

**An examination of the theory of aërial dissemination of small-pox infection
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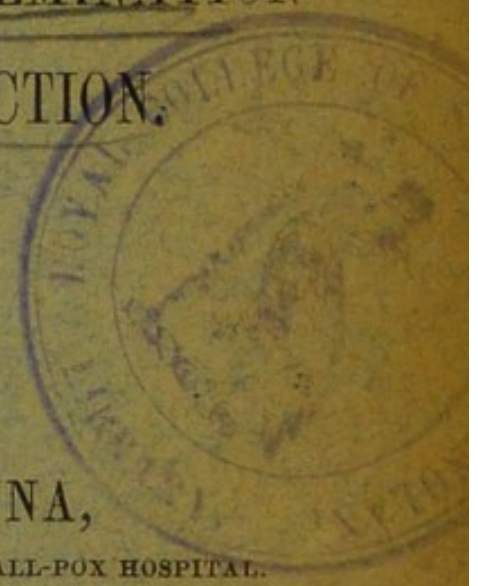
THEORY OF AËRIAL DISSEMINATION
OF SMALL-POX INFECTION.

BY

MONTAGUE D. MAKUNA,

LATE MEDICAL SUPERINTENDENT OF FULHAM SMALL-POX HOSPITAL.

PRESENTED BY
The Author



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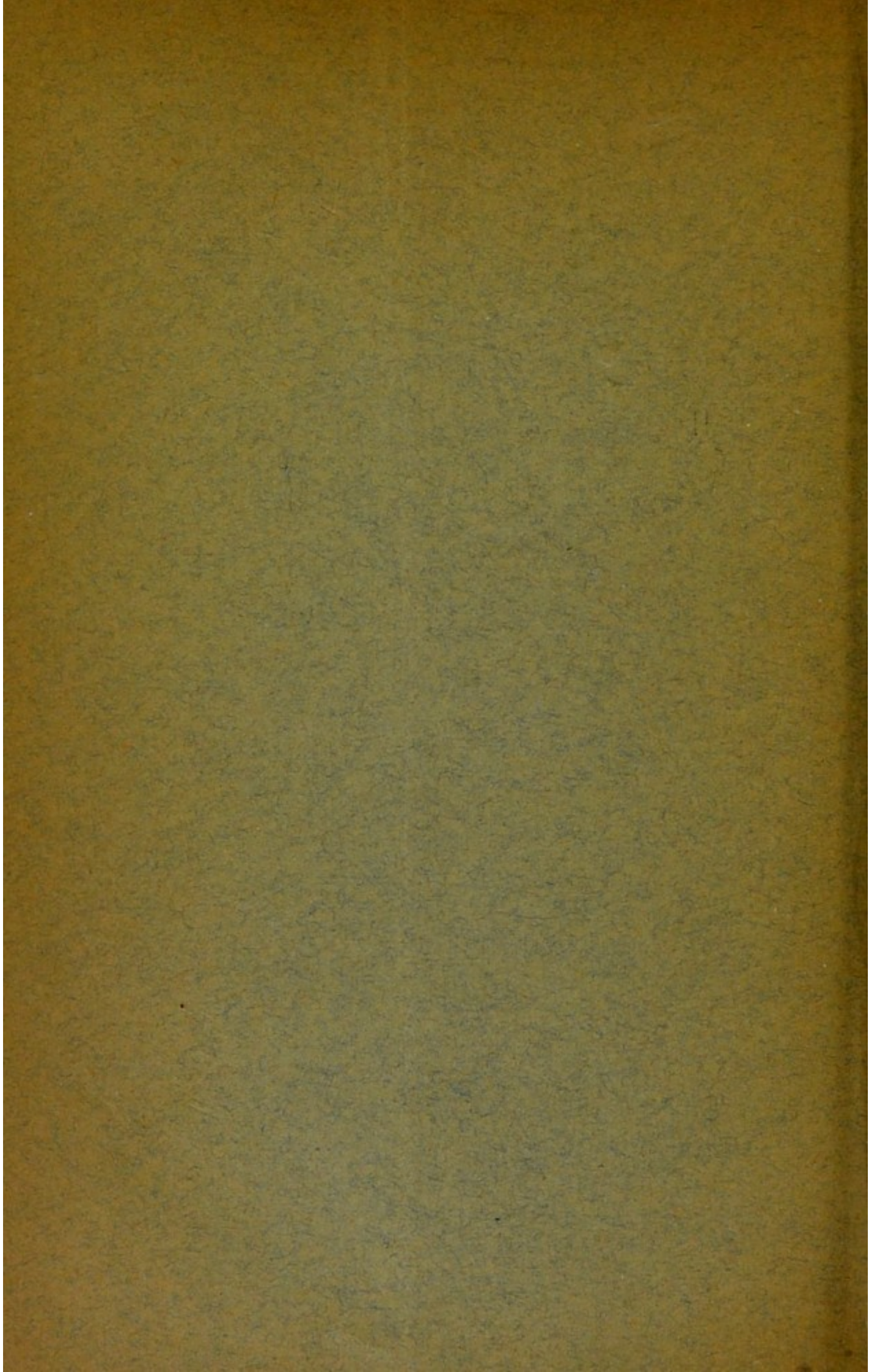
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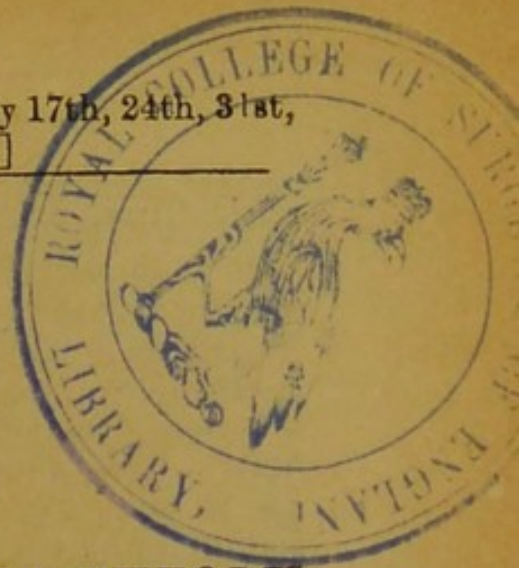
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AN EXAMINATION OF THE THEORY OF AËRIAL DISSEMINATION OF SMALL-POX INFECTION.

By MONTAGUE D. MAKUNA,

Late Medical Superintendent of Fulham Small-Pox Hospital.

THE object of this paper is to demonstrate how the infection of small-pox is disseminated by ordinary channels, and thus prove that the theory of aërial dissemination of small-pox infection at long distances, as enunciated by Mr. W. H. Power, of the Local Government Board, in his Report "On the influence of Fulham Small-pox Hospital on the neighbourhood surrounding it," is purely speculative. He conducted his investigations in January, February, and March, 1881, and because he could not ascertain the sources of infection of cases in the districts of Kensington, Fulham, and Chelsea, he started this theory, and by an elaborate series of tables he has tried to make it applicable to the years 1877, 1878, 1879 and 1880. The following history that I have collected during these years will prove that his data are erroneous, inasmuch as he has not known the facts and history of the local outbreaks of the disease, the mismanagement of the institution, overcrowding, and other conditions of the population in the locality. In the parish of Fulham, according to the Census of 1871, there was 4·9 persons to a house; while, according to 1881, there was 7·3. Nearly all the houses in Fulham, within half a mile of the hospital, are of recent growth, and inhabited by labouring and artizan classes, migrating from the country and from parish to parish, according to the activity of trade and

agriculture, extension of railway works and manufactures in the locality. They come, unguarded by vaccination or re-vaccination, live for a short time in infected haunts, and thus fall a prey to the unknown foe. In West Brompton, within half a mile of the hospital, the building operations have also been active. The houses in Adrian Terrace and Ifield Road (it is one long street, and both the names are used indiscriminately), where the disease has been most prevalent, built for a superior class, have come to be occupied by the artizan and labouring classes. These streets are overcrowded, the intercommunication between the houses is very free, and the population ever changing. They form the borderland of the central circle of Mr. Power's "special area." Higher up are houses in Coleherne Road, Westgate Terrace, Redcliffe Gardens and Square, and the turnings through them, Tregunter Road, Cathcart Road, and Fawcett Street. Still higher up are the Boltons and Onslow Gardens. On leaving the area of the central circle, we find the houses are occupied by superior classes, and in the area between half to one mile distant from the hospital some of the highest and noblest live. When cases of small-pox do occur in their houses, they are chiefly among servants who have in considerable numbers contracted it by visiting their friends in haunts of infection. It would be monstrous to draw calculations from these houses, the number of which increases the further we go from the hospital, and consequently gives a higher average on the poorer houses in Chelsea and Fulham in the same "special area round the hospital," and thus add an argument to the speculation that the vitality of the infection diminishes the further we recede from the hospital. There are no houses within a quarter-mile of the hospital in Chelsea. Beyond this are those in Fulham Road, King's Road, Church Street, and intersecting streets. These main streets, especially Fulham Road, which is a boundary line between Kensington and Chelsea, are composed of shops. The people in West Brompton, especially the poorer classes, deal with these shops. Had one cared to investigate the prevalence of the disease in these shop-houses in Chelsea, where there was no isolation of the sick, and everybody went in and out unguarded, sufficient cause of infection would have been found. There are

numerous small laundries in Chelsea where infected clothing was washed ; the workers took small-pox and continued at their occupation. Chelsea is notorious for infected haunts, and its old houses are quite unlike the mansions in Brompton, or the cottages in Fulham. All who know the different characteristics of Mr. Power's "special area" will bear me witness when I say that to draw averages on houses in this area, counting them as so many units, is like buying and selling books by weight. It would be an egregious blunder to lose sight of these facts and circumstances in investigating the origin and spread of an epidemic disease midst such a mixed population. An epidemic disease, when once introduced among the poorer classes, becomes endemic, gives rise to so-called sporadic cases, which, under favourable circumstances, lead to fresh outbreaks of epidemics time after time. Again, infection, unless it is directly attacked, retains its vitality for propagation for years, and harbours in nooks and corners, adhering to many household articles, furniture, clothing, &c., with a tenacity scarcely conceivable, but which has been repeatedly demonstrated by investigators in all parts of the world. The most systematic and scientific disinfection, and renewing of hospital wards, ships, barracks, huts, houses, and their belongings, have been futile in many cases. Bearing this fact in my mind, I for one cannot realise the idea that the dwellings of the poor of London can be thoroughly disinfected after the occurrence of infectious cases as is done at the present day by the local sanitary authorities. When I was at Fulham Hospital I noted the fact of cases occurring in the same house time after time, and year after year, the fresh victims in many cases being quite unaware of the previous cases.

Small-pox is, socially speaking, a misfortune, because no sooner is its existence in a house known than its inmates are thrown out of employment and shopkeepers lose their trade. Under these circumstances, concealment of cases, even among well-to-do classes, is frequent, if not discouraged as it should be by medical men, is connived by authorities among their friends and the death certificates falsified. We know more of these practices in poorer localities, because their means of isolation and concealment are few, their methods of evading all enquiry less refined, and

through many causes the tendency of the disease to spread among their class more general. I have known many well-to-do people leave town to shake off infection and the houses either changed altogether or renewed. Their servants, as a rule, being not re-vaccinated, take the disease, and are either sent home ill or removed to the hospital.

I have sometimes found that when all the efforts of the sanitary authorities to get at the sources of infection were baffled through the disingenuity of the people, the truth was revealed to me through children in the hospital on the offer of small enticements. Add to this concealment of cases or facts bearing on the primary cases, the numerous cases of varioloid among the vaccinated adults at work and children at school, besides the treatment of such cases in public dispensaries and out-door departments of hospitals for other affections, and we need not have recourse to hypothesis to account for the mischief. Taking all these and many other circumstances into consideration, I contend that the infection of small-pox in certain localities in London is ever existent, a thorough and systematic disinfection has been rendered impracticable, and the explanation of its spread through air is a confession of our inability to cope with the disease, and of our ignorance of its immediate sources. I do not deny the dissemination of contagion through air, the very word *infection* means it, but it is difficult to conceive atmosphere as a mere carrier of infection at long distances. Have heat, light, moisture, ozone, and other constituents of the air no influence on the economy of animal and vegetable life?

The conditions that favour the spread of small-pox are the absence of re-vaccination among adults, non-vaccination at all ages, overcrowding, malnutrition of the body, accumulation of filth in clothing and linen, defective sanitation in houses, free intercourse among houses and families, children playing together in streets. All these causes abound among poor people. With these facts before me I have felt surprised, not because I have not been able to account for the cases that came to my knowledge, but because of the repeated escapes of so many people in an infected locality. Mr. Power began his enquiry nearly four years after the establishment of Fulham Hospital, surrounded by such a locality, and his Report gives us

no idea of the condition of the houses in the *special area* forming a circle round the hospital within the radius of a mile, which includes many magnificent and palatial residences in Brompton as well as wretched hovels in Fulham, and old and inferior houses in Chelsea, upon which he calculates averages, taking houses as so many units, irrespective of all other conditions, to support his dazzling theory. It was not possible that he could study the locality in a few weeks. Had he confined himself to the explanation of a few cases he enquired into I should not have felt it necessary to criticise his Report. But by the addition of a series of tables and maps, professing to explain the outbreaks of the disease in previous years by mere calculations and averages, he has tried to harmonise facts in a manner contrary to my experience as the Medical Officer of the Fulham Small-pox Hospital.

With this introduction, I shall narrate the history of the hospital, and the incidence of the disease in Kensington, Fulham, and Chelsea. For the sake of convenience I shall adopt the same terms used by Mr. Power for defining several areas.

Special Area (S. A.) means the area included in a circle with a mile radius, having the hospital for its centre.

Outside Special Area (O. S. A.), area beyond the special area.

Central Circle (C. C.) means the area included in a circle with quarter mile radius, with the hospital for its centre.

Half Mile Ring ($\frac{1}{2}$ mile R.) means the area between the central circle and a circle described with a half mile radius.

Three Quarter Mile Ring ($\frac{3}{4}$ mile R.) means the area between $\frac{1}{2}$ mile R. and a circle described with three quarter mile radius.

One Mile Ring (1 mile R.) means the area between $\frac{3}{4}$ mile R. and a circle described with one mile radius.

Small-pox became epidemic in London in the summer of 1876, when the Stockwell Small-pox Hospital was the only one available for the metropolis. Very soon Homerton was opened, and it was followed in the November of the same year by Hampstead. In March, 1877, Deptford and Fulham Hospitals were established. Hence it becomes necessary to know whether small-pox was existent in the locality before the opening of the

Fulham Hospital, on the 10th of March, 1877. We find from the returns of the Metropolitan Asylums Board, that there were 31 admissions from Fulham, 50 from Chelsea, and 115 from Kensington at other small-pox hospitals up to the latter date. During the same period the Highgate Small-pox Hospital had admitted 24 from Kensington, of which seven were from Brompton, 30 from Fulham Union, of which fourteen were from Fulham Parish, and eight from Chelsea. During the year 1876, there were 736 deaths from small-pox in London, of which ten were in Kensington, three in Fulham, and four in Chelsea, while the Metropolitan Asylums Board Hospitals had admitted 2,120 cases of small-pox. This conclusively proves that the admissions to these institutions does not mean incidence of the disease in the metropolis. A death certificate sometimes reveals an outbreak in a locality of which the sanitary authorities had no knowledge. Many mild cases are treated, as cases of chicken-pox, measles, skin affections, &c. Dr. Dudfield informs us, in his annual report for 1876, that during the year there were about 30 cases treated at home in Kensington. He had traced the spread of the disease through laundries, and among the victims were several ironers, manglers, and laundresses. Another feature noticed by him was, that in Brompton the victims were mostly adults, many being domestics, while in the Kensington Town Sub-district they were of all ages. The same peculiarities had been recorded by him in the epidemic of 1871-72, and they go to prove that the sources of infection in Brompton must be outside the district. On my visits to the locality in January and February, 1877, I was informed of nearly a dozen cases of small-pox in the Central Circle and $\frac{1}{2}$ mile Ring. It is evident, therefore, that the sources of infection were rapidly multiplying in the locality, and especially in the small shop-houses and laundries, with the rise of the epidemic in the metropolis before the hospital was opened.

The Fulham Small-pox Hospital was opened on March 10th, 1877, and during the first week it received convalescents, and during the second week some acute cases, the admissions being confined to males over 7 years of age. The children and females were either treated at home or taken to other hospitals. This arrangement was unavoidable, and it would have been

well had the managers not opened this hospital in its then incomplete state, and thus saved one blot on the management. The southern wing, with five wards, was barely ready to receive patients. The administrative block and the northern wing were fenced off to prevent the workmen and patients mixing together. Some workmen were re-vaccinated and were engaged to finish the kitchen and laundry, which were also incomplete. A room to keep disinfected clothing had been forgotten ; a wooden shed with venetian walls was soon erected as a substitute. The disinfecting chamber was put up in the engineer's workshop, as no provision was made for it. The mortuary was not ready for months, and coffins were first used to remove the dead bodies from the wards, and piled up one on the other in the room. Out of the five wards of the southern wing, one was used as a store-room and mess-room for male attendants, and another as their dormitory. The medical officer, assistant medical officer, and the steward had each a ward scullery for their residence, offices, and dispensary. The attendants were males and their wives. Some of them slept outside with their families, and had their lodgings generally in Walham Green. Most of the workers in the kitchen and laundry slept outside. The washing of the staff was sent out for weeks, while the patients' clothing and bed linen were left to accumulate for days, in expectation of the completion of the laundry. A porter's lodge had not yet been provided, and a temporary gate was put up nearest the southern wing by breaking through the boundary wall. The reception-room was used as the gate-porter's lodging-room, admission and discharge room for the patients. The non-resident staff left in the evening, to return in the morning. The resident went out every evening, and half-day once a week. Cases of small-pox occurred in their families and among their friends. They were either treated at home or sent to hospitals. The administrative block and northern wing were ready in May. The former building was unfit for its purpose, as it was wanting in rooms of every description. There was no provision for a dispensary : it was fitted up in a small corner room. There was no bath-room for superior officers, and only one bath for the rest of the staff, both males and females. There was no provision for the assistant medical officer. The steward was

expected to reside outside. There was no coal-cellar for the whole of the block, excepting one for the apparatus for hot-water pipes. Only one scullery for the whole block. The washing of plates, &c., was all done in the kitchen. The sleeping accommodation for the staff was insufficient. Now and then two girls have slept in one bed, and in rooms too small for one. Two wards had to be used as dormitories, one for the males and the other for the females. There was no adequate provision to keep sexes among servants separate, and all manner of dereliction of duties had to be excused. The rooms were all poorly and badly furnished. The surface drainage, roads, and paths in the grounds were left unfinished by the contractors, and the passengers and ambulances had to wade through mud and stones. The firegrates and scullery fittings of the wards were condemned before they were used, and had to be gradually replaced and deficiencies gradually supplied. The washing of the staff was at first done with that of the patients, and after many remonstrances a sort of a separate provision was made. The drying horses were few, and a portion of the grounds was set apart with wooden poles and iron cords to dry washed clothing and linen in the open air. The walls of the wards and the rooms in the administrative block were left bare and dirty, as workmen left them, without paper, paint, or limewash, till the year 1880. The porter's lodge was not ready, and the proper gate was not in use till about the middle of the year 1879. Many parcels and presents for the patients were brought in by the traders' carts, nurses, &c., who visited the patients' friends at home, and I had to exert a most rigid supervision to keep many improper things out of the wards. The nurses did their knitting and sewing in the wards, and carried the work outside in handbags, which were every now and then turned out of wards by me. Although they changed their dresses when going out, they always passed along the corridors, and sometimes spent hours in out-door garments in the ward sculleries and receiving-rooms when tired of walking the streets. They had no kind of recreation or sitting-room except the mess-room, which was also their pantry. Reports, reprimands, discharges of servants, did them no good, and the institution every now and then lost a good servant. Numerous complaints of the spread of the disease from

the hospital were made, and they were explained away in one way or another. If the complaint was that the members of the staff slept outside, they would reduce the staff and adopt some means for a time to report that no one slept outside. If the complaint was that the refuse of food caused the spread, they would stop it and report none left the premises. If the complaint was that poultices, rags, &c., that went out of wards with the dust, caused the disease, they would issue an order to burn them and report it as such. When cases of small-pox occurred amongst friends and relations of the staff, they would suddenly disappear before they came to light or could be investigated. Many patients, and male and female servants married away from the hospital.

In the Hampstead Hospital trial it was proved in court that the hospital was mismanaged as far as the safety of the public outside was concerned. Had they taken advantage of their experience, done away with many abuses, and investigated the local outbreaks, there would not have been any necessity for Mr. Power's Report, nor for pleading through a Royal Commission for their errors, nor for a compromise with the opposite party at the expense of the public purse, and acceptance of the dogma of aërial infection. Had these allegations of mine been known and considered by Mr. Power, he would not have been led astray. Let me ask those who adopt the theory of aërial infection, whether we are to forget all the foregoing facts which point to so many ways of the spread, and for a while roam in the region of fancy and philosophy to search after something new to pacify the public mind?

I shall now make a detailed statement of the incidence of the disease in Kensington, Chelsea, and Fulham for the years 1877, 1878, 1879 and 1880, which will show that Mr. Power's figures of the incidence are inaccurate, and his method of counting of houses in the circles and rings of the special area misleading.

The Year 1877.

THERE were 2,544 deaths from small-pox in London, of which 39 occurred in Kensington, 18 in Chelsea, and 72 in Fulham (including 47 in Fulham Small-pox Hospital). Calculating at the rate of 15 per cent. 84 deaths among private cases, would give us the number 560 treated at home. The metropolitan small-pox hospitals admitted 6,750 cases from the whole of the metropolis, of which 263 were from Kensington, 86 from Fulham, and 195 from Chelsea, giving a total of 544 for the district. The Highgate Small-pox Hospital admitted 112 cases from Fulham, 26 from Kensington, and 13 from Chelsea. So that the total incidence of the disease in Kensington was 549, in Fulham 378, and in Chelsea 328, or 1,255 cases for the three districts between which the hospital is situated. Mr. Power takes 544 admitted from the three districts into the metropolitan hospitals as the incidence of the disease, and ignores the admissions to Highgate Small-pox Hospital and the private cases, which together form a much larger proportion than the number accounted for by him, especially in the case of Fulham. According to the Medical Officer of Health for Fulham, 328 cases were known to the sanitary authorities, of which 119 were in Hammersmith, and 209 in Fulham. He further states that 84 per cent. of the former and 45·9 per cent. of the latter were removed to the hospitals. He remarks, "This difference in the percentage of cases properly isolated is sufficient to account for the great difference in the number of cases occurring in the two parishes. . . . The most energetic efforts were made to get cases removed to hospitals, but, unfortunately, a large proportion of patients remained to spread the disease, without proper accommodation or means of isolation. Some of the medical men in the district, and nearly all those in Hammersmith, did all in their power to assist us in the removal of cases. . . . Unfortunately there was a very different course adopted by some, though I am very glad to say few. I found numerous cases treated with the worst possible accom-

modation." Mr. Power calculates his theory on 86 cases admitted from Fulham, and omits 112 admissions to Highgate Small-pox Hospital, and 132 private cases known to the Medical Officer of Health. I now turn to Kensington. According to Dr. Dudfield there were 399 reported cases, of which 114 were treated at home and 26 were removed to Highgate Small-pox Hospital, so that he omits 140 Kensington cases. The Report of the Medical Officer of Health for Chelsea gives us 266 cases, and they are estimated to be 328, of which Mr. Power takes up 195.

The onus of the introduction of the disease in the neighbourhood does not lie with the hospital, for it is proved that before the opening of the hospital on the 10th March, the other metropolitan hospitals received 47 cases from Kensington, 21 from Fulham, and 14 from Chelsea during the year. During the same period Highgate Small-pox Hospital admitted 10 from Kensington, 19 from Fulham, and 6 from Chelsea. The incidence of the disease for January, February, and March was, according to the known cases, as follows:—Fulham C. C. 1, $\frac{1}{2}$ mile R. 1, $\frac{3}{4}$ mile R. 6, 1 mile R. —, O. S. A. 7. = 15 cases. Kensington C. C. —, $\frac{1}{2}$ mile R. —, $\frac{3}{4}$ mile R. —, 1 mile R. —, O. S. A. 18. = 18 cases. Chelsea C. C. —, $\frac{1}{2}$ mile R. —, $\frac{3}{4}$ mile R. 1, 1 mile R.—, O. S. A. 6. = 7 cases. To this must be added the incidence (on houses) given by Mr. Power in his tables, as the above cases are those not included in his. Unfortunately he gives the total for the three districts, which is not the best way of dealing with the subject. It is as follows:— C. C. 1, $\frac{1}{2}$ mile R. 1, $\frac{3}{4}$ mile R. 6, 1 mile R. 5, O. S. A. 73 = 86. In the Monthly Report, No. 1, dated 7th February, Dr. Dudfield, of Kensington, reports that during the previous four weeks, 43 cases were known to him, of which 6 were convalescents whose illness was concealed from the sanitary authorities until too late. Nineteen cases were treated at home, of which 4 proved fatal. On the death of an unvaccinated child a sanitary inspector discovered 10 cases of small-pox in a house. A case was reported ill on the 28th December, 1876, and within five weeks 3 cases from the same family were removed to Highgate Hospital. An unvaccinated baby was taken ill and treated in a room with nine inmates; her sister was taken ill and it was with difficulty the father was persuaded to send her to the hospital. Two cases

were treated in a kitchen in Goldborne Terrace, O.S.A., and they were removed to a hospital after an application to the magistrate. A friend of theirs was lying ill in an adjoining house. Dr. Dudfield's Monthly Report, No. 2, dated 7th March, shows that during the previous four weeks there were 26 new cases and 4 deaths from small-pox. Two fatal cases were recorded in Goldborne Terrace, O. S. A., where 2 cases were reported during the previous month. A private case was treated in Southam Street, where another occurred. Two lads were treated at home who gave it to their father. A man, Lawson, was committed at the police court for the offence of sending infected clothing to a laundress. Several cases of small-pox had occurred in the defendant's house and a fatal case of a child was certified as that of "diarrhoea" early in January. The laundress discovered a sheet covered with scabs, and on pressing her enquiries she found that infected clothing had been sent to the wash weeks before. The date of the offence on the summons was 18th December, 1876. On the 19th, the daughter and niece of the laundress sorted the clothes, and on Monday the 1st January, both were taken ill. About this time the nephew of the laundress, a soldier on leave, went down to her house. He left for Birmingham on the 15th January, ill with symptoms of small-pox, and died on the 18th. His death certificate was signed by the regimental surgeon as "Epidemic Spinal Meningitis." A woman who washed his clothing became ill in turn. These facts prove that the disease was gaining ground in the locality before the opening of the hospital on the 10th March, 1877. I shall now give the incidence of the disease month after month.

March.—Fulham Hospital admitted 14 acute cases (males above 7 years), 11 from Wandsworth and Clapham, 2 from Fulham and 1 from Chelsea; Highgate Hospital admitted 20 from Fulham, 2 from Kensington, and 1 from Chelsea. Dr. Dudfield's Monthly Report, No. 3, dated 4th April, records 24 cases since 7th March. There were 109 convalescents transferred to Fulham Hospital. The Medical Officer of Health for Chelsea records 12 cases. The cases under treatment during the succeeding weeks were 45, 67 and 101.

Fulham Cases.—(1) One from 24, Hildyard Street, C. C., to Hampstead Hospital, on the 2nd. (2) One from 9, Orchard Street, $\frac{3}{4}$ mile R., to Hampstead

Hospital, on the 31st. (3 to 22) Other 20 Fulham cases admitted to Fulham and Hampstead Hospitals were O. S. A. They were 6 from three houses in Brewhouse Yard, Hammersmith, 2 from two houses in Angel Road, and 1 each from Broadway, Devonport Road, Chapel Street, Vernon Street, Bridge Street, Cambridge Terrace, King Street, Rose Gardens, Glenthorn Road, Florence Gardens, Birchwood Cottage, and Grafton Terrace. Excepting the last 2 cases, they are not included in Mr. Power's incidence of the disease. This enumeration of cases might be considered tedious by some, but it is of vital importance because it shows that Mr. Power's method of counting each house as a unit, regardless of all other considerations, drawing averages on palatial residences, in which servants took small-pox from outside, and poor men's houses, is unsound. Again, a plain statement of facts is in itself a satisfactory disproof of an hypothesis. It was at this time that two medical men were gaining notoriety as "small-pox curers," and were encouraging concealment of cases. Dr. Dudfield in his Report for March, gives the history of a fatal case which is very instructive. "The deceased, a single woman, aged 34, living at Notting Hill, occupied the front room on the first floor. On the 18th, a friend came down to see her but was not admitted to the room, as she thought she was suffering either from small-pox or erysipelas. From that day she was seen no more alive, nor anything so much as heard of her by the other inhabitants of the house. But the dog began to bark and howl on the 21st March, and continued to do so until the door of the room was broken open late at night on the 23rd March. A frightful spectacle was then presented. The wretched creature was found lying on her back on a bed naked, exposed and dead. The state of the room from filth of every sort, and the evidences of entire neglect and wretchedness exceed belief. An inquest was held, and the body was buried on 27th March. This gave rise to 3 more cases. The 2 Kensington cases admitted to Highgate Hospital, were 1 each from Cornwall Road, Westbourne Park, O. S. A., and Porter Road, Notting Hill, O. S. A. The two Chelsea cases were 1 each from Westbourne Street, O. S. A., and Kensal Town, O. S. A.

April.—Fulham Hospital admitted 24 acute cases, of

which 7 were from Fulham, 3 from Kensington, 10 from Chelsea, and 4 from Wandsworth. The Highgate Hospital admitted 12 from Fulham and 2 from Kensington. Dr. Dudfield in his Monthly Report, No. 4, dated 2nd May, states that during the previous four weeks, there were 39 fresh cases, and 3 deaths in Kensington. Sixteen cases were treated at home, and he states that the increase was due to the concealment of cases and treatment at home by unqualified practitioners. Three cases occurred in the house in which the dead body of the woman was discovered as mentioned in the previous report. During the month there were 62 convalescents transferred from others to Fulham Hospital, and the weekly number of cases under treatment was 94, 101, 95 and 63.

Fulham Cases.—(1) One from 37, St. Oswald's Road, C. C., to Highgate Hospital, on the 3rd. (2) One from 61, May Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 5th. The street has many laundries, and several members of the hospital staff lived there. (3) A child from 6, Providence Place, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 10th. Several cases were treated at home, and the child was ill ten days before removal. (4) One from 6, Hilmer Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 11th. (5) One from 3, Wheatsheaf Alley, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 26th. Some of the hospital staff lived in the street. (6 and 7) Two from 27, Studland Street, O. S. A., 1 to Highgate Hospital, on the 6th, and the other to Fulham Hospital, on the 7th. Cases of small-pox in the house since January. (8 and 9) Two from 3, Blyth Terrace, O. S. A., 1 to Fulham Hospital, on the 7th, and the other to Highgate Hospital, on the 19th. Several cases of small-pox in the street. (10 and 11) Two from 3, Chancellor Street O. S. A., 1 to Fulham Hospital, on the 9th, and the other to Hampstead Hospital, on the 24th. Small-pox in the street. (12 to 14) Three from 10, Brewhouse Yard, O. S. A., 2 on the 5th and 1 on the 24th, to Highgate Hospital. Infected house. Several cases in street, and six removed to Highgate Hospital previous month. (15 and 16) Two from 30, Alma Cottages, O. S. A., 1 on the 7th, and the other on the 25th, to Highgate Hospital. (17 to 19) One each from 29, Hanover Cottages, 2, Ainsvale, and 10, William Street, to Highgate Hospital, on the 13th, 28th and 30th.

Kensington Cases.—(1) One from 4, Fawcett Mews, $\frac{1}{2}$ mile R., on the 25th, to Fulham Hospital. (2 to 5) One each from 325, Portobello Road, and 26, Goldborne Gardens, O. S. A., to Fulham Hospital, on the 26th; and 21, Athelstone Mews, and 10, Phillimore Gardens, O. S. A., to Highgate Hospital, on the 2nd and 19th respectively.

Chelsea Cases.—(1 to 5) Five occurred in Kensal Town, O. S. A., between two and three miles from the hospital. (6) One from 22, Seaton Street, $\frac{3}{4}$ mile R., to Highgate Hospital, on the 7th. (7 and 8) A boy from 42, Blantyre Street, $\frac{3}{4}$ mile R., to Highgate Hospital, on the 9th, his brother on the 21st. (9 and 10) One from Chelsea Hospital, O. S. A., to Highgate Hospital, on the 12th, and the other from 27, Paradise Walk, on the 16th.

May.—Fulham Hospital was now ready for the reception of cases of both sexes, and at all ages; the total admissions were 64 acute cases, and 98 convalescents. The acute cases were, 7 from Fulham; 11 from Kensington; 34 from Chelsea; 11 from Wandsworth, and 1 from Westminster. Highgate Hospital admitted 21 from Fulham; 2 from Chelsea, and 2 from Kensington. Dr. Dudfield's Monthly Report, No. 5, dated 30th May, gives 43 new cases, and 2 deaths during the four previous weeks. Most of the Kensington cases occurred in Kensal New Town and the adjoining parts, between two and three miles away from the hospital. The Medical Officer of Health for Chelsea reported 54 cases. Several applications were made to the magistrate at Hammersmith for the removal of cases from Fulham, where the landlords wanted to eject the tenants suffering from small-pox, whose families of five and seven persons were living in one room, the children, moreover, playing together in the street. The weekly number of cases under treatment at Fulham Hospital was 48, 66, 101, and 142.

Fulham Cases.—(1) One from a street in Walham Green, C. C., to Fulham Hospital, on the 19th. It was the child of a man and his wife employed in the laundry of the hospital and who slept outside; their other children had already had small-pox and been treated at home. (2) One from Seagrove Road, C. C., the street in which Fulham Hospital is, to the Highgate Hospital, on the 20th. (3) A child, from 2, Bective

Road, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 20th. It was that of a man and his wife engaged in Fulham Hospital as nurses, and who had lodgings at the above address. Their other children suffered from small-pox, but were treated at home. (4) One from 3, Jervis Road, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 20th. (5) One from 2, Princess Terrace, $\frac{1}{2}$ mile R., to Highgate Hospital, on the 15th. (6 and 7) Two from 2, John's Place, $\frac{1}{2}$ mile R., to Highgate Hospital, one on the 16th and the other on the 18th. (8) One from 14, Crown Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 19th. (9) One from 4, Pownal Road, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 10th. (10) One from Russell's Cottages, $\frac{3}{4}$ mile R., to Highgate Hospital, on the 19th. (11) One from 7, Rectory Place, 1 mile R., to Highgate Hospital, on the 4th. (12 and 13) One each from 13 and 24, Rylstone Road, 1 mile R., to Highgate Hospital, on the 12th and 28th. Several cases of small-pox in the street. (14) One from 10, William Street, 1 mile R., on the 16th, to Highgate Hospital. (15) One from 16, Ancill Street, 1 mile R., on the 18th, to Highgate Hospital. (16) One from 19, Bedford Place, 1 mile R., to Highgate Hospital, on the 19th. (17 to 28) Twelve cases were from Outside Special Area. They were 2 from 4, Mitre Row, 1 from Hant Street, 2 from Hanover Cottages (infected houses), 1 from Wilson's Road, 1 from Norfolk Terrace, 1 from Angel Row, 1 from Elrice Terrace, 1 from Church Road, 1 from Suffolk Cottage, and 1 from Wharf Terrace.

From the above history it is evident that Fulham, within the Special Area, especially in the neighbourhood of the hospital, became infected through the free intercourse of the hospital staff residing outside. It was well known that male and female nurses, laundry people, porters, &c., received visits from their friends, waiting outside the hospital gates till they were free, and then promenaded the streets and visited the places of refreshment in the neighbourhood. Several complaints were made from public-houses, and some members of the staff were taken before magistrates charged with drunkenness and fighting.

Kensington Cases.—(1 to 13) The 13 Kensington cases were from O. S. A., 2 from Southam Street, 1 each from Lancaster Road, Bangor Street, Norfolk Terrace (imported case), Stafford Terrace, St. Luke's

Mews, Hazlewood Crescent, Bevington Road, Alma Cottages (infected house), Pembroke Place, St. Anne's Road, and Silver Street.

Chelsea Cases.—(1) One from 22, Luna Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 26th. (2) One from 20, Luna Street, $\frac{3}{4}$ mile R., to Highgate Hospital, on 17th. (3 to 37) The remaining 34 cases occurred in O. S. A., and of these 14 were in Kensal New Town. The 20 cases in O. S. A. were — 3 from Bywater Street, 4 from Wellington Buildings, 2 each from Little Kepple Street, Pimlico Road, Lower George Street, and King's Road, and 1 each from College Street, Radnor Street, Paradise Walk, Arthur Street, and Standfield Street. Had the theory of aërial infection been borne out by facts, the Special Area in Chelsea and Kensington should have been equally infected with that of Fulham. Moreover, it has been ascertained that a large number of cases in the Special Area of Fulham were concealed or treated at home. It is monstrous to draw averages on houses in the Special Area of Fulham, Kensington, and Chelsea, when cases have occurred only in Fulham.

June.—Fulham Hospital admitted 75 acute cases, viz., 41 from Kensington, 5 from Fulham, 23 from Chelsea, 2 from Paddington, 3 from Westminster, and 1 from Wandsworth. Highgate Hospital admitted 11 from Fulham, 3 from Kensington, and 1 from Chelsea. Dr. Dudfield, in the Monthly Report, No. 6, dated 27th June, reports 50 new cases and 3 deaths. The Medical Officer of Health for Chelsea reported 30 cases. During the month 20 convalescents were transferred to Fulham Hospital; and the cases under treatment, week by week, were 144, 130, 107, 90, and 74.

Fulham Cases.—(1) One from Rickett Street, C. C., to Fulham Hospital, on 15th. He was a bricklayer, working on Fulham Hospital premises. (2 and 3) Father and son, from 9, Wyatt's Terrace, 1 mile R., to Fulham Hospital, on 1st and 15th. (4) A domestic, from Parson's Green, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 2nd. Infected house. (5 and 6) Two from Russell's Cottages, $\frac{3}{4}$ mile R., to Highgate Hospital, on the 3rd and 14th. (7) One from 24, Ancill Street, 1 mile R., to Highgate Hospital, on the 18th. (8 to 16) Nine were from O. S. A., viz., 4 from Wilson Road, and 1 each from Union Place, Hunt Street, Mortimer Terrace, Faroe Street, and King Street.

Kensington Cases.—(1) One from 47, Ifield Road, C. C., to Fulham Hospital on the 10th. The names Ifield Road and Adrian Terrace are indiscriminately used, as they form one street and the houses numbered consecutively. We knew of cases of small-pox in this street, as some medical men had asked us to attend them. (2) An attendant at South Kensington Museum, from 146, Adrian Terrace, C. C., on the 15th, to Fulham Hospital. She believed she took the disease from the place of her service. She became a centre of infection to several cases. (3 to 6) Four children from 7, St. Mark's Road, just outside C. C., 3 on the 17th to Fulham Hospital, and the primary case, a convalescent, the following day. The family had recently come to reside here from Bedfordshire, and the previous inmates left the house infected. (7) One from 16, South Street, C. C., to Fulham Hospital, on the 26th. Close to the above cases. (8) One from 3, North Street, C. C., to Fulham Hospital, on the 27th. Close to the above cases. (9) One from 19, Redcliffe Mews, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 15th. (10) A dressmaker from 21, Seymour Place, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 21st. (11) A domestic from 40, Harcourt Terrace, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 24th. (12) One from 46, Fulham Road, $\frac{1}{2}$ mile R., on the 7th, to Highgate Hospital. (13) One from 17, Ashley Cottages, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 5th. (14) A domestic from 144, Fulham Road, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 26th. (15) One from 58, Pembroke Road, 1 mile R., to Fulham Hospital, on the 2nd. (16) One from Providence Terrace, 1 mile R., to Fulham Hospital on the 9th. (17 to 44) Twenty-eight cases were from O. S. A. Six children from 9, Testerton Street, 3 from three infected houses in Southam Street, 3 from three houses in Absolm Road, 2 from Tedbury Road, 1 each from Mornington Road, Bute Street, Blythfield Street, Bosworth Road, Elgin Mews, High Street, Godsden Mews, Notting Hill, Bangor Street, Duke's Lane, St. Evan's Street, Portobello Road (infected from Walmer Road), Goldborne Road, and Holland Place.

Chelsea Cases.—(1) One from 25, Limerstone Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 23rd. (2) One from 11, Hобury Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 30th. (3 and 4) One each from 83 and 85, Fulham Road, 1 mile R., on the 7th and 9th.

(5 to 24) Twenty cases were from O. S. A. Two from an infected house in First Street, 2 from Flood Street, 2 from Manor Gardens, 2 from Marlborough Place, 1 each from King's Road, York Terrace, Regent Street, Blackland Terrace, Bywater Street, Ive Street, The Barge, Kensal Town (infected), Paradise Walk (an infected house), Christchurch Street, King Street, Stewart's Grove, and 1 wandering about the street.

July.—Fulham Hospital admitted 67 acute cases, viz., 3 from Fulham, 45 from Kensington, 9 from Chelsea, 7 from Wandsworth, and 3 from Westminster. Highgate Hospital admitted 3 from Fulham, 1 from Kensington, and 1 from Chelsea. Dr. Dudfield, in his Monthly Report, No. 7, dated 25th July, gives 43 fresh cases during the previous four weeks, of which 5 were treated at home. The Medical Officer of Health for Chelsea gives 23 cases as the incidence of the disease in his parish. During the month there were 4 convalescents transferred to Fulham Hospital, and the weekly number of cases were 65, 68, 59, and 52.

Fulham Cases.—(1) One from 2, Wellington Road, $\frac{1}{2}$ mile R., on the 2nd. (2) One from 6, Wilson's Cottages, $\frac{3}{4}$ mile R., on the 19th. (3) One from 2, King's Road, $\frac{3}{4}$ mile R., on the 25th. (4 to 6) Three from O. S. A.; 1 each from Victoria Cottages, Oak Terrace, and Munden Street.

Kensington Cases.—(1 to 5) Five cases from Ifield Road, C. C. They were 1 each from Nos. 64, 76, 21, 116, and 93, to Fulham Hospital, on the 7th, 9th, 9th, 11th, and 30th respectively. The last case was that of a domestic, who up to a fortnight of her illness was in the service of a foreign family in Pembroke Gardens, where a fatal concealed case of small-pox occurred which led to the breaking up of the household, and the servant came home at the above address. (6 to 8) Three from Finborough Road, C. C., to Fulham Hospital. A domestic from No. 1, on the 9th. A schoolmaster, who had several children under him suffering from so-called chicken-pox. A landlady from No. 172. One of her lodgers, a clerk in the City, took the disease lightly from his affianced (the second Kensington case for June), followed his daily occupation as usual. A domestic was taken ill, and sent home. Other light cases occurred in the same street, and they succeeded in evading the sanitary authorities. (9) One from 21, Seymour Place, $\frac{1}{2}$ mile

R., to Fulham Hospital, on the 8th (case last month). (10) A shop-boy from 238, Fulham Road, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 8th. (11 and 12) A butler from 82 and a domestic from 71, Redcliffe Gardens, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 13th and 26th respectively. (13) A butler from 14, Redcliffe Square, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 29th. (14 and 15) One from No. 2 and one from No. 11, Coleherne Mews, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 30th. (16) A domestic from 2, Cathcart Road, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 30th. A concealed case was treated at home. (17) A female from 8, Clifton Place, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 28th. (18) One from 2, Cranley Mews, 1 mile R., to Fulham Hospital, on the 30th. (19 to 46) Twenty-eight were from O. S. A., eleven of which were from 29, Wheatstone Road. Dr. Dudfield reported on these cases as follows:—"Twenty-one persons lived in the house—viz., three families in the parlour, first and second floors, respectively, besides a single man in the kitchen who had had small-pox previously. The disease made its appearance in the parlour floor of the house some time in June, the first case being that of a girl aged 10. The parents of this child attempted to conceal the nature of the disease, even from the father's brother, who lived on the first floor, and who has been the greatest sufferer from the outbreak. No preventive measures were taken to check the spread of the disease. On 19th June the suspicion entertained that the child had small-pox was communicated to us in an anonymous letter. The house was visited the same day, and the suspicion proved to be just. In three rooms there lived the parents and two children. The sick girl was in a room by herself, and the mother was nursing her. An absolute refusal was returned to Inspector Langman's urgent and repeated requests that the child might be sent to the hospital, it not being a case in which the compulsory powers of removal could be enforced. Other cases, to the number of 10, subsequently occurred, and these, with one exception, which was very light and was concealed from us, were sent to the Fulham Hospital. Of the 21 inmates of the house, 11 were attacked and four have died, including one adult, the father of the little girl who was first taken ill and who has recovered. This child, it is stated, was running about for days with the scabs of the disease on her face; and it is

said, moreover, that the blankets in which she lay, covered with scabs, were hung over the yard wall, a mode of exposure of an infected thing which your Vestry's Law and Parliamentary Committee have advised is not an offence within the meaning of the 38th Section of the Sanitary Act, 1866. At the rear of the house in which these people lived, two other cases have occurred in other two houses, the disease apparently having been spread by the exposure of the before-mentioned blankets, which, by the way, first excited suspicion as to the nature of the illness." One each from Bosworth Road, Lionel Mews, Angola Mews, Lonsdale Road, Upper Westbourne Park, Rabbit Row, Swinbrook Road, James Street, James Place, Goldborne Road, Vicarage Street, Drayton Mews, Kensington Square, Monro Mews (back of 29, Wheatstone Road), Ladbroke Grove Road, Bevington Road, and Southam Street.

Chelsea Cases.—(1) One from 10, Maude Grove, $\frac{1}{2}$ mile R., to Highgate Hospital, on 10th. (2) One from 27, Slaidburn Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 7th. (3) One from 10, Callow Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 11th. (4) One from King's Arms, Cheyne Walk, 1 mile R., on the 23rd. The lady of the public-house lying ill at home with small-pox. (5 to 8) Four from O. S. A., 1 each from Exeter Street, Flood Street, Cornwall Cottage, Kensal New Town, and Hilda Terrace.

August.—Fulham Hospital, admitted 43 acute cases, viz., 2 from Fulham, 24 from Kensington, 7 from Chelsea, 8 from Wandsworth, and 2 from Westminster. Highgate Hospital, admitted 14 from Fulham, and none from Kensington and Chelsea. Dr. Dudfield in his Monthly Report, No. 8, dated 22nd August, reported 39 fresh cases, and 2 deaths; 7 cases were treated at home. The Medical Officer of Health for Chelsea recorded 7 fresh cases. There were 64, 60, 48, and 38 cases under treatment at Fulham Hospital, during each week of the month.

Fulham Cases.—(1) One from 5 Lillie Yard, C. C., to Highgate Hospital, on the 2nd. (2) A female, from 6, Augustus Place, $\frac{1}{2}$ mile R., on the 6th, to Fulham Hospital. She was sent home ill from the place of her service, outside the parish. (3) One from 36, Peterboro' Road, $\frac{1}{2}$ mile R., on the 18th. (4) One from 3, Dawes' Buildings, $\frac{1}{2}$ mile R., on the 29th. (5 to 10)

Six from Rectory Place, $\frac{3}{4}$ mile R. It was an outbreak of 14 known cases. A servant girl was sent home ill from a shop-house in Fulham Road, at the corner of the Ifield Road; she gave the disease to 1 in 12, Rectory Place, to Fulham Hospital, on the 6th, 1 in No. 14, 3 in No. 34, and 1 in No. 25; sent to Hampstead Hospital; 7 cases were treated at home. (11) One from Stamford Road, $\frac{1}{2}$ mile R., on the 1st. (12 to 16) Five from O. S. A., viz., 1 each from Fulham Board of Works Premises (infected while removing cases to Hospitals), Ivy Cottage, Broomhouse, Orchard Street, and Dolling Street.

Kensington Cases.—(1) A domestic from Cemetery Lodge, C. C., to Fulham Hospital, on the 3rd. (2 and 3) One from 69, and 1 from 124, Ifield Road, C. C., to Fulham Hospital, on the 4th and 5th. (4) A domestic from 44, Finborough Road, C. C., to Fulham Hospital, on the 13th. By visiting her uncle in Langston Street, Chelsea. (5) One from 16, St. Mark's Road, just outside C. C., to Fulham Hospital, on the 2nd. Small-pox in the street since May. (6) A domestic from 67, Redcliffe Gardens, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 2nd. (7) One from 7, Stamford Cottages, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 23rd. (8) One from 45, Thistle Grove, $\frac{3}{4}$ mile R., to Fulham Hospital, about the 25th. (9) One from Onslow Works, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 31st. (10) An ironer from 6, Warwick Street, 1 mile R., to Fulham Hospital, on the 3rd. (11 to 24) Fourteen cases from O. S. A. Four from 14, Monro Mews, took the disease from 29, Wheatstone Road, admitted last month, 2 from 8, St. James' Place, a case from the same house last month, 1 each from Bangor Street, Alveston Mews, Bolton Road, Bomore Road, Southam Street, Thorpe Mews, Edwardes Cottages, and Katherine Road. Most of these streets have been infected.

Chelsea Cases.—(1) One from 4, Maude Grove, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 8th. (2) One from 443, King's Road, 1 mile R., to Fulham Hospital, on the 6th. (3 to 7) Five from O. S. A., 2 from Manor Gardens, on the 19th and 31st, 1 each from Langston Street, Pond Terrace, and Marlborough Place.

September.—Fulham Hospital admitted 27 acute cases, viz., 7 from Fulham, 9 from Kensington, 4 from Chelsea, 4 from Westminster, 1 from St. George's, and

2 from Wandsworth. Highgate Hospital admitted 2 from Fulham, and 2 from Chelsea. Dr. Dudfield in his Monthly Report, No. 9, dated 19th September, gives 12 fresh cases, and 1 death of an imported case. The Medical Officer of Health for Chelsea gives 6 cases. The number of cases under treatment during each week of the month were 37, 28, 19, 23, and 28.

Fulham Cases.—(1) One from 4, Seagrove Road, C. C., to Highgate Hospital, on the 21st. An infected house. Cases from C. C. were sent to Highgate Hospital to avoid all inquiries. (2) An unvaccinated child from 50, Farm Lane, C. C., to Fulham Hospital, on the 28th. An infected street. (3) One from 21, St. Thomas' Road, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 14th. She had been to the seaside and returned home ill. (4) One from 26, Rectory Place, $\frac{3}{4}$ mile R., to Highgate Hospital on the 6th. Source of the outbreak given in the statement of the last month. (5 to 9) Five from O. S. A. Four unvaccinated children from Munden Street, and 1 from Wilson Road.

Kensington Cases.—(1) One from 132, Ifield Road, C. C., to Fulham Hospital, on the 12th. (2 and 3) Two from 58, Seymour Place, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 18th and 26th. A lady in the house treated for small-pox. (4 and 5) Two from 23, Ashley Cottages, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 23rd and 25th. (6) One from 2, South Bank Villas, 1 mile R., to Fulham Hospital, on the 27th. Infected in Putney. (7 to 9) Three from O. S. A. Two from Warmington Road. An infected house. One from 2, Bolton Road. An infected street.

Chelsea Cases.—(1) One from 20, Poulton Square, 1 mile R., to Fulham Hospital, on the 29th. (2 to 6) Five from O. S. A. ; 2 from College Street (infected in Marylebone), 1 from Robert Street, and 1 from Victoria Hospital (both infected in the hospital), and 1 from Police Station.

October.—Fulham Hospital admitted 9 acute cases, viz., 5 from Fulham, 3 from Kensington, and 1 from Chelsea, up to the 15th, as it was then closed for acute cases. The Metropolitan Asylums Board Hospitals had admitted 10 from Fulham, 13 from Kensington, and 24 from Chelsea, from 6th October to 3rd November. Highgate Hospital had admitted 1 from Chelsea. The cases under treatment at Fulham Hospital were 21, 19, 14, and 13 during each week of the month.

Fulham Cases.—(1) One from 11, St. Thomas's Road, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 2nd. Small-pox in the street. (2) A female from the "Elms," $\frac{3}{4}$ mile R., to Fulham Hospital, on the 10th. She took the disease from her friends in Clyde Road, $\frac{1}{2}$ mile R., where there were cases of small-pox. (3) A schoolboy from 14, Grove Terrace, $\frac{3}{4}$ mile R., on the 15th. (4 and 5) Two brothers from 8, Caroline Terrace, O. S. A., to Fulham Hospital, on the 9th. Their sister came home ill from King's Road, Chelsea, three weeks previous, and now convalescent. Cases admitted to other metropolitan hospitals from Fulham during October, November, and December are not available.

Kensington Cases.—(1) One from 166, Adrian Terrace, C. C., to Fulham Hospital, on the 12th. (2) One from 2, Southbank Villas, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 7th. Infected House. (3) A domestic, from 23, Ashley Cottages, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 2nd. Infected House. (4) One from 5, North Street, C. C., to Stockwell Hospital, on the 14th. (5) One from Portland Lodge, $\frac{1}{2}$ mile R., to Stockwell Hospital, on the 18th. (6) One from 9, Walgrove Road, $\frac{3}{4}$ mile R., to Stockwell Hospital, on the 17th. (7 to 9) Three from Shaftesbury Terrace, 1 mile R., to Stockwell Hospital, on the 12th, 23rd, and 25th.

Chelsea Cases.—(1) A student from St. Mark's College, $\frac{1}{2}$ mile R., to Highgate Hospital, on the 15th. (2) One from 1, Riley Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 1st. Other Chelsea cases are not available, but we know of more than 20 cases admitted to other hospitals.

November.—Fulham Hospital received 26 convalescents, and had under treatment 7, 21, 16, and 21 cases. The metropolitan hospitals had admitted 4 from Fulham, 2 from Kensington, and 17 from Chelsea. Dr. Dudfield, in his Monthly Report, No. 11, dated 14th November, gives 12 cases from four previous weeks. Medical Officer of Health for Chelsea gives 24 cases. Highgate Hospital admitted 2 from Fulham and 2 from Kensington. They were, one from 24A, King's Road, $\frac{1}{2}$ mile R., and 3, Ebenezer Cottages, $\frac{3}{4}$ mile R., in Fulham. The two Kensington cases were from Silchester Road and Tavistock Road.

December.—Fulham Hospital admitted 34 convalescents, and there were 24, 27, 24, 24, and 15 under treatment during each week. The other metropolitan

hospitals admitted 4 from Fulham, 4 from Kensington, and 27 from Chelsea. Highgate Small-pox Hospital admitted 15 from Fulham and 2 from Kensington. Dr. Dudfield's Monthly Reports, Nos. 12 and 13, give 10 fresh cases during eight weeks, to 9th January, 1878. The Medical Officer of Health for Chelsea gives 27 fresh cases during the month.

Fulham Cases admitted to Highgate Hospital.—(1 and 2) Two from 11, Seagrove Road, C. C., one on the 4th and the other on the 27th. Infected house. (3) One from 1, Peterborough Road, $\frac{1}{2}$ mile R., on the 1st. (4 and 5) Two from Fane Street, $\frac{1}{2}$ mile R., on the 3rd and 4th. (6) One from 47, Estcourt Road, $\frac{3}{4}$ mile R., on the 15th. (7) One from 10, Hilmer Street, $\frac{3}{4}$ mile R., on the 30th. (8) One from 12, Dieppe Street, $\frac{3}{4}$ mile R., on the 17th. (9) One from Star Lane, $\frac{3}{4}$ mile R., on the 16th. (10 to 15) Six from O. S. A., viz., 2 from Mansion House Street, and 1 each from Munden Street, Shuter's Terrace, Goodson Road, and Southbrook Street. We know that of Kensington cases, 1 from 32, Ifield Road, C. C., and 2 from Walgrove Road, $\frac{3}{4}$ mile R., and 1 from 10, Edwardes Square, 1 mile R., were admitted to Stockwell Small-pox Hospital.

We learn from the able Report of the late Dr. Barclay on Small-pox in Chelsea, that 5 cases occurred in Durham Terrace, O. S. A., during October, November, and December from the same source; Ormond Row produced 9 cases in October and November from a concealed case, and he states other cases were traced to the same source. In October there were 5 cases from 4 houses, viz., 20, 21 (2 cases), 24, and 57, Slaidburn Street. In November there were 9 cases in 6 houses, viz., 28, 30, 37 (4 cases), 38, 42, and 49, Slaidburn Street. In December there were 4 cases, viz., one each from Nos. 28, 49, 36, and 39. Thus there were 21 cases in October, November, and December from Slaidburn Street, $\frac{1}{2}$ mile R. The history of small-pox in Kensington, Fulham, and Chelsea, as given above, shows:—Firstly, that in those months when it was most prevalent in Fulham, it was least so in Kensington and Chelsea, and *vice versa*, which would not allow drawing up averages on cases or houses in the three districts put together. Secondly—A large number of cases occurred in October, November, and December, when the Hospital was closed, and the Special Area remained

infected through concealed cases. Thirdly—The inter-communication between the hospital-staff, especially the non-resident, and the public was free. Fourthly—The hospital management was defective. Fifthly—The above-mentioned history gives many significant facts which account for the causes of the outbreaks in the locality. Under these circumstances the hypothesis of aërial infection, apart from all other conditions, is incompatible with the facts bearing on the history of the spread of small-pox in Kensington, Fulham, and Chelsea during the year 1877.

The Year 1878.

THE Registrar-General's Annual Summary for the year contains the following statement:—"Small-pox was fatal to 1,416 persons who, at various ages, died of that disease in London, whereas only 17 died in 19 country towns. This is in spite of the precautions taken in London, where 897 patients died in small-pox hospitals which are freely open to all. No doubt great numbers remained who were treated at their own homes, for the deaths at home were 519, and this implies a great number of cases. What would be the result of isolating every case it is impossible to say; but it is evident that partial isolation is only partially successful, for we have 1,416 deaths in London from the disease, with five hospitals; whereas in 19 towns, with less hospital provision, there were only 17 deaths from small-pox." To this mortality in private cases Fulham contributed 18, Kensington 11, and Chelsea 4. The Metropolitan Asylums Board Hospitals admitted 4,667 patients, of whom 205 were from Fulham, 140 from Kensington, and 124 from Chelsea. The Highgate Small-pox Hospital had admitted 30 from Fulham, 15 from Kensington, and 8 from Chelsea. The total incidence of small-pox, as known to the Medical Officers of Health, was 180 in Kensington, 266 in Fulham, and 147 in Chelsea, or 592 cases for the three districts. Mr. Power's table accounts for 466 cases, and ignores the rest of the known cases as well as the concealed ones.

January.—Fulham Hospital admitted 15 acute and 63 convalescents. The acute cases were—2 from Fulham, 2 from Kensington, 6 from Camberwell, 2 from

St. Giles's, and 3 from Westminster. Highgate Hospital admitted 15 from Fulham, 5 from Kensington, and 1 from Chelsea. The weekly number of cases under treatment in Fulham Hospital, beginning the 29th December, 1877, were 21, 32, 37, and 52. The Medical Officers of Health for Fulham, Kensington, and Chelsea reported 21, 8, and 7 cases respectively.

Fulham Cases.—(1) One from 13, Maxwell Road, $\frac{1}{2}$ mile R., to Highgate Hospital, on the 4th. (2) One from 32, Victoria Road, $\frac{1}{2}$ mile R., to Highgate Hospital, on the 13th. (3) One from 20, Peterborough Road, $\frac{1}{2}$ mile R., to Highgate Hospital, on the 17th. (4 and 5) Two from 2, Harriet Street, $\frac{1}{2}$ mile R., on the 22nd. (6) A labourer from 40, Hilmer Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 6th. (7 to 17) Eleven from O. S. A., viz., 2 each from Rowan Road and Dalling Road; and 1 each from Redmore Road, Goodson Road, Brook Street, St. Peter's Square, Rose Gate, John's Road, and Southerton Road.

Kensington Cases.—(1) A disinfecting porter in the service of Paddington Vestry, from 66, Ifield Road, C. C., on the 26th, to Fulham Hospital. He took it while disinfecting articles with small-pox infection. (2) One from 82, Cromwell Road, 1 mile R., to Highgate Hospital, on the 25th. (3 to 7) Five from O. S. A., viz., 2 from Westbourne Grove, and 1 each from Sunbrook Road, Clarendon Mews, and Hunt Street.

One Chelsea case was from Keppel Street, O. S. A.

Fulham Small-pox Hospital was closed to acute cases about the middle of October, 1877, and re-opened for acute cases on the 25th January, 1878. The history of the above given cases clearly demonstrates that the disease was undergoing recrudescence in the Special Area when Fulham Hospital was closed, and the foci of infection were multiplying. Thus in ignoring the admission of fifteen cases to Highgate Hospital, Mr. Power miscalculated the time and incidence of the disease.

February.—Fulham Hospital admitted 73 acute cases and 116 convalescents. The acute cases were—13 from Fulham, 9 from Kensington, 6 from Chelsea, 6 from St. Giles's, 8 from Camberwell, 5 from Westminster, 7 from Wandsworth, 8 from Paddington, 7 from St. George's, and 4 from Strand. Highgate Hospital admitted 14 from Fulham, and none from Kensington and Chelsea. According to the Medical Officers of

Health, the monthly incidence of the disease was 39 in Fulham, 10 in Kensington, and 7 in Chelsea. The weekly number of cases under treatment in Fulham Hospital were 72, 100, 108, and 166.

Fulham Cases.—(1) A ward servant of the Fulham Hospital was taken ill and entered as a Fulham case on the 15th. (2) One from 3, Garden Cottages, C. C., to Highgate Hospital, on the 19th. (3) One from 9, Peterborough Road, $\frac{1}{2}$ mile R., on the 2nd. Infected street. (4 and 5) Two from 58, Victoria Road, $\frac{1}{2}$ mile R., to Fulham Hospital, one in a neglected and convalescent state on the 3rd, the other on the 13th. From a concealed case. Infected street. (6 and 7) Two from 18, Maxwell Road, $\frac{1}{2}$ mile R., to Fulham Hospital on the 6th and 8th. Infected street. (8) One from 12, Richmond Place, $\frac{1}{2}$ mile R., to Highgate Hospital, on the 13th. (9 and 10) Two from Waterford Road, $\frac{1}{2}$ mile R., to Highgate Hospital, on the 15th and 22nd. (11) One from 28, Stanley Road, $\frac{1}{2}$ mile R., on the 20th. (12) One from 10, Hilmer Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 4th. Infected street. (13 and 14) Two from 21, May Street, $\frac{3}{4}$ mile R., to Fulham Hospital. Infected by the non-resident hospital staff. (15) One from 10, Dawson Street, 1 mile R., on the 21st. (16 to 27) Twelve from O. S. A., viz., two from 10, Hanover Cottages (infected house), and one each from Brook Street (infected), Trafalgar Street, Simpson's Place (a neglected case), Paradise Row, Munden Street (infected), Raynham Road (infected), Waterloo Street, Rowan Road (infected), Dalling Road (infected), and Black's Road.

Kensington Cases.—(1) A female from 93, Ifield Road, C. C., to Fulham Hospital, on the 20th. Her daughter from the same house, an imported case, previous year. The latter was now a ward servant in Fulham Hospital. (2) A dressmaker from 172, Fulham Road, $\frac{1}{2}$ mile R., on the 13th. By visiting her mother in Lambeth, who was removed to Stockwell Hospital. (3) A cook from 36, Warwick Road, $\frac{1}{2}$ mile R., on the 21st. (4) A draper's assistant from 44, Earl's Court Road, $\frac{3}{4}$ mile R., on the 16th. (5 to 9) Five from O. S. A., viz., 1 each from Portland Road, Fowell Street, Treverton Street, Ladbroke Grove Road, and Brunswick Mews.

Chelsea Cases.—Six from O. S. A., viz., 2 from Cheyne Row, and 1 each from Pond Place, Pavilion

Road, Sloane Street, and King's Road. Thus it will be observed that in January and February there were 27 cases in the Special Area, of which 21 were from Fulham, 6 from Kensington and none from Chelsea. I have pointed out this unequal distribution of cases in the three districts in the history of the previous year, and yet Mr. Power accounts for some of them by his method of calculation as from the three districts equally.

March.—Fulham Hospital admitted 123 acute cases and 125 convalescents. Of the acute cases, 37 were from Fulham, 16 from Kensington, 29 from Chelsea, 17 from Wandsworth, 7 from St. George's, 6 from Strand, 5 from St. Giles's, 4 from Westminster, and 2 from Paddington. Highgate Hospital admitted 1 from Fulham, 2 from Kensington, and 1 from Chelsea. The Medical Officers of Health for Fulham, Kensington, and Chelsea reported 38, 16, and 31 cases respectively. The weekly number of cases under treatment at Fulham Hospital were 202, 234, 207, 206, and 203. At this time the *West London Observer* contained much correspondence and many articles regarding concealment of cases, want of sanitary measures, halting of ambulances near public-houses, visits of the hospital staff in the vicinity of the hospital, actions of the qualified and unqualified small-pox curers. The magistrate was several times applied to, to isolate the cases in hospitals. At this time also a firm of builders, who were erecting streets in the immediate vicinity of the hospital, failed in their extensive speculations outside London; and the agitators against Fulham Hospital and the prosecutors of the Hampstead Hospital found in it an argument that the depreciation of property and building failures were due to Fulham Hospital. I prepared a statement for the Managing Committee of the hospital, to answer certain allegations made against the hospital by some members of the Kensington Vestry; but they refused to forward it to Dr. Dudfield, on ground that it was impolitic to give him information which might be used against the managers in the court. In answer to my enquiries, one medical man wrote to me that he had had cases of small-pox in Ifield Road and Finborough Road since October, 1877; and he attributed the disease to non-isolation of convalescents at home, and visiting of the hospital staff in that neighbourhood. Other medical men stated they had

cases before the hospital was re-opened and subsequently, but they refused to give particulars. I had come to know that occupiers of small shops in Ifield Road, Fulham Road, and adjoining streets had cases at home, and that the persons attending the sick also served at the counters. When the cases were successfully concealed, they left lodgings infected and carried infection with them.

Fulham Cases.—(1) One from 17, Farm Lane, C. C., to Fulham Hospital on the 7th. Infected street. (2) One from 1, Garden Cottages, C. C., to Fulham Hospital, on the 15th. (3) One from 16, Melroth Place, $\frac{1}{2}$ mile R., to Fulham Hospital on the 9th. (4) A cab-driver from 12, Richmond Place, $\frac{1}{3}$ mile R., on the 10th. (5 to 8) Three from 14, Stamford Road, $\frac{1}{2}$ mile R., 1 on the 11th, and 2 on the 27th; 1 from No. 11, on the 28th. (9) A laundress from 19, Moor Park Terrace, $\frac{1}{2}$ mile R., on the 28th. (10) One from 20, Mund Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 1st. (11) One from 13, Bramber Road, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 2nd. (12) One from 16, Star Lane, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 5th. Concealed cases in the street. (13) A homeless man, removed from his sister's house in North End Road, $\frac{3}{4}$ mile R., on the 16th. (14) One from 5, King's Terrace, $\frac{3}{4}$ mile R., on the 24th. (15) One from 3, Cambrian Terrace, $\frac{3}{4}$ mile R., on the 30th. (16) One from 3, Thorpe Terrace, 1 mile R., on the 11th. (17 to 38) Twenty-two cases, O. S. A., viz., 1 each from Paradise Row, Raynham Road, York Road, Redmore Terrace, Church Lane, Simpson's Place, Bullock Road, King Street, Felgate Mews, Hanover Cottages, Anne's Place, Latimer Road, Gillard's Place, Campbell Street, Adelaide Terrace, Bridge Street, Chancellor Street, Paradise Cottages, Brook Green Lane, Dalling Road, and 2 from Great George Street. Most of the houses and streets were previously infected.

Kensington Cases.—(1) One from 11, North Street, C. C., to Fulham Hospital, on the 9th. (2) One from 4, South Street, C. C., to Fulham Hospital, on the 31st. (3) One from 29, Ifield Road, C. C., to Fulham Hospital, on the 7th. (4) A housemaid from 18, Bolton Gardens, $\frac{1}{2}$ mile R., on the 8th. (5) A domestic from 26, Cathcart Road, $\frac{1}{2}$ mile R., on the 19th. Infected by a case treated at home. (6) One from 12, Ashley Cottages, $\frac{3}{4}$ mile R., by visiting her parents in Faroe Road. (7) A page from 9, Bina Gardens, $\frac{3}{4}$ mile R., on the 19th. (8) One

from 90, Warwick Gardens, 1 mile R., on the 26th. (9) A domestic from Kensington Infirmary, 1 mile R., on the 30th. (10 to 18) Nine from O. S. A., viz., 3 from 2, Silchester Gardens, and 1 each from Peel Street, Norland Terrace, Pennant Mews, Portobello Road, Queen's Gate, and High Street, Notting Hill.

Chelsea Cases.—(1) One from 16, Maude Grove, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 14th. (2) A student from St. Mark's College, $\frac{1}{2}$ mile R., to Highgate Hospital, on the 26th. (3 and 4) Two from 58, Slaidburn Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 10th and 11th. They took the disease from No. 27. (5 and 6) One each from 43 and 30, Slaidburn Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 26th and 28th. Many infected houses in the street. (7) One from 4, Mill Terrace, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 8th. (8) One from 24, Riley Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 14th. (9) A domestic from 37, Gertrude Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 27th. (10) One from 9, Little Camera Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 29th. (11 and 12) A cook from 96, and a shopwoman from 44, Beaufort Street, 1 mile R., to Fulham Hospital, on the 23rd and 27th. (13 to 30) Eighteen from O.S.A., viz., 3 each from Francis Street and Paradise Walk, 2 from White Lion Street and Danver's Buildings and 1 each from Cole Street, North Street, Hasker Street, Charles Street, Keppel Street, Christchurch Street, Benson Terrace, and Caversham Street.

April.—Fulham Hospital admitted 203 acute cases, and 40 convalescents. The acute cases were 56 from Fulham, 49 from Kensington, 23 from Chelsea, 25 from Wandsworth, 21 from St. George's, 14 from St. Giles's 9 from Paddington, 3 from Strand, and 3 from Westminster. Highgate Hospital admitted 6 from Kensington, and 2 from Chelsea. Dr. Dudfield reported 57 fresh cases in Kensington during the four weeks ending 1st May, of which 10 were treated at home. The Medical Officer for Fulham reported 65 fresh cases, of which 8 were treated at home. The Medical Officer of Health for Chelsea reported 28 fresh cases. The weekly number of cases under treatment at Fulham Hospital during four weeks ending 27th April, were 188, 204, 246, and 202. It was stated by several medical men that the westerly winds carried the infection from the hospital area and spread the disease in the locality. Dr. Dudfield investigated the question

and found that the majority of the cases were reported during the second fortnight of the month, and they might have been infected when the winds were principally easterly or south-westerly. Another stated that it was due to visitation of the sick by their friends; another that it was due to the visits paid by the members of the hospital staff to their friends; another to ambulances. Dr. Dudfield believed that the spread was due to concealment of cases, premature exposure of convalescents, infected clothing of attendants on sick at home, laundries, neglect of vaccination, re-vaccination, &c. A striking case was reported to him by a medical man, who, one Saturday night, saw a laundress with the disease well out on her. That very day she had sent home the washing of her customers dried in her room. Another laundress fell ill and her husband nursed her, the business being conducted as usual. There were sixteen lodgers in the house who all left, with the probable result of sowing the disease broadcast. The husband fell ill subsequently and was sent to the hospital.

Fulham Cases.—(1) One from 23, Seagrove Road, C. C., to Fulham Hospital, on the 28th. (2) One from 54, Hildyard Road, C. C., to Fulham Hospital, on the 11th. (3 and 4) One from 14 (an infected house), and 1 from 32, Stamford Road, $\frac{1}{2}$ mile R., on the 16th and 20th respectively. (5 and 6) A child from 19, and another from 20, Moor Park Terrace, $\frac{1}{2}$ mile R., on the 7th and 29th respectively. (7 to 9) Three children from 2, Golding's Buildings, $\frac{1}{2}$ mile R., 1 on the 10th and 2 on the 25th. (10 and 11) A dressmaker from 12 (an infected house), and another from 5, Richmond Place, $\frac{1}{2}$ mile R., on the 20th and 2nd. (12 and 13) Two from 4, Ashton Road, $\frac{1}{2}$ mile R., on the 10th and 19th. (14) One from 5, Waterford Road, $\frac{1}{2}$ mile R., on the 11th. (15 to 18) Four from May Street, $\frac{3}{4}$ mile R. (an infected street); a wheelwright from 4, on the 11th; a painter from 40, on the 11th; a carpenter from 43, on the 14th, and his wife, on the 29th. (19) One from 45, Rylstone Road, $\frac{3}{4}$ mile R., on the 9th. (20) One from 1, Orchard Street, $\frac{3}{4}$ mile R., on the 11th. (21) One from 3, New King's Road, $\frac{3}{4}$ mile R., on the 14th. (22) One from 28, Dieppe Street, $\frac{3}{4}$ mile R., on the 22nd. (23 to 25) Three from 14, Field Road, 1 mile R. (infected street); 1 on the 18th, and 2 on the 30th. (26) One from 2,

Edwin Terrace, 1 mile R., on the 16th. (27) One from 9, Wyatt's Terrace, 1 mile R. (infected street), on the 27th. (28) One from 6, John's Street, 1 mile R., on the 29th. (29 to 56) Twenty-eight from O. S. A., viz., 5 from 5, Blythe Terrace, 5 from two houses in Great George Street; 2 each from Bridge Street, South Street; 1 each from Brunswick Cottages, Cambridge Road, Henrietta Place, Stow Road, Queen Street, Dunganon Terrace, Westbourne Park Road, Hanover Cottages, Distillery Lane, Trafalgar Street, Faroe Road, Devonshire Street, Serf's Cottage, and Felgate Mews.

Kensington Cases.—(1 to 7) Seven from Ifield Road, C. C., viz., A child and a bricklayer from 77, on the 17th and 19th, infected in Fulham; a paper-stainer's boy from 28, on the 18th; 1 from 91, on the 18th; a charwoman working in the street, from 106, on the 19th; a woman, only a day in the house, from 110, having changed lodgings from Lambeth, about the 20th; a laundress from 112, on the 16th. (8) A housemaid from 178, Finborough Road, C. C., on the 17th, from her mother's house in Stamford Terrace. (9) A domestic from 7, South Street, C. C., on the 21st, she was sent home ill from the place of her service, outside the parish. (10 and 11) A labourer from 6, and a coach-painter from 7, North Street, C. C., on the 3rd and 5th. (12) A schoolboy from 20, St. Mark's Road, C. C., on the 17th. (13 to 16) Four from Richmond Road, $\frac{1}{2}$ mile R.; a servant from 58, on the 13th; a potman from Richmond Arms, on the 18th, he took it from an ambulance driver; a domestic from 96, on the 20th; a child from 73, on the 22nd. (17 to 19) Three from Redcliffe Gardens, $\frac{1}{2}$ mile R.; a cook from 52, on the 16th; a housemaid from 34, on the 18th; a cook from 8, on the 29th. (20) One from 24, Redcliffe Mews, $\frac{1}{2}$ mile R., on the 18th. (21 and 22) A female from 26, and a child from 14, Seymour Place, $\frac{1}{2}$ mile R., on the 24th and 16th. (23 and 24) A housekeeper from 53, and another from 6, Hollywood Road, $\frac{1}{2}$ mile R., on the 19th and 18th. (25) A barman from 214, Fulham Road, $\frac{1}{2}$ mile R., on the 18th. (26 to 28) Three from Kempsford Gardens, $\frac{1}{2}$ mile R.; 1 from 27, on the 15th, from a case treated at home; a domestic from 33, on the 22nd, engaged to marry an hospital porter; a clerk from 12, on the 25th, recently changed his lodgings to the above address. (29) A servant from 59, Eardley Crescent, $\frac{1}{2}$ mile R., on the 19th. (30) A servant from

6, Warwick Road, $\frac{1}{2}$ mile R., on the 19th. (31) A servant from 21, Earl's Court Square, $\frac{1}{2}$ mile R., on the 18th, from a sempstress engaged during the day, who had two children ill at Fulham. (32) One from 179, Earl's Court Road, $\frac{1}{2}$ mile R., on the 19th. (33) A child from 12, Child Street, $\frac{3}{4}$ mile R., on the 18th (infected street). (34) One from 3, Clifton Place, $\frac{3}{4}$ mile R., on the 18th. (35) A butler from 20, Collingham Road, $\frac{3}{4}$ mile R., on the 20th. (36) One from 11, Walgrave Road, $\frac{3}{4}$ mile R., on the 24th. (37) One from 18, Queensbury Mews, 1 mile R., on the 1st. (38) One from 9, Pembroke Place, 1 mile R., on the 23rd. (39 to 55) Seventeen from O. S. A., viz., 2 from St. Evan's Road, 1 each from Portland Road, Adia Terrace, Essex Villas, Catherine Road, Norfolk Terrace, South End, Peel Street, Portland Cottages, St. Clement's Road, Newcombe Street, Lonsdale Road, Bedford Gardens, Richmond Road, Ladbroke Road, and Talbot Road.

Chelsea Cases.—(1 and 2) One each from 40 and 41, Slaidburn Street, $\frac{1}{2}$ mile R., on the 10th and 24th. An old haunt of infection. (3) One from Milton House, Maude Grove, $\frac{1}{2}$ mile R., on the 21st. (4) One from 23, Lot's Road, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 27th. (5) One from 43, Lot's Road, $\frac{1}{2}$ mile R., to Highgate Hospital, on the 2nd. (6 and 7) One from 37, and a laundress from 33, Luna Street, $\frac{3}{4}$ mile R., on the 3rd and 18th. (8) One from 9, Little Camera Street, $\frac{3}{4}$ mile R., on the 16th. (9) One from 8, Foundry Place, $\frac{3}{4}$ mile R., on the 19th. (10) One from 333, Fulham Road, $\frac{3}{4}$ mile R., on the 22nd. (11) One from The Rectory, Church Street, 1 mile R., on the 16th. (12) One from 72, Camera Square, 1 mile R., on the 17th. (13) One from 2, Carlyle Square, 1 mile R., on the 19th. (14) One from 4, Alfred Cottages, 1 mile R., on the 20th. (15 to 25) Eleven from O. S. A., viz. :—1 each from Shewon Terrace, Christchurch Street, Park Walk, Marlborough Road, Britton Street, Francis Street, Flood Street, Rawling's Street, Langston Street, Oakley Crescent, and King's Road. Most of the Kensington cases in S. A. were servants, and Fulham cases were caused by concealed cases.

May.—Fulham Hospital admitted 172 acute cases, viz. :—49 from Fulham, 35 from Kensington, 34 from Chelsea, 20 from Wandsworth, 17 from St. George's, 7 from Paddington, 4 from St. Giles's, 2 from Strand, and 2 from Westminster. Highgate Hospital admitted

1 from Fulham, 1 from Kensington, and 4 from Chelsea. Dr. Dudfield reported 55 fresh cases in Kensington, of which 20 were treated at home. The Medical Officer of Health reported 65 cases during the month, Fulham parish contributing 46, of which 16 were treated at home; the remaining 19 occurred in Hammersmith. The Chelsea Medical Officer of Health reported 44 fresh cases. The local papers were filled with information on concealment of cases, especially in the district of North End and May Street, and a correspondent wrote, "If the medical practitioners of this and neighbouring districts would (instead of indulging, as it is to be feared more than one of them does, in either selfishness or sentimentality, or a combination of both) make it their duty in the interest of the community at large, which is justly entitled to consideration, to report all cases to health authorities—they at least would be clear when the question is asked, with whom lies the responsibility of such a reprehensible state of things?" Dr. Dudfield was asked by the Kensington Vestry to answer certain allegations against Fulham Hospital. He made a special report on the subject, and gave the following history of some of the cases in the immediate vicinity of the hospital:—

"It will have been noticed that the largest number of cases have occurred in Ifield Road, a long and very populous (not to say over-crowded) street, where there have been 15 cases in 11 houses. One of the first of the cases was that of a man who refused to go to the hospital and who died on the 19th April, after eight days' illness. His widow then sickened and passed through her illness at home. Within a few doors from this house there have been several other single cases which were removed to the hospital. In another house a man passed through his illness, having refused to go to the hospital. In another house three sisters were successively attacked after the customary interval for incubation, the family declining our offers, on two occasions, to disinfect the rooms, &c., having, as they said, carried out some directions of their medical attendant which they deemed sufficient. After the occurrence of the third case we insisted on doing the work, and since then there has not been any further case.

"At Finborough Road and at Adrian Terrace, which

are intimately connected with Ifield Road, cases have occurred, and in each road there has been a death from small-pox.

“At Kempsford Gardens a married woman was nursed at home by her husband, who afterwards took the disease, and was sent to hospital. In this street there have been four other cases in as many houses.

“From South Street, St. Mark’s, a woman was removed on the third day of the eruption, and it is stated that during her illness the linen of families was washed and dried in the sick-room. In this and contiguous streets eight other cases have occurred in March, April, and May.

“At Thistle Grove a case occurred, and was concealed until two other cases happened, and then the people were glad to send the new cases to hospital.

“At Redcliffe Street three children were ill in one house. No doctor was called in, and nothing was known of the occurrence until after the children had recovered.”

The weekly number of cases under treatment during the five weeks ending 1st June, was 198, 199, 192, 182, and 165.

Fulham Cases.—(1) A gardener from 70, Farm Lane, C. C., on the 11th, to Fulham Hospital, by visiting an ill friend in the same street. (2) One from 14, North Street, C. C., to Fulham Hospital, on the 15th. (3) One from 10, Rickett Street, C. C., to Fulham Hospital, on the 24th. (4) One from 26, Stamford Road, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 6th. (5) One from Prince’s Mews, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 13th. (6) One from 18, Bective Road, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 22nd. (7) One from 23, Lot’s Road, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 26th. (8 and 9) One from 1, and 1 from 8, Richmond Place, $\frac{1}{2}$ mile R., on the 14th and 21st. Infected houses. (10 and 11) Two from St. John’s Place, $\frac{1}{2}$ mile R., on the 14th and 15th. A case from the same house last month. (12 and 13) Father and son from May Cottage, May Street, $\frac{3}{4}$ mile R., on the 6th and 22nd. Many concealed cases in the street. (14 and 15) Two from 1, Star Lane, $\frac{3}{4}$ mile R., on the 2nd and 30th. Infected Street (16 and 17) One from 11, and one from 17, Dieppe Street, $\frac{3}{4}$ mile R., to Fulham Hospital, on the 3rd and 14th. (18) One from 8, Little Ebenezer Place, $\frac{3}{4}$ mile R., on the 4th. (19) One from 1, Simmons’ Cottages, $\frac{3}{4}$ mile R.,

on the 5th. (20) One from 20, King's Terrace, $\frac{3}{4}$ mile R., on the 6th. (21) One from 20, Ansford Cottages, $\frac{3}{4}$ mile R., on the 10th. (22) One from Normandy Cottage, $\frac{3}{4}$ mile R., on the 19th. (23) One from 9, Bramber Road, $\frac{3}{4}$ mile R., on the 31st. (24) A baby from 19, Field Road, 1 mile R., on the 6th. Infected House. (25) One from 24, Grove Terrace, 1 mile R., on the 4th. (26) One from the "The Three Kings," 1 mile R., on the 30th. (27) One from 5, Field Terrace, 1 mile R., on the 30th. (28 to 50) Twenty-three from O. A. S., viz., 3 from Felgate Mews, 2 each from Nasmythe Street, Hanover Cottages, Raynham Road, and Devonport Road; 1 each from Devonshire Street, "Red Cow," Model Buildings, Elm Place, Melina Road, Trafalgar Street, Raynham Road, Morby's Buildings, Masboro' Road, The Mall, Horace Mews, Melbourne Terrace, and Elrick Street.

Kensington Cases.—(1 to 7) Seven from Ifield Road, C. C.; a child from 60, on the 1st; 2 laundresses from 112, on the 5th and 18th; a stableman from 110, on the 6th; a bricklayer from 40, on the 7th; a boy from 21, on the 15th; and a girl from 34, on the 19th. (8) A domestic from 137, Finborough Road, $\frac{1}{2}$ mile R., on the 14th. (9) One from 176, Earl's Court Road, $\frac{1}{2}$ mile R., on the 29th. (10) A child from 8, Penywern Road (a school), $\frac{1}{2}$ mile R., on the 8th. (11 and 12) One from 21, and a child from 41, Kempsford Gardens, $\frac{1}{2}$ mile R., on the 17th; small-pox in neighbouring houses, the latter caught it from washing in a laundry. (13) A laundress from 54, Seymour Place, $\frac{1}{2}$ mile R., on the 24th. (14) One from 15, Eardley Crescent, $\frac{1}{2}$ mile R., on the 23rd. (15 and 16) Two boys from 38, Thistle Grove, $\frac{3}{4}$ mile R., on the 2nd and 3rd, from a concealed case. (17) A servant from 274, Fulham Road, $\frac{3}{4}$ mile R., on the 17th. (18) One from 8, Gledhow Terrace, $\frac{3}{4}$ mile R., on the 9th. (19) One from 38, Courtfield Gardens, $\frac{3}{4}$ mile R., on the 25th. (20) One from 53, Onslow Gardens, 1 mile R., on the 7th. (21 to 36) Sixteen from O. S. A., viz., 5 children from 13, Gadsden Mews; 1 each from Chelsea Grove, South End, Bosworth Road, Bramley Road, Elvaston Mews, Hazlewood Crescent, Walmer Road, Holland Road, Dartmoor Street, Orchard Street, and Tavistock Crescent.

Chelsea Cases.—(1) One from Cottage Laundry, Limerston Street, $\frac{1}{2}$ mile R., on the 18th. (2 and 3) Two students from St. Mark's College, $\frac{1}{2}$ mile R., to High-

gate Hospital, on the 11th and 13th. Infected house. (4) One from 39, Seaton Street, $\frac{3}{4}$ mile R., on the 6th. (5 and 6) Two from 20, Callow Street, $\frac{3}{4}$ mile R., on the 17th and 27th. (7) One from 56, Park Walk, $\frac{3}{4}$ mile R., on the 19th. (8 to 10) Three children from 56, Beaufort Street, 1 mile R., to Fulham Hospital, on 8th, 18th, and 21st. (11 and 12) One from 31, and the other from 98, Church Street, 1 mile R., on the 12th and 20th. (13) One from 37, Paulton Square, 1 mile R., on the 18th. (14) One from 7, Arthur Street, 1 mile R., on the 22nd. (15 to 38) Twenty-four from O. S. A., viz., 4 from 9, George's Place, 2 from Walton Street and Keppel Street; 1 each from Flood Street, Oakley Crescent, Upper Cheyne Row, Francis Street, Moss Place, Badcock Street, Redsdale Street, Stratham Place, St. Hilda Terrace, Langston Street, Exeter Place, Lincoln Street, College Place, High Street, Danver Street, and Milner Street. It is noticeable that most of the cases in C. C. seem in Ifield Road. By what law this selection of the street to the exclusion of others can be accounted for is not evident to me. Another point is, that the Special Area of Chelsea has suffered the least, because the haunts of infection are away from the hospital.

June.—Fulham Hospital admitted 88 cases, viz., 20 from Fulham, 18 from Kensington, 16 from Chelsea, 8 from St. George's, 15 from Wandsworth, 6 from Paddington, 2 from St. Giles's, 2, from Westminster, and 1 from Strand. Highgate Hospital admitted 3 from Kensington. Dr. Dudfield reported 23 cases in Kensington during four weeks ending June 26th. The Medical Officer of Fulham reported 20 fresh cases, of which 17 occurred in Fulham parish. The Medical Officer of Health for Chelsea reported 18 fresh cases. The weekly number of cases under treatment at Fulham Hospital during four weeks ending June 29th, were 147, 141, 133, and 121.

Fulham Cases.—(1) A hospital nurse was taken ill, and entered as a case on the 28th. (2) One from 4, Roxby Place, C. C., on the 13th, from concealed cases. (3) One from 8, Richmond Place, $\frac{1}{2}$ mile R., on the 7th. Infected house. (4 to 6) Three from Stamford Road, $\frac{1}{2}$ mile R., 2 from 11, on the 5th, and 1 from 37, on the 7th. (7) One from Cambridge Terrace, $\frac{1}{2}$ mile R., on the 18th. (8) One from 93, Rylstone Road, $\frac{3}{4}$ mile R. on the 5th. (9 to 11) Three from Estcourt

Road, $\frac{3}{4}$ mile R., a child from 13 (a baby farm), on the 11th, 1 from 52, on the 14th, and 1 from 16, on the 22nd. (12) One from 9, Pownal Road, $\frac{3}{4}$ mile R., on the 13th. (13) One from 17, William Street, $\frac{3}{4}$ mile R., on the 26th. (14) One from 94, May Street, $\frac{3}{4}$ mile R., on the 23rd. (15) One from Field Terrace, 1 mile R., on the 17th. (16 to 20) Five from O. S. A., viz., 1 each from The Grove, Chelmsford Street, Dungannon Terrace, Overton Road, and Queen's Place.

Kensington Cases.—(1) One from 7, Ifield Road, C. C., on the 13th. (2 and 3) Two from Finborough Road, $\frac{1}{2}$ mile R., 1 from 81, on the 10th, she came to live here from Bermondsey on the 6th; a nurse from 144, on the 21st. (4) A domestic from 12, Bolton Gardens, $\frac{1}{2}$ mile R.; she took it from her mother's house in Fulham. (5) A domestic from 26, Onslow Square, 1 mile R., on the 18th. (6) A boy from 1, Merton Road, 1 mile R., on the 12th. (7 to 21) Fifteen from O. S. A., viz., 2 each from Dartmoor Road, Bomore Road; 1 each from Kensington Place, Tavistock Crescent (infected house), Absolom Road, Yeoman's Row, Radley Mews, Phillimore Mews, Charlesville Road, Bosworth Road, Moscow Road, Kensington Dispensary, and Prince's Gate.

Chelsea Cases.—(1 and 2) Two brothers from 25, Lot's Road, $\frac{1}{2}$ mile R., on the 7th and 12th. Small-pox in the next house. (3) One from 20, Callow Street, $\frac{3}{4}$ mile R., on the 17th. Infected house. (4) One from 39, Luna Street, $\frac{3}{4}$ mile R., on the 20th. (5) One from 55, Seaton Street, $\frac{3}{4}$ mile R., on the 14th. (6 to 16) Eleven from O. S. A., viz., two each from Guthrie Street, North Street, Elm Park Terrace, Caledonian Road; and one each from York Mews, Danver's Buildings, and Ives Street. Most of these houses were infected. The local papers contained accounts of many concealed cases in Fulham, and the spread of the disease from two public-houses, the "Three Kings," and the "Rose and Crown." It was stated that many families stricken with small-pox in the North End, left the houses infected, and others who followed them took the disease.

July.—Fulham Hospital admitted 31 acute cases, viz., 12 from Fulham, 5 from Kensington, 4 from Chelsea, 5 from St. George's, 2 from Paddington, 2 from Westminster, and 1 from Wandsworth. The weekly number of cases under treatment at Fulham

Hospital during the four weeks ending 27th July, was 98, 76, 72, and 56.

Fulham Cases.—(1) One from 25, Seagrove Road, C. C., to Fulham Hospital, on the 10th. An infected house. (2 and 3) One from 10, and another from 4, Rickett Street, C. C., on the 24th and 22nd. Infected houses and concealed cases. (4) One from 8, Farm Lane, C. C., on the 19th. Infected street. (5) One from 18, Stamford Road, $\frac{1}{2}$ mile R., on the 4th. Infected street. (6) One from 1, Jackson's Place, $\frac{1}{2}$ mile R., on the 15th. (7) One from 19, Prince's Terrace, $\frac{1}{2}$ mile R., on the 18th. (8 to 10) Three sisters from 34, Pownal Road, $\frac{3}{4}$ mile R., two on the 5th, and the other on the 19th. (11) One from 11, Crown Street, $\frac{3}{4}$ mile R., on the 16th. (12) One from 5, Field Terrace, 1 mile R., on the 8th. Infected street.

Kensington Cases.—(1) A nurse from 55, Earl's Court Square, $\frac{1}{2}$ mile R., on the 7th. (2) One from 12, Merton Road, 1 mile R., on the 17th. (3 to 5) Three from O. S. A., viz., 1 each from Argyll Road, Dartmoor Street, and Duke's Lane.

Chelsea Cases.—(1) One from 20, Gunter Grove, $\frac{1}{2}$ mile R., on the 23rd. (2 to 4) Three from O. S. A., viz., 1 each from Radnor Street, Lower George Street, and North Street.

August. -Fulham Hospital admitted 8 acute cases, viz., 1 from Fulham, 4 from St. George's, 2 from Westminster, and 1 from Wandsworth. The weekly number of cases under treatment during five weeks ending 31st August, were 45, 40, 33, 22, and 16. The Fulham case was from 32, Peterborough Road, $\frac{1}{2}$ mile R., on the 11th.

September. — Fulham Hospital admitted 3 acute cases, viz., 2 from St. George's, and 1 from 2, Shalcombe Street, $\frac{3}{4}$ mile R., on the 26th. A Chelsea case.

October.—Fulham Hospital admitted 7 acute cases: 1 from 8, Rear Gate, $\frac{1}{2}$ mile R., on the 30th, a Fulham case; 2 from 2, Shalcombe Street, Chelsea, $\frac{3}{4}$ mile R., on the 9th, an infected house; and 4 from other districts.

November.—Fulham Hospital admitted 18 acute cases, viz., 2 from Fulham, 3 from Chelsea, 1 from Kensington, O. S. A., and 12 from other parishes. The Fulham cases were—1 each from 20, Moor Park Terrace, and 24, Waterford Road, $\frac{1}{2}$ mile R., on the 17th and 27th. The Chelsea cases were 2 from 17,

Slaidburn Street, $\frac{1}{2}$ mile R., on the 6th (infected house), and 1 from 25, Limerston Street, $\frac{3}{4}$ mile R., on the 7th. Infected house.

December. — Fulham Hospital admitted 19 acute cases, viz., 6 from Fulham, and 13 from other parishes.

Fulham Cases.—(1) One from 3, Garden Row, C. C., on the 27th. (2) One from 24, Waterford Road, $\frac{1}{2}$ mile R., on the 10th. Infected house. (3) A baby from "Norfolk Arms," $\frac{3}{4}$ mile R., on the 29th. (4) A baby from 69, Rylstone Road, $\frac{3}{4}$ mile R., on the 31st. (5) One from 6, Caroline Place, 1 mile R., on the 27th. (6) One from 5, Hatfield Street, 1 mile R., on the 27th.

Thus closed the year 1878, in which much damage in the S. A. of Fulham had been caused; many houses were left infected, and new cases cropped up at the end of the year to serve as foci for fresh outbreaks during the following year.

The Year 1879.

WE learn from the Report of the Registrar-General that during the year there were 458 deaths from small-pox in London, of which 10 were in Kensington, 5 in Chelsea, and 118 in Fulham, including 111 in Fulham Small-pox Hospital. The Metropolitan Asylums Board Hospitals admitted 1,685 patients, including 144 from Fulham, 113 from Kensington, and 105 from Chelsea. The Highgate Hospital had admitted 7 from Chelsea, 5 from Kensington, and 1 from Fulham. The cases reported to the Medical Officers of Health, were 166 in Fulham Union, of which 133 were in Fulham parish, 139 in Kensington, and 121 in Chelsea, giving 426 known cases in the three districts. By calculating 15 per cent as mortality among private cases, we estimate the total incidence for the three districts, 521 cases, of which Mr. Power accounts for 382 cases. The proportion of cases unaccounted for this year is not so large as in the previous years, on account of the better organisation for the removal of cases to the Metropolitan Hospitals and for effectually dealing with the concealment of cases. I utilised my experience of the previous two years, and conducted my investigations into the history of the cases with more precision

and better results. I discovered that small laundries in Chelsea were a fruitful source of the disease, as infected clothing of concealed and private cases was washed without any precaution. The washing of many families in the S. A. was done there. A severe outbreak occurred in Land's End, Fulham, $\frac{1}{2}$ and $\frac{3}{4}$ mile R., principally in the families of workmen of the Imperial Gas Factory, in the months of April and May. The workmen also lived on the other side of the water, in Battersea and in Chelsea. There were several cases of small-pox in the families at Battersea, and some of them were sent to Fulham Hospital in February and March, which clearly demonstrates that the disease was imported in Sand's End, Fulham, as will be seen from the detailed history to follow. In my Annual Report I pointed out to the Managing Committee of the Fulham Hospital several imperfections, and the insanitary condition of the buildings, and recommended improvements and proper accommodation for the members of the staff—defects existing with the opening of the hospital, which were left unnoticed as in the past years.

January.—Fulham Hospital admitted 31 acute cases, viz., 6 from Fulham, 3 from Kensington, 3 from Chelsea, 8 from St. George's, 4 from Wandsworth, 3 from Paddington, 1 from Strand, 1 from St. Giles's, and 2 from St. Saviour's; 25 convalescents were transferred from other hospitals. The cases known to Health Officers were 7 in Fulham, 4 in Chelsea, and in Kensington, during the four weeks ending 5th February, 7 cases. The weekly number of cases under treatment in Fulham Hospital was 17, 18, 19, 50 and 44.

Fulham Cases.—All admitted to Fulham Hospital. (1) One from 11, Farm Lane, C. C., on the 21st. Infected street. (2) One from 16, Hildyard Road, C. C., on the 31st. Infected street. (3) One from 6, Caroline Place, $\frac{3}{4}$ mile R., on the 19th. (4) One from 27, Rectory Place, 1 mile R., on the 24th. (5) One from 21, Coomer Road, 1 mile R., on the 31st. (6) One from Hammersmith Baths, O. S. A.

Kensington Cases.—(1) A waiter treated at home in 109, Ifield Road, C. C. Dr. Dudfield states he was engaged in obtaining signatures to a memorial to Sir C. Dilke, to bring in a Bill to do away with the Fulham Hospital. He probably took the disease while about his singular mission. He did his best to

conceal his case. (2 to 5) Four cases in Richmond Road, $\frac{1}{2}$ mile R. A domestic from 90, on the 6th, to Fulham Hospital. Two fatal cases of a recently confined mother and the infant at 70, revealed by the death certificate of the mother. A fishmonger in 104, who also tried to conceal his case from the lodgers, was treated at home. (6) A domestic from 29, Hollywood Road, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 1st. (7) A cook, from 29, Coleherne Road, $\frac{1}{2}$ mile R., to Fulham Hospital, on the 10th. (8) A barmaid died at home on the 11th, at 4, Pelham Street, O. S. A.

Chelsea Cases were—One from 64, Church Street, 1 mile R., to Fulham. (9 and 10) A coachman and his wife, private concealed cases in Sumner Mews, O. S. A.

Chelsea Cases.—One from 64, Church Street, 1 mile R., to Fulham Hospital on the 9th; and one each from Markham Street and Keppel Street, O. S. A.

February.—Fulham Hospital admitted 107 acute cases, viz., 15 from Fulham, 8 from Kensington, 23 from Chelsea, 32 from St. Saviour's, 9 from Wandsworth, 5 from St. George's, 2 from Westminster, 10 from Lambeth, 2 from Paddington, and 1 from Brentford. Highgate Hospital admitted 3 from Chelsea. The Health Officers report 17 cases in Fulham, 27 in Chelsea, and in Kensington, during four weeks ending 5th March, 11 cases. The weekly number of cases under treatment in Fulham Hospital was 62, 79, 90 and 93. Of the Wandsworth cases 5 were from Battersea, S. A. One was a brother of a workman in the Imperial Gas Factory, who was admitted last month; a lighterman from Bridge Road, two labourers and a laundress.

Fulham Cases.—Admitted to Fulham Hospital. (1 and 2). A girl from 6, and a smith from 38, Farm Lane, C. C., on the 20th. Infected street. (3) A married female from 9, Jordan Place, $\frac{1}{2}$ mile R., on the 5th. (4 and 5) Two boys from 6, Stanley Road, $\frac{1}{2}$ mile R., on the 7th and 9th. An infected street. (6) A girl from 3, Percy Place, $\frac{1}{2}$ mile R., on the 13th. (7) A labourer from 3, Schofield Terrace, $\frac{1}{2}$ mile R., on the 15th. (8 to 10) A mother and a baby on the 23rd, and a child on the 27th, from 13, Little Ebenezer Place, $\frac{3}{4}$ mile R. (11 and 12) A girl from 12, and a girl from 19, Hilmer Street, $\frac{3}{4}$ mile R., on the 1st and 27th. An infected street. (13) A labourer from 18, Serf's Terrace, $\frac{3}{4}$ mile R., on the 4th. (14) A boy from 10, Broxholm Road, $\frac{3}{4}$ mile

R., on the 19th. Infected house. (15) A girl from 21, Coomer Road, 1 mile R., on the 12th. Infected house.

Kensington Cases.—Admitted to Fulham Hospital. (1) A child from 3, Redcliffe Street, $\frac{1}{2}$ mile R., on the 28th. (2) A labourer from 8, Child's Place, $\frac{3}{4}$ mile R., on the 27th. Infected street. (3) A boy from Industrial School, 1 mile R., on the 23rd. (4 to 8) Five from O. S. A., viz., one each from Lonsdale Road, Moreton Gardens, Goldborne Road, Cornwall Road, and William Street.

Chelsea Cases.—(1) A labourer from 6, Seaton Street, $\frac{3}{4}$ mile R., on the 8th. (2 to 26). Twenty-five from O. S. A., viz., 3 from Godfrey Street, 3 from Cole Street, 2 each from Norman Street, Markham Terrace, Sloane Street, Brewer Street, and Jubilee Place; and one each from Rawling's Street, Smith Street, Albert Cottages, Little College Street, Francis Street, Exeter Place, College Place, and Marlborough Road. This outbreak was caused by a fatal concealed case in 46, Godfrey Street, O. S. A., and the case of the landlord of the public-house "Blenheim." Eighteen of the above cases were traced to this source. Many infected families migrated from the neighbourhood, after the outbreak, into various localities. The unequal distribution of cases in the several areas of Fulham, Kensington, and Chelsea, and at widely different dates, occurring in infected streets, points to outbreaks due to local causes—a feature I have repeatedly pointed out in the history of 1877, and 1878. It will also be made evident in the history of the years 1879 and 1880.

March.—Fulham Hospital admitted 112 acute cases, viz., 24 from Fulham, 22 from Kensington, 17 from Chelsea, 21 from St. Saviour's, 7 from Lambeth, 7 from Wandsworth, 3 from Westminster, 1 from St. Giles's, 2 from Brentford, and 8 from St. George's. Highgate Hospital admitted one from Kensington. The Health Officers reported 19 cases in Chelsea, 24 in Fulham, and in Kensington, for four weeks ending 2nd April, 28 cases. The weekly number of cases under treatment in Fulham Hospital was 101, 98, 106 and 99. Of the Wandsworth cases five occurred in Battersea, on the outskirts of S. A., and one in the family of a workman in the Imperial Gas Factory, Sand's End, Fulham.

Fulham Cases.—(1) A married female from 9, Rickett Street, C. C., on the 7th. Some members of the hospital staff lived here. (2) A joiner from 16, Sher-

brook Road, $\frac{1}{2}$ mile R., on the 2nd. (3) A schoolmaster from 37, Cornwall Street, $\frac{1}{2}$ mile R., on the 3rd. (4) A married woman from 4, Whitechurch Cottages, $\frac{1}{2}$ mile R., on the 4th. (5 and 6) A carpenter and his wife from 20, Bective Road, $\frac{1}{2}$ mile R., on the 9th and 24th. (7) A labourer from 27, Bullow Road, $\frac{1}{2}$ mile R., on the 9th. (8) A labourer from 3, Carpenter's Row, $\frac{1}{2}$ mile R., on the 13th. He was at work in the Imperial Gas Factory till the fourth day of eruption. (9) A workman in the same Gas Factory from 21, Cornwall Street, $\frac{1}{2}$ mile R., on the 14th. He was at work till the seventh day of eruption. (10) A boy from "Stamford Arms," $\frac{1}{2}$ mile R., on the 27th. (11 and 12) A warehouse boy from 8, and a carman from 55, Victoria Road, $\frac{1}{2}$ mile R., on the 23rd and 29th. (13 and 14) Two from 13, Little Ebenezer Place, $\frac{3}{4}$ mile R., on the 3rd and 6th. An infected house. (15) A messenger from 10, Broxholm Road, $\frac{3}{4}$ mile R., on the 4th. An infected house. (16) A child from 8, George's Square, $\frac{3}{4}$ mile R., on the 7th. The case was treated at Kensington Dispensary. (17) A plasterer from 7, Crown Road, $\frac{3}{4}$ mile R., on the 19th. (18) A domestic from 7, Parson's Green, $\frac{3}{4}$ mile R., on the 20th. An infected house. (19 to 24) Six from O. S. A., viz., 1 each from Devonport Road, George Street, Flora Villas, Rose and Crown Lane, Dalling Road, and Broadway.

Kensington Cases.—(1 to 4) Four from Ifield Road, C. C.; a domestic from 126, in a dying condition on the 2nd; a married female from 158 on the 19th, believed to have been infected by previous lodgers; the family migrated to 95; a barmaid from 59 on the 15th. She took it from No. 16 Fulham case for this month; 1 from 22 on the 21st. (5 and 6) Two domestics from 113 and 54, Finborough Road, C. C., on the 8th and 23rd. (7 and 8) Two from Redcliffe Gardens, $\frac{1}{2}$ mile R.; a domestic from 100, on the 11th, a domestic from 76, on the 27th, by visiting her aunt at 87, Adrian Terrace. (9) A domestic from 24, Redcliffe Mews, $\frac{1}{2}$ mile R. An infected house. (10) A domestic from 13, Tregunter Road, $\frac{1}{2}$ mile R., by visiting her relations in South Parade, Chelsea. (11) A shoemaker from 40, Seymour Place, $\frac{1}{2}$ mile R., on the 29th. (12) A stableman from 21, Kranmer Mews, $\frac{1}{2}$ mile R., on the 3rd. (13) A mason from 7, Shaftesbury Terrace, $\frac{3}{4}$ mile R., on the 5th. (14 to 23) Ten from O. S. A., viz., 5

from 329, Portobello Road (a baker's shop and a dairy), where there had been a fatal concealed case without isolation or any precaution from 24th February to 8th March, and the death certificate was returned as "Congestion of the Lungs." One each from Warwick Terrace, Norland Square (from a concealed fatal case), Queen's Road (from the one preceding), Yeoman's Row (infected street), and Royal Crescent.

Chelsea Cases.—(1) One from 46, Slaidburn Street, $\frac{3}{4}$ mile R., on the 21st. Infected house. (2) One from 14, Park Walk, $\frac{3}{4}$ mile R., on the 28th. (3) A domestic from 7, Hans Place, 1 mile R., on the 7th. (4 and 5) An ironer from 478, King's Road, 1 mile R., on the 5th, and a domestic from 303, on the 29th. (6 to 17) Twelve from O. S. A., viz., 2 from Manor Buildings (infected), 1 each from Ovington Street, Cheyne Walk, Robert Street, Langston Street, Onslow Dwellings, Pimlico Road, White Hart Court, Charlotte Street, Portobello Terrace and George Street; 6 of these cases were traced to the fatal case at 43, Godfrey Street, whose history is given in last month.

April.—Fulham Hospital admitted 106 acute cases, viz., 36 from Fulham, 24 from Kensington, 17 from Chelsea, 8 from St. Saviour's, 5 from Lambeth, 4 from St. George's, 6 from Wandsworth (of which 5 were from Battersea), 2 from Paddington, 2 from Westminster, 1 from St. Giles's, and 1 from Brentford. The Health Officers reported 41 in Fulham, 18 in Chelsea, and 27 in Kensington. The Highgate Hospital admitted 1 from Kensington and 1 from Chelsea. The weekly number of cases under treatment at the Fulham Hospital was 84, 82, 83, and 94. The Fulham Hospital is between the Lillie Bridge and Stamford Bridge Running Grounds, and on the 4th, 11th, 14th, and 15th of April, thousands of people from all parts had congregated there to witness the sports. Dr. Dudfield addressed a letter to the medical profession through the medical journals, requesting information regarding any patient with small-pox that might occur in their practice, who might have visited those grounds, to put the question of aërial dissemination of small-pox infection to a practical test, when the hospital was in full working and the admissions were large. He received no reply to it. My enquiries amongst subsequent admissions did not give any better

results, nor, I believe, did others, even the opponents of the hospital, get any information. Had there been a charging of atmosphere with infection, as Mr. Power would have us believe, we might have received some corroboration of his opinion.

Fulham Cases.—(1) A boy from 6, Bullow Road, $\frac{1}{2}$ mile R., on the 26th. (2) A smith from 14, Rock Avenue, $\frac{1}{2}$ mile R., on the 25th. (3) A joiner from 30, Cornwall Street, $\frac{1}{2}$ mile R., on the 25th. (4) A mason from 7, Cambridge Terrace, $\frac{1}{2}$ mile R., on the 5th. (5) A labourer from 40, Clyde Road, $\frac{1}{2}$ mile R., on the 28th. (6 to 16) Eleven from Tyrrell's Cottages, $\frac{3}{4}$ mile R.; 8 from 4, a family of Hook's, a workman in the Imperial Gas Factory, where men with eruptions on them were at work; and, as is shown above, first outbreaks occurred among them in Battersea and Chelsea. Three from No. 5, next door, another workman's family. First on the 18th and the last on the 23rd. (17) Another workman from 11, Rear Gate, $\frac{3}{4}$ mile R., on the 23rd, a brother of the Hooks. (18 and 19) Two children of another workman from 25, Imperial Cottages, $\frac{3}{4}$ mile R., on the 24th and 26th. Traced to Hook's. (20) A woman from 19, Stanley Road, $\frac{1}{2}$ mile R., on the 28th. She had removed from 5, Tyrrell's Cottages, on the 22nd. (21) A barman from "Adelaide Arms," $\frac{3}{4}$ mile R., on the 28th. Traced to Hook's. (22) One from Rose Cottage, $\frac{3}{4}$ mile R., on the 29th. Traced to Hook's. (23 and 24) Two from 1, Sand's End Lane, $\frac{3}{4}$ mile R., on the 22nd and 29th. Traced to Hook's. Thus the preceding 19 cases were traced to one source, and caused by the concealment of a case at home, which was treated by a medical man for measles till too late. The particulars of this outbreak cast a serious reflection on the medical men who have cared more for themselves than for public health and good of others. Space forbids me from giving the details. (25 to 29) Five from another workman's family at 7, Wheatsheaf Alley, $\frac{3}{4}$ mile R., and 1 on the 25th, and 4 on the 30th. Caused by a concealed case. (30 and 31) Two workmen from Peterboro' Lane, $\frac{3}{4}$ mile R., on the 14th and 29th. (32) A boy from 3, Providence Row, $\frac{3}{4}$ mile R., on the 6th. (33 to 36) Four from O. S. A., viz., 1 each from Latimer Road, Carlton Terrace, Fulham Workhouse, and Rutland Terrace. The last one was a son of a railway inspector. He first lived in Notting Hill, and left a child ill with small-pox in charge of a woman,

and migrated to Walham Green, $\frac{1}{2}$ mile R., where his wife died of small-pox. He then shifted to the above address. After the removal of his son to hospital he took up his lodgings near Earl's Court Station. He was at work on the station all the while! He left all the houses infected.

Kensington Cases.—(1 to 6) Six from Ifield Road, C. C. An infected street. A domestic from 51, Ifield-road, on the 20th, by visiting at 68, where there were 3 concealed cases. A mason from 83, on the 17th. A blacksmith from 26, on the 23rd. A girl in 48, reported on the 12th. A painter in 36, reported on the 19th. A workman in 126, on the 19th. Most of these houses inter-communicate, and the cases might have come in contact with concealed ones. (7 and 8) A domestic from 49, Finborough Road, C. C., on the 6th. Another from 127, walked down to the hospital on the 1st. She was in the service of a member of the Managing Committee of Fulham Hospital. (9) A waistcoat maker from 8, South Street, C. C., on the 28th. She came to live here on the 26th, from Notting Hill. (10) A domestic from 57, Redcliffe Square, $\frac{1}{2}$ mile R., on the 13th, by visiting her sisters in Shaftesbury Road, where there were cases of small-pox. (11) A domestic from 47, Redcliffe Square, $\frac{1}{2}$ mile R., on the 17th. (12) One from 3, Earl's Court Square Mews, $\frac{1}{2}$ mile R., on the 18th. (13) A domestic from 45, Tregunter Road, $\frac{1}{2}$ mile R., on the 18th. (14 and 15) A domestic from 26 and another from 29, Coleherne Road, $\frac{1}{2}$ mile R., on the 21st and 23rd. (16) A painter from 26, Seymour Place, $\frac{1}{2}$ mile R., on the 21st, by visiting his friends in 68, Ifield Road. (17) An errand boy from 14, Ashley Cottages, $\frac{3}{4}$ mile R., on the 3rd. (18) A painter from 56, Earl's Court Road, 1 mile R., on the 21st, from a private case. (19) A domestic from 135, Gloucester Road, 1 mile R., on the 15th. (20 to 28). Nine from O. S. A., viz., 3 from Dartmoor Street, and 1 each from Warwick Terrace (infected house), Yeoman's Row (infected house), Archer Mews, South Place, Brompton Consumption Hospital (infected at home in Walham Green), and Queen's Gate (infected at home in Charlotte Street Chelsea.)

Chelsea Cases.—(1) A domestic from 231, Fulham Road, $\frac{3}{4}$ mile R., on the 14th. (2) A domestic from 33, Little Camera Street, $\frac{3}{4}$ mile R., on the 16th. (3) One

from 4, Limerston Street, $\frac{3}{4}$ mile R., to Highgate Hospital, on the 18th. (4) A baker from 69, Arthur Street, 1 mile R., on the 15th. Caught it from one of his customers. (5 to 17) Thirteen from O. S. A., viz., 6 from 1, Charlotte Street (a case from the same house in March last), and 1 each from Schofield Street, Redburn Street, Anderson Street, St. Anne's Convent (infected house), Wickham Place, Lawrence Street, and 2 from Portobello Terrace.

May.—Fulham Hospital admitted 92 acute cases, viz., 25 from Fulham, 16 from Kensington, 9 from Chelsea, 9 from Wandsworth, 4 from Putney, and 5 from Battersea, 6 from Marylebone, 4 from Paddington, 3 from St. Pancras, 3 from Lambeth, 8 from St. Saviour's, 8 from St. George's, and 1 from St. Giles'. Highgate Hospital admitted 1 each from Fulham, Kensington, and Chelsea. The Health Officers reported 33 cases in Fulham, 10 in Chelsea, and 10 in Kensington during the four weeks ending 28th May. The weekly number of cases under treatment at Fulham was 95, 102, 105, 93, and 92. There were 2 convalescents transferred from Hampstead Hospital. A newly appointed Manager of the Fulham Hospital Committee walked the hospital wards and took the disease. He was treated for skin affection by another manager, a medical man, and he went about town and country as usual. His wife took it from him. Her medical attendant protested against such a procedure and gave me all the facts of the case. (See *Medical Times and Gazette*, June 17th, 1882, case 8, page 634, and case 11, page 635).

Fulham Cases.—(1) A boy from 6, Garden Row, C. C., on the 7th, from a fatal concealed case. (2 and 3) A gardener, and his wife, a laundress, from 14, Farm Lane, C. C., on the 14th and 16th. The woman nursed three cases of small-pox in 10, Harwood Road, $\frac{1}{2}$ mile R., where her husband was in service, and went backwards and forwards doing her laundry work. (4) A grocer from 1, Lillie Bridge Road, C. C., on the 16th. Four weeks previously he engaged a girl from Crown Street, convalescent from small-pox; his son took the disease from her, and was concealed at home; he took it from his son, nursing him and minding the shop as usual. (5) A boy from 6, Bullock Road, $\frac{1}{2}$ mile R. An infected house. (6) A female from 4, Kempson Road, $\frac{1}{2}$ mile R., on the 22nd. Her landlady's child was treated for small-pox by a chemist, attending his shop daily. (7)

One from 1, Cornwall Street, $\frac{1}{2}$ mile R., on the 23rd. Infected street. (8) A laundress from 27, Maxwell Road, $\frac{1}{2}$ mile R., traced to Hook's. (9) A workman in the Imperial Gas Factory, from 8, Wheatsheaf Alley, $\frac{3}{4}$ mile R., on the 5th. Five cases next door last month. (10) An ironer from 21, Crown Street, $\frac{3}{4}$ mile R., on the 8th. She took it from 7, Wheatsheaf Alley. (11) A boy from 26, Pamerall Road, $\frac{3}{4}$ mile R., on the 8th. (12) A stoker from 78, May Street, $\frac{3}{4}$ mile R., on the 10th. A hospital porter lived in the house with him. (13) A tailor from 28, Anselm Road, $\frac{3}{4}$ mile R., on the 13th. (14) A child from 19, Imperial Square, $\frac{3}{4}$ mile R., on the 16th. Traced to Hook's. (15) A child from 13, Broxholm Road, $\frac{3}{4}$ mile R., on the 17th. Infected street. (16) One from 67, Estcourt Road, $\frac{3}{4}$ mile R., on the 23rd. (17 to 26) Ten cases from O. S. A., viz., 2 from Southbrook Street, and 1 from Devonshire Villas, were traced to the same source; 1 each from Acton Vale Gardens, Faroe Road, Broadmoor Terrace (by washing infected clothing), Beaumont Street (from a concealed case outside the district), White Hart Court, St. John's Terrace, and Studland Street.

Kensington Cases.—(1) A gardener, from 44, Ifield Road, C. C., on the 11th. He was living here since 24th March, and a fatal case of small-pox had occurred in the house. (2) A flower mounter from 9, Stamford Cottages, $\frac{1}{2}$ mile R., on the 31st. (3) A cook from 10, Rich Terrace, $\frac{1}{2}$ mile R., on the 28th, from a concealed case. (4 and 5) Two cases were treated at Kranmer Mews, $\frac{1}{2}$ mile R. (6) One from Edward's Square, 1 mile R., on the 30th. (7 to 9) Three from Earl's Court Road, 1 mile R., 2 from 32, on the 12th and 26th, caused by a private case; and 1 from 56, on the 6th, traced to the same source. A case from the same house last month. (10 to 12) Three boys from Industrial School, 1 mile R., 1 on the 12th, and 2 on the 13th. A boy from the same in February. (13) A boy from 25, Merton Road, 1 mile R., on the 26th, by visiting his relations in Lambeth, who was removed to Stockwell. (14) A butler, from 25, Onslow Gardens, 1 mile R., to Highgate Hospital, on the 12th. (15) A dressmaker from Abingdon Villas, 1 mile R., on the 31st. (16 to 19) Four from O. S. A., viz., 1 each from High Street, Bonchurch Road, Portland Road, and Victoria Grove. The last was caused by the visit of a convalescent, and removed to the hospital after he had been violently delirious, and driven in a cab.

Chelsea Cases.—(1) One from 109, Lot's Road, $\frac{1}{2}$ mile R., on the 31st. (2) One from 43, Slaidburn Street, $\frac{3}{4}$ mile R., on the 3rd. (3 and 4) One each from 27, and 29, Luna Street, $\frac{3}{4}$ mile R., on the 8th and 29th. (5) One from 43, Seaton Street, $\frac{3}{4}$ mile R., on the 29th. (6 to 10) Five from O. S. A., viz., 1 each from Lower George Street (infected house), Moor Street, Wood Street, First Street, and Durham Street.

June.—Fulham Hospital admitted 82 cases, viz., 17 from Fulham, 25 from Kensington, 15 from Chelsea, 5 from Marylebone, 5 from St. George's, 5 from Paddington, 5 from St. Pancras, 2 from Brentford, 2 from St. Giles's, and 1 from Hampstead. Highgate Hospital admitted 1 from Chelsea. The Health Officers reported 20 in Fulham, 20 in Chelsea, and in Kensington 27, during the four weeks ending 6th June. The weekly number of cases under treatment was 99, 90, 82, and 82.

Fulham Cases.—(1) A child, from 2, Roxby Place, C. C., on the 23rd. On my suggestion, Fulham Sanitary Authorities made a house to house inspection, and discovered the case. A woman kept here a baby farm, and several cases of small-pox spread from here. (2) A coal porter in the Gas Factory from 4, Garden Row, C. C., on the 25th. Small-pox next door. (3) A woman from 7, Stamford Street, $\frac{1}{2}$ mile R., on the 10th, traced to Hook's. (4) A clerk from 59, Waterford Road, $\frac{1}{2}$ mile R., on the 7th, by visiting a friend's house where there were 3 cases of small-pox. (5) A woman from 14, Waterford Road, $\frac{1}{2}$ mile R., on the 3rd. (6) A carpenter from 23, Vaunston Place, $\frac{1}{2}$ mile R., on the 10th. (7) A labourer, from 32, Victoria Road, $\frac{1}{2}$ mile R., on the 25th. (8) A gardener from 40, Britannia Road, $\frac{1}{2}$ mile R., on the 1st. (9) A carpenter from 23, Vaunston Place, $\frac{1}{2}$ mile R., on the 10th. (10) A coal porter, 6, Rose Cottages, $\frac{3}{4}$ mile R., on the 4th, traced to Hook's. (11) A boy from "Maxwell Arms," $\frac{3}{4}$ mile R., on the 10th, traced to Hook's. (12) A domestic from 7, Parson's Green, $\frac{3}{4}$ mile R., on the 9th. Infected house. (13) A cook from Peterborough Villas, $\frac{3}{4}$ mile R., on the 1st. Infected house. (14) A coachman from 15, Caroline Place, $\frac{3}{4}$ mile R., on the 28th. (15) A labourer from 9, Francis Street, $\frac{3}{4}$ mile R., on the 26th. (16) A dustman from 16, Field Road, 1 mile R., on the 5th. He cleared the dustbins of the Fulham Hospital wards a fortnight previous. (17) A work-

man in the Gas Factory, from 11, Peterborough Road, 1 mile R., on the 8th.

Kensington Cases.—(1) A shopman from 112, Ifield Road, C. C., on the 18th. (2) A cook from 27, Redcliffe Square, $\frac{1}{2}$ mile R., on the 2nd. (3) A domestic from 4, Bolton Gardens, $\frac{1}{2}$ mile R., on the 6th. At the above address only a fortnight. (4) A housekeeper from 18, Bolton Gardens, $\frac{1}{2}$ mile R., on the 6th. By handling infected clothing in the house of a case occurred last year. (5) A domestic from 20, Rich Terrace, $\frac{1}{2}$ mile R., on the 13th. (6) A piano tuner from 7, Clow Terrace, $\frac{1}{2}$ mile R., on the 13th. From a house in Finborough Road. (7) One from 39, Eardley Crescent, $\frac{1}{2}$ mile R., on the 21st. (8) One from 23, Philbeach Gardens, $\frac{1}{2}$ mile R., on the 26th. (9) A carpenter from 43, Kempsford Gardens, $\frac{1}{2}$ mile R., on the 27th, living at the above address since the 14th. (10 and 11) A private case in 13, Child's Place, $\frac{3}{4}$ mile R., causing a case at No. 1B, removed to Fulham Hospital on the 27th. (12) A woman from 12, Devonshire Terrace, 1 mile R., on the 4th, caused by the delirious patient from Victoria Grove last month, who drove to her house. (13) A butler from 77, Onslow Gardens, 1 mile R., on the 3rd, by visiting his brother in Bridge Street, Hammersmith. (14 to 26) Thirteen from O. S. A., viz., 2 from Enson Mews and 1 each from Victoria Grove (his father admitted last month in a delirious condition), Queensbury Place, Portobello Road, South End, Fenelon Road, Stanhope Mews, Yeoman's Row, Ledbury Road (a sister of the Assistant Medical Officer, Fulham Hospital; her little brother was treated at home for chicken-pox, who is said to have contracted the disease in Victoria Docks), Cornwall Road, St. James' Street, and Edward's Place.

Chelsea Cases.—(1) A carman from 11, Lot's Road, $\frac{1}{2}$ mile R., on the 19th. (2 and 3) Two from 22, Slaidburn Street, $\frac{3}{4}$ mile R., on the 7th and 21st. An infected haunt. (4) A labourer from 17, Blantyre Street, $\frac{3}{4}$ mile R., on the 2nd. (5) One from 65, Seaton Street, $\frac{3}{4}$ mile R., to Highgate Hospital, on the 10th. (6) A domestic from 235, Fulham Road, 1 mile R., on the 3rd. (7 to 16) Ten from O. S. A., viz., 3 from Arthur Street, and 1 each from Park Terrace, Falcon Terrace, Bywater Street, Upper Manor Street, Wood Street, Wellington Street, and Guthrie Street.

July.—Fulham Hospital admitted 44 acute cases,

viz., 13 from Fulham, 7 from Kensington, 11 from Chelsea, 5 from St. Pancras, 4 from St. George's, 2 from Strand, 1 from St. Giles's, and 1 from Brentford. Highgate Hospital admitted 1 from Chelsea. The Health Officers reported 13 in Fulham, 11 in Chelsea, and in Kensington 10 during the four weeks ending July 23rd. The weekly number of cases under treatment was 78, 75, 51, 46, and 45.

Fulham Cases.—(1) A domestic from 5, Seagrove Road, C. C., on the 19th. From a concealed case in Rickett Street. (2) A labourer from 34, Vaunston Place, $\frac{1}{2}$ mile R., on the 2nd. (3 and 4) A coachman and his wife, from 32, Bective Road, $\frac{1}{2}$ mile R., on the 7th and 20th. The Fulham Hospital carpenter lived in the house. (5 and 6) Two children of two workmen in the Gas Factory, from 1, Britannia Road, $\frac{1}{2}$ mile R., on the 9th and 12th. (7) A female from 49, Waterford Road, $\frac{1}{2}$ mile R., on the 16th. (8 and 9) Two children of two workmen in the Gas Factory, from 6, Broxholm Road, $\frac{3}{4}$ mile R., on the 12th and 24th. (10) A potman from "Wilton Arms," $\frac{3}{4}$ mile R., on the 3rd. (11) A labourer from 13, Crown Street, $\frac{3}{4}$ mile R., on the 7th. (12) One from 3, Orchard Street, $\frac{3}{4}$ mile R., on the 15th. (13) One from Masborough Road, O. S. A.

Kensington Cases.—(1 and 2) One each from 7 and 54, Ifield Road, C. C., on the 8th and 26th. The former resident for two months in the house. (3) A child from 13, Child's Place, $\frac{3}{4}$ mile R., on the 3rd. From a child treated at home. (4) An undertaker from 68, Abingdon Villas, 1 mile R., on the 24th. He removed a body from Fulham Hospital a fortnight previous. (5) A chemist's assistant, from 280, Fulham Road, 1 mile R., on the 4th. (6 and 7) One each from Beaufort Gardens and Brompton Road, O.S.A.

Chelsea Cases.—(1) A paper-stainer from 49, Slaidburn Street, $\frac{3}{4}$ mile R., on the 19th. An infected haunt. (2) A carpenter from 67, Limerston Street, $\frac{3}{4}$ mile R., on the 22nd. (3) One from 42, Beaufort Street, 1 mile R., on the 18th. (4 to 12) Nine from O. S. A., 2 from Manor Street, and 1 each from Arthur Street, Zealand Street, Union Place, Robert Street, Markham Square, Smith's Terrace and Margaretta Terrace.

August.—Fulham Hospital admitted 33 acute cases, viz., 5 from Fulham, 7 from Kensington, 4 from

Chelsea, 12 from St. George's, 2 from Marylebone, 1 from St. Giles's, 1 from St. Pancras, and 1 from Westminster. Highgate Hospital admitted 1 from Chelsea. The Health Officers reported 5 in Fulham, 5 in Chelsea, and in Kensington 8, during four weeks ending 20th August. The weekly number of cases under treatment at Fulham Hospital was 38, 34, 37 and 33.

Fulham Cases.—(1) One from 10, Broxholm Road, $\frac{3}{4}$ mile R., on the 11th. An infected house. (2) One from 20, Estcourt Road, $\frac{3}{4}$ mile R., on the 18th. (3) A milkman from 79, Rylston Road, $\frac{3}{4}$ mile R., on the 13th. (4) One from 11, Grove Terrace, $\frac{3}{4}$ mile R., on the 14th. (5) A labourer from 6, Peterborough Road, 1 mile R., on the 29th.

Kensington Cases.—(1) One from 54, Ifield Road, C. C., on the 12th. A case from the same house last month. (2) A servant from 84, Redcliffe Gardens, $\frac{1}{2}$ mile R., on the 29th. She returned from her holiday on the 27th. (3 to 7) Five from O. S. A., viz., Holmes Place, Gloucester Road, Clarendon Road, Blithfield Street, and Shaftesbury Road.

Chelsea Cases.—(1) One from Camera Cottages, $\frac{3}{4}$ mile R., on the 11th. (2 to 5) Four from O. S. A., viz., Smith's Terrace, Strewon Square, Denyer Street, and Ovington Square.

September.—Fulham Hospital admitted 12 acute cases, viz., 2 from Fulham, 4 from Kensington, 2 from Chelsea, 2 from Strand, 1 from St. George's, and 1 from St. Pancras. The Health Officers reported 2 in Fulham, 10 in Kensington, and 3 in Chelsea. The weekly number of cases under treatment in Fulham Hospital was 29, 22, 19 and 19.

Fulham Cases.—A small-pox nurse and her child from Broxholm Road, $\frac{3}{4}$ mile R., on the 23rd.

Kensington Cases.—(1) A child from 87, Ifield Road, C. C., on the 1st. (2 to 4) Two from Swinbrook Road, and 1 from Chapel Place, O. S. A.

Chelsea Cases.—Two from Henry Place, O. S. A.

October.—Fulham Hospital admitted 7 acute cases, viz., 1 from Kensington (Abingdon Road, O. S. A.), 4 from Islington, 1 from St. George's, and 1 from Lambeth. The weekly number of cases under treatment in Fulham was 14, 15, 14, 8 and 8.

November.—Fulham Hospital admitted 11 acute cases, viz., 7 from Islington, 1 from Holborn, 1 from Westminster, 1 from Wandsworth, and 1 from St.

Pancras. The weekly number of cases under treatment was 8, 9, 10 and 10.

December.—Fulham Hospital admitted 21 acute cases, viz., 2 from Fulham, 3 from Chelsea, 1 from Paddington, 6 from Islington, 2 from St. Pancras, 2 from Strand, 2 from Marylebone, and 3 from Wandsworth. The Health Officers reported 2 in Fulham, and 4 in Chelsea. The weekly number of cases under treatment was 8, 12, 18 and 19. Highgate Hospital admitted 1 from Kensington.

Fulham Cases.—(1) A labourer from 5, Moorpark Terrace, $\frac{1}{2}$ mile R., on the 25th. (2) A railway guard from 4, Estcourt Road, $\frac{3}{4}$ mile R., on the 19th. The Kensington case was from Ladbroke Hotel, O. S. A.

Chelsea Cases.—(1 and 2) One each from 44 and 38 Slaidburn Street, $\frac{3}{4}$ mile R., on the 8th and 18th. (3) One from 496, King's Road, $\frac{3}{4}$ mile R., on the 21st.

Thus the history of the cases recorded in the year 1879 clearly demonstrates the spread of small-pox in a common-place manner, and proves the speculative nature of the theory of the aërial dissemination of small-pox infection.

The Year 1880.

THIS was not an eventful year, as the small-pox epidemic was on the decline. There were 475 deaths from it in London, of which 3 were in Kensington, 49 in Fulham, including 48 in Fulham Hospital, and 1 in Chelsea. The Metropolitan Asylums Board Hospitals admitted 1,916 cases, of which 46 were from Fulham, 40 from Kensington, and 17 from Chelsea. Highgate Small-pox Hospital admitted 1 from Fulham O. S. A., and 1 from Kensington O. S. A. The Health Officers reported 51 in Fulham, 51 in Kensington, and 8 in Chelsea as the incidence of the disease.

January.—Fulham Hospital admitted 45 acute cases,

viz., 5 from Fulham, 4 from Kensington, 4 from Chelsea, 20 from Islington, 5 from St. Pancras, 2 from Wandsworth, 2 from Marylebone, and 1 each from Paddington, Strand, and St. George's. The known incidence of disease was 6 cases in Fulham, 8 in Kensington, and 4 in Chelsea. The weekly number of cases under treatment during the five weeks ending 31st January, was 24, 32, 31, 36, and 33.

Fulham Cases.—A labourer from 56, Farm Lane, C. C., infected house. (2) A child from 17, Fane Street, $\frac{1}{2}$ mile R., on the 23rd to Fulham Hospital. (3) A female from 19, Chesson Road, $\frac{1}{2}$ mile R., on the 29th. (4) A labourer from 1, Elizabeth Place, $\frac{3}{4}$ mile R., on the 29th, from a fatal concealed case in Hilmer Street. (5) A labourer from 36, Ancill Street, 1 mile R., on the 1st, from a concealed case. (6) A case treated at Vanstone Place, $\frac{1}{2}$ mile R., reported on the 28th.

Kensington Cases.—(1) A child from 2, Finborough Road, C. C., on the 23rd. She came from Paris on the 16th. (2) A domestic from 33, Coleherne Road, $\frac{1}{2}$ mile R., on the 6th. (3) A domestic from 24, Harcourt Terrace, $\frac{1}{2}$ mile R., on the 13th. She came from Yorkshire only a week before. (4) A newspaper boy from 141, Earl's Court Road, $\frac{3}{4}$ mile R., on the 27th. By visiting in Child's Place, where there were cases of small-pox. (5 to 7) Three in Child's Place, $\frac{3}{4}$ mile R., caused by concealed cases; 2 at 14, reported on the 20th and 22nd; and 1 at 13, on the 28th. (8) A boy in Goldborne Road, O. S. A.

Chelsea Cases.—(1 and 2) Two children from 39, Slaidburn Street, $\frac{3}{4}$ mile R., on the 8th and 24th. (3) One from 94, Arthur Street, 1 mile R., on the 23rd. (4) One from Leader Street, O. S. A.

February.—Fulham Hospital admitted 62 acute cases, viz., 18 from Fulham, 12 from Kensington, 4 from Chelsea, 15 from St. Pancras, 4 from St. George's, 6 from Wandsworth, 2 from Islington, and 1 from St. Giles's. The known incidence of disease was 18 in Fulham, 15 in Kensington, and 4 in Chelsea. The weekly number of cases under treatment was 40, 54, 50, and 53.

Fulham Cases.—(1) A domestic from 14, Farm Lane, C. C., on the 14th. She was sent home ill from the place of her service; she took it from 5, Langston-place, where a wake had been held on a fatal case. (2) A plasterer

from 3, Rickett Street, C.C., on the 17th. A concealed case. (3) A charwoman from 6, Rickett Street, C.C., on the 20th. From a concealed case. These cases were discovered by house to house visitation. (4 and 5) Two sisters from 4, Hermitage Villas, $\frac{1}{2}$ mile R., on the 1st and 16th. (6) A labourer from 17, Fane Street, $\frac{1}{2}$ mile R., on the 4th. Infected house. (7 to 11) A domestic from 5, Rear Gate, $\frac{1}{2}$ mile R., on the 13th. Sent home ill from 8, Seagrove Road, an infected house and a baby farm. She gave it to the lodgers in the house, on the 22nd, 24th and 27th. (12) A tailor from 5, Langston Place, $\frac{1}{2}$ mile R., on the 14th. The house in which a wake was held over a fatal case. (13 and 14) A carpenter from 31, Cornwall Street, $\frac{1}{2}$ mile R., on the 25th. From a house opposite. (15) A fitter from 3, Edward's Cottages, $\frac{3}{4}$ mile R., on the 15th. By visiting friends in Church Street, Battersea. (16) A labourer from 20, Anselm Road, $\frac{3}{4}$ mile R., on the 19th. (17) A publican from 13, Star Lane, $\frac{3}{4}$ mile R., on the 27th. From a concealed case at home. (18) A navy from 8, Kennett Road, 1 mile R., on the 14th. (19) A private case was treated in Vaunston Place, $\frac{1}{2}$ mile R., reported on the 14th.

Kensington Cases.—(1) A female from 104, Adrian Terrace, C.C., on the 14th. (2) A painter from 36, Ifield Road, C.C., on the 21st. A fatal case occurred in the house in October last. (3) A painter from 5, South Street, C.C., on the 23rd. (4) A sick-visitor from 15, Redcliffe Gardens, $\frac{1}{2}$ mile R., on the 3rd. Believed to have caught it at a public concert. (5) A domestic from 20, Coleherne Road, $\frac{1}{2}$ mile R., on the 14th. (6) A carpenter from 18, Kempsford Gardens, $\frac{1}{2}$ mile R., on the 23rd. (7) A labourer from 3, North Row, $\frac{3}{4}$ mile R., on the 3rd. By visiting infected houses either in Child's Place, or Hilmer Street, Fulham. (8 and 9) A mother and child from 18, Ashley Cottages, $\frac{3}{4}$ mile R., on the 9th. (10) A domestic from 38, West Cromwell Road, 1 mile R., on the 21st. From the infected clothing of her companion who was a patient in July last. (11 to 13) Two in 13 and one in 14, Child's Place, $\frac{3}{4}$ mile R. Infected houses. (14) A servant from Industrial School, suffering from measles took the disease in the hospital. (15 and 16) One each from Stamford Street, and Notting Hill Square, O.S.A.

Chelsea Cases.—(1) A labourer from 63, Blantyre Street, $\frac{3}{4}$ mile R., on the 10th. By visiting his father at

21, Seagrove Road. (2) A dressmaker from 10, Riley Street, $\frac{3}{4}$ mile R., on the 25th. (3) A domestic from 34, Church Street. Only two days at the address. (4) One from Elm Park Gardens O. S. A.

March.—Fulham Hospital admitted 23 acute cases, viz., 8 from Fulham, 6 from Kensington, 3 from St. George's, 2 from Strand, 1 from St. Giles's, 1 from Wandsworth, 1 from Paddington, and 1 from Westminster. The Medical Officers of Health reported 10 in Fulham, 7 in Kensington, and 1 in Chelsea. The weekly number of cases under treatment was 52, 44, 33 and 25.

Fulham Cases.—(1) A horse dealer from 6, Roxby Place, C. C., on the 6th. From a concealed case. (2) A dressmaker from 5, Little Stamford Street, $\frac{1}{2}$ mile R., on the 2nd. Took it from 5, Rear Gate, where there have been cases. (3 to 6) Four from 19, Chesson Road, $\frac{3}{4}$ mile R., on the 4th, 5th, and 2 on the 21st. A case from the same house in January. (7) A baker from Richmond Place, $\frac{1}{2}$ mile R., on the 11th. (8) One from 61, May Street, $\frac{3}{4}$ mile R., on the 27th. (9) A private case treated in Anselm Road, $\frac{3}{4}$ mile R.

Kensington Cases.—(1) A milkman from 15, Redcliffe Mews, $\frac{1}{2}$ mile R., on the 3rd. (2) A domestic from 24, Eardley Crescent, $\frac{1}{2}$ mile R., on the 5th. (3) A domestic from 5, Redcliffe Square, $\frac{1}{2}$ mile R., on the 21st. (4 to 6) Three from O. S. A., viz., one each from Kensington Place, Stamford Road, and 109, High Street.

April.—Fulham Hospital admitted 27 acute cases, viz., 2 from Fulham, 6 from St. George's, and 3 from St. Giles's. The weekly number of cases under treatment was 18, 18, 17, 16 and 15. The three Fulham cases, including desperate case, occurred in O. S. A. The small-pox epidemic was on the decline in the metropolis during the year, and it followed the same general law in the S. A., for although we admitted 45, 62 and 23 acute cases in January, February and March respectively, it had no influence on the S. A. through air. It cannot be said that there were no susceptible individuals present there, because in the following year, when Mr. Power made his investigations, S. A. was specially infected as in the years 1878 and 1879.

May.—Fulham Hospital admitted 27 acute cases, viz., 2 from Fulham, 3 from Kensington, 1 from Chelsea, 2 from Paddington, 8 from Islington, and

7 from St. Pancras. The weekly number of cases under treatment was 11, 11, 16, and 23. The two Fulham cases were from Clarence Villas, 1 mile R., on the 27th. The Kensington and Chelsea cases were from O. S. A.

June.—Fulham Hospital admitted 26 acute cases, viz., 5 from Fulham, 2 from Kensington, 9 from Islington, 3 from St. George's, 2 from St. Giles's, 2 from Paddington, 2 from Marylebone, and 1 from St. Pancras. The weekly number of cases under treatment was 20, 24, 29, and 26.

Fulham Cases.—(1) One from Dawes Lane, $\frac{3}{4}$ mile R., on the 4th. (2) One from Model Buildings, 1 mile R., on the 29th. Infected house. (3) One from Grove Terrace, 1 mile R., on the 17th. (4 and 5) Two from Goldhawk Road, and West London Hospital, O. S. A. The two Kensington cases were, a domestic from 7, Bolton Gardens, $\frac{1}{2}$ mile R., on the 12th, and one from Silchester Terrace, O. S. A.

July.—Fulham Hospital admitted 16 acute cases, viz., 3 from Fulham, 2 from Kensington, 8 from Islington, 1 from St. George's, 1 from Paddington, and 1 from St. Pancras. The weekly number of cases under treatment was 19, 15, 17, 17, and 14.

Fulham Cases.—(1) One from 32, Dieppe Street, 1 mile R., on the 3rd. (2) One from 4, Grove Terrace, $\frac{3}{4}$ mile R., on the 17th. (3) One from Portland Street, O. S. A.

Kensington Cases.—(1) A domestic from 7, Redcliffe Square, $\frac{1}{2}$ mile R., on the 23rd. (2) A pupil teacher from 338, Fulham Road, $\frac{1}{2}$ mile R., on the 12th. (3) A private case at 78, Cromwell Road, 1 mile R., reported on the 17th. He contracted the disease at Folkestone.

August.—Fulham Hospital admitted 10 acute cases, viz., 1 from Fulham, Elizabeth Cottage, $\frac{3}{4}$ mile R., 1 from Kensington, O. S. A., 4 from Islington, 2 from St. Pancras, 1 from Paddington, and 1 from St. Giles's. A private case was treated at 3, Eardley Crescent, $\frac{1}{2}$ mile R. The weekly number of cases under treatment was 11, 12, 11, and 10.

September.—Fulham Hospital admitted 14 cases, viz., 1 from Fulham, O. S. A., 6 from Kensington, 1 from St. George's, 1 from Paddington, 1 from Marylebone, 2 from Islington, and 2 from St. Pancras. The weekly number of cases under treatment was 12, 12, 14, 18, and 10.

Kensington Cases.—(1) A domestic from 6, Redcliffe Gardens, $\frac{1}{2}$ mile R., was sent home ill to 13, South Place, C. C., on the 30th. The following day she went to St. George's Hospital as an out-door patient, and on the 1st drove down in a cab to the workhouse, from which place she was removed to the hospital. (2 and 3) Two from 13, South Street, C. C., the house where the above case went home ill, one on the 13th, and the other walked to the hospital on the 15th. (4) A domestic from 3, Cathcart Road, $\frac{1}{2}$ mile R., on the 11th. (5) A domestic from 1, Lily Terrace, 1 mile R., on the 8th. She contracted it in Paris, nursing her sister. (7) One from Edenham Street, O. S. A.

October.—Fulham Hospital admitted 3 acute cases, viz., 2 from Kensington, O. S. A., and 1 from Islington. The weekly number of cases under treatment was 6, 9, 7, and 7.

November.—Fulham Hospital admitted 5 acute cases, viz., 1 from Fulham, O. S. A., 1 from Kensington (330, Fulham Road, $\frac{1}{2}$ mile R.), 2 from St. George's and 1 from Marylebone. The weekly number of cases under treatment was 4, 3, 4, and 3.

December.—Fulham Hospital admitted 15 acute cases, viz., 10 from Islington, 2 from Holborn, 1 each from St. George's, St. Pancras, and Strand. There were 55 convalescents transferred from other hospitals. A case from Fulham, O. S. A., was sent to Stockwell Hospital. The weekly number of cases under treatment was 1, 1, 44, 38, and 63.

With the close of the year 1880 ends the history of the spread of small-pox in Kensington, Fulham, and Chelsea, between which three districts Fulham Hospital is situated, previous to Mr. Power's investigations. It has not been my intention to comment on his observations during the following three months, viz., January, February, and March, 1881. From my personal investigations during the years 1877-80, I had formed definite ideas how small-pox spreads in a commonplace manner, whatever mode it may be—through exposure of the sick, want of isolation, washing infected clothing in laundries, concealment of cases, mismanagement of hospitals, &c., and this has been abundantly testified in the narration of the history year after year. Those who have carefully perused Mr. Power's Report (Supplement to the "Tenth Annual Report of the Local Government

Board, pages 302-358), will agree with me when I say that he bases his theory on assumptions and general statements—mere negation of the knowledge of the spread of the disease. I have clearly demonstrated that the incidence of the disease in Kensington, Fulham, and Chelsea, separately, is quite a different thing from admissions to the Metropolitan Asylums Board Hospitals. Again, the calculation of the incidence in the C. C. and surrounding rings, taking the houses collectively in the three districts in the respective areas at certain times, is erroneous; for I have shown that in those months when the disease was most prevalent in the S. A. of Fulham, it was not so in the S. A. of Kensington, and so on, irrespective of multifarious conditions favouring the spread of the disease narrated at the commencement of this paper.

Before I complete this paper I shall briefly notice Mr. Power's conclusions. At page 322, he states:—"It will now be convenient to sum up the results that have, up to this point, been established in the present inquiry. (1) There has been in each epidemic period an excessive incidence of small-pox on houses in the neighbourhood of the hospital as compared with more distant houses in Chelsea, Fulham, and Kensington. (2) The percentage of houses invaded in the neighbourhood of the hospital has become gradually smaller as the distance of the houses from the hospital has increased. This gradation has been very exact and very constant. (3) Houses upon the chief lines of human intercourse with the hospital have not suffered more than houses lying in other directions from the hospital. (4) In point of time, there has been a very marked relation between the varying use of the hospital and the manifestations of excessive small-pox in the neighbourhood. This relation has not shown itself while the use of the hospital has been for convalescents only. (5) The appearance of excessive small-pox in houses around the hospital has never been delayed until the hospital has become full or nearly full. It has been always most remarkable at the time when admissions to the hospital were beginning to increase rapidly. In the succeeding months of active operations, though the use of the hospital may have gone on increasing, the excess of small-pox upon the neighbourhood has habitually become less marked. (6) On comparison of different epidemics, an almost constant ratio is observed between

the amount of the hospital operations and the degree of excess of small-pox on the neighbourhood."

In describing the conditions of the population and the houses in the S. A., I have clearly shown how his first three conclusions can be justified without having recourse to the theory of infection. His statement "that gradation has been very exact and very constant" is founded on inexact figures, varying with unequal admissions to metropolitan hospitals, with concealment of cases, private cases, and admissions to Highgate Hospital. As regards the fourth conclusion, it has been noticed that, with increasing use of the hospital, there has been to a certain extent increasing inter-communication between the hospital and the outer world. But there is one thing to be said, and that is, the existence of the disease was never fully ascertained from the beginning and primary cases isolated. We all know that the period of convalescence is not so infectious as the pre-eruptive and vesicular stages of the disease, as has been demonstrated by Panum, of Copenhagen, and Thomas, of Leipzig, and as has been narrated in my paper on "The Pre-eruptive Stage of Small-pox" (see *Medical Times and Gazette*, May and June, 1882). His fifth and sixth conclusions are meant to add force to his calculations based on unsound premises. Further on he states:—"At the time of the opening of Fulham Hospital four years ago, the Managers of the Metropolitan Asylums Board were nowise unfamiliar with the accusations to which small-pox hospitals are liable, and they applied their experience with great intelligence and forethought. The hospital buildings are, as has been shown, thoroughly well enclosed and separated from populous parts of the district by wide intervals of open ground. Also, they are remote from traffic routes, so that few persons besides those having business at the hospital need to go near it."

It must be evident to every reader of this paper that Mr. Power's complimentary advocacy of the management of the Fulham Hospital is a grievous failure, and *would* lead one to speculation and philosophy. His description of the current doings of the hospital "from the first regulated with the express purpose of avoiding all needless communication with the outside," is, to say the least, a picture without the original after all, and not applicable to the years 1877-80. His last three conclusions are a sequence of his reasoning from

the evidence placed before him, viz. :—“(7) The machinery of the hospital administration, with inclusion of defects in that machinery, does not account for the peculiarity of small-pox incidence within the three parishes of Chelsea, Fulham, and Kensington since the establishment of the hospital. (8) There must have been some condition or conditions operating to produce the observed distribution of small-pox around the hospital that have pertained to the hospital as such, and that have been in excess of the condition of small-pox extension as usually recognised.”

“To these propositions it should be seen to be a corollary, that every detail in the machinery of the hospital that is within the province of the hospital administration becomes of more importance to the protection of the neighbourhood than ever before. The apprehension that, outside of conditions over which man has control, there may exist other conditions conducing to the spread of small-pox from a hospital to its neighbourhood should be a reason for increased and not for diminished watchfulness in the management of the hospital, in order that such other conditions may be deprived, as far as human foresight can deprive them, of the opportunity of exerting their influence.”

“(9) During the present epidemic period, and most probably during former similar periods, there has arisen in the atmospheric circumstances of the time peculiar facility for the dissemination in an undamaged state of any matter that may have been given off from the hospital.”

Like the judge who asks the gentlemen of the jury to leave out of their mind all they might have known and heard of the accused and to give their verdict in strict accordance with the evidence produced before the Bench, Mr. Power, disregarding all the facts bearing on the history of the epidemic in the districts of Fulham, Kensington, and Chelsea because he could not have access to them; disregarding the variety of the conditions of the population in those districts, which tend to the spread of the disease; taking for granted that admissions to Metropolitan Asylums Board Hospitals represented the incidence of the disease; overlooking the mismanagement of the institution; and disregarding the spread of the disease through concealment, laundries, non-isolation, and

other commonplace modes — asks us to believe in his statistics, calculations, and arguments, and join him in enunciating the hypothesis of aërial infection, stamped with the authority of the Local Government Board, as a compromise with the agitators against the metropolitan small-pox hospitals, and thus end the *protracted* litigations of the managers of the hospitals. His conclusions might satisfy, as they have satisfied, the legal mind, but that cannot be considered a solution of the scientific problem. Mere negation of facts is not scientific evidence. I have placed before the readers all the facts I can command, and I ask them whether they are prepared to accept Mr. Power's nine conclusions quoted above. I for one look upon his theory and arguments, speculative as they are, as not applicable to the years 1877-80 and contrary to facts and my experience.
