

MONTHLY BULLETIN

Indiana State Board of Health.

[Entered as second-class matter at the Indianapolis Postoffice.]

VOLUME II.

INDIANAPOLIS, NOVEMBER, 1900.

NUMBER 2.
25 Cents a Year.

MEMBERS AND OFFICERS OF THE BOARD.

T. HENRY DAVIS, M. D., PRESIDENT,	Richmond
E. D. LAUGHLIN, M. D., VICE-PRESIDENT,	Orleans
J. N. HURTY, M. D., PH. D., SECRETARY,	Indianapolis
JNO. H. FORREST, M. D.,	Marion
H. JAMESON, M. D.,	Indianapolis

The MONTHLY BULLETIN will be sent to all health officers and deputies in the State. Health officers and deputies shall carefully read and file each copy for future reference. This is very important, for we expect to print instructions, rules and general information, which it will be necessary for officers to preserve.

ABSTRACT OF MORTALITY STATISTICS FOR NOVEMBER, 1900.

The total number of deaths reported was 2,854. For the corresponding month of last year, 2,510 were reported, an excess for November, this year, of 344. A decrease appears, however, for November as compared with the preceding month of this year, for there were reported for October, 2,933 deaths, a difference of 79. The annual death rate for the whole State, as based upon the month's returns and the United States census of this year is 13.8, an increased rate of .1 over September, and an increase of .2 over the corresponding month of 1899. The deaths under one year were 476, and 1 to 5 inclusive 269, making a total of 755 infantile deaths, which is 26.8 per cent. of the whole number. Whenever the infantile deaths reach this percentage, it is pretty safe to assume that sanitary laws are not being heeded. The deaths of those over 65 years of age number 638. There was a decrease in deaths from consumption as compared with the preceding month of 37, the figures being November 250, October 287. As compared with November of 1899, the figures show 29 fewer deaths. The deaths reported from typhoid fever were 164, as compared with 199 in the corresponding month last year. The diphtheria deaths were 172, while for the corresponding month last year, the figures were 111. There were 15 scarlet fever deaths, 7 from measles, 21 from whooping cough, croup 8, influenza 14, puerperal septicemia 15, cancer 93, violence 126, smallpox 1. The deaths from pneumonia numbered 191, with 145 recorded for the corresponding month last year. Diarrheal diseases caused 68 deaths.

SANITARY SECTIONS: The Northern Sanitary Section, having a population of 839,835, and numbering 31 counties, had 876 deaths, a rate of 12.7, which is 1.1 below the State average for the month. The Central Sanitary Section, 33 counties, with 1,024,791 inhabitants, had 1,144 deaths, a rate of 13.6, being .2 below the State average. The Southern Sanitary Section, 28 counties,

651,836 inhabitants, had 834 deaths, a rate of 15.6, which is 1.8 above the State average. The chart, page 21, gives an objective comparison of the mortality of the three sections.

COUNTIES: The counties which in November had death rates above the average for the whole State were: Benton, 13.9; Blackford, 19.8; Jasper, 14.5; Jay, 14.1; Laporte, 15.8; Miami, 15; St. Joseph, 15.9; Wells, 15; Bartholomew, 21.8; Boone, 15.7; Brown, 16.3; Delaware, 14.5; Fountain, 14.7; Marion, 15.7; Montgomery, 16.1; Tippecanoe, 16; Tipton, 14; Vermillion, 14.3; Warren, 18.2; Wayne, 15.9; Clark, 19.9; Crawford, 16.2; Dearborn, 16.4; Dubois, 14.2; Floyd, 18.2; Greene, 16.2; Jackson, 16; Jefferson, 15.9; Jennings, 14.7; Knox, 19.3; Lawrence, 14.6; Martin, 20.7; Scott, 19; Spencer, 21.2; Sullivan, 17.8; Switzerland, 16.4; Vanderburgh, 16.6; Warrick, 21.3; Washington, 20.1. Bartholomew county shows the highest death rate for this month, 21.8, while for the corresponding month last year, Pike showed the highest rate which was 19. Johnson county shows the lowest death rate for the month, the figures being 6.

CITIES: All cities of the State, showing a population of 847,302, reported 1,127 deaths, a rate of 16.2. The country, with a population of 1,669,164, reported 1,727 deaths, making a rate of 12.6, a difference in favor of the country of 3.6. The cities having a death rate above the average for the State were: South Bend, 17.2; Terre Haute, 17.6; Anderson, 25; Elkhart, 16.8; Elwood, 16.9; Jeffersonville, 24.9; Lafayette, 17.5; Marion, 23.9; Michigan City, 20.5; Muncie, 19.8; New Albany, 23; Vincennes, 16.6; Columbus, 33; Crawfordville, 23.8; Frankfort, 24; Hartford City, 22.6; Madison, 23.3; Mishawaka, 17.5; Peru, 24.5; Seymour, 24.6; Greensburg, 24.2.

CITIES, CLASS A: Cities having over 50,000 population, Indianapolis and Evansville, total population 228,171, report 289 deaths, a rate of 15.4. The rate for the corresponding month last year was 16.3. The Indianapolis rate is 15.9 and the Evansville rate 14.

CITIES, CLASS B: Cities having 25,000 to 50,000 population, including Fort Wayne, South Bend and Terre Haute, having a total population of 117,787, report 161 deaths, a rate of 16.6. The rate for the corresponding month was 13.8.

CITIES, CLASS C: Cities having 10,000 to 25,000 inhabitants, 14 cities in all, having a total population of 218,623, report 326 deaths, a rate of 18.2. The rate for the corresponding month last year was 15.9.

CITIES, CLASS D: Cities having 5,000 to 10,000 population, 23 cities in all, having a total population of

161,751, report 213 deaths, a rate of 16. The rate for the corresponding month last year was 13.7.

CITIES, CLASS E: Cities having less than 5,000 population, 36 cities, with a total population of 120,970, report 138 deaths, a rate of 13.9. The rate for the corresponding month last year was 13.2. The urban deaths from tuberculosis number 96 and the rural 154. The urban deaths from typhoid fever number 96 and the rural 154. The rural deaths from typhoid fever number 48 and 153, respectively. Diphtheria was more destructive in November, 1900, than it was in November, 1899, the figures being, urban 63 this year and 52 last; rural 1,096 this year, 59 last year.

SICKNESS DURING NOVEMBER.

Reports from health officers and physicians taken together with the mortality reports show that the following diseases increased in area of prevalence as compared with the month of October: Bronchitis, tonsillitis, rheumatism, typhoid fever, diphtheria, influenza, scarlet fever, pneumonia. The diseases which decreased in area of prevalence were: Intermittent fever, diarrhea, dysentery, whooping cough, measles, cholera morbus, puerperal fever, cholera infantum, cerebro-spinal meningitis.

Smallpox was reported from the following counties: Jackson, 1 case; Allen, 30 cases and 1 death; Jennings, 6 cases; Marion, 2 cases; Washington, 1 case. Hog cholera was reported as epidemic in Laporte and Whitley counties

THE PRESERVATION OF THE TEETH OF SCHOOL CHILDREN.

Rules recommended by the School Children's Committee of the British Dental Association, and circulated for the information of managers and teachers of national schools in Ireland:

"Without good teeth there can not be good mastication.

Without thorough mastication there can not be perfect digestion, and poor health results.

Hence the paramount importance of sound teeth.

Clean teeth do not decay.

The importance of a sound first set of teeth is as great to the child as a sound second set is to the adult.

Children should be taught to use the tooth brush early.

Food left on the teeth ferments, and the acid formed produces decay.

Decay leads in time to pain and the total destruction of the tooth.

The substance of the following rules should therefore be impressed constantly upon all children:

1. The teeth should be cleansed at least once daily.

2. The best time to clean the teeth is after the last meal.

3. A small tooth brush, with stiff bristles, should be used, brushing up and down and across, and inside and outside, and in between the teeth.

4. A simple tooth powder, or a little soap, and some precipitated chalk taken up on the brush may be used if the teeth are dirty or stained.

5. It is a good practice to rinse the mouth out after every meal.

6. All rough usage of the teeth, such as cracking nuts, biting thread, etc., should be avoided, but the proper use of the teeth in chewing is good for them.

When decay occurs it should be attended to long before any pain results. It is stopping of a small cavity that is of the greatest service.

In 10,000 children's mouths examined 86 out of every 100 required skilled operative treatment."—Journal of the British Dental Association.

MILD SCARLET FEVER: There is a doctor in Vincennes (he lives also at other points in Indiana) who says to the householder: "O! the case is mild scarlet fever, and I won't report it; you just go on as usual." The mother protested in one instance, and said she would rather suffer quarantine than run the slightest risk of transmitting the disease to others. This is one of many instances where the lay individual was ahead of the doctor both in morals and practice.

* * *

MARTINSVILLE: The new sewer system at Martinsville will soon be completed. Every effort is being made to induce the people to put in flush closets and bathrooms. An ordinance compelling abolition of the barbarous vaults and compelling house sewer connections is at the present time considered not the thing to do. Eventually this will, of course, be done. Martinsville has a potable water supply, and when its sewers are completed it will be well on the way to having modern city conditions. Next will come paved streets. Martinsville is a fine city, beautifully located, and its citizens are up to date.

* * *

THE BOZE FAMILY: Peter Boze was a farmer of Adams county. He died January 1, 1900, of pulmonary tuberculosis, at the age of 80 years. His son, David L. Boze, died of tuberculosis May 15, 1900. Dollie Boze, daughter of David Boze, died December 11, 1899, the cause of death being pulmonary tuberculosis.

Here seemingly is an instance of inherited tendency. It, of course, is possible, yes, likely, that the elder Boze thoroughly infected the home, and inherited tendency had nothing to do in the matter.

* * *

"DISINFECTION AND DISINFECTANTS" is the title of a handy little volume of 100 pages written by Dr. H. M. Bracken, Secretary of the State Board of Health of Minnesota, and published by the Trade Periodical Co., of 241 Wabash avenue, Chicago, Ill. The book is just what its title indicates, and it covers the whole subject of disinfecting in a thoroughly intelligible way. It treats of the different methods of disinfecting and the different disinfectants and their applicability to different diseases, and gives specific instructions to disinfectors as to the care of

themselves and their surroundings. We know of no book in which so much is contained in so little space. Dr. Bracken has done his work thoroughly. He has had abundant opportunity to study the great question of disinfection and has given to the profession something of real value. The book is such a volume as should be in the hands of every physician and every health officer. It is sold for one dollar.

* * *

UNDERTAKER FINED: Dr. Horne, health officer of Wells county, observed that his transcript from the State office for July made no record of the death of one Peter Moore of Poneto. Knowing of the death, investigation was made and it developed that undertaker Lewis L. Howard had buried the remains without a permit. Dr. Horne was therefore compelled to make out affidavit, and Mr. Howard was fined \$17.50.

* * *

FINED FOR NOT REPORTING TYPHOID FEVER: Dr. L. A. Spaulding of Bluffton neglected to report two cases of typhoid fever which came under his care. He was fined \$19.00.

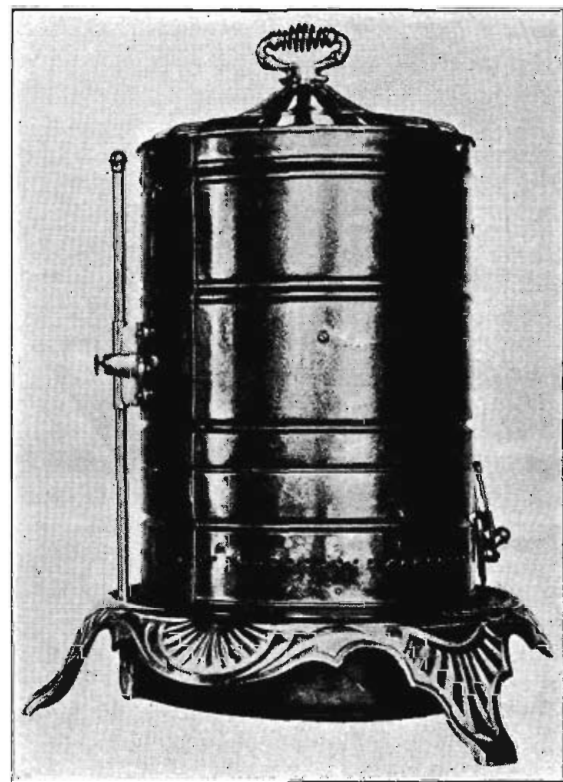
* * *

DRIVEN WELLS: Never drive a tubular well in the bottom of an old dug well, unless afterward the old well is filled to the top with clean gravel and clean earth. When tubular wells are put down in the bottom of old dug ones without filling as directed, the old one ultimately becomes a sink hole containing stagnant water and surface drainage. This is, of course, polluted, and the chances of it finding its way down the side of the tube to its lower end and eventually appearing in the supply, is very great.

* * *

WE PUBLISH an illustration in this number of the Bulletin of the formaldehyde generator that was exhibited at the American Public Health Association meeting in this city, by the Kuhn Formaldehyde Generator Company of Alexandria, Va., and which attracted more than ordinary attention. This is one of the direct type of formaldehyde generators in that it generates formaldehyde by the passage of the vapor of wood or methyl alcohol, mixed with air, over incandescent platinum in a state of fine division, and the most important feature of the apparatus is the immersion of the lower end of the cylinder carrying the disks and cone into water. This acts as a water seal and the only air admitted to the alcohol, is passed through a series of small openings which are carefully gauged to supply just a sufficient quantity for the partial oxidation of the alcohol vapor. In addition, the water forming this water seal is slowly volatilized during the process of combustion, and hydrates the formaldehyde evolved, thus giving it a much more penetrating effect and rendering it much more highly germicidal. Experiments conducted from time to time in laboratories and by various authors have demonstrated the fact, that in order for formaldehyde to be most effective, there should be a certain amount of

moisture thrown off with the gas. This was corroborated by Prof. F. C. Robinson, in his excellent paper read on disinfection at the meeting of the Public Health Association. Remarkable results have been obtained from experiments conducted with this apparatus, in which various bacteria have been exposed to the formaldehyde evolved under various conditions. A number of these experiments were conducted in the laboratory of the United States Marine Hospital Service by Dr. H. D. Geddings, under the direction of Surgeon General Walter Wyman. Practical tests simulating conditions obtaining in a room where a case of infectious or contagious disease has occurred, have resulted in uniform success. Cultures of various organisms, such as typhoid, diphtheria and the bacillus icteroides of yellow fever, were



THE KUHN FORMALDEHYDE GENERATOR.

enclosed in envelopes, and these envelopes were covered by folds of blankets; by sheets; were buried in hair pillows; were exposed in the pockets of coats and trousers; were placed on the floor and covered by heavy carpeting; were put in the interior of hats; shoes, etc., and were pasted on the wall behind heavy wall paper, with the result that the organisms submitted to the experiment were invariably killed. The apparatus is simple in operation, absolutely safe from any danger of explosion, and extremely cheap to operate, only requiring one quart of standard methyl or wood alcohol to thoroughly disinfect 2,500 cubic feet of space. The apparatus has recently been adopted by the United States Marine Hospital Service, which has supplied the various quarantine stations under its control with a complete outfit of the generators. Surgeon General George M. Sternberg, of the United States Army, has

recently purchased a number of them for use of the surgeons under his command. We feel assured that the representations made for this apparatus by its manufacturers are fully sustained.

A STATE LABORATORY OF HYGIENE.

The State Board of Health will present a bill to the next legislature for an act establishing A STATE LABORATORY OF HYGIENE. This laboratory is to be under the control and direction of the State Board of Health. It will be for the purpose of making sanitary analyses and sanitary investigations and studies for the purpose of preventing disease. To this laboratory physicians may send specimens for free examination to aid in diagnoses. Examinations for diphtheria, tuberculosis, malaria, typhoid fever, etc., will be made free of charge. This work alone would be most valuable to the people. The laboratory would also be used for enforcing the pure food and drug law. This law, which was passed in 1899, is a model law in every respect, and has been highly praised by the British Food Journal. The State Board of Health is commanded to enforce this law. Enforcement has been perfectly impossible, because there was no appropriation and because the State Board of Health has no laboratory. It is absolutely impossible to enforce a pure food and drug law without making chemical analyses, and these can not be made without a laboratory.

Another use for a Laboratory of Hygiene would be through it to look closely after the pollution of streams and the proper sanitary disposal of sewage and polluting wastes from factories. It is always possible to devise methods for the sanitary disposal of sewage and other polluting matters. This work can only be done in a laboratory. If, instead of driving industries out of the State as is now being done by prosecutions, the State would take up the problem of preserving these industries by devising methods for the sanitary disposal of their polluting wastes, and then force these methods upon the industries, great benefits would be gained. The industries which pollute the streams and which should be saved, represent a total capital of not less than twenty million dollars. They pay out annually in wages almost five million dollars; they pay large taxes, and use up annually several million dollars' worth of raw material. Already two factories have been driven out of the State by prosecutions, one at Greenfield and the other was at Hartford City. The latter burned down and the owners would not consent to rebuild again in Indiana. It is very possible to save the stream-polluting industries with little expense, and it would be foolish indeed not to do so.

If the State Board of Health had a laboratory, its method would be to go to the stream-polluting industries, secure samples of their waste matters, make analyses, and afterward devise methods of sanitary disposal. When these methods were finally installed and in working order there would be no pollution of the streams and the industries would remain with their many benefits. Not less than 40 per cent. of the foods offered for sale in Indiana

are adulterated or unwholesome. The people are swindled right and left by purchasing butter adulterated with an equal weight of milk. Spices which are nothing more than ground cocoanut shells, sausages that are filled with bad flour, clay and injurious coloring matter, cheese which is filled with cotton seed oil, lard which is adulterated with cotton seed stearin and cheap fats, catsups which are preserved with injurious antiseptics, and there are many kinds of adulterated canned goods. For the State not to protect the people against these swindles and threats against their health is foolish indeed. The people are annually swindled out of enough money in adulterated butter alone to pay the entire expense of the laboratory.

It has been suggested that the laboratories of the State universities be used. This would be impracticable. The university laboratories are teaching laboratories. They are filled with students almost every hour of the day, and the professors of chemistry are engaged continuously in teaching. A teaching laboratory differs greatly from a working laboratory, and it would be impossible for professors to make analyses in their teaching laboratories and carry on prosecutions all over the State. Either the teaching must be given up or else the analyses incident to a laboratory of hygiene must not be entered upon. It has also been suggested that the County Boards of Health should be required to enforce the pure food law. This suggestion is more impracticable than the first one. The County Boards of Health could not do the work without laboratories and without trained chemists. This would necessitate ninety-two laboratories and ninety-two chemists. The proposition of the Board of Health is the only sane and practicable one.

A laboratory of hygiene would bring great benefits to the people, would save them large sums of money annually, and would do much toward bettering the public health, which simply means the promotion of the general happiness.

Every health officer should, without delay, take this matter up with the Representatives and Senators from his district and urge that they support the bill creating a laboratory of hygiene.

THE PUBLIC WATER SUPPLY OF CONNERSVILLE.

The water supply of Connerville is taken from the west branch of White river. A canal seven miles long, at every point raised above the surface of the ground on either side, brings the supply to the city. This feature of the canal makes it impossible for surface drainage or pollution of any kind whatever to enter the same. The water which is brought to Connerville is the pure, uncontaminated water of the river, which flows through a region that is sparsely inhabited and has upon it no towns to drain therein. The picture herewith shows the end of the canal at Connerville with the waterworks on the left. These waterworks are run by a turbine wheel propelled by water taken from the canal itself, and the pumps force

the water direct to the consumers. The machinery of the waterworks is almost altogether automatic, requiring skilled attention only once in a great while and daily attention from only a boy. The following analyses show the character of the supply. To make plain the standing of the "hydraulic supply," the analysis of a well at the residence of W. J. Orr, Central avenue, is given. Connersville is to be congratulated upon having such an excellent public water supply.

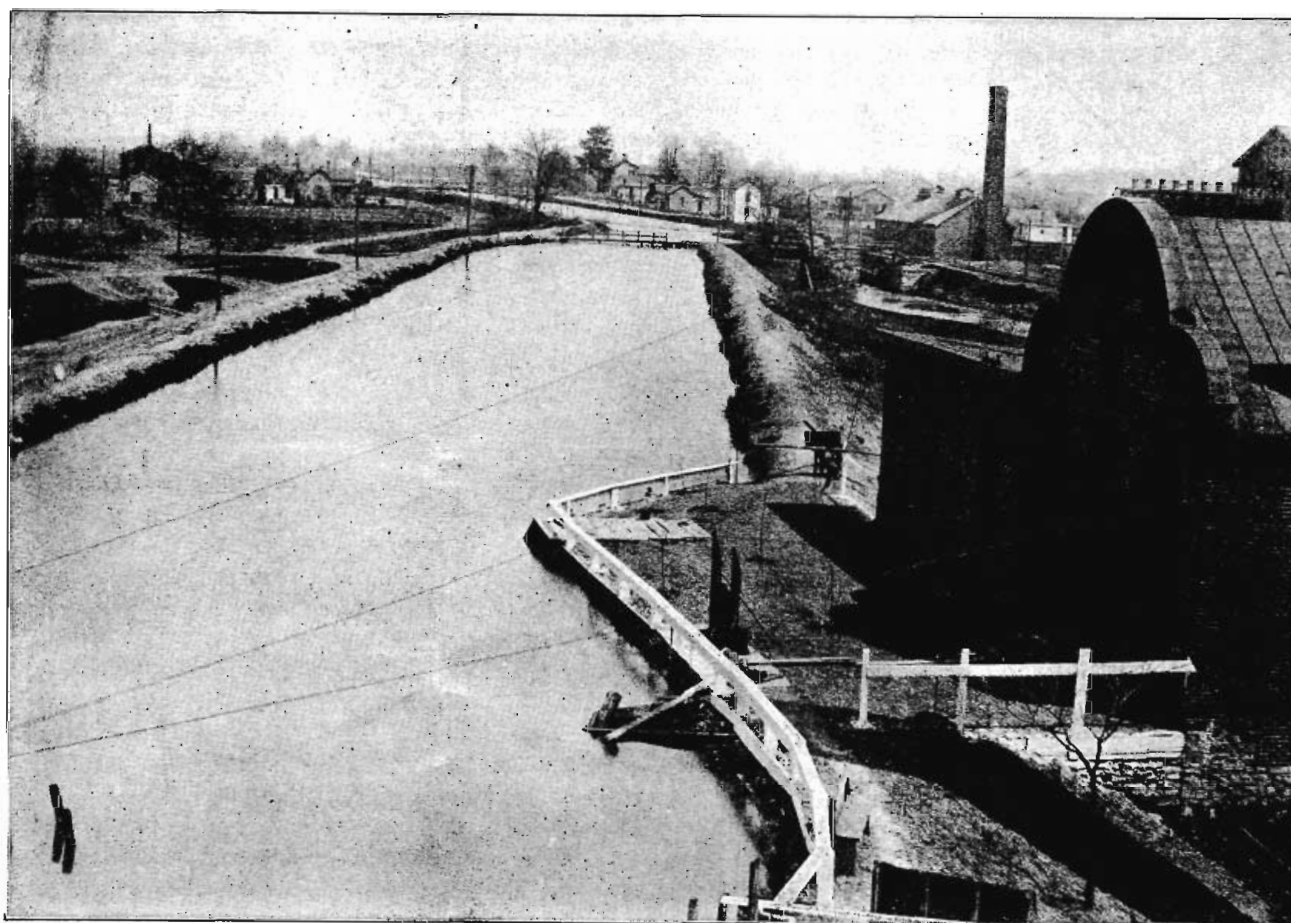
No. 3. Faucet at F. T. Roots' residence after being filtered. Collected September 26, 1900.

No. 4. From reservoir at entrance of city waterworks. Collected and sealed by F. T. Roots and Z. M. Ellis.

No. 5. Inlet city waterworks. Collected by C. E. Jordan. September 27, 1900.

The figures are parts per 100,000.

The analytical figures shows that the Connersville public supply is not only potable but is also soft. For all uses pure soft water is best.



"CONNERSVILLE HYDRAULIC."

SANITARY WATER ANALYSES OF CONNERSVILLE WATERS.

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.
APPEARANCE:					
Turbidity.....	none.	none.	none.	none.	none.
Sediment.....	none.	none.	none.	none.	none.
Color.....	none.	none.	none.	none.	none.
Odor.....	none.	none.	none.	none.	none.
CHLORIN in chlorids...	0.9	0.8	0.7	0.7	0.7
SOLIDS:					
Total solids.....	51.8	32.4	32.3	32.7	33.0
Fixed solids.....	38.10	25.4	25.8	27.8	27.5
Volatile solids.....	13.7	7.0	6.5	4.9	5.5
NITROGEN AS:					
Free ammonia.....	0.003	0.003	0.004	0.018	0.003
Albuminoid am.....	0.002	0.003	0.004	0.019	0.005
Nitrites.....	0.000	0.000	0.000	0.021	0.003
Nitrates.....	0.000	0.000	0.000	0.000	0.000
INTESTINAL BACTERIA.	present.	none.	none.	present.	none.

No. 1. Well at residence of W. J. Orr, Central avenue, Connersville, Ind. Collected September 27, 1900.

No. 2. Faucet, residence of F. T. Roots, filtered water from city mains. Collected September 27, 1900.

MALARIA: Dr. Manson suggests that America's educational system, "which is in some respects in advance of British ideas," ought properly to include a course in elementary hygiene. He says that children should be taught the rudimentary principle that malarial parasites flourish wherever stagnant water is permitted to accumulate, and that thus children would grow up with the knowledge firmly rooted in their minds that from the neglect of such simple conditions of health dangerous consequences are sure to follow.

ALLEN COUNTY SMALLPOX: Smallpox appeared in Allen county last winter and was fought hard by Dr. Carl Proegler, the county health officer. This winter the disease appeared again, being introduced from Ohio. Dr. Proegler tells how he makes war on this loathsome disease as follows: "I asked and obtained from the County

Council an appropriation of \$2,500 as an epidemic fund. Dr. Lomas was appointed deputy, to be paid \$10 per day while engaged in smallpox work. A smallpox nurse was also engaged, salary to be \$25 per week while actually in smallpox service. Guards, when necessary, are employed at \$1.50 to \$3 per day, and necessary supplies are furnished quarantined families which are too poor to pay for the same. Well-to-do families, even when quarantined, are required to pay for their food. All smallpox houses are thoroughly disinfected with formaldehyde gas after the disease subsides, and straw beds, husk mattresses and such cheap articles destroyed by burning. Free vaccination is given to all who are too poor to pay, and all are vaccinated who are known to have been exposed. House to house inspection is always made in any locality where smallpox appears. I have had no trouble of moment in enforcing the rules of the State Board of Health, and our physicians always lend their services and advice. Our smallpox this year is exclusively an Ohio product."

ENFORCEMENT OF STATISTICS LAW IN WASHINGTON COUNTY.

We give below copies of the notices recently sent out by Dr. Purkhiser, health officer of Washington county. Evidently Dr. Purkhiser is a conscientious officer, intent upon doing his duty. It is needless to say that the mortality reports from Washington county are all right:

W. J. PURKHISER, M. D.,
Secretary County Board of Health.

SALEM, IND., July 26, 1900.

What and When Physicians shall report to the Secretary of Board of Health—

- (1) Deaths—Report at once.
- (2) Births—Report within 15 days after occurrence.
- (3) Diseases—Report at once: Typhoid Fever, Yellow Fever, Smallpox, Cholera, Diphtheria, Membranous Croup, Scarlet Fever, Measles, Typhus Fever, Whooping Cough, Cerebro-Spinal Meningitis, Bubonic Plague, Leprosy and Pulmonary Tuberculosis. (Pulmonary Tuberculosis and Typhoid Fever shall not be quarantined.)

Any failure to comply promptly with this rule of the State Board of Health will be dealt with according to law.

Tack this card up over your desk, as it may save you trouble and expense.

W. J. PURKHISER, M. D.,
Secretary County Board of Health.

Office of
W. J. PURKHISER, M. D.,
Secretary County Board of Health.

SALEM, IND., 1900.

DEAR SIR—The law provides a fine of \$10 to \$100 for failure to report births, deaths and contagious diseases to the Secretary of the County Board of Health. Each failure will be immediately reported to the Prosecuting Attorney, with orders to proceed according to law. It is my duty to do this or pay a fine of \$10 to \$100 myself.

Reports must be made PROMPTLY, as required, so my reports can be as promptly reported to the State Board. I enclose blanks. Very respectfully,

W. J. PURKHISER, M. D.,
Secretary.

POLLUTION OF STREAMS: Not long since a city of 30,000 inhabitants, situated in southern Pennsylvania, began to suffer from typhoid fever to such an extent that the State Inspector was started on a tour of investigation. The city is supplied by a large mountain stream which flows through a hilly, rolling country for some twelve or thirteen miles.

Up this stream the inspector started in quest of filth, and filth he found, just five miles back of the city. There, on a small branch stream, was a flourishing town of 1,200 inhabitants, with a livery stable, numerous privies and more numerous private drains, all emptying into this stream, which was practically an open sewer. Yet this was not the worst. On investigation it was found that during the last month there had been nineteen cases of typhoid fever in this town and that half of the cases dwelt directly on the drainage area of this stream.

Six miles farther up the main brook there were other sources of pollution in the shape of piggeries, a number of country privies and a tannery. Is it any wonder that the city which was drinking this water should be swept by a scourge of typhoid? Yet the average citizen evidently thought he was getting pure mountain water, and never bothered about it until sickness and death became more apparent than usual.

A mountain stream like this will never purify itself, and poison in one end goes to the other just as surely as night follows day.

Another case of negligence, perhaps ignorance, I ought to call it, in regard to a water supply, came to my notice lately. A small town in one of the mountain districts of Pennsylvania decided that danger lurked in the old well and sought a public supply. On Peter's mountain, eight miles distant, is one of the finest springs in the State, for there is no habitation of man or beast on the whole mountain, and the drainage area of the spring is a small basin in a more or less primeval condition. So to this spring the town, eight miles away, laid pipes and built a small covered reservoir for collection and protection of the water; but instead of covering up the fountain head, they went a little below and left the head exposed. Now this spring is a resort for picnic parties, and every one, of course, uses the water. At my last visit there were the debris of a feast, not only about the spring, but actually in it.

The town should have made the reservoir large enough to surround the entire spring, and then the picnickers, the passing tramp or the wandering hunter would drink at the overflow, and the water would not then run so much risk of pollution. Some day the tramp or the hunter will come here in the incipient stage of typhoid, and then the town will wonder how it is that one can get sick from such pure mountain water. They will take it as a sign of the degenerating times and tell you that nothing is as good as it was in the days of old—even one can no longer trust spring water. A hundred dollars would have effectually protected this spring and its drainage area and have given the town pure water for years to come. Many a stream I know which flows through a vale where nature seems to have done her best in glorious trees and fragrant flowers. Surely, you say, in this primeval purity there is no danger.

Follow the stream to its head. The trees and flowers begin to vanish and you will eventually find yourself at the back door of some spring house, with the usual country privy or cow yard or pig pen not far away. The water does not seem so pure now nor the flowers so sweet.

All along the Susquehanna there are sources of polluting; some are bad and some are very bad. Here is an example: A village of 1,000 inhabitants is situated on a little brook about a mile long. This brook answers as an open sewer for the village, and there are just about twenty-five privies built along its banks, and most of them discharge directly into it. For the last ten years, to my personal knowledge, there has been typhoid fever along this brook. Now, two miles below its mouth, on the same side of the river, is the pumping station of a waterworks which supplies several towns with river water. Two miles will certainly not purify Susquehanna water, and some day we shall have a practical demonstration of it.—H. B. Bashore, M. D., in *The Sanitarian*.

SUGGESTIONS ABOUT THE SANITARY MANAGEMENT OF CONTAGIOUS DISEASES IN CHILDREN.

Almost everything said of the management of contagious diseases in adults, applies equally to these maladies as they affect children. But there are certain aspects of the subject in the cases of infectious diseases in children, which do not present themselves so prominently in relation to older people. These diseases taken as a class are far more likely to attack the child than the adult; consequently the sick child's associates and juvenile neighbors, are in much greater peril from the contagion than the adult neighbors, and that form of juvenile association which is unavoidable in our public and private schools makes the infected child a greater menace to health and life than the infected adult is likely to be.

This paper would be open to severe criticism if it did not include the all-important injunction to have every infant successfully vaccinated before the beginning of the teething period, unless, in the opinion of the attending physician, present ill-health is such as to render the postponement of the operation advisable. No parent should pay the slightest attention to any of the so-called arguments against the necessity or the value of vaccination. They are all sophistical, sinister, worthless.

The best of all precautions are those which prevent us from contracting disease ourselves or from carrying it to others. A large amount of disease is caused by needless association with families in which contagious disease is present, and by attending funerals of those dead of such disease. No person, young or old, who is liable to come into contact with, or to approach, young children, should enter a house where smallpox, scarlet fever, diphtheria, measles or whooping cough prevails, or has recently prevailed, or attend the funeral of a person who has died of one of these maladies. The only exceptions to this rule relate to those whose duties require their presence at such places; and even in the case of these persons, no avoida-

ble approach to young children should be tolerated subsequently, until all danger of transmitting the infection has been removed. To the needless visitation of infected houses by parents and friends, thousands on thousands of children have owed the diseases that consigned them to early graves. Such visitation should be avoided and, in connection with diphtheria, smallpox and scarlet fever, should be prohibited.

But when contagious disease has invaded the home, what then? The first precaution—the very first—is to isolate the patient. It can not be done too soon. It is usually not done soon enough. There are reasons for this unfortunate, and sometimes disastrous, delay. It is not always easy, or even possible, to diagnose a case of contagious disease in its incipency. The most skillful and experienced of our physicians meet with great difficulty, and are often unable to determine the contagious nature of a case of disease upon a first, or even a second, visit. But wherever the case exhibits suspicious characteristics, the patient should be promptly isolated; and then, the physician should not be censured, or suspected of deficient skill, in case the disease fortunately proves to be non-contagious. He should rather be warmly commended for his wise care of the interests of the family and neighbors.

Isolation which is not perfect is not isolation. To be perfect, it must separate the patient and nurse from all contact and approach of those who may either contract or carry the infection. The word "contact" here used is a broader term than when employed in its ordinary sense. It may be either direct or indirect. Thus "infectious contact" may be had not only through the person of the patient, but through anything that has been in contact with him—the clothing, bedding, culinary utensils, excretions, secretions, air of the room, and even the walls, floor, ceiling and furniture of the apartment; and last, but by no means least, the persons and clothing of those who, in the way of duty or otherwise, have entered the room, or breathed the atmosphere of the disease.

One serious mistake often made by parents is based on the erroneous idea that persons living in the house, but avoiding the sick chamber, are not likely to carry the disease on their persons or in their clothing, and may, therefore, continue to mingle with the outside world, transact business, attend school, etc., without imperilling their neighbors. This error, especially as it relates to diphtheria and scarlet fever, has cost many precious lives and shrouded many homes in sorrow and gloom.

What was said in this paper about the perfection of isolation, might be repeated about disinfection. Partial disinfection is continued infection. The "germs" that possess the power to propagate infectious disease may be found in the discharges, the clothing and bedding, the atmosphere of the room, as well as on the person of the sufferer. The proper time and place to kill them is while we have them in our custody, and on the spot. To throw the discharges of a case of contagious disease into the cesspool or sewer and then apply our disinfectants to them, is like turning a mad dog into the street and then searching for a policeman to shoot him. All infected substances should, if possible, be disinfected before removal. I have

usually recommended to my patients the lime chloride, in preference to the mercuric chloride or the carbolic acid, not because it possesses any superior disinfecting virtues, but because accidental poisonings are less liable to occur from its presence in the house than from the others. Four ounces of the fresh chloride of lime (or six ounces if it be not perfectly fresh and strong) is dissolved in a gallon of water for the disinfection of the discharges, and a mixture of one gallon of this solution with nine gallons of water can be recommended for soaking, for one hour, the infected clothing or for washing the person of the patient or nurse.

I want to say just a word about "isolation hospitals" and their management. We physicians know how difficult it is to induce a mother to send her child, sick with scarlet fever or diphtheria, to a hospital for treatment. Most mothers can not be induced to consider the question, much less to consent to such a proposal. And what wonder? God hath joined together the mother and her child, and no man can put them asunder, least of all when, amid the perils of a dreadful disease, the tie grows tenfold stronger. These hospitals will never reach their highest usefulness so long as their management requires the child to be separated from its mother. But let these institutions be so constructed and arranged as to care for both, and permit the mother to relieve and assist the hospital nurse in certain of her duties, and mothers will soon be found welcoming the shelter and care and safety of the hospital, and then we shall have reached that efficiency of isolation and of general sanitation of our contagious maladies which will enable us to crush out these epidemics promptly, even in our large cities.

We physicians—and we patients—ought to be very scrupulous and very intelligently careful about the way in which we receive and encourage and co-operate with our local health inspectors. They come to us when our homes are invaded by pestilential disease, just as much in the garb and character of a true friendship, as do our physicians and nurses. They ought to be welcomed as such and their efforts furthered to the extent of our ability. There is in the minds of some persons a disposition to attach to the health officer and his inspectors the responsibility for all the inconvenience and annoyance incident to the sanitation of contagious diseases, just as there are people who censure the weather bureau for all the cyclones.

An intelligent patient of mine into whose house scarlet fever had entered determined that not a suggestion or direction of the inspector should fail of her cordial and energetic support and execution. Promptness, energy and persistence characterized every effort she made to prevent the disease from reaching other people. As a consequence her three other children escaped the infection, and, after a period of maternal anxiety such as none but the maternal heart can know, her sick one recovered. Subsequently the inspector said to her something like this: "Madam, your child caught the disease through somebody's mismanagement, but no other mother's child caught it through yours. So far as you had to do with the progress of this epidemic, it never got past your house, and if everybody

would do as you have done the disease would be quickly stamped out; no failure on your part has filled any other woman's home with mourning." "Well," said the relieved mother, "what a comfort it is to know that."—Pemberton Dudley, M. D., member of the State Board of Health, Philadelphia, Pa.

PLAGUE PROPHYLACTIC: The toxin that is used as a prophylactic against the plague is prepared by taking the virus from the liver of a patient who has just died of the disease. Of this a culture is made in agar-agar for from four to six weeks, or until the germs of the disease have attained their maximum of vitality. This first culture is now put into bouillon and allowed to undergo a second process of germination and growth. This second culture is next submitted to a high temperature, so as to insure the death of all the germs that it contains. This last is the fluid used as a preventive injection. The great difficulty is to get antitoxin of a uniform and proper strength. There is a wide difference of opinion among scientists as to the utility of this preventive inoculation. In fact at the present time the whole subject seems to be in an experimental stage. The best evidence of its efficacy is furnished in one of the Bombay prisons, where among 100 uninoculated prisoners 40 died of the disease, while among 100 of those who had been inoculated only eight died. To overcome the prejudices of the natives against the inoculation for the prevention of the plague, the Viceroy of India, Lord Curzon, before he started on his late tour through the country, had himself and all his staff inoculated.—*Journal of American Medical Association*.

* * *

HOW PLAGUE ATTACKS: Plague attacks rats and other small animals as well as human beings. At the beginning of a plague epidemic large numbers of rats leave their holes, go into the houses without the usual fear of man, stagger about the floor and at length die. After this human beings begin to be attacked, and it is well known that it is dangerous to live in a house where rats are dying of the plague. The fact that rats and similar animals are susceptible to the plague has made it possible to carry out such researches as have led to the discovery of a remedy—a protective remedy—the plague vaccine—just as cowpox led to the discovery of a smallpox vaccine.

* * *

DIED BY DEGREES: A Chinaman met his death a few days ago in San Francisco in a peculiar manner. His physician, Dr. Pillsbury, who is a professor in the College of Physicians and Surgeons, placed a thermometer in the mouth of his patient to ascertain the temperature. The Chinaman evidently mistook the heat measure for medicine and deliberately chewed it and death followed. The cause of death is not given at the time of writing. A medical friend suggests that the Chinaman probably died by degrees.—*The Medical Standard*.

CHART SHOWING GEOGRAPHICAL DISTRIBUTION OF DEATHS FROM CERTAIN COMMUNICABLE DISEASES.

NORTHERN SANITARY SECTION.

Total population	839,835
Total deaths	876
Death rate per 1,000	12.7
Consumption, rate per 100,000	113.3
Typhoid, rate per 100,000	53.7
Diphtheria, rate per 100,000	94.4
Scarlet fever, rate per 100,000	7.2
Diarrheal diseases, rate per 100,000	18.8

CENTRAL SANITARY SECTION.

Total population	1,024,791
Total deaths	1,144
Death rate per 1,000	13.6
Consumption, rate per 100,000	116.6
Typhoid, rate per 100,000	90.4
Diphtheria, rate per 100,000	92.8
Scarlet fever, rate per 100,000	8.3
Diarrheal diseases, rate per 100,000	20.2

SOUTHERN SANITARY SECTION.

Total population	651,836
Total deaths	834
Death rate per 1,000	15.6
Consumption, rate per 100,000	138.5
Typhoid, rate per 100,000	95.4
Diphtheria, rate per 100,000	54.2
Scarlet fever, rate per 100,000	5.6
Diarrheal diseases, rate per 100,000	71.1

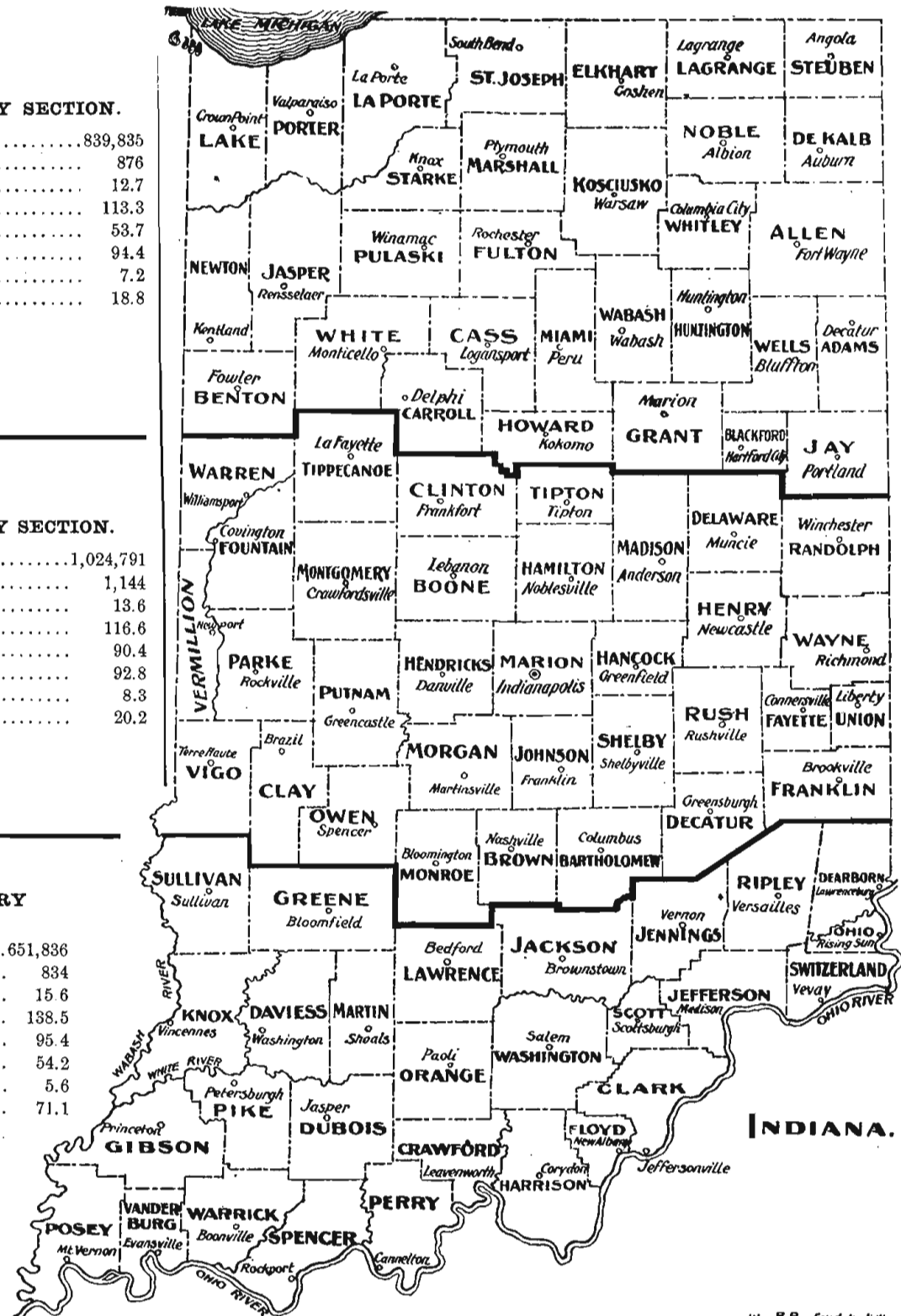


TABLE No. 1. Deaths in Indiana by Geographical Sections and Counties During the Month of November, 1900.

STATE AND COUNTIES.	Population, Census 1900.	Total Deaths Reported for November, 1900.	Annual Death Rate per 1,000 Population	Stillbirths.	IMPORTANT AGES.			DEATHS FROM IMPORTANT CAUSES.																
					Under 1 Year.	1 to 5, Inclusive.	65 Years and Over.	Pulmonary Consumption.	Other Forms of Tuberculosis.	Typhoid Fever.	Diphtheria.	Croup.	Scarlet Fever.	Measles.	Whooping Cough.	Pneumonia.	Diarrheal Dis- eases, Under 5.	Cerebro-spinal Meningitis.	Influenza.	Puerperal Septicemia.	Cancer.	Violence.	Deaths in Insti- tutions.	Smallpox.
State of Indiana..	2,516,462	2,854	13.8	149	476	269	638	250	52	164	172	8	15	7	21	191	68	42	14	15	93	126	103	1
Northern Co's....	839,835	876	12.7	51	133	57	230	78	15	37	65		5		5	55	13	11	5	3	38	30	21	1
Adams.....	22,232	24	13.1	4	2	2	5	2		2	1					1	2				1	2		
Allen.....	77,270	84	13.2	3	13	7	19	7	1	4	9		1			1	4	2		1	3	6	2	1
Benton.....	13,123	15	13.9		1	1	3	3			1					1	1				1			
Blackford.....	17,213	28	19.8	4	9	3	7	2		1	3		1			1	3	1			1	1		
Carroll.....	19,353	20	12.2		3	3	5	1			1					1	3				1	1		
Cass.....	34,545	37	13.0	3	3	3	12	2	2		1					2	2				1	1	6	
Dekalb.....	25,711	25	11.8		5	5	9	1			1					1	1	1			1	1		
Elkhart.....	45,052	47	12.7	1	12	1	14	3	1	3	2					1	1				2	4	2	
Fulton.....	17,453	16	11.1	1	2	2	5	2			3					2	2				3			
Grant.....	54,693	59	13.1	1	13	3	13	7	1	2	3				2	6	2				3		6	
Howard.....	28,575	27	11.5	1	2	2	7	5			3					2	2					1		
Huntington.....	28,901	16	6.7		3	3	6	4			3					1	1				1			
Jasper.....	14,292	17	14.5	2	2	2	4	4		1	2					1	1							
Jay.....	26,818	31	14.1	4	5	2	3	3	1	2	4					1	1				2	1		
Kosciusko.....	29,109	30	12.5		2		14	3		2						2					2			
Lagrange.....	15,284	8	6.3	2	3		1	1			1											4		
Lake.....	37,892	31	9.9	1	4	2	7	7	1	1	3				1	5	1					1		
Laporte.....	38,386	50	15.8	2	10	3	12	4		1	2			1		7	1					1	1	
Marshall.....	25,119	29	14.0	4	1	1	7	1		2	1					1	1				3	1		
Miami.....	28,344	35	15.0	1	6	1	5	4	2	1	3				1	2	1				2		1	
Newton.....	10,448	7	8.1		2	1	1	1			1					2	1							
Noble.....	23,533	27	13.9	2	3	3	5	5	2	2	2					1	1				2	1		
Porter.....	19,175	19	12.0	1	3		9	5			1					1	1				1			
Pulaski.....	14,033	8	6.9		2	2	1	1																
Starke.....	10,431	11	12.8	2	2		3	3			1													
Steuben.....	15,219	12	9.6		1		5	1		2														
St. Joseph.....	58,881	77	15.9	8	10	5	17	6	1	7	7					4	2		2		5	3	2	
Wabash.....	28,235	24	10.3		1	2	10	2		2	3				1	2	2	1			1			
Wells.....	23,449	29	15.0	3	3	3	8	1		3	3		1			2	2	1				1		
White.....	19,138	18	11.4	1	2	3	6	1	1	1	3		1			2	1				1			
Whitley.....	17,328	15	10.5		2	2	7	2		2							1							
Central Co's.....	1,024,791	1,144	13.6	59	171	131	233	98	17	76	78	4	7	7	7	81	17	20	8	5	34	58	44	
Bartholomew.....	24,594	44	21.8		8	7	11	7		5	3		1			2	2			1	1	2		
Boone.....	26,321	34	15.7	2	5	7	5		1	1	11					2	2	1			2			
Brown.....	9,727	13	16.3	1	1	2		2	1	4	3		1			1	1							
Clay.....	34,285	37	13.1	4	10	4	5			3	1				1	1	2		1		1	1		
Clinton.....	28,202	32	13.8	1	5	5	5			1	3					7	1				2	3	2	
Decatur.....	19,518	21	13.1	1	1	7	1		1	2						2	1				3	1		
Delaware.....	49,624	59	14.5	4	11	13	8			7	9				7	4	2					2	1	
Fayette.....	13,495	13	11.7		1	4	2	2			3					3						1		
Fountain.....	21,446	26	14.7	1	3	2	7	3		1	1		1				1					4		
Franklin.....	16,388	17	12.6		1	4	5	2			4					1	1							
Hamilton.....	29,914	22	8.9		3	4	7	2		1	4					1						2		
Hancock.....	19,189	15	9.5	2	2		4	2		1						1					1	2		
Hendricks.....	21,292	18	10.3		1	1	7	1		1														
Henry.....	25,088	23	11.1	1	4	3	6	2								1					2	1		
Johnson.....	20,223	10	6.0		1	1	4	1		3														
Madison.....	70,470	75	12.9	4	12	9	6	3	1	7	3		2			7	1	6			3	8	4	
Marion.....	197,227	255	15.7	24	38	20	46	22	6	10	11	1				27	5	3	1	1	10	15	23	
Monroe.....	20,873	16	9.3	1	4	2	4	3			1					3								
Montgomery.....	29,388	39	16.1	1	6	6	8	4		4	2					2	3					3	1	
Morgan.....	20,457	23	13.7		10		2		1	2					2	2					1			
Owen.....	15,149	13	10.4		3	2	4			1							1					1		
Parke.....	23,000	22	11.6	2	3			5		4						2						2		
Putnam.....	21,478	12	6.8		2	3	2	3			2					1	1							
Randolph.....	28,653	28	11.9	1	7	4	6	2			4				2	1	1				1	2		
Rush.....	20,148	21	12.7	2	3	2	7	4			2				1	2	1					2	1	
Shelby.....	26,491	23	10.5		3	1	7	6		1	2					1	3					2	1	
Tippecanoe.....	38,659	51	16.0	2	3	3	15	2	2	2	6					1	1				1	2	5	
Tipton.....	19,116	22	14.0		5		3	3		2						1					1	1		
Union.....	6,748	6	10.8				5	2		1														
Vermillion.....	15,252	18	14.3	1		4	5	2		2						1								
Vigo.....	62,035	68	13.3	3	8	5	13	8	2	8	2	1				2	1		1	1	1	3	2	
Warren.....	11,371	17	18.2	1	2	2	5	1			3					1						3		
Wayne.....	38,970	51	15.9		5	2	18	3	1	3			2			2		1		1	1	3	6	
Southern Co's....	651,836	834	15.6	39	172																			

TABLE No. II. Deaths in Indiana by Cities During the Month of November, 1900.

CITIES.	Population, Census 1900.	Total Deaths Reported for November, 1900.	Annual Death Rate per 1,000 Population.	IMPORTANT AGES.			DEATHS FROM IMPORTANT CAUSES.																	
				Stillbirths.	Under 1 Year.	1 to 5, Inclusive.	65 Years and Over.	Pulmonary Consumption.	Other Forms of Tuberculosis.	Typhoid Fever.	Diphtheria.	Croup.	Scarlet Fever.	Measles.	Whooping Cough.	Pneumonia.	Diarrheal Diseases, Under 2.	Cerebro-spinal Meningitis.	Influenza.	Puerperal Septicemia.	Cancer.	Violence.	Deaths in Institutions.	Smallpox.
Cities over 50,000 Population	228,171	289	15.4	25	45	18	57	28	6	11	8	1				24	7	2	1	3	12	17	27	
Indianapolis	169,164	321	15.9	22	34	14	40	20	6	9	7	1				21	5	2	1	1	10	15	17	
Evansville	59,207	68	14.0	3	11	4	17	8		2	1					3	2			2	2	10	10	
Cities from 25,000 to 50,000 Population	117,787	161	16.6	10	27	11	30	13	3	7	13		1			8	2	4	1	4	7	8	5	
Ft. Wayne	45,115	59	15.9	2	13	4	10	2	1	1	6		1			3	1	4	1	1	3	5	2	
South Bend	35,999	51	17.2	1	9	3	9	3			5					4	1	2	1	2	4	2	1	
Terre Haute	36,673	51	17.5	1	5	4	11	3	2	6	2					1	1	1	1	1	1	1	2	
Cities from 10,000 to 25,000 Population	218,623	326	18.2	11	67	31	65	17	10	16	22		2	6	2	22	4	7	1	1	8	17	15	
Anderson	20,178	34	20.5	1	4	1	3	1		3	1					2					1	3	4	
Elkhart	15,184	21	16.8		6	1	6	2		2	2											3	2	
Elwood	12,950	18	16.9	1	5	4		1		2	2					2	1					2	2	
Hammond	12,376	15	14.7	1	1	1	4			1	1					1						2	1	
Jeffersonville	10,774	22	24.9	1	4	1	2	1	5	1	1					3		1			1	2	7	
Kokomo	10,609	13	14.9	1	1		3	2		2						1						1		
Lafayette	18,116	26	17.5	1	4	1	7	1		1	3					1								
Logansport	16,204	18	13.5	1	3		6		1										1		1		2	
Marion	17,337	24	23.9		6	2	8	6			2				2	3					2			
Michigan City	14,850	25	20.5	1	8	2	5	1								4		1					1	
Muncie	20,942	34	19.8	2	6	9	4			4	7			6		3		1				1		
New Albany	20,628	39	23.0	1	11	5	7	1	1	2	3					1		1			1			
Richmond	18,226	23	16.0		5	1	10									1		1		1	1	2	1	
Vincennes	10,249	14	16.6		4	3		2	1	1	1		1				1	1						
Cities from 5,000 to 10,000 Population	161,751	213	16.0	6	38	14	45	27	5	10	7					22	5	1		1	10	13	3	
Alexandria	7,221	4	6.7		1		1	1		1						1						1		
Bedford	6,115	7	13.9	1	4											1								
Bloomington	6,460	5	9.4		1		2	1			1													
Brazil	7,786	5	7.8		2	1				1						1								
Columbus	8,130	22	33.0		2	6		4		3						2				1	1	1		
Connersville	6,836	7	12.4		1	2	1	1		1	1					2						1		
Crawfordsville	6,649	13	23.8		2	4		1		1						1		1				2		
Frankfort	7,100	14	24.0		2	2	2				1					4					2	2	1	
Greensburg	5,034	10	24.2		1	1	1	1		1	1					1	1				1	1		
Goshen	7,810	7	10.9	1	2																			
Hartford City	5,912	11	22.6	2	3			1								1					2			
Huntington	9,491	7	8.9			3		2			2													
Laporte	7,113	8	13.7			4	1	1			1													
Madison	7,835	15	23.3		3	1	5	3														1	1	
Mishawaka	5,560	8	17.5	1	1	1	4	2			1						1							
Mt. Vernon	5,132	6	14.2		2	1										2						1		
Peru	8,463	17	24.5		1	2	2	4	2	1							1				1		1	
Princeton	6,041	4	8.0		2	1											1							
Seymour	6,445	13	24.6		5	1	2	2	1	1						1	1					1		
Shelbyville	7,169	6	10.2		1	1	1	1								1	1					1		
Valparaiso	6,280	7	13.5	1	1			2								1	1							
Wabash	8,618	8	11.3				3									2					1			
Washington	8,551	9	12.8		2	1			2	1						1								
Cities under 5,000 Population	120,970	138	13.9	7	28	17	30	11	2	4	13		1		1	8	5	1	3		9	8		
Attica	3,005	6	24.3		2	1	1																	
Aurora	3,645	5	16.7				2				1													
Bluffton	4,479	6	16.3	2			3																	
Cannelton	2,188	2	11.1			1																		
Clinton	2,918	3	12.5		2											1						1		
Columbia City	2,975	5	20.5		2	1	1	1			1						1							
Covington	2,213	2	11.0					1			1													
Decatur	4,142	3	8.8		1			1									1							
Delphi	2,135	6	34.2		1	1	1	1		1	1					1								
Dunkirk	3,187	2	7.6								1													
East Chicago	3,411	2	7.1		2										1									
Franklin	4,005	1	3.0		1																			
Garrett	3,910	5	15.6				2														1	1		
Gas City	3,622	4	13.4		2	1					1													
Greencastle	3,661	3	9.9		1	2					2													
Greenfield	4,489	3	8.1		1		1	1									1							
Huntingburg	2,527	2	9.6		1													1						
Kendallville	3,354	5	18.1		1		2			1	1										1			
Lawrenceburg	4,326	4	11.2		1																			
Lebanon	4,465	10	27.3			4	1									1		1						
Ligonier	2,231	6	32.8		1			1	1		3													
Martinsville	4,038	5	15.1		2					1											1			
Montpelier	3,405	7	25.0		1	2	1	1					1											
Noblesville	4,792	2	5.0			1																2		
North Vernon	2,823																							
Plymouth	3,656	6	20.0			1	4													1				
Portland	4,798	4	10.1		1	1	1																	
Rensselaer	2,255	2	10.8								1					1								
Rising Sun	1,428	3	25.6				2									1								
Rushville	4,541	7	18.8		1	1	4	1								2					2	1		
Tell City	2,680	3	13.6		1			1								1						1		
Tipton	3,764	7	22.6		3		1	2														1		
Union City	2,716	2	8.9																		1			
Vevay	1,494	2	16.3		1			1									1							
Warsaw	3,987																							
Winchester	3,705	3	9.8				2																	
Total Urban Population	847,302	1,127																						

Mortality of Indiana for November, 1900.

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL.	Population, Census 1900.	Total Deaths Reported for November, 1900.	Annual Death Rate per 1,000 Population.	Stillbirths.	Important Ages.						Deaths and Annual Death Rates per 100,000 Population from Important Causes.									
					Under 1		1 to 4.		65 and Over		Consumption.		Other Forms Tuberculosis.		Typhoid Fever.		Diphtheria.		Croup.	
					Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.
State	2,516,462	2,854	13.8	149	476	17.2	269	9.9	638	23.5	250	121.2	52	25.2	164	79.5	172	83.3	8	3.8
Northern Co's	839,835	876	12.7	51	133	16.1	57	6.9	230	27.8	78	113.3	15	21.7	37	53.7	65	94.4	.....	.....
Central Co's	1,024,791	1,144	13.6	59	171	15.7	131	12.0	233	21.4	98	116.6	17	20.2	76	90.4	78	92.8	4	4.7
Southern Co's	651,836	834	15.6	39	172	21.6	81	10.1	175	22.0	74	138.5	20	37.4	51	95.4	29	54.2	4	7.4
All cities	847,302	1,127	16.2	59	205	19.1	91	8.5	227	21.2	96	138.2	26	37.4	48	69.1	63	90.7	1	1.4
Over 50,000	228,171	289	15.4	25	45	17.0	18	6.8	57	21.5	28	149.7	6	32.0	11	58.8	8	42.7	1	5.3
25,000 to 50,000	117,787	161	16.6	10	27	17.8	11	7.2	30	19.8	13	134.6	3	31.0	7	72.5	13	134.6	.....	.....
10,000 to 25,000	218,623	326	18.2	11	67	20.8	31	9.8	65	20.5	17	94.8	10	55.8	16	89.2	22	122.7	.....	.....
5,000 to 10,000	161,751	213	16.0	6	38	18.3	14	6.7	45	21.7	27	20.6	5	37.7	10	75.4	7	52.7	.....	.....
Under 5,000	120,970	138	13.9	7	23	21.3	17	12.9	30	22.9	11	110.9	2	20.1	4	40.3	13	131.1	.....	.....
Country	1,669,160	1,727	12.6	90	271	16.5	178	10.8	411	25.1	154	112.5	26	19.0	116	84.7	109	79.6	7	5.1

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL.	Deaths and Annual Death Rates per 100,000 Population from Important Causes.																					
	Scarlet Fever.		Measles.		Whooping Cough.		Pneu- monia.		Diarrheal Diseases, Under 5 Yrs.		Cerebro- Spinal Meningitis.		Influenza.		Puerperal Septi- cemia		Cancer.		Violence.		Small- pox.	
	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.
State.....	15	7.2	7	3.3	21	10.1	191	92.5	68	32.9	42	20.3	14	6.7	15	7.2	93	45.0	126	61.0	1	.4
Northern Co's...	5	7.2	.....	.....	5	7.2	55	79.8	13	18.8	11	15.9	5	7.2	3	4.3	38	55.2	30	43.5	1	1.4
Central Co's.....	7	8.3	7	8.3	7	8.3	81	96.4	17	20.2	20	23.8	8	9.5	5	5.9	34	40.4	58	69.0	.....	.....
Southern Co's...	3	5.6	.....	.....	9	16.8	55	102.9	38	71.1	11	20.5	1	1.8	7	13.1	21	38.3	38	71.1	.....	.....
All cities	4	5.7	6	8.6	3	4.3	84	120.9	23	33.1	15	23.0	6	8.6	9	12.9	46	66.2	63	90.7	.....	.....
Over 50,000.....	.....	.....	.....	.....	.....	.....	24	128.3	7	37.4	2	10.6	1	5.3	3	16.0	12	64.1	17	90.8	.....	.....
25,000 to 50,000	1	10.3	.....	.....	.....	.....	8	82.8	2	20.7	4	41.4	1	10.3	4	41.4	7	72.5	8	82.8	.....	.....
10,000 to 25,000	2	11.1	6	33.4	2	11.1	22	122.7	4	22.3	7	44.6	1	5.5	1	5.5	8	44.6	17	94.8	.....	.....
5,000 to 10,000 .....	.....	.....	.....	.....	.....	.....	22	165.9	5	37.7	1	5.5	.....	.....	1	5.5	10	75.4	13	98.0	.....	.....
Under 5,000	1	10.0	.....	.....	1	10.0	8	80.6	5	50.4	1	10.0	3	30.2	.....	.....	9	90.7	8	80.6	.....	.....
Country.....	11	8.0	1	.7	18	13.1	107	78.2	45	32.8	27	19.0	8	5.8	6	4.3	47	34.3	63	46.0	1	.7

Indiana Climatic Data for November, 1900, Furnished by U. S. Department of Agriculture.

C. F. R. WAPPENHANS, LOCAL FORECAST OFFICIAL AND SECTION DIRECTOR.

SECTIONS.	Temperature—Degrees Fahrenheit.				Precipitation in Inches.				Sky.			Prevailing Direction of the Wind.
	Monthly—Mean.	Departure from the Normal.	Mean—Maximum.	Mean—Minimum.	Average—Monthly.	Departure from the Normal.	Average Snowfall. (Unmelted.)	No. of Days with Precipitation.	No. of Clear Days.	No. of Partly Cloudy Days.	No. of Cloudy Days.	
Northern Counties—												
Normal	38.9	.....	.....	.....	3.43	.....	.....	.....	.....	.....	.....	.....
Average	40.2	+1.3	71	13	4.42	+0.99	5.7	11	8	8	14	W.
Central Counties—												
Normal	40.7	.....	.....	.....	3.85	.....	.....	.....	.....	.....	.....	.....
Average	42.3	+1.6	74	16	3.80	—0.05	0.7	10	8	8	14	N. W.
Southern Counties—												
Normal	43.8	.....	.....	.....	4.18	.....	.....	.....	.....	.....	.....	.....
Average	45.8	+2.0	76	19	4.56	+0.38	0.4	8	13	6	11	S. W. & N. W.
Averages for the State—												
Normal	41.3	.....	.....	.....	3.83	.....	.....	.....	.....	.....	.....	.....
Average	42.8	+1.5	74	16	4.26	+0.43	2.9	10	10	7	13	S. W.