

Loughborough and District General Hospital and Dispensary.—Res. H.S. £200.
 Manchester, Ancoats Hospital.—H.S. £150.
 Manchester Ear Hospital.—Anaesthetist. £15 15s.
 Manchester Hospital for Consumption and Diseases of the Throat and Chest.—Res. M.O. £350.
 Manitoba University.—Asst. Prof. of Anatomy. \$3500. Prof. of Biochemistry. \$4500. Asst. Prof. of Physiology. \$3500.
 Newcastle-upon-Tyne City Mental Hospital, Gosforth.—Jun. Asst. M.O. £400.
 Nottingham City Asylum.—Med. Supt. £700.
 Nottingham General Hospital.—H.P. £200.
 Oxford, Radcliffe Infirmary and County Hospital.—Cas. H.S. £200.
 Preston County Asylum, Whittingham.—Asst. M.O. £572 18s.
 Queen Mary's Hospital for the East End, Stratford, E.—Cas. O. £150.
 Royal Waterloo Hospital for Children and Women, Waterloo Road, S.E.—H.P. £100.
 St. Bartholomew's Hospital.—M.O. for Dept. of Psychological Medicine.
 Seamen's Hospital Society, Greenwich, S.E.—H.P. H.S. Each £150.
 Singapore Municipality.—Bacteriologist. 9000 dollars.
 Swansea County Borough.—Asst. M.O. £500. Dental Surg. £500.
 Sydney University, New South Wales, Australia.—Chair of Psychiatry. £1100.
 Tynemouth County Borough.—Clin. Tuberc. O. and Asst. M.O.H. £600.
 Wakefield, Clayton Hospital.—H.S. £225.
 West Derby Union.—Asst. Res. M.O. for Walton Institution, Rice-lane. £400.
 Winsley Sanatorium, near Bath.—Asst. Res. M.O. £250.

Births, Marriages, and Deaths.

BIRTHS.

EARP.—On July 22nd, at Onex, Geneva, Switzerland, to Kathleen, (née Goodliffe) wife of J. Rosslyn Earp, M.A., M.R.C.S.—a daughter, who was named Evelyn Mary.
 HARTIGAN.—On July 28th, at Wood Hatch, Farnborough, the wife of Colonel J. A. Hartigan, C.M.G., D.S.O., R.A.M.C., of a daughter.
 JEPSON.—On July 24th, at a nursing home, the wife of W. Baly Jepson, M.C., M.R.C.S., St. Bartholomew's Hospital, of a daughter.
 NORBURY.—On July 29th, at 25, Harley-street, the wife of Lionel E. C. Norbury, O.B.E., F.R.C.S., of a daughter.
 WINFIELD.—On July 27th, wife of Dr. F. B. Winfield, of Harborne, Birmingham, of a daughter.

MARRIAGES.

BUTCHER—DYER BALL.—On Thursday, the 28th July, at Blackheath, Trevor A. Butcher, O.B.E., M.R.C.S., L.R.C.P., to Lucy, only daughter of the late James Dyer Ball, I.S.O., Hong-Kong, and Mrs. Ball, 55, Lewisham-hill, S.E.
 HUDSON—BASTOW.—On June 19th, at St. Alban's Church, Burnaby, B.C., W. F. A. Hudson, M.A. (Cantab.), of Fosthall, Nakusp, B.C., to Irene Bastow, M.B., B.S. of 12, Cardiff-road, Luton, Beds.
 NAPIER-CLAVERING—SPRIGGE.—On July 23rd, at Stoke Poges Church, by the Rev. Canon A. T. Barnett, Mark, elder son of Mr. and Mrs. Claude Napier-Clavering, of Harborne, Birmingham, to Elizabeth, elder daughter of Sir Squire and Lady Sprigge, of Stoke Green, Slough.

DEATHS.

ALLEN.—On July 23rd, 1921, at Riversdale, Belper, Richard G. Allen, M.R.C.S. Eng., L.R.C.P. Edin.
 ATKINSON.—On July 25th, at Bexhill-on-Sea, Frederick Page Atkinson, M.D., formerly of Surbiton, aged 80.
 LYON-SMITH.—On July 29th, at 35, Harley-street, W., Harry Lyon Lyon-Smith, M.D., of heart failure.
 WILSON.—On the 19th July, at St. Martin's House, Jersey, suddenly, Fleet-Surgeon George Wilson, Royal Navy (Retired).

N.B.—A fee of 7s. 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.

CRIPPLES HOSPITAL, HARTSHILL.—On July 21st Lady Stafford formally opened the nurses' wing at the Hospital of the North Staffs Cripples Aid Society, Layfields, Hartshill. The foundation stone of the new block was laid by Sir Joseph Cook, now acting Premier of Australia, some time ago, the building being then intended for an operating theatre, but the necessity for better accommodation for the nurses was so urgent that temporary arrangements were made for the theatre. Although the cost of the addition has been largely raised already, the hospital requires a greatly increased annual income. If sufficient funds were available the work could be greatly extended. The income for last year was about £9000, the annual expenditure about £12,000; 198 patients passed through the wards, an increase of 34 on the previous year; 895 new out-patients presented themselves for treatment, and the average attendance in the out-patient department was 5076 per month. An average of 164 visits per month was made to the homes of patients. Pensioners are paid for by the Government, and all voluntary income is spent upon the children.

Notes, Short Comments, and Answers to Correspondents.

PHANTASIES OF THE DYING.

SOME REMARKS ON THE MANAGEMENT OF DEATH.

BY J. NORMAN GLAISTER, M.B., B.S. LOND.,
 CHIEF ASSISTANT, MEDICAL O.P.D., ROYAL FREE HOSPITAL.

It is commonly assumed that the function of the physician is to restore the disordered health of his patient to a normal condition, but it is difficult precisely to define a normal condition. It is obvious that a physical condition normal for a man of 65 is not normal for a boy of 15; it is almost equally obvious that the normal condition for a man aged 150 is one of peaceful slumber in a churchyard. The suggestion here brought forward is that we should regard death as being, like birth, a natural process; by so doing we shall escape the futile struggle, well known to every general practitioner, against a death known to be both inevitable and desirable.

The method of dealing with a dying patient here described will not improbably be criticised on two grounds: (1) That there is nothing new about it—up to recent times it has been usual for the priest to attend to the mental comfort of the dying, and he can do so still where it is considered necessary; (2) that it is new and unnatural and an undesirable intrusion into the privacy of last moments. Such criticism would encourage me in the belief that the provision of mental comfort for the dying has been a pre-occupation of the human mind from the earliest antiquity, and that present-day practice falls far short of what it might achieve in the fulfilment of the legitimate demands of a deep-rooted human instinct.

Mental State Associated with Inoperable Cancer.

For the sake of simplicity let us confine our attention to the typical case of a patient dying from inoperable cancer. Consider first the mental state usual in such a case. The illness of the patient is steadily progressing; his friends know that he is dying, but he is supposed not to know—or at least, not to know how advanced it is. He is perfectly sane, presumably capable of drawing inferences from his own observation of facts, and growing steadily worse; the efforts of those about him to dissuade him from taking his illness seriously are in marked contrast with their earlier attitude of urging him to seek thorough treatment. The atmosphere of unreality soon shuts him off completely from the world of common-sense and normal conversation; the word "cancer" is never mentioned, and the friends avoid any remarks which might encourage him to ask a direct question as to the verdict. Soon the outsider listening to a conversation between the patient and his friends will notice the most elaborate circumventions on both sides; each speaker is obviously preoccupied with "cancer," and draws attention to it negatively by his avoidances.

The patient's mind is therefore in a condition of continual conflict. He knows that he is dying of cancer, and this for him is very likely the most important fact in the world; it appears constantly in his dreams, but in the waking world there is not a living soul with whom he can discuss it. He tries to exclude it completely from his conscious and rational thinking. His conventional life and his intercourse with other people are based upon the supposition that he may soon get well; his inner life is based upon the exactly opposite supposition. Again, as in every case of extreme illness, the instinct to accept death is steadily growing stronger; but all his intercourse with others tends to accentuate the instinct of self-preservation natural to the healthy, which his friends persistently force upon him. The one thing which he craves—human companionship up to death as in normal life—is denied him. As the end approaches, the effort of those around him to encourage him becomes such a mockery that it is abandoned; but there is nothing to put in its place. There is no objective which the patient can now pursue in common with those around him, and he sinks into lonely phantasy. The rôle of the doctor is to treat symptoms, to prolong life as far as possible, and to relieve physical pain by morphine or otherwise. For all human purposes the patient is thus thrust out from the company of living minds and buried away from contact with his kind weeks or even months before his death.

The method here advocated aims at providing human companionship for the patient up to the last moment of consciousness, it relieves fear by showing a desire to share his dreams and phantasies, and to accompany him as far

as possible on his road. A short description of an individual case will probably afford the best illustration.

Example of a Complaining Patient.

Miss A. was an unattractive woman past middle age, with a large fibrotic goitre and an inoperable recurrence of carcinoma of the breast. When seen at the end of November, 1920, the left breast was solid with growth, there was some ulceration of the new growth at the site of the operation on the right breast, and many nodules of growth were scattered over the right chest wall. She was very depressed, and full of complaints about her nurses, her food, and the cheerlessness and discomfort of her room. She was not confined to bed, but appeared to spend the whole of her time sitting by the fire and thinking. She found difficulty in concentrating her attention upon a book, she had hardly any visitors, and there were no relatives or friends who would find house-room for her. She was thus thrown back almost entirely upon her own resources. These included an affectionate regard for a niece in a convent school in France, and a sense of gratitude towards a distant relative who was providing for her maintenance in a nursing home; beyond these she seemed to have no interests outside shopping, life in a comfortable boarding house, and travelling about London. She displayed little emotion in talking about her own illness, except when expressing her sense of grievance against the doctor (since dead) who had first diagnosed the case, because he had not concealed his diagnosis from her.

She was asked to face the facts (admittedly known to her) that she had cancer, that most people with cancer die, and that it was probable that she would do as others had done. At the second visit she refused to see me, but I was informed that she was much more cheerful and stronger and had been out visiting friends. (Her internal conflict had become external—if she could only avoid this brutally truthful doctor she could feel as if she were getting well.) During the following three weeks I saw her seven times and we became good friends, though she continued to cherish grievances against her nurses. Her strength increased at first, but later diminished, and by the New Year was finding difficulty in getting up. Her dislike of the matron and of her special nurse was now intense, and during the first week in January she began to have definite delusions of persecution and disturbing dreams.

Growth of Phantasy.

She was now entirely unable to leave her bed, and began rapidly to lose touch with the world of external fact. The cheery conventionalities of the nurse and of her few visitors were now thoroughly unreal to her, and the life of her dreams and phantasies became for her the real life, disturbed by occasional shadowy perceptions of taking nourishment, having her bed made, or receiving a visitor. She was evidently worried and unhappy, and she had a moderate amount of physical pain. Without external help it seems probable that at this point she would have withdrawn completely from contact with external affairs; she would have spent her remaining strength in a lonely struggle against insuperable difficulties in the land of phantasy. But with the help of a pre-established personal understanding and a readiness to talk in the language of her own phantasy, I was able to accompany her and to help her to overcome her difficulties. She recounted to me her dreams; many or most of them were half-waking dreams, more properly described as phantasies.

Three dreams recurred frequently in various guises: (1) Of lying at night in a sanctuary; (2) Of struggling to get somewhere; (3) Of people with a motor plotting against her. The patient evidently derived great comfort from recounting these dreams to a sympathetic listener, but she often had difficulty in talking, and would not take the trouble to give associations. It was therefore necessary to guess at the interpretation, and to wait for confirmation in subsequent dreams before making use of any information so gained. Also, since the interpretation of the dream was left for the time being in the region of the unconscious, it was necessary when one did make use of it to speak in the language of the unconscious.

Thus, when she first dreamed that people with a motor were plotting against her by the road-side, it seemed probable that the dream had reference to arrangements for her own funeral. This interpretation became more probable when she dreamed on the following night that the people in the nursing home were plotting to take her away in "a motor or something." She recounted this first as a dream, then as a statement of fact. I told her that I had sent for her niece, who was coming to take care of her. She replied: "It will be no use. I shall be taken away before she comes." I promised to keep in close touch with everything that went on at the home, and assured her that she certainly would not be taken away before my visit to her on the following day. This veiled statement that she would live

for at least 24 hours completely relieved her anxiety, and I left her sleeping comfortably. The mention of the word "death" might have excited the alarm conventionally proper to such an occasion.

On the following day she reported a night full of dreams of frantic struggles to get somewhere, so as not to be lost. They all ended in the nurse flinging her roughly on the bed. She was persuaded to see that the nurse was only doing her duty in looking after her. On the following day she had still been struggling all night to get somewhere and still always finishing with the nurse, but now as a rescuing angel and not as a pursuing demon. On the evening of the same day she took a great liking to the nurse and made friends with her old enemy the matron. At the same time she became contented and pleased with all her surroundings and with herself. She had been a very difficult patient and had worn out the patience of those around her, and this sudden change of front on her part no doubt gained for her a considerable increase of comfort and attention.

A Dream of "Home."

The next day she continued her policy of reconciliation; she sent for a priest and was received into the Roman Catholic Church. On the same night she had a dream which linked together most of her previous dreams and was probably for her the solution of her life problem. It was as follows: "I was in a place with high, thick, moss-covered walls, with pretty little white lights scattered about in the walls. In one part there were beautiful strings of beads hanging down over the stone. We all lay or sprawled upon the floor until midnight in night-dresses or chemises. The place was beautiful, but its effect was rather weird and frightening. Then I think I must have been in a boat in this place, because there was water underneath. I went out in a boat or on a bed and was struggling up a hill to make money. (On inquiry, she was sure it was a great struggle, though she was not herself rowing or doing anything.) I went on and came down the other side of the hill, but finished at the same place as I had started from, which had now become this room, and I called it home." She dreamed this dream several times with slight variations, but always finished at home, and was always "so glad to get there." When the niece arrived she gave an account of a watchnight service to which she had taken her aunt a year or two previously, and which had evidently supplied much of the imagery of this dream.

For several reasons it seemed probable that the place from which the patient started in this dream was at once her mother's womb, Mother Earth, and Mother Church. She set out from it on the voyage of her life, which was always an uphill struggle to obtain creature comforts, yet a struggle which demanded effort from others rather than from herself. She had followed her course right up the hill and down the other side, but was now surrendering her life to the common stock of human life whence it had come, to Mother Church whence it had come, to Mother Earth whence it had come, and was very glad to get home again.

Cessation of Mental Conflict.

The niece recognised this as a correct summary of her aunt's life-history. With the help of the knowledge of the patient's attitude of mind derived from this dream, it was comparatively easy to keep in touch with her mentality during the remaining days of her life. The niece was instructed to abandon all reticences and to talk quite freely in her aunt's presence, assuming that she knew of her approaching death and welcomed it. Her death had appeared to be imminent, but after this solution of her conflicts there was a very definite return of physical strength, and on the first day of the remaining week of her life her voice, from an almost inaudible whisper, became strong enough to carry across the room. She then grew steadily weaker until her death. She slept peacefully at nights, and during the days was perfectly conscious and seemed quite happy. She said that her sleep was natural; she thought she had pleasant dreams, but could not remember them. During the last three days she could only make herself heard with great difficulty, but she intimated that she liked best to hear her niece and a friend talking to each other about everyday affairs in the room, and on the last day she expressed herself as quite ready to die. She was fully conscious half an hour before her death, and died—apparently without any discomfort—in her sleep.

Physical pain was never a very prominent feature in this case, but there was considerable and increasing pain during December, and a little T. opii was given; after the solution of the mental conflicts, however, the pain ceased entirely, and no sedatives were required. During the last fortnight the patient appeared to have entirely forgotten the existence of her growth, and no mention was made of it or of any pain. There is no doubt that the last week of this patient's life was quite exceptionally pleasant and satisfactory both to herself and to those around her, and it

seems not unreasonable to attribute the fact to the special attention devoted to the solution of her mental difficulties.

The Necessity for Plain Speaking.

An immense amount of skilled effort is directed towards the extirpation of malignant disease, to the great advantage of those patients who are cured as a result; but unhappily most of those attacked remain uncured, and to these we seem to be able to offer comparatively little that is of value to them. Has not the time arrived for a broad re-survey of the whole treatment of the inoperable cancer case? Operative procedures of great value for the prolongation of life and the relief of discomfort have of late been described, but in very many cases the patient cannot be given the benefit of such treatment because it is considered necessary to maintain the fiction that there is no question of cancer, or alternatively that the growth has been permanently disposed of by a previous operation. When cancer has been diagnosed the facts in their least painful guise ought to be laid before the patient, and this may be a mental operation of considerable difficulty. The patient and his medical attendant can then discuss adequately their plans for extirpating the disease, or failing that for making the best possible use of the remainder of life, with all the help that the surgeon, the radiologist, and the psychologist can give them.

"PETROMORTIS."

POISONING by the exhaust gas of motor engines has already been the subject of comment in these columns (see THE LANCET, 1920, i., 1334). In the House of Lords the Marquis of Aberdeen commented recently upon the emission of noxious vapours from motor vehicles, suggesting the need of amending the Light Locomotive Acts so as to bring the matter under the control of the police authorities generally, when it was pointed out by the Duke of Sutherland (replying for the Minister of Transport) that the County Council could make regulations for the parks under their control similar to those which ruled in the great London parks, and that the police and London County Council possessed powers under the Locomotives on Highways Act to take proceedings against owners of motor vehicles that emitted smoke.

The London County Council have on various occasions exercised these powers. The visible emission of smoke from motor vehicles is certainly a cause of discomfort to other users of the road and sometimes interferes with vision, and constitutes a nuisance and a risk which should be stopped. The offence is due either to excessive lubrication or to an imperfect explosive mixture, the result of using a low-grade petrol or benzol without the sufficient addition of air. Whenever an explosion in a petrol engine is of moderate intensity and the combustion is incomplete, the exhaust gases will contain an increased percentage of carbon monoxide, which may rise to 15 or 20 per cent., while the percentage of carbon dioxide will correspondingly be lower.¹ According to Haldane 0.05 per cent. of carbon monoxide in air may produce symptoms of poisoning, 0.1 per cent. will cause headache and palpitation, while 0.2 per cent. is absolutely dangerous. Carbon monoxide is invisible and merely detectable by the symptoms it produces if inhaled. It is lighter than air, and so when emitted from a moving car will ascend and quickly become diluted. It is only when through a leak in the exhaust pipe that it escapes into a closed car, or where engines are run in imperfectly ventilated garages or, as during the war, in dugouts, that serious results have ensued.

Lieut.-Colonel Dale Logan, D.S.O., R.A.M.C. (retired),² Dr. R. P. Albaugh,³ and A. C. Foote⁴ have published accounts of serious results that have thus been caused. Automobilists using closed cars who develop headache after long runs would do well to eliminate this possibility. In America there have been a large number of deaths in small garages, with windows and doors closed, when engines have been run for testing purposes. There the term "petromortis" has been used by the press as to the cause of death in cases of this kind.

THE WEST RIDING MEDICAL CHARITABLE SOCIETY.

THE 93rd annual meeting of this Society was held at Sheffield on July 28th under the presidency of Prof. Arthur J. Hall. Reference has been made in former years to the valuable work carried on by this Society. Founded in July, 1828, at a meeting held in Leeds, it has gone on steadily

¹ T. Watson: On the Thermal and Combustion Efficiency of a Four-cylinder Petrol Motor. London, 1910.

² Journal of State Medicine, October, 1920.

³ Gasoline Engine Exhaust Poisoning, American Journal of Public Health, August, 1917.

⁴ A Case of Gasoline Poisoning, United States Nav. Med. Bull., No. 10, 1916.

increasing its sphere of usefulness. The Society now numbers 826, last year's increase of 63 being the largest in any one year. Those desirous of being admitted members of the Society must be in good health and not over 40 years of age. No application for a grant can be given except in respect of a member who has been an annual subscriber for at least five years. As is stated in the rules, the objects of the Society are as follows: "To help (a) any member who is disabled by illness, or accident, or age, and who has not adequate means of support; (b) the widow or children of a member dying in indigent circumstances; (c) the mother of such member, being a widow (or the sister, being single or a widow), who has acted as his housekeeper for a period of not less than five years immediately preceding his incapacity or death; (d) in the education of the children of members thus disabled."

The great majority of members join from altruistic motives and the Society deserves the support of every practitioner in the West Riding who is entitled to join. On the other hand, it is a wise and provident act for all young medical men and women to become members of this Society, for they know that if evil days fall upon themselves or upon those who are dear to them, and for whom they may not have been able to make provision, they will not be left without sympathy and help. The feature of the annual meeting is the careful consideration of the applications for help. The applicants are all known intimately by the stewards of the particular district in which they reside and full details of their circumstances are brought before the meeting. The grants are made for one year, each grant being subject to revision. Many of the grants have been running for long periods, one of them for 35 and one for 40 years. On this occasion 45 grants were made amounting to £1843. It was some years before the Society with its humble origin was able to make any grants at all, and it is a gratification to the members to know that the total sums granted now amount to £69,197.

ENGLISH-ESPERANTO DICTIONARY.

ESPERANTO was designed by a Polish ophthalmologist, Dr. Zamenhof, as an international link of communication. To-day medicine itself is becoming more and more recognised as a bond uniting the peoples of the world, and so it is natural that there should be many Esperantists among medical men. These will welcome a new and enlarged English-Esperanto dictionary,¹ containing some 30,000 entries. This number of words can, however, be considerably extended by the Esperanto student, as prefixes and suffixes play a very important part in the construction of the language. A feature of the dictionary is the printing in a separate line of every word having a distinct though allied meaning. For example, the word entertainment is repeated three times for the separate significations of hospitality, amusement, and soirée. Some new roots have been introduced which the authors offer for the acceptance of students, *tanko*, the armoured car introduced during the war, and *kamufli*, to camouflage, being examples; but not everyone will approve of the list of neologisms. *Pulo*, for instance, which is given for the name of the game played with billiard balls as well as for pool in the commercial sense, has long been in use by Esperantists for flea, and is indeed an international root, being derived from *pulex*. Although there is a fair proportion of technical words which the average educated man is expected to be acquainted with, there are not many medical terms, save those which are in more or less common use. There is a convenient list of proper names. Such a dictionary has long been wanted by Esperantists.

A MISSION HOSPITAL IN CHINA.

Prof. Harold Balme, dean of the School of Medicine, Shantung Christian University, brought the claims of preventive medicine in China before a large gathering of visitors to the British Medical Association gathering at Newcastle on July 22nd. We have before us the annual report for 1920 of the Roberts Memorial Hospital, Tsangchow (Province of Chihli), which contains a brief account of the extension of the main hospital work by the establishment of temporary branch hospitals, and gives some idea of the enormous amount of work undertaken by these outposts of Western medicine. Members of the hospital staff spent three weeks during the spring of the year under review in the city of Hsien Hsien, 50 miles distant from Tsangchow, and the capital of a county containing over 1000 villages and 320,000 people; and during those three weeks 2136 out-patients were attended to and 219 operations performed (112 of them under chloroform anaesthesia) in makeshift surroundings; two deaths only occurred—one of an out-patient, who drank "a week's supply of medicine at one go," and the other a Chinese

¹ English-Esperanto Dictionary. By F. Fulcher and B. Long. B.A. Camb. London: E. Marlborough and Co. 1921. Pp. 346, 7s. 6d.

hospital helper who contracted small-pox during his work. In the summer the hospital flew the Red Cross flag for two weeks in readiness to receive wounded from the fighting 50 miles to the southward, but the few casualties which occurred were sent to Tientsin. The famine spread through neighbouring districts in the autumn and the Mission undertook the distribution of grain under the auspices of the North China International Society for Famine Relief. An outbreak of pneumonic plague ten miles south of Tsangchow took place at the end of the year, at which time the earthquake, very serious elsewhere, was slightly felt in the neighbourhood.

A couple of pages of the report deal with the women's hospital. The difficulty occasioned by the suspicious attitude of many of the patients is partly overcome by the plan of allowing each patient one relative or friend to live in the hospital and wait on the patient. A great hindrance to medical work is the well-known ability of the Chinese to suffer uncomplainingly for long periods of time; many patients are only brought to hospital in a hopelessly advanced stage of disease. Tuberculosis and cancer are common, and all treatment is prejudiced by the absolute lack of sanitation in the homes of the poorer people. A lack of funds prevents the undertaking of more extensive work.

A MEDICO-EDUCATIONAL EXPERIMENT.

In the medical report which has been issued on the Oak Bank Recovery Home opened at Prestwich in October, 1917, by the Invalid Children's Aid Association, for ailing children, Dr. A. A. Mumford, the medical adviser to the Home, gives an account of the work done and of the principles of treatment adopted.

Earlier experiments in 1913-14 had shown the importance of steady and definite out-door occupation in establishing a permanent recovery in ailing children, better results following a shorter and fully occupied stay in the country than a longer and unoccupied stay in a convalescent home. Dr. Mumford notes that the final test is to be found in the ultimate fitness of the child for citizenship, and points out that the measurement of respiratory capacity forms a reliable index to the standard of will-power as well as that of bodily health in a given individual. On this axiom is based the treatment for the ailing and delicate children admitted to Oak Bank Recovery Home. Careful notes are taken of the range of breathing of all the children, most of whom on admission possess barely the minimum of respiratory capacity to suffice for a sedentary life, and although they are not encouraged to put forth exaggerated respiratory efforts, nor is any formal training given to this end, yet, after a sufficiently prolonged stay the range of breathing is found to be greatly increased. The benefits resulting from the acquirement of adequate respiratory capacity are claimed by Dr. Mumford to be far more permanent than are those derived from the usual forms of Swedish drill. Tables are appended to the report, suggesting that the longer the stay of the child the better the results as gauged by the breathing tests, the nature of the tests applied, however, not being specified.

Dr. Mumford correlates with these observations similar observations made upon children at the Greengate Dispensary, Salford. These children, who are suffering from actual deformity of the chest, associated with a severe degree of rickets, receive the same treatment as do the Oak Bank Home inmates, without the advantage of country air; and after three or four years of treatment they are usually discharged, not only completely cured but above the average in general health. Dr. Mumford concludes by the remark that improvement in class work is constantly associated with increased range in breathing.

WORTHING WATER-SUPPLY.

THE Worthing Corporation is wise in the step it has just embarked upon in preparing for the increased demands that must inevitably be made upon it in the near future as regards that all-important commodity, water. Worthing grew in population more than any other urban district in West Sussex in the decade 1901-1911; the figures of the population were 22,567-30,308 respectively; and while the 1921 census figures are not yet available they must, as the result of changed circumstances since 1911, show a very large increase in population, inasmuch as a considerable extension has been made of the boundaries. The demands for water have consequently greatly increased. The works from which Worthing obtains its present supply are situated at Broadwater, at the foot of the South Downs, and were constructed a quarter of a century ago. At that time the Local Government Board stipulated for a daily yield of 1,000,000 gallons before sanctioning the loan to cover the cost. The supply proved ample and of excellent quality, but during the past ten years, consequent upon the increased population and the extended district, the average daily consumption has increased

from about 900,000 gallons to 1,050,000 gallons, or at the rate of only about 15,000 gallons per day per annum. In a week of maximum use the average daily supply rises to about 1,300,000 gallons, an increase of about 25 per cent. This is approaching very closely to the maximum yield of the existing works, which at the end of a series of dry years may fall even as low as 1,300,000 gallons per day. Acting, therefore, on the advice of Mr. Kenneth P. Hawksley, consulting engineer of Westminster, the corporation has, without a word of opposition, voted in principle for a scheme to make ample provision for the future at a cost of £80,500. But this formidable sum is not to be raised at once, nor in the immediate future, but steps are to be taken forthwith for acquiring the land only and then piecemeal the construction of the works and the provision of the necessary machinery. In the first place, efforts are to be made to secure an additional flow of water from the excellent source already tapped at Broadwater; while the new site upon which the corporation has designs for an extension of their water-getting area is in the same vicinage as the existing works and known as the Long Furlong Valley. There is no doubt this will result in an abundant supply of water as excellent as that from the Broadwater site. The South Downs are noted for their excellent springs. A few miles eastward of Worthing the large towns of Brighton and Hove are supplied with water from similar sources. Worthing may be congratulated upon its foresight.

A. P.—We are informed that the site for the proposed Lister Memorial has not yet been decided upon.

Medical Diary.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

MONDAY, August 8th.—12 noon, Dr. S. Pinchin; Diseases of the Heart. 2 P.M., Dr. Morton: X ray Department. Mr. MacDonald: Surgical Out-patients. Mr. Gibb: Eye Department. 4.30 P.M., Lecture:—Dr. A. Saunders: Scurvy.

TUESDAY.—10 A.M., Mr. D. Buxton: Dental Department. Surgical Registrar: Demonstration of Cases (Surgical Wards). 11 A.M., Dr. McDougal: Electrical Department. 2 P.M., Dr. Burrell: Medical Out-patients. 4.30 P.M., Lecture:—Dr. Pritchard: Acute Pyrogenic Infections.

WEDNESDAY.—10 A.M., Mr. MacDonald: Genito-Urinary Department. 12 noon, Mr. Sinclair: Surgical Diseases of the Abdomen. 2 P.M., Mr. Addison: Operations. 4.30 P.M., Lecture:—Mr. Page: Anæsthesia.

THURSDAY.—11.30 A.M., Obstetrical Registrar: Gynaecological Demonstration. 2 P.M., Dr. S. Pinchin: Medical Out-patients. Mr. Simmonds: Orthopaedic Department. 2.30 P.M., Dr. A. Saunders: Demonstration of Cases, Medical Wards. 4.30 P.M., Lecture:—Mr. MacDonald: Bladder Growths.

FRIDAY.—12.15 P.M., Dr. Burnford: Applied Pathology. 2 P.M., Mr. Simmonds: Surgical Out-patients. Dr. Pernet: Skin Department. 2.30 P.M., Dr. Pritchard: Visit to Medical Wards. 4.30 P.M., Lecture:—Mr. D. Buxton: Dental Emergencies in General Medical Practice.

SATURDAY.—10 A.M., Dr. A. Saunders: Medical Diseases of Children. Dr. Burnford: Visit to Medical Wards. 2 P.M., Mr. Sinclair: Surgical Out-patients.

Daily:—10 A.M., Visit of Post-Graduates to Wards. 2 P.M., In-patient, Out-patient Clinics, and Operations.

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