esten is exposed to the air, | produce carbonic acid gas, and having the greater the chance that germs will be deposited on it. Bread raised with yeast is worked down or kneaded twice before being baked and this process may take anywhere from four hours to ten. It has, then, the chance of collecting disease germs during this process of raising and it has two periods of working down or kneading during each of which it may gather the dirt containing the germs from the baker's hands. As no bread save that raised with yeast, goes through this long process of raising and kneading so no bread save that raised with yeast has

weights, so that when chemical action begins between them they practically disappear, the substance of both havso good a chance of gathering germs. What is meant by "raising" bread ing been taken up to form the carbonic acid gas. More than this, the proper method of using the powder is worth a few words. The introduction of the yeast into the moist dough and the addition of heat when the pan insures the most thorough mixing with the floor. The proper quantity being taken, it is mixed with the floor is placed near the fire produces an the yeast "germ," in other words, and stirred around 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 salt and milk or water being added, the dough is made up

to give itself room. This is what is

It needs but a glance to see that it

before a close-grained mass, is now

full of little holes, and when cooked

and ensily digest it, for the gastric

juices quickly soak into and attack it

the dough, however, uses up a portion

of the nutrient elements of the losf.

These are placed in the oven and baked. But the very moment the warmth and moisture attack the mixture of cream of tartar and sons, 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.

as quickly as possible and moulded

into the loaves.

order that the starch may ferment and

The two materials used in the Royal,

cream of tartar and sods, are perfectly

harmless, even when eaten. But they

are combined in exact compensating

there is also no kneading necessary.

Here, then, there is no chance for germs of disease to get into the dough and thence into the stomach, more than that the bread is necessarily as sweet as possible, there having been no time during which it could sour, This involves the fact that the bread so made will keep longer, as it is less likely to be contaminated by the germs that affect the softring process.

It will be strange if the crowds of visitors to the World's Fair do not greatly increase the number of contagious diseases, which we will have to treat. Under these circumstances is it not folly of follies to open a single channel through which these germs may reach us? Is it not the part of wisdom to watch with the greatest care all that we eat an l drink, and to see that none but the safe-t and best methods are employed in the preparation of our food? To me it seems as is necessary to remember at this in this condition is what we ordinarily though there could be but one answer to questions like those.

I have shown the danger of using the yeast raised bread, and with this I have shown how that danger may be from all sides. The fermentation of avoided. The ounge of prevention which in this case is neither difficult nor expensive is certainly worth many pounds of cure, and the best thing about it is that it may be relied on alstruction and without the "kneading" | monishsolutely. Those who cat bread process, which fills the dough with or bisent or rolls made at home with germs and filth, and without the long Royal being fellower may be sure they

Norg.-Housekeepers desiring informs

LATER NEWS WAIFS,

CHOLERA ADVICES

BUCHAREST-Fourteen new cases of chol-

trained six deaths were reported. Friday in

Brahilov, 16 new cases and 11 deaths in

Soolina, and 6 new cases and I death in

Napres-Ten new cases of cholera and 10

deaths were reported in this city on Friday.

WASHINGTON, In order to furnish the South with enough

money to move the cotton crop. Secretary Carlisle will deposit currency in the sub-

treasury in New York and telegraph the

New Orleans sub-treasury to pay out a like

Owing to the scarcity of \$5 and \$10 go'd

pieces, the Treasury has ordered the coining

of \$5,000,000 in eagles and half eagles at the

CRIMES AND PENALTIES.

At a revival near Oakland, Ill., a young

man named A exander quarreled with several others over a girl and shot three men.

WEATHER.

heavy showers throughout the nor-hwestern

part of the state on Saturday.

The great drouth in Ohio was broken by

Yellow Fever Quarantines.

Ala., and Savannah, Ga., have declared

quarantine against Pensacola, Fla., where

-THE Executive Committee has accepted

New Orleans, Augusta Ga., Birmingham,

Cerxnawoda.

sum in silver.

one fatally.

Mint in Philadelphia.



DREAD WITHOUT YEAST-"THE MOST PERFECT OF ALL CONCEIVABLE WATS OF BAID-ING IT."

on that the germs of disease which cess goes on, the gain in food and the through which disease may reach in the air and dust and on stair- gain in the avoidance of the germs is them,

But while we can easily see the but while we can easily see the dangers which attend the use of yeast much understands the way in which the tended angers which attend the use of yeast it is certain that the vesiculating effect which, for sanitary reasons, Dr. Edson so strongly urges for general use, should write to the lieuwing that the light degree perfect. It is apparent. ans that any germs which may have last degree perfect. It is apparent and a lodging place on the hands of that if we are to substitute any other baker before he makes up his system of bread making we must have ch of bread are sure to find their one which will give us, first, mechanical y into the dough, and once there, to results equally as good, that is, that d all the conditions necessary for will produce minute bubbles of bdivision and growth. This is carbonic acid gas throughout the mass nivalent to saying that we must rely of dough. Now it is in no way diffiheat to kill these germs, because it cult to produce carbonic acid gas almost certain that they will be chemically, but when we are working ere. Now, underdone or doughy at bread we must use such chemicals ead is a form which every man and as are perfectly healthful. Fortunately these are not hard to find.

derdone bread is unhealthfui. This made bread are obviated by the use of putation has been earned for it by a properly made, pure and wholesome experience of countless genera- baking powder in lieu of yeast. Bakms, and no careful mother will wish jug powders are composed of an acid r children to cat bread that has not and an alkali which, if properly comen thoroughly cooked. The reason bined, should when they unite at once en for this recognized unhealthful- destroy themselves and produce carss has been that the uncooked yeast | bonie seid gas. A good baking powagh is very difficult to digest. No der does its work while the loaf is in a but a physician would be apt to the oven, and having done it, disap-

But care is imperative in selecting g as a cause of the sickness following the brand of baking powder to be cere use of uncooked yeast bread. Yet tain that it is composed of non-injuri-is result from this cause is more than our chemicals. Powders containing sobable. I have not the slightest alum or those which are compounded ubt that could we trace back some from impure ingredients, or those the cases of illness which we must which are not combined in proper proour practice we would find that portion or carefully mixed and which will leave either an acidor an alkali in the bread, must not be used.

It is well to soun I a note of warning in this direction or the change from the objectionable yeast to an imoura baking powder will be a case of jump-

yellow fever exists. All trains leaving the The best baking powder made is, as shown by analysis, the "Royal." It latter place are crowded with refugees. contains absolutely nothing but cream I have already pointed out that the of tartar and sods, refined to a chem-Theodore Thomas's resignation as musical ms of disease are to be found in the | ical purity, which when combined undirector of the World's Fair and the free and dust. The longer any sub- der the inducate of host and moisture concerts in the big orchestra will be aban-

done this, disappear. Its leavening strength has been found superior to other baking powders, and as far as 1 A History of the Circumstances Attendknow, it is the only powder which will ing Its Passage and Some Account raise large bread perfectly. Its use avoids the long period during which the yeast made dough must stand in

THE SHERMAN ACT.

of Its Provisions and Its Workings.

When the act of 1873 was passed the silver dollar was worth more as bullion than as money. It had therefore disappeared from circulation and no objection was made at the time to the provision of the act stopping its coinage. The silver mine owners found it in fact more profitable to sell their product in the market for bullion than to the Government. The world's average annual production of silver from 1866 to 1870 was \$60.250 .-000, and of gold \$133,850,000. During 1871-1875 the annual figures were respectively \$88,025,000 and \$119,050,000, while during the period 1876-1880 they were \$112,500,000 and \$119,075,000. while during the period 1876-1880 they were \$112,500,000 and \$119,975,000. Naturally after the passage of the act of 1873, owing to the great increase in silver production and the standstill in that of gold, silver fell rapidity in value and the silver mine owners found that conditions were reversed and that it would be more profitable to sell their product to the Government for coinage numbers than as builton on the open purposes than as builton on the open market as before, a fact which had large

market as before, a fact which had large large influence in securing the passage of the act of 1878. In 1878 the gold value of the bullion in a coined silver dollar was \$1004, in 1878 it was only .891. The act of 1878, as bas has been mentioned, centained a provision for the issuing of paper certificates of not less than \$10 in exchange for silver coin deposited and redeemable in the same. The act of August 5, 1886, provided for the posited and redeemable in the same. The act of August 6, 1886, provided for the Issue of silver certificates of one, two and five dollar denominations in lieu of certificates of larger denominations. On April 8, 1886, the House rejected by a vote of 163 to 126 a bill for the free coinage of silver. In his message to Congress on December 8, 1885, President Cleveiand said that since February, 1878, the Government had under the compulsory provisions of the Bland the compulsory provisions of the Bland law purchased silver buillon and conted the same at the rate of more than \$2. 100,000 every month. By this process up to the date of the message 215,750,431 silver dollars had been comed. The necessity for such an addition to the silver currency, the President said as was compelled by the act, was negatived by the fact that only about 50,000,000 o the silver dollars so coined had actually found their way into circulation, leaving more than 165,000,000 of them in the more than 165,000,000 of them in the possession of the Government, the custody of which had entailed a considerable expense for the construction of vanits of deposit. Against this latter amount there were outstanding silver certificates amounting to about \$93,000,000. Mr. Cleveland predicted very evil effects from the continuance of the coinage under the act and said that gold would eventually be driven out of the country or be hoarded. He therefore recommended the suspension of the compulsory coinage of silver dollars.

Owing to the refunding of the Government's bonds at much lower rates of in terest, the National banks greatly curtalled the circulation of their notes based on such bonds. In his message to Congress of December 3, 1889, President Harrison said that the total amount of Harrison said that the total amount of money of all kinds in circulation on March 1, 1878, was \$805,793,807, while on October 1,1889, the totak was \$1,405,-018,000. There was an increase of \$293,417,552 in gold com, of \$57,554,-100 in standard silver or Bland dollars, of \$72,311,249 in gold certificates, of \$72,311,249 in gold certificates, of \$276,619,715 in silver certificates based on Bland dollars deposited in the Treasury, and of \$14,073,787 in United States notes, making a total of \$713,976,403. There was during the same period a nenry, and of \$14,073,787 in United States notes, making a total of \$713,976,408. There was during the same period a decrease of \$114,109,729 in bank circulation, and of \$642,481 in subsidiary silver. The net increase was \$599,224,103. The circulation per capita had increased about \$5. The price of silver when the Bland law was passed was \$1.20 4410 per cunce, making the ballion value of the dollar 93 cents. Since that time the price had fallen as low as 91.2 cents, making the builton value of the dollar 70.6 cents. Within the past few months the price had somewhat advanced and the value of the dollar as bullion at the date of the message was 72 cents. The President said that some favorable conditions had contributed to maintain the practical equality in their commercial use between the gold and silver dollars, but some of these were trade conditions that statutory enactments did not control and of the continuance of which we could not be certain. If we stould make the coinage of silver at the xisting rates free we must expect that the difference in the billion value of the gold and silver dollars would be taken account of in commercial transactions, and it was to be feared that the same recount of in commercial transactions, and it was to be feared that the same result would follow any considerable increase of the present rate of column personth. Such a result would be discredible. month. Such a result would be discreditable to our financial management and disastrous to all business interests. Nothing more harmful could happen to the silver interests, any safe legislation upon the subject must secure the equality of the two coins in their commercial uses. The President further said that he had always been and that he had always been a secure to fit the said always been a secure to the said that he had always been a secure to the said that he had always been a secure to the said that he had always been a secure to the said that he had always been as the said that he had always been a secure to the said that he had always been a secure to the said that he had always been as the said that he had always to the said that he had always that he had always the said ways been an advocate of the use of sliver in our currency; we were large producers of that metal and should not iscredit it. He then referred to the slan to be presented by the Secretary of the Treasury for the issuance of notes or certificates upon the deposit of silver online at its market value, saying it had been formulated so late that he had not had time to carefully consider its details. The bill prepared by Secretary Windom on the above lines was introduced in the flouse by Mr Conger, of flowa, on Jansary 20, 1800, and referred to the Committee on Counge, Weights and Measures, which reported it back March 26. On June 7 a substitute, which had been agreed mon by a Republican cancus, was passed by the House, the little being, had act to direct the purchase of silver hullon and the issue of silver notes thereof, and for other purposes." On June 18 the Senate passed a substitute by way of amendment providon the above lines was introduced in the poses." On June 18 the Senate passed a substitute by way of amendment providing among other things for the free coinage of silver and the fitte of the measure was changed to read, "a bill to provide for the free coinage of silver bullion and other purposes." The House refused to concur in the Senate amendrefused to concur in the Senate amendments and a conference committee was appointed which agreed upon a bill which was passed by both Senate and Homse and received the President's approval on July 14, 1890, and which has been generally known as the Sherman act. This act directed the Secretary of the Treasury to purchase 4,500,000 ounces of silver buillon each month at the market price, not exceeding \$1 for \$71.25 grains of pure silver, and to issue in payment therefor treasury notes in

in payment therefor treasury notes in denominations of not less than \$1 nor there than \$1.000. Such notes were made redeemable in coin, either gold or silver, at the discretion of the Secretary of the Treasury, and might be re-issued, but no greater or less amount of them should be outstanding at any time than the cost of the sliver bullion and the standard silver dollars coined therefrom then held in the Treasury purchased by such notes, which were to be a legal tender for all debts racept where otherwise provided. Until July 1, 1891, 2,000,000 ounces per month of the bullion purchased was to be coined into standard dollars, and after that date to much was to be coined as might be

becessary to provide for the redemption of the Treasury notes issued for the bullion and any seignorage was to go to the Treasury. It was declared to be the established policy of the Nation to maintain silver and gold at a parity. The provision of the Bland act requiring the coinage of not less than \$2.000,000 and not more than \$4.000,000 worth of silver follars per month was repealed.

Under the Sperman act the comage of the Bland dollar practically ceased in 1891. From January 1 to June 80, 1892, only \$2,445,991 silver dollars were coined, and since the latter date the coinage of them has been very small. Since the passage of the Bland act of 1818, about 419,000,000 silver dollars have been coined, of which \$60,000,000 remain in circulation, the balance being covered by silver certificates or are lying vile in the Treasury. During that period the price of silver bullion has so decreased that the value of the silver in the dollar has fallen from 91.2 cents to as low as about 48 cents, and is now about 55 cents. Under the Sherman act up to the first of this month, 156,000,000 ounces of silver had been purchased, of which 26,000,000 had been coined, the balance remaining in the Treasury. The certificates issued for this bullion have been re-deemed in gold. The bullion in Treasury Is now worth about \$35,000,000 less than was paid for it.

WORLD'S FAIR RATES. The Ballroads Will Make No More

Changes in Fares A dispatch from Chicago says: Eastern roads are extremely anxious that it should be clearly understood that the action of the general managers at yesterday's meeting in regard to World's Fair rates and arrangements is final. It is not subject to reconsideration or possible change. The roads have had prepared the following official

statement.

From all scaboard cities eight trains per week are run at one fare for the round trip, tickets good for 10 days. There are special excursion 30-hour trains, taking passengers from all points east of the Niag ara fiver, l'itt-burg and Wheeling The numb r of these trains will be increased. whenever the bosiness warrants. In the territory west of the Niagara frontier. Putsburg and Wheeleng, all roads run excursion traces at one fare the round trip and will continue to do so."

LIGHT CROP EXPECTED.

The ! Continued Drouth Has Damaged Cereals, Vegetables and Fruit.

Weekly weather crop bulletins for Penn sylvania, Ohio and West Virginia , were received at Pittsburg. Dry and cool weather has had a damaging effect on Pennsylvania crops. Grasshoppers are adding to the injury in Huntingdon, Bedford and adjacent counties. Potatoes, tobacco, corn, apples and berries are showing the most damage. The same conditions are reported from Ohio, while in West Virginia the drouth has been broken and crops are improving.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cared by Hall's Catarrh Unre.

J. Chenny & Co., Props., Toledo, O., We, the undersigned, have known F. J. Cheney for the last lib years, and believe him perfectly honorable in all business transactions and financially able to carry out any coligation made by the firm.

fron made by their firm. WEST & TRUAX, Wholesale Druggists, Toledo,

Ohio.
WALDING, KINNAN & MARVIN, Wholesale
Druggists, Toledo, Ohio.
Hall's Catarch Cure is taken internally, acting directly upon the blood and induced surfaces of the system, Toley, Security Settle, Sold by all Druggists. Te

An average of five feet of water is estimated to fall annually over the whole earth.

Shooting Pains



swelling of my limbs have caused me great aftering. In the string I was completely wern out and are bardly the swelling has subsoluted the sheeling pure are give, I have send appearing the am better every way. Mare A. O. Osas. It ston. Hood's Curcs

troud's Pitts care sick Bendacies. The in-P.N.U.33

"August, Flower"

I had been troubled five months with Dyspepsia. I had a fullness after eating, and a heavy load in the pit of my stomach. Sometimes a deathly sickness would overtake me. I was working for Thomas McHeary, Druggist, Allegheny City, Pa., in whose employ I had been for seven years. I used August Flower for two weeks. I was reheved of all trouble. I can now eat things I dared not touch before. I have gained twenty pounds since my recovery. J. D. Cox, Allegheny, Pa. @



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Diserrated in the World I Catalogue A. J. TOWER, BOSTON, MASS.

We Cure scapinge. No matter of how long standing. Write for free treatine, testimonials, etc., to S. J. Hollensworth & Co. Owego, Tioga Co., N. Y. Price \$1; by mail \$1.15.

Enough spiders' webs to go around the

For pneumonia, no other cough syrup equals Hatch's Universal 25 cents at druggists,

A 12 year-old Ann Arbor boy killed and dressed a calf in 20 minutes.

A wonderful stomach corrector - Berchs - 's Pilis. Beecham's no others. Zi cents a box. Denmark makes the best butter.



KNOWLEDGE

Brings comfort and improvement and tends to personal enjoyment when rightly used. The many, who live bet-ter than others and enjoy life more, with less expenditure, by more promptly adapting the world's best products to the needs of physical being, will attest the value to health of the pure liquid laxative principles embraced in the remedy, Syrup of Figs.
Its excellence is due to its presenting

in the form most acceptable and pleasant to the taste, the refreshing and truly beneficial properties of a perfect laxative; effectually cleansing the system, dispelling colds, headaches and fevers and permanently curing constipation, It has given satisfaction to millions and met with the approval of the medical profession, because it acts on the Kidneys, Liver and Bowels without wenkening them and it is perfectly free from

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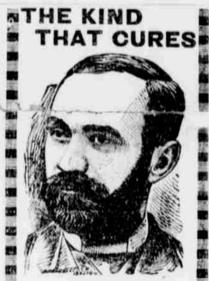
T.F.

L

every objectionable substance. Syrup of Figs is for sale by all drug-gists in 50c and \$1 bottles, but it is manufactured by the California Fig Syrup Co. only, whose name is printed on every package, also the name. Syrup of Figs, and being well informed, you will not accept any substitute if offered.

OTHE WALL PAPER MERCHANT SMITH SELLS THE BEST, THE CHEAPEST

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JEROME BALL.

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PANA SAUSATABILLA CO. Meadache the last ten years. La

wonderful curve.
I decided to ke wee better. The first be to bestire I WAS CURED. I can DANA'S

SARSAPARILLA a safe and reliable medicine. Waterfeet, N. V. JEROME BALL

The trath of Mr. Halle statement is sectified to Dana Sarsaparilla Co., Belfast, Maine.



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Piso's Remedy for Catarrh is the first. Ensiest to Use, said Chrabest. CATARRH