

kinds had been got together—old and modern portraits of past and present medical worthies of Sheffield and elsewhere, and other things of local and medical interest. The graphophone (Tainher's) was exhibited, and its marvellous properties excited the most lively interest; and it was the centre throughout the evening of an appreciative throng. Mr. Edmunds, the introducer into this country of the instrument, kindly attended himself.

The visitors, most of whom had assembled earlier, adjourned at 8.30 to the Hall in Firth College, to hear Sir Andrew Clark's address. The chair was occupied by Mr. W. F. Favell, in the absence of Dr. de Bartolomé, the President of the School. The hall was well filled, and Sir A. Clark's address was listened to with marked attention and evident appreciation. It was generally felt that it was typically the address for a mixed audience. The lecturers of the school feel greatly indebted to Sir A. Clark, not only for his present address, but for his attendance two or three years before, to advocate the claims of a medical school to the generous assistance of the public. This point he again pressed upon his audience. Other parts of his address, dealing with what is required in a teacher, exposing cramming *versus* true education, pointing out the ideal student, the dangers besetting, and his counsel and advice to students, were all expressed and delivered in a manner to make Sir Andrew Clark's lecture a most memorable one.

In seconding a vote of thanks to the lecturer, which had been proposed by the Master Cutler, Mr. ARTHUR JACKSON gave expression to the appreciation of the lecturers for the services Sir Andrew Clark had rendered to the cause of medical education in Sheffield; and the CHAIRMAN, after putting the resolution to the meeting, took the opportunity of presenting to Sir Andrew Clark a piece of plate of Sheffield workmanship, as a small remembrance from the lecturers of his kind services.

One incident only seemed to mar the perfect success of the opening ceremony, and that was the absence of the President, Dr. de Bartolomé. His persevering and untiring exertions through a long series of years contributed very materially to the maintenance of a medical school in the past, and in no small measure to the erection of the present school. The regret universally felt at his absence from a ceremony in which he was so warmly interested, through what it is hoped is only a passing illness, found expression in an appropriate resolution by Drs. YOUNG and DYSON.

COVENTRY (Population 47,750).—*Improved Sanitation: Hospital Isolation has been of Great Value.*—The beneficent effect of the administration of the Public Health Act is becoming more apparent from year to year in the reduction in the amount of sickness, and the decrease in the rate of mortality throughout the kingdom, and Dr. Fenton's report for the year 1887 shows that Coventry is no exception to the general rule. The death-rate was 16.3 per 1,000 as compared with 17.5, the average for the past seven years. This result is exceedingly satisfactory, more especially as the population of the district is so largely made up of the working classes, and a great proportion of the houses and streets are constructed in an unwholesome fashion. The progressive diminution in the birth-rate in Coventry becomes more marked year by year, and in 1887 the rate was lower than it had ever been. The number of deaths registered from the seven principal zymotic diseases was seventy less than in the former year, and almost entirely accounted for the lower death-rate. The powerful influence which the isolation of infected persons has in restraining outbreaks of epidemic disease has been so frequently demonstrated in Coventry as to require no further proof. The inhabitants appreciate this, and every year a greater proportion of persons who suffer are removed to hospital, and with less reluctance on the part of the parents and friends. In 1887 four-fifths of the cases of scarlet fever that were reported were removed, and in no case did the sufferer remain at home, unless isolation there were really effective. The result was that the disease never assumed any serious proportions, and, although it displayed a most malignant tendency, only fifteen deaths took place from it, and at the end of the year no new cases had been reported for a month. Dr. Fenton compares this with the epidemic of 1874, when the Iron Hospital was first opened. Owing to the strong objection which parents had at that time to part with their children, removal was effected only in 12 cases. The children remained in their homes, but the disease spread with such rapidity and fatality, that in six months 101 deaths took place, and probably more than 2,000 persons were infected.

JUDICIAL EXECUTIONS.

By JOHN J. DE ZOUCHÉ MARSHALL, L.R.C.S.I., ETC.

My name having been for some time before the public in connection with the execution of criminals, I am anxious to explain to the profession the suggestions which I have had the honour of laying before Lord Aberdare's Capital Sentences Committee,¹ and also some of the evidence, as well as the recommendations contained in the report of that distinguished body; thereby submitting to the physiologists of the country an issue on which they are so competent to decide.

The subject of hanging seems never to have received any scientific attention until the year 1875, when an important meeting of the Surgical Society of Ireland was held at the College of Surgeons in Dublin, which was attended by many surgeons who had experience of gaol executions, and to which Professor Samuel Houghton submitted his famous tables, regulating the length of the drop in proportion to the weight of the criminal, founded on his mathematical principles of animal mechanics.

Up to then the "long drop," even to the extent of 17 feet, was "traditional in Irish gaols," while at the same time in England the custom of Calcraft, who held office until 1874, was to allow from 2 to 2½, and never more than 3 feet drop. In Ireland, two executions took place in 1865 and 1870, the culprits being about the same weight, 11 st. 6 lbs., and getting the same fearful drop of 14½ feet, the knot being placed behind ("suboccipital"). The second was decapitated, and the first nearly so, which is not surprising. That no more decapitations occurred or were reported must be due to the employment of a much thicker rope than that now in use (¾ in.) In 1874 Marwood succeeded Calcraft, and went in for the long drop, being guided, it is supposed, by Dr. Houghton's tables, though I have not the smallest belief in an executioner being guided by anything save his own ignorant vanity, which points to himself alone as *the* authority.

The most important point in the whole proceeding is admitted by experts to be the position of the knot or eye, which has often been placed at the back of the head ("suboccipital"), but is now invariably put under the left ear ("subaural"), though every surgical work that mentions the subject states that the "submental," that under the chin, is the most deadly position. The members of Lord Aberdare's Committee seem to be in favour of this submental knot, as I intend to show, but, strange to say, "they never mention it" in the recommendations of their report, simply contenting themselves with laying down a scale of long drops to be used with the subaural knot, *plus* brute force much in excess of anything I have ever seen Berry use, even at Newgate. The Committee give as the chief reason for their attachment to the barbarous "long drop" that it is better to risk the shock to the public with painless decapitations than to risk painful suffocations. I should say "by all means," that is, if I was as strong an advocate of the total abolition of capital punishment as the noble Chairman is suspected of being, he having (it is said) reprieved every convicted murderer during his tenure of the Home Secretaryship. Now suffocation has never been proved to be so very painful, the opposite being more likely from the fact of suicides by hanging always giving themselves as short a drop as possible, and never (probably owing to the sudden supervention of apoplectic unconsciousness) rescuing themselves by the many means generally at hand. Besides, it is quite possible for insensibility from concussion to take place with suffocation, as I saw at Winchester (a culprit named Whelan, weighing thirteen stone, getting a drop of but four feet). Dr. Carte also testifies to this possibility in paragraph 434 of the report. I admit that Berry's interpretation to the reporters of "instantaneous death" means in most cases intense and needless torture for many minutes; but this is due to excessive constriction of six inches by a thin rope into the neck, compressing the multitude of nerves against the spine, when no concussion or dislocation has rendered the wretched culprit insensible, both of which circumstances I have witnessed. If, however, the cases submitted by other surgeons were as freely dealt with as were mine, the Committee's preference for the extra long drop might seem justified; for of five cases on which I reported I

¹ This Committee on Capital Sentences was appointed in January, 1886, by Sir Richard A. Cross, the Home Secretary, and consisted of Lord Aberdare, G.C.B., Chairman; Sir Henry Selwin Ibbotson, Bart., M.P.; Sir Frederick Bramwell, F.R.S.; the Rev. Professor Houghton, F.R.S.; and Dr. Gover, Medical Inspector of Prisons, and having the most courteous of secretaries in Major Alten Beamish, R.E.

gave the cause of death in three as "strangulation"—including one unconscious from shock (Whelan) one "instantaneous from dislocation" (Currell) and one "instantaneous from dislocation and fracture" (Lipski). In the report I find Currell's case tabulated with the three suffocations and Lipski left out altogether. I should state that Dr. Haughton refuses to admit the existence of insensibility except the pulse beats at the rate of 140 or more, which theory I think completely upset by Currell's case, whose pulse, notwithstanding fearful injuries to the spine from a seven-foot drop (weight 147 lbs.), beat normally at about 80 to the minute. Drs. Gilbert and Morgan, of Newgate Prison, can bear me out in stating that Currell's neck was completely dislocated, the dislocation being as easy to reproduce after the body was "cut down" as in the case of a fractured thigh. However, I can see that in the face of the new tables, it would never do to admit that a dislocation could be produced by an energy of 1,029 foot-pounds (Dr. Barr's lowest being 1,121 foot-pounds, and his highest for asphyxia being 1,106 foot-pounds), or dislocated and fractured with one of 1120 foot-pounds (Lipski 140 lbs × 8), though this latter case had the *fatal* pulse of 160 for fourteen minutes.

I examined these cases digitally through the mouth, and could easily introduce the finger between the vertebrae; but this evidently does not satisfy Dr. Haughton, who must have a *post-mortem* examination made by "a skilled anatomist and not by a mere surgeon," which shows what an awkward twelfth he would make on a jury with "iliven obstinit min." As I consider the great flaw in this report to be its ignoring in its "recommendations" the "submental knot," I wish to reproduce the evidence in favour of that method, there being none against it, which can be verified by reference to the report itself, a copy of which can, I presume, be easily obtained by any member of Parliament.

Professor Haughton says (par. 1), in reference to the important meeting of surgeons in Dublin in 1875, "the results of their discussion were two. In the first place, it was recommended that the knot should be placed under the chin," and also "to diminish the drop to about 8 feet, as a rule," that is, from between 14 and 17 feet. Again (par. 7), "my opinion would be that half the decapitating energy with the knot under the chin would be necessary."

Mr. J. R. Gibson, F.R.C.S., twenty-seven years surgeon to Newgate Prison (1855-82), says (par. 220), in reply to the Chairman's question, "Have you ever considered the expediency of preferring one method of placing the knot to another?"—"The position of the knot has always been at the side. I think that if the knot could be placed in front it would secure the breaking of the neck;" and, subsequently (par. 221), "I recollect reading some case where an execution took place rather by accident than by design in that way, and it was most efficient. I can quite understand that with a knot coming under the chin a sudden jerk would be almost certain to snap the spinal column."

During my own evidence (Mr. J. de Z. Marshall, L.R.C.S.I.) (par. 385), in reference to my invention, the Chairman said, "*as far as your object goes it quite falls in with what we wished, namely, to keep the knot under the chin;*" and, later on, in reference to the risk of decapitation with the long drop, the Chairman says (p. 404), "that arises from the fact that the rope is not properly adjusted under the chin; but if you could be sure of the knot remaining here, and so jerking the head back, you would then be sure of producing the fracture" to which Dr. Haughton added "*we can produce fractures now by moderate drops, by securing the head being thrown back; this is a step in the right direction.*"

Dr. W. A. Carte, M.B., Coldstream Guards, late acting Medical Officer to one of Her Majesty's prisons, says (p. 419), "In the cases where I have seen the most satisfactory results, that is to say, dislocation perfectly produced, the knot has been adjusted almost under the point of the chin, just a shade to the left; that, I think, is the best position, because the shock thus falls at right angles to the spinal column, in the weakest part of the neck;" and, further on (p. 420), "I have witnessed five executions where the rope was thus adjusted, and, in four of them, death was instantaneous, owing to complete severance of the spinal cord produced by dislocation; but, in the fifth case, there was a hitch, the rope caught under the man's elbow. That would be one of my methods of making it more certain. You must have your knot 'submental,' as we call it, that is, under the point of the chin." Later on the same witness says (p. 439), "I remember carefully contrasting that with another case, both cases being almost precisely the same, except as regards the position of the knot; in the one case it was occipital, and in the other case it was submental, death being

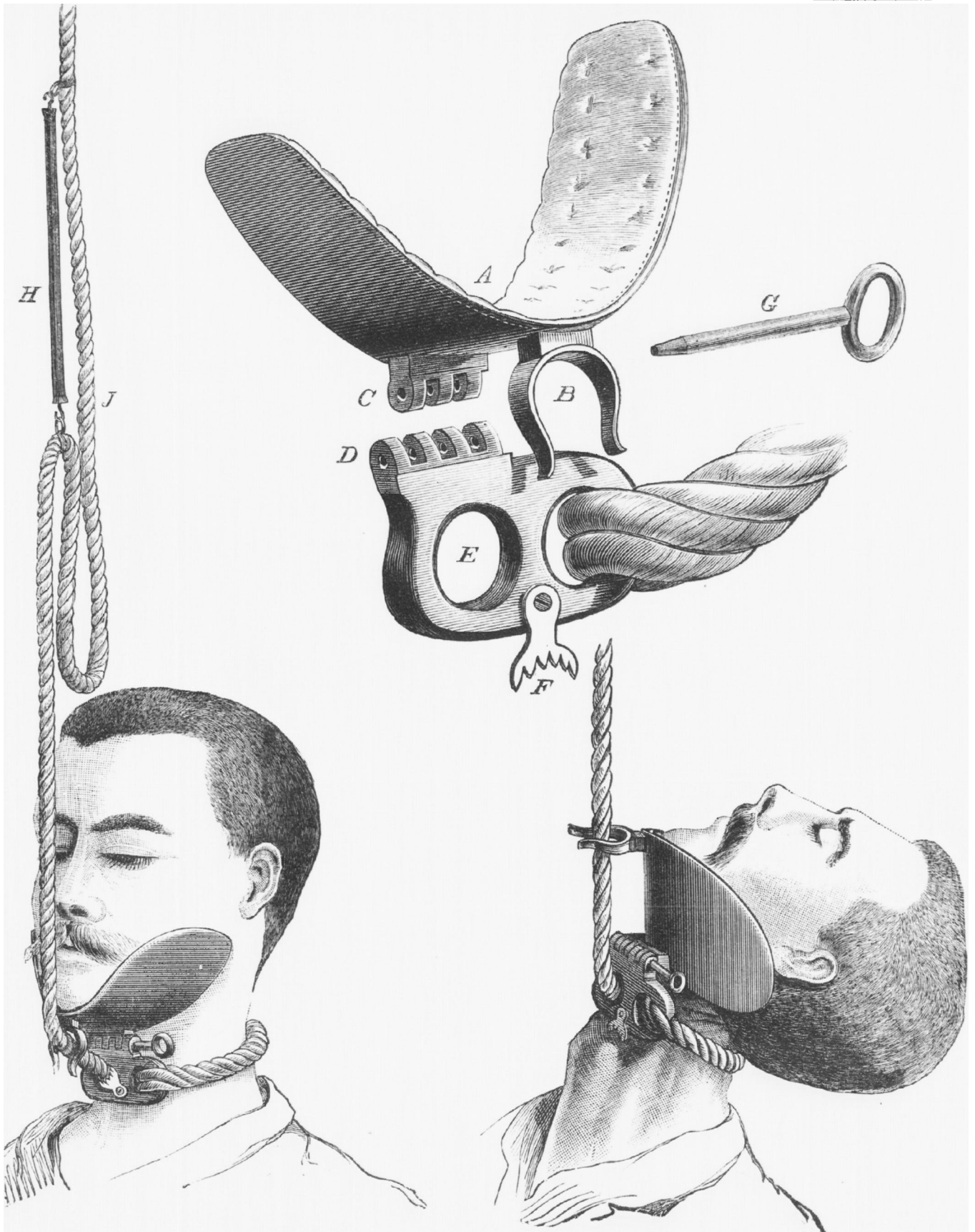
caused by asphyxia in the former and resulting from dislocation in the latter."

Mr. J. Barr, M.D., Surgeon to Her Majesty's Kirkdale Prison, Liverpool, says (p. 768): "I think it is better underneath the chin, but the position of the knot is not of so much importance as is generally supposed;" while later on he says (p. 770): "My own opinion is that it should be placed underneath the chin. There is a slight leverage action, and it also tightens better; if it is placed underneath the chin, the head is thrown so far back that the tightening takes place very quickly." Again (p. 773): "The submental knot is best?"—"Yes; and the ring should be directed forwards, so that there should be no risk of its slipping backwards to the nape of the neck." And, finally, at par. 797: "What was the position of the knot in that case in which there was separation between the fifth and sixth vertebrae?"—"The position of the knot in that case was exactly on the chin."

Long before I was aware of such overwhelming evidence from experts in favour of the submental knot, I felt instinctively as a "mere surgeon" that it must be the best, and I fully believed, until I witnessed my first execution, that it was firmly established in our prisons. I soon found, however, that no attempt was being made to carry out the sentence of death in the most humane manner, the prison surgeons taking little or no interest in the matter, and leaving everything to Berry, the hangman, whose vanity is only equalled by his ignorance. This man changes and "improves his system" where and when he likes, trusting alone in very tight pinioning, which renders movement almost impossible (the expression of face being concealed by the white cap) and the gullibility of newspaper reporters, who base all their reports on his statements, which are often backed up (as the Committee seem well to know) by the prison surgeons, more especially, I have noticed, since I (an outsider) have dared to suggest humane improvements. Thus but very little dependence can be placed in newspaper reports.

My worst case of painful strangulation (Hewett, of Gloucester, June, 1886), after a drop of 6 feet 6 inches, was reported, as usual, "instantaneous," though the wretched man struggled in the most apparent and desperate manner for about three minutes, and his face, which I uncovered, showed unmistakable and terrible signs of torture. In a recent case some reporters said "the neck was broken by the fall," while others said that the culprit "struggled for a few minutes." I can only say that in the cases of Currell and Lipski, whose spinal cords must have been ruptured, the bodies after the drop were as absolutely free from movement as they were at the end of the prescribed hour for hanging, the action of the heart not being, of course, visible. Believing, then, that the submental knot was in vogue (before I ascertained the contrary), and meditating over a remedy for the slow and struggling deaths reported, I set myself to render more perfect and certain this submental knot system, believing, as I now do, that if the ascending rope could be maintained on or opposite the tip of the chin (the eye from which said rope makes its exit being, of course, in front of the neck), the leverage upwards and backwards would be more complete, and the process rendered absolutely certain to produce dislocation with about half the drop used with the clumsy subaural knot, which depends entirely on brute force, gathered in the fall, to produce a violent *circular chop* on the neck. My first invention with this object consisted in a leather-covered trough, which could be rapidly fixed on the ascending rope after the noose had been adjusted, and immediately outside the eye of that noose. It was fixed by a toothed, tubular, hinged clamp of brass, with a fly-nut, and it met with decided encouragement from the Committee. On the drop taking place, it would have given the chin a violent *push upwards and backwards*, the *impetus* of which, taken in conjunction with the sudden and forcible jerk *forwards* by the posterior segment of the noose, must, in my humble opinion, have resulted in a dislocation, with rupture of the spinal cord. At the time of my exhibiting this contrivance to the Committee, Sir Frederick Bramwell suggested that the chin trough might be fixed on the metal eye (which I had designed for my rope), to which I at the time demurred, thinking the proposition to involve a rigid angular metal structure supporting the trough, which would really protect the chin from the force of the ascending rope.

However, some time afterwards, in thinking the subject over, the "happy thought" of a hinge occurred to me, and I made drawings from which Messrs. Maw, Son, and Thompson (who had admirably carried out my first design) made the improved instrument, as shown in the drawing. The first trough had the disad-



A chin-trough; B spring fork for ascending rope; C half hinge; D half hinge; E eyelet for noose; F toothed spring in place of leather washer to prevent noose relaxing; G centre pin to complete hinge; H india-rubber tubing to support trough to chin and keep slack rope in safety; J slack rope representing length of drop (in drawing only about eighteen inches, really three feet).

vantage of affording the executioner great temptation to draw his noose excessively tight, so as to get the trough as far back as possible under the chin. The improved instrument can be safely applied without this necessity, is more simple of, and consequently quicker in, application, the noose being made with the simple eye, and the hinge completed afterwards in a second by a centre pin. The noose is prevented from opening out by means of a toothed spring, and the ascending rope easily pressed into its guide, a spring fork on the base of the trough. The whole adjustment would, with practice, take little, if any, more time than the present process, which in Currell's and Lipski's case occupied forty seconds. I may add that one of my original suggestions for the safety of the slack rope was to have it held up with a piece of light india-rubber tubing, both ends being furnished with hooks, one to be attached over head, and the other to a small ring on the rope, about eight inches from the noose. This would have the extra advantage of keeping the trough in contact with the chin, notwithstanding any movement of the latter.

I may now quote the reference to my suggestions, etc., from the report of the Committee, which is as follows:—"Dr. J. de Zouche Marshall, of Lamberhurst, who has given much consideration to this subject, and who, with praiseworthy zeal, has attended several executions lately for the purpose of noting the present practice, has recommended, as an improved mode of attaining these ends, the use of a chin trough, by which the rope might be held at the very point of the chin. He attaches great importance to the use of such an implement, as he maintains that the head can in this manner be thrown back by the rope when the fall takes place, and that dislocation can be effected with a drop of less length than is required by the existing system, and thus he believes there would be secured instant loss of consciousness, and painless death without danger of decapitation.

"The Committee have carefully considered this suggestion, but have come to the conclusion that the leverage which would be thus exerted would not be sufficient to throw the head back to an angle which in all cases would ensure the dislocation required, and they are not prepared to recommend the adoption of Dr. Marshall's ingenious device of the chin trough. Impressed as they are with the necessity for the utmost simplicity of mechanism and rapidity of action in the operations connected with executions, they are averse to the use of any apparatus involving extra time in preparing the culprit, and they are of opinion that, without resorting to this mechanical contrivance, other and simpler means may be adopted for producing instantaneous loss of consciousness and death."

It will be seen from the above that one of the objections put forward against my chin trough is the insufficiency of leverage, which would prevent its throwing the head back far enough. This objection was advanced in the Committee room by Dr. Gover and Dr. Barr, who argued that anybody could throw his head back to an angle of 75°, and that I only claimed an extra 15°—to a right angle—for the chin trough. My reply to this was, and is still, that we *can* throw our heads back to a great extent, but we must do so *slowly*. I should be very sorry to throw my head *swiftly* back till its own ligaments checked it, and especially if someone was ready behind to thrust the edge of the back of a chair against the top of my spine at exactly the same time; but this is precisely what my system proposes to do *twenty times the amount of force* our own action could command, the very *impetus* conveyed to the hinged and heavy head being sufficient to jerk it irresistibly backwards, after contact with the floor of the trough had ceased, which floor by-the-bye is nearly an inch (and could be made more) from the hollow of the spring fork, representing the rigid vertical rope. I have long seen, too, that the leverage could be increased if necessary (which I doubt) by the introduction between the chin and the trough of a simple pad, while it could also be increased to almost any extent by standing the culprit sideways on the drop a couple of feet or more out of the vertical line of the overhead attachment of the rope, the back being of course towards that point. With regard to time or delay, I can only say that the adjustment of the apparatus, though it may seem complicated to the uninitiated, would not take much if any more time than the ordinary method, there being no leather washer to adjust, which takes at least ten of the forty seconds on the drop. The time might even be reduced by having the feet strapped by one of the warders, which would give the executioner more opportunity of performing his duty with care, instead of hurrying to "make a record" for the newspapers, through which haste, according to his own admission, he nearly brought off a decapitation at Oxford Gaol quite recently.

The Committee now recommend the following scale of long drops to be authorised by the Home Office, which I very much doubt any hangman will carry out, their basis being that an energy of 1,260 foot pounds is necessary and safe wherewith to break the neck, this being, however, the exact force used in decapitating the culprit at Norwich, whose weight was 15 stone, that is 210 lbs, falling through 6 feet.

Scale of Drops recommended by the Committee.

Weight of Culprit.		Drop.		Energy developed in Foot Pounds.
Stone.	Pounds.	Feet. Inches.		
7	98	11	5	1,119
8	112	10	0	1,120
9	126	9	6	1,197
10	140	9	0	1,260
11	154	8	2	1,258
12	168	7	6	1,280
13	182	6	11	1,259
14	196	6	5	1,258
15	210	6	0	1,260
16	224	5	7	1,251
17	238	5	3	1,250
18	252	5	0	1,260
19	266	4	8	1,241
20	280	4	6	1,260

That the Committee should have found reasons for rejecting my recommendations has not altogether surprised myself, when I consider the gulf which separates me from the Prisons Board, namely, the fact of my not belonging to the select brotherhood of prison surgeons; but that they could sacrifice on the altar of departmental red tape the recognised principles of the "submental knot," in order to do so after the foregoing evidence adduced in its favour, is difficult to understand. Ordinary mortals, on examining the evidence taken before this two-years Committee, would have concluded that the submental knot had been clearly proven to be the most efficient, and that so even with a less drop than required in the ordinary method by long drop, which often led to decapitations, and that as this chin trough plainly emphasised the best points of the said submental system, and could not take very much longer time, or cause any unnecessary cruelty, it would be at least advantageous to give the system and invention a fair trial. I may point out that Surgeon Carte and myself reported cases of painless death by concussion without dislocation, and I believe that the blow on the base of the skull, turned up by the chin trough to receive it, would be even more likely to produce this concussion. By the Committee's classification (page vii) of the causes of death by hanging as (a) "suffocation," (b) "shock of base of brain, with dislocation, fracture, and unconsciousness, etc., etc.," they imply that there is no possibility of shock or concussion with (a) "suffocation." If any more evidence were required to prove the deadliness of forcibly throwing back the head, I could relate the case of a plasterer who was at work on the ceiling of a low room, when his foothold giving way he fell, his chin being caught by the upper angle of a shutter which was lying open into the room. The man could not have fallen more than a couple of feet before his chin was struck upwards, which was however enough to dislocate his spine and render him a corpse.

In conclusion, I must state that I look upon the main recommendation of the Committee—the "long drop," which I consider barbarous as a system, as sure to bring about many ghastly scenes at executions, calculated more than anything to foster the sentimental agitation for the abolition of capital punishment. On the other hand, I believe that executions carried out by the means which I suggest on the principle of *arte non vi*, which governs all surgical proceedings, and properly superintended by a humane, responsible, and practised expert would prove swift, painless, and merciful, an opinion for the confirmation of which I confidently look to the physiologists of the country.

RED CROSS IN JAPAN.—The Empress of Japan attended the second annual meeting of the Red Cross Society at Tokio, and made, it is said, an effective speech, which was followed by the announcement that she and the Emperor had given 100,000 yen to the society. The Empress subsequently visited the hospital and distributed toys to the children.

THE MEDICAL SCHOOLS: ALTERATIONS IN BUILDINGS.

ST. BARTHOLOMEW'S HOSPITAL.

Owing to the multitude of out-patients who flock to this hospital, satisfactory arrangements for seeing each case so as to benefit the patient and instruct the student have long been desired. The surgical and special departments have worked well and with little difficulty to the house staff, but it is in respect to physicians' cases that improvement is demanded. To meet the want, the surgery has been altered and new rooms added to the building, so as to accommodate the assistant house-physicians, who are appointed for the first time this month, and part of whose duties consists in attending to the patients in the medical casualty department.

ST. GEORGE'S HOSPITAL.

For many years the students' refectory was found to answer, though established on a small scale. About seven years ago it was rebuilt, and after various improvements suggested by experience, it is now perfect in its kind. A reading-room stands on one side, and a luncheon-room on the other. The names of the staff, and "operation," "accident," etc., are marked on electric dials. This arrangement allows every student to know when and where he is wanted; it has proved a good remedy for the inconvenience which arises in hospitals through the house-staff and the dressers and clerks being compelled to wait for the visiting physicians and surgeons on stairs or in corridors.

GUY'S HOSPITAL.

The College.—As we announced in the Students' number, a residential college for students is to be erected upon a site in Great Maze Pond, fronting the east gate of the hospital. The excavation of the foundations has been commenced, and it is hoped that the building may be ready for occupation in the winter session of next year. There will be a resident warden, who will "have the general control and supervision in disciplinary matters over the students residing in the college," and he will be appointed by the treasurer upon the recommendation of the College Committee. The plans of the college, in accordance with which the building is now proceeding, show the following accommodation: 1. Resident Staff.—Four sets of rooms for house-physicians, each set consisting of a sitting room and bedroom; four sets for house-surgeons; two bedrooms and a common sitting room for the "charities;" four bedrooms and a common sitting room for the externs. The house-surgeon and dressers for the week will sleep near the surgery, to be close at hand for sudden emergencies. 2. Students.—Thirty-four sets of rooms, each set consisting of a sitting room and bedroom; two sets, consisting each of two bedrooms and a single sitting room; and eight single rooms, somewhat larger than the others, with an alcove for the bed. Four large bath rooms, with hot and cold water-supply, are also provided. 3. Public Rooms.—The public rooms, which are intended not only for the residents in the college, but also for the use of the Guy's Hospital Students' Club, comprise a large dining hall, 70 ft. long by 22 ft. broad, with an open timber roof; a smoking room, 48 ft. by 27 ft., and a reading room, and the lavatory accommodation is very complete.

Physiological Laboratory.—The new physiological laboratories which have been erected consist of two large, well-fitted rooms adjoining the old lecturer's laboratory. The lower room is intended chiefly for physiologico-chemical and microscopical work, and the upper room contains one bench for microscope work, but will chiefly be used for demonstrations in physical physiology and for special investigations of a physiological and therapeutical character. The additional space available for practical work will permit of some alteration in the course of physiological teaching hitherto prevailing in the school. The preparation and examination of histological specimens will be carried out in the laboratory. Each student will go through a short course of physiological chemistry. The practical physiology class will consist in instruction on these subjects, and in such parts of experimental physiology as are most essential; the time of the class will be entirely devoted to actual instruction, the practical work being carried out in the laboratory by the students themselves.

Pathological Laboratory.—A new room for pathological and microscopical work has been, through the liberality of the governors, erected during the past year adjacent to the *post-mortem* room. The roof is one large skylight, which in clear weather gives an excellent light for all purposes, and can, when necessary,

be supplemented by gas, which is laid on to brackets on the tables.

Pathological Museum.—It has been decided to revise the present catalogue of this museum, to renumber the specimens, and, by improving the descriptions, to bring the new edition up to date, and thus to increase the value of the museum as a place of study.

Students' Club.—Through the consideration and kindness of the School Committee, who started it on a good firm basis, a club has already existed for a year. There is a committee consisting of six members of the staff, elected by the School Committee, and six students to be elected annually. The club possesses a large dining room, smoking and reading rooms, and a gymnasium.

KING'S COLLEGE.

The chief improvements in the Medical School of King's College during the past year consist in the completion of a new laboratory for bacteriology and micro-pathology, under the superintendence of Professor Crookshank, and the fitting up of a new workroom for the classes in practical botany, directed by Professor Groves. At the hospital very extensive additions have been made by building cubicles, sitting-rooms, lavatories, etc., for nearly seventy nurses, and the sanitary arrangements of all the wards have been altered and put into thorough repair.

LONDON HOSPITAL.

The school buildings were opened last year by H. R. H. the Prince of Wales after their entire reconstruction. The painting and finishing of the rooms have been complete since that date; the museum has been entirely rearranged. We are glad to learn that a new catalogue is in the press; it will be of great service to all who wish to avail themselves of the valuable resources afforded by the fine pathological collection in the museum.

MIDDLESEX HOSPITAL.

A new block of buildings, containing a lecture theatre, a library, a large physiological classroom, a common room for students, and a luncheon and grill-room, which was not completed last October, was opened at the beginning of this year. Since then a large classroom and a new *Materia Medica* museum have been added.

ST. THOMAS'S HOSPITAL.

In the month of April last, a commodious smoking and reading room was added with the view of lessening the crowding of the club dining-room, in which smoking is not now allowed before 3 o'clock in the afternoon. As part of the improvements effected in the spring, baths were fitted up adjoining the cloak-room for the use of members of football and other clubs. A dressing-room was also provided. The lighting of these rooms was also greatly increased by the use of daylight reflectors. The approach to the students' club has been improved. Adjoining the museum work-rooms a bacteriological laboratory has been fitted up under the superintendence of Mr. Shattock. This has superseded a similar laboratory used by Dr. Acland and Mr. Ballance, the first of the kind attached to a London medical school, and therefore of a relatively experimental construction. Accommodation has been provided by the governors of the hospital for two additional house-surgeons. This, although not strictly connected with the medical school buildings, forms an important addition to the appointments tenable by senior students when qualified.

UNIVERSITY COLLEGE, LONDON.

The series of improvements in the anatomical department, which have been in progress during the past four years, have been completed by the erection of a new building at the north end of the large dissecting-room, in the place of what was known as the small dissecting-room. The new building is two storeys high, and comprises, on the ground-floor, the lavatory (with increased accommodation), demonstrator's room, professor's study, entrance-hall, an injecting-room, and a demonstration theatre. On the upper floor of the new building are a room for the operative surgery class and two preparation and work-rooms. The operative surgery room measures twenty-four feet by eighteen, and the preparation-rooms eighteen feet by thirteen and twenty feet by eighteen respectively. The upper rooms are twelve feet high, and have both a side light from windows and a top light through the roof. The rooms have concrete floors, and all are fitted with gas, sinks, basins with hot and cold water laid on, hot-water warming

apparatus, shelves, cupboards, and slate tanks for the preservation of large objects. Besides a spacious staircase, a lift seven feet by three establishes communication between the two floors.

WESTMINSTER HOSPITAL.

Since last October a laboratory for bacteriological research has been fitted up, and it is worked under the direction of Dr. Abraham. Increased and improved accommodation has been provided for the practical chemistry classes. The museum is in course of re-arrangement, and the new catalogue is being prepared.

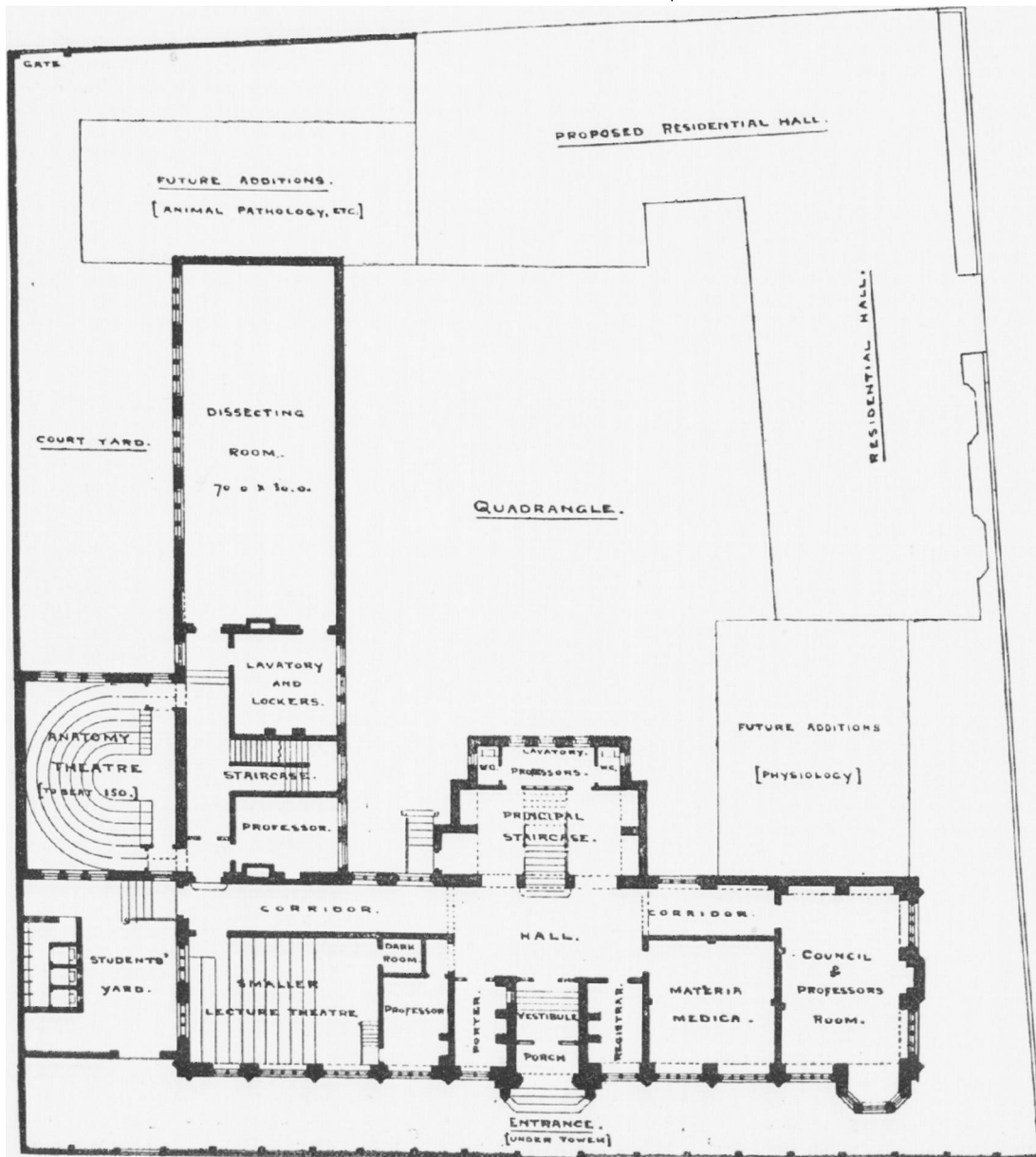
UNIVERSITY OF CAMBRIDGE.

A large chemical laboratory, well provided for teaching by experiment and research, with commodious lecture-rooms and private rooms for study, has been built, and is now ready for work. The old chemical laboratory will now be reconstructed for pathological lecture-rooms and laboratories for research. Additions have also been made to the physiological and botanical departments, chiefly for purposes of microscopical teaching and investigation.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

We announced, in the Students' number of the JOURNAL, that the new college-building was in course of erection, at an estimated cost of £25,000. It has been erected in Bath Road, off

Northumberland Street, Newcastle, and is designed in the Elizabethan style. The site is one acre in extent. The complete design has been prepared by the architects, Messrs. Dunn, Hansom, and Dunn, of Newcastle-upon-Tyne, to occupy the whole site, a quadrangle being left in the centre. Two sides only have been built, the main (north) front, in Bath Road, and the "east wing," which contains the anatomical department. In the future it is contemplated to occupy the west side, with an extension of the College and a residential hall for 50 students. The south side of the quadrangle is reserved for extensions for laboratories, a department of animal pathology, etc. The main front, in Bath Road, is 150 feet long, and has a tower in the centre, 70 feet high. The College is entered through a vestibule and hall. On the left is the porter's office with a window overlooking the entrance—next the professor's room for the medical lecture theatre—and then the theatre, which occupies the remainder of the half-front. The other half of the front, west of the tower, contains the secretary's office, a small class room 25 feet by 25 feet, and the council room, 35 feet by 24 feet. The whole of the upper storey of the front is devoted to the Museum, 60 feet by 35 feet (at the eastern end), and the examination hall and library, 80 feet by 35 feet (at the western end). These rooms are 25 feet high. The hall has a pannelled ceiling of the Elizabethan type, with core round the sides, and a rich frieze and cornice. Double doors connect the hall with the museum. The latter is lighted chiefly by a large skylight, and is fitted up with a wide gallery. The museum has a door communicating directly with the anatomy wing. A side staircase passes from the first floor level to a large room in the top of tower, 35 feet by 19 feet, to be devoted to the curator of the Museum. The anatomy wing is practically cut off from the main front, and is entered through a door opposite the smaller lecture theatre. It contains on the ground floor the anatomy theatre, fitted up with semi-circular seats, and amply lighted from the roof. Close by is the professor's room, and immediately beyond are the students' lavatory and locker room, and the dissecting room. These and the corridors are lined with white glazed bricks, as are also the rooms in the basement of this wing. The dissecting room, 70 feet by 30 feet, is lighted by a ridge and furrow roof facing north, and by windows on the east side. The floor is laid with Claridge's asphalt—warm, noiseless, and waterproof—as are also the floors in the basement, and the flat roofs. A stone staircase, for the students, leads down to the basement floor, and also up to two rooms on a level with the top of the gallery of the anatomy theatre—one a bone room and the other a students' room. The basement under this wing contains two physiological and pathological laboratories, a professor's room, the heating vault, coal and other stores, cellars, etc. Great care has been taken to ensure



has been taken to ensure

perfect warming and ventilation. The warming is effected by the admission of fresh air between coils of steam pipes in all the rooms and corridors, the air being drawn off again by heated upcast shafts.

QUEEN'S COLLEGE, BIRMINGHAM.

Owing to the increase of the collection contained in the museum of this college, the gallery has been extended, and other changes made in order to gain more room. This step has been partly necessitated by Professor Lawson Tait's gift of a large number of gynaecological specimens.

YORKSHIRE COLLEGE, LEEDS.

The considerable improvements, which were made just before the opening of the winter session 1887-8, in the arrangements in the dissecting-room, museum, and other parts of the medical school have proved highly satisfactory.

UNIVERSITY OF ABERDEEN.

In connection with this University, plans have now been completed and building operations are about to begin for a considerable extension of the Marischal College buildings, which will provide increased class-room and laboratory accommodation. All the departments will thereby be benefited, and those which will be specially provided for in the new building are physiology, pharmacology, medical jurisprudence and hygiene, and natural history.

THE OPENING OF THE MEDICAL SCHOOLS.

ST. BARTHOLOMEW'S HOSPITAL.

ONE hundred and twelve old students and visitors dined together in the Great Hall of the Hospital on Monday evening. Dr. Gee, Physician to the Hospital, was in the chair; Mr. Butlin acted as Honorary Secretary. The Treasurer, Sir Sidney Waterlow, was present, as well as many distinguished guests, including Sir Thomas Crawford, Professors Burdon Sanderson, Flower, and Atfield, and Dr. Buchanan, of Glasgow.

GUY'S HOSPITAL.

As has been customary of late years, the Guy's Hospital Physical Society held their first meeting on the evening of October 1st. Mr. Bryant, one of the consulting surgeons to the hospital, occupied the chair. In the course of a short speech he welcomed the new students to the hospital, and trusted they would maintain its best traditions. Mr. Lawford Knaggs read a paper upon the "Causes of Death in Peritonitis." Previous to the meeting the Students' Club threw open their rooms to all past and present students of the hospital, and entertained their guests with tea and coffee and an exhibition of photographs taken by members of the Guy's Photographic Society. The whole proceedings were saddened by the very recent death from diphtheria of the senior house-surgeon, Mr. F. S. Hawkins.

LONDON HOSPITAL.

THE winter session opened at the London Hospital with a dinner in the fine Library of the College, where nearly two hundred students and guests were entertained. Mr. Jonathan Hutchinson occupied the chair, and was supported by Sir Andrew Clark and Mr. Carr Gomm, Chairman of the House Committee. We understand that, as far as can be ascertained, the entry of students is likely to be quite up to the average. The anatomical department is well provided with subjects, and ready for immediate work.

ST. MARY'S HOSPITAL.

THE introductory lecture, published at page 751, was delivered on Monday afternoon by Dr. Waller, and the prizes gained by students at the Medical School at recent competitions were subsequently distributed by Dr. Broadbent, who also addressed the assembly. In the evening of the same day a *conversazione*, given by the medical officers and lecturers, was held at the hospital and new school buildings, which was of a most successful character. Over three thousand guests were present. The rooms and pass-

ages on the ground-floor were artistically decorated by several firms; and Mr. Dan Godfrey's orchestral band, the band of the St. George's Rifles, Mr. A. Tilley's banjo band, and Mr. E. Plater's Glee Union contributed selections of instrumental and vocal music during the evening. Perhaps the greatest attraction was Edison's phonograph, which was kindly exhibited by Colonel G. E. Gouraud. A charge of 2s. 6d. was made to each of those who wished to hear the phonograph talk, the proceeds being given to the fund for the extension of the hospital into Praed Street.

On Tuesday evening the annual dinner of the school was held at the Holborn Restaurant, when Mr. Howard Hayward was in the chair. About 130 guests were present. Following the usual loyal toasts came that of "Success to St. Mary's Hospital Medical School," proposed by the Chairman; the "Past and Present Students of the Hospital," proposed by Mr. H. W. Page, and responded to by Surgeon P. Hayes and Mr. A. Lewers; the "Medical Staff and Lecturers," proposed by Professor Michael Foster, F.R.S., and acknowledged by Mr. Edmund Owen; the "Visitors," proposed by Dr. Broadbent, and answered by Mr. H. M. Bompas, Q.C.; the "Dean of the Medical School," proposed in highly eulogistic terms by Mr. Malcolm Morris, and acknowledged by the Dean, Mr. G. P. Field; finally, the toast of the "Chairman," given by Mr. A. J. Pepper, to which the Chairman replied.

THE MEATH HOSPITAL.

THE one hundred and thirty-eighth session of clinical teaching in this hospital was inaugurated on Monday last by an address delivered by Dr. John William Moore, an abstract of which we publish at page 757. Instead of the address being given in the theatre of the hospital as usual, it was on this occasion delivered in one of the wards in the new wing, the recent opening of which by the Lord-Lieutenant was referred to in last week's JOURNAL. The chair was taken by the Solicitor-General for Ireland, M.P., and there were a number of laymen present, as well as medical men and students. Hitherto, although regular clinical instruction has commenced in the Dublin hospitals on October 1st, it has not been the custom to formally open the session until November 1st. The authorities at the Meath Hospital are to be congratulated upon having broken through this pernicious habit, which tended to unsettle students at the commencement of their studies, and to engender ideas and practices not easily got rid of.

Upon the conclusion of Dr. Moore's address, Sir George Porter unveiled a portrait of Mr. Wharton, who lately resigned his surgeoncy to the hospital after an honourable and valued service of thirty years. This portrait is to be placed in the new medical board room; and, as Sir George said, "It would be a great pleasure to his colleagues to have the portrait of one who, in the board room gave them good advice constantly before them. It would remind them of one who had supported and stood by them at all times, and of one who had spent the best years of his life in helping to build up the reputation of the hospital. When the picture would be shown to visitors at the hospital it would be pointed out as that of a man who was a great surgeon and a most unswerving friend."

Mr. Wharton returned thanks in a feeling speech. He referred to the value of the "old Meath" as a school, and, addressing the students, impressed upon them the importance of constant attendance in the wards; it was that, he said, which made men eminent physicians and surgeons.

In the evening the Meath Hospital annual dinner took place in the Shelbourne Hotel, and was as successful and enjoyable as the previous similar *réunions* have been.

MIDDLESEX HOSPITAL

THE session was opened on Monday, October 1st, by an address by Mr. W. Foster, an abstract of which we publish at page 757. The prizes gained during the past year were subsequently distributed by Sir Arthur T. Watson, Bart., Q.C., who addressed the students, and urged them to court success in life by hard and continuous work; other things, such as a pleasant manner and tact in dealing with people of all kinds were not to be disregarded or undervalued, but in the medical profession, as in other similar callings, the surest road to success was steady work continued from year to year.

The large theatre of the school was crowded with students and

their friends, and both Mr. Foster's and Sir Arthur Watson's addresses were enthusiastically received. The Dean, Mr. Pearce Gould, read the usual report, which, in addition to enumerating the successes of the pupils from this school at the various examinations, pointed out that during the past year the new school buildings had been completed, the library had been newly furnished, a new materia medica museum had been opened, a new class-room fitted up for the practical surgery and operative surgery classes, and a commodious luncheon room had been started. These additions have recently added to the comfort of the students, and have made the school premises very complete. After the opening meeting a reception was held in the school buildings and the residential college; some of the rooms were decorated with flowers and with valuable pictures lent by Mr. W. A. Smith. A series of interesting microscopical specimens was exhibited in the physiological class room; and an old student, Mr. Freeman, who has recently returned from the Gold Coast, showed a valuable collection of curios, etc., he had made there. In the evening the staff and a large number of the past and present students of the hospital dined in the Venetian Salon of the Holborn Restaurant, Dr. Sidney Coupland occupying the chair. The usual toasts were honoured. Major Ross, M.P., spoke in the name of the hospital, and in the most cordial terms of the school. Sir Arthur Watson, in replying for the visitors, referred to the happiness it had always been to him to remember that while his father, Sir Thomas Watson, had an unusually large number of close and valued friends in the profession, he appeared to have had no enemies, a fact which bore eloquent testimony to Sir Thomas Watson's charm of character. The music was of a very high order of merit, and the musicians, Mr. Ganz, Mr. Fulkerson, and Dr. Pringle, added not a little to the pleasure and success of the gathering.

YORKSHIRE COLLEGE, LEEDS.

THE prizes and certificates for the past year were distributed by Mr. T. P. Teale, F.R.C.S., F.R.S., who subsequently delivered an address, an abstract of which will be found at page 759.

Mr. C. G. Wheelhouse, in proposing a vote of thanks to Mr. Teale for his address, said that he greatly rejoiced to see that the day was coming when the number of systematic lectures would be cut down, and when they would be devoted to the teaching of the outline of a given subject, rather than to elaborating all the details of that subject. They could get all that, as the lecturer in many cases got it himself, from books; but if they were fortunate in their lecturer, and were taught by a man of practical experience, there were certain facts which he would always be able to give them out of the stores of his own experience and wisdom, which they would find in no book whatever.

Professor Bodington, in seconding the motion, alluded to the union of the Yorkshire College with the Victoria University; it was, he said, under the impulse given by the amalgamation of the Medical School with the Yorkshire College that union had been brought about.

The motion was also briefly supported by the Dean, Mr. L. Scattergood.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held at the Offices of the Association, No. 429, Strand (corner of Agar Street), London, on Wednesday, the 17th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

September 20th, 1888.

NOTICE OF QUARTERLY MEETING FOR 1888. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 17th, 1888. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, December 28th, 1888.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible

by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

REPORTS upon the two remaining inquiries, namely, that into DIPHTHERIA, and that into the GEOGRAPHICAL DISTRIBUTION OF CERTAIN DISEASES, are in preparation, and will be published as soon as ready.

The following inquiry only of the first series remains open, namely, that on the ETIOLOGY OF PHthisis.

A fresh inquiry into the ORIGIN and MODE OF PROPAGATION OF EPIDEMICS OF DIPHTHERIA has been issued.

Memoranda upon these subjects, and forms for recording observations, may be had on application to the Secretary of the Collective Investigation Committee, 429, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

BORDER COUNTIES BRANCH.—The autumn meeting will be held at the Infirmary, Whitehaven, on Friday, October 20th, at 1 P.M. Notices of papers or communications of any kind should be sent to the Honorary Secretary. Dinner at the Grand Hotel after the meeting.—H. A. LEDIARD, 41, Lowther Street, Carlisle.

LANCASHIRE AND CHESHIRE BRANCH.—An intermediate meeting of the Branch will be held at Warrington, towards the end of October. Gentlemen wishing to read papers, make communications, or show cases, are requested to write at once to Dr. GLASCOTT, 23, St. John Street, Manchester, Honorary Secretary.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—An ordinary meeting will be held on Thursday, October 11th, at the Grosvenor Hotel, Queen's Gate, Southsea, H. B. NORMAN, Esq., F.R.C.S., President, in the chair. Gentlemen desirous of introducing patients, exhibiting pathological specimens, or making communications are requested to signify their intention at once to the Honorary Secretary. Dinner will be provided at 6.30 P.M.—J. WARD COUSINS, Honorary Secretary.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, October 18th, at 5 P.M.; dinner at 5.30 P.M. The subject for discussion after dinner will be: "What Connection, if any, exists between Hemorrhage and Mal-hygiene?" The discussion will be opened by Dr. Meredith, who will read a paper on the subject. Members having any communication to bring before the meeting are requested to send notice of its title to W. M. KELLY, Honorary Secretary.

STAFFORDSHIRE BRANCH.—The fifteenth annual general meeting of this Branch will be held at the North-Western Railway Hotel, Stafford, on Thursday, October 25th, at 3.30 P.M. An address will be delivered by the President, Dr. F. BOLDERO, Penkridge.—T. VINCENT JACKSON, Wolverhampton.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 11th, at 4 P.M., C. HOLMAN, M.D., Treasurer of the British Medical Association, in the chair. Dinner at 6 P.M.; charge, 7s., exclusive of wine. The following papers will be read: "On Functional Albuminuria," by Dr. Ralfe. Mr. Edmund Owen will open a discussion on the Diagnosis and Treatment of Diphtheria. Dr. H. W. DREW will describe a case where there was escape of cerebro-spinal fluid after avulsion of the lower limb (from an accident) with recovery. Members desirous of communicating papers or showing specimens are requested to write to the Honorary Secretary, P. T. DUNCAN, M.D., Croydon.

OXFORD AND DISTRICT BRANCH.—The next meeting of this Branch will be held on Friday, October 26th, in the Radcliffe Infirmary, at 3 P.M. Members intending to read papers or show cases are requested to communicate with the Honorary Secretary, W. LEWIS MORGAN, 42, Broad Street, Oxford, on or before October 12th.—S. D. DARBISHIRE and W. LEWIS MORGAN, Honorary Secretaries.

SOUTH-WESTERN BRANCH.—An intermediate meeting of the Branch will be held at the Angel Hotel, Tiverton, on Thursday, October 25th, 1888, at 2 P.M. Luncheon will be provided between one and two o'clock, at three shillings a head. Notices of papers, cases, etc., to be sent to the Honorary Secretary; and members who propose to attend the meeting and luncheon are requested to inform the Honorary Secretary a few days beforehand. Mr. J. D. HARRIS, Exeter, will read a paper "On the General Condition of the Injured on Admission to the Devon and Exeter Hospital after the Theatre Fire." Mr. L. MACKENZIE, Tiverton, will show: 1. A Case of Arsenic Poisoning simulating Addison's Disease. 2. A Case of Fracture of the Spine.—P. MAURY DEAS, Honorary Secretary, Wonford House, Exeter.