

# MONTHLY BULLETIN

# Indiana State Board of Health

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The MONTHLY BULLETIN will be sent to all health officers and deputies in the State. Health officers and deputies should 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.

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### BIRTHS FOR APRIL, 1914.

Total births, 4,410 (stillbirths excluded); State rate, 19.1.  
 Males, 2,236; females, 2,174.  
 White males, 2,198; white females, 2,139.  
 Colored births, 73; males 38, females 35.  
 Stillbirths, 136; white, 134; colored, 2.  
 Northern Sanitary Section, population 972,129, reports 1,758 births; rate, 22.0.  
 Central Sanitary Section, population 1,152,277, reports 1,680 births; rate, 17.7.  
 Southern Sanitary Section, population 672,551, reports 972 births; rate, 17.5.  
 Highest rate, Lake County, 31.4.  
 Lowest rate, Posey County, 10.1.  
 Total births to date for 1914, 20,166.

### ABSTRACT OF MORTALITY STATISTICS FOR APRIL, 1914.

Total deaths reported, 3,316; rate, 14.4. In the preceding month, 3,596 deaths; rate, 15.1. In the same month last year, 3,050 deaths; rate, 13.4. Deaths by important ages were: Under 1 year of age, 485, or 14.6 per cent. of total; 1 to 4, 184; 5 to 9, 61; 10 to 14, 38; 15 to 19, 81; 65 and over, 1,151, or 34.7 per cent. of total.

**SANITARY SECTIONS:** THE NORTHERN SANITARY SECTION, population 972,129, reports 1,040 deaths; rate, 13.0. In the preceding month, 1,142 deaths; rate, 13.8. In the same month last year, 1,033 deaths; rate, 13.0.

THE CENTRAL SANITARY SECTION, population 1,152,277, reports 1,500 deaths; rate, 15.8. In the preceding month, 1,622 deaths; rate, 16.5. In the same month last year, 1,286 deaths; rate, 13.7.

THE SOUTHERN SANITARY SECTION, population 672,551, reports 776 deaths; rate, 14.0. In the preceding month, 832 deaths; rate, 14.5. In the same month last year, 781 deaths; rate, 13.3.

**REVIEW OF SECTIONS:** The highest death rate occurred in the Central Section and is 1.4 higher than that for the whole State. The Southern Section presents the highest death rate for tuberculosis, scarlet fever, measles, whooping cough and poliomyelitis. The Northern Section presents the highest death rate for typhoid fever, diphtheria, diarrhea and enteritis, and external causes. The Central Section presents the highest death rate for lobar and broncho-pneumonia, cerebro-spinal fever, influenza, puerperal septicemia, cancer and smallpox.

**RURAL:** Population 1,550,642, reports 1,671 deaths; rate, 16.3. In the preceding month, 1,796 deaths; rate, 16.9. In the same month last year, 1,593 deaths; rate, 15.8.

**URBAN:** Population 1,246,315, reports 1,671 deaths; rate, 16.3. In the preceding month, 1,796 deaths; rate, 16.9. In the same month last year, 1,593 deaths; rate, 15.8. The cities named present the following death rates: Indianapolis, 19.1; Evansville, 16.0; Fort Wayne, 13.2; Terre Haute, 15.2; South Bend, 14.1; Gary, 8.4; Muncie, 16.5; Richmond, 20.1; Hammond, 21.2; Anderson, 18.9; East Chicago, 11.0; Lafayette, 21.7; New Albany, 14.7; Elkhart, 18.9; Michigan City, 10.8.

### SUMMARY OF MORBIDITY AND MORTALITY FOR APRIL, 1914.

Measles were reported as the most prevalent disease. Seventy-one per cent. of observers reported it present. The order of prevalence is as follows: Measles, bronchitis, scarlet fever, pulmonary tuberculosis, rheumatism, tonsillitis, smallpox, lobar pneumonia, diphtheria and croup, influenza, bronchial pneumonia, whooping cough, chickenpox, typhoid fever, malaria fever, diarrhea and enteritis, other forms of

tuberculosis, erysipelas, intermittent and remittent fever, puerperal fever, rabies in human, cerebro-spinal fever, dysentery, rabies in animals, cholera morbus, poliomyelitis.

**SMALLPOX.** 449 cases in 44 counties, with 1 death. The following counties reported smallpox present: Allen, 26 cases; Blackford, 3; Brown, 4; Carroll, 2; Cass, 3; Clinton, 2; Crawford, 2; Decatur, 5; Delaware, 5; Floyd, 34; Fulton, 1; Gibson, 12; Greene, 2; Hamilton, 13; Hancock, 25; Henry, 6; Howard, 4; Jackson, 7; Jay, 4; Johnson, 9; Kosciusko, 10; Lake, 3; Lawrence, 6; Madison, 24; Marion, 53; Miami, 1; Orange, 2; Parke, 2; Pike, 1; Posey, 5; Pulaski, 1; Rush, 2; Shelby, 20; Spencer, 21; Sullivan, 17; Vanderburgh, 69; Vermillion, 1; Vigo, 8; Wabash, 31; Warren, 1; Washington, 4; Wayne, 2; Wells, 1; White, 4. The death occurred in Marion County.

**TUBERCULOSIS:** 385 deaths, of which 325 were of the pulmonary form, and 60 other forms. The male tuberculosis deaths numbered 195, females 190. Of the males, 30 were married in the age period 18 to 40 and left 60 orphans under 12 years of age. Of the females, 65 were married in the same age period and left 130 orphans under 12 years of age. Total orphans under 12 years of age made in one month by this preventable disease, 190. Number of homes invaded, 371.

**PNEUMONIA:** 444 deaths; rate, 193.2 per 100,000. In the preceding month, 482 deaths; rate, 202.9. In the same month last year, 265 deaths; rate, 116.4. Of the deaths reported this month 131 were under 1 year of age, 60 in age period 1 to 4, 9 in age period 5 to 9, 95 in age period 10 to 60, and the remainder were in the age period of 60 and over.

**TYPHOID FEVER:** 83 cases in 26 counties, with 33 deaths. In the preceding month, 132 cases in 37 counties, with 38 deaths. In the same month last year, 117 cases in 37 counties, with 27 deaths.

**DIPHTHERIA:** 157 cases in 38 counties, with 29 deaths. In the preceding month, 186 cases in 45 counties, with 33 deaths. In the same month last year, 147 cases in 34 counties, with 23 deaths.

**SCARLET FEVER:** 468 cases in 49 counties with 21 deaths. In the preceding month, 662 cases in 57 counties with 10 deaths. In the same month last year, 578 cases in 52 counties with 24 deaths.

**MEASLES:** 2,628 cases in 63 counties with 28 deaths. In the preceding month, 1,955 cases in 65 counties with 21 deaths.

**RABIES:** 18 persons bitten by rabid animals and treated by the State Board of Health during the month. There were no deaths.

**POLIOMYELITIS:** 3 cases in 3 counties with 3 deaths. The deaths occurred: Clay County, male 16 years; Greene, female 2 months; Porter, male 56 years.

**EXTERNAL CAUSES:** Total deaths, 185; males, 132; females, 53. *Suicide total*, 48; males, 39; females, 9. Means of suicide, poison, 23; asphyxia, 3; hanging or strangulation, 5; drowning, 8; firearms, 8; cutting or piercing instruments, 1. *Accidental or undefined total*, 126; males, 85; females, 41. Poisoning by food, 3; other acute poisonings, 9; conflagration 1; burns (conflagration excepted), 14; absorption of deleterious gases (conflagration excepted), 5; accidental drowning, 7; traumatism by firearms, 4; traumatism by cutting or piercing instruments, 1; traumatism

by fall, 30; traumatism in mines, 1; traumatism by machines, 3; railroad accidents and injuries, 18; street car accidents and injuries, 9; automobile accidents and injuries, 4; injuries by other vehicles, 4; other crushing, 5; injuries by animals, 1; electricity (lightning excepted), 1; fractures (cause not specified), 2; other external violence, 4. *Homicide total*, 11; males, 8; females, 3. Homicide by firearms, 7; homicide by cutting or piercing instruments, 1; homicide by other means, 3.

#### DELAYED BIRTH AND DEATH CERTIFICATES.

Each month the statistical department receives certificates for births and deaths that have occurred during preceding months, which are not sent to this department in time to be tabulated with the report for the current month. With the report for April, the following counties named below were delinquent in this matter.

#### BIRTHS.

Adams 2; Allen 7; Bartholomew 2; Benton 1; Blackford 1; Boone 8; Carroll 2; Cass 1; Clark 7; Clay 4; Clinton 1; Crawford 1; Daviess 1; DeKalb 5; Delaware 12; Elkhart 1; Fayette 2; Fulton 1; Gibson 2; Grant 7; Greene 1; Hancock 1; Harrison 4; Hendricks 1; Henry 1; Howard 1; Huntington 3; Jackson 1; Jasper 4; Jay 3; Jefferson 1; Knox 1; Kosciusko 3; Lake 20; Madison 3; Marion 3; Miami 5; Monroe 1; Noble 5; Owen 4; Parke 3; Pike 1; Porter 1; Posey 6; Pulaski 1; Ripley 3; Shelby 1; Spencer 5; Starke 1; St. Joseph 39; Sullivan 6; Switzerland 2; Tippecanoe 1; Tipton 2; Vanderburgh 9; Vermillion 2; Vigo 12; Wabash 1; Warrick 6; Washington 5; Wells 5; White 5. Total 251.

#### DEATHS.

Adams 1; Allen 3; Bartholomew 1; Cass 1; Clay 2; Clinton 1; Decatur 2; Delaware 8; Dubois 1; Franklin 1; Grant 3; Greene 2; Harrison 3; Howard 2; Huntington 1; Knox 2; Lawrence 1; Madison 2; Orange 1; Owen 2; Parke 6; Pike 1; Posey 1; Putnam 2; Rauldolph 1; Ripley 1; Starke 1; St. Joseph 1; Tippecanoe 2; Tipton 1; Vigo 4; Warrick 10; Washington 1; Wells 1; White 1. Total 77.

#### REPORT OF THE DEPARTMENT OF FOOD AND DRUGS, INDIANA STATE BOARD OF HEALTH, FOR APRIL, 1914.

H. E. BARNARD, STATE FOOD AND DRUG COMMISSIONER.

During the month of April 55 food samples were analyzed, of which 37 were legal and 18 illegal. The two samples of temperance beer analyzed contained more than the limit of one-half of one per cent. of alcohol and were classed as illegal. Two of the six samples of pops analyzed were misbranded and were classed illegal. The illegal sample of cream analyzed was low in butter fat content. Four of the 24 samples of milk analyzed were below standard and were placed in the illegal list. Seven of the ten samples of vinegar examined were illegal, usually because of the low acidity or cider vinegar solids.

Of the 25 drug samples analyzed, 24 were passed as conforming to the required standards and one was condemned as illegal. The illegal sample was a linseed oil that had been contaminated with a small amount of rosin or resin oil.

RESULTS OF ANALYSIS OF FOODS AND DRUGS DURING THE MONTH OF APRIL, 1914.

CLASSIFICATION.	Number Legal.	Number Illegal.	Total.
<b>FOODS.</b>			
Beverages—			
Ale	1		1
Temperance beers		2	2
Cider	1		1
Pops	4	2	6
Wine	1		1
Baking powder		1	1
Apple butter	1		1
Meat Products—Ham		1	1
Milk Products—			
Butter	3		3
Cream		1	1
Ice cream	1		1
Milk	20	4	24
Oleomargarine	2		2
Vinegar	3	7	10
<b>Total</b>	<b>37</b>	<b>18</b>	<b>55</b>
<b>DRUGS</b>			
Patent medicines			6
Toilet articles			8
Oils—			
Lined oil	1	1	2
Olive oil	1		1
Extract of witchhazel	1		1
Paregoric	1		1
Tincture of arnica	1		1
Tincture of iodine	1		1
Miscellaneous			4
<b>Total</b>	<b>6</b>	<b>1</b>	<b>25</b>

Other places inspected during the month included one wholesale grocery, one fish market, 7 poultry houses, 13 ice cream parlors, 2 flour mills, 3 milk depots, 4 ice cream factories, 12 slaughterhouses, 2 bottling works, one creamery, one wholesale produce company, condensed milk company, pure milk company, stockyards and one ice and cold storage plant.

During the month of April six prosecutions were brought for violation of the Weights and Measures and Pure Food and Drugs Act. One case involved the sale of misbranded tincture of iodine; one the sale of misbranded spirits of camphor and one the sale of misbranded food stuffs. One dealer was prosecuted on two counts, one for the sale of misbranded foods and one for the sale of misbranded drugs, and for each offense was fined eighteen dollars and costs. The fines and costs collected during the month amounted to \$113.00.

During the month of April, 38 condemnation notices were issued, 29 because of unsanitary conditions and 30 because of improper construction. The summarized list appears below.

SUMMARY OF INSPECTIONS MADE DURING THE MONTH OF APRIL, 1914

INSPECTIONS.	No. Inspected.	No. Excellent.	No. Good.	No. Fair.	No. Poor.	No. Bad.
Dairies	98			18	34	46
Grocery stores	350	8	185	147	9	1
Meat markets	125	1	77	44	3	
Drug stores	83	1	65	17		
Bakeries and confectioneries	109		51	51	7	
Hotels and restaurants	111		42	61	8	
Wholesale grocery	1		1			
Fish market	1		1			
Poultry houses	7			5	1	1
Ice cream parlors	13		4	7	2	
Flour mills	2		2			
Milk depots	3		3			
Ice cream factories	4		2	2		
Slaughter houses	12		1	5	4	2
Bottling works	2		1	1		
Creamery	1			1		
Wholesale produce company	1		1			
Condensed milk company	1		1			
Pure milk company	1			1		
Stock yards	1			1		
Ice and cold storage plant	1		1			
<b>Total</b>	<b>927</b>	<b>10</b>	<b>438</b>	<b>380</b>	<b>69</b>	<b>50</b>

A TELEGRAM FROM BUFFALO reads as follows: Wire birth of Frank Martz. Born in ninety-eight or ninety-nine, Muncie, Indiana. His father, Conrad Martz, resides 1505 North B street, Elwood, Indiana. Frank Martz held here for larceny and his correct age must be known before disposition of the case. EDWIN J. COOLEY, Constable.

Of all the many requests we have had for transcripts of birth records, this is the first time such transcript was asked for in order to secure jail rights.

INSPECTORS' REPORTS FOR THE MONTH OF APRIL, 1914.

During the month of April the inspectors reported 927 visits to places handling foods and drugs. Ten of these establishments were classed as excellent, 439 good, 360 fair, 69 poor and 50 bad.

Of the 98 dairies inspected none were even good, 18 were classed as fair, 34 poor and 46 bad.

Eight of the 350 grocery stores were found to be in excellent condition, 185 were good, 147 fair, 9 poor and one bad.

One hundred and twenty-five meat markets were inspected. Of this number one was rated excellent, 77 good, 44 fair and 3 poor.

Of the 109 bakeries and confectioneries visited 51 were classed good, 51 fair and 7 poor.

Forty-two of the hotels and restaurants visited were rated good, 61 fair and 8 poor.

NOTICES OF CONDEMNATION DURING THE MONTH OF APRIL, 1914.

CLASSIFICATION.	Reasons for Condemnation.		Total.
	Unsanitary Conditions.	Improper Construction.	
Bakery	1	1	1
Creamery	1	1	1
Dairies	18	24	27
Groceries and meat markets	2	2	2
Meat market	1	1	1
Restaurants	5	4	5
Restaurant and bakery	1	1	1
<b>Total</b>	<b>29</b>	<b>34</b>	<b>38</b>

LIST OF PROSECUTIONS DURING THE MONTH OF APRIL, 1914.

County.	Laboratory Number.	Names and Addresses of Defendants.	Why Prosecuted.	Date of Trial.	Final Disposition.
Delaware		Jasper Scott, Muncie	Selling potatoes, short weight	4-22-14	Fined \$20.00.
Gibson		Wesley McDowell, Princeton	Selling misbranded tincture of iodine	4- 9-14	Fined \$10.50.
Gibson		Wesley McDowell, Princeton	Selling misbranded spirits of camphor	4- 9-14	Fined \$10.50.
Spencer		Fred Fugger, Rockport	Selling misbranded food stuffs	4- 2-14	Fined \$17.50.
Spencer		Charles Simpson, Rockport	Selling misbranded drugs	4-16-14	Fined \$18.25.
Spencer		Charles Simpson, Rockport	Selling misbranded food	4-16-14	Fined \$18.25.

**REPORT OF THE WATER LABORATORY FOR THE MONTH OF APRIL, 1914.**

During April a sanitary analysis was made of 112 samples of water received at the laboratory. Seventy-six of this number were from private wells, cisterns and springs and 36 from public supplies. Fifty-five of the samples from private supplies were potable, 7 were of doubtful quality and 14 showed evidence of pollution by sewage.

Samples taken from the public supplies of the following cities were found to be in a satisfactory condition: Browns-town, Chesterton, Clinton, Decatur, Evansville, Fort Wayne, Frankfort, Hartford City, Jonesboro, Kokomo, Laporte, Lin-ton, Montpelier, Mt. Vernon, Noblesville, Plymouth, Spencer, Terre Haute, Wabash and West Baden.

The supplies of Logansport, Boonville, Washington and Vincennes were not entirely satisfactory. Two samples from the Peru Water Works system showed the well supply and cistern water to be potable. A sample from the reser-voir of this system indicated this supply was of a poor quality.

The work of investigating the water supply used on the electric interurban lines of the state was initiated. At Evansville, an electric line center, inspections of cars and car barns were made, and water supplies and water samples taken from cars were examined in a bacterial laboratory established at that point.

**WE ARE MAKING HEADWAY.**

Health officers will remember the attempt to enjoin the members of the State Board of Health and the State Food and Drug Commissioner from enforcing that part of our Pure Food Law which regulates and prohibits the use of preservatives in food stuffs. When the suits were pending it was impossible for the Department to secure the support of the United States Department of Agriculture, but on the contrary, James Wilson, then Secretary of the United States Department of Agriculture, used every effort to assist the complainants in their attempt to destroy our pure food law, even going so far as to send members of the Remsen Ref-eree Board to Indianapolis to testify against the state at the expense of the Department of Agriculture. But there is a new regime at Washington, and although Dr. Wiley is no longer at the Head of the Bureau of Chemistry, the present Department of Agriculture is active in spreading the propa-ganda for pure food in the development of which he has spent so many years of his life. The Department has just issued a most excellent and timely bulletin under the head-ing, "Warning Against Dangerous Preserving Powders and Canning Compounds Used by the Housewife." This bulle- tin reads in part as follows:

"The attention of the Department of Agriculture has re- cently been called to the widespread use, especially in rural communities, of salicylic acid in putting up preserves. The head of a large drug and chemical supply house states that people living in Southwest Virginia, North and South Caro- lina, Kentucky, Tennessee, and western Georgia, have been purchasing salicylic acid in 4-lb. packages for a number of years and that this practice has grown to an enormous extent. This dealer states further that only a few weeks ago he received an order from one wholesale grocer for fifty gross of these goods.

The Department is aware that this practice is not con- fined to salicylic acid under its own name alone, but that large quantities of this acid, and of boric acid as well, are sold under fanciful names as preserving powders or canning

compounds at prices which are much in excess of their real value.

In the directions for use, the housewife is told to fill the jar with the fruit or vegetables, cover with water and add a teaspoonful of the powder. It is true that these powders may prevent the decay of the fruit or vegetable, but they also encourage uncleanly or careless work, and their exces- sive use may be attended with very serious effects upon the health. Salicylic acid is a medicine of the greatest value in acute articular rheumatism and certain other diseases. It is well known as a poisonous substance, and one of the evils which may accompany its use is derangement of the diges- tion. It is therefore plain that its extensive use in food may lead to disturbance of digestion and health. It is entirely practicable to put up both fruits and vegetables in such a manner that they will keep indefinitely by sterilizing the products by means of heat, and there is no excuse for running any risk by the using of preserving powders."

We are glad that the Department recognizes the fact that the use of preservatives may "encourage uncleanly and care- less work," for the action of the State Board of Health in barring the use of preservatives was influenced by this fact.

It is to be hoped that the order of the Department of Agriculture allowing the use of benzoate of soda will, in view of the fact that it is now recognized that preservatives encourage uncleanly or careless work be rescinded and that benzoic acid and benzoate of soda will no longer be recog- nized by the Federal Government as a necessary and harm- less ingredient of food.

**RUMO SAC.**

We present the following extracts from the advertising literature of "Rumo Sac" for those who are gifted with a sense of humor, but remember while reading that "Rumo Sac" consists of an ounce of powdered alum in a small bag and sells for \$1.00. The treatment consists in wearing this bag suspended between the shoulders.

"How RUMO-SAC extracts the deadly, pain-producing uric acid from the blood, or just what counteracting ele- ment it introduces into the system, we shall not try to say."

"Just where the old negro doctor discovered the healing properties of RUMO-SAC we do not know."

"With the ordinary cure for Rheumatism, sad to say, it is the other way around.

"Some one is looking for a means of making money, so they 'hunt up' something that can be palmed off as a cure.

"RUMO-SAC is not that kind of a remedy."

"So far as placing RUMO-SAC on the market merely for the slight profit there would be in selling it at \$1.00, that is not the idea."

**REPORT OF BACTERIOLOGICAL LABORATORY INDIANA STATE BOARD OF HEALTH, FOR APRIL, 1914.**

WILL SHIMER, M. D., SUPERINTENDENT.

Sputum for tubercle bacilli—		
Positive .....	135	
Negative .....	378	
		513
Urine for tubercle bacilli—		
Positive .....	0	
Suspicious .....	2	
Negative .....	3	
		5

Feces for tubercle bacilli—	
Negative .....	1
Pus for tubercle bacilli—	
Positive .....	2
Negative .....	3
—	5
Mother's milk for tubercle bacilli—	
Negative .....	2
Pleural fluid for tubercle bacilli—	
Negative .....	3
Widal tests for typhoid fever—	
Positive .....	13
Negative .....	55
—	68
Throat cultures for diphtheria bacilli—	
Positive .....	30
Suspicious .....	12
Negative .....	146
Unsatisfactory .....	1
—	189
Epidemics for diphtheria bacilli—	
Positive .....	1
Suspicious .....	1
Negative .....	38
—	40
Brains for Negri bodies—	
Dogs:	
Positive .....	16
Suspicious .....	1
Negative .....	3
Rotten .....	1
Cats:	
Positive .....	2
Cows:	
Positive .....	1
Negative .....	3
—	27
Feces for typhoid bacilli—	
Negative .....	1
Pathological tissues—	
Carcinoma .....	13
Sarcoma .....	1
Miscellaneous .....	22
—	36
Guinea pigs inoculated for rabies—	
Positive .....	1
Negative .....	4
—	5
Blood for counts .....	10
Blood for general analysis .....	1
Blood for malaria plasmodia—	
Negative .....	4
Pus miscellaneous .....	9
Feces for hook worm—	
Negative .....	3
Urine for chemical analysis .....	38
Pus for gonococci—	
Females:	
Positive .....	4
Suspicious .....	2
Negative .....	19
Males:	
Positive .....	9
Suspicious .....	6
Negative .....	14

Sex not given:	
Positive .....	2
Negative .....	3
—	59
Cerebro-spinal fluid for meningococci—	
Positive .....	5
Guinea pig inoculated with spinal fluid .....	1
Stomach contents .....	1
Feces for general analysis .....	1
Milk for general analysis .....	1
Guinea pigs inoculated for rabies—	
Negative .....	3
—	3
Total number specimens examined .....	1,031
Doses of anti-typhoid vaccine sent out .....	1,126

OUTFITS SENT OUT DURING APRIL, 1914.

Tuberculosis .....	500
Diphtheria .....	457
Widals .....	120
Gonococci .....	67
Blood counts .....	15
Malaria .....	7
Bile media .....	1
—	—
Total number sent out .....	1,167

PATIENTS WHO HAVE TAKEN "PASTEUR" TREATMENT THIS MONTH

NAME.	Town.	County.	Age.	Sex.	Began Treatment.	Finished Treatment.
John Allen	Princeton	Gibson	13	M	3-19-14	4-1-14
Arthur Allen	Princeton	Gibson	7	M	3-19-14	4-1-14
Tillie Grossman	Peru	Miami	20	F	3-20-14	4-2-14
William L. Drury	Indianapolis	Marion	9	M	3-20-14	4-9-14
Mrs. A. Schafer	Indianapolis	Marion	59	F	3-20-14	4-10-14
Leslie Drury	Indianapolis	Marion	31	M	3-23-14	4-12-14
Raymond Drury	Indianapolis	Marion	5	M	3-23-14	4-12-14
Aldyth Drury	Indianapolis	Marion	6	F	3-23-14	4-12-14
Herman Drury	Indianapolis	Marion	2	M	3-23-14	4-12-14
Harold Craig	Indianapolis	Marion	16	M	3-24-14	4-13-14
Gladys West	Indianapolis	Marion	7	F	3-26-14	4-16-14
Earl West	Indianapolis	Marion	4	M	3-26-14	4-16-14
A. F. Davis	Mitchell	Lawrence	40	M	4-13-14	4-19-14
Mrs. A. F. Davis	Mitchell	Lawrence	32	F	4-13-14	4-19-14
Atha Davis	Mitchell	Lawrence	15	F	4-13-14	4-19-14
C. D. Hauger	Farmersburg	Vigo	39	M	4-11-14	4-24-14
Ray Krusan	Terre Haute	Vigo	17	M	4-9-14	4-26-14
Helen Bins	Terre Haute	Vigo	6	F	4-16-14	4-24-14

SARGOL.

Our second edition of "Medical Frauds" contained a statement that we would give any information we might have about patents not listed in our circular to anyone desiring it. The inquiries we have received are exceedingly interesting and have thrown much light on the "compelling" power of patent medicine literature, but the most striking fact was the large number of requests for the composition of a fraudulent "flesh builder" called Sargol.

The majority of these requests came from prospective purchasers and since the mixture is practically worthless, they are a tribute to the skill of the author of the Sargol advertisements, who, according to the American Medical Association, is Wylie B. Young, part owner of the Sargol Company. His is truly a most fitting name, for he who can extract \$1.00 for two and one-half cents worth of such practically discarded remedies as the hypophosphites, zinc phosphide, etc., is very properly named "wily."

**SPECTACLE DEALERS:** A correspondent from Kirklín writes the State Board of Health as follows:

"Two gentlemen (?) came through this part of the country selling spectacles. They represented themselves to be eye specialists and located in the Terminal Building, fifth floor, Indianapolis. They gave their name as Davis Brothers, saying there were four of them. These men fitted spectacles and took in pay such things as eggs, jelly and butter, claiming the same to be better than they were able to get in the city. I have investigated and find there is no such firm in the Terminal Building at Indianapolis. Both men were clean shaven. They looked to be forty years or older. Both had gray hair. Along with the glasses they gave in some instances a liquid for bathing the eyes. Since finding them to be such liars I am almost afraid to use the eye water. I have heard the sale of glasses by peddlers was prohibited by law and would like to know if there is not some way to catch these rascals."

Our correspondent was told that he was very gullible and should have known years ago that traveling medicine dealers and traveling doctors are always quacks and swindlers. Our friend has at last learned this fact by experience, and is now in a condition to impart it to others.

#### SANITARY SEWAGE DISPOSAL WITHOUT SEWERS.

The people are rapidly coming to understand that they never will be rid of typhoid fever, dysentery and diarrheal diseases until they take sanitary care of all of their sewage all of the time. Typhoid fever is a rural disease simply because human sewage is not cared for upon farms in a sanitary manner. In cities where sewers exist, there is less typhoid fever than in the rural regions because the sewage is cared for in a sanitary manner.

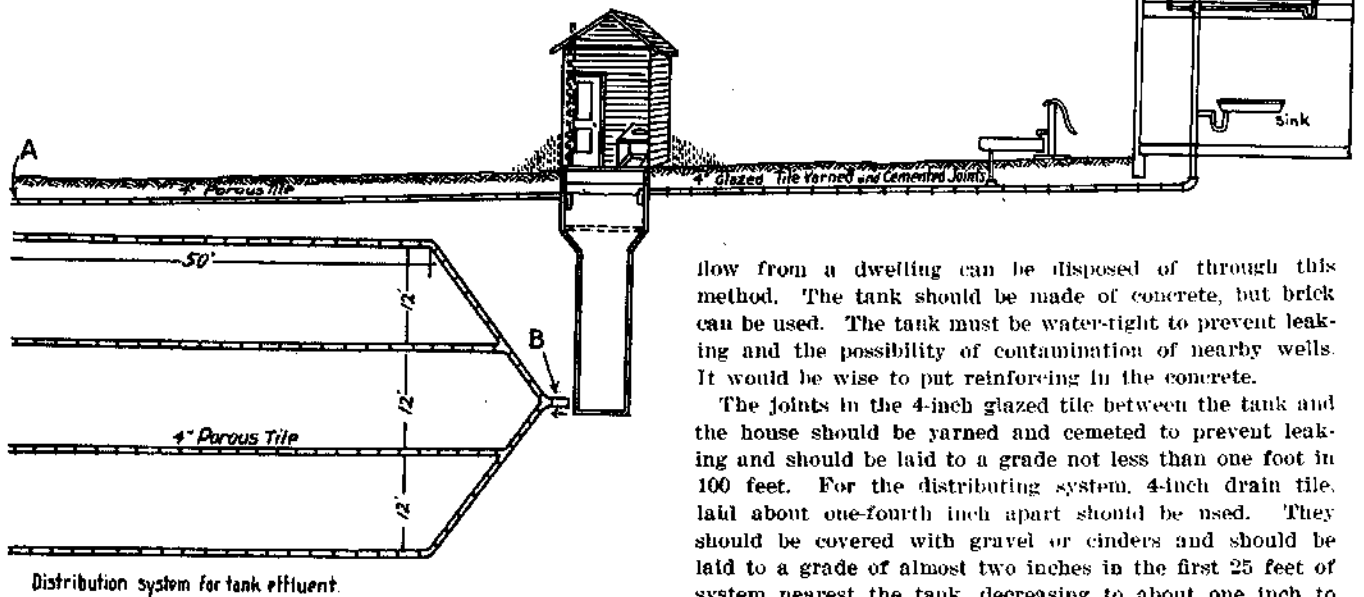
When the septic tank was invented, a great service was performed for humanity, for by means of such tanks sewage may now be rendered quite harmless in conjunction with underground disposal. In the sewage disposal design here presented, every feature will appear perfectly clear to those who have studied the subject. In Figure 1, we see plainly how the sewage from the house may be brought down to the septic tank beneath the outhouse. No privy is usually needed in the yard if flush closets are in the house. However, both indoor and outdoor closets may be used at the

same time. As show in the picture, the waste pump water runs into the septic tank and if there is no drainage from the house, the waste water from the pump will be all that is necessary to carry on the destruction of the sewage in the tank.

In Figure 1, the absorption system is represented by B, which should be attached to the pipe leading from the drains at A. This absorption system should not be placed more than three feet underground, better about two and one half feet. The overflow from the tank passes into the system and through it is distributed underground, and this constitutes underground disposal system. The effluent will be taken care of thoroughly and well, unless the ground has much clay in it.

In Figure 2, will be observed the details of the construction of the tank. The tank should be at least 16 feet deep, better 20 feet, for it is found that the deeper the tank, the more perfect liquefaction or destruction of the solids in the sewage. In Figure 2, the tank B, must be supplied with the Imhoff catch basin as represented at A. This Imhoff catch basin will materially aid in destruction of the sewage and will also prevent odors from rising into the privy above. In constructing the tank, a sludge pipe may be included leading to the tank and projecting to the surface of the ground outside of privy. This may be capped with an ordinary screw cap. If found necessary to clean the tank, attachment of a simple pump to the top of the pipe is all that is necessary to extract its contents.

We call attention again to the flexibility of this method of disposal. It can be used in connection with a single privy with the necessary connection to the pump overflow for flushing purposes. If a water tank is located in the kitchen and a sink is in use, they may be connected. A bath tub and water closet can also be installed in the house and these be connected. In fact all sewage and waters that



flow from a dwelling can be disposed of through this method. The tank should be made of concrete, but brick can be used. The tank must be water-tight to prevent leaking and the possibility of contamination of nearby wells. It would be wise to put reinforcing in the concrete.

The joints in the 4-inch glazed tile between the tank and the house should be yarned and cemented to prevent leaking and should be laid to a grade not less than one foot in 100 feet. For the distributing system, 4-inch drain tile, laid about one-fourth inch apart should be used. They should be covered with gravel or cinders and should be laid to a grade of almost two inches in the first 25 feet of system nearest the tank, decreasing to about one inch to

50 feet in the ends of the system. In very porous soil, less tile than shown in the plans may be used, and for heavy soil the length should be increased. Obviously, this system cannot be installed in a flat level country, nor in a locality where ground water is near the surface at any time in the year. The State Board of Health will be glad to give further information to any who may desire the same.

Two Van Wie centrifugal pumps of 1,000,000 gallons capacity each, draw water from an intake extending into the river two hundred feet and elevate it to the two sedimentation basins whose capacity is 1,000,000 gallons. The chemicals, iron sulphate and lime are here applied. From the sedimentation tanks the water flows by gravity into two New York Continental Jewell filters of 500,000 gallons capacity each. These filters were used at the Louisiana Purchase Exposition at St. Louis and after the close of the fair were moved to Aurora. Leaving the filters, the water flows into a 50,000 gallon clear well of cypress staves. Two Smith-Valle pumps of 1,000,000 gallons capacity each force the water into a storage tank located on one of the highest hills. This tank has a capacity of 280,000 gallons. The hypochlorite solution is added to the suction line drawing the filtered water from the clear well.

This plant was visited in June, 1911, by Jay A. Craven of this department, and at that time samples were taken of the raw, settled and filtered water. Examinations of these samples indicated such a poor efficiency of the filter beds that the installation of hypochlorite treatment was recommended. The inefficient condition of the filters was laid to the irregular feeding the coagulant.

Early in January, 1914, a rather serious epidemic of typhoid fever developed in Aurora. Examinations of a number of sets of samples taken from the taps of the public water supply disclosed the presence of sewage bacteria in many cases. The bacterial content of the samples indicated something seriously wrong with the purification operations. At the request of W. A. Winn, General Manager of the Water Company, an inspection of the equipment and operation of the plant was made by a representative of the Indiana State Board of Health.

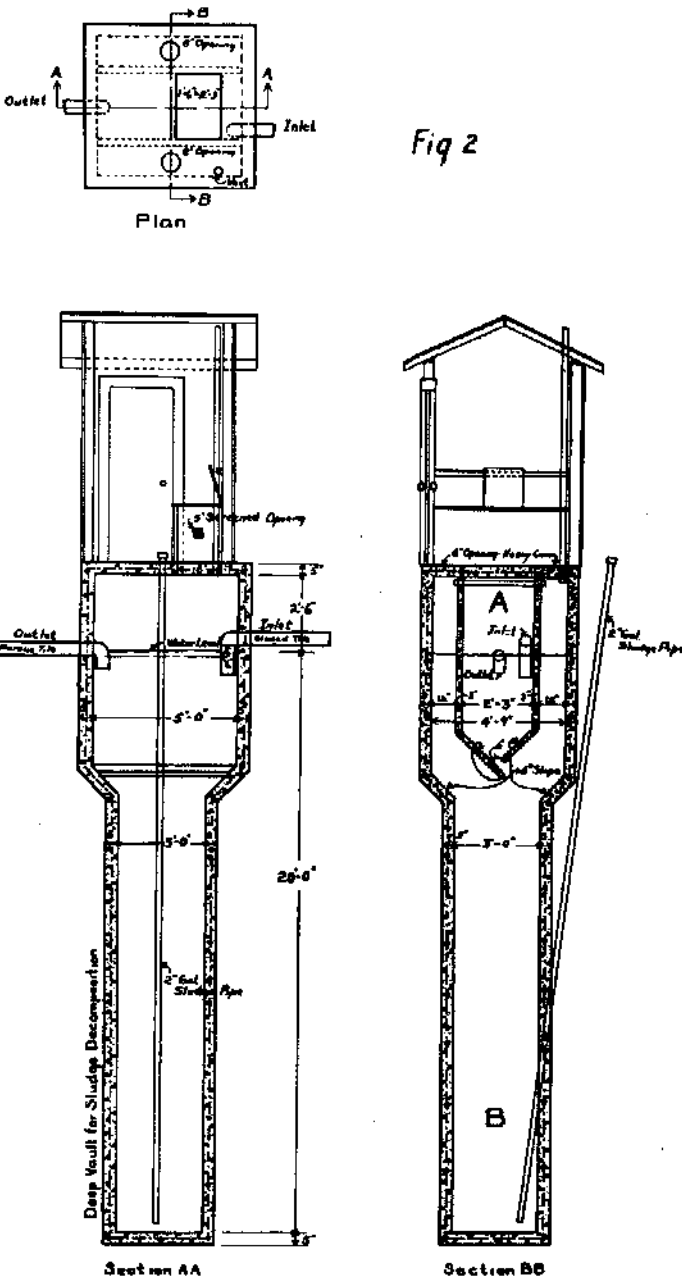
During the inspection, washing of the filters, feeding of chemical solutions and general operations of the plant were studied. On March 3d, 4th and 5th samples were taken from various sources of the plant and bacterial examinations made. A laboratory was set up above the office of the Water Company, thereby permitting an examination of the samples soon after collection.

During the course of the investigation of the plant some minor changes in operation were made at once. Other alterations which could not be made immediately were recommended to be carried out as soon as possible.

One of the first objectionable features to be noted was the irregular feeding of the iron sulphate solution used as a coagulant into the raw water. The iron sulphate was put in solution in two cypress tanks of about 800 gallons capacity each. From these tanks it was pumped into the raw water main leading to the sedimentation tanks. No definite amount of the chemical was put in solution, but a shovelful was added at such times as was deemed necessary in the judgment of the engineer. From the appearance of the coagulated water, the slight turbidity of the filter effluent and the condition of the filter beds upon dropping the water from them, it appeared that for a water as turbid as the raw water was at the time of the visit, an insufficient amount of chemical was used. It was advised that the solution tanks be moved from their present position under one of the filters to a separate room from which the solution may be fed by gravity to the raw water mains. The solution should also be made up to a definite strength and this solution fed into the raw water at a rate for proper coagulation. The same condition was found to exist in the case of the lime solution.

For hypochlorite treatment a half per cent. solution of chloride of lime was used. This was fed into the mouth

Fig 2



Sanitary Sewage Disposal

INVESTIGATION OF THE AURORA WATER WORKS PLANT.

JOHN C. BIGGS, ASSISTANT ENGINEER.

The Aurora Water Works System, built in 1904, is owned and operated by the Indiana Public Service Company. The supply is taken from the Ohio River and subjected to coagulation, sedimentation, filtration and hypochlorite treatment before being pumped into the mains.

of the suction line drawing from the bottom of the clear well cistern through an automatic feed tank. A micrometer screw valve was used for adjusting for different rates of pumpage. This adjusting screw was entirely out of order, making an accurate rate of feed absolutely impossible. The pumpage varies from 6,000 to 30,000 gallons per hour and with such a device for regulating the solution, the application of the chemical at anything like a regular rate was impossible. This, of course, resulted in the addition of an excess amount of hypochlorite solution at times, while at other times an amount too small for proper sterilization was added. To eliminate this objection the adjusting screw was replaced by a one-eighth-inch valve. This gave very satisfactory control and by means of tables indicating gallons per hour for each rate for pumpage, satisfactory chemical treatment was obtained.

In so far as the filtered water was slightly turbid and the bacterial and bacterial efficiency of the filters decidedly low, it seemed wise that a careful examination of the sand beds be made. An examination disclosed the fact that the filtering materials were so displaced that the filter was of value only in removing the coarser sediment from the water. For the purpose of removal of bacteria it was entirely useless. The gravel was collected in the center of the sand bed extending even above the surface of the surrounding sand. This gravel layer extended to the bottom of the filter and permitted the water to flow freely through it. Near the edge of the filter were similar mounds of gravel. Between the center of the filter and the outer edge was a section which was in very good condition for a filter, but of course, any efficiency that this portion may have had was entirely offset by the condition of the surrounding material. In addition to all of this, a very large part of the sand had been washed out of the beds. Filters of this sort should have four to four and one-half feet of filtering material. One filter had three feet and four inches of gravel and sand and the other two feet and six inches. This fact alone would have been the cause of very poor efficiency.

In an attempt to break up these mounds of gravel and to level the sand stratum over the gravel layer, the filter was washed with the wash water valve open full. A rise of water of fifteen inches per minute was obtained and this pressure, with the rake revolving part of the time, continued for fifteen minutes. As this washing continued an attempt was made to force a rod down through the bed but the mounds of gravel could not be penetrated. The wash water failed to loosen the material and, for the time being, it seemed wise to depend on chemical treatment alone for bacterial reduction.

This condition of the filters may have taken its start from one of three causes: the stoppage of some of the strainer caps preventing the passage of wash waters, too rapid revolution of the rake, or the displacement of the sand and gravel layers when the strainer system was cleaned, some two years since. It seemed hardly possible this displacement of gravel was entirely due to a stoppage of the filter heads. This would have resulted in no such regular ridge formation as existed in this case. It seemed most likely that the condition can be attributed to the last two causes. When the strainer heads were examined two years ago the sand was thrown back in any fashion to best get at the work, without regard to gravel and sand. When the sand was washed with the rake going at twenty revolutions per minute the hydraulic sorting took place, some strainer heads being buried so deeply that it was impossible to force water through them. Over these places the coarser

material gradually accumulated and slowly overspread adjacent strainer heads. By continued rapid raking the gravel was drawn to the center until it stood even higher than the sand immediately surrounding it. It is quite clear that such a bed would be a failure as a filter. It will be necessary that the gravel be placed over the filter heads and that the bed be filled to the proper level with suitable sand.

Rate control valves designed to prevent sudden changes of the height of the water above the filters are so worn and out of repair that they work very ineffectively.

In practice the plant is run at full capacity from six to eight hours per day in which time the storage tank is filled. Continuous running at a regular rate would give far better results as far as filtration and chemical treatment are concerned.

To get the plant in an efficient working condition from a point of economy, as well as water purification, it seemed advisable that it be thoroughly overhauled and remodeled in agreement with the more advanced ideas in water purification engineering. Certain changes about the plant are already under way and several of the recommendations which are made are in agreement with plans already considered. Changes recommended however, will cover only those points which will assist in bettering the water supply and will in no way deal with certain other points which might be covered by tests made by an efficiency engineer. It does however, seem highly advisable that such an engineer be employed by this plant while planning the alterations.

To get the plant in proper working condition, it is necessary that the filters be overhauled thoroughly, the gravel placed back in its proper position and the layer of sand be brought back to a suitable thickness. In the meantime, it will be necessary that the health of the consumers be safeguarded by treating the water with hypochlorite solution. The rate of twelve pounds of calcium hypochlorite per million gallons of water appears to be the most suitable rate for feeding the chemical. The coagulant feed must be carefully regulated. Iron sulphate as a coagulant should be replaced by alum as soon as arrangements can be made.

During the investigation thirty samples were collected. Bacterial counts were made on agar at 37°. Tubes of lactose broth were planted and the presence of B. Coli or other gas forming bacteria determined. Judging from the results of this test, it is necessary to treat the water with hypochlorite at the rate of twelve pounds per million gallons to remove objectionable bacteria.

BACTERIAL EXAMINATION OF SAMPLES FROM AURORA WATER WORKS,  
AURORA, INDIANA.

Date.	Sample.	Bacteria Per C.C.		Pre- sumptive B. Coli.	Remarks.
		Agar at 37°.	Gelatin at 20°.		
Mar. 3.	1	450	.....	+	Top of filter No. 1, from river.
Mar. 3.	2	500	.....	+	Top of filter No. 2, near river.
Mar. 3.	3	180	.....	+	Effluent, filter No. 1.
Mar. 3.	4	1,500	.....	+	Effluent, filter No. 2.
Mar. 3.	5	40	.....	+	Tap at pumping station.
Mar. 3.	6	100	.....	+	Tap in city.
Mar. 4.	7	580	.....	+	Top of filter No. 1.
Mar. 4.	8	550	.....	+	Top of filter No. 2.
Mar. 4.	9	190	.....	+	Effluent of filter No. 1.
Mar. 4.	10	260	.....	Gas	Effluent of filter No. 2.
Mar. 4.	11	85	.....	—	Tap at pumping station.
Mar. 4.	12	20	.....	Gas	Tap at pumping station 16 lbs. hypo.
Mar. 5.	13	20	8,000	Gas	Tap at pumping station 14 lbs. hypo.
Mar. 5.	14	35	3,000	+	Tap at pumping station 7 lbs. hypo.
Mar. 5.	15	450	16,000	+	Effluent, filter No. 1.
Mar. 5.	16	480	18,000	+	Effluent, filter No. 2.
Mar. 5.	17	200	8,000	—	Tap at pumping station 9 lbs. hypo.
Mar. 5.	18	6,000	180,000	+	Raw water at river's edge.
Mar. 5.	19	4,000	40,000	+	Top of filter No. 1.
Mar. 5.	20	3,000	35,000	+	Top of filter No. 2.



CHART SHOWING GEOGRAPHICAL DISTRIBUTION OF DEATHS FROM CERTAIN COMMUNICABLE DISEASES FOR APRIL, 1914.

**NORTHERN SANITARY SECTION.**

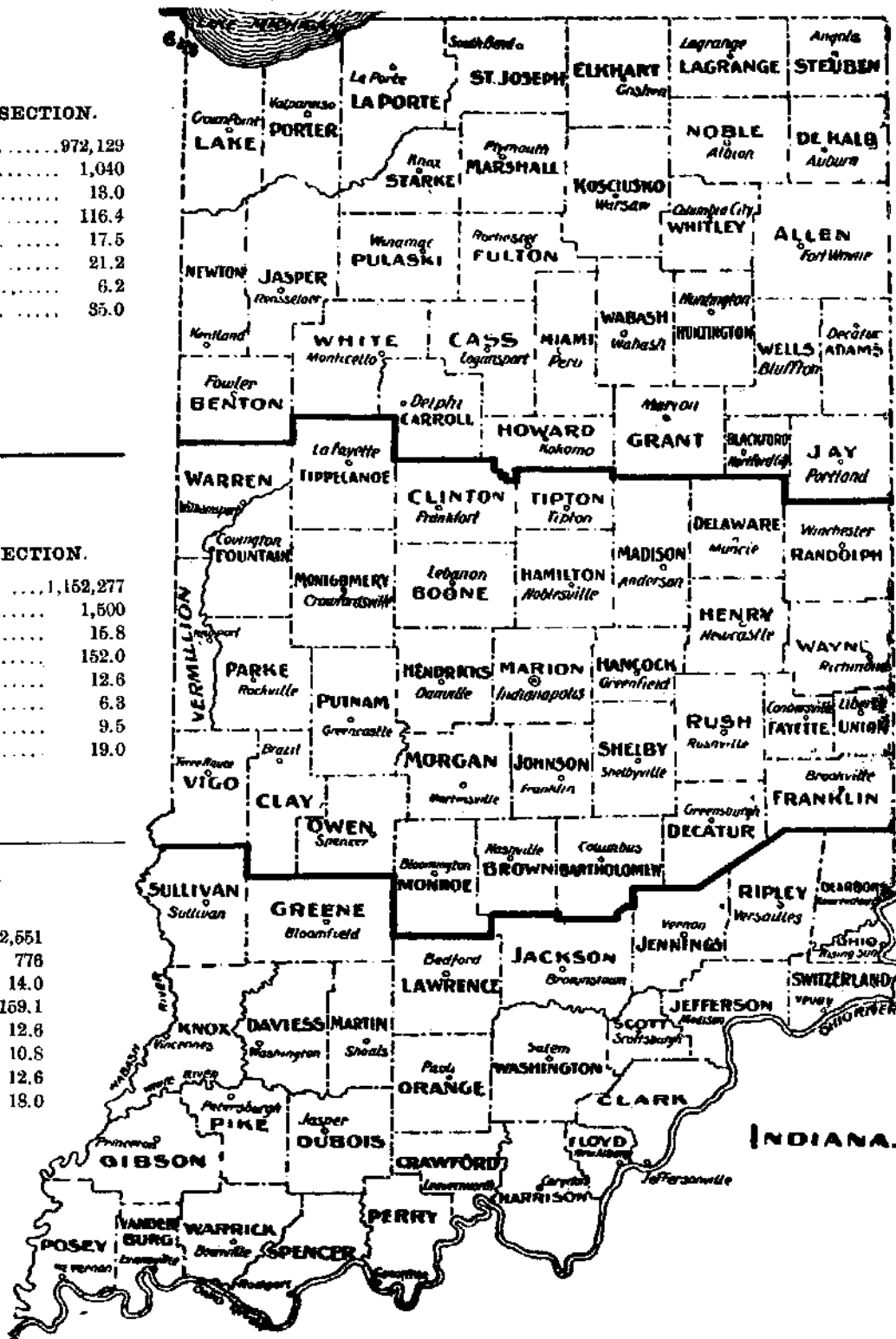
Total population	972,129
Total deaths	1,040
Death rate per 1,000	18.0
Pulmonary Tuberculosis, rate per 100,000	116.4
Typhoid, rate per 100,000	17.5
Diphtheria, rate per 100,000	21.2
Scarlet fever, rate per 100,000	6.2
Diarrheal diseases, rate per 100,000	95.0

**CENTRAL SANITARY SECTION.**

Total population	1,152,277
Total deaths	1,500
Death rate per 1,000	15.8
Pulmonary Tuberculosis, rate per 100,000	152.0
Typhoid, rate per 100,000	12.6
Diphtheria, rate per 100,000	6.8
Scarlet fever, rate per 100,000	9.5
Diarrheal diseases, rate per 100,000	19.0

**SOUTHERN SANITARY SECTION.**

Total Population	672,651
Total deaths	778
Death rate per 1,000	14.0
Pulmonary Tuberculosis, rate per 100,000	159.1
Typhoid, rate per 100,000	12.6
Diphtheria, rate per 100,000	10.8
Scarlet fever, rate per 100,000	12.6
Diarrheal diseases, rate per 100,000	18.0







Mortality of Indiana for April, 1914. (Stillbirths excluded.)

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL.	Population Estimated 1914.	Total Deaths Reported for						Annual Death Rate Per 1,000 Population.					Important Ages.																				
		April, 1914.		March, 1914.		April, 1913.		Year 1914 to Date.		Year 1913 to Same Date.		April, 1914.		March, 1914.		April, 1913.		Rate for Year 1914 to Date.		Rate for Year 1913 to Same Date.		Under 1.		1 to 4.		5 to 9.		10 to 14.		15 to 19.		65 and Over.	
		Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.		
State.....	2,796,837	3,316	3,596	3,050	12,924	12,875	14.4	15.1	13.4	14.9	14.1	485	14.8	184	5.3	61	1.8	38	1.1	81	2.4	1,151	34.7										
Northern Counties.....	972,129	1,040	1,142	1,033	4,202	4,471	13.0	13.8	13.0	13.1	14.1	166	15.9	56	5.3	17	1.6	9	.7	19	1.8	370	35.5										
Central Counties.....	1,162,277	1,500	1,632	1,286	5,725	5,448	15.8	16.9	13.7	15.1	14.4	193	12.8	69	4.5	24	1.6	17	1.1	36	2.4	534	35.6										
Southern Counties.....	672,551	776	832	731	2,997	2,956	14.0	14.5	13.3	13.5	13.6	126	18.2	59	7.6	20	2.5	13	1.6	26	3.3	247	31.8										
All Cities.....	1,248,315	1,671	1,796	1,593	6,428	6,463	16.3	16.9	15.8	15.6	16.2	267	15.9	87	5.2	41	2.4	18	1.0	47	2.8	457	27.3										
Over 100,000.....	252,984	397	413	334	1,457	1,344	19.1	19.2	16.4	17.4	16.5	55	13.8	24	6.0	13	3.2	9	1.5	10	2.5	92	23.1										
45,000 to 100,000.....	267,060	323	336	309	1,215	1,319	14.7	14.8	14.4	13.7	15.5	52	16.1	15	4.6	12	3.1	11	3.3	9	3.3	75	23.2										
20,000 to 45,000.....	229,816	303	339	228	1,236	766	16.0	17.3	16.7	16.3	17.8	60	19.8	18	5.9	12	3.3	11	3.3	5	1.6	82	27.0										
10,000 to 20,000.....	174,438	220	247	201	880	1,281	15.3	16.6	16.7	15.3	16.9	39	17.7	15	6.8	7	3.1	6	3.1	3	3.1	64	29.0										
Under 10,000.....	322,007	428	461	431	1,638	1,754	16.1	16.8	15.5	15.4	15.7	61	14.2	15	3.5	7	1.6	8	1.4	16	3.7	144	33.6										
Country.....	1,550,642	1,645	1,800	1,457	6,498	6,412	12.9	13.6	11.4	12.7	12.6	216	13.2	67	5.8	20	1.2	20	1.2	34	2.0	694	42.1										

Deaths and Annual Death Rates Per 100,000 Population from Important Causes.

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL.	Pulmonary Tuberculosis.		Other Forms Tuberculosis.		Typhoid Fever.		Diphtheria and Croup.		Scarlet Fever.		Measles.		Whooping Cough.		Lobar and Broncho-Pneumonia.		Diarrhea and Enteritis (Under 2 Years.)		Cerebro-Spinal Fever.		Acute Anterior Poliomyelitis.		Influenza.		Puerperal Septicemia.		Cancer.		External Causes.		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.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.
	State.....	325	141.4	60	28.1	33	14.3	29	12.6	21	9.1	28	12.1	47	20.4	444	193.2	56	24.3	10	4.3	3	1.3	67	29.1	25	10.8	191	84.4	184	80.0	1
Northern Counties.....	93	116.4	7	8.7	14	17.5	17	21.3	5	6.2	1	1.2	9	11.3	137	171.5	26	35.0	3	2.5	1	1.2	18	22.5	9	11.2	61	78.3	67	83.8		
Central Counties.....	144	182.0	30	31.6	12	12.6	8	8.6	9	9.5	9	9.5	14	14.7	215	227.0	16	19.0	1	1.0	31	32.7	11	11.6	55	89.7	76	80.2	1	1.0		
Southern Counties.....	88	159.1	23	41.6	7	12.6	6	10.3	7	12.6	18	32.5	24	43.4	92	166.4	10	18.0	1	1.8	1	1.8	18	32.5	5	9.0	45	81.4	41	74.1		
All Cities.....	175	179.8	33	32.2	24	23.4	10	9.7	13	12.6	13	12.6	19	17.5	244	238.2	36	38.0	8	7.8			25	24.4	12	11.7	85	92.7	109	106.4		
Over 100,000.....	50	240.6	12	57.7	4	19.2	3	14.4	4	19.2	4	19.2	3	14.4	56	260.4	7	33.6	3	24.0			3	14.4	2	9.6	24	115.4	17	81.8		
45,000 to 100,000.....	40	182.2	5	22.7	3	13.2	2	9.1	1	4.5	1	4.5	2	9.1	46	259.7	9	41.0	2	9.1			1	4.5	2	9.1	8	36.4	25	113.9		
20,000 to 45,000.....	24	127.0	6	31.7	3	12.6	3	15.2	2	10.5	3	15.2	3	15.2	46	243.5	13	68.8					4	21.1	9	19.0	106	35	201.1			
10,000 to 20,000.....	20	139.5	3	20.9	7	48.8	3	13.2	1	6.9	2	20.9	4	28.0	41	286.0	2	13.9	1	6.9			5	55.8	3	34.2	9	62	10	69.7		
Under 10,000.....	41	154.8	17	26.4	4	15.1	3	11.3	6	23.6	11	11.3	6	23.6	44	186.3	8	30.2					0	34.0	3	11.3	35	132	19	71.7		
Country.....	150	117.7	27	21.1	9	7.0	19	14.9	8	6.2	15	11.7	29	22.7	202	158.5	17	13.3	2	1.5	3	2.3	42	32.9	13	10.2	99	77.1	75	58.8	1	.7

U. S. Department of Agriculture, Weather Bureau. Condensed Summary for Month of April, 1914.

V. H. CHURCH, SECTION DIRECTOR, INDIANAPOLIS, IND.

TEMPERATURE—IN DEGREES FAHRENHEIT.

Section average.	Departure from the normal.	Extremes.							
		Station.		Highest.	Date.	Station.		Lowest.	Date.
		51.9	+0.1	Shoals.....		95	22	Collegeville.....	

PRECIPITATION—IN INCHES AND HUNDREDTHS.

Section average.	Departure from the normal.	Extremes.					
		Station.		Greatest monthly amount.	Station.		Least monthly amount.
		3.16	-0.20	Maury.....		4.98	Whiting.....