

deaths referred to "fever," which had been 9 and 1 in the preceding two weeks, rose again to 6 last week, of which 4 occurred in Glasgow. The fatal case of diphtheria was recorded in Dundee. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 67 and 71 in the previous two weeks, were 69 last week, and exceeded by 7 the number returned in the same week of last year. The causes of 53, or more than 11 per cent., of the deaths registered in the eight towns during the week were not certified.

#### HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 29.6 and 31.5 per 1000 in the preceding two weeks, further rose to 35.5 in the week ending August 20th. During the first seven weeks of the current quarter the death-rate in the city averaged 30.3 per 1000, the mean rate during the same period being but 22.5 in London and 18.8 in Edinburgh. The 240 deaths in Dublin last week showed an increase of 27 upon the number returned in the preceding week; they included 39 which were referred to diarrhoea, 27 to measles, 5 to whooping-cough, 4 to "fever" (typhus, enteric, or simple), 3 to scarlet fever, and not one either to small-pox or diphtheria. Thus the deaths resulting from these principal zymotic diseases, which had steadily risen in the preceding five weeks from 45 to 58, further rose last week to 78; they were equal to an annual rate of 11.5 per 1000, the rate from the same diseases being 5.7 in London and 3.2 in Edinburgh. The fatal cases of diarrhoea, which had been 29 and 23 in the previous two weeks, rose again to 39 last week. The deaths referred to measles, which had been 16 and 27 in the preceding two weeks, were again 27 last week. The 5 fatal cases of whooping-cough were within one of the number in the previous week, and the 4 deaths referred to "fever" exceeded those recorded in any recent week. The deaths of infants showed a marked excess, while those of elderly persons declined. Eight inquest cases and 8 deaths from violence were registered; and 51, or nearly one-fourth, of the deaths occurred in public institutions. The causes of 49, or more than 20 per cent., of the deaths registered during the week were uncertified.

#### THE SERVICES.

WE learn from the Indian papers that Surgeon J. C. Addison, of the Army Medical Staff, has, with the sanction of the military authorities, established an Ambulance Association at Quetta, and has been delivering a course of lectures on "First Aid to the Wounded." His class consisted of twenty-four ladies and a large number of the officers at the station.

**WAR OFFICE.**—Army Medical Staff: Brigade Surgeon Albert Stanley Knight Prescott has been granted retired pay, with the honorary rank of Deputy Surgeon-General (dated July 26th, 1887); Surgeon-Major Samuel Flood is granted retired pay, with the honorary rank of Brigade Surgeon (dated Aug. 24th, 1887).

**ADMIRALTY.**—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet-Surgeon John Shields has this day (16th inst.) been placed on the retired list, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets. Fleet-Surgeon Fleetwood Buckle, M.D., has been placed on the retired list of his rank (dated Aug. 12th, 1887).

The following appointments have been made:—Fleet Surgeon H. S. Lander, to Devonport Dockyard; Fleet Surgeon S. H. Stewart, to the *Impregnable*; Fleet Surgeon J. B. Courtenay, to the *Clyde*; Staff Surgeon E. R. H. Pollard, to the *Ganges*; Staff Surgeon S. F. Hamilton, to the *Devastation*; Staff Surgeon C. Hicks, to the *Neptune*; Surgeons G. B. Townsend and H. J. Hadden, to the *Nelson*, additional; Surgeon P. J. Barcroft, to the *Revenge*; Surgeon F. R. Jeans, to the *Monarch*; Surgeon R. W. Rickards, to the *Hotspur*; Surgeons G. H. Milnes and C. H. Upham, to the *Alexandra*, additional; Staff Surgeon J. C. B. Maclean, to the *Agincourt*; Staff Surgeon D. D. Birkey, to the *Espiegle*; Staff Surgeon E. H. Saunders, to the *Garnet*; Staff Surgeon William R. White, to the *President*, additional, for temporary service; and Mr. R. A. Nesbitt to be Surgeon and Agent at Donaghadee, Orlick Hill, Millisle, and Ballywater.

**RIFLE VOLUNTEERS.**—4th Volunteer Battalion, the Gordon Highlanders: James William Mackenzie Gunn, M.A., M.B., to be Acting Surgeon (dated August 20th, 1887).—2nd Volunteer Battalion (the Prince of Wales's), North Staffordshire Regiment: Surgeon H. M. Morgan, M.D., is granted the honorary rank of Surgeon-Major (dated August 20th, 1887).

## Correspondence.

"Audi alteram partem."

### "USEFUL EMPLOYMENT IN THE TREATMENT OF THE INSANE."

To the Editors of THE LANCET.

SIRS,—Writing under the above heading in your issue of August 20th, Dr. Bower is good enough to refer in complimentary terms to the management of this hospital. His letter, however, contains at least one, doubtless inadvertent, inaccuracy, which, I feel sure, he will be pleased to see corrected. He conveys the impression that the system of employment of patients is here of quite recent development, and adduces want of premises as an explanation of our apparent tardiness and want of energy. In both these particulars he is entirely in error. This institution has for many years had immediately attached to it an estate of nearly seventy acres (ornamental grounds, flower and kitchen gardens, &c.), and been equipped with the usual complement of workshops and the like. It is obvious, therefore, that it has not lacked the necessary resources. As to the utilisation of this material, it is certain that, during the tenure of office of the present medical superintendent (a period of over twenty years), employment of patients, particularly in outdoor work, has been regarded as a remedial agent of the most radical importance, and been carried out to the fullest possible extent. The case-books and other hospital records at any time during the past ten years indicate a proportion of working patients nearly, if not quite, as high as at present. It is true that the purchase, seven years ago, of an annexe, with a farm of 500 acres, has in a measure favoured the development of the employment system, but in no sense originated it. It has rendered practicable the devising of greater variety in occupation, but has not materially increased the number of the workers.

In a paragraph of their Forty-first Annual Report, the Commissioners in Lunacy note with approval the fact that one-third of our male patients were employed in out-door work in April, 1886. This estimate is, of course, perfectly correct so far as it goes, but it does not entirely cover the ground. In illustration of my meaning, I beg leave to append statistics, as to occupation, of a day taken at random in the past week:—

Total number of male patients	164
Employed on farm, grounds, and gardens	60
"    in in-door work (carpentry, printing, tailoring, &c.)	19
Cricket, tennis, bowls, driving, fishing, &c.	15

The addition of the inside workers to those employed out of doors raises the number of those usefully occupied to 79, or nearly 50 per cent. In-door work, though for obvious reasons less beneficial than labour in the open air, is nevertheless resorted to in a small minority of instances—patients who are either strongly averse to, or physically unfit for, out-door employment.

Considering next the 15 who are entered as devoting their time to various forms of recreation, I may remark that the majority, if not all, of these individuals are both mentally and physically capable of engaging in manual labour, if it were insisted on. Their preference, however, for healthy amusement in place of actual work cannot under the circumstances be reasonably interfered with. In a pauper asylum, however, where such counter-attractions are practically non-existent, this class of patients would undoubtedly go to swell the ranks of the usefully employed.

When to the numbers already quoted, I make two further additions—to include, first, those who are incapacitated by bodily illness or physical infirmity, and, secondly, those who, without pretending to any regular employment, yet occupy themselves in a rational manner in the wards (reading,

writing, drawing, music, &c.),—I find, out of a total of 164 male patients, a residuum of not more than 20 who can be truthfully denominated as hopelessly idle. These are either incurably indolent, or else so demented or intractable as to baffle all efforts to improve them.

Taking into account the comparatively large number of patients, the classes of society from which they are drawn, the various difficulties in the way of enforcing such a plan of treatment, amongst which the ill-advised opposition of relatives and friends is one of the most practical and embarrassing, the result which I have endeavoured to indicate above is not, I venture to think, wholly unsatisfactory.

I am, Sirs, faithfully yours,

LLOYD FRANCIS, M.A., M.D. Oxon.,  
Senior Assistant Medical Officer.

St. Andrew's Hospital, Northampton, Aug. 23rd, 1887.

## "DIPHTHERIA IN MAN AND THE LOWER ANIMALS."

To the Editors of THE LANCET.

SIRS,—In a leading article on the above subject in your issue of the 13th inst., you draw attention to a report lately issued by Dr. Turner, in which he deals with the relationship that, according to him, exists between diphtheria of man, the horse, the cow, the pig, and poultry, I have not at present seen Dr. Turner's report, but I am, nevertheless, bound to accept the statement in your article as in some sense reflecting the general conclusions with which it deals.

Dr. Turner seems to have arrived at the conclusion that the disease so well known to veterinary surgeons as affecting poultry, and in which a false membrane is formed in the mouth, throat, nostrils, and conjunctivæ, is identical with diphtheria, and he speaks of the membranous product as being *found in the trachea*. At first sight does this statement bear out the relationship? I have always understood that diphtheria is, in the human subject, mainly localised in the pharynx and fauces, and if I am wrong in this ingrained supposition, I may still fall back upon my experience, and say that I have never yet seen anything approaching a diphtheritic product in the trachea of any feathered creature; but I will not beg the question thus, as I am perfectly well aware that circumstances alter cases, and that slight histological differences exercise a material influence in the characters of pathological or, more strictly speaking, histological processes. I cannot at the moment remember the name of the pathologist who some time ago stated that the difference between catarrhal, croupous, and diphtheritic products was merely histological, and was dependent upon the difference in the arrangement of the epithelium in the mucous membrane of the pharynx, larynx, and trachea respectively, and that the same disturbing influence (only in a different degree) that would produce catarrh or croup in one would produce diphtheria in another; and until this statement was published I was at a loss somewhat to account to my pupils for a fact which I had on more than one occasion observed—viz., the occurrence of true diphtheritic products in the larynx and trachea of the cow. Diphtheria I have only seen once in the horse; it is more common in the pig; and a few years ago cases occurred in swine and cattle in the practice of Mr. Campbell, F.R.C.V.S., Kirkcudbright, on farms where diphtheria *had prior existence* in the attendants. Such statements as that made by Dr. Turner to the effect that "strangles in the horse appears to have some real kinship with human diphtheria" are gratuitous assumptions, and not borne out by the experience of every-day practice. That strangles in some seasons takes on protean characters is a fact well known to all observant veterinary practitioners; that it bears in its essential characters any resemblance to, or has any clinical kinship with, diphtheria are, again, gratuitous assumptions, and all the more so seeing that Dr. Turner attempted to impart to them an air of plausibility by the further statement that "a large proportion of fatal attacks of diphtheria has also been observed to occur in the families of persons—such as shepherds [this brings in the innocent sheep], grooms, and blacksmiths—who have to do with the lower animals." Really this is drawing conclusions (if I may be permitted to say so) from false data with a vengeance. Why does he not put cowherds and swineherds in the list? Dr. Turner, it seems to me, has lost sight of a well-known law bearing upon enzootics and endemics and epizootics and epidemics,

to the effect that in certain seasons this class of affections rage simultaneously, and that the same forces which favour the production or prevalence of epidemics and endemics are equally operative in the propagation and spread of epizootic and enzootic diseases. Returning to Dr. Turner's primary argument as to the prevalence of diphtheria in poultry and pigeons, I may be forgiven when I express the doubt that he has not made himself acquainted with the current medical and veterinary literature on the subject during the past few years, both in this country and on the Continent.

About the year 1865, I saw, in the neighbourhood of Liverpool, cases in poultry which I looked upon as of the nature of *diphtheritic aphtha*. On my removal to Edinburgh (in the years 1871-2), I came across similar cases in pigeons, poultry, and canaries, and in the first lectures it was my privilege to give in the Royal Veterinary College on the subject of infectious and contagious diseases I described an affection that I considered partook partly of the nature of aphtha and partly of that of diphtheria by the dual term *diphtheritic aphtha*, and which was most certainly contagious and infectious between poultry and pigeons. I further attributed it to the action of a fungus (*aleptothrix*), and thought that its production was favoured by insanitary conditions and all influences that tended to lower the vital forces, such as damp, cold, and in-breeding. Some time after this a disease was described by Dr. Fleming, in his "Sanitary Science and Police," under the head of "Gregarinosis" or "Psorospermiosis," the clinical characters of which resembled those of diphtheritic aphtha. The terms mentioned were, if I mistake not, of continental origin, and were applied to the disease because it was believed to be due to a form of psorosperm or gregarina.

In 1879 M. Megnin described diphtheria of poultry, and distinguished two forms—(1) a false membranous form, and (2) a tuberculous form, the former being localised in the pharynx, nose, &c., the latter in the internal organs and muscles; and Megnin identified the disease (histologically) with the hepatic tuberculosis of rabbits. Megnin also asserted that M. Nicati sought to identify the affection with the diphtheria of man; but he himself combated Nicati's identification by drawing attention to the fact that he had frequently seen women and children eat infected poultry with impunity, and by the experiments of Trasbot of Alfort, who inoculated pigs and dogs ineffectually, fowls successfully, and who stated that a pupil of his—M. Faiés—placed diphtheritic membrane (from fowls) in his own throat with impunity.

In May, 1882, I read a paper on "Specificity in Disease" at a meeting of the North of England V. M. Association held at Newcastle, and amongst other subjects touched upon the disease designated "gregarinosis." For some time I had had doubts as to the nature of the disease, and strongly suspected that causally—as most certainly pathologically—it was intimately related to tuberculosis; but there were certain differences in the characters of its local manifestation which I could not reconcile with those of the last-mentioned disease. These were principally the presence of flattened yellow bodies in the intermuscular connective tissue, the peculiar croupous transformations so frequently seen in the lungs, and the cylindrical croupous and hæmorrhagic masses sometimes forming in and occluding the intestines, with the absence of that marked tendency to calcification so characteristic of tubercular granulomata. In the paper alluded to I concluded my remarks as follows:—"The dissemination of the nodules internally is certainly similar to that of ordinary tubercle, and, as in that disease, death is largely produced by anæmia and exhaustion. But, in other respects, the two diseases differ widely, though one is undoubtedly quite as specific in its nature as the other."

Since the above-mentioned date I have arrived at the conclusion that the disease might be due to a cladothrix form of fungus, the visible products of whose action were, as in the case of actinomycosis, granulomata. In August, 1883, attention was directed to the subject of Tuberculosis in Fowls, in a leading article in THE LANCET. And again in October, 1884, the statement of Emmerich to the effect that he had discovered a bacterium in the false diphtheritic membrane from pigeons is noticed in THE LANCET. The spread of disease amongst domestic poultry has been going rapidly on for some years, and in several—in fact, I may say in all—specimens examined by the newer methods of staining, my colleague, Professor McFadyean, has succeeded in detecting bacilli identical with those of tubercle. Whether, however, there are two distinct forms of disease in poultry,