

be charged upon land (cap. 101) in Ireland. To a not inconsiderable share in the work of adding these measures to the statute book this Society may lay claim; here it was that, at an early period, Judge Longfield, our President, promulgated his well-considered views upon Land Debentures; here, too, were discussed the projects for the Registration of Titles, as explained by Colonel Torrens and Mr. H. Dix Hutton; through the means of the free discussions of this Society, these proposals for changes of the law were ventilated; and through some of its members their details were worked out. To these enactments, from which many expect much benefit to the community, the open counsels of this Society have given help, as they did to many previous measures of practical advantage to our country.

III.—*The Unhealthiness of Irish Towns, and the Want of Sanitary Legislation.* By E. D. Mapother, M.D., Professor of Hygiene, Royal College of Surgeons; Medical Officer of Health, Dublin; and Surgeon to St. Vincent's Hospital.

[Read Tuesday, 19th December, 1865]

ABOUT two years ago, I had the honour of reading a short paper on the "Sanitary State of Dublin," in which I was compelled to assert that it was most unsatisfactory, because of the insufficient legal powers which then belonged to the Corporation, and because of the imperfect machinery which had been organized to carry out the preventive powers which they did possess. In July, 1864, the "Dublin Improvement Acts Amendment Act" became law, and so ample were its provisions that it has left scarcely anything to be desired in the way of sanitary legislation, and it will be the fault of the Corporation and its officers if the most substantial benefits do not soon follow. The artisan and poorer classes of this city, who number about 100,000, dwell in some 8,000 houses, each room of which is usually let as a separate tenement, and the state of these dwellings has been deplorable in the extreme. The Corporation gained by the recent Act the power to compel the owners of these houses to put in thorough repair, and keep so, their roofs, walls, and chimneys; to have their windows kept clean, and glazed, and movable at the top or bottom, and to keep a properly-trapped house-drain and other sanitary requisites in good order. The Corporation is also to determine the fit number of occupants for each of these rooms, many of which are dangerously overcrowded; for instance, in Cuffe-street there is a room in which six adults have but 216 cubic feet of space each, and two children half that amount. The standard which has been proposed is 300 cubic feet for each person over eight years, and 150 for each child below that age, and a card stating the cubic measurement and the fit number of occupants will be posted in each room. The poverty of the occupants and the want of good house accommodation has precluded the adoption of a higher standard, the regulations under which I am

sure would be disobeyed, and our efforts would consequently fall into contempt. The inspection of these lodging-houses is entrusted to eight sergeants and a superintendent of the metropolitan police, whose books constitute a most accurate record of the sanitary state of every one of their rooms. I believe, therefore, that the sanitary state of Dublin will contrast favourably with that of any other city in the United Kingdom, when pure water shall be supplied to every house, when sewers are extended, and a few other improvements effected without increased taxation—a subject on which our citizens are just now rather sensitive.

In Waterford, Dr. Mackesy, and in Cork, Mr. W. d'E. Parker, have procured an expression of public opinion that a similar act is desirable in those cities, and I, being desirous that other towns should share the blessings of so good a measure, devoted a few leisure days, in the autumn, to visiting them. The unhealthiness of some of these provincial towns induced me to consult with your Society as to the best remedies for it, and I have, therefore, written this hasty paper, which I feel sets forth very imperfectly the immense importance of the subject. I have omitted those of my notes which refer to minute hygienic details.

The statistics with which I propose to illustrate the state of disease in each town are as follows:—1st, the death-rate, with which I have been favoured by the Registrar-General. In his inaugural address last month, the Right Hon. Mr. Justice O'Hagan expressed his opinion that, notwithstanding the Registration Act, a large proportion of the deaths were unrecorded, and there is little doubt that the numbers of deaths in the towns I shall allude to are greater than these figures indicate. Compared, however, with the rates in rural districts they are striking indeed.

2nd. The number of cases of fever which had been treated in the hospitals of the union and those which were seen by the medical officer of the dispensary for the last seven years. I obtained these data from the Poor-law Commission returns; but as I have struck a yearly average on the assumption that one case of fever is treated at the patient's home for every two admitted into hospital (a ratio which, in some instances, I have found exact), the results are but approximations, and that admirably-worked department cannot be held responsible for them.

3rd. The proportion of inhabitants attacked with cholera in the epidemics of 1832, 1849, and 1854. These proportions I have derived from the manuscript record of the late Prof. Barker, who for so long a period, in connection with the Board of Health, cared for the public health of this country; from the report of the Commissioners of Health (1852); and from the Poor-law Reports of 1854-5.

The very similar progress of former epidemics to that which lately passed over Europe gives to us reasonable grounds for anxiety.

Knowing that any general statement as to the unhealthiness of towns would be likely to meet merely with an apathetic assent, and as registration has now for the first time permitted the effects of faulty sanitary arrangements to be demonstrated, I have directed my

remarks specially to each town, and I must beg forgiveness of the inhabitants if the results of my investigations should place their localities in an unfavourable light.

LEINSTER.

ATHLONE (population 5,902) has suffered from every visitation of cholera. 1-18th of the people were attacked in 1849, and on January 20, 1855, a severe outburst occurred. Some days after, an inspector of nuisances was appointed, who was to notice all owners of premises where nuisances existed, and, if found necessary, to summon them. The death-rate of the union has been 1 in 62. Fever epidemics have been always severely felt, over one-fourth of the people having suffered in that of 1818. The sewerage is very bad, the lanes filthy, the lodging-houses and cabins over-crowded, and the former are not inspected. The water-supply is from pumps and superficial wells. The graveyard is in the centre of the town, very closely surrounded by dwellings.

From the position of the town, divided by the Shannon, towards which both halves slope, an efficient system of sewerage might be readily constructed.

The Commissioners have no local surveyor.

CHAPELIZOD (population 1,958), among other towns in the neighbourhood of the metropolis, loudly demands some local authority to prevent the ravages of fever and cholera when they become epidemic. I cannot more forcibly prove this statement than by quoting the following facts from Dr. Hill's report :—

The town, which had experienced severe attacks of cholera in 1832 and 1849, was visited again in October, 1854; and in February, 1855, another outbreak began, and within the week 17 cases occurred. One case was that of "a factory girl, aged 18, who with seven others of about the same age, and a man, the father of two of the girls, lived and slept in a room not quite twelve feet square." The committee of management had held no meeting for 105 days before this last outbreak, although warned by the former one which had so recently occurred; and it was not until two days after the last case the police sergeant informed the medical officer that steps would be taken for cleansing and whitewashing the houses where the disease had appeared, and for carrying into effect the provisions of the sanitary acts. I might easily multiply facts, but these I think are sufficient to show that in a town of nearly 2,000 inhabitants, some legal power to thin overcrowded rooms, such as that in which this poor girl existed, is called for, and that so tardy and inefficient a local authority should be superseded.

KELLS (population 3,224). The death-rate of the district was 1 in 50. Fever is very prevalent, and is nearly three times as frequent in the Kells dispensary district as in the whole union, the other districts being more rural. In 1818, one-third of the people were seized with fever. Cholera attacked 1 in 17 of the inhabitants in 1832, and 1 in 12 within seven weeks of 1849. Any one who

examines the sanitary state of the town might predict that the death-rate and epidemic-rate would be thus lamentably high. The sewers are too large, made of rubble masonry, flagged on the bottom, and are very imperfect, most of them having gratings which emit the effluvia of the decomposing sewage, and the stench-traps which had been laid were, at the time of my visit, out of order. The lanes and the yards behind the houses were covered with the most noxious kind of filth, for there was no accommodation for most of the houses. The main sewers lead to the eastern end of the town, and open into gullies within twenty or thirty yards of the town, in which, as there was no current, the sewage was drying and putrefying. The river Blackwater, into which the sewage should be discharged, is not half a mile from the edge of the town. The water supply is by pumps, sunk, I was told, very superficially, two of them being in most dangerous proximity to the crowded church-yard, one within ten, and the other within fifty yards of graves. Other pumps were in corners, which were also used as the filth depôts of the town. The water was very bad in taste, and much complained of. The cabins were as ill-constructed, unaired, and dirty as any I have seen in the remotest parts of this country. With regard to other towns, I have had to acknowledge that the corporate funds are insufficient for the adoption of the improvements I advocate; but Kells has an income of £750 a year, exclusive of the borough-rate, which the commissioners have never levied. With such abundant funds, they should be surely called on to provide for the health and comfort of their constituents, when death, disease, and dirt so lamentably afflict their town.

No medical man is connected with the Town Commission, nor do they employ a surveyor.

But one prosecution under any Sanitary Act took place in the entire county of Meath during 1864.

LONGFORD (population 4,819). The death-rate of the union is 1 in 74. Cholera visited this town severely in both 1832 and 1849, 1,117 of the inhabitants having been attacked in the latter epidemic, while the neighbouring town of Granard wholly escaped, probably because it possessed a good supply of water from deep wells, whereas those in Longford were more superficial, and as the river Camlin runs through the town, the poor people may have made use of its water contaminated with sewage.

The Commissioners have an inspector of nuisances, but filthy lanes of wretched cabins and unregulated lodging houses abound. The registrar states that during the present year there have been severe epidemics of fever, scarlatina, and small-pox.

MAYNOOTH (population 1,497) is but three below the population which empowers the adoption of the Towns Act. 231 cases of cholera occurred there in 1832, and 141 in 1849.

NAVAN (population 3,865). The district has had the very high death-rate of 1 in 48, and that of the entire union is thereby raised to 1 in 54, relatively one of the highest in Ireland, and startling when

it is remembered how large a proportion of the deaths in this country are unrecorded. In the first cholera epidemic 1 in 28 of the people suffered; but the town was very slightly attacked in 1849, although the neighbouring town, Kells, was so severely visited. Fever, which in the epidemic of 1818 attacked one-fourth of the people, is always very prevalent in Navan; and this can be no matter of surprise when one walks through the filthy lanes of hovels, many of which are lodging-houses, in which the town abounds. The sewers are too few, and, being untrapped, they do more harm than good.

The Boyne and Blackwater course through the town, and would afford, as the town is hilly, natural aid to a system of drainage.

OLDCASTLE (population 979). The death-rate in this dispensary district has been 1 in 46, and in the entire union, which is remarkably rural, 1 in 73. About 1 in 78 of the entire union population yearly suffer from fever, which has been partially typhoid, or that variety most clearly produced by the want of sanitary arrangements. Cholera has always attacked the town with severity. Notwithstanding this lamentable state of public health in the town and surrounding district, it is unsewered and uncared for.

RUSH (population 1,453), wants but forty-seven of the required number, and if amalgamated with Lusk, which is but two and a-half miles distant, the combined population would be 2,092. The fact that 237 cases of cholera occurred in Rush in 1832, that fever is never absent, that sewers are most partial and untrapped, that many of the houses are remarkably ill-constructed, and that the water supply is principally by surface wells, into which a copious rainfall washes all kinds of filth, seem to indicate that some sanitary authority is needed. The death-rate of the dispensary district is 1 in 56.

TULLAMORE (population 4,797). The death-rate has been 1 in 42 in the dispensary district, and 1 in 63 in the whole union. Both the cholera epidemics visited Tullamore, the first attacking 1 in 25, and the second 1 in 26 of the inhabitants.

The rate of mortality has on both occasions been about the greatest in Ireland—namely, 76 and 65 per cent.

The Town Commission has no medical member, and has no nuisances officer. During a recent outbreak they employed a person at a salary of 5s. a week, a sum which could scarcely obtain the services of an intelligent or active man to inspect or cleanse the town.

Not a single prosecution under any Sanitary Act has taken place in this town, or indeed in the entire county during 1864.

ULSTER.

BALLYSHANNON (population 3,197). This town has always been subject to epidemics. In the year 1818 "almost every one was attacked" with fever, and in the cholera of 1832, 1 in 9 of the inhabitants suffered. While the steepness of the town and its proximity to the river would render it most easily drained, the

sewerage is imperfect, and from the want of water-traps the stench in lanes is most pernicious. The cabins are most wretched and overcrowded, especially in the part named the Purl.

The Town Commissioners do not employ an inspector of nuisances or local surveyor.

In BANGOR (population 2,531) the order for electing a commission has been passed, but no steps have been taken, although no town in Ireland requires its admirable provisions more. 1 in 15 was attacked by cholera in 1832, and in 1849 the town was also severely visited. In November, 1857, fever burst out with such virulence that 25 cases occurred in a fortnight, 5 persons having been attacked in one house. The Inspector, Dr. Knox, on that occasion described the houses as ill-ventilated and over-crowded, the drainage unsatisfactory; and these facts had been previously brought under notice without any material results.

ENNISKILLEN (population 5,774). The death-rate of the union is 1 in 72. One in 40 of the population was attacked by cholera in 1832; it wholly escaped in 1849, but suffered severely in 1854-55. There was then no permanent inspector, and Dr. Hill, the Medical Poor-Law Inspector, reported that no steps were being taken for cleansing the dwellings of the poor. Since then two persons are employed to prevent nuisances, and much of the improved health of the town might be attributed to this fact. As, however, but one prosecution took place in the county during 1864 under any sanitary act, we must suppose the inhabitants very obedient, or else the authorities very neglectful.

The water supply is by superficial wells and pumps, which give a very impure water, and partly from the river, into which the sewage of the town flows. The town is under the old imperfect Towns Act, 9 Geo. IV., c. 82; the sewers are few and inefficient, and they discharge their effluvia by large open gratings here and there through the streets. I am happy to learn, however, that a guardian is agitating the construction of sewers under the Sewage Utilization Act; and as the town is steep and surrounded at all sides by the branches of the Erne, it could be readily and very perfectly drained. The town has corporate property, amounting, I am informed, to £1,500 a year, exclusive of the rates. The churchyard lies in the midst of the town, and, from its crowded state, must exercise a very pernicious influence.

NEWTOWNARDS has never been spared by cholera, and fever is very prevalent. The Registrar in September, 1864, described it as "dirty, unlighted, and unwatched at night;" but Commissioners, three of whom are medical men, have been since elected, and the improvement is striking.

The towns of Newtownards and Bangor are so close together that a commission governing both with proper officers could be readily elected, and even Donaghadee might be included. Some steps should be taken to stay the appalling mortality of the union, which is now 1 in 47, and to check the spread of fever, which

averages 1 in every 60 of the population yearly. These figures are explained by the fact that the union contains many towns in which sanitary matters are uncared for.

PORTAFERRY (population 1,960), another town in the same county, seems no better off. One-tenth of the inhabitants suffered from cholera in 1832, and a local outburst of that disease occurred in 1857 and invaded thirteen houses. "The only peculiarity of circumstances affecting them which could be ascertained with certainty consisted in the scarcity of water used for drinking and cooking purposes, arising from the long summer droughts which had also tended to render it thick and muddy."—*Dr. Knox, Poor-law Inspector.*

MUNSTER.

CARRICK-ON-SUIR (population 5,059). The death-rate in the dispensary district attains the appalling figure of 1 in 34, and that of the entire union is 1 in 48. Fever attacks about 1 in every 31 annually, but for the last year it has raged so alarmingly that about one-eleventh of the people have been stricken down. In the fever epidemic of 1818 one-sixth of the people were attacked. The cholera in 1832 and 1849 respectively attacked 1.40 and 1.23 of the townspeople. The graveyard is in the exact centre of the town, which is also the densest part.

The Town Commission includes no medical member, employs no surveyor, and appears to be a very apathetic body indeed, for in three consecutive reports the Registrar has this year publicly complained that the sewers are bad and scanty, the houses overcrowded, and the town is altogether the most dilapidated in Ireland.

The registrar of a rural district near Carrick-on-Suir, Rathgormuck, justly complains, of this bad neighbour, from which fever has been imported into his district.

ENNIS (population 7,041). No less than 1 in 24 of the population of the dispensary district yearly suffer from fever, or about 1 in 62 of the people in the entire union. It has never escaped an epidemic of cholera, 1 in 10 having been attacked in that of 1832, which created such a panic that 127 of the houses of business were closed; and 1 in 54 was seized in that of 1849. The death-rate of the entire union was 1 in 65, and of the dispensary district 1 in 42. Scarletina broke out in a small filthy part of the town during the past autumn, and in a couple of months produced 50 deaths. There is no method of removing sewage save by surface channels, and the water-supply is by pumps and superficial wells. The graveyard is in the town and surrounded by houses.

No medical man has a seat on the Town Commission, and no local surveyor seems to be employed. Dr. Crampton, the Government Inspector in 1818, reported:—"In the town of Ennis many of the poorer classes live in close dirty cellars, the streets narrow, and the population condensed within a small space. The town also had been remarkably dirty, and full of nuisances antecedent to the visitation of the epidemic"—a description which, I fear, is equally applicable at present.

In GLIN (population 999) in 1854 cholera broke out, and Dr. Geary reported that the houses were most filthy and overcrowded. "In the upper and lower main streets, at the western side, there are offensive open drains running down immediately behind the houses and communicating from yard to yard, the contents being mixed at some points with the blood of animals slaughtered by butchers in their own houses. Few towns are better situated for drainage, and where an effective system of drainage could be secured at a smaller expense. At the village of Tarbert (3 miles distant and with 857 inhabitants), the very same state of neglected sanitary arrangements was observed; manure heaps, cesspools, defective and obstructed drains and sewers running behind the houses; animals slaughtered in houses, and the blood on the floors in the very apartments used for cooking, eating, and sleeping in, pigs in the houses and rear yards; overcrowded apartments and filthy collections of fetid water from underneath the paving, in immediate connexion with the police barracks."

Shortly after the date of this report the epidemic spread, and carried off, among others, the chairman of the board of guardians.

KILMALLOCK (population 1,393). The death-rate in the dispensary district for the year ending September, 1865, attained the unequalled height of 1 in 28, and that of the whole union 1 in 60. Much of this mortality is due to fever, for on an average of seven years about 1 person in every 52 persons in the union is attacked with that disease each year; and in each of its six districts the rate has been as follows:—Kilmallock, 1 in 34; Bruff, 1 in 53; Hospital, 1 in 101; Kilfinane, 1 in 45; Charleville, 1 in 62; Biuree, 1 in 52. Cholera in 1832 attacked 1 in 12 of the inhabitants of Kilmallock. It is below the number for the Towns Act, but by amalgamation with a neighbouring town, as Charleville or Bruff, Commissioners might act for the two.

KILRUSH (population 4,593). The death-rate of the district is 1 in 50, and of the union, which is chiefly rural, 1 in 75. Fever attacks every year about 1 in 28. Cholera has on both the visitations spread with great rapidity and virulence, attacking respectively 1 in 24 and 1 in 17 of the townpeople.

The graveyard is immediately at the edge of the town.

The town is imperfectly sewered, and unsupplied by pure water; yet no steps have been taken to obtain the Towns Improvement Act, although the inhabitants are more than three times as many as the required number.

But one prosecution under any Sanitary Act occurred during 1864 in the county of Clare.

KINSALE (population 4,850). The death-rate of the dispensary district is 1 in 51, and that of the entire union is 1 in 64. In the first cholera epidemic 1·13 of the inhabitants were attacked, and one-sixth in that of 1849, Kinsale having suffered more than any other Irish town, except Gort and Ballinasloe, where nearly half the townpeople were stricken by the pestilence. The town a few years ago

was unsewered, and the imperfect drains which now exist open into a large cesspool, which is, however, twice daily flushed by the sea. The noxious mud is left behind.

Many of the houses are built on very sloping cut away rock, which allows no perfect airing, or no draining whatever, as there are no sewers leading from them, and percolation into the ground cannot occur.

The water is derived either from filthy surface wells, or from wells near the overfilled cemeteries of the town. A new supply is about to be obtained, but from sources not at all above suspicion. In the epidemics of cholera, the low lying parts of the town, to which an ill-arranged system of sewerage would bring the sewage, suffered far more than the higher portions.

No medical man is among the Town Commissioners, and no surveyor inspector of nuisances is employed.

MACROOM (population 3,289). The dispensary district, with the exception of this town, is very much a rural one, yet the death rate has been 1 in 55. Cholera attacked the town severely in 1832, 1849, and 1854, and fever is stationary there, yet there is no town commission. Dr. Geary, the Medical Poor-law Inspector, reported on the state of the town in 1854, and after describing an unusually filthy state, says, "The want of water is much felt in the eastern side of the town, there being no pump, and the river being some distance away. Here, too, the absence of sewerage, or the defective character of that which has been attempted, tends to perpetuate the uncleanly habits which are found to exist. I am informed by the occupants of large and good-looking houses of business in the centre of the town, that they send all their house and night-soil to be deposited in the river at a late hour at night," and people drink the water of this stream, both here and along its course to the Lee. Even the people along the banks of the latter great river may suffer from the sewage of Macroom, if forced by their own imperfect supply to use its water.

MILTOWN MALBAY, high above the sea, permeated by the fresh Atlantic breezes, and which from its local advantages ought to be the healthiest town in Ireland, has been always severely visited by cholera, and during April, May, and June this year a disease still more preventible—namely, typhoid fever—has attacked between 55 and 60 of the villagers, who number but 1,330, the cause being in every case traced to pollution of the water and of the air by want of sewerage in the neglected parts of the town where water was also deficient. The medical officer duly reported these circumstances to the poor-law guardians in April; during May and June the pestilence raged, and on the 15th of August, six weeks after it had ceased, this body first took action to improve the sanitary state of the town. Between April and September of this year about 150 cases of fever have occurred in this district.

NEWMARKET (population 1137). The sanitary state of this town is graphically described in Dr. Geary's report in 1854. Each house

has a small yard, in which the house soil and manure floats in offensive water up to the kitchen-door. Pigs are frequently kept in the yards, or even the houses themselves. Overcrowding seems to prevail, for in one house, not inappropriately named the "hulk," forty-six persons existed. Dr. Geary notices that very many convicts have been reared in this abode, and the fact is not devoid of connexion with its sanitary state. Opposite the police barracks was found a dangerous collection of nuisances, drained by a sewer which passed in its course to the mill-pond under the floor of a house, to which there was attached a filthy yard for pigs, which were, however, also free of the house. A wretched man in cholera was found lying on the floor of this hovel, and when the sewer under the floor was opened, it was found choked with most offensive matter. Opposite this house it was customary to empty the night soil of several houses, as there had been a drain; but as at this time it was choked, the filth floated down to the police barracks.

Before the time of Dr. Geary's visit, the medical officer reported a case of cholera which was fatal, on the 6th of October, to the dispensary committee and guardians, verifying his statement by the evidence of two other physicians; yet the latter body postponed the consideration of the sanitary state of the town for a week.

Sixty-six cases of cholera occurred in 1832 in this village, and it was severely attacked in 1849.

TIPPERARY (population 5,864). About 1 in every 62 persons of the entire union suffer annually from fever. Cholera did not spare the town either in 1832 or 1849, but attacked 127 of the people in the former year and 138 in the latter. The death-rate of this town and the surrounding district reaches the high proportion of 1 in 39. The water supply is by wells and pumps. The graveyard is in the town, surrounded by houses.

There are Town Commissioners; but no medical man is among them, nor do they employ a local surveyor or inspector of nuisances. Mr. Charles Moore, M.P. for the county, on a recent public occasion, forcibly drew attention to the sanitary state of the town.

CONNAUGHT.

BOYLE (population 3,098). This town was not spared in either of the cholera epidemics, and in the year 1818 one-fourth of its inhabitants were prostrated with fever. Typhus and typhoid fever are recorded as being frequent there this year. It is almost unsewered, surface channels filled with filth being in most of the streets; and, where there are sewers, the old-fashioned gratings which open from them emit all the effluvia. As the town is very steep, and the river runs through its centre, sewers might be made most efficient; but the Towns Act has not been adopted.

CARRICK-ON-SHANNON (population 1,513), the assize town of the county of Leitrim, has not adopted the Towns Act. It is quite unsewered, wretched, and uncared for in the extreme, and has a most suspicious water supply. In 1818, the epidemic fever prostrated

over one-third of the inhabitants; in 1832 cholera attacked 1 in 14, and so great was the panic that no one remained in the town except the doctor's and curate's family and the military in the barracks.

The Nuisances Acts nor the Lodging-houses Acts do not seem to be practically in operation in this county, for no prosecution under them is recorded in the "Judicial Statistics" for 1864.

CASTLEBAR (population 3,022). Few towns have suffered more from cholera than Castlebar, 1 in 18 and 1 in 27 having suffered in the two first epidemics. That pestilence broke out also in 1854. On the 29th and 30th of October five persons, four of whom lived in one house, had died, and three other cases were reported by the medical officer, who got together his dispensary committee. This sapient body resolved: "That at present there does not appear any decided case of Asiatic cholera," and consequently they do not appear to have taken any precautionary steps, for the epidemic spread.

Since then Town Commissioners have been appointed, but the only clause of the Act which they seem to think necessary is that which empowers them to light the town, and they do not expend funds or employ officers for any sanitary purpose.

In **LOUGHREA** (population 3,072) the water supply appears to be abominable, being derived from the lake into which the sewers, particularly those from the military and police barracks, empty. Seven cases of severe British cholera have occurred recently.

The Commissioners have no medical man amongst them, and employ no local surveyor.

ROSCOMMON (population 2,619). The death rate of the dispensary district is 1 in 38, being the highest I have noted save those of Kilmallock and Carrick-on-Suir. So great is the town mortality, that it raises that of the whole union, the other districts of which are very rural, to 1 in 58. Cholera produced great mortality in both epidemics, and attacked respectively 1 in 30 and 1 in 26 of the townspeople.

The Towns Act has been adopted, but no medical man is connected with it. The town is in many places so ruinous as to merit the epithets in Thom's "Directory" of "straggling, ill-built, and ill-arranged—with miserable outlets." The sewerage is very imperfect, and one main sewer opens into a gripe along the poorhouse-road, and within ten yards of it is the large pond from which many of the people derive their water supply. The water of the town is scanty in summer, always impure, and has to my own knowledge produced attacks of diarrhoea.

In **SLIGO** (population 10,605), 1 in 43 yearly suffered from fever, on an average of 7 years. In the cholera epidemic of 1832, this town suffered more than any other in Europe, 1232 persons, or 1 in 12 of the inhabitants, were attacked, and the mortality for some days attained 100 daily. Again, in 1849, 1 in 27 suffered from that disease. The death-rate for the past year in the entire

union was 1 in 54, and that of the dispensary district 1 in 47, and the sanitary state of the town affords an explanation of these sad facts. The sewers are few, and more for the conveyance of surface-water than sewage; they are furnished with mere gratings, which evolve the effluvia most freely. Scarcely such a thing as a water-closet is to be found. The Corporation has not adopted the clause of the Towns Improvement Act which provides for water supply, and this greatest of sanitary requirements is derived from wells and pumps, which in badly sewered and crowded towns are so subject to defilement. The water of the river is also used, and the impurities from the churchyard, which is but a few feet distant, percolate into it. It is disgraceful that some steps are not taken to close this graveyard, as well as those of very many other Irish towns. That of Sligo is in the very midst of the town; its earth is dark, foetid, and overcharged with human remains, so that it cannot forward the decomposition of the bodies. So numerous have been the interments, that the surface of the ground outside has been raised three or four feet above the level of the floor, obscuring the Abbey walls, which are so interesting to the archaeologist.

Many of the streets are narrow, ill-paved, and dirty.

The Towns Improvement Act of 1854 has not been adopted; and as is quite usual in Irish towns, the Corporation contains no medical member; nor do they employ a surveyor or inspector of nuisances, or any analogous officer.

The yearly funds from rates and other property in 1863 only amounted to £288—a sum preposterously inadequate to either the requirements or the wealth of the town. Neither nuisances, the emission of smoke, want of sewers, offences under the lodging-houses acts, the sale of unsound food, or other sanitary offences seem to challenge inquiry or prosecution, as Dr. Hancock records but three such cases in his "Judicial Statistics" during the past year.

It struck me that it would make my statements forcible if I was able to contrast with the foregoing towns one in the whole of which enlightened sanitary efforts had produced evident benefits, but I regret to say I can find none such in Ireland. The smaller towns in the agricultural counties of England, governed by good laws and fostered by liberal and resident proprietors, alone afford such encouragement. In Portlaw, indeed, cared for by a great manufacturer and patriot in deeds, one may see a mixture of the healthy and prosperous with the sickly and ruinous. Mr. Malcolmson owns 332 houses, which are clean and comfortable, and for the past year preventible diseases have been one-fourth less frequent in them than in the remaining 278 squalid houses of the town, and fever is much less frequent. But there is no commission to sewer the town, or to cleanse or supply pure water to that part which is public, yet neglected, and from proximity to which the prosperous part suffers. The benevolent and able physician of the town writes to me that between the two classes of tenants there is the strongest contrast in moral effect, in cleanliness, and in such small yet significant details as the increased culture of flowers.

The following 48 towns have adopted no Towns Act, although they possess the required population; Parsonstown, 5,401; Arklow, 4,760; Kilmashogue, 4,593; Portlaoigh, 3,852; Roscrea, 3,725; Macroom, 3,289; Boyle, 3,098; Mitchelstown, 2,922; Donaghadee, 2,671; Portlaoigh, 2,581; Skerries, 2,557; Ballinrobe, 2,506; Charleville, 2,468; Newcastle, 2,449; Bantry, 2,438; Holywood, 2,437; Tullow (a town which is especially faulty), 2,383; Buttevant, 2,732; Passage West, 2,288; Kanturk, 2,285; Listowel, 2,373; Dingle, 2,260; Whitehouse, 2,196; Gort, 2,097; Mountrath, 2,080; Dunmanway, 2,068; Legoneil, 1,968; Moate, 1,960; Portaferry, 1,960; Chapelizod, 1,958; Rathfriland, 1,916; Kilkee, 1,856; Tramore, 1,847; Caherciveen, 1,802; Cappoquin, 1,774; Comber, 1,713; Castleisland, 1,702; Granard, 1,671; Edenderry, 1,661; Ballybay, 1,658; Askeaton, 1,637; Warrenpoint, 1,636; Tallow, 1,629; Ballycastle, 1,626; Ballaghaderreen, 1,583; Graigue, 1,552; Donegal, 1,541; and Carrick-on-Shannon, 1,513.

By an amalgamation of neighbouring towns of some thousand inhabitants, many of which are uncared for, and by an expansion of the rateable area, so as to include the property of landowners who use the towns, or of absentees whose tenants use them, sufficient funds might be obtained to provide sewerage and water supply, and to pay officers for their inspection and regulation.

The following 15 towns—Bandon, Cahir, Clonakilty, Fethard, Tralee, Youghal, Armagh, Downpatrick, Dungannon, Enniskillen, Lisburn, Monaghan, Moy, Omagh, and Strabane, many of them parliamentary boroughs—are under the old Act 9 Geo. IV., ch. 82 (1828), which is very faulty and insufficient, not providing for water supply, not giving separate rating powers for sewers in special parts, and granting no borrowing powers for this purpose.

It is astonishing that these towns have not exchanged this old and cumbrous Act for the new one; but perhaps it is because houses under £5 valuation would then be rateable, and an average of one-seventh of the town property thus escapes taxation.

Fever has for centuries been the reigning disease in Ireland; epidemic in other countries, it is endemic with us; and, in exhibiting its prevalence in various towns, I am not recording an evil the dangers of which have passed, for, after having been nearly twice as frequent throughout Ireland in the last quarter of 1864 as in that of 1863, the Poor-law Commissioners report that "for the first five or six weeks of the present year the number of cases of fever continued steadily to increase, and the disease became in a few localities alarmingly prevalent." In February, the Poor-law Inspectors reported as follows:—Mr. Hamilton, North-western district, "There has been epidemic disease in some few parts of my district, but I attribute it more to defective sanitary arrangements in a few towns and villages than to any want of proper food." Dr. Brodie, Western district: "The fever has been generally confined to towns, and from the class of persons attacked it is evident that it is not attendant upon destitution." Dr. King, in the same district, corroborates the latter statement, adding that fever prevails most intensely

in towns through which rivers flow; for example, Limerick, Ennis, Boyle, Sligo, &c. Mr. Bourke for the Midland counties, Mr. Horsley for the South-western district, and other inspectors repeat the same statements, that the fever was not due to destitution, that it prevailed in towns, and spread to the middle and upper classes, among whom it was proportionately more fatal.

For reasons previously stated, the death-rates in the various unions and dispensary districts containing towns which I have alluded to may not be in themselves very striking, but they become so when compared to those of purely rural unions. Thus, while the death-rate of all these dispensary districts is 1 to 43, that of five rural unions from various parts of Ireland, Glenties, Bawnboy, Dunshaughlin, Ballinrobe, and Caherciveen, containing together an equal population, is just half, or 1 in 86, and that of all Ireland is 1 in 61, or one-fourth less. In other countries the excess in mortality of civic over rural populations, is not a fourth. Again, while on the average 1 in 52 is attacked with fever, in dispensary districts which contain towns but 1 in 281 of the people of the rural unions I have mentioned, or seven times as few, and 1 in 194 in all Ireland suffer from that preventible disease. Sir William Wilde, in the sanitary part of the Census of 1841, brings out the same fact, for he shows that for that decennium the deaths by fever had been only half as many in the rural as in the civic population, even excluding all cases treated in hospitals. It must be also remembered that the death-rates and fever-rates of towns would be still higher if we had returns concerning the townspeople alone, and not of the entire dispensary district. However, the contrast is striking enough to convince me that a well directed sanitary organization is capable of saving in Ireland thousands of lives yearly, and of protecting very many thousands from pestilence, and the pauperism and misery which follow in its wake.

Even in Glasgow, a city noted for unhealthiness, to which I am afraid the presence of many of our poorer countrymen very much contributes, the annual fever-rate is but 1 in 200, and that of its very worst slum, 1 in 31.

In the epidemic of 1818, $1\frac{1}{2}$ million of cases occurred, and the fever hospitals of Dublin, Cork, Limerick, Waterford, and Kilkenny alone received 45,000 patients. Extreme droughts, which dried up the uncertain supply of water from wells, and putrefied the stagnant sewage, had much to do with the spread of this pestilence. The government organized a good system of inspection, which was discontinued when the epidemic subsided. Now it appears to me that it is in times of freedom from pestilence that inspection is most valuable, as then precautions are apt to be neglected, and, when epidemics are developed in a town, preventive action is nearly useless.

The death-rate for the population of all towns of over 2,000 inhabitants was, according to the Census Commissioners in 1841, nearly twice as high as that of rural populations, yet municipal authorities cannot comfort themselves with the belief that it was necessarily so. There is nothing in a well-regulated town to kill people faster than in the country; and even in London the rate of mortality has for

some years fallen below that of all England. The causes of unhealthiness which may surround the peasant are under his own control ; but the villager or citizen suffers through his careless neighbour, or his neglectful local authority, and the state should provide a remedy.

If I have shown that the sanitary state of Irish towns is bad, it is fit that I should propose some remedies, and those which I do propose, and which I have arranged under six heads, are in no way experimental, but have been tried and found perfectly effectual for many years in England. They would occasion considerable preliminary expenditure, but in the end would be really economical, for it has been often shown that sanitary improvements lessen public expenditure by affecting not only people's health, but their prosperity and contentedness.

1st. A central authority analogous to the Local Government Office and Medical Department of the Privy Council in London. When one-tenth of the inhabitants of any town petition the Home Secretary, or when the death-rate rises to 1 in 43, an inspector competent to examine its water supply, sewerage, and other sanitary circumstances, and to investigate the manner in which the Lodging-house, Nuisances, and other Sanitary Acts are carried out, is despatched to it. The appropriate remedies are urged upon the local authority, and every aid in the way of loans, suggested bye-laws, instruction, and supervision is given by the central office. Although, therefore, the Public Health Act (1848) and the Local Government Act (1858) are, like our Towns Improvement Act, permissive, many hundreds of towns and populous places have been by proper representations induced to adopt their admirable provisions. While a town of 200 inhabitants in England and 700 in Scotland may adopt the Health Act, none except those of 1,500 can take advantage of the similar measure in Ireland. These statutes give a power to local boards which is not contained in any Irish act—namely, that of prohibiting the habitation of any house, which, by reason of its being infected or structurally unfit, ought not to be dwelt in. These acts, which have lowered the annual mortality of the towns in England by 6 per 1,000, were prepared by such statesmen as Lord Morpeth, Sir G. C. Lewis, and Sir George Grey ; and, although it was declared that they should not extend to Ireland, the lamented nobleman I have named, who was then Commissioner of Woods and Forests, expressed a hope that the Public Health Act would afterwards be granted for this country. The Medical Officer of the Privy Council, under the Public Health Act, Mr. Simon, according to his yearly reports, besides the above routine duties, has conducted personally, or through assistants, many vitally important investigations throughout England, as those into the causes of infant mortality, the working of the vaccination laws, the food supply, and house-accommodation of the labouring classes, the parasitic and other diseases of cattle in relation to the supply of meat and milk, the peculiar diseases of various industrial classes, accidental and criminal poisoning, diphtheria, and other epidemics. No similar inquiry has been ever instituted in Ireland, except the examination by Sir W. Wilde and Dr. Jacob into the causes of ophthalmia in the workhouses of

Athlone and Tipperary. The prevalence of eye diseases, of certain forms of skin diseases, and of convulsions among the children of the poor, the health of miners, and of linen and muslin workers in Ulster, and the state of burial grounds, to which I will just now allude, are subjects of equal importance which in this country have never been approached. Unless the thirty towns described to-night be exceptional, sewerage, water-supply, and the carrying out of the Sanitary Acts seem to call for systematic and scientific inquiry. Since the last cholera epidemic, the Poor-law Inspectors cannot be said to have been engaged in any investigations similar to those conducted by the Medical Officer of the Privy Council. Those which were directed to the alleged destitution this year cannot be regarded in such a light, as they did not concern the management of towns, sewerage, water supply, lodging-houses, nuisances, state of burial-grounds, &c., and indeed they were declared by the Commissioners "somewhat out of the limits of the official business of the department." Thus, while we have for our poor the best organized system of curative medicine in the world, we cannot be said to have any arrangements for prevention.

2nd. The adoption of an efficient system of sewerage. I am aware that it is still a debateable question whether our rivers shall continue to be the main sewers of towns, or whether the sewage shall be utilized directly on the lands; but, in any case, there is need that the ground, water, and even atmosphere of towns shall not be saturated with pernicious refuse. I am happy to say that, under the Sewage Utilization Act of the present year, poor-law guardians and town commissioners are empowered to construct sewers, and to borrow money on the security of the rates for the purpose, from the Public Works Loan Commissioners. It remains to be seen whether, without any pressure from a central authority, and with the fear of increased rates before them, they will do so at all, and whether they will construct them in the efficient way they are constructed in England under the direction of the Local Government Office. It strikes me that the Board of Works in Ireland should be granted similar powers with respect to sewerage and water supply; and, perhaps, that department might be constituted a central authority to which one interested in the health of his town, yet despairing of improvement as long as the ignorance, short-sighted parsimony, and insensibility of local bodies is uncontrolled, might apply.

Mr. Simon, the Medical Officer of the Privy Council, in his last report, forcibly observes:—"With regard to these elementary necessities of health, I venture to submit that the time has now arrived when it ought not any longer to be discretionary in a place whether the place shall be kept filthily or not. Powers sufficient for the local protection of the public health having first been universally conferred, it next, I submit, ought universally to be an obligation on the local authorities, that those powers be exercised in good faith, and with reasonable vigour and intelligence." In an admirable commentary on the Towns Improvement Act, Ireland, which was published in 1861, it is justly remarked:—"The fact of a town being under the Improvement Act gives the Grand Jury a plausible reason for not inter-

fering for a purpose apparently provided for under the municipal government ; besides, Grand Juries must feel that the towns of any importance will one after another be withdrawn from their jurisdiction, and thus it seems foolish to improve to-day for people at the county's expense who may cease to-morrow to be contributors to the county funds."

3rd. A safe water supply. When it is remembered that diarrhoea, cholera, and typhoid fever, are propagated by means of contaminated water, and that probably other diseases have a similar origin, no arguments are needed to prove that a supply of that requisites pure and above all suspicion, is desirable for towns ; yet every town I have mentioned to-night derives its supply from superficial wells or pumps, or from the rivers in towns, and such sources are rarely, if ever, free from pollution. Some years ago, Dr. Voelcker, the eminent chemist, found that the water of many superficial town wells contained three times as much organic matter as the tank liquid with which Mr. Mechi was manuring his land. Three months ago nineteen persons in a large house were attacked with typhoid fever from drinking the water of a well which was within four yards of a cesspool. As is often the case with regard to the most poisonous water, this specimen was beautifully sparkling, and had no bad taste or smell, but the microscope displayed crowds of organic forms, and analysis revealed nitrous acid and organic matter in abundance.

I believe the geological structure of Ireland does not often afford Artesian wells, but deep wells or pumps, the circumference of which should be of cemented brick, and puddled, to prevent all soakage, and placed in situations away from cesspools, should be freely provided in small towns and villages. For larger towns—Sligo, for instance—a supply from a lake, stream, or catchment basin in a pastoral district, should be always obtained and distributed by pipes to all houses in the town. A river which has passed a town should never be used as a source for drinking water, even if the sewage should come to be utilized on the land. The sewage water from the town of Croydon, after being irrigated over the farm for the purpose, passes limpid and apparently pure into the river Wendle. I have examined it, however, microscopically and chemically, and find it loaded still with organic matter. Indeed, when kept, it throws down a filthy sediment and smells badly. A fortnight ago at the Society of Arts, Mr. Baily Denton, the eminent engineer, proposed a mode of water supply for small villages, which was approved by other eminent engineers and sanitarians. It was, that the water of under-drainage, which has filtered through four feet of earth, and which is remarkably pure, should be collected in the most pastoral neighbourhood of the village. For a town of 100 houses from seven to twelve acres would suffice, and the whole expense, including the purchase of a reservoir four-tenths of an acre in extent, to give water for the four summer months when wells are dry, would be £415, which a yearly payment of 5s. 3d. on each house for thirty years would refund.

Of the 54,552 cases of cholera in 1832, and the 45,698 in 1849, throughout all Ireland, nearly all occurred in towns, and in these two epidemics 40,496 lives were lost.

In none of the towns I have alluded to did the cholera contagion, when once introduced, starve out, but, on the contrary, spread with rapidity and virulence, and this in itself is a proof of imperfect sewerage and water supply.

We are told that in the middle ages when pestilence seized upon a town, the citizens put to death the physicians, believing they had poisoned the wells; and if cholera should visit us, and spread in some towns where the authorities provide no safe water-supply, they will deserve punishment, although of a milder nature than that which the barbarism of the dark ages inflicted.

4th. The extension of Ireland of the Nuisances Removal and Disease Prevention Act of 1855. I remember that you, sir, with your colleagues in the Poor-law Commission, in two successive reports, urged on the government the extension of this Act which had superceded the faulty Act of 1848, and I am rejoiced to see by a communication of yours to the Municipal Council of Waterford, that the law officers are engaged on the subject. Ireland has still to be content with an act, which eleven years ago for England, and ten years for Scotland, successive Parliaments declared defective. The desirable act, however, does not give power to prevent overcrowding in any house which contains but one family, and thus wretched hovels and stables converted into human dwellings become greatly over-populated.

It has been suggested that the constabulary, instead of the relieving officers, should carry out the provisions of the Nuisances Act, and that they should receive part of the fines. As this force is more than twice as numerous with us as the analogous body in England, and as their time is not fully occupied, there seems to be no objection to the arrangement. Under the present system it is undeniable that an epidemic is often at its height before any precautionary steps are taken, and we have no means to "stamp it out." By the abolition of the Vestry Act (1819) officers of health were taken from parishes. In no Irish town is the iron, or least injurious mode of purifying gas adopted, and in many this and other manufactures, are conducted in such a way as to be nuisances. Clauses directly ordering that injurious wells should be closed, that damp fetid earth under the floors of houses should be replaced by dry brick rubbish, and one directing licensing of cow-houses and thereby giving powers to compel sewerage, water supply, and to prevent overcrowding in them, and the retention of manure, are very desirable. The last-named addition to our sanitary acts seems now more necessary than ever, when there is dread of invasion by the cattle plague.

My friend, Dr. Druitt, at the Metropolitan Sanitary Association, on Thursday, proposed that local boards should also have a lien on the premises to cover all expenses for their sanitary improvement, which should be recoverable by their sale. Mr. H. Dix Hutton has pointed out to me that it is desirable that the expenses for the removal of nuisances should, in case the owner cannot be got at, be liquidated by receipt of the rent due to him from the occupiers. In municipal towns the commissioners should be the sole autho-

city for the removal of nuisances, for at present, as the responsibility is divided with the guardians, the work is done by neither.

The verbiage of this Act should be most clear, as magistrates will not act if it be at all ambiguous, and local boards will not undergo the expense of an appeal.

5th. Lodging-house acts, similar to that now possessed by Dublin, for towns over 10,000 inhabitants. Dr. Mackesy has explained that few labourers' houses are now built in the districts surrounding towns, as they would be subject to poor-rate and grand jury rate, so that the lodging houses in towns are becoming every day more crowded. The Towns' Act only allows inspection in towns of over 3,000 population, and then only in those lodgings which are set for less than one week. On certificate of the medical officer of health, or indeed any medical practitioner, there should be power to compel a person ill with fever or other contagious disease to be removed from a lodging-house to hospital.

The local authorities of English towns of over 10,000 inhabitants may erect and maintain public lodging-houses, and may borrow money for the purpose from the Public Works Loan Commissioners, but there is no such power for any of the Irish cities or towns. The most crying evil of our large cities is the degraded state of the tenemental dwellings of the poor, some of whom are thereby lowered almost to that state of physical and moral decline, which in American cities is recognized by a name "less elegant than expressive—tenant-house rot."

6th. An inspection of burial grounds, similar to that conducted by the Burial Acts Office in London, and from which the greatest and most striking benefits to public health have resulted. Every burial ground in England was examined by direction of the Board of Health in 1842 and in 1850, and again on the appointment of permanent inspectors, and upon any complaint whatever of the state of any cemetery, or when a new one is contemplated, the fullest investigation is made by these officers. No inquiry has ever been made into those of Ireland, although they are nearly all intramural; many of them are overcrowded, and there is evidence that some are in such a condition as to pollute the water and air of the towns, with the effect of producing a palpable increase of epidemic disease. In the case of a large cemetery, in which I gave evidence before the Privy Council, the water of a neighbouring much-used well contained ten times as much organic matter as is present in good drinking water. The aggregation of human remains in this churchyard raised the surface from the ground level of the neighbouring houses to the height of their second windows, and the place was constantly pervaded by an offensive smell. It seems desirable that there should be in Ireland as well as in England some independent officer who could judge of the suitability of any site for a cemetery, in regard to soil, drainage, position with respect to prevailing winds, and other sanitary circumstances; and one of the highest authorities on the subject in England assures me that "power to appoint inspectors *quite removed from local influence* is indispensable to the successful working of a burial act. Local in-

spectors would, I am sure, be involved in interminable difficulties and disputes." The view is still more true with respect to inspectors for other sanitary purposes. The Medical Officer of the Privy Council, before which body such matters are tried, would be a judicious and independent adviser, or perhaps a sanitary inspector added to the poor-law staff might fulfil the duties of both these offices.

The Scotch Act gives power to any two members of a parochial board, or to any ten ratepayers, to demand examination of the condition of any burial ground.

Since the reports of the Children's Employment Commission have appeared, it has been generally conceded that laws are required for the regulation of workrooms similar to those which have done much good in other factories; and in no part of the kingdom are they more necessary than in our northern muslin and linen-making towns, where there is an excessive mortality by consumption.

The acknowledged failure in obtaining complete returns of deaths in Ireland seems to me to demand that the Registration Act be assimilated to that of England, where nobody can be interred without a certificate from a medical man as to the cause of death, under a penalty of £10 on the undertaker, sexton, or clergymen concerned in the burial. The relative or other responsible person is the informant, and if the medical man is not satisfied that the death was from natural causes, and in every case of accidental death, he informs the coroner, and thus great aid is given in the detection of crime. The fact also of a certificate as to the actual cause of death being absolutely necessary causes no severe malady to be neglected, which is often the case in this country, despite our admirable system of medical charity. The Medical Registrar has suggested to me that the fittest person in this country on whom to impose the penalty would be the undertaker, as to many rural graveyards there is no sexton attached.

There is probably no division of our statutes which require codification more than those relating to public health; sanitary provisions have been strung together in a truly patchwork fashion. There are none likewise which require more to be assimilated for all parts of the United Kingdom. It was, therefore, that I endeavoured last year to draw a parallel between those of England and Ireland, and it was suggested that I should attempt to submit the heads of a comprehensive measure. However, regarding Act of Parliament-making as the statesman's or the lawyer's province, I hesitated to do so; but, as no such person has interested himself in the matter, it may not be presumptuous in one who, although belonging to a profession often regarded as unconcerned in legislative matters, has been freely acting under the defective sanitary laws we possess, to suggest a few amendments. I have, therefore, arranged the following propositions, mainly founded on the marginal summaries of English Acts. I have not thought it necessary to draw up procedure and penalties sections, nor have I interfered with the Towns' Improvement Act (1854), to which this proposed act might be supplemental. Perhaps the easiest assimilative process would be to give power to the Lord Lieutenant in Council to adopt any of the clauses of the English Public Health Acts.

In conclusion, I will assert that these statistical facts and suggestions for amendment would have been long since brought under public notice with greater effect by my medical brethren who possess local information in various parts of Ireland, were it not for the natural reluctance on the part of professional men to agitate public questions, the effectual settlement of which would seem to advance their personal interests.

But how long is this state of things to last? Are our people to continue to be decimated by avoidable pestilence, because a few professional men might derive emolument from the measures taken to stay it.

SUGGESTIONS FOR AN ACT FOR PROMOTING THE PUBLIC HEALTH IN IRELAND.

21 and 22 Vic.
cap. 98, sec. 76

1.—The act to apply to all cities and towns and all unions in Ireland. The municipal councils, the town commissioners, and the poor-law guardians to be the "local authority," and each local authority to report annually to Secretary for Ireland.

17 and 18 Vic.
cap. 103, sec. 1.
21 and 22 Vic.
cap. 97, sec. 3,
4, and 5.

2.—Interpretation of terms.

3.—The Lord Lieutenant in Council may direct inquiries, and may appoint a medical officer who shall report annually (or a sanitary inspector shall be appointed by the Poor-law Commissioners).

21 and 22 Vic.
cap. 98, sec. 79,
and 80.

4.—The Board of Public Works to be the officers provided for the supervision of all works constructed in accordance with this Act.

11 and 12 Vic.
cap. 63, sec. 8.

5.—Upon petition of a certain proportion of householders, or when the deaths in any district appear on the Registrar-General's returns to be above a proportion of 1 in 43 of the population, the medical officer of the Privy Council to make local inquiry.

11 and 12 Vic.
cap. 63, sec. 10.

6.—After inquiry, in certain cases the Act shall be put in force by order of the Lord Lieutenant in Council.

11 and 12 Vic.
cap. 63, sec. 37.

7.—Local authority shall appoint a surveyor and inspector of nuisances, and make bye-laws for the due performance of their duties.

11 and 12 Vic.
cap. 63, sec. 41,
43, and 45.

8.—All sewers shall be vested in local authority, who may cause to be prepared a map exhibiting the sewerage of the district, and shall make, alter, or discontinue sewers.

11 and 12 Vic.
cap. 63, sec. 42.

9.—No new house shall be erected without a drain, and local authority may, upon report of surveyor that any house is without a drain, cause one to be constructed; the expense to be recoverable from the owner.

17 and 18 Vic.
cap. 103, sec.
52, 53, 54.

10.—Local authority may provide a proper supply of water for the district, as by the sections 52, 53, and 54 of the Towns Improvement Act, 1854 (to which might be added compulsory powers for the taking of land).

- 11.—Houses to be purified, and damp earth under floors to be replaced by suitable matter, on certificate of officer of health or of two medical practitioners. 11 and 12 Vic. cap. 63, sec. 60.
- 12.—In towns of over 10,000 inhabitants, all houses in which lodgings are let for a less term than four weeks, and rents not exceeding 3s. per week, shall be deemed lodging-houses, and shall be subject to the rules and regulations contained in the Dublin Improvement Act, 1864. 10 and 11 Vic. cap. 34, sec. 116, 117, and 118.
- 13.—Local authority under this Act shall elect the dispensary committee of each district, as a nuisances removal and diseases prevention committee. 18 and 19 Vic. cap. 121, sec. 5.
- 14.—The word "nuisances" under this act shall include any premises in such a state from insufficiency of size or other circumstance, as to be a nuisance or injurious to health—any foul ditch, gutter, water-course, privy, urinal, cesspool, drain, or ashpit, so foul as to be a nuisance or injurious to health, any animal so kept as to be a nuisance injurious to health, any accumulation or deposit which is a nuisance or injurious to health. 19 and 20 Vic. cap. 103, sec. 18.
- 15.—Power of entry to local authority or their officers. 18 and 19 Vic. cap. 121, sec. 11, 18 and 19 Vic. cap. 121, sec. 12.
- 16.—Justices may prohibit the continuance of nuisances. 18 and 19 Vic. cap. 121, sec. 19.
17. Cost to be paid by persons on whom order is made, or owner, or occupier. 18 and 19 Vic. cap. 121, sec. 23.
- 18.—On certificate of medical officer of health, or of two medical practitioners to the local authority, that any house is overcrowded, proceedings may be taken to abate the same. 23 and 24 Vic. cap. 17, sec. 12.
- 19.—Local authority may provide carriages for conveyance of infected persons. 19 and 20 Vic. cap. 103, sec. 22 and 26.
- 20.—Lord Lieutenant in Council empowered to issue orders for prevention of epidemic disease when prevalent, providing for the speedy interment of the dead, and house-to-house visitation. 19 and 20 Vic. cap. 103, sec. 38.
- 21.—Local authority may remove sick persons from lodging-houses to hospital.
- 22.—Local authority of towns of over 10,000 inhabitants, may erect and maintain lodging-houses, and borrow money for the purpose from the Public Works Loan Commissioners.
- 23.—The Lord Lieutenant in Council shall appoint a duly qualified medical inspector to examine the state of existing burial grounds and the suitability of the sites of any which may be proposed, and that the same person may act as medical officer of the Privy Council or Sanitary Poor-law Inspector and Inspector of Burials. 18 and 19 Vic. cap. 128, sec. 8.
- 24.—The local authority shall be the authority for carrying out the provisions of the Bakehouse Regulation Act. 26 and 27 Vic. cap. 40, sec. 1.

DISCUSSION.

The CHAIRMAN (Sir Thomas Larcom) remarked that the paper read by Dr. Mapother displayed the most complete knowledge of the subject, and treated of so many most interesting questions, that the great difficulty of the meeting would be to know where to begin with them. He would be glad to hear any gentleman who wished to speak with reference to it.

MR. JAMES HAUGHTON, J.P., said the subject was a most melancholy one to think of, but it was nevertheless one that they ought to be glad to have brought under their notice, more particularly by a gentleman of such ability and experience as Dr. Mapother. It was lamentable that so much ignorance prevailed amongst the community on the sanitary condition of towns—a subject it was so essential for them to know. A large proportion of the evils pointed out arose from the absolute ignorance as to sanitary measures, and partly from the unwillingness of people to tax themselves for sanitary purposes. While he quite agreed there should be no waste of public funds on the part of corporate bodies, yet no legitimate expenditure should be spared to preserve public health.

DR. DAVYS, County Coroner, observed that the country at large should feel indebted to Dr. Mapother for the very valuable paper he had read that evening, which showed that in a large proportion of Ireland the population had been decimated from want of proper sanitary arrangements. He was acquainted with the subject, and could speak with some authority with reference to it; but he thought there could have been no more practicable remedy proposed than that which had been suggested, which was to have a central body to send out medical officers to report on certain districts.

MR. HANCOCK, J.P., Chairman of Lurgan Commissioners, said he had come ninety miles to hear the paper read by Dr. Mapother that night, and he had rarely listened to any one with deeper interest, and he entirely agreed with the previous speaker. With regard to the Towns Improvement Act, one of the chief obstacles to its being properly carried out might be attributed to some of its provisions, and the utter impossibility of borrowing money under it. It struck him that the course which had been suggested in the Loans Act of last year might be well adopted for sanitary purposes. They had granted money for the drainage of estates, and he believed the same would be done for the drainage of towns. One of the greatest obstructions in the way was the great variety of opinion which existed in regard to the best mode of drainage. Such being the case, it could not be wondered at that the poorer classes should be reluctant to expend money on what they might be afterwards told was useless. He had great pleasure in approving of the suggestions of Dr. Mapother, which he thought were much to the point.

MR. McEvoy said that there were two things to be done, which, he thought, were most important. The first was that the strongest public opinion on the importance of sanitary measures should be formed throughout the country, the ignorance of such being a

great obstacle. Dr. Mapother had called attention to the necessity of a proper system of registration of deaths, and to the extraordinary fact that different systems of carrying out such existed in England and Scotland. Such a system, if it were carried out, would warn the public of any coming disease. The Registrar-General in Ireland should publish a report of the number of deaths in the eight principal towns of Ireland every month, as was the case in Scotland. The reluctance of the people to tax themselves for sanitary purposes would not be overcome so long as they have so little security that their money will be properly expended. A different system of auditing should be adopted, and the practice abandoned of compelling objectors to the accounts to object to them at their own expense. They should endeavour, as far as possible, to make the ratepayers feel that their money had been properly expended.

SIR COLMAN O'LOGHLEN, M.P., said that the subject was one of great importance, and in reference to which both the Society and the public were much indebted to Dr. Mapother. He, in his paper, had endeavoured, as far as in his power, to get rid of the apathy which prevailed in the public mind. It was a subject which touched all parties. They all knew that every one was interested in the public health. The speaker referred to a proper system of drainage, and to the Utilization of Sewage Act, in which he, having been on the Committee of the House of Commons, had had extended to Ireland. That act gave extensive powers to town commissioners, and, where there was no such body, to boards of guardians, to have proper sewers made, and for that purpose to borrow money on the security of their rates from the Exchequer Loan Commissioners. He was glad to learn that this act would not be inoperative in Ireland, inasmuch as applications had already come from several towns in Ireland for loans under the provisions of the act. Dr. Mapother and others had properly advocated the advisability of having a central authority in reference to sanitary improvements. Unfortunately there did exist a great apathy on the subject of public health, and one of the best modes of removing that indifference was by reading papers and holding such discussions as these.

PROFESSOR SHAW said that the bodies in Ireland established for the education of the people should pay more attention to the subject. He did not think that the machinery of the poor-law department was at all adequate for the purpose of investigating the sewerage, water-supply, or sanitary management of towns, which was one of real national importance, yet had attracted no attention from Irish representatives or the executive.

The REV. PROFESSOR HAUGHTON agreed with all the propositions which Dr. Mapother had advanced, and remarked that it was a matter of the deepest regret that fever was always with us, whereas other countries had but now and then to combat it. He referred to the condition of the poor in Dublin, and hoped that the better system as regarded lodging-houses would be successful. There was one matter which he wished to mention, and which he thought was of more importance than all the rest, and that was good and wholesome

food for the people. He thought the better condition of the labouring classes was much required. A man with a full stomach and a glass of good whisky would not be afraid to enter a house in which there was fever, while a poorly-fed man might be afraid and, in all likelihood would take it.

MR. JOSEPH FISHER, of Waterford, addressed some practical remarks to the meeting, acknowledging that the subject was a most pressing one, which had, nevertheless, received scarcely any attention from the Government.

MR. J. L. CONN, P.L.G. of Waterford, noticed the case of a town in his neighbourhood which strongly exhibited the necessity of a central directing body; there was the most lamentable need of sanitary improvement, yet none had been effected, as the proprietor of the town (which numbered 800 houses) had expressed himself content; and as the ratepayers had no leases, they were by this hint most effectually silenced, and breathed their malaria contentedly. He advocated the appointment of professional men to examine and report to a central authority on the sanitary wants of localities throughout the country. Local proprietors should be compelled to do their duty in preserving public health.

Some other speakers having expressed their approval of the measures which had been proposed, the Chairman invited Dr. Mapother to reply.

DR. MAPOTHER said he was much indebted to the several speakers who had interested themselves so much in the topic he had submitted. Sir C. O'Loughlen had justly explained the value of the Sewage Utilization Act, and he felt sure it was capable of doing infinite service if there was any central authority to urge the adoption of its provisions, and to see that sewers were made on a really effectual plan, as bad sewers were far worse than no sewers at all. There was already an instance of the Public Works Loan Commissioners having refused to sanction a loan for the sewerage of a town, because the sum sought by the guardians was palpably insufficient for the purpose. He had endeavoured to show the still greater importance of a pure water-supply, and this was universally neglected in Irish towns; indeed, he believed the clauses of the Act of 1854, in this respect were very faulty. He felt sure that a chemical analysis of the pump and well-waters of many Irish towns would disclose facts as startling as those which Mr. Simon published in one of his earlier Privy Council Reports. The Registrar-General's returns had shown that in some English districts the deaths yearly by diarrhoeal disease had been eighty times as numerous as in others, and the sanitary inquiry proved that "the excess of mortality had been in all the places coincident with one or other of two definite local circumstances—1st, the tainting of the atmosphere with the products of organic decomposition, especially of human excrement; or 2nd, the habitual drinking of impure water. In certain districts of England, sometimes by good fortune, sometimes by good local government, definite causes of disease must have been kept at or near their least conceivable activity; while in other districts the same causes must have been prevailing with as little check as if the

community had been one of savages, to whom science had never taught the first and simplest lessons." To show the importance of such questions, he would mention that if the death rate by diarrhoeal diseases had been only ten times the minimum rate, 20,000 lives would have been annually saved. He had omitted to mention the two other medical inquiries which had been granted for Ireland—namely, the investigation into the sanitary condition of children in the North Dublin Union by Drs. Corrigan and Evory Kennedy in 1843, and that into the mortality in the Clare unions by Drs. Hill and Hughes in 1849.

IV.—*Proceedings of the Statistical and Social Inquiry Society of Ireland.*

[Tuesday Evening, 28th November, 1865.]

The Society met at 35, Molesworth-street, The Right Hon. Mr. Justice O'Hagan, V.P., in the Chair.

His Excellency, the Lord Lieutenant (the Lord Wodehouse) honoured the Society with his presence.

The Hon. Judge Longfield, President, and the following Vice-Presidents, were present :—Edward Barrington, J.P. ; Jonathan Pim, M.P. ; John K. Ingram, LL.D., F.T.C.D. ; and James Haughton, J.P.

Mr. Gibson, Hon. Sec., read the minutes.

Mr. O'Shaughnessy, Hon. Sec., read the Report of the Council.

The Chairman delivered the inaugural address.

Mr. Justice O'Hagan having vacated the Chair, the Hon. Judge Longfield was called thereto.

The Right Hon. John Barrington, Lord Mayor of Dublin, proposed

"That the thanks of the Society be hereby offered to the Right Hon. Mr. Justice O'Hagan for the Address with which this Session has been inaugurated, and that he be requested to hand the same to the Secretaries for publication in the Journal of the Society."

His Lordship said he thought it would ill become him, after the eloquent, able, and exhaustive address which they had heard, to add any words to commend it to their attention. The learned judge had given them a very clear statement of the progress and operations of the Society from its commencement, and the important objects which claimed its attention. His reference to the Registration Act for the transfer of land in Ireland, and his practical allusions to the present deplorable state of Irish Railways, were well worthy of attention and would be read with interest by all.

Sir Colman O'Loughlen, M.P. Q.C., in seconding the resolution, said he was sure that every one who heard the address considered it worthy of the occasion, and all would agree with him that if it had been equalled it had never been surpassed by any delivered by those who on former occasions had occupied a similar position to that held by his right hon. friend that evening.