

nation. Four offered themselves in Part I. only, of whom one was approved. The remaining 22 were examined in both parts, and 19 of them were approved.

Two days were devoted to each part of the examination. Part I. comprised Physics and Chemistry, and their applications to sanitary matters. Part II. comprised the remaining subjects specified in the regulations—viz, the causes and prevention of epidemic and infectious diseases, the circumstances and conditions of life which are injurious to health and the laws of the realm which relate to public health. In each part two papers of questions, each of which had been submitted to all four Examiners, were set, to which written answers were required; in each part the candidates were also questioned orally by two of the Examiners sitting together, and in each part the candidates were tested by practical work.

The Examiners report that the answering was generally good, some of it excellent, more especially in questions relating immediately to the actual duties of Officers of Health. This remark applies emphatically to the reports on the sanitary condition of some of the small courts and other places in Cambridge, which the candidates were directed to visit for the purpose of inspection, each candidate having a different locality assigned to him.

The Examiners are of opinion that the number and character of the candidates are evidence that the examination supplies a public want, and may be of real service in the advancement of sanitary improvements. Such a knowledge of Sanitary Science as has been shown by the successful candidates proves them to be entitled to some trustworthy voucher for their acquirements. The University Certificate, granted after a careful and thorough examination, will be such, and may serve to assist the judgment of those Public Bodies in which the choice of Officers of Health has been invested by the law.

Every candidate was required to pay a fee of four guineas before admission to each part of the examination, and it has been found that this has been sufficient to defray all the expenses incident to the examination. The certificate is granted to those who have passed both parts of the examination without further fee.

The Syndicate considers it convenient that the holders of the certificate should be designated in a uniform manner, and recommends that their designation be "Holders of the Certificate in Sanitary Science," or abbreviated "S. Sc. Cert. Camb."

The Syndicate has arranged that the next examination shall begin on June 13, 1876, and considers it desirable to hold a second examination next year at the beginning of October. These times seem as convenient as any for the University, and are likely to suit medical men engaged in the practice of their profession. Whether it will be advisable to hold two examinations in any future year must be decided by the experience gained as to the probable number of candidates, and by other considerations.

H. W. COOKSON. P. W. LATHAM.
G. E. PAGET. G. D. LIVEING.
G. M. HUMPHRY.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE usual general meeting of this Society was held on the evening of Friday, the 29th ult., by the liberality of the Royal Medical and Chirurgical Society in their library. Sir George Burrows, Bart., president, took the chair punctually at half-past 8 o'clock. The attendance was very limited. Out of more than four hundred members only ten were present to support the president, and four of the ten were officers of the Society. Although it may be very complimentary to the officers, as showing how satisfied the members are with the management, still it would be more gratifying to them if the members would attend at the general meeting and manifest an interest in the working of the Society.

From the half-yearly statement of accounts read, it appeared that, during the last half-year 58 widows and 20 children had received grants amounting in the aggregate to £1236 10s.; the expenses had been £130 11s. 5d., which sum included the cost of the circular in the beginning of the year to all members of the profession eligible to become

members of the Society. The total receipts of the half-year available for payments had been £1598 10s., and the payments £1367 1s., leaving a balance of over £200. A legacy of £1500, less duty, had been received from the executors of Alexander Barker, Esq., and a legacy of £100, less duty, from the executors of T. F. Chilver, Esq., a member of the Society, and another legacy was reported of £1000, duty free, from the Rev. H. C. Morgan.

Sir Thomas Watson and Dr. Billing were elected vice-presidents in the places of Dr. Latham and Sir Charles Locock, both deceased; and Mr. Streatfeild was elected a director in place of the late Mr. Sercombe.

It was announced at the meeting that the directors intended, out of the balance in hand, to make a present at Christmas of £4 to each widow, £1 10s. to each child, and £s. to each of the recipients from the Copeland Fund.

Correspondence.

"Audi alteram partem."

THE CAUSATION OF DICROTISM.

To the Editor of THE LANCET.

SIR,—In his valuable lectures on the Pulse recently published in THE LANCET, Dr. Broadbent has touched upon a question which has long been a vexed subject of controversy—namely, the Causation of Dicrotism. The point at issue does not indeed affect the practical inferences from the pulse-curve with regard to arterial tension and distensibility which he has so lucidly set forth. A correct explanation of dicrotism must, however, conduce to a clear comprehension of the different varieties of pulse, and I therefore regret that so high a sanction should be given to a theory which I believe to be not only mechanically impossible, but directly contradicted by observation.

Dr. Broadbent explains the second expansion in the pulse as caused simply by the elastic recoil or contraction of the aorta when relieved from the pressure of the blood, so that in the aorta itself no second expansion or dicrotic wave occurs at all. It is an explanation which was, I believe, first put forward by Dr. Mahomed. In all theories of dicrotism, the elasticity of the arteries is, of course, regarded as a necessary condition for its production, but, according to this view, we must suppose that, as we trace the pulse-wave downwards towards the legs, there is a point—namely, the bifurcation of the aorta—above which no second expansion takes place, while below it there is a second expansion due to the elastic contraction of the aorta above. Reasoning based upon the principles of mechanics is apt not to be universally understood or appreciated, and therefore it is a fortunate circumstance that, in this case, the theory can be put to the direct test of observation, whether or not a second expansion does occur in the aorta. We know that in the femoral arteries the dicrotic wave is well marked, and it is not unfrequently possible to obtain a tracing from the abdominal aorta when it has undergone aneurismal dilatation, or pulsates excessively from nervous causes. The dicrotic wave is always found in the trace, and in the latter case the form of the pulse-curve is not very different from that of the femoral artery. Again, pulsation is occasionally produced in the upper intercostal spaces by a condition which is found after death to be not an actual aneurism but a general aneurismal dilatation of the arch of the aorta. The tracing then obtained from the point of pulsation may be expected not to differ widely from the normal aortic tracing. In more than one instance of this kind I have found the curve to resemble closely that obtained from the radial pulse when the arteries are very atheromatous, and to show a distinct second expansion. Lastly, similar evidence may be obtained from experiments on animals. Marey has published* a curve, obtained by means of the polygraph, representing the pressure within the aorta of a horse, and the dicrotic wave is here seen, and shown to be synchronous with the closure of the aortic valves, although in this instance it is comparatively small. In this and in

* Physiologie Médicale de la Circulation du Sang, p. 189.

all other aortic tracings the dicrotic wave differs from that seen in the radial pulse, just as the latter in its turn differs from the dicrotic wave in a more distant artery, such as the dorsalis pedis, by the fact that its ascent is more abrupt, and its maximum is reached much earlier. I think that the evidence thus afforded of the occurrence of a second expansion in the aorta itself is sufficient to narrow the question of the causation of dicrotism by the exclusion of the theory adopted by Dr. Broadbent.

I am, Sir, your obedient servant,
St. Thomas-street, Oct. 27th, 1875. A. L. GALABIN.

DR. HARDWICKE.

To the Editor of THE LANCET.

SIR,—With reference to a paragraph which has recently appeared in the daily press headed "Contempt of a Coroner's Court," I wish to make the real facts of the case known.

1st. I received no notification, either verbal or written, that the inquest was going to be held.

2nd.—I know perfectly well that no fee is allowed in such cases, as I have given evidence before.

3rd.—I have never heard any complaint with reference to fees from any member of the resident staff.

Apologising for troubling, I enclose my card, and am, Sir,
Your obedient servant,

THE HOUSE-SURGEON.

University College Hospital, Nov. 4th, 1875.

* * As we expected, our correspondent has triumphantly vindicated himself and his colleagues. It will be seen that we have dealt with the matter in another place.—ED. L.

BIRMINGHAM.

(From our own Correspondent.)

THE Queen's Hospital is to be congratulated on having achieved two great successes this week. "Hospital Sunday" bids fair to equal, if not to surpass, any of its predecessors, the amount already announced, as collected yesterday, being upwards of £4000; but the greater and more important achievement is the adoption of the "free system," which was carried to-day by a large majority at one of the largest meetings of governors ever held. The subject was discussed by the governors on the 9th of July last, in consequence of the report of a sub-committee specially appointed to inquire into the best means of improving the financial state of the institution, and an adjournment took place till Nov. 1st in order that the governors might have the fullest information before instituting any fundamental change in the admission of patients. The report of the sub-committee, which was to-day adopted, abolishes every vestige of the privilege system, and leaves the committee and medical staff free to admit what patients are most suitable; establishes a registration fee of one shilling for each patient, such fee to be remitted in cases of accident or extreme indigence; and ensures the fullest inquiry by competent officers into the social fitness of all applicants for hospital relief. When one considers that, out of 5170 in-patients and 42,304 out-patients who have been attended to at the Queen Hospital during the last three years, 4000 in- and 16,000 out-patients were admitted without tickets, as accidents or urgent medical cases, one is not surprised to find the governors have seen the uselessness of perpetuating the privilege system, and that they have by their present action decided that in future there shall, between the hospital and the sick and suffering poor of Birmingham, be no barrier in the shape of any ticket of admission. Great credit is due to the committee for so energetically pursuing a course which at one time was regarded with hostility by some few of the governors, and by some representatives of the working class, and for carrying it to so successful an issue, and it is to be hoped their example will be followed by the committees of many other medical charities which at present groan under the disadvantages of the privilege system.

At their last meeting the corporation unanimously decided to purchase the property of the waterworks company, and thus to control the water-supply of the town and adjacent neighbourhood. This property, which might have been

purchased in 1851 for £250,000, will now cost the town £1,360,000—a vast sum truly, but probably not too much for the great outlay of capital involved in the supply of water to a population of 500,000 people, and certainly public money can be spent in no better way than in providing an ample supply of the purest water that can possibly be obtained. The corporation also decided to expend £1000 in planting trees in some of the public streets, on the ground that such trees would not only improve the appearance of the thoroughfares, but would also be useful in a sanitary point of view.

The annual meeting of the Governors of Queen's College was devoid of special interest, except for the attempt of the Mayor to reopen the question of the admission of female students, which, however, was of no avail, as the council had decided to abide by their former resolution, and therefore the Mayor, with some warmth, withdrew his proposition for reconsideration of the subject.

The report of the Orthopædic Hospital is satisfactory. 759 cases have been treated during the year at a cost of £443. A suitable building has not yet been found, but probably the funds are better expended in instruments and drugs than they would be in keeping up a costly in-patient department.

The thirtieth annual meeting of the Dudley Dispensary was recently held, when the report of the Committee showed that the institution was flourishing, 3804 patients having received medical aid during the year, and the funds having proved ample for their wants.

Birmingham, Nov. 1st, 1875.

PARIS.

(From our own Correspondent.)

ANNUAL MEETING OF THE FIVE ACADEMIES.

THE annual meeting of the five Academies constituting the Institute of France took place on the 25th ultimo, at the Palais Mazarin. The meeting was this year presided over, according to rotation, by a member of the Academy of Fine Arts, but the great biennial prize given away every year by one of the Academies "to the work or discovery most highly calculated to honour or serve the country," belonged this year in turn to the Academy of Sciences. It has been given, with the necessary consent of all the other Academies, to Dr. Paul Bert, Professor of Physiology at the Sorbonne, and a deputy in the National Assembly, for his labours and published work "On the Influence of Barometric Pressure on the Phenomena of Life."

The President, in mentioning Dr. Bert's name, accompanied it with the following flattering remarks, which show in what high estimation he is held here:—"In giving such a reward to the varied and ingenious experiments of M. Paul Bert, to his long and useful researches carried on during several years under difficult circumstances, you have, gentlemen, to speak like the Academy of Sciences represented by one of its most illustrious members—Claude Bernard,—you have, I say, highly manifested the interest which you attach to the progress of pure science, to true scientific discoveries. They are always fertile, but it is for time to develop and ripen their consequences. The discoveries of M. Paul Bert bear that eminently scientific character of severity and precision which, even at present, places them in the first rank amongst the greatest physiological discoveries of our epoch."

PROFESSOR LORAIN.

Many touching and interesting anecdotes are related of Professor Lorain, whose sudden death has been the universal subject of conversation and regret during the last few days. The circumstances under which he died were most unfortunate, whilst they showed his devotion to the duties of humanity. He was busy in his study preparing his first lecture on the History of Medicine, which he was to deliver in a few days (to-morrow, Wednesday), when a patient called to ask him to attend a child. The servant had received orders to say, "Not at home," but the poor father insisting, she let him in, and Dr. Lorain, notwithstanding his wife's reminder that he was not well, went out, took an open carriage, and climbed the six flights of stairs which led to the sick child. He had scarcely reached the room when he begged to be laid