

Annual report on the vital statistics, sanitary conditions and sanitary administration of the Urban Sanitary District of the City of Port-of-Spain.

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PORT-OF-SPAIN CITY COUNCIL.



ANNUAL REPORT

ON THE

Vital Statistics, Sanitary Condition and Sanitary
Administration

OF THE

Urban Sanitary District of the City of Port-of-Spain

FOR THE YEAR 1929.

BY

GEORGE H. MASSON, M.D., C.M., D.Sc. (Public Health), F.R.C.P.E., F.R.S.E.,
Medical Officer of Health.

TRINIDAD:

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1930.



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January 1930



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With the Compliments of
Dr. GEORGE H. MASSON,
Medical Officer of Health,
Port-of-Spain, Trinidad, B. W. I.

ANNUAL REPORT

1929-30 YEARLY REPORT
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URBAN SANITARY DISTRICT OF THE CITY OF PORT-OF-SPAIN.

Report of the Medical Officer of Health for the Year 1929.

SECRETARY, LOCAL AUTHORITY.

SIR,

I have the honour to submit for the information of the Local Authority the following Annual Report on the vital statistics, sanitary condition and sanitary administration of the Urban Sanitary District of the City of Port-of-Spain for the year 1929.

1.—VITAL STATISTICS.

Short Summary.

Area of City	1,514 acres.
Mean Population	67,356
Density of Population	44.4 persons per acre.
Total live-births	1,895
Birth-rate per 1,000 population	28.13
Average Birth-rate for previous five years	28.16
Total Deaths	1,503
Death-rate per 1,000 population	22.31
Average Death-rate for previous five years	22.93
Natural increase of population	392
Natural increase of population—average for previous five years	340
Total deaths under one year	250
Infant Mortality (Rate per 1,000 live-births)	131.93
Average Infant Mortality for previous five years	144.13
Total Still-births (Dead-born infants)	158
Still birth-rate (Dead-born infants per cent. of registered live-births)	8.34
Average Still-birth rate for previous five years	8.40
Notifiable Infectious Diseases—Death-rate per 1,000 population	3.31
Notifiable Infectious Diseases—Average death-rate for previous five years	3.88
Cardiac and Vascular Diseases—Death-rate per 1,000 population	3.96
Pulmonary Tuberculosis	1.92
Bright's disease and Nephritis	1.22
Bronchitis	1.14
Pneumonia and Broncho-pneumonia	0.83
Diarrhoea and Enteritis	0.79
Cancer and other Malignant Diseases	0.79
Malaria	0.56
Syphilis	0.53
Tuberculosis (non-pulmonary)	0.37
Dysentery	0.34
Enteric Fever	0.19
Influenza	0.12
Ankylostomiasis	0.06

A comparative summary of the principal causes of death for the quinquennial period 1924-1928 and the corresponding statistics for 1929 are given in Table I.

Population.—The mean population estimated to the 30th June was 67,356—an increase of 973 on the preceding year. Of this number 392 were due to the **natural increase of population**, viz.: the excess of live-births over deaths, the remaining 581 being attributable to an excess of immigration over emigration. In 1928 the natural increase of population was also 392, and the mean, 340 for the previous five years, 1924-1928.

The sectional distribution of the population was on a rough departmental enumeration found to be approximately as follows:—

City	27,425
St. Clair	1,264
East Dry River	16,297
Belmont	12,881
Woodbrook	9,489

Births.—During the year 1,895 live-births, comprising 985 boys and 910 girls, were registered. This excess of 75 male births was a return to the more customary experience and the reverse of what took place in the previous year when the female exceeded the male births by 16. The birth-rate worked out at 28·13 per 1,000 of the population, compared with 28·14 in 1928, and an average of 28·16 for the preceding five years, 1924-1928. November had the highest record of births for the year, the number being 182, of which 87 were boys and 95 girls, and the birth-rate for that month 32·87 per 1,000 population. The lowest record occurred in May when 131 births, comprising 77 boys and 54 girls were registered, with a corresponding birth-rate of 22·9.

A statement of births and birth-rates for each month in the year is given in Table II.

Deaths.—Deaths registered from all causes, comprising males 771 and females 732, totalled 1,503, with a death-rate of 22·31 per 1,000 population, being an excess of 27 deaths over the previous year when the number was 1,476 and the death-rate 22·23. For the previous five years the average death-rate was 22·93. Of the total deaths, 341—of which 103, or 30·2 per cent., were due to notifiable infectious diseases—related to non-residents who died at the Colonial Hospital. The form of death certificate now in use does not provide for the insertion of the permanent place of abode of deceased persons and, except from the Colonial Hospital, whence this information is supplied to the local authority, the necessary particulars for differentiating between the deaths of residents and non-residents are not available. The writer advises that representations be made to the Government by the local authority with a view to having the current death certificate forms amended to meet this necessary requirement for the accurate compilation of statistics relating to all deaths taking place in the City, whether in or out of hospital. A detailed statement of deaths of non-residents at the Colonial Hospital is given in Table V. The sex distribution of the deaths and the death-rates from month to month are shown in Table III. The highest death-rate, viz. : 26·22 per 1,000, took place in July with 150 deaths, this number being equally divided between males and females. The lowest, 16·98, was in November, when 94 deaths were registered, of which 51 were males and 43 females. Table IV shows deaths at the different age periods. Under 1 year 250 deaths were registered, and over 60 the number was 420. Between these two extremes of life, the highest number of deaths, viz. : 104, took place at the age period 46-50 and the lowest, 18, between 11 and 15 years.

The principal causes of deaths are summarised in Table I and show that the following were, in order of importance, the most fatal diseases during the year :—

Diseases of the Heart and Blood Vessels, Deaths 267—Death-rate 3·96 per 1,000.			
Pulmonary Tuberculosis	do. 129	do. 1·92	do.
Bright's disease and Nephritis	do. 82	do. 1·22	do.
Bronchitis	do. 77	do. 1·14	do.
Pneumonia	do. 56	do. 0·83	do.
Diarrhoea and Enteritis	do. 53	do. 0·79	do.

Deaths from **all causes** are classified in Table VI. The total mortality from infectious diseases notifiable under the Public Health Ordinance, Cap. 98, was 223 and included deaths from enteric fever, pulmonary tuberculosis, tuberculosis (other forms) and pneumonia. (Table XI.) 128 deaths took place from the following non-notifiable infectious diseases, malaria, whooping cough, influenza, dysentery, ankylostomiasis and syphilis. (Table XV.) Diseases of early infancy accounted for 152 deaths and at the other extreme of life 132 died of senility.

STILL-BIRTHS.

158 still-births, or infants born dead after 28 weeks of intrauterine life, were registered, this number being equivalent to a rate of 8·34 per cent. of the live-births. The number of still-births in the previous year was exactly the same, though the still-birth rate worked out at 8·46, a slight excess on this year. The average still-birth rate for the preceding five years was 8·40. These stationary results seem to indicate the need for greater effort in the ante-natal and maternity branches of child welfare work in the City.

INFANT MORTALITY.

Of a total of 1,503 deaths registered from all causes 250, or a little over one-sixth, occurred among infants under one year of age. The infant mortality rate, viz.: the number of infant deaths per 1,000 registered live-births, resulting from this number, which is 18 in excess of that from the preceding year, is 131.93, compared with 127.41 for the previous year and an average of 144.13 for the preceding five years.

The infant mortality rates for the two quinquennial periods 1920-1924 and 1925-1929, showing the gradual decline which is taking place in deaths of children under one year in the City, are set out below:—

Year.	Infant mortality rate.	Year.	Infant mortality rate.
1920	188.23	1925	154.95
1921	179.12	1926	156.57
1922	157.80	1927	134.63
1923	141.58	1928	127.41
1924	147.09	1929	131.93

The causes of deaths under this head are classified in Table VIII and may be grouped in the following proportions of the aggregate.

Conditions commonly attributable to pre-natal causes, such as

Prematurity, congenital debility, marasmus, malnutrition, congenital syphilis, icterus, atrophy, status lymphaticus	52.00	per cent.
Respiratory diseases	19.60	do.
Gastro-intestinal diseases	16.00	do.
Dysentery	1.60	do.
Miliary Tuberculosis and Tubercular Meningitis	1.60	do.
Malaria	1.20	do.
Eleven other causes of death including dentition, worms, asphyxia, umbilical haemorrhage and sepsis, toxæmia, simple meningitis, tongue haemorrhage, stomatitis, hepatitis, nephritis and convulsions	8.00	do.
	100.00	do.

DEATHS AT AGES 1-5.

Ninety-six deaths of children from one to five years of age, including 59 boys and 37 girls, were registered, this number being the equivalent of 6.32 per cent. of the total mortality from all causes, which was a slight decline in the figures for the previous year, when the deaths at this age-period numbered 100, or 6.77 per cent. of the total.

The following is a summary of the causes of death in this age group set out in detail in Table IX:—

Mouth, stomach and bowel troubles, including dentition, stomatitis, gastritis, and gastro-enteritis, intussusception, colitis, dysentery, diarrhoea and worms	28.1	per cent.
Respiratory diseases, including pneumonia, pulmonary congestion, whooping cough and bronchitis	25.0	do.
Diseases attributable to pre-natal causes, including syphilis and congenital debility, atrophy, malnutrition and marasmus	17.7	do.
Malaria, miliary tuberculosis, pulmonary tuberculosis, enteric fever and influenza	11.5	do.
Six other causes of death, including meningitis, convulsions, toxæmia, rheumatism, nephritis and injuries	17.7	do.
	100.0	do.

NOTIFIABLE INFECTIOUS DISEASES.

Notifications.—397 cases of infectious diseases under the Public Health Ordinance were notified to the writer, compared with 355 in the preceding year, an excess of 42 cases chiefly accounted for by an unusual prevalence of mild **chicken pox** during the months of March, April, May and June, when 58 notifications of this disease were received out of a total of 73, as against 23 for the previous year. Other increases were **pneumonia** 10, **diphtheria** 5, **ophthalmia neonatorum** 4 and **non-pulmonary tuberculosis** 1. On the other hand notifications of **enteric fever** and **pulmonary tuberculosis** still pursued their downward course, the former dropping from 54 in the previous year to 39, and the latter from 152 to 142, reductions of 15 and 10 cases, respectively.

Owing to an outbreak of **acute poliomyelitis** of a severe type, but restricted to certain rural districts in the southern division of Trinidad, this disease together with **cerebro-spinal fever** and **encephalitis lethargica** were, in the month of September, declared by the Governor's proclamation to be infectious diseases within the meaning of the Public Health Ordinance. One case of **encephalitis lethargica** was notified in the month of December and was still living at the close of the year.

A complete list of the diseases notified from month to month is given in Table X.

Deaths.—Deaths from notifiable diseases which are detailed in Table XI showed a slight decline from 228 in the preceding year to 223 in this. This decline was most marked in **pulmonary tuberculosis** which fell by 12 deaths from 141 in the previous year to 129, or 1.92 per 1,000 population, the lowest record yet reached and the first recorded occasion on which the death-rate from this disease fell below 2 per 1,000; but there was an increase of six deaths over last year in the **non-pulmonary forms of tuberculosis**, the figures being 19 and 25, respectively. There were no deaths from **diphtheria** as against three in the previous year, and **enteric fever** declined slightly from 14 to 13 deaths, in spite of the more substantial decrease in the notifications from 54 to 35 cases. Following the increase of 10 cases in the notifications for **pneumonia** there was also an increase of five in the deaths from this disease, the figures having risen from 51 in the previous year to 56. There were no deaths from any of the other notifiable diseases.

The total deaths registered from these diseases represented 57.43 per cent. of the notifications and 15.16 per cent. of the deaths from all causes, the corresponding records for the previous year being 64.22 and 15.44 per cent.

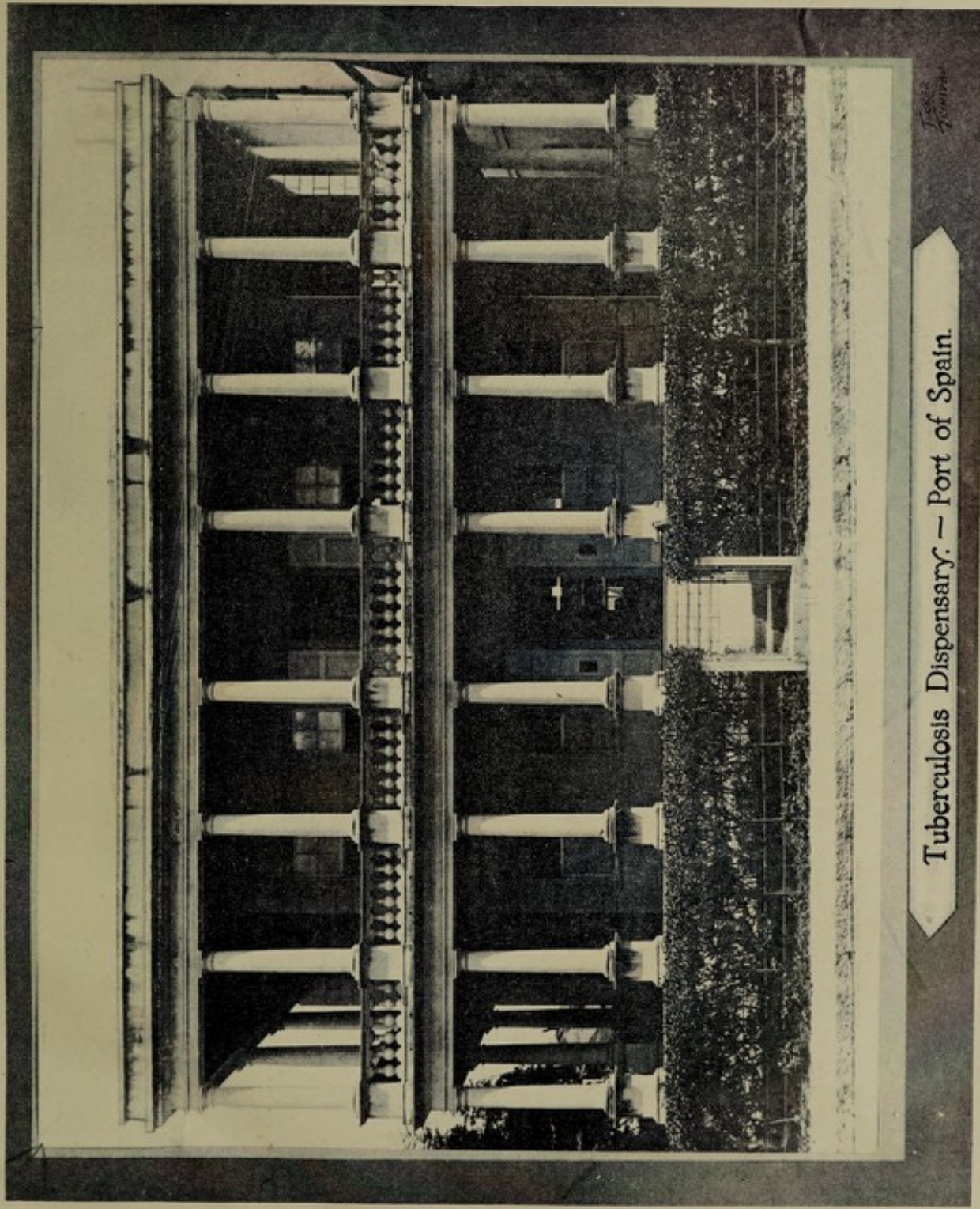
Below is a comparative statement of notifications, deaths and death-rates for this and the preceding year:—

Comparison of Notifications, Deaths and Death-rates for the years 1928 and 1929.

Diseases.	1928.			1929.		
	Notifications	Deaths.	Death-rate per 1,000 population	Notifications	Deaths.	Death-rate per 1,000 population.
Pulmonary Tuberculosis ..	152	141	2.08	142	129	1.92
Enteric fever	54	14	0.21	35	13	0.19
Pneumonia and Broncho-pneumonia	60	51	0.77	70	56	0.83
Ophthalmia neonatorum] ..	31	..	..	35	..	..
Tuberculosis (other forms) ..	16	19	0.29	17	25	0.37
Chicken pox	23	..	..	73	..	..
Diphtheria	19	3	0.05	24	..	..
Encephalitis lethargica ..	..	..	..	1	..	..
Total	355	228	..	397	223	..

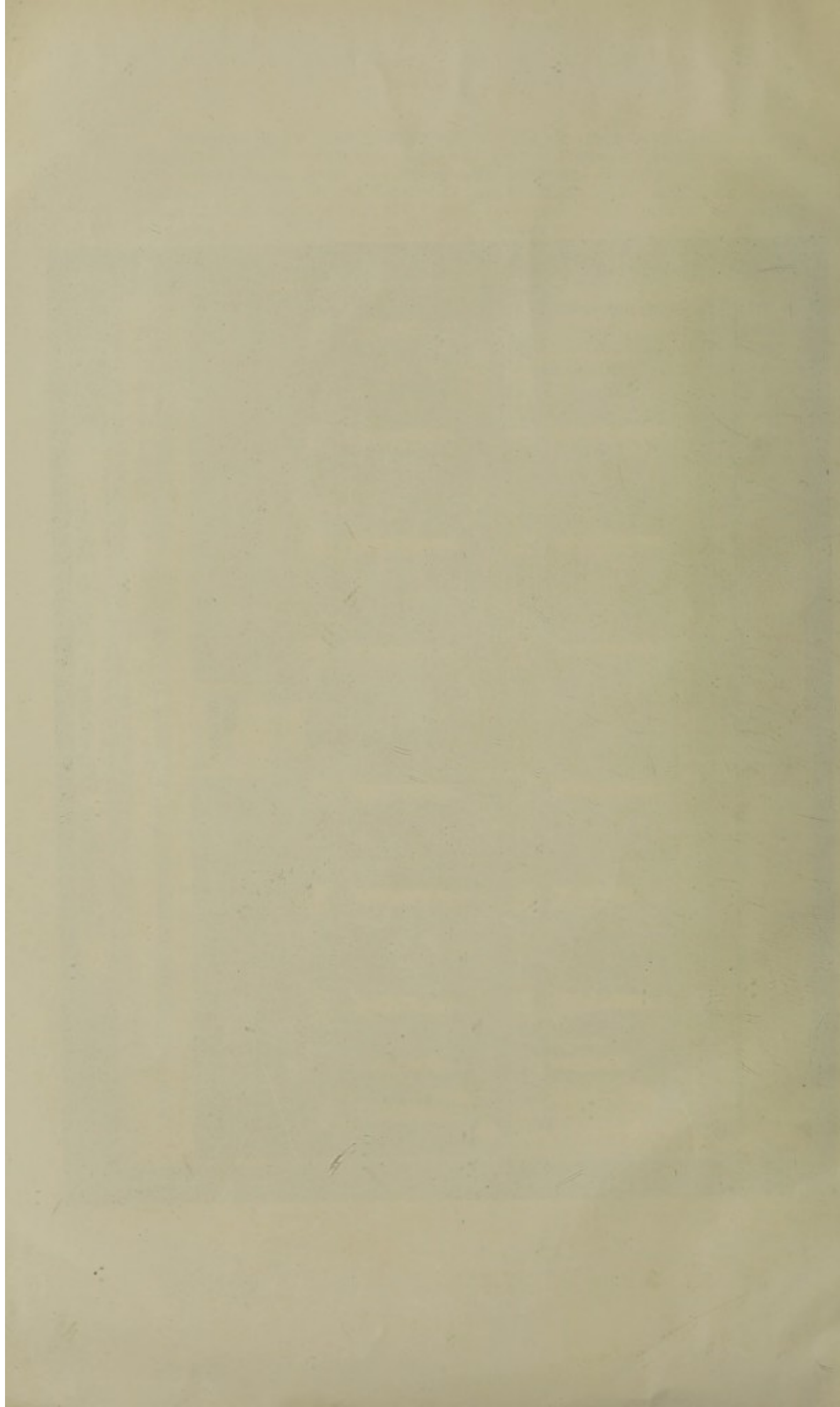
The number of cases notified month by month is shown in Table X and the distribution of cases and deaths from notifiable diseases in different districts of the City shown in Table XII is summarised below as follows:

	City.	St. Clair.	East Dry River.	Belmont.	W'brook.	Total.
Notifications ..	175	7	94	75	46	397
Deaths ..	100	..	57	36	30	223
Average for preceding five years 1924-28						
Notifications ..	214	3	123	80	56	476
Deaths ..	117	0.4	67	42	26	252

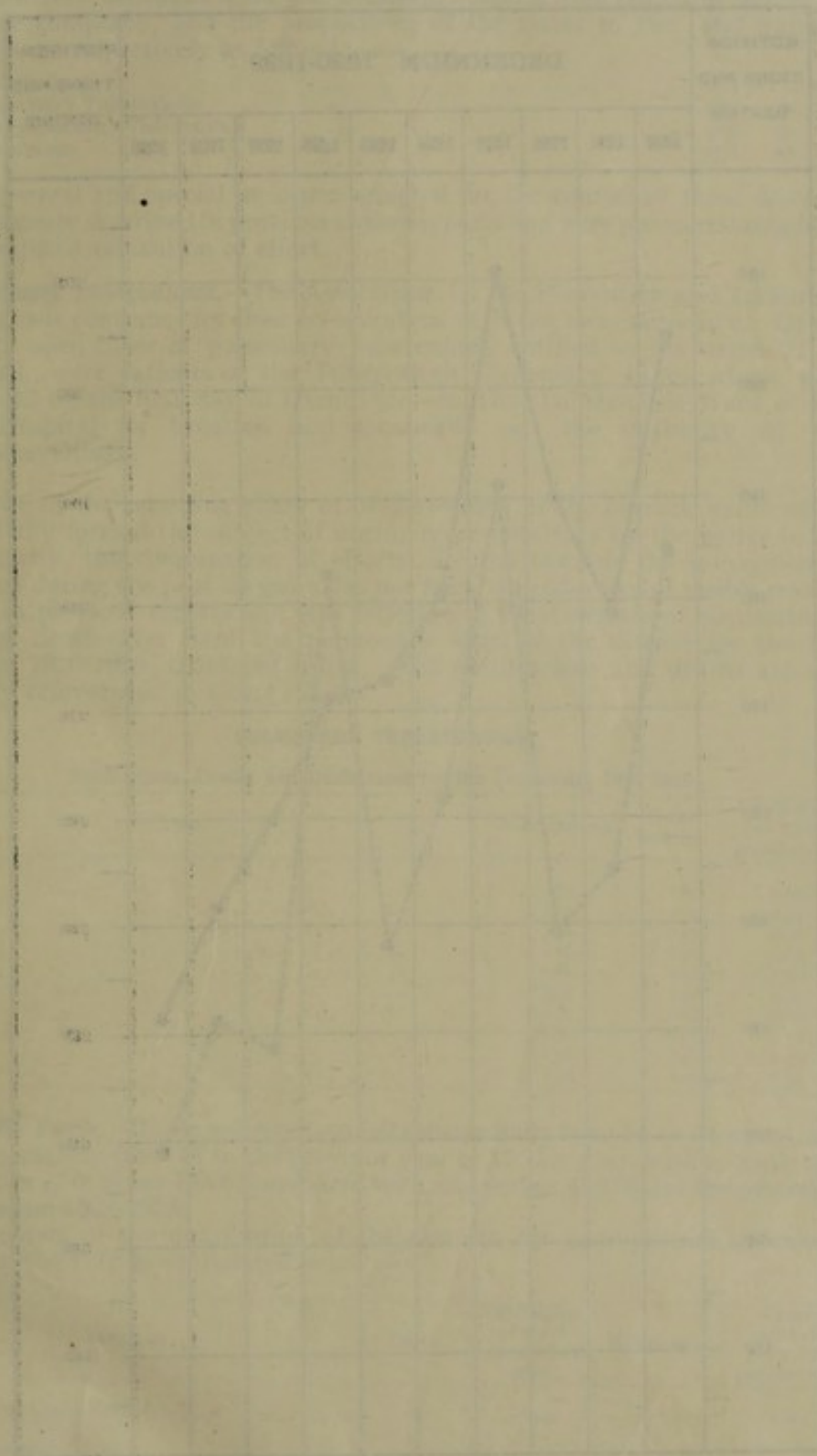


*Fisher
Henderson*

Tuberculosis Dispensary. — Port of Spain.



STATIONARY EXPERIMENTAL DATA
 AND OBSERVATIONS ON THE
 BEHAVIOR OF THE

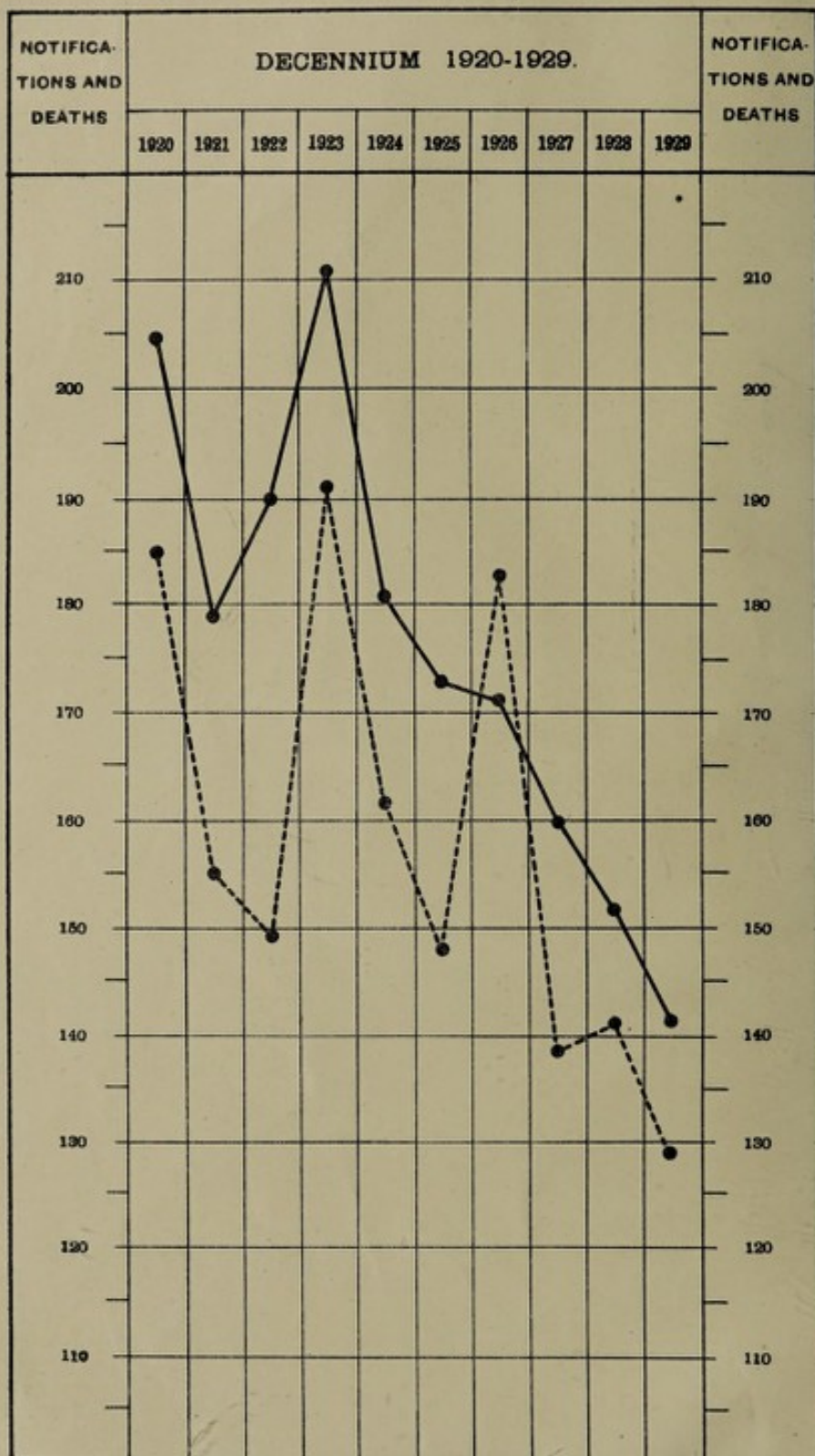


Stationary Experiment - Results
 (continued from page 1)

CHART A.

PULMONARY TUBERCULOSIS— PORT-OF-SPAIN.

Notifications and Deaths.



DEATHS IN HOSPITAL FROM NOTIFIABLE INFECTIOUS DISEASES.

In Table XIV deaths at home and deaths in hospital from notifiable infectious diseases are compared, and the proportions of the latter to the total number registered were respectively as follows:—

Enteric fever	..	..	..	..	..	..	92.3 per cent.
Pulmonary Tuberculosis	..	..	..	..	..	..	58.1 do.
Non-pulmonary Tuberculosis	..	..	..	..	..	..	48.0 do.
Pneumonia	..	..	..	..	..	..	57.1 do.

The general and special measures adopted for the control of these diseases are those already described in previous annual reports and were pursued throughout the year without relaxation of effort.

Pulmonary Tuberculosis.—The Association for the Prevention and Treatment of Tuberculosis continues its close co-operation with the local authority. Of the total of 142 open cases of pulmonary tuberculosis notified to the writer 71, or 50 per cent., were patients of the Tuberculosis Dispensary 46 of whom were removed—13 on the first day of attendance—to the Tuberculosis Ward of the Colonial Hospital for isolation and treatment on the authority of the Tuberculosis Officer.

In spite of the retarding effect of overcrowding in the barrack yards which has repeatedly formed the subject of urgent representations by the writer to the local authority, the combination of efforts directed towards the prevention of tuberculosis during the past 25 years has not been unproductive of visible results, as shown in previous reports and still reflected in the statement of notifications, deaths and death-rates from the pulmonary form of the disease for the last decennium, 1920-1929, tabulated below. The notifications and deaths are also graphically represented in Chart "A."

PULMONARY TUBERCULOSIS.

Notifications, Deaths and Death-rates for the Decennium 1920 1929.

Year.								Notifications	Total Deaths.	Death-rate per 1,000 population.
1920	..	..	..	..	..	..	..	205	185	2.65
1921	..	..	..	..	..	..	..	179	155	2.51
1922	..	..	..	..	..	..	..	190	149	2.38
1923	..	..	..	..	..	..	..	211	192	3.04
1924	..	..	..	..	..	..	..	181	162	2.53
1925	..	..	..	..	..	..	..	173	148	2.29
1926	..	..	..	..	..	..	..	172	183	2.81
1927	..	..	..	..	..	..	..	160	138	2.10
1928	..	..	..	..	..	..	..	152	141	2.13
1929	..	..	..	..	..	..	..	142	129	1.92

Enteric Fever.—These notifications fell substantially from 54 to 35 cases, and the deaths slightly from 14 in the previous year to 13 this year, with a death-rate for the latter of 0.19 per 1,000, compared with an average of 0.39 for the preceding quinquennium 1924-1928.

Particulars of the distribution of the cases in the sewered and unsewered districts of the City are tabulated below:—

Districts.				Cases.	Percentage of total number of cases.	Population.	Cases notified per 1,000 population.
Central part of City (sewered)	..	..	..	19	54.3	27,425	0.69
St. Clair (sewered)	..	..	..	0	..	1,264	..
East Dry River (unsewered)	..	..	..	5	14.3	16,297	0.31
Belmont (unsewered)	..	..	..	8	22.8	12,881	0.62
Woodbrook (partly sewered)	..	..	..	3	8.6	9,489	0.32

A statement of notifications, deaths and death-rates from enteric fever during the period of 12 years 1918-1929 is given in the following table and the curves of the notifications and deaths contrasting the pre and post-chlorination figures are shown graphically in Chart "B."

ENTERIC FEVER.

Statement of Notifications, Deaths and Death-rates for the years 1918-1929.

Year.	Notifications	Deaths.	Death-rate per 1,000 population.
1918	495	104	1.52
1919	330	76	1.10
1920	401	90	1.29
1921	287	77	1.25
1922	226	53	0.84
1923	265	43	0.68
1924	370	49	0.76
1925	168	20	0.31
1926	125	26	0.39
1927	94	17	0.26
1928	54	14	0.21
1929	35	13	0.19

From the above table it will be seen that the steady decline in the prevalence of enteric fever which followed on the chlorination of the water supply from February, 1924, still remained unbroken. This phenomenon has puzzled a good many interested consumers who fail to appreciate the advantage of treating the water supply with chemicals, when enteric fever is also effectively controlled in rural districts where the local sources of potable water, especially in times of drought, are grossly polluted. The answer is that in out-districts where chlorination is impracticable, protective inoculation is the most ready weapon for the prevention of enteric, whilst necessary sanitary improvements are in progress, and is effectively used for that purpose. It is easy to inoculate all the inhabitants of a country village or small town in a short time and thereby render them immune to the disease for a term of years. Further, the protection against enteric afforded by this measure is more complete than may be expected from a purified water supply, since it renders the individual immune not only from infection through contaminated water, but, also, milk and other food, flies, carriers or any source whatever.

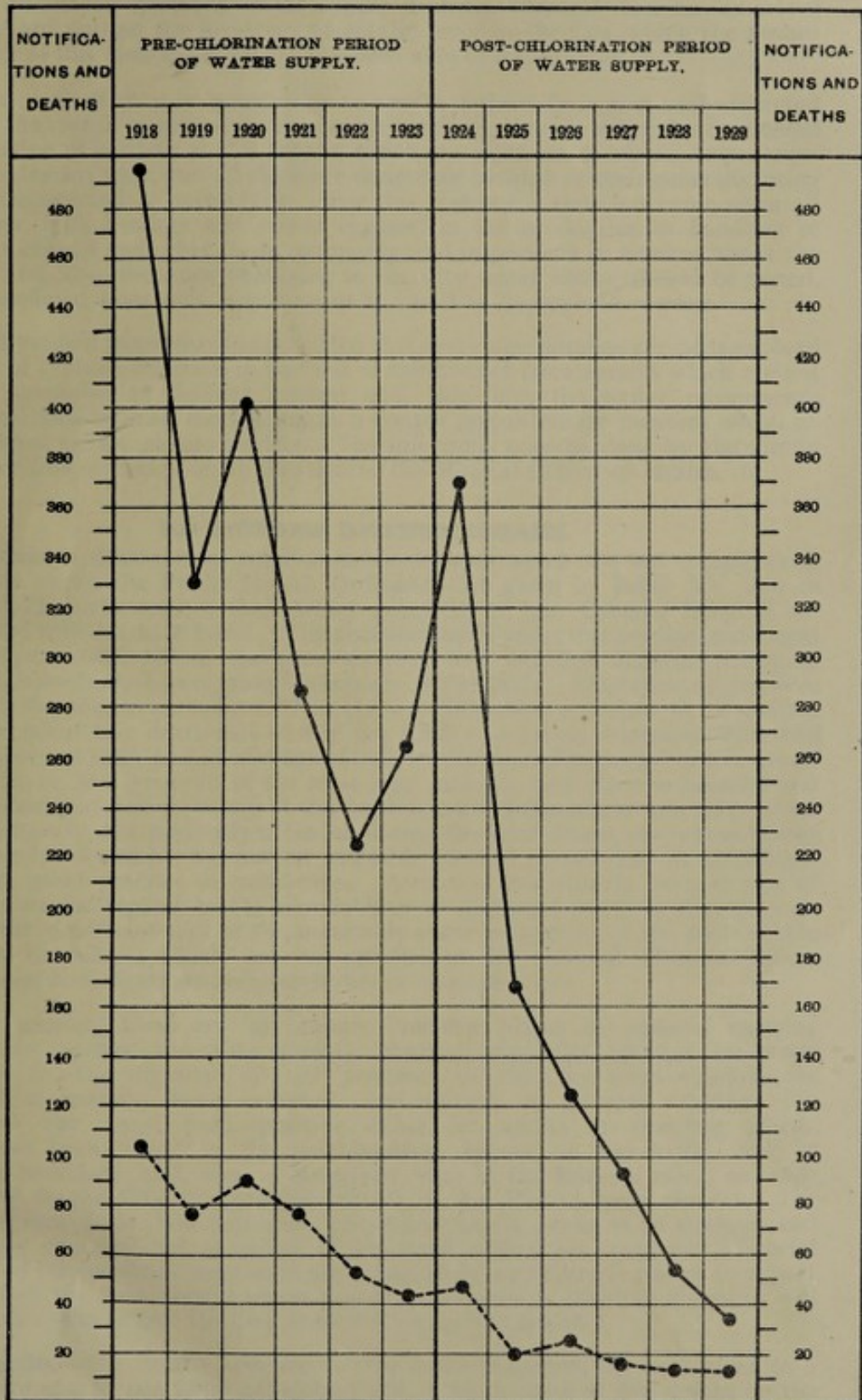
In large urban districts the inoculation of the entire population is quite a different proposition, and reliance must be placed on the elimination of all potential sources of infection, river water, such as the Maraval supply, being among the most dangerous. In Port-of-Spain it is, as a rule, only the contacts to a case of enteric fever who are willing to be inoculated. The routine practice is for the writer to offer this measure of protection to the housemates of the patient and inoculate free of cost those who accept. During the year 241 such inoculations were done in that way. In the case of a barrack an effort is made to inoculate all the tenants in the yard.

Special attention is paid to privy cesspits in the unsewered portion of the City to prevent them from breeding or attracting flies which are, of course, potential carriers of typhoid infection. The public health bye-laws require that cesspits should be sprayed with a mixture of crude and distillate oil once a week, at the cost of the owner, and this is enforced as strictly as possible; moreover, on receipt of the notification of a case of enteric fever in an unsewered district of the City the cesspit is immediately oiled, free of charge, by the local authority, and all cesspits in a wide zone round about the infected premises are similarly treated, the process being repeated for many weeks in succession.

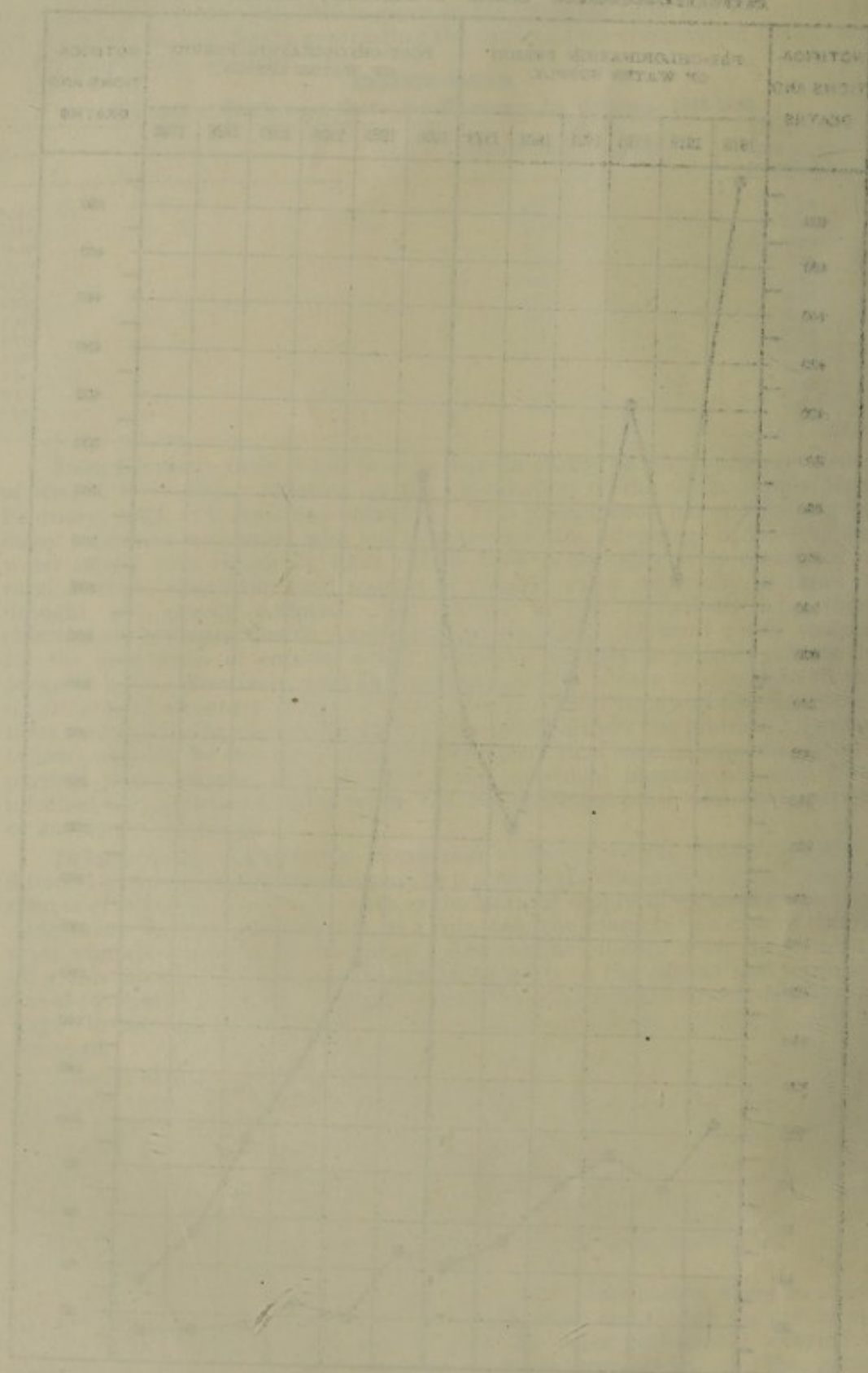
It ought, however, to be said that, apart from chlorination, these measures just described were all in force before February, 1924, and though the prevalence of the disease fluctuated from year to year, the cases persistently occurred in excessive numbers, sometimes reaching epidemic proportions. In the period following the introduction of chlorination there was a complete change in the curve of the disease: the fluctuations by which it was previously marked ceased altogether and were replaced by a sudden, steep descent which has continued

CHART B.

ENTERIC FEVER IN PORT-OF-SPAIN. Notifications and Deaths, 1918-1929.



ENTERIC FEVER IN PORT OF SPAIN.
 Notifications and Deaths 1892-1893.



unbroken to the end of this year. The writer ventures the opinion that such an occurrence affords reasonable grounds for the conclusion that the chlorination of the admittedly polluted water supply from the Maraval river has exercised a downward pull on the incidence of enteric fever in the City which the former tendency of this disease to rise has not been able to countervail.

And while it may be permissible to say that the City is now well protected against the spread of enteric fever in epidemic form, there is still to be considered the question of carriers of the disease, which are elements of serious importance to be contended with, and all the more dangerous because of their generally being either unsuspected or untraceable. For this reason the time has come when all dairymen, milk vendors and others engaged in the production or handling of milk, ice creams and other foods commonly sold in parlours or hawked about the streets, and, also, workmen belonging to the City water works, should be tested, and interdicted from such employment if found to be typhoid carriers.

It is evident from what has preceded that every non-immune person is exposed to risks of typhoid infection in and out of the district from sources which are not always amenable to definite control and, therefore, the writer recommends individual anti-typhoid inoculation as a simple precautionary measure which no unprotected person should neglect. The injections may be done by the family doctor or free of charge on application to the Medical Officer of Health.

NON-NOTIFIABLE INFECTIOUS DISEASES.

Details of deaths from communicable diseases which are not compulsorily notifiable under the Public Health Ordinance are given in Table XV, and in Table XVI particulars of those which occurred at the Colonial Hospital are contrasted with deaths at home. The deaths grouped under this heading numbered 128, compared with 135 in the previous year, and included malaria, whooping cough, influenza, dysentery, ankylostomiasis, and syphilis. 38 of these deaths were ascribed to **malaria**, as against 57 in the previous year, a decline of 19 deaths, and equivalent to a death-rate of 0.56 per 1,000 population, compared with 0.86 in the previous year, and an average of 0.81 for the preceding period of five years. 10 deaths, or 26.3 per cent. of the total from malaria, took place in hospital and the remainder at home. Many of the deaths certified to malaria were of persons, children mostly, not medically attended during the fatal illness, and whose bodies were merely viewed by the nearest available medical practitioner in accordance with the usual practice in such cases. Attention has already been drawn in previous annual reports to the unreliability of diagnoses made in this manner, and to the significant fact of the invariably small proportion of the total deaths allocated to malaria which are so certified at the Colonial Hospital where *post mortem* investigations are practicable in cases of doubt.

At present there are no known breeding places of malaria carrying mosquitoes within the City limits; routine anopheles surveys are made at, and in the vicinity of, all premises in the City from which deaths certified as malaria have occurred, and though in no case during the year has the result been positive either for adults or breeding places, both have been found in the neighbouring district of Laventille, east of the City boundary, and, also, in Mucurapo, west of the Maraval river, on lands belonging to the City Corporation outside of the Port-of-Spain district. The danger arising from these insanitary conditions hardly needs to be stressed, and is already engaging the attention of the local authorities concerned. Special surveys of the localities mentioned are being made, and there is reason to expect that before the next annual report comes to be written effective measures will have been taken to free the City from this menace to health.

Syphilis.—The deaths assigned to this cause numbered 36, equivalent to a death-rate of 0.53 per 1,000 population and to an increase of five deaths on the record of 31 for the previous year, when the death-rate was 0.47 per 1,000. The average death-rate for the preceding five years was 0.86. 21, or 58.3 per cent. of the total deaths allocated to syphilis occurred in hospital, the others at home.

The free clinic under the control of the Government at the Colonial Hospital in Port-of-Spain is open for the treatment of venereal disease three times weekly and is reported to be well patronised. The treatment of expectant mothers at this institution when indicated forms an important part of the ante-natal activities of the Child Welfare League.

Dysentery, mostly of the amoebic type, contributed 23 deaths to diseases under this head, which number was six fewer than in the previous year and yielded a death-rate of 0.34 per 1,000 population, compared with 0.44 last year and an average of 0.49 for the preceding five years. Only six, or 26.1 per cent. of the total, occurred in hospital.

In Table XV it is shown that no deaths from dysentery took place in May or October, one each in February, March, April and November, two each in January, June, August and September, seven in July and four in December. Thirteen, or 56.5 per cent. of the deaths occurred during the months of June, July, August and September when 29.8 inches, or 55 per cent. of the total rainfall of 53.74 inches, was gauged.

Whooping Cough of a severe type, contributing a death-rate of 0.29 per 1,000 of the population, was unusually prevalent during the months of May, June, July and August, during which period 17 out of a total of 19 deaths registered from that cause took place, compared with two deaths for the previous year. Only two of the deaths occurred in hospital.

It is interesting to note that the great majority of these deaths occurred during the same months that notifications and deaths from pneumonia were most numerous. The serious mortality, caused by the disease, far in excess of that for which enteric fever, for example, was responsible, suggests the advisability of having whooping cough added to the list of notifiable infectious diseases, to which recommendation the writer begs to draw the special attention of the local authority.

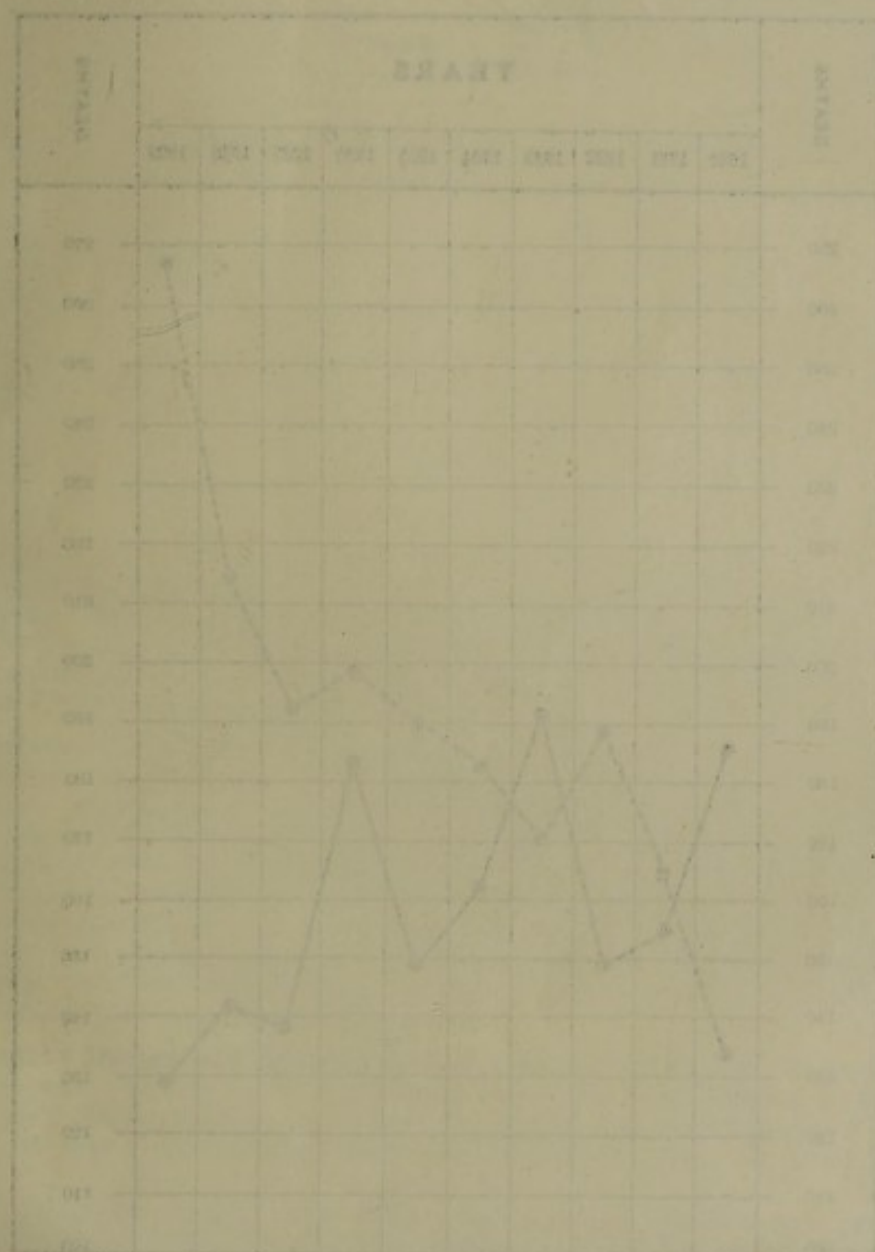
Influenza.—This disease prevailed in a mild form with occasional cases of a severe type, more especially during the latter half of the year. Of eight deaths registered under that head, two occurred between February and April, and six between June and December. Not more than one death was certified to that cause in any month, and none in January, March, May or August. All the deaths took place at home.

Ankylostomiasis.—Hookworm is not a City problem and yielded only four deaths, compared with 11 in the previous year. The death-rate was 0.06 per 1,000, as against an average of 0.17 for the preceding five years. Section 52 of the Public Health Ordinance requires that every dwelling house shall be provided with a sufficient privy and this provision is strictly enforced. In the unsewered portion of the City the type of sanitary convenience in general use is the privy cesspit, usually four feet by four feet by four feet, provided with a concrete or other impervious base wall, raised at least one foot above the surrounding ground to keep out storm water, and surmounted by a privy building so constructed as to prevent access of flies and other insects to the contents of the pit.

OTHER PRINCIPAL CAUSES OF DEATH.

Cardiac and Vascular Diseases.—The mortality comprised in this group included deaths registered from valvular and other diseases of the heart, arteriosclerosis, angina pectoris and aneurism of the aorta to some of which, especially the last mentioned, syphilis is an important contributing cause. The total deaths so certified numbered 267, equivalent to a death-rate of 3.96 per 1,000 population, compared with 214 deaths and a death-rate of 3.22 in the previous year. This group topped the mortality list and exceeded deaths from pulmonary tuberculosis by 138, yet 10 years ago, in 1920, pulmonary tuberculosis, which formerly held the first place among the killing diseases, accounted for an excess of 51 deaths over the mortality from cardiac and vascular diseases.

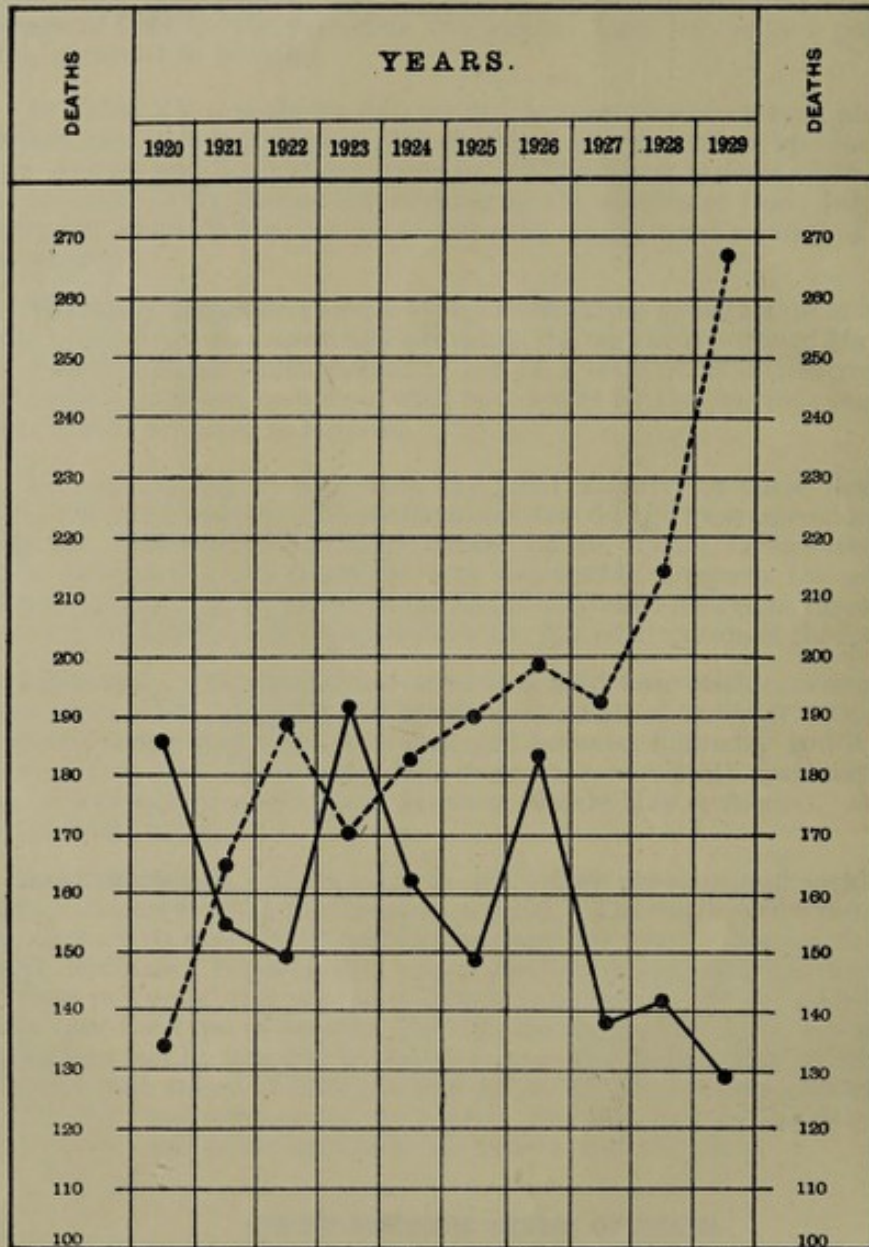
Curves of Deaths from Tuberculous, and Cardiac and Vascular Diseases Compared.



Legend: Tuberculous (solid line with dots), Cardiac (dashed line with crosses), Vascular (dotted line with triangles).

CHART C.

**Curves of Deaths from Pulmonary Tuberculosis
and Cardiac and Vascular Diseases Contrasted.**



Black line — Pulmonary Tuberculosis.
Dotted line — Cardiac and Vascular Diseases.

Below is tabulated a statement, also displayed in Chart C, showing the exchange of pride of place between pulmonary tuberculosis and the cardiac and vascular group of diseases during the decennium 1920-1929 :

Comparison of Deaths and Death-rates from the two Principal Killing Diseases during the period of 10 years 1920-1929.

YEAR.	CARDIAC AND VASCULAR DISEASES.		PULMONARY TUBERCULOSIS.	
	Deaths.	Death-rate per 1,000 population.	Deaths.	Death-rate per 1,000 population.
1920	134	1.92	185	2.65
1921	164	2.67	155	2.53
1922	189	3.03	149	2.39
1923	170	2.69	192	3.04
1924	183	2.86	162	2.53
1925	190	2.94	148	2.29
1926	199	3.06	183	2.81
1927	193	2.94	138	2.10
1928	214	3.22	141	2.08
1929	267	3.96	129	1.92

The above figures show that concurrently with the fall in the death-rate from pulmonary tuberculosis from 2.65 to 1.92 per 1,000 population in the 10 years 1920-1929, equivalent to a decrease of 27.55 per cent. for that period, the death-rate from cardiac and vascular diseases more than doubled itself, rising from 1.92 to 3.96 per 1,000, an increase of 106.25 per cent.

The causes ascribed to this formidable rise in the deaths and death-rates from cardiac and vascular diseases are many and varied, but if the one most commonly suggested, namely, strain caused by hard times resulting from the after effects of the great war be correct, then, assuming the correctness, also, of current predictions of still harder times in the near future, as a consequence of the fall in the prices of sugar, cocoa, and other staples of the Colony, the outlook for an early turn in the tide of deaths from these diseases is not promising. This problem, which has, also, arisen in many other countries, requires serious investigation by competent observers and the promulgation of more definite scientific opinion thereon than is available at the present time.

Bright's Disease and Nephritis showed a marked decline of 38 deaths on the previous year. 82 deaths were registered under this head yielding a death-rate of 1.22 per 1,000 population, as against 120 deaths and a death-rate of 1.81 per 1,000 last year. The average death-rate for the five previous years was 3.00 per 1,000.

Coming after deaths from cardiac and vascular diseases and pulmonary tuberculosis which took first and second places, respectively, in point of numbers, Bright's disease and nephritis came third with 82 deaths, followed in numerical sequence by bronchitis 77 deaths, pneumonia 56 deaths, diarrhoea and enteritis and cancer 53 deaths each.

Diarrhoea and Enteritis.—53 deaths, as shown in Table XVIII, were assigned to this group of diseases, equivalent to a death-rate of 0.79 per 1,000 population, compared with 63 deaths and a death-rate of 0.95 per 1,000 in the previous year, and an average of 1.12 per 1,000 for the preceding five years. 16 deaths occurred in the second half of the year, as against seven in the first. Seven, eight and nine, the highest numbers in any single month, occurred in December, July and August, respectively, and, except for January, when there were no deaths registered under this head, the lowest numbers, namely one, two and three, were recorded in October, September and May, and in April, respectively.

Of the total deaths under this head 32, or 60.38 per cent., occurred among infants under one year, and seven, or 13.21 per cent., were distributed among children of the age-period one to five.

The curve of diarrhoea and enteritis for the period of 12 years, 1918-1929, is displayed in Chart D.

Bronchitis.—Among the respiratory group of diseases bronchitis was responsible for the highest mortality, the number of deaths being 77, which was an increase of six over the preceding year. The respective death-rates were 1.14 and 1.07 per 1,000 population, and the average for the previous five years, 1.24.

As already shown the mortality from pneumonia and broncho-pneumonia was 51 deaths with a death-rate of 0.83 per 1,000 population, compared with an average of 0.82 for the previous five years.

The deaths and death-rates from these diseases during each year of the last-mentioned period are given in Table I.

Cancer.—Deaths from cancer and other malignant diseases increased to 53 from 48 in the previous year, the former being the greatest number recorded for the past five years. The death-rates calculated on the mortality figures for this and the previous year were, respectively, 0.79 and 0.72 per 1,000 population, and the average rate for the previous five years was 0.68. Fatal delay on the part of sufferers in seeking competent medical advice contributes materially to the increased mortality from these diseases, as is evidenced by the following remarks in the annual report for this year of the Resident Surgeon of the Colonial Hospital:—

“Patients suffering from cancer almost invariably applied too late for any but palliative treatment.”

In view of this discouraging statement, the writer wishes to further emphasise the tenor of his remarks on this subject in last year's report, namely, that *early* surgical interference still holds the field as the most reliable curative measure, and the surest hope lies in early diagnosis. It is therefore imperative that the best possible medical advice should be taken without delay in every case in which there may be the least ground for suspecting the disease in any swelling or growth, or in any unusual discharge from the body.

Further details of the Vital Statistics presented in this part of the report will be found in Appendix A, Tables I to XVIII.

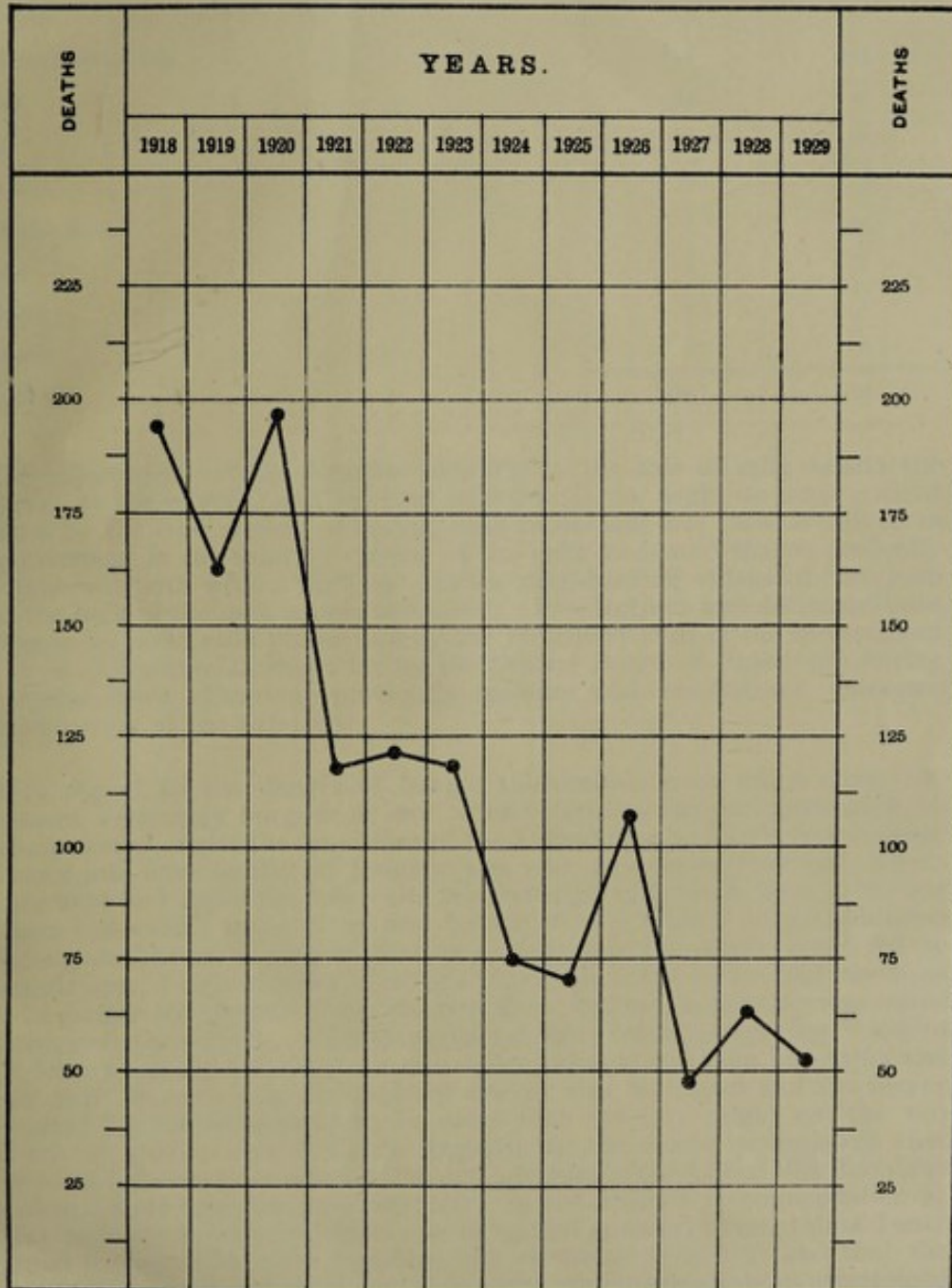
II.—SANITARY CONDITION.

Rainfall.—The total rainfall was 53.74 inches compared with 59.56 inches last year, an increase of nearly six inches. More rain fell in the September quarter than in any other season of the year. The amount gauged during that period was 26.24 inches, compared with 3.89 in the March quarter, 14.64 in the June quarter and 12.96 in the December quarter. The three wettest months were August with 10.53 inches of rainfall, November with 8.66 inches and June with 7.62. The driest months were February with 0.97 inches of rainfall, April with 1.05 inches and December with 1.30. From records supplied through the kind courtesy of the Department of Agriculture the average record of rainfall for each month during this and the preceding year, as gauged at the three principal stations for Port-of-Spain, namely, St. Clair, the Colonial Hospital and Constabulary Headquarters, is given in Tables XIX and XX, respectively. (Appendix A.)

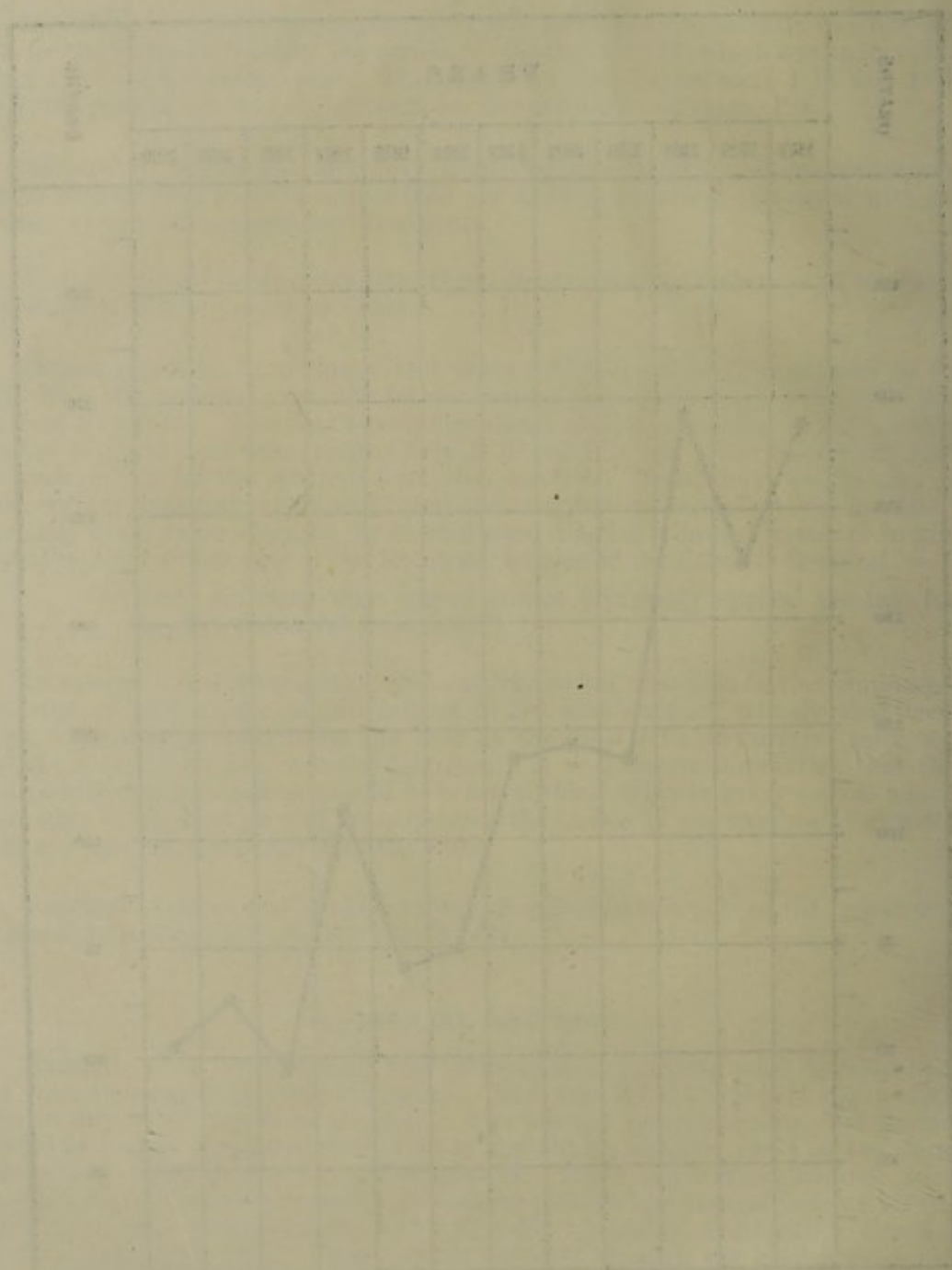
Milk.—29 licenses were issued in respect of cowsheds kept in the City, but the bulk of the milk supply came from outside. Of 232 milk vendor's licenses only 37, or 16 per cent., were issued to City dairies; the others, namely, 195, or 84 per cent., related to country dairies. More than half of these licenses went to San Juan which has the biggest share of the milk trade with Port-of-Spain.

CHART D.

DIARRHOEA AND ENTERITIS IN PORT-OF-SPAIN. DEATHS 1918-1929.



DIARRHOEA AND ENTERITIS IN PORTUGAL
DEATHS 1918-1920



Below is a table giving exact details of the situation of the dairies in respect of which milk vendor's licenses were issued and badges supplied :—

Milk Vendor's Licenses and Badges.

Situation of Dairies, &c.							Milk Vendor's Licenses issued.	Badges supplied.
Port-of-Spain	..	..	..	..	..	..	37	50
San Juan and Santa Cruz	..	..	..	..	..	..	126	143
St. James	..	..	..	..	..	..	34	40
Maraval	..	..	..	..	..	..	28	30
St. Joseph	..	..	..	..	..	..	3	3
Long Circular Road	..	..	..	..	..	..	1	4
Laventille	..	..	..	..	..	..	1	1
Four Roads	..	..	..	..	..	..	1	1
Diego Martin	..	..	..	..	..	..	1	1
Total	..	..	..	..	..	..	232	273

The enforcement of the bye-laws relating to the sale of milk assists the production of clean milk, and typhoid infection is no doubt to some extent prevented by the local custom of boiling milk before use, but there is still room for improvement in the sanitary control of the milk trade and that is gradually being tightened both within the City and the neighbouring village of San Juan whence the bulk of the milk supply is derived. Free lectures and demonstrations to dairymen on clean milk production by the veterinary staff of the Government Farm at St. Augustine arranged for by the Central Board of Health are having the intended effect of making previously ignorant and recalcitrant dairymen willing observers of the bye-laws.

With regard to the danger of bovine tuberculosis from milch cows, the Government Veterinary Surgeon or any other veterinary surgeon authorized by him is empowered, under the provisions of the Tuberculosis in Cattle Regulations, which came into force on the 1st January, this year, to enter any premises where cattle are kept and apply the tuberculin test, whether such cattle show or do not show signs from which tuberculosis may be suspected. From a return published by the Surgeon-General it appears that, in pursuance of the powers conferred by these regulations, a large number of cattle distributed in 553 dairies and cowsheds situate in various out-districts from which milk is supplied to the City was tested free of charge to the owners. 15 positive reactors were found, comprising five cows in milk, four in calf and two dry; the remainder included two oxen, one heifer and one bull calf. In each case the positive reactor was destroyed and the owner compensated by the Government. In order that the City might get the full benefit of the Tuberculosis in Cattle Regulations, the writer recommends that early steps be taken to pass into law the amendments to the Sale of Milk Bye-laws which were adopted by the local authority on the writer's recommendation at their May meeting with the object of providing that cowshed licenses should only be granted in respect of cows registered by the local authority, and that the presentation of an approved certificate of freedom from tuberculosis, as ascertained by recent application of the tuberculin test, shall be a condition precedent to the registration of any cow.

Food.—The completion of the reconstruction of the meat and fish section, and the southern division of the fruit and vegetable section of the Eastern Market at a cost of £24,000, has vastly improved the sanitary conditions under which these marketable commodities are sold in the principal market of the City. Proper tables have been supplied for the use of stall holders and no longer is the insanitary practice of exposing articles of food for sale on the ground allowed; an abundant supply of running water is provided for hosing down the meat and fish tables and

the floors and drains of the market daily after closing hours; latrines and lavatory basins of the most modern type have been installed and special attendants are on duty all day to ensure constant cleanliness. When the projected improvements of the northern division of the fruit and vegetable section shall have been carried out the Eastern Market will be unsurpassed by any similar institution in the West Indies.

Draft bye-laws prepared to give effect to the amendment of Section 156 of the Public Health Ordinance with respect to the registration of shops where food is sold and of persons selling food have for a long time been under the consideration of the local authority. As there is plenty of use for them when completed, the writer ventures to express the hope that they will be fully considered and passed into law at an early date.

In consequence of the extensive abuse of Saccharin, which is held by many authorities to be injurious to health, as a sweetening agent in the manufacture of the cheaper forms of sweet drinks consumed in the City, principally by school children and persons of the poorer class, the local authority on the suggestion of the writer drew the attention of the Central Board of Health to the matter with a suggestion that the Government be invited to increase the import duty on this chemical to such a figure as would effectively prevent its use as a commercial substitute for cane sugar. Favourable consideration was given to this representation but at the close of the year the method to be employed for restricting the importation of Saccharin into the Colony had not yet been decided upon.

Water Supply.—During the year a continuous supply of pure, potable water was piped to the City from the Corporation's water works. The daily amount delivered per head of population was ample and averaged 55 gallons, inclusive of the supply for trade purposes, flushing street drains and other sanitary services. The supply from each separate source was treated with varying doses of liquid chlorine regulated by Paterson chloronomes with the addition of proportionate quantities of permanganate as a detaster or taste preventer. Delivery tap samples of the mixed waters from Diego Martin, Cocorite, Maraval, St. Ann's and Cascade taken and examined by the Government Bacteriologist, to whom the thanks of the local authority are due, tested negative for *B. coli* in 50 cc. on 350, or 95.89 per cent., of the 365 occasions on which they were examined. The standard of purity adopted by the local authority, which is reasonably safe, is higher than is apparent at first sight, the personal experience of the Bacteriologist, after exhaustive examinations of the City water supply over a period of many years, being that samples which test negative for *B. coli* in 50 c.c. do not fail to give the same negative results in 100 c.c. As already shown there was a decrease on the previous year of 6 deaths from dysentery and 10 from diarrhoea and enteritis, also a drop of 19 and 1, respectively, in enteric notifications and deaths.

At the same time it cannot be gainsaid that there is an ever present risk of the Maraval river, the main source of the City water supply, being suddenly and heavily loaded with specific pollution just when the dose of chlorine in use at the reservoir happens to be insufficient to cope with such a contingency, and should the filters then, as they practically always are, be working at too rapid a rate for efficient filtration, it is easy to see the danger to which the health of the consumers would be exposed before the dosage of chlorine could be adjusted to meet the emergency.

In view, therefore, of this unsatisfactory circumstance and the great expense that would be involved in any comprehensive scheme for remodelling the Maraval waterworks and St. Clair filtration station without, as the writer thinks, any certainty of the results being completely successful in the end, owing to topographical disadvantages and well-nigh insuperable difficulties attending the efficient sanitary control of the Maraval watershed, the writer recommends that the local authority should as early as possible give consideration to this position of affairs in relation to the Colony Water Scheme, and definitely decide whether it would not be safer on sanitary grounds, as the writer believes it would be, and more economical in the long run to contract with the Government for a sufficient supply of water from the Colony Scheme, when completed, to permit the scrapping of the Maraval waterworks, or its maintenance solely as a reserve source of supply for use in circumstances of grave emergency. Failing an affirmative decision on this question, which the writer strongly recommends, it is advisable that no time be lost in installing an additional battery of 12 filters at St. Clair, and adopting as a permanent measure the chlorination of the Maraval water after filtration, as successfully carried out experimentally in April and May, 1927.

Drainage.—The improvements made in the drainage system of Woodbrook have to a large extent been effective in preventing the flooding which formerly took place in that portion of the City and to which attention was drawn in certain special reports and, also, in last year's annual report. Flooding, however, still takes place in the lower reaches of the Maraval river, much of which could be prevented if the course of the river in that locality, which is full of bends, were straightened. Complaints of flooding in Belmont, especially in the vicinity of the Valley Road are still rife, and it is satisfactory to note that a scheme for the general improvement of the drainage system of Belmont at a cost of \$63,000 was under the consideration of the Council at the close of the year. The commencement of the long delayed plan for paving the bed of the Dry River, which is expected to take place early in the new year, will mark a notable advance in the sanitation of Belmont and East Dry River, and remove a painful eyesore from the suburbs through which the course of the river lies. The writer must, however, take this opportunity of reminding the local authority of the danger, to which attention has already been directed in a previous report, of converting the Maraval river in its course through St. Clair and Woodbrook into an equally insanitary and offensive water course as the Dry River, and the necessity for taking steps now to prevent the discharge into it of slop waters from neighbouring premises. The writer begs to repeat his suggestion that a suitable intercepting drain be laid to carry off all slop waters from premises in the immediate vicinity of the river direct to the sea.

Sewerage and Sewerage Disposal.—The City sewerage system, functioned satisfactorily throughout the year, but the same cannot be said of the septic tanks in common use in the newer buildings in Woodbrook. Chokes are fairly frequent and in many cases the effluent has found its way to the street drain. Sometimes the walls of the cesspool crumble and allow the inrush of ground water which soon overflows on the premises. In many cases mosquitoes have been found breeding in the cesspools, and the necessity for their abolition increases the urgency of connecting Woodbrook with the general sewerage system of the City.

The final disposal of faecal matter removed in steel barrels from cesspits in the unsewered portions of the City to the Mucurapo Pumping Station is unsatisfactory. The drums are hoisted on to the top of a tower, emptied thereon and washed down with water to a concrete drain leading to the sea south of the pumping station. As the sea is very shallow in that locality layers of faecal matter are deposited on the foreshore during low tides, thereby causing an insanitary condition which is dangerous to health and not in keeping with the sanitary progress of the City. The writer recommends that this matter, which he has previously brought to the notice of the local authority, be given urgent consideration with a view of devising some more sanitary means of disposing of faecal matter brought to the pumping station for that purpose.

Removal of House Refuse.—The writer begs leave to make a further plea for scavenging on Sundays the congested area situate between Park Street on the north, Marine Square on the south, Piccadilly Street on the east and Henry Street on the west. The majority of the premises included in this area are barrack yards, some of them the largest in the City, and the dustbins prescribed under the bye-laws relating to the collection and removal of house refuse are insufficient in size to contain the refuse which accumulates, usually composed to a large extent of putrescible animal and vegetable matter, between Saturday morning and Monday morning. The result is that a good deal of this offensive matter is littered in gateways and also finds its way on the footpaths; the effect is not only insanitary but unsightly as well, and not creditable to the City. The writer strongly advises that as an experiment provision be made in the next estimates for a single round of the scavengers' carts on Sunday mornings in the area described.

The breeding of flies at the Eastern and Western dumping grounds has to a certain extent been kept in check by covering the dump with earth, but in order to effectively prevent occasional breaks in that respect, the writer again begs to urge upon the local authority the necessity for placing the supervision of this work in the hands of a qualified sanitary inspector who is scientifically trained in the proper methods of controlling the disposal of refuse on a dumping ground. The writer feels certain that such an appointment, which has already received the sanction of the local authority, though not carried into effect, will fully repay

the expense involved. Looking ahead, with the rapid extension of building operations in the direction of the Maraval river in close proximity to the Western dumping ground, consideration of the question of removing the dump is one which, for the same reasons which caused it to be shifted from its former site, cannot long be delayed, and the writer begs to recommend that this contingency, and the question of the establishment of a modern refuse destructor, be not lost sight of.

Housing.—The shortage of housing accommodation for persons of the poorer class referred to in last year's report has grown much worse and so has the overcrowding. This is the most urgent and far reaching sanitary problem that has arisen in the City since the local authority was constituted, and now requires to be even more seriously considered than before. The barrack question in the congested districts south of Park Street is to a certain extent solving itself by the conversion of an ever increasing number of these premises into factories and workshops, garages, bakehouses, refreshment parlours, small stores and other places used for trading purposes. On this account a great number of tenants was turned out of their rooms during the year to face the impossibility of finding decent accommodation anywhere. Rents have in consequence gone on rising beyond all previous bounds, and incredible prices are demanded and paid for the occupation of rooms that are unfit for human habitation. The enforcement of notices under the nuisance sections of the Public Health Ordinance to put such premises in proper sanitary condition has practically come to a standstill where the requisitions of the notice are such as to render necessary the vacation of the rooms, since the tenants all complain with one voice that they can find no place to go to. An instance of this, which was only one of many similar cases, may be recalled here. Dealing with a report on the condition of certain premises in Laventille Road which were structurally unsafe and otherwise unfit for human habitation, the local authority at their November meeting resolved as follows :—

“ That in view of the opinion expressed by the City Engineer as to the impossibility of repairing these premises, and the facts mentioned by the Medical Officer of Health that to enforce the closing of the premises would mean turning into the streets a large number of persons who will be unable to obtain housing elsewhere without causing overcrowding of other barrack yards, no further action be taken in the matter for the present.”

Shortly before this resolution was adopted the local authority had taken the usual steps to get an amendment of the Public Health Ordinance passed to empower them to carry out the necessary works and allow the repayment of the cost to be spread over a period not exceeding fifteen years in cases where default in complying with the requirements of a nuisance notice with respect to a barrack yard or common lodging house was due to poverty or other inability of the owner. But this measure fell short of what was needed to remedy the impotence to which the local authority was reduced in regard to their duty of enforcing the nuisance sections of the Public Health Ordinance relating to insanitary premises, since they themselves could not carry out such structural improvements of a barrack, as would in most cases be necessary, without turning out the tenants and forcing them to squeeze into other overcrowded yards and thereby aggravate the nuisance which was sought to be abated. The writer, therefore, in the course of a memorandum on the Housing question, dated the 18th November, 1929, submitted the following observations and references for the consideration of the local authority :—

“ The writer is aware that the Local Authority has recently applied to the Government for legislative sanction to carry out the requirements of a nuisance notice and allow the cost to be paid by instalments where the owner, through poverty or other sufficient cause, is unable to do the necessary work : but obviously that is not enough. *Increased housing accommodation for the poor worker is just as urgently needed in the City as the improvement of insanitary barracks.*

The Housing Act, 1925, among other important provisions, empowers a Local Authority :—

- (a) to repair dwelling houses suitable for occupation by persons of the working classes and spread the repayment of the cost by the owners over a period not exceeding 30 years ;
- (b) to acquire closed houses.

It also imposes the duty on every local authority to consider the needs of their area with respect to the provision of housing accommodation for the working classes and, as often as occasion arises, to prepare a scheme for the exercise of their powers under the relevant part of this Act.

The Housing Act also gives power to local authorities to provide housing accommodation for the working classes :—

- (a) by the erection of dwelling houses on any land acquired or appropriated by them ;
- (b) by the conversion of any buildings into dwelling houses for the working classes ;
- (c) by the acquisition of houses suitable for the purpose ;
- (d) by the alteration, enlargement, repair or improvement of any houses or buildings on land acquired as a site for the erection of dwelling houses for the working classes, or any other houses or estate wherein interest has been acquired by the Local Authority.

Considering all this, and in view of the serious menace to the public health created by the insufficiency and insanitary condition of housing accommodation for the persons of the poorer class in Port-of-Spain, and the absence of adequate powers in the Public Health Ordinance to deal effectively with these dangerous nuisances, the writer strongly recommends that the scope of the Housing of the Working Classes Act, 1925, in England and Wales be investigated as early as possible by the local authority, with the object of making representations to the Government for the enactment of such of the powers and duties included therein as may be considered expedient and practicable locally, with such financial provisions as may be mutually agreed upon between the Government and the Council.

Elsewhere an opinion has been advanced that the Council has no obligations with regard to the poor of the City or to the provision of houses for the working classes. For the sake of the uplift that an improved system of housing would give the children who perforce have to be reared in the unhealthy atmosphere of the barrack yards—especially those situated in the older parts of Port-of-Spain, the writer hopes that this opinion may not be taken too literally ; for though it may be correct in its legal aspect, is it quite the same in the moral sense ?

It is said that " The Men are the City : " in considering the foregoing observations and recommendations this maxim deserves to be remembered and, with great respect, the writer would invite the Council to ponder also the following reflections of a thinker on its significance :—

" The men are the City : but do the men make the City or does the City make the men ? Or do they make each other as generation succeeds generation, the environment shaping the young and the adults shaping the environment ?

A bad environment does make bad citizens, and it is only good citizens who can initiate a good environment, though bad citizens can be slowly improved by it when once it is shaped.

Draining the field does get rid of the rushes, and does give the meadow grass a chance to grow."

This report was referred to a special committee of the local authority and at the end of the year was still under consideration.

Inclusion of St. James in the City.—A majority and a minority report of the Special Committee appointed in December, 1927, to consider the question of the advisability of taking steps to have St. James included within the limits of the City of Port-of-Spain were submitted to the local authority at its regular meeting in October. Both reports stressed the fact that, by reason of the backward state of its sanitation, St. James was a menace to the health of Port-of-Spain. "We are of opinion," the majority stated, "that in principle it would be very desirable that St. James by reason of its close proximity to Port-of-Spain, should be included within the limits of the City, so as to secure that it should come under the same sanitary control. But we find that St. James is in a backward and very insanitary state, with no street lighting, no properly formed streets, with few, and generally defective drains, numerous cesspits and many other conditions." It further added that "It would entail a very great deal of expenditure to bring St. James to the level of sanitation now enjoyed by the existing suburbs of Port-of-Spain." The recommendations which followed were :

- "(a) that the time is not opportune for taking any steps to have the district of St. James included within the limits of the City.
- (b) that nothing should be done in that direction until the district has been put in as good a sanitary condition as the existing suburbs of the City.
- (c) that the Council do represent to the Government the desirability of taking steps to improve the sanitary condition of St. James as suggested in (a).
- (d) that when the sanitary conditions of St. James have been improved in the manner suggested the question of the desirability of including St. James within the limits of Port-of-Spain be again brought up for further consideration."

On the question of sanitation the minority remarked "So long as St. James remains in its present insanitary condition, so long will it continue to be a source of potential, if not actual, menace to the City, and a drawback to the attempts being made at modern sanitation. It seems to be the reverse of a long sighted policy that the City of Port-of-Spain should be content to allow St. James to be a source of menace to health," to which was added, "I am, therefore, strongly of opinion that the time is most opportune for the district of St. James to be included within the limits of the City of Port-of-Spain. If advisable the large area of land now privately owned, may be purchased as in the case of Woodbrook, and if necessary, the Land Acquisition Ordinance with all its powers of arbitration should be invoked in the event of a purchase being decided upon."

After discussion, the minority report, with the following addition thereto, was declared carried :—

- "I therefore recommend that the question of the inclusion of St. James in the City be referred back to the Committee of the whole Local Authority, with a special direction to them to endeavour to confer with the Government and with the owners of the land, so that their views may be definitely ascertained in the matter before the Council commits itself to any decision on this important question."

The road now seems wide open for this momentous matter to be brought to a satisfactory issue. But there is one aspect of the question which does not appear from either of the reports to have received consideration and that is the importance of St. James to the City in the solution of the Housing problem. Assuming that with the machinery which has at length been set in motion every barrack yard in Port-of-Spain is put in proper sanitary condition within the next five or ten years, the question of relieving the overcrowded state of the barracks would still exist, for, as was pointed out in last year's report, even with good lighting and efficient ventilation there is a limit to the number of persons whom a barrack room 10 feet by 10 feet can accommodate without danger to health and, unless steps are taken, without delay, to provide for the expansion of the City, the effect of improving the present housing accommodation for the poorer class would vanish before long and, as the writer also stated in his previous annual report, "overcrowding with the continuing growth of the population would again become rampant in the improved barracks."

And, this being so, in what direction is the expansion to take place? Obviously St. James which, with its undulating hills, the easily drained slopes below and a wide sea-front, offers great natural advantages for carrying out an enlightened town planning scheme, and converting what is now an unsavoury village into a healthy and delightful suburb of Port-of-Spain. The question of going eastwards is ruled out by the Caroni Swamp and all that it means in the breeding of *Anopheles* mosquitoes and the spread of malaria. The failure of the attempt to drain it and its unproductive cost to the Colony are matters of recent history. On the other hand whilst *Anophelines* are also found to a certain extent in St. James, the cost of eradicating their breeding places would be comparatively trifling.

As to the suggested drawback of the City having to take a share in the expenditure for bringing the sanitation and amenities of St. James in line with New Woodbrook, what would be the urge to include St. James in the City if the sanitary conditions and amenities of the former were all that they should be? In both the Committee reports on the subject the menace of St. James in its present condition to the health of the City is uncontested, and should therefore be removed without further delay, and advantage taken of the suitability of that district for providing increased housing accommodation for the City population. Both these objects are worth paying for in such proportions as may be equitably arranged between all the parties concerned.

Moreover, there are certain necessities of life, such as health, comfort, pleasant surroundings and other refinements which give a satisfying return that cannot be assessed in money alone, and it is the writer's firm opinion that the amalgamation of St. James with Port-of-Spain will bring to both places a full measure of enjoyment of these priceless advantages.

III.—SANITARY ADMINISTRATION.

Staff.—The following is the staff appointed by the local authority under the Public Health Ordinance Cap. 98:—

Medical Officer of Health—George H. Masson, M.D., C.M., D.Sc. (Public Health), F.R.C.P.E., F.R.S.E.

Secretary, Local Authority—E. Prada, M.R.C.S.E., L.R.C.P.L.

Chief Clerk to Medical Officer of Health—W. R. Smith.

Chief Sanitary Inspector—Capt. E. W. Lack, V.D.

1st Grade Sanitary Inspectors—J. E. Ferreira, CERT. R. SAN. I., Henry Thorne, G. Charles, J. W. Parris, and F. A. Howard.

2nd Grade Sanitary Inspectors—N. Guppy, C. C. Assing and O. E. Forde, ASSOC. R. SAN. I.

3rd Grade Sanitary Inspectors—W. G. Williams, Clerk to M.O.H., H. St. Cyr, CERT. R. SAN. I., F. Babb, G. Ashe, J. Wood, and T. M. Mitchell, CERT. R. SAN. I., Clerk to M.O.H.

Assistant Sanitary Inspectors—J. B. Taylor, S. B. Nurse and A. Romain.

Messenger—T. Christian.

There are also four anti-mosquito gangs equipped with extension ladders and a supply of larvicide; four anti-rat gangs each one of which is equipped with traps, bait, rat poison, and a portable "Clayton" Fumigating Machine; two to four gangs of labourers for oiling stagnant pools in the bed of the Dry River and the lower reaches of the Maraval River, earthen drains, pools and swampy lands on the Woodbrook foreshore, and the dumping grounds; two spraymen for disinfecting premises for infectious diseases and two others for oiling cesspits. The work of the labourers is carried on under the immediate supervision of qualified inspectors. The Chief Sanitary Inspector personally controls the scavenging and cleansing of the Eastern Market.

Changes and Promotions.—There were no changes or additions to the staff during the year. The following promotions were made :—

Captain E. W. Lack, v.d., Chief Sanitary Inspector, W. R. Smith, Chief Clerk, and 1st grade Inspector J. E. Ferreira, CERT. R. SAN. I., were granted personal allowances for long and efficient service.

G. Charles, H. Thorne, J. W. Parris, F. A. Howard from Sanitary Inspectors 2nd grade to 1st grade.

O. E. Forde, Assoc. R. SAN. I., from Sanitary Inspector 3rd grade to 2nd grade.

T. M. Mitchell, CERT. R. SAN. I., and J. A. Wood from Assistant Sanitary Inspector to Sanitary Inspector 3rd grade.

H. St. Cyr, CERT. R. SAN. I., restored from Assistant Sanitary Inspector to his former position of Sanitary Inspector 3rd grade.

Sanitary Work.—The following is a summary of the sanitary work performed under the writer's direction and immediate supervision of the Chief Sanitary Inspector, Captain E. W. Lack, v.d.

House to House Inspection.—During the year under review 101,277 visits of inspection, equivalent to an average of 8,440 per month, were made to premises in the City, including barrack yards, private dwelling houses, shops, factories and places where offensive trades are carried on. (Table A.)

Results of Notices and Verbal Directions.—The requirements of notices and verbal directions were complied with in 22,544 instances, the principal results including 3,549 yards, 2,606 drains, 1,167 sewer basins, 1,366 dustbins, 1,375 cesspits, 739 sinks, 519 washing platforms and troughs, 293 gullies, 167 urinals and lavatories cleaned ; 376 damp or swampy yards filled with earth ; 17 yards paved ; 93 yard pavements, 407 drains, 43 sinks, 34 sewer basins, 706 privies, 360 cesspits, 42 sewerage flush tanks, 503 dustbins, 110 barracks, and 41 kitchens repaired ; 913 sanitary dustbins provided ; 764 uncovered dustbins provided with covers ; 116 new drains, 21 sinks, 156 new privies, 127 new cesspits constructed ; 346 privies made fly-proof ; 2,712 paid for cesspits oiled ; 31 new sewer basins installed ; 332 accumulations of manure removed ; 616 premises cleared of bush ; 297 trees cut down and 630 trimmed on account of excessive shade and dampness ; 259 rat holes stopped ; 45 houses ventilated ; 41 roofs close-boarded ; 126 retail shops, 68 barracks, 17 provision stores, 37 bakehouses, 41 cowsheds, 18 stables, 64 parlours, 17 spirit shops scrubbed or cobwebbed and 25 barracks painted. (Table B.)

Disinfection.—358 premises were disinfected for infectious diseases, including tuberculosis, enteric fever, pneumonia, diphtheria, chickenpox, ophthalmia neonatorum, measles, cerebro-spinal meningitis and encephalitis lethargica. 665 premises were sprayed with insecticide for vermin : 1,322 premises including 1,023 privies, 14 common lodging houses, 29 bakehouses, 30 stables, 16 kitchens, 110 barracks, 40 retail shops, 10 parlours, 3 aerated water factories, 3 garages, 1 tannery and 1 goat pen were limewashed and 7,115 cesspits oiled free of charge for enteric fever. (Tables C, E. and F.)

Destruction of Rats and Mice.—During the year, 6,257 rats and 1,169 mice were caught by the rat gangs and destroyed. Besides these 1,240 rats were bought. Of the total of 7,497 rats collected, 7,304 were examined by the Government Bacteriologist with negative results for plague bacilli. The remainder being immature rats were not examined. (Tables G. and H.)

Anti-Mosquito Work.—Details of the work done by the anti-mosquito gangs are shown in Table J. The laddermen paid 36,149 visits to premises in the City. Defective eaves gutters were found on 2,548 occasions, defective eaves gutters containing water on 619 occasions, and defective eaves gutters containing water with mosquito larvae on 384 occasions. In 448 instances mosquito larvae were found on occupied premises in tubs, antiformicas, empty milk or sardine tins, &c., and the nuisance abated there and then.

21,514 gallons of crude were used in spraying pools and swampy ground in the low-lying portions of Woodbrook, and 500 gallons in oiling pools in the Dry River for the purpose of preventing the breeding of mosquitoes.

Reports to Water and Sewerage Department.—Table K shows from month to month the number of leaks, defective taps, chokes and other defects noticed by sanitary inspectors in the course of their domiciliary visits and reported to the Water and Sewerage Department. The numbers totalled 992, or an average of 82.6 reports per month.

Prosecutions.—164 informations for various breaches of the Public Health Ordinance and bye-laws made thereunder were laid, and fines totalling £62 0s. 0d., were imposed by the City Magistrate. (Table L.)

The Tables relating to this part of the Report appear in Appendix C.

Observance of Health Week.—As is now customary Health Week was observed in October and the following is a copy of the Special Committee's Report thereon :—

REPORT ON THE OBSERVANCE OF HEALTH WEEK IN THE CITY.

12TH OCTOBER, 1929.

Health Week.

1.—At a meeting of the City Council, sitting as the Local Authority for the City of Port-of-Spain, held on the 13th July, 1929, a communication from the Secretary to the Health Week Committee of the Royal Sanitary Institute of Great Britain was read, inviting the Council to join again, as in previous years, in the observance of Health Week between the 5th and 12th of October.

2.—The Council appointed a committee, with His Worship the Mayor (the Honourable Gaston Johnston, K.C.), as Chairman, to carry out the observance of Health Week on similar lines to those adopted in former years. The remaining members of the Committee were the Deputy-Mayor (the Honourable A. A. Cipriani), Dr. T. P. Achong, Dr. E. Prada (Town Clerk), Mr. T. H. Scott (City Engineer), Dr. G. H. Masson (Medical Officer of Health), the Surgeon-General (the Honourable Dr. K. S. Wise), the Deputy Surgeon-General (Dr. J. R. Dickson), the President of the Child Welfare League (His Honour Mr. Justice C. W. W. Greenidge), the acting Director of Education (Captain J. O. Cutteridge), the President of the Medical Board (Dr. S. M. Laurence) and the Honourable A. H. McShine, with Mr. R. L. Power (Secretary). Before the arrival of Health Week, the City Engineer, and the Medical Officer of Health of the City had gone on vacation leave, and Mr. W. J. Anderson and Dr. E. N. Darwent, who had been appointed to act for them took their seats on the Committee. The Surgeon-General also went on leave just before the opening of Health Week, and Dr. C. F. Lassalle (acting Deputy Surgeon-General) took his seat on the Committee, remaining a member after Dr. Dickson (Deputy Surgeon-General) had assumed the position of acting Surgeon-General on his return to the Colony.

3.—The Committee held two meetings at which a programme was drawn up; and an Exhibition Committee and an Executive Committee were appointed to whom were delegated powers to carry out all arrangements.

4.—It was agreed that, as usual, the chief feature of the observance of Health Week should be the holding of a Health Exhibition at the Prince's Building; and all the stalls or sections arranged in previous years were again organised, except that the boy scouts, having so recently returned from their Imperial Jamboree in England, were unable to take part. They, however, held a special rally on the grounds of Queen's Royal College on the opening day of the Exhibition, at which Colonel May, Inspector-General and Commandant of the Local Forces was decorated by the Governor, on behalf of the Chief Scout, with the insignia of the scout order of merit for valuable services to the movement during a long period of years.

5.—The sections represented in the Exhibition Hall were as follows:

- (a) Model Farm, by the Department of Agriculture;
- (b) Model Dairy Work, by the Department of Agriculture;
- (c) Fruits, Vegetables and Foodstuffs, in relation to Vitamins, by the Department of Agriculture assisted by Dr. Alfred Clarke;
- (d) Dental Section, by the Dentists Association;
- (e) Child Welfare by the Child Welfare League;
- (f) Training of the Blind, by the Blind Institute;
- (g) Bacteriological Methods, by the Government Bacteriologist;
- (h) Tuberculosis, by the Port-of-Spain Public Health Department, assisted by the Nurse Visitors of the Association for the Prevention of and Treatment Tuberculosis;
- (i) Preventable Diseases :—
 - (i) Typhoid Fever, in charge of Sanitary Inspector O. E. Forde;
 - (ii) Hookworm, in charge of Sanitary Inspectors J. Carrington and Thompson;
 - (iii) Malaria, Yellow Fever, &c., in charge of Sanitary Inspectors H. Carr and L. Assang;
- (j) Girl Guides Work, by the Girl Guides Association;
- (k) Handicraft, by the Girl Students of the Women's section of the Workingmen's Association.

6.—In view of the importance of the fresh milk supply, it was very satisfactory to notice the evident interest displayed by all sections of visitors in the dairy stall managed by Dr. Metivier, and his assistant Dr. Shannon under the auspices of the Department of Agriculture. Here the processes of milking, of sterilising the milk, cleansing the bottles, maintaining the milk at a low temperature, sending it out to customers in a sanitary manner, and in fact every detail of successful dairy-work was simply and concisely explained. And at no time was there any lack of listeners to the instructions given.

7.—The same may be said of the dental stall, at which the Dentists' Association had representatives every afternoon and every evening, who were kept busy giving homely instructions to the groups of persons, young and old, and of both sexes, who constantly surrounded this stall to learn what could be told them of the importance of the care of the teeth.

8.—The section of the Exhibition managed by the Child Welfare League was a constant centre of attraction at both the afternoon and evening openings, and nurses in attendance every afternoon and evening gave demonstrations in the care of infants as well as brief addresses on the same subject.

9.—The League also organised a general convention of trained nurses and midwives from all over the country, which met at the Mothers' and Infants' Clinic in Belmont Circular Road, on the Friday when they listened to an interesting and instructive address by Dr. S. M. Laurence, President of the Medical Board.

10.—Another stall which attracted much attention was that run by the Institute for the Blind, at which not only was there a full assortment of such articles as are made by the inmates and pupils, but opportunity was given to see the blind workers actually at work, making baskets and so on.

11.—That the teaching given in recent years on the subjects of the treatment and prevention of such diseases as tuberculosis, typhoid, malaria and hookworm, has been appreciated was evidenced by the constant attendance of groups of visitors before the sections where these diseases were dealt with, and by the intelligent interest displayed in the short talks given on their respective subjects by the officers in charge. Dr. Pawan, the Government Bacteriologist, was in charge of an instructive section at which bacteriological methods were exemplified. The thanks of the Exhibition Committee are due to Messrs. Govia & Co., druggists, for the loan of an assortment of drugs, chemicals, disinfectants, and medicines useful in the treatment of tuberculosis and typhoid fever.

12.—Though not directly connected, perhaps, with public health, the section managed by the Girl Guides' Association, at which a very interesting display of girl guide apparatus and methods was shewn, proved, as usual, a very attractive one: and the Committee desire to thank very sincerely those officers of the Girl Guides who every afternoon gave interesting and greatly appreciated exhibitions of singing, games, sports and gymnastics by different companies.

13.—The exhibition was opened by His Excellency the Acting Governor, the Honourable S. M. Grier, C.M.G., on Saturday afternoon the 5th October at 4 p.m. and remained open daily thereafter from 4 to 6 p.m. and from 7 to 10 p.m. until Friday the 11th October. Throughout the week it was visited daily by large crowds of all classes of the community, admission, of course, being free. That His Excellency took a keen interest in the exhibition was evidenced by the fact that later the same evening, after leaving the Boy Scouts rally, he and Mrs. Grier, returned privately to the Prince's Building and went carefully round the sections again, studying the various exhibits and making inquiries of those in charge of each section.

14.—As customary, an invitation was extended to the heads of the several religious denominations in the City to suggest to their respective clergy that some appropriate reference to the objects of Health Week might be made in the course of the sermons delivered in the different churches on the Sunday, and that suitable instruction on the same subject might be included in the teaching given in the Sunday Schools on that day.

15.—Directions were also given that the important municipal institutions, such as the abattoir, the waterworks and sewerage pumping stations, the reservoirs and water filtration plants, and the water chlorination plants should be thrown open to visitors, and especially to groups of school children who, accompanied by their teachers, might desire to be shewn around, and that every information should be given to any such visitors.

16.—Both previous to, and during Health Week, lantern slides on health subjects were shewn at the theatre, and at some of the schools where the requisite facilities existed, through the courtesy of the Surgeon-General, from whom, and especially from his *locum tenens*, Dr. C. F. Lassalle, the Committee acknowledge with gratitude, much useful assistance.

17.—Arrangements were made for the delivery of addresses and lectures to pupils of the colleges and secondary and intermediate schools, and to the general public on different afternoons and evenings: as well as for the presence at the several stalls at the Exhibition of persons qualified to give instruction on the exhibits; during the whole time that the Exhibition was open groups of visitors gathered around the stalls to listen to the explanations and instructions thus given.

18.—A new departure this year was the bringing to the lecture hall of the Prince's Building of the students of the colleges to hear addresses, and to be afterwards shewn round the Exhibition by selected lecturers. Under this scheme Dr. J. E. Boucaud, Resident Surgeon of the Colonial Hospital, addressed the boys of Queen's Royal and St. Mary's Colleges, while Dr. C. F. Lassalle, acting Medical Inspector of Health, gave a similar address to the girls of St. Joseph's Convent and of the Bishop's High School. At the suggestion of Mr. Daniel, Principal of the Government Intermediate Schools, it was arranged that the addresses to the pupils of these Schools should be delivered at the school premises: and accordingly Dr. Edith Wharton addressed the girls on Wednesday morning, and the Honourable Dr. A. H. McShine addressed the boys the same afternoon. The pupils of the Holy Name Convent were addressed by Dr. J. Camps—Campins at their school on Thursday afternoon.

19.—The Director of Education issued instructions to the head teachers of all elementary schools in the City to devote special attention to lessons on hygiene and public health during the week; and leaflets on various subjects were distributed to the schools. In addition, a scheme was worked out whereby groups of teachers met every afternoon at the Prince's Building to hear an address by Dr. Alfred Clarke on food values and vitamins.

20.—On three evenings in the week cinema films were shown by Mr. Louis Tucker, assisted by Mr. George Pollard, of the Trinidad Electric Company, in Woodford Square, the subjects being the life history of the fly, and two special films on tuberculosis and the dangers of germs, kindly lent by the Surgeon-General. These shows were attended by great crowds and were much appreciated.

21.—At the rooms of the Chinese Association in Charlotte Street, where he addressed a large gathering, and again at the hall of the Trinidad Workingmen's Association in Prince Street, where he also delivered a lecture to a crowded audience, Dr. Tito P. Achong gave some most interesting cinema films on health subjects; and in particular two which were greatly appreciated, one entitled "Consequences" and the other "He who laughs last" very kindly lent at his special request by the New York Tuberculosis and Health Association Inc. Dr. Achong also very kindly allowed these films to be given at the public cinema show in Woodford Square.

22.—The addresses delivered in the evenings included the following:

- (a) Lecture by Dr. T. P. Achong, to the Chinese Association;
- (b) Lecture by Dr. Hayes, on general health, and by Dr. R. A. Steele, on the care of the teeth, to the Workingmen's Association;
- (c) Lecture, with lantern slides, by Dr. T. P. Achong, to the Workingmen's Association;
- (d) Lecture by the Honourable Dr. A. H. McShine at the Salvation Army Hall;
- (e) Lecture by Dr. A. D. Caldeira to the Portuguese Association.

23.—During the whole week the customary "cleaning up" campaign was carried out by the City Council; notices posted about the City invited householders to clean up their yards and place all rubbish at the gate for removal, and fairly general advantage was taken of this offer. But as, for the whole of the past year the municipality has undertaken the daily removal, not only of ordinary house and kitchen refuse, but of all other kinds of domestic and garden rubbish, free of charge, there was not as heavy a strain cast upon the scavenging department as in previous years.

24.—At the request of the teachers of several of the schools in the City arrangements were made to allow groups of the pupils to visit the exhibition privately during the hours when it was closed to the general public in order to afford the pupils an opportunity of receiving quiet and special instruction on the aspects of health dealt with at the various stalls.

25.—In closing this report, the Committee desire to place on record their grateful appreciation of the valuable assistance rendered by all who took part in making the exhibition, and the general observance of Health Week, 1927, the success it was; and in particular they would thank His Excellency the Acting Governor and Mrs. Grier for attending at the opening ceremony; the Department of Agriculture, the Dental Association, the Bacteriological and Sanitary Departments of the Government Health Department, the Child Welfare League, the Nurse Visitors of the Tuberculosis Dispensary, the Girl Guides Association, the Institute for the Blind, the Inspector-General (for the kind permission for the Constabulary Band to give performances in the evenings), and to all those who by contributing addresses or helping at the stalls, assisted the movement.

26.—The following is the detailed programme of the week's events:—

Saturday, 5th October.

Opening of the Health Exhibition at the Prince's Building, by His Excellency the Acting Governor, The Honourable S. M. Grier, C.M.G., at 4 p.m.

Sunday, 6th October.

References to the subjects of Health and hygiene and the prevention and cure of disease, in sermons; and in the addresses to children attending Sunday Schools.

Brotherhood meeting at St. John's Hall, Pembroke Street, 4 p.m.

Health Exhibition at the Prince's Building, 4 to 6 p.m.

Monday, 7th October.

Health Exhibition, at Prince's Building, 4 to 6 p.m. and 7.30 to 10 p.m.

Constabulary Band at Prince's Building, 8 to 10 p.m.

Address on "Food," by Dr. Alfred Clarke to Teachers at Prince's Building, 2 p.m.

Net Ball Match by Girl Guides at Prince's Building arranged by Miss Anderson, 5 p.m.

Addresses with Health Week Lantern Slides at the Chinese Club to be arranged by Dr. T. P. Achong, 8.30 p.m.

Lecture by Dr. Hayes (on General Health in relation to medicine) and by Dr. R. A. Steele (on Dentistry, with special reference to the care of the teeth), at Liberty Hall, No. 28, Prince Street, 8.30 p.m. The Honourable Captain A. A. Cipriani (Deputy-Mayor) will take the chair.

Tuesday, 8th October.

Health Exhibition at Prince's Building, 4 to 6 p.m. and 7.30 to 10 p.m.
 Belmont Orphanage Band, at Prince's Building, 8 to 9.30 p.m.
 Address by Dr. Edith Wharton to Girls of Tranquillity Government Intermediate School, 8.15 a.m.
 Address by the Honourable Dr. A. H. McShine to Boys of the Tranquillity Government Intermediate School, 1.45 p.m.
 Address on "Food," by Dr. Alfred Clarke to Teachers at Prince's Building, 2 p.m.
 Skipping Display by Girl Guides at Prince's Building, arranged by Miss Graham, 5 p.m.

Wednesday, 9th October.

Health Exhibition at Prince's Building, 4 to 6 p.m. and 7.30 to 10 p.m.
 Moore's String Band at Prince's Building, 8 to 10 p.m.
 Address by Dr. Clarke on "Food," to Teachers at Prince's Building, 2 p.m.
 Address by the Honourable Dr. C. F. Lassalle, acting Surgeon-General to the Students of St. Joseph Convent and of the Bishop's High School at the Prince's Building, 3 p.m.
 Brownie Health Games (Girl Guides) at the Prince's Building, arranged by Miss Cambridge, 5 p.m.
 Lecture by Dr. T. P. Achong at Liberty Hall, No. 28, Prince Street, 8.30 p.m. The Honourable Capt. A. A. Cipriani, Deputy-Mayor, Chairman of the Workingmen's Association will preside; and Dr. Achong will show Health Week Lantern Slides obtained by himself from New York.

Thursday, 10th October.

Health Exhibition at Prince's Building, 4 to 6 p.m. and 7.30 to 10 p.m.
 Constabulary Band at Prince's Building, 8 to 10 p.m.
 Address on "Food," by Dr. Alfred Clarke to Teachers at Prince's Building, 2 p.m.
 Address by Dr. J. E. Boucaud, Resident Surgeon of the Colonial Hospital, to the students of Queen's Royal College and St. Mary's College at the Prince's Building, 3 p.m.
 Address by Dr. J. Camps-Campins to pupils at Holy Name Convent, 3 p.m.
 Physical Drill Display by Girl Guides under Mr. Ball and Miss Todd, at Prince's Building, 5 p.m.
 Lecture by the Honourable Dr. A. H. McShine at the Salvation Army Hall in Charlotte Street 8.30 p.m.

Friday, 11th October.

Health Exhibition at Prince's Building, 4 to 6 p.m. and 7.30 to 10 p.m.
 Belmont Orphanage Band at Prince's Building, 8 to 9.30 p.m.
 Convention of Nurses and Midwives at the Mothers' and Infants' Clinic, Belmont Circular Road.
 Address by Dr. S. M. Laurence, President of the Medical Board.
 Girl Guides Sports in grounds of the Prince's Building, 5 p.m.
 Lecture by Dr. A. D. Caldeira, to members of the Portuguese Association at their Club-room in Richmond Street, 8.30 p.m.

REGINALD L. POWER,
Secretary.

Reports.—The following is a list of Reports submitted to the local authority during the year:—

- (1) *Regular Reports.*
 Monthly Reports on the Health of the City and the work of the Sanitary Staff—12.
 Quarterly Returns of Causes of Deaths—4.
- (2) *Special Reports.*
 Observations on Public Health Administration with special reference to Barrack and Barrack Yards.
 Slaughter of Tuberculous cow at Abattoir.
 Statistics of Typhoid Fever in Trinidad.
 Mosquito and Fly breeding in Woodbrook, St. Clair and Mucurapo.
 Insanitary barracks in Port-of-Spain.
 Report on premises No. 103, Laventille Road with some Observations and Recommendations on the Housing of persons of the poorer class in the City.
 Adulteration of aerated drinks with saccharin.
- (3) *Reports on plans of buildings and building sites, and applications for Leases of land in Woodbrook.*
 Plans 107.
 Leases 42.

Meetings.—Except during the period of his absence on leave from the Colony, the writer attended all the regular and special meetings of the Council and, also, a number of Committee meetings.

Financial.—The Revenue collected by the Public Health Department amounted to \$1,351.24, compared with \$1,215.54 in the preceding year, and was made up as follows :—

	\$	c.
Sale of Disinfectants	124	20
Disinfecting Cesspits	911	54
Cleansing Eaves Gutters	14	16
Milk Badges	65	52
Dairyman's Licenses	22	20
Milk Vendor's Licenses	55	68
Oyster Vendor's Licenses	4	32
Fines	137	52
Miscellaneous Receipts	16	10
	<u>\$1,351</u>	<u>24</u>

The Expenditure amounted to \$31,839.89, compared with \$30,587.14 in the previous year, and was distributed as follows :—

	\$	c.
Staff	20,985	95
Labour	5,511	41
Materials	5,342	53
	<u>\$ 31,839</u>	<u>89</u>

Leave of Absence.—Details of leave of absence taken by members of the Staff with the approval of the local authority are as follows :—

(a) *Vacation Leave.*

G. Ashe—Sanitary Inspector—18th January to 21st February.
 W. R. Smith—Chief Clerk—18th February to 31st March.
 F. Babb—Sanitary Inspector—2nd April to 6th May.
 Dr. G. H. Masson—Medical Officer of Health—27th April to 21st October.
 S. B. Nurse—Assistant Sanitary Inspector—1st June to 6th July.
 Thomas Christian—Messenger—19th August to 1st September.
 E. W. Lack—Chief Sanitary Inspector—19th August to 2nd September.
 T. M. Mitchell—Sanitary Inspector—7th October to 3rd November.
 J. B. Taylor—Assistant Sanitary Inspector—8th October to 4th November.
 J. A. Wood—Sanitary Inspector—18th November to 15th December.

(b) *Sick Leave.*

J. B. Taylor—Assistant Sanitary Inspector—17th to 26th January.
 H. Thorne—Sanitary Inspector—2nd April to 11th May.
 J. W. Parris—Sanitary Inspector—29th April to 8th May.
 W. G. Williams—Sanitary Inspector—6th to 15th May, 5th to 25th December.
 J. E. Ferreira—Sanitary Inspector—4th June to 23rd June.
 J. A. Wood—Sanitary Inspector—26th July to 4th August, 10th to 16th October, 6th to 8th November.
 C. C. Assing—Sanitary Inspector—1st August to 21st September.
 W. R. Smith—Chief Clerk—25th September to 4th October.
 G. Charles—Sanitary Inspector—4th to 24th November.
 T. M. Mitchell—Sanitary Inspector—9th to 18th December.

CONCLUSION.

In conclusion the writer desires to thank Dr. Darwent for acting in his place during his absence abroad, and reiterate the grateful recognition which he expressed in last year's report of the valuable assistance given him by Mr. Smith, Chief Clerk, Captain Lack, Chief Sanitary Inspector, and all other grades of the clerical and sanitary staff in his direction of the work of the Public Health Department. He is happy to take this opportunity of bringing their efficient services to the notice of the local authority and acknowledging his obligation to Mr. Ferreira for invaluable help in the compilation of the statistics. Finally, he is, also, glad to express his appreciation of the care bestowed by Mr. Mitchell on the typing of the not too legible manuscripts.

I have the honour to be,

Sir,

Your obedient Servant,

GEORGE H. MASSON,
Medical Officer of Health.

Port-of-Spain, Trinidad,
 Public Health Department,
 Town Hall,
 20th November, 1930.

APPENDIX A.—VITAL STATISTICS, 1929.

TABLE I.—Comparative Summary of Vital Statistics for the years 1924 to 1929.

	Port-of-Spain.	1924. Population. 63,954.		1925. Population. 64,535.		1926. Population. 65,016.		1927. Population. 65,573.		1928. Population. 66,383.		1929. Population. 67,356.		Average rate for five preceding years 1924 to 1928.		
		1924. Population. 63,954.		1925. Population. 64,535.		1926. Population. 65,016.		1927. Population. 65,573.		1928. Population. 66,383.		1929. Population. 67,356.				
		Number	Rate per 1,000 population	Number	Rate per 1,000 population	Number	Rate per 1,000 population	Number	Rate per 1,000 population	Number	Rate per 1,000 population	Number	Rate per 1,000 population			
Total Births	..	..	..	1,890	29.55	1,820	28.20	1,833	28.20	1,753	26.73	1,868	28.14	1,895	28.13	28.16
Total Deaths	..	..	..	1,493	23.34	1,492	23.12	1,568	24.12	1,433	21.85	1,476	22.23	1,503	22.31	22.93
Natural increase or decrease	..	..	..	+397	.. Per 1,000 births.	+328	.. Per 1,000 births.	+265	.. Per 1,000 births.	+320	.. Per 1,000 births.	+392	.. Per 1,000 births.	+392	.. Per 1,000 births.	+340
Deaths of Infants under 1 year	..	..	..	278	147.09	282	154.95	287	156.57	236	134.63	238	127.41	250	131.93	144.13
Deaths from Enteric Fever	..	..	..	49	0.77	20	0.31	26	0.40	17	0.26	14	0.21	13	0.19	0.39
Do. Pulmonary Tuberculosis	..	..	..	162	2.53	148	2.29	183	2.81	138	2.10	141	2.08	129	1.92	2.36
Do. Tuberculosis (other forms)	..	..	..	25	0.39	17	0.26	17	0.26	9	0.14	19	0.29	25	0.37	0.27
Do. Pneumonia and Broncho Pneumonia	..	..	..	50	0.78	63	0.98	62	0.95	41	0.63	51	0.77	56	0.83	0.82
Do. Diphtheria	..	..	..	2	0.03	2	0.03	1	0.02	2	0.03	3	0.05	..	..	0.03
Do. Malaria	..	..	..	42	0.66	53	0.82	67	1.03	46	0.70	57	0.86	38	0.56	0.81
Do. Dysentery	..	..	..	42	0.66	31	0.48	31	0.47	27	0.41	29	0.44	23	0.34	0.49
Do. Ankylostomiasis	..	..	..	15	0.23	7	0.11	15	0.23	8	0.12	11	0.17	4	0.06	0.17
Do. Syphilis	..	..	..	55	0.86	80	1.24	65	0.99	48	0.73	31	0.47	36	0.53	0.86
Do. Influenza	..	..	..	..	..	2	0.03	..	..	6	0.09	4	0.06	8	0.12	0.04
Do. Diarrhoea and Enteritis	..	..	..	75	1.17	71	1.10	107	1.64	48	0.73	63	0.95	53	0.79	1.12
Do. Bronchitis	..	..	..	61	0.95	83	1.29	79	1.21	109	1.66	71	1.07	77	1.14	1.24
Do. Cancer and other Malignant Diseases	..	..	..	37	0.58	39	0.60	48	0.73	51	0.78	48	0.72	53	0.79	0.68
Do. Cardiac and Vascular Diseases	..	..	..	183	2.86	190	2.94	199	3.06	193	2.94	214	3.22	267	3.96	3.00
Do. Bright's Disease and Nephritis	..	..	..	98	1.53	111	1.72	111	1.70	99	1.51	120	1.81	82	1.22	1.65
Still-Births	..	..	..	182	9.63	153	8.41	144	7.85	134	7.64	158	8.46	158	8.34	8.40
					Per 100 Live-births.		Per 100 Live-births.		Per 100 Live-births.		Per 100 Live-births.		Per 100 Live-births.		Per 100 Live-births.	Average rate 1924 to 1928.

TABLE II.—Showing monthly Births and Birth-rates.

Months.						Males.	Females.	Both Sexes.	Birth-rate per 1,000 population.
January	..	..	..	..	..	97	80	177	30.94
February	..	..	..	..	..	61	71	132	25.55
March	..	..	..	..	..	90	74	164	28.67
April	..	..	..	..	..	80	70	150	27.09
May	..	..	..	..	..	77	54	131	22.90
June	..	..	..	..	..	78	75	153	27.64
July	..	..	..	..	..	94	84	178	31.11
August	..	..	..	..	..	81	63	144	25.17
September	..	..	..	..	..	64	90	154	27.82
October	..	..	..	..	..	89	73	162	28.32
November	..	..	..	..	..	87	95	182	32.87
December	..	..	..	..	..	87	81	168	29.37
Total	..	..	..	..	..	985	910	1,895	28.13

TABLE III.—Showing monthly Deaths and Death-rates.

Months.						Males.	Females.	Both Sexes.	Death-rate per 1,000 population.
January	..	..	..	..	..	62	57	119	20.80
February	..	..	..	..	..	65	46	111	21.48
March	..	..	..	..	..	64	59	123	21.50
April	..	..	..	..	..	60	46	106	19.15
May	..	..	..	..	..	58	69	127	22.20
June	..	..	..	..	..	73	70	143	25.83
July	..	..	..	..	..	75	75	150	26.22
August	..	..	..	..	..	68	72	140	24.47
September	..	..	..	..	..	55	67	122	22.04
October	..	..	..	..	..	60	63	123	21.50
November	..	..	..	..	..	51	43	94	16.98
December	..	..	..	..	..	80	65	145	25.35
Total	..	..	..	..	..	771	732	1,503	22.31

TABLE IV.—Deaths at different age periods.

Period.	Males.	Females.	Total both sexes.	Period.	Males.	Females.	Total both sexes.
Under 1 year ..	128	122	250	31-35 do. ..	30	37	67
1-5 years ..	59	37	96	36-40 do. ..	51	33	48
6-10 do. ..	16	9	25	41-45 do. ..	55	23	78
11-15 do. ..	6	12	18	46-50 do. ..	63	41	104
16-20 do. ..	22	39	61	51-55 do. ..	40	35	75
21-25 do. ..	26	31	57	56-60 do. ..	51	49	100
26-30 do. ..	34	34	68	Over 60 ..	190	230	420
				Total ..	771	732	1,503

TABLE V.—Deaths of Non-residents at Colonial Hospital.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Enteric Fever ..	..	..	..	..	2	..	..	1	2	2	3	2	12
Pulmonary Tuberculosis ..	..	6	3	3	4	5	3	2	9	5	7	9	62
Tuberculosis (other forms) ..	..	1	1	..	..	1	..	1	..	1	..	1	6
Pneumonia ..	..	2	4	4	1	2	2	1	2	2	1	1	23
Other causes ..	..	24	23	14	21	21	24	15	19	7	17	29	238
Total ..	..	32	31	21	28	29	29	20	32	17	28	42	341

TABLE VI.—Classification of Causes of Death.

1.—NOTIFIABLE INFECTIOUS DISEASES :—	(d) Disease of the Respiratory System :—
Enteric Fever 13	Bronchitis 77
Diphtheria —	Other Diseases of the Respiratory System .. 10
Membranous Croup —	
Pulmonary Tuberculosis 129	(e) Diseases of the Digestive System :—
Tuberculosis (other forms) 25	Diarrhoea and Enteritis 53
Pneumonia and Broncho-Pneumonia .. 56	Ankylostomiasis 4
Plague —	Cirrhosis of Liver 9
Cholera —	Other Diseases of the Digestive System .. 54
Small Pox —	
Chicken Pox —	(f) Non-Venereal Diseases of the Genito-Urinary System :—
Yellow Fever —	Bright's Disease 20
	Nephritis 62
2.—OTHER DISEASES :	Other Non-Venereal Diseases 35
(a) General Diseases :—	(g) Venereal Diseases of the Genito-Urinary System :—
Malaria 38	Syphilis 36
Whooping Cough 19	Other Venereal Diseases 2
Influenza 8	
Dysentery 23	(h) Diseases of the Puerperal State :—
Cancer and other Malignant Diseases .. 53	Puerperal Fever —
Blackwater Fever —	Puerperal Eclampsia 1
Beri-Beri —	Puerperal Septicaemia 2
Other General Diseases 38	Other Puerperal Diseases 11
(b) Diseases of the Nervous System and Organs of Special Sense :—	(i) Diseases of Early Infancy 152
Simple Meningitis 1	(j) Old Age 132
Cerebral Haemorrhage 58	
Apoplexy 10	(k) Affections produced by External Causes :—
Convulsions of Children under 5 years of age 4	Burns 5
Other Diseases of the Nervous System .. 63	Accidents and Injuries 17
(c) Diseases of the Circulatory System :—	(l) Other causes of Death 16
Cardiac and Vascular Diseases 267	Total 1,503

TABLE VII.—Showing monthly Still-births and rates per 100 Live-births.

Months.								No. of Still-births.	Rate 100 Live-births.
January	..	..	..	..	..	..	..	11	6.21
February	..	..	..	..	..	..	..	10	7.58
March	..	..	..	..	..	..	..	16	9.75
April	..	..	..	..	..	..	..	15	10.00
May	..	..	..	..	..	..	..	15	11.45
June	..	..	..	..	..	..	..	11	7.19
July	..	..	..	..	..	..	..	17	9.55
August	..	..	..	..	..	..	..	10	6.94
September	..	..	..	..	..	..	..	11	7.14
October	..	..	..	..	..	..	..	8	4.94
November	..	..	..	..	..	..	..	12	6.59
December	..	..	..	..	..	..	..	22	13.10
Total	..	..	..	..	..	..	..	158	8.34

TABLE VIII.—Showing causes of deaths of Infants under 1 year.

Diseases.				1928.	1929.	Diseases.				1928.	1929.
Asphyxia Neonatorum	..	..	..	2	2	Intestinal Obstruction	..	..	..	1	..
Atelectasis	..	..	..	1	..	Intussusception	..	..	..	1	..
Atrophy	..	..	..	1	3	Jaundice	..	..	..	1	..
Bronchitis	..	..	..	11	15	Malaria	..	..	..	5	3
Cerebral Congestion	..	..	..	1	..	Malnutrition	..	..	..	15	9
Colic	..	..	..	2	..	Marasmus	..	..	..	17	18
Colitis	..	..	..	6	5	Meningitis	..	..	..	3	2
Congenital Debility	..	..	..	32	37	Miliary Tuberculosis	..	..	..	2	3
Congenital Heart Disease	..	..	..	1	..	Nephritis	..	..	..	1	1
Congenital Syphilis	..	..	..	7	9	Pneumonia	..	..	..	10	14
Convulsions	..	..	..	..	1	Prematurity	..	..	..	51	48
Dentition	..	..	..	3	4	Pulmonary Congestion	..	..	..	3	7
Diarrhoea	..	..	..	5	4	Septic inflammation of Umbilicus	..	..	..	..	2
Dysentery	..	..	..	5	4	Status Lymphaticus	..	..	..	..	1
Emphysema	..	..	..	..	1	Stenosis of Stomach	..	..	..	1	..
Gastritis	..	..	..	3	3	Stomatitis	..	..	..	..	1
Gastro Enteritis and Enteritis	..	..	..	39	28	Toxaemia	..	..	..	..	1
Haemorrhage from Umbilical Cord	..	..	..	2	1	Tubercular Meningitis	..	..	..	..	1
Haemorrhage from wound of tongue	..	..	..	..	1	Vermes	..	..	..	1	3
Hepatitis	..	..	..	..	1	Whooping Cough	..	..	..	2	12
Icterus Neonatorum	..	..	..	1	5						
Hydrocephalus	..	..	..	1	..						
Inflammation and Prolapse of Rectum	..	..	..	1	..	Total	..	..	..	238	250

TABLE IX.—Showing Deaths of children from 1-5 years.

Disease.	Males.	Females.	Total Both sexes.
Asphyxia	1	..	1
Atrophy	2	..	2
Bronchitis	2	..	2
Convulsions	2	3	5
Dentition	..	2	2
Dysenteric diarrhoea	1	1	2
Dysentery	5	3	8
Enteric Fever	1	..	1
Gastro Enteritis and Enteritis	4	3	7
General Debility	1	..	1
Haemorrhage of Tongue	1	..	1
Helminthiasis	2	2	4
Ileo and entero-colitis	2	..	2
Influenza	..	1	1
Intussusception	1	..	1
Malaria	2	3	5
Malnutrition	..	4	4
Marasmus	3	6	9
Meningitis	3	..	3
Miliary Tuberculosis	2	1	3
Nephritis	1	..	1
Pneumonia	10	2	12
Poisoning due to Scorpion sting	1	..	1
Pulmonary Congestion	3	..	3
Pulmonary Tuberculosis	1	..	1
Rheumatism	1	..	1
Shock	2	..	2
Stomatitis	..	1	1
Syphilis	1	..	1
Toxaemia	1	1	2
Whooping Cough	3	4	7
Total	59	37	96

TABLE X.—Showing Infectious Diseases notified each month under Public Health Ordinance.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Diphtheria.. .. .	..	..	2	1	4	9	1	1	..	2	..	4	24
Enteric Fever	1	1	1	4	6	3	5	4	1	3	3	3	35
Pulmonary Tuberculosis	13	5	12	12	11	17	10	6	13	14	10	19	142
Tuberculosis (other forms)	1	2	..	1	..	3	2	2	1	..	2	3	17
Pneumonia	9	3	3	5	6	12	11	5	3	5	3	5	70
Ophthalmia Neonatorum	1	6	3	6	3	2	1	1	6	..	6	..	35
Chicken Pox	1	1	20	18	7	13	..	2	6	1	1	3	73
Encephalitis Lethargica	..	..	..	..	..	..	..	..	..	..	..	1	1
Total	26	18	41	47	37	59	30	21	30	25	25	38	397

TABLE XI.—Showing Deaths from Notifiable Infectious Diseases.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Diphtheria.. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	..	2	..	2	1	3	..	1	..	1	2	1	13
Pulmonary Tuberculosis	..	8	7	13	8	11	10	8	12	13	15	7	129
Tuberculosis (other forms)	..	3	3	1	2	..	4	6	2	1	..	2	25
Pneumonia	..	1	7	1	5	3	6	10	7	1	4	5	56
Ophthalmia Neonatorum	..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken Pox	..	..	..	..	..	..	..	..	..	..	..	..	..
Encephalitis Lethargica	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	14	17	15	17	15	23	24	22	15	20	16	25	223

TABLE XII.—Distribution of Cases and Deaths from Notifiable Infectious Diseases.

Population :—	CITY. 27,425		ST. CLAIR. 1,264		EAST DRY RIVER. 16,297		BELMONT. 12,881		WOODBROOK, 9,489	
Diseases.	Cases notified.	Deaths.	Cases notified.	Deaths.	Cases notified.	Deaths.	Cases notified.	Deaths.	Cases notified.	Deaths.
Diphtheria	6	..	3	..	4	..	11	..	..	..
Membranous Croup	..	..	..	..	..	..	..	..	..	..
Enteric Fever	19	10	..	..	5	1	8	1	3	1
Plague	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..	..
Small Pox	..	..	..	..	..	..	..	..	..	..
Pulmonary Tuberculosis	61	52	..	..	34	35	23	23	24	19
Tuberculosis (other forms)	7	10	..	..	8	7	2	3	..	5
Pneumonia	29	28	..	..	20	14	11	9	10	5
Ophthalmia Neonatorum	18	..	..	..	10	..	4	..	3	..
Chicken Pox	35	..	4	..	12	..	16	..	6	..
Encephalitis Lethargica	..	..	..	..	1	..	..	..	..	..
Total	175	100	7	..	94	57	75	36	46	30

TABLE XIII.—Showing Deaths in Hospital from Notifiable Infectious Diseases.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Enteric Fever	2	..	..	2	1	3	..	1	..	1	1	1	12
Pulmonary Tuberculosis	4	4	8	5	5	8	5	6	8	10	5	7	75
Tuberculosis (other forms)	1	1	..	..	..	3	3	1	..	..	2	1	12
Pneumonia	1	3	..	3	1	5	7	4	..	2	4	2	32
Total	8	8	8	10	7	19	15	12	8	13	12	11	131

TABLE XIV.—Comparing Deaths in Hospital with Deaths at Home from Notifiable Infectious Diseases.

Diseases.	Died at Home.	Died at Hospital.	Total Deaths.	Percentage of cases isolated in Hospital before death.
Enteric Fever	1	12	13	92.3
Pulmonary Tuberculosis	54	75	129	58.1
Tuberculosis (other forms)	13	12	25	48.0
Pneumonia	24	32	56	57.1
	92	131	223	58.7

TABLE XV.—Showing Deaths from Non-notifiable Infectious Diseases.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Malaria	7	2	2	4	6	..	2	4	3	4	1	3	38
Whooping Cough	..	..	1	..	4	8	2	3	..	1	..	..	19
Influenza	..	1	..	1	..	1	1	..	1	1	1	1	8
Dysentery	2	1	1	1	..	2	7	2	2	..	1	4	23
Ankylostomiasis	..	1	..	..	..	..	1	..	..	..	..	2	4
Syphilis	4	2	3	4	3	5	4	3	2	1	1	4	36
Total	13	7	7	10	13	16	17	12	8	7	4	14	128

TABLE XVI.—Showing Deaths in Hospital from Non-notifiable Infectious Diseases.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Malaria	1	..	2	3	1	..	..	2	..	..	..	1	10
Whooping Cough	..	..	..	..	2	..	..	..	..	..	..	..	2
Influenza	..	..	..	..	..	..	..	..	..	..	..	..	..
Dysentery	..	1	..	1	..	..	1	..	..	..	1	2	6
Ankylostomiasis	..	1	..	..	..	..	1	..	..	..	..	..	2
Syphilis	2	2	2	..	2	1	4	2	2	1	..	3	21
Total	3	4	4	4	5	1	6	4	2	1	1	6	41

TABLE XVII.—Comparing Deaths in Hospital with Deaths at Home from Non-notifiable Infectious Diseases

Diseases.						Died at Home.	Died in Hospital.	Total Deaths.	Percentage of cases isolated in Hospital before death.
Malaria	..	..	..	..	..	28	10	38	26.3
Whooping Cough	..	..	..	..	..	17	2	19	10.0
Influenza	..	..	..	..	..	8	..	8	..
Dysentery	..	..	..	..	..	17	6	23	26.1
Ankylostomiasis	..	..	..	..	..	2	2	4	50.0
Syphilis	..	..	..	..	..	15	21	36	58.3
Total	..	..	..	..	..	87	41	128	32.0

TABLE XVIII.—Deaths from Diarrhoea and Enteritis.

Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
..	5	6	3	2	5	8	9	2	1	5	7	53

APPENDIX B.—SANITARY CONDITIONS.**TABLE XIX.—Monthly Rainfall from three Stations in Port-of-Spain with Average for 1929.**

Stations.	Jan.	Feb.	Mar.	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total for year.
St. Clair	.84	.84	1.78	.81	7.33	6.43	5.10	8.90	5.21	3.40	9.30	1.51	51.45
Colonial Hospital ..	.69	1.08	1.22	.71	5.24	5.02	7.77	8.98	4.98	2.41	8.02	.95	47.07
Constab. Headquarters ..	3.00	1.00	1.22	1.64	5.34	11.41	8.68	13.70	3.40	3.20	8.67	1.45	62.71
Average Rainfall ..	1.51	.97	1.41	1.05	5.97	7.62	7.18	10.53	4.53	3.00	8.66	1.30	53.74

TABLE XX.—Monthly Rainfall from three Stations in Port-of Spain with Average for 1928.

Stations.	Jan.	Feb.	Mar.	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total for year.
St. Clair	4.22	.69	2.31	2.00	.67	5.75	8.07	8.66	7.36	9.13	8.42	5.94	63.24
Colonial Hospital ..	2.92	.29	1.49	.68	.24	3.85	5.46	11.09	6.54	8.93	8.50	6.14	56.13
Constab. Headquarters ..	5.06	1.09	1.23	.57	.30	5.00	6.28	12.33	7.18	7.80	6.42	6.04	59.30
Average Rainfall ..	4.07	.69	1.68	1.00	.40	4.87	6.60	10.69	7.03	8.60	7.78	6.04	59.56

APPENDIX C.—Sanitary Work.

TABLE A.—Inspection of Premises, &c., by Sanitary Inspectors.

MONTHS.	MONTHS.												Total.
	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	
Visits to dwelling houses and other premises ..	11,458	8,721	9,210	4,430	9,003	7,906	9,084	7,718	8,876	8,297	8,088	8,486	101,277
No. of Shops, Stores, Bakehouses, &c., inspected.	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Average per month.
Provision and Meat Shops ..	172	131	215	92	155	157	136	120	154	119	136	141	144
Provision Stores ..	18	1	25	..	27	27	26	26	26	26	27	27	21
Restaurants and Cookshops ..	14	29	38	9	35	19	14	15	26	11	12	19	20
Common Lodging Houses ..	9	10	14	7	10	9	6	7	12	3	5	13	9
Dairies and Cowsheds ..	34	32	32	20	79	44	48	71	37	32	26	29	40
Stables ..	45	45	53	23	130	57	78	102	45	52	45	44	60
Schools ..	25	25	28	13	25	31	18	20	27	19	20	32	24
Dyeworks ..	4	5	9	4	7	5	1	4	5	3	1	3	4
Barber Shops ..	16	24	29	7	20	17	9	11	12	9	9	10	14
Aerated Water Factories ..	10	7	12	6	16	10	5	7	9	8	7	6	9
Other Factories ..	18	13	28	6	19	18	15	16	13	15	9	14	15
Cake and Ice Cream Shops ..	144	133	166	63	89	123	122	112	146	107	87	113	117
Fish Hawkers' Trays ..	128	110	117	42	87	159	160	127	161	120	124	109	120
Bakehouses ..	33	34	35	17	101	53	56	86	56	56	23	35	49
Bread Depots ..	6	3	7	1	7	5	1	4	4	2	3	1	4
Ice Cream Carts and Pails ..	34	29	33	17	34	25	8	36	57	8	32	48	30
Cake and other Food Hucksters' Trays ..	45	38	57	19	30	48	7	75	64	54	52	47	45
Plantain Carts ..	6	8	7	4	9	8	10	8	15	13	20	16	10

APPENDIX C.—CONTINUED.

TABLE A.—Inspection of Premises, &c., by Sanitary Inspectors.—Continued.

No. of Shops, Stores, Bakehouses, &c., inspected.	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Average per month.
Bread Carts and Baskets ..	35	10	14	8	18	37	19	31	27	22	16	17	21
Boats ..	18	20	38	10	30	30	8	5	18	10	29	20	20
Spirit Shops ..	38	17	44	10	30	35	24	23	29	16	20	24	26
Fry Shops ..	18	12	8	5	10	12	7	10	8	8	9	7	10
Hotels ..	15	7	16	3	12	1	7	7	9	5	6	5	8
Markets ..	5	5	6	5	5	5	3	3	3	1	1	4	4
Laundries ..	9	11	15	8	17	9	9	10	11	8	7	12	11
Tanneries ..	3	3	15	3	13	11	11	11	11	11	8	9	9
Garages ..	30	36	71	61	70	61	67	67	68	76	87	66	63
Sweet Drink Carts ..	26	14	22	1	14	28	8	45	48	12	13	42	23
Public Urinals ..	6	6	7	2	13	6	5	7	6	6	8	6	6
Oyster Vendors' Baskets ..	..	4	3	..	1	7	4	3	2	1	..	15	3
Breakfast Sheds and Lunch Rooms ..	4	..	..	..	..	..	..	..	..	..	..	..	1
Soap Factories ..	..	1	1	1	1	2	1	2	2	1	2	2	1
Goat Pens ..	..	12	18	14	42	44	37	31	37	35	23	23	26
Provision Trays ..	..	..	..	17	30	56	11	28	60	27	32	..	22
Fat Boiling Works ..	..	..	..	..	..	2	..	2	..	..	..	..	1
Milk Vendors' Badges ..	..	..	..	..	..	..	18	10	..	..	..	..	2
Milk Vendors' Fails ..	..	..	..	..	..	..	..	..	9	..	..	..	1

TABLE B.—Results of Notices and Verbal Directions.

Yards paved	17	Barracks painted	25
Yard pavements repaired	93	Cake Trays screened	6
Damp or swampy yards filled in	376	Retail Shops painted	83
Yards cleaned	3,549	Parlours painted	22
Drains constructed	116	Restaurants painted	3
Drains repaired	407	Barber Shops painted	1
Drains cleaned	2,606	Privies painted	1
Washing Troughs cleaned	167	Bread Carts painted	7
Washing Troughs repaired	1	Spirit Shops painted	2
Washing Platforms cleaned	352	Concrete floor of Shops repaired	7
Sinks cleaned	739	Concrete floor of Parlours repaired	2
Sinks constructed	21	Concrete floor of Cowsheds repaired	14
Sinks repaired	43	Concrete floor of Bakehouses repaired	6
Gullies cleaned	293	Concrete floor of Stables repaired	14
Lavatories cleaned	20	Concrete floor of Bathrooms repaired	3
Sewer Basins cleaned	1,167	Roof of Bakehouses repaired	4
Sewer Basins repaired	34	Bread Carts repaired	4
Sewer Basins installed	31	Retail Shops cobwebbed	112
Flush Tanks installed	42	Barracks cobwebbed	68
Flush Tanks repaired	42	Parlours cobwebbed	27
Privies repaired	706	Cookshops cobwebbed	1
Privies made fly-proof	346	Hotels cobwebbed	1
New Privies built	156	Bakehouses cobwebbed	17
New Cesspits constructed	127	Provision Stores cobwebbed	17
Cesspits repaired	360	Cowsheds cobwebbed	13
Cesspits emptied	1,375	Aerated Water Factories cobwebbed	2
Urinals cleaned	87	Stables cobwebbed	2
Cesspits oiled (paid for)	2,712	Wall of Bakehouses repaired	4
Rat holes stopped	259	Wall of Cowsheds repaired	7
Accumulations of manure removed	332	Spirit Shops cobwebbed	8
Sanitary dustbins provided	913	Aerated Water Factories scrubbed	11
Dustbins repaired	503	Bakehouses scrubbed	20
Dustbins cleaned and disinfected	1,366	Retail Shops scrubbed	14
Uncovered dustbins covered	764	Parlours scrubbed	37
Trees trimmed or cut down	927	Barber Shops scrubbed	1
Premises cleared of bush	616	Spirit Shops scrubbed	9
Barracks repaired	110	Restaurants scrubbed	7
Kitchens repaired	41	Stables scrubbed	16
Houses ventilated	45	Cowsheds scrubbed	28
Roofs closeboarded	41	Hotels scrubbed	3
Holes in trees stopped	2	Common Lodging Houses scrubbed	4
Foodstuffs screened	5	Tanneries scrubbed	2

DISINFECTION.

TABLE C.—Premises disinfected for Infectious Diseases and Vermin.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Tuberculosis	16	11	12	12	11	14	12	14	11	15	13	16	157
Enteric Fever	3	1	1	3	8	2	2	11	2	2	5	2	42
Pneumonia	7	4	2	2	5	11	11	3	1	5	4	5	62
Diphtheria	1	..	1	1	3	..	4	..	1	2	..	1	14
Leprosy	..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken Pox	3	1	9	14	8	5	3	2	..	4	1	..	50
Measles	..	..	..	..	..	..	..	..	..	..	1	..	1
Ophthalmia Neonatorum	2	4	1	6	2	3	1	..	4	2	4	1	30
Cerebro Spinal Meningitis	..	..	..	..	..	..	..	..	..	..	1	..	1
Encephalitis Lethargica	..	..	..	..	..	..	..	..	..	..	..	1	1
Total Infectious Diseases	32	21	26	38	37	35	33	32	19	30	29	26	358
Vermin (Common Lodging Houses)	50	49	48	32	50	56	61	65	61	60	57	56	665

TABLE D.—Railway Coaches Disinfected.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Yaws	2	..	..	..	..	..	..	..	..	..	..	..	2
Leprosy	..	1	3	2	4	3	3	2	3	3	3	..	27
Tuberculosis	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE E.—Cesspits sprayed with Crude and Distillate Oil (Free for Infectious disease).

Disease.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Enteric Fever	805	285	204	453	471	684	417	474	774	700	945	903	7,115

TABLE F.—Limewashing.

Premises and places limewashed.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Common Lodging Houses	2	2	2	1	1	1	..	..	..	..	1	4	14
Privies	77	77	134	20	128	70	113	65	88	25	121	105	1,023
Cowsheds	2	6	4	..	4	8	8	3	6	1	..	..	42
Bakehouses	1	2	..	..	3	3	2	2	2	3	..	1	29
Stables	..	4	3	..	2	5	8	4	1	3	..	..	30
Kitchens	2	2	..	..	1	..	2	1	..	2	2	4	16
Barracks	12	11	7	5	7	4	6	7	8	3	11	29	110
Retail Shops	..	..	..	..	..	..	..	..	..	..	34	6	40
Parlours	2	..	..	..	..	..	..	..	..	..	6	2	10
Aerated Water Factories	..	..	..	..	..	..	..	..	1	..	..	2	3
Garages	..	..	..	..	..	..	..	..	1	..	..	2	3
Tanneries	..	..	..	..	..	..	..	1	..	..	..	..	1
Goat pens	..	..	..	..	..	1	..	..	..	..	..	..	1
Total	98	104	150	26	146	92	144	88	107	37	175	155	1,322

ANTI-PLAGUE MEASURES.

TABLE G.—Destruction of Rats and Mice.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
Rats caught by Gangs ..	424	445	584	410	460	491	604	518	592	521	731	477	6,257
Rats bought ..	99	92	86	120	86	83	97	121	98	125	171	62	1,240
Total Rats destroyed ..	523	537	670	530	546	574	701	639	690	646	902	539	7,497
Mice caught and destroyed ..	54	92	77	131	136	122	99	81	48	81	109	119	1,169

TABLE H.—Examination of Rats by Government Bacteriologist.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
Rats examined for Plague ..	514	523	670	507	529	557	652	628	665	632	801	556	7,304
Rats found infected with Plague ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Immature rats not examined ..	9	14	..	23	17	17	49	11	25	14	11	3	193

ANTI-MOSQUITO WORK.

TABLE J.—Inspection of Eaves Gutters, &c.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
Number of inspections and re-inspections of premises ..	3,737	2,957	3,443	1,715	2,096	3,012	3,254	2,841	2,840	3,365	3,496	3,384	36,149
Occasions found in good order ..	3,502	2,776	3,245	1,597	1,933	2,805	2,983	2,614	2,669	3,133	3,189	3,155	33,601
Defective Eaves Gutters ..	235	181	198	118	163	207	271	227	180	232	307	229	2,548
Defective Eaves Gutters containing water ..	51	20	45	32	44	68	52	78	52	53	94	30	619
Defective Eaves Gutters containing water with larvae ..	44	7	5	19	21	25	36	66	42	31	53	35	384
Occasions on which mosquito larvae were found in tubs, antiformicas, tin cans, &c. ..	50	26	20	7	42	63	34	60	64	24	33	25	448

TABLE K.—Reports to Water and Sewerage Department.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
Leaks, defective taps, chokes, &c., reported ..	58	103	107	73	118	115	65	59	97	54	65	78	992

TABLE L.—Cases determined by the City Magistrate and penalties imposed.

Offences.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Totals.		
	Fines. £ s. d.	cases	Fines. £ s. d.	cases	Fines. £ s. d.	cases	Fines. £ s. d.	cases	Fines. £ s. d.	cases	Fines. £ s. d.	cases	Fines. £ s. d.	cases	Fines. £ s. d.	cases	Fines. £ s. d.	cases	Fines. £ s. d.	cases	Fines. £ s. d.	cases	Fines. £ s. d.	cases	Total Fines. £ s. d.	Total cases	
Keeping stagnant water in anti- formicas, &c. ..	6 1 5 0 1		10 0 7 1 2 6 5		12 6 4		10 0 10 5 0 0 34 16 10 0 19 7 12 6 ..																				
Failing to keep dustbins covered ..	.. 3 2 6 ..																									3 2 6	
Failing to keep dustbins in good repair ..	.. 1 5 0 ..		.. 5 0 ..		.. 2 5 0 ..														.. 10 0 ..		.. 3		.. 10 0		.. 7 1 10 0		
Failing to comply with notices requiring abatement of nuisances ..	.. ..		.. ..		.. 1 15 0 ..		.. ..		.. ..		.. 1 1 0 0 6 2 5 0 ..		.. ..		.. ..		.. 1 1 0 0 3 3 0 0 ..		.. 1 1 5 0		.. 1 1 5 0		.. 13 9 5 0				
Failing to maintain sewer basins clean ..	.. ..		.. ..		.. 1 5 0 ..		.. ..		.. ..		.. 2 1 0 0 1 10 0 ..		.. ..		.. 2 1 15 0 ..		.. ..		.. 2 1 15 0 ..		.. ..		.. 6 3 10 0				
Hawking milk without carrying badges ..	.. ..		.. ..		.. 12 1 10 0 ..		.. ..		.. ..		.. ..		.. ..		.. ..		.. ..		.. ..		.. ..		.. 12 1 10 0				
Failing to provide proper dust- bins ..	.. ..		.. ..		.. 2 10 0 ..		.. ..		.. 1 2 6 1 7 6 ..		.. ..		.. ..		.. ..		.. ..		.. 3		.. 2 6		.. 7 1 2 6				
Exposing foodstuffs for sale without protection from con- tamination ..	.. ..		.. ..		.. ..		.. ..		.. 9 1 12 6 ..		.. ..		.. ..		.. 1 1 0 0 2 10 0 ..		.. ..		.. 12 5 2 6		.. ..		.. 1 7 6				
Failing to keep privy clean ..	.. ..		.. ..		.. ..		.. ..		.. 1 7 6 ..		.. ..		.. ..		.. ..		.. ..		.. ..		.. ..		.. 1 10 0				
Selling unsound fish ..	.. ..		.. ..		.. ..		.. ..		.. ..		.. 1 1 10 0 ..		.. ..		.. ..		.. ..		.. ..		.. ..		.. 1 10 0				
Offering unsound fish for sale ..	.. ..		.. ..		.. ..		.. ..		.. ..		.. ..		.. ..		.. ..		.. ..		.. ..		.. ..		.. 1 10 0				
Total ..	6 1 5 0 5		17 6 21 3 12 6 9 1 7 6 4		10 0 22 8 2 6 43 20 2 6 22 11 2 6 1 1 0 0 9 6 15 0 9 4 7 6 13 2 17 6 164 62 0 0																						

DISINFECTION.

TABLE C.—Premises disinfected for Infectious Diseases and Vermin.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Tuberculosis	16	11	12	12	11	14	12	14	11	15	13	16	157
Enteric Fever	3	1	1	3	8	2	2	11	2	2	5	2	42
Pneumonia	7	4	2	2	5	11	11	5	1	5	4	5	62
Diphtheria	1	..	1	1	3	..	4	..	1	2	..	1	14
Leprosy	..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken Pox	3	1	9	14	8	5	3	2	..	4	1	..	50
Measles	..	..	..	..	..	..	..	..	..	..	1	..	1
Ophthalmia Neonatorum	2	4	1	6	2	3	1	..	4	2	4	1	30
Cerebro Spinal Meningitis	..	..	..	..	..	..	..	..	..	..	1	..	1
Encephalitis Lethargica	..	..	..	..	..	..	..	..	..	..	..	1	1
Total Infectious Diseases	32	21	26	38	37	35	33	32	19	30	29	26	358
Vermin (Common Lodging Houses)	50	49	48	52	50	56	61	65	61	60	57	56	665

TABLE D.—Railway Coaches Disinfected.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Yaws	2	..	..	..	..	..	..	..	..	..	..	..	2
Leprosy	..	1	3	2	4	3	3	2	3	3	3	..	27
Tuberculosis	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE E.—Cesspits sprayed with Crude and Distillate Oil (Free for Infectious disease).

Disease.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Enteric Fever	805	285	204	453	471	684	417	474	774	700	945	903	7,115

TABLE F.—Limewashing.

Premises and places limewashed.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Common Lodging Houses	2	2	2	1	1	1	..	..	..	..	1	4	14
Privies	77	77	134	20	128	70	113	65	88	25	121	105	1,023
Cowsheds	2	6	4	..	4	8	8	3	6	1	..	..	42
Bakehouses	1	2	..	..	3	3	2	2	2	3	..	1	29
Stables	..	4	3	..	2	5	8	4	1	3	..	..	30
Kitchens	2	2	..	..	1	..	2	1	..	2	2	4	16
Barracks	12	11	7	5	7	4	6	7	8	3	11	29	110
Retail Shops	..	..	..	..	..	..	..	..	..	..	34	6	40
Parlours	2	..	..	..	..	..	..	..	..	..	6	..	10
Aerated Water Factories	..	..	..	..	..	..	..	..	1	..	..	2	3
Garages	..	..	..	..	..	..	..	..	1	..	..	2	3
Tanneries	..	..	..	..	..	..	..	1	..	..	..	..	1
Goat pens	..	..	..	..	..	1	..	..	..	..	..	..	1
Total	98	104	150	26	146	92	144	88	107	37	175	155	1,322

ANTI-PLAGUE MEASURES.

TABLE G.—Destruction of Rats and Mice.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
Rats caught by Gangs	..	..	..	..	..	..	..	..	..	..	..	..	..
Rats bought	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Rats destroyed	..	..	..	..	..	..	..	..	..	..	..	..	..
Mice caught and destroyed	..	..	..	..	..	..	..	..	..	..	..	..	..
	424	445	581	410	460	491	604	518	592	521	731	477	6,257
	99	92	86	120	86	83	97	121	98	125	171	62	1,240
	523	537	670	530	546	574	701	639	690	646	902	539	7,497
	54	92	77	151	136	122	99	81	48	81	109	119	1,169

TABLE H.—Examination of Rats by Government Bacteriologist.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
Rats examined for Plague	..	..	..	..	..	..	..	..	..	..	..	..	..
Rats found infected with Plague	..	..	..	..	..	..	..	..	..	..	..	..	..
Immature rats not examined	..	..	..	..	..	..	..	..	..	..	..	..	..
	514	523	670	507	529	557	652	628	665	632	801	536	7,304
	9	14	..	23	17	17	49	11	25	14	11	3	193

ANTI-MOSQUITO WORK.

TABLE J.—Inspection of Eaves Gutters, &c.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
Number of inspections and re-inspections of premises	..	..	..	..	..	..	..	..	..	..	..	..	..
Occasions found in good order	..	..	..	..	..	..	..	..	..	..	..	..	..
Defective Eaves Gutters	..	..	..	..	..	..	..	..	..	..	..	..	..
Defective Eaves Gutters containing water	..	..	..	..	..	..	..	..	..	..	..	..	..
Defective Eaves Gutters containing water with larvae	..	..	..	..	..	..	..	..	..	..	..	..	..
Occasions on which mosquito larvae were found in tubs, antiformicas, tin cans, &c.	..	..	..	..	..	..	..	..	..	..	..	..	..
	3,737	2,957	3,443	1,715	2,096	3,012	3,254	2,841	2,849	3,365	3,496	3,384	36,149
	3,502	2,770	3,245	1,597	1,933	2,805	2,983	2,614	2,660	3,133	3,189	3,155	33,601
	235	181	198	115	163	207	271	227	180	232	307	229	2,548
	51	20	45	32	41	68	52	78	52	53	94	30	619
	44	7	5	19	21	25	36	66	42	31	53	35	384
	50	26	20	7	42	63	34	60	64	24	33	25	448

TABLE K.—Reports to Water and Sewerage Department.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
Leaks, defective taps, chokes, &c., reported	..	..	..	..	..	..	..	..	..	..	..	..	..
	58	103	107	73	118	115	65	59	97	54	65	78	992

TABLE L.--Cases determined by the City Magistrate and penalties imposed.

Offences.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Totals.						
	Fines. £ s. d.	£ s. d.	Fines. £ s. d.	£ s. d.	Fines. £ s. d.	£ s. d.	Fines. £ s. d.	£ s. d.	Fines. £ s. d.	£ s. d.	Fines. £ s. d.	£ s. d.	Fines. £ s. d.	£ s. d.	Fines. £ s. d.	£ s. d.	Fines. £ s. d.	£ s. d.	Fines. £ s. d.	£ s. d.	Fines. £ s. d.	£ s. d.	Fines. £ s. d.	£ s. d.	Total Fines. £ s. d.	Total Fines. £ s. d.					
Keeping stagnant water in anti- formicas, &c. ..	6	1	5	0	1	10	0	7	1	2	6	4	10	0	10	5	0	34	16	10	0	19	7	12	6	101	36	10	0		
Failing to keep dustbins covered ..	..	..	3	2	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	6	0			
Failing to keep dustbins in good repair ..	..	..	1	5	0	..	..	2	5	0	..	..	..	..	..	..	..	..	1	10	0	..	3	10	0	7	1	10	0		
Failing to comply with notices requiring abatement of nuisances ..	..	..	..	..	..	..	..	1	15	0	..	..	..	..	..	..	1	1	0	3	0	0	..	1	1	5	0	13	9	5	0
Failing to maintain sewer basins clean ..	..	..	..	..	..	..	..	1	5	0	..	..	..	..	..	..	..	2	1	15	0	..	..	..	..	6	3	10	0	0	
Hawking milk without carrying badges ..	..	..	..	..	..	..	..	12	1	10	0	..	..	..	..	..	..	..	..	..	..	..	..	..	12	1	10	0	0		
Failing to provide proper dust- bins ..	..	..	..	..	..	..	..	2	10	0	..	..	1	2	6	1	..	..	..	..	..	..	3	2	6	7	1	2	6	0	
Exposing foodstuffs for sale without protection from con- tamination ..	..	..	..	..	..	..	..	..	..	..	..	9	1	12	6	..	..	..	1	1	0	0	2	2	10	12	5	2	6	0	
Failing to keep privy clean ..	..	..	..	..	..	..	..	..	..	..	..	1	7	6	..	..	..	..	..	..	..	..	..	..	1	7	6	0	0		
Selling unsound fish ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	10	0	..	..	..	..	..	..	1	1	10	0	0		
Offering unsound fish for sale ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	10	0	..	..	..	..	..	..	1	1	10	0	0		
Total ..	6	1	5	0	5	17	6	21	3	12	6	9	1	7	6	4	10	0	22	8	2	6	43	20	2	6	164	62	0	0	

