Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF THE HISTORY OF MEDICINE.

Election of Officers.—A Down Survey Manuscript of William Petty.—Contributions from History of Medicine to Problem of Transmission of Typhus.—Contemporary Portraits of John Banister and William Harvey.—Exhibition of Italian Diplomas.

THE inaugural meeting of the Section of the History of Medicine was held in the West Hall of the Royal Society of Medicine on Nov. 20th. The chair was taken by Sir FRANCIS CHAMPNEYS, Bart., President of the society, who declared the section duly constituted.

The section proceeded to elect the following officers:—President: Sir William Osler, Bart. Vice-Presidents: Sir T. Clifford Allbutt, K.C.B., Dr. Richard Caton, Sir William S. Church, Bart., K.C.B., Sir Henry Morris, Bart., and Sir Ronald Ross, K.C.B. Honorary Secretaries: Dr. Raymond Crawfurd and Mr. D'Arcy Power. The following were elected Members of Council: Sir Francis Champneys, Bart., Dr. S. G. Clippingdale, Dr. J. D. Comrie, Mr. Alban Doran, Dr. David Forsyth, Dr. James Galloway, Dr. Leonard G. Guthrie, Mr. E. Muirhead Little, Dr. R. O. Moon, Sir Shirley F. Murphy, Dr. J. A. Nixon, Mr. Herbert S. Pendlebury, Dr. H. D. Rolleston, Dr. F. M. Sandwith, and Dr. A. F. Voelcker.

Sir FRANCIS CHAMPNEYS inducted Sir WILLIAM OSLER into the chair, who opened the proceedings with a few words upon the objects of the section and afterwards read his paper on a Down Survey Manuscript of William Petty. He said: Sir William Petty (born 1623, died 1687), for a short time professor of anatomy in the University of Oxford and Vice-Principal of Brasenose College, has outlived the somewhat slender reputation he had in the profession, and yet in one particular he deserves to be held in remembrance among us for his share in Graunt's "Bills of Mortality of the City of London" (1661), the first work of the kind in English, and for his "Observations on the Dublin Bills of Mortality" (1683). As a political economist his praise is in the schools. In the "Treatise on Taxes and Contributions" (1662), the "Discourse on Political Arithmetic" (1690), the "Political Anatomy of Ireland," and in certain minor tracts students find the beginnings of that science in these islands. Before Petty no one had tried accurately to estimate the money value of the individual life to the nation, the importance of the division of labour, and the real nature of wealth. Let me quote one sentence from "Verbum Sapienti" (from the 1691 edition, p. 14):—

> For Money is but the Fat of the Body-Politick, whereof too much doth as often hinder its Agility, as too little makes it sick. 'Tis true, that as Fat lubricates the motion of the Muscles, feeds in want of Victuals, fills up uneven cavities, and beautifies the Body; so doth Money in the State quicken its Action, feeds from Abroad in time of Dearth at home; evens accounts by reason of its divisibility, and beautifies the whole, although more particularly the particular persons who have it in plenty.

You will not wonder that the Cambridge University Press reprinted his economic works in 1899 (edited by C. H. Hull) when you hear the following extract from Lord Edmund Fitzmaurice's "Life," 1895:—

> In the "Treatise on Taxes," with an eye still fixed in the same direction, he begins by pointing out that the only legitimate public charges of the State are, its defence by land and sea, so as to secure peace at home and abroad and honourable vindication from injury by foreign nations; the maintenance of the chief of the State in becoming splendour, and of the administration, in all its branches, in a state of efficiency; "the pastorage of soul by salaried ministers of religion;" the charge of schools and universities, the endowment of which, in his opinion ought to be a concern of the State, and the distribution of whose emoluments ought not to be "according to the fond conceits of parents and friends," and of which one of the principal aims should be the discovery of Nature in all its operations; "the maintenance of orphans, the aged, and the impotent," for, in his opinion, "the poor can lay up nothing against the time of their impotency and want of work, when we think it is just to limit the wages of the poor"; and the improvement of roads, navigable rivers, bridges, harbours, and the means of communication, and the development of mines and collieries.

But Petty has a third claim to remembrance as the author of the famous Down Survey of Ireland—which "stands to-day, with the accompanying books of distribution, the

legal record of the title on which half the land of Ireland is held." (Larcom.) The text of my few remarks is an interesting manuscript relating to this work which chance threw in my way. In 1649 Petty had been named deputy to Dr. Clayton, the then Regius professor of medicine at Oxford, and in 1651 succeeded him in the chair of anatomy. At Oxford he became an active member of the club or society out of which originated the Royal Society. In 1652 he was appointed Physician General to the Forces in Ireland, with which country the remainder of a stormy life was to be associated. A masterful, energetic, resourceful man, the first thing he did was to reorganise the medical service. Energy in action was, he said, the great requisite of life, and soon an opportunity offered which called forth all his powers. In 1652 the Irish were conquered, the English won, and, as Petty says, "had amongst other pretences a Gamester's right at least to their Estates." The claimants were (1) the adventurers in England to whom 2,500,000 acres of Irish land had been pledged for money advanced to raise an army; (2) the soldiers of the new model army of Cromwell and Fairfax, who had really done the fighting; and (3) the Commonwealth, which had reserved the Crown and Church and certain other lands. There were, it is said, 35,000 claimants of land in all. Lots were drawn, and attempts were made at the distribution, but it was found impossible to identify the lot drawn with any particular parcel of land. There was no survey, and matters were soon in a hopeless muddle. The surveyor-general, also a doctor, a visionary, unpractical man, insisted that a survey could not be made in less than 13 years. Petty, a strong critic of this scheme, undertook to finish the job in 13 months, if given a free hand. Registers and valuation lists existed in places, but no maps; Petty agreed "to survey, admeasure and to map," and so his work came to be known as the "down" survey, because it was surveyed *down* on a map. The date fixed was Feb. 1st, 1655, and the rate of payment agreed upon was £7 3*s*. 4*d*. per 1000 acres of forfeited profitable land, and the Church and Crown lands at £3 per acre. It was a vast undertaking, but Petty had a genius for organisation, and was himself a practical surveyor as well as a mathematician and physicist of the first rank. We get a glimpse of the way he went to work from a contemporary account:—

> The said Petty, considering the vastnesse of the worke, thought of dividinge both the art of makinge instruments as alsoe that of usinge them into many partes, viz., the one man made only measuringe chaines, vizt. a wire maker: another magneticall needles, with theire pins, vizt. a watchmaker; another turned the boxes out of wood, and the heads of the stands on which the instrument playes, vizt., a turnor; another the stands, or leggs, a pipe maker; another all the brasse worke, vizt., a founder; another workman, of a more versatile head and hand, touches the needles, adjusts the sights and cards, and adaptates every peece to each other.

In the meantime scales, protractors, and compass cards were prepared by the ablest artists in London, whither also were sent for, to use the old expression, "a magazine of royal paper, mouth-glue, colours, pencils," &c. Field-books were prepared, and the ablest men in each barony and parish were selected as helpers. A staff of 1000 persons was organised, with 40 clerks at headquarters and an army of surveyors and undermeasurers. By April, 1656, the greater part of the special work assigned was finished, and he had surveyed for the army about 3,500,000 acres. Subsequently he undertook the survey of the adventurers' lands, a task which occupied his time until nearly the end of 1658. As Sir Thomas Larcom, the historian of the survey, remarks: "It is difficult to imagine a work of more obscurity and uncertainty than to locate 32,000 officers, soldiers, and followers with adventurers, settlers of every kind and class, having different and uncertain claims on lands of different and uncertain value, in detached parcels sprinkled over two-thirds of the surface of Ireland." But this is the task Dr. Petty successfully accomplished. The MS. which I show deals with the survey, and was bound at the back of two volumes of Petty's letters, which I bought at the sale of the Phillips MSS. in April, 1911. The numerous manuscripts relating to the survey are in the possession of the Lansdowne family (descendants of Petty), in the British Museum, and in the Public Record Office in Dublin. This manuscript has two points of interest: a copy in Petty's hand of the contract, dated Dublin, May 18th, 1655, signed by Charles Fleetwood on behalf of the Council of Officers. This has already been published in Larcom's book. But the greater portion of the MS. is occupied with private memoranda concerning the detailed cost of the work of the survey. These, I am informed by Mr. Mills of the Public Record Office, Dublin, "have not been known to Sir Thos. Larcom Hardinge, or Lord Fitzmaurice when writing on Petty's work. They should be of interest to any future writer on Petty's life or his great work." In reading Petty's life and works one gets the impression of a man born out of due time. His ideas, and the practical capacity and energy with which he carried them into execution, suggest the twentieth rather than the seventeenth century. No one of his writings shows the man in a better light than a little tractate on education ("Advice of W. P. to Samuel Hartlib for the Advancement of Some Particular Parts of Learning," London, 1648). He suggests the establishment of "ergastula literaria," literature workshops where children may be taught to do something towards their living as well as to read and to write; and he would have all children, though of the highest rank, do "some gentile manufacture in their minority." He also urged the establishment of a college of tradesmen—a technical school, "gymnasium mechanicum"—"to which one prime and ingenious workman of each trade should be appointed a Fellow." Of special interest is his advocacy of a "Nosocomium Academicum," or a hospital to cure the infirmities both of physicians and patients. It is the first suggestion I know of a research hospital. And he lastly urges the formation of a society, which will be "as careful to advance arts as the Jesuits are to propagate their religion"—which indicates that he had in mind at that time the organisation of the Royal Society. Pepys, in the celebrated diary, has many notices of Petty, who, he says, "in discourse is methinks one of the most rational men that ever I heard speak with a tongue, having all his opinions most distinct and clear"—judgment amply confirmed by all those who have studied the workings of this remarkable man.—Mr. W. G. SPENCER, in congratulating the President on his paper, referred to the incident which occurred whilst Petty was lecturing on anatomy at Oxford in 1650, when Anne Green, a maid-servant, insufficiently hanged, was brought for dissection and resuscitated. The story is told at length by Anthony Wood.

Dr. RAYMOND CRAWFURD read a paper entitled "Contributions from the History of Medicine to the Problem of the Transmission of Typhus," with the purpose of showing that, apart from the discovery by experimental pathology, the history of recorded epidemics supplied all the data for reaching the correct conclusion as to the part played by body lice in its transmission. He argued that as the flea and the body louse tend to flourish under closely similar conditions, one would expect to find considerable similarity in the epidemicity of plague and typhus fever, but with differences corresponding to any differences of habits of life of the two parasites. He adduced a volume of evidence to show that epidemics of typhus and plague did habitually concur in former times, and also epidemics of typhus and relapsing fever. This latter association would be inevitable, seeing that it is now known that relapsing fever is also communicated by body lice. The constant association of various acute infectious fevers explained how it was that physicians came to the conclusion that they all represented merely stages of a single morbid process, with no differences in kind. But though thus closely associated, the tendency in European epidemics had consistently been for typhus to precede plague, and sometimes to follow it as well. European epidemics of plague had almost invariably reached their highest virulence in the summer when flea prevalence is at a maximum; but European epidemics of typhus had almost always been most severe in winter, when the habitation of the body louse is least disturbed by washing and changing of clothing and when the desire for warmth induces overcrowding, with increased facilities for the transmission of the parasite. Of the rôle of clothing in the carriage of typhus there was no doubt whatever. Perhaps the scantiness of clothing was a subsidiary cause of the absence of typhus in Tropical Africa, and it was interesting to note that several writers a century or more ago had noted the immunity to typhus of naked slaves on ships in which typhus raged among those who wore clothing. Murchison and others had shown that the prevalence of typhus in a district was directly proportional to the overcrowding and the destitution of the residents; and, contrariwise, that there was no tendency, except in abnormal circumstances, such as warfare, for it to spread to districts in which overcrowding and uncleanliness did not exist. In this feature

typhus contrasted strongly with measles and scarlet fever. Typhus had so constantly attached itself to camps and armies that it bore numerous synonyms indicating the fact. Many armies and many beleaguered cities had been terribly devastated by typhus. The Crimean war supplied striking testimony to the part played by lice. In the first year the medical officers stated that the English troops were infested with lice, and typhus also raged among them, until fresh clothing arrived for the troops. In the second year the French were the chief sufferers from lice and also from typhus. Letters were read from Crimean medical veterans substantiating these facts. In the South African and Soudanese campaigns both officers and men were infested with lice, but in the absence of the hypothetical causal micro-organism, typhus did not appear. Drastic treatment of pediculosis should be a cardinal feature of military hygiene. The constant appearance of typhus in gaols, of which many instances were cited, in the absence of typhus in the district, led medical men to believe in its generation *de novo* in prisons. The true explanation probably lay in the presence of infected body lice or their ova in the prison clothes and bedding that were used by successive relays of prisoners. It has been recently shown that the infection can be transmitted to the ova. This, however, does not suffice to explain such an outbreak as that in Strasburg gaol in 1854, in the absence of typhus in the district, and after an interval of 40 years, unless the audacious hypothesis is advanced that infected ova may have lain dormant for 40 years and become revivified under appropriate conditions. The hypothesis of typhus carriage might be suggested, but that could not well explain five outbreaks that occurred on the French convict hulks at Toulon between 1820 and 1856, when there was no typhus in or around Toulon. Typhus had shown the same liability, in a less degree, to break out in hospitals as it had done in gaols and ships, and in this connexion it was interesting to find that in a recent epidemic in N.W. India a careful examination of the bedding disclosed the presence of numerous ova of the body louse. With the relationship of typhus to the body louse confirmed it was unpleasant to reflect that in past times the British Isles had been regarded as the favourite haunt of typhus. The much-travelled Erasmus had, however, awarded the palm to England for "the filthiness of the streets and the sluttishness within doors," and Stuart literature told the same tale. It was not for the reader of the paper to suggest why typhus had continued to flourish in Ireland after it had disappeared from the sister islands. Murchison had actually noted the verminous condition of the occupants of a house, in which a sporadic case of typhus appeared, but it did not occur to him that there was a direct relation between the two.—The paper was discussed by Dr. L. W. SAMBON and Dr. F. M. SANDWITH, each of whom adduced evidence from their own experience in support of the general thesis of the paper.

Mr. D'ARCY POWER read notes on a Contemporary Portrait of John Banister delivering the Visceral Lecture at the Barber-Surgeons' Hall in Monkwell-street in 1581. He pointed out how many additional facts it furnished both about the lecturer and the teaching of anatomy in London in the sixteenth century. He also showed a contemporary portrait of Dr. William Harvey at the age of 61. Both portraits he thought had been painted by the Serjeant Painter to the Court for the time being, and a copy of each was given to the members present.

Dr. MICHAEL FOSTER exhibited two Italian Diplomas to show how closely they resembled Harvey's diploma at the College of Physicians. One diploma was issued at Padua in 1714 to Augustin Rossi as Doctor of the Canon and Civil Law; the other was a licence to practise surgery granted to Laurentius Maria Saura and dated Venice 1755.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Exhibition of Cases and Specimens.—Epidemic Catarrhal Jaundice.

A MEETING of this section was held on Nov. 22nd, Mr. A. H. TUBBY, the President, being in the chair.

Dr. J. L. BUNCH showed a Congenital Syphilitic Infant treated by intravenous injection of neosalvarsan. The child, a girl 2 years old, had been suffering from an offensive muco-purulent discharge from the nostrils, malnutrition, and well-marked condylomata round the anus. The Wassermann reaction had been markedly positive, and on Oct. [illegible] was given a dose of 0·45 grm. neosalvarsan [illegible] into the median basilic vein. No ill-effects of any [illegible] followed the injection. The child left the hospital two days afterwards with the syphilitic symptoms greatly improved, and a week afterwards the condylomata and muco-purulent rhinitis had disappeared. On Nov. 13th a second injection of neosalvarsan was given, this time intramuscularly into the right buttock. The amount of neosalvarsan so injected was again 0·45 grm. The child had steadily improved in general health and had put on weight. The Wassermann reaction was negative.

Dr. J. WALTER CARR showed a case of Partial Hemiatrophy of the Face and Tongue; boy, aged 9 years. About a year ago the patient's mother first noticed a whitish spot, like a scar, over the lower border of the lower jaw on the right side. Since then a gradual wasting of the lower part of the right side of the face had been observed. No cause could be assigned for the onset of the atrophy; there was no history of illness or of trauma. When shown there was marked atrophy of the skin, subcutaneous tissues, and muscles over and below the right half of the lower jaw, from the angle to the symphysis. The bone itself also appeared to be somewhat wasted, but an X ray examination did not show any definite atrophy. The skin showed slight, rather patchy atrophic changes; its sensibility was unaltered, except, perhaps, for a very slight diminution to touch. The muscles contractednormally; those of mastication were not affected. There was marked atrophy also of the right half of the tongue, but no affection of movement, ordinary sensibility, or taste. In all other respects, except for slight psoriasis, the boy seemed quite normal, both physically and mentally.

Mr. LIONEL E. C. NORBURY showed a case of Spina Bifida (Meningo-myelocele) treated by operation. The girl, when aged 5 weeks, was admitted with an ulcerating sacral spina bifida the size of a large Tangerine orange. There was very little true skin over the swelling, the covering consisting chiefly of a thin membrane, discharging in several places. There was a slight degree of hydrocephalus; talipes calcaneus bilateral; no other paralyses. After the ulcers had healed an operation was performed under chloroform anæsthesia of excision of the spina bifida by elliptical incisions. A rubber tube was stitched into the rectum to avoid soiling of the wound, but did not remain in position very long. The child was kept in a slanting position with the head low until the wounds had healed. There was never any leakage of cerebro-spinal fluid during convalescence The child was 16 months old when shown. She was intelligent The anterior fontanelle was almost closed. There was no bulging in the region of the wound. The condition of talipes calcaneus remained, and was being treated by massage and passive movement by the mother.

Mr. H. A. T. FAIRBANK showed a case of Ununited Fracture of the Neck of the Femur. The patient, a girl, aged 15, gave a history of having been knocked down and run over by a van in October, 1904. The diagnosis was said to have been "comminuted fracture of the femur near the neck." The left leg had always been short since the accident, which necessitated her lying in bed many weeks. The shortness was said to be increasing. Pain had been present at times only, but had been worse lately. The pain was severe at night, it waked her; it was particularly noticeable on rising after sitting for long, but it was not caused by walking, except in wet weather. The left leg was wasted, and held in an everted position. Flexion of the hip was possible to a right angle only; abduction was practically abolished, while internal rotation was very limited; extension and adduction were only slightly affected. The trochanter was raised, prominent, and thickened anteriorly. Real shortening, 2 in. A skiagram showed an ununited fracture of the neck of the femur and coxa vara. The case was shown in order to elicit opinions as to the best treatment. It was proposed to excise the head of the femur, and retain the limb in hyper-abduction for several weeks.

Dr. ERIC L. PRITCHARD and Mr. DOUGLAS DREW showed a case of Œsophageal Stricture. The patient was a boy, aged 2 years, delicate from birth and subject to vomiting, and was admitted owing to inability to swallow solid food. He had been fed on liquid foods until recently, when inability to swallow solids was discovered. X ray photograph showed a dilated œsophagus between the level of the suprasternal notch and xiphisternum and a stenosed portion below.