duced mainly by shrivelling up and destroying the vascular walls' and that coagulation of the blood is a matter of very secondary importance; therefore, I keep moving the negative pole about and penetrating as many vessels with it as I can, because its destructive effect is more powerful and diffuse than that of the positive. I maintain it in one place just long enough to bring about a decided effect, and then change to another.

In these operations the process is essentially distinct from that by which Apostoli and others have produced their effects upon uterine tumours. However his results may be brought about, it is not by electrolysis proper, it is not by the decomposition of fluids and solids at the poles of the battery. It may be neurotic or vascular or trophic or osmotic, it is not electrolytic, and to call it so is no doubt a misnomer. I have for several years, however, been applying electrolysis in the way I describe to various forms of goitre with very striking results, and I have been impressed by the fact that on several occasions the desired effect has been produced by one operation. This was the case, for example, in two out of three cases sent to me by Dr. Watson Campbell, of Duns. There has just left my wards a woman, aged 25, on whom I operated two years ago for a goitre of considerable size, chiefly on the right side. It shrivelled up very quickly after one operation, leaving only a tiny knot low down on the left side. She came back recently on Dr. McBride's recommendation, because this lump was giving her some uneasiness, and she was anxious to get rid of it entirely. I have thus had a rare opportunity of noting the result. Having ascertained by puncture that the swelling was partially cystic, I cut down upon and shelled out a beautiful little cysto-adenoid growth about an inch and a quarter in diameter. I found the gland itself normal in size. I took away a small portion of the left lobe, to which the tumour was attached. I could detect nothing unusual in its structure, but it must be remembered that the needles had been chiefly worked in the right lobe.

I do not think that this rapid atrophy after one operation is likely to be the rule. In the larger number I have found more are required. Moreover, this speedy cure is not without its parallel among the angiomas, in which such success certainly depends on the thoroughness of the operation in reaching all parts of the tumour. It may be, then, that they were simply further examples of absorption of destroyed parts and cicatricial contraction of the rest. Still, however, these thyroid operations were largely tentative, and fell far short of what I should have considered necessary in angioma; and since Apostoli has described his method by the passage of strong currents for short times, without appreciable electrolysis at the poles, I have sometimes thought that, perhaps, there might be something analogous in those thyroid operations.

I have not yet had sufficient experience to be able to define with precision the value of electrolysis in goitre. I can only give the results so far as they have gone.

Fourteen cases have been operated upon. Three are at present under treatment, having been recently operated upon, and already showing beneficial results. One is a fibro-cystic, another a strongly marked exophthalmic, the third a vascular goitre, with considerable dyspnoea. Eleven remain, two or three having slight vascular and exophthalmic symptoms, others with slight dysphagia or dyspnoea, all of the vascular variety. Four of them I have found it impossible to trace. These cases are in the infirmary only for a day or two, and the records of their addresses have been imperfectly kept. In two cases, however, they returned for a second operation, having been benefited by the first. Of the others, six have been absolutely cured, and the seventh, I hear, has the tumour still in no way changed by one operation. I think the results are very encouraging, and that, with greater experience, one will be able to operate with more confidence. The chief difficulties have hitherto lain in the manipulation of the needles, and our want of knowledge of the effects which might be produced on surrounding structures in so important a locality.

SUCCESSFUL VACCINATION.—Mr. T. Pickthorn Thomson, M.B., of Half-Way House, Shrewsbury, has been awarded, for the second time, the Local Government grant for efficient vaccination.

PRESENTATION.—Mr. A. R. Anderson, F.R.C.S. Eng., was presented on Monday, October 29th, at the General Hospital, Nottingham, by the president, staff, and numerous other friends, with a walnut library table and chair, a dining-room clock, and a brass newspaper stand, on his resigning the post of Senior Resident Medical Officer.

INTRODUCTORY ADDRESS ON THE REFORM OF MEDICAL EDUCATION.

Delivered at Glasgow University at the Opening of the Session 1888-89.

By GEORGE BUCHANAN, M.D.,
Professor of Clinical Surgery, University of Glasgow.

PROFESSOR BUCHANAN said he was going to speak a few minutes, not in dictating to his audience, but in suggesting certain topics for their consideration and certain topics upon which he thought they might take some action, because they were, perhaps, aware that probably before the end of this session, for the first time, the students would be recognised by the State as a corporate body in the University. He was going to take up two topics of importance. The first was free trade as against protection; and, secondly, some considerations with regard to the curriculum and examination. What had free trade and protection or monopoly to do with the University, as applied to the study, the teaching, and the practice of medicine? Should the study of medicine be regulated or influenced simply by the principles of free trade; and the same with teaching, and the same with practice? He had not the least doubt that all young, generous minds who heard this stated for the first time would say, "Down with monopoly! Free trade for all connected with medicine." When he was a student, the principles of free trade regulated the entrance into the profession. All that a student had to do was to pay his fee, get his name enrolled, and sit on the benches. No questions were asked. He continued to do so till the end of four years, and then he was examined in one day from botany to medicine. He either came out a doctor or not a doctor. In 1860 free trade was abolished, and now they were under protection; and the protection consisted in demanding that the student should pass a preliminary examination before he began his studies. Was this preliminary examination serving the purposes intended? The original idea of a preliminary examination was to secure that a young man should be engaged in some studies preparing him for the special study of medicine up to the very time he enrolled as a student. But now they passed the preliminary subjects piecemeal, and in many cases left off the really educative subjects as soon as they could pass them—perhaps two or three years before registering as students of medicine. In the preliminary examination there was a great slaughter in mechanics; 204 entries for mechanics, with 101 passes. Why was that? It was easily explained. There was no means in country schools for a young man learning mechanics, and he had to get it up by cramming out of a class book. He thought that with regard to entrance to professional study, mechanics ought to be taken out of the registration subjects. What he held was that a student ought to pass in everything else required for registration; and every student should be compelled to begin his studies in May, not October, and during the first summer he could devote himself to elementary mechanics and physics, and to botany and zoology, and pass in these before the first winter session. In the first winter the student should devote his time solely to anatomy and chemistry, which he could do if the ordeal of the examination in botany and zoology were removed out of the way; while at present during the first winter the examination in botany and zoology was weighing on his mind, which should be free for chemistry and anatomy, especially the latter. Or if the student could afford the time, one whole year might be most usefully spent in mechanics and demonstrations in physics—as well as botany, zoology, and chemistry—as the first medical academic year in Cambridge was arranged. Unquestionably the time had arrived when the curriculum must be extended to five years—and in the case of those who had had no opportunity to study mechanics and physics, probably to six years—but in order to utilise their first year for either botany, zoology, or chemistry, or all, the subject of mechanics might well be included in the first professional examination of a six years' course, instead of regis-

¹ The address was delivered without the use of MS. It appears here in an abridged form, in a report by a shorthand writer. Hence the colloquial and sometimes fragmentary style.

tration. The whole subject of the relation of mechanics and physics to medical study required most careful reconsideration.

Was there any other kind of restriction? What about sex? What about women? The ladies had settled that for themselves in a way that would astonish the audience. Those who had begun already had proved not only their capacity for the study of medicine, but their capacity for excelling the men. He had a note from Mrs. Garrett-Anderson, Secretary of the School of Medicine for Women, and in it he found that at the August examination at the University of London in anatomy, physiology, and materia medica, there were only 19 passes with honours among candidates from all schools, and of these 10 were women. In anatomy there were 6 who took honours, and of these 3 were women; in physiology 6 took honours, and 4 of these were women; and in materia medica 7 took honours, and of these 3 were women. More than half of the honours of the University of London in anatomy, physiology, and materia medica were taken by women, as against all comers from all schools. That proved what women could do. These must, however, be regarded as exceptional cases. They were women who had braved public opinion, and who had satisfied themselves by their previous study that they were qualified for what they undertook, and, consequently, when they were determined to take high honours they did so. He thought it right that women should be encouraged in the profession for the sake of going to India and practising in places to which men were not admitted. In the zenanas of India was the proper sphere for women.

Professor Buchanan next proceeded to state the question: Whether the teaching of medicine should be regulated upon the principle of free trade or upon that of protection? He would say protection for the student rather than protection for the teacher. In the meantime there was restriction for the teacher, and that restriction was founded upon two totally different principles. The one was that a teacher must belong to a guild, the members of which held the monopoly of educating for its own licence, or rather members of one of three guilds, which gave a conjoint licence; university professors being also necessarily recognised, as they were the teachers of the great majority of the medical students in Scotland. The other was that the teacher must defer to a tribunal—an impartial tribunal, the University Court—which was entitled to grant the right of teaching to any person who applied, if he satisfied the Court that he was qualified to teach. That was the present state of matters.²

The next question was a much more difficult one. In connection with the giving of a degree, should the teaching be confined to that given within the university, or should it be open to all? At present the teaching for a degree was, in the main, given in the university, but the students had the right to take a portion of it outside. With reference to that, he was of opinion that the permission should be made more liberal than it was. But the very essence of a Scotch degree was that a part of the teaching must be within the university. Many were crying out against this, and demanding that all degrees should be given by examination alone, without reference to any part of it being taken within the university. It was a very curious fact that the university reformers in London—seeing the non-success of the University of London, so far as the wants of the medical profession were concerned—were crying out for the foundation of another university in London on the principle of the Scotch universities, in order, if possible, to share in the success of these universities, of which they were now so jealous; while reformers in Scotland, even with the example of the University of London before their eyes, were crying out that the Scotch universities should grant degrees to all comers, with the certain result that these universities would share the fate of the University of London.³ The degrees of London University being given by examination alone, to any who chose to present themselves, the test, especially with regard to the science subjects, was made so severe that few, except those specially educated for the kind of examination given, could pass the ordeal. Hence the degree of M.B.Lond. was the mark of exceptional merit and talent, or, at least, of a very special course of study, beyond what was required for the diplomas of the Colleges of Physicians and Surgeons. Now, if the same power of granting degrees by examination alone were extended to the Scotch universities, it would be accompanied by a condition that the test should be made analogous to that of London; with the result that the Scotch M.B. would be out of the reach of those

who now obtained it; and so the universities would necessarily become schools and graduating centres for a comparatively small number of the medical profession, who could afford the time and cost of preparing for the very special tests to be applied, and would lose touch with the present class of students, who, as graduates, had done such honour to the Scotch universities. "By all means," said Professor Buchanan, "liberalise the conditions, but retain, in part at least, the principle which has made our universities what they are."

With regard to the question of free trade as against protection in private practice, he would say almost nothing. In 1860, the Government declared that every practitioner who wished to have his name upon the *Register* should pay five guineas for registration. What had they got for that? Had they got any protection? No. There had been no suppression of quackery, as it was called. It was a very delicate and difficult thing to interfere with the freedom of the citizen. If a man preferred to go to a bone-setter or herbalist who did not assume the title of physician or surgeon, and chose to give him a guinea for his help, not as a fee, but as a gift, no one could interfere with that. Every year or two some unfortunate wretch who had made a mistake was hauled up before the General Council, and his name was taken off the *Register*, but there was no suppression of irregular practice by those not on the *Register*, and it was hardly possible to be done. They had done their best, and they had not very well succeeded. It was for those who were beginning the profession to see if they could do better, and give themselves the protection which had not yet been obtained.

In the next place, Professor Buchanan suggested some alterations in the plan of study. Among the most important was the securing a larger share of a student's time for the most important subject, anatomy. This was the foundation on which rested all the practical branches—and the knowledge of its details must be acquired during student life. As a general statement, it might be said that an increased knowledge of medicine and surgery was gained the longer a man was in practice; but opportunities for the study of anatomy were few and far between after the battle of life had begun—so that, from the time a man got his degree, his knowledge of the particulars of anatomy began to get less vivid. In the multiplicity of other studies, it was difficult for a student to find time enough for practical anatomy, but in any rearrangement of the curriculum some more time must be procured for it—even at the expense of some of the other lectures. Some more time for anatomy would be gained when the duration of the curriculum was lengthened.

Professor Buchanan next maintained that it was a great mistake to postpone the practical observation of injury and disease in the hospital to a late period of the curriculum. This was a very difficult point, but he had no hesitation in saying that, for those who were to get all their medical education in four years, the hospital practice should be taken at the beginning of the second winter, and for those who proposed to make a five years' course, it should not be delayed beyond the end of the second winter. Even that time was little enough to be occupied in observing the phases of disease in patients, which was to be the business of their life. Professor Buchanan elaborated this suggestion by some illustrations and arguments, and then concluded as follows:—

"There is one topic of public interest for which I must crave a few minutes' attention. The subject of affiliation of colleges to the University will be fully considered by the Executive Commission under the Universities Act, and I do not propose to discuss it here; but in Glasgow it has been mixed up with another subject to which I must shortly allude. It has been publicly asserted in the Merchants' House, in the Trades' House, and elsewhere, by men who have no personal knowledge of medical teaching, that the clinical teaching in the Western Infirmary is defective, owing to the large number of students who frequent that hospital. I unhesitatingly assert the contrary. I do not deny the general statement that a large hospital is likely to have greater facilities for clinical teaching than a smaller one; but that statement must be taken with some reservation. A hospital with 400 beds and eight clinical teachers is practically eight hospitals with 50 beds each, and each is essentially a repetition of the other. A hospital with 200 beds and four teachers is in like manner four hospitals with 50 beds; and so on. Now, as our students are not allowed to wander aimlessly about, or 'walk the hospital,' as used to be said, but attach themselves at the beginning of each session to one teacher and one set of wards, so far as each individual student

² These remarks apply to Scotland.

³ See notice of an amendment to that effect on the second reading of the Universities Bill.

is concerned, and so far as variety of cases is concerned, it does not matter whether the hospital contains 100 or 800 beds. Each group of 50 is practically identical with the other. When anything unusual in interest occurs in one ward, means are taken to bring it before the students of other wards; but, as a rule, the occupants of each group of 50 beds, medical or surgical, are suffering from nearly allied diseases. University College Hospital, London, has 200 beds; King's College, 220; Charing Cross, 180; Westminster, 215; St. Mary's, 281—all duly recognised as efficient clinical hospitals—while the Western Infirmary, Glasgow, has 400 beds.

"But it is asserted that the classes in the Western Infirmary are too large, and those in the Royal Infirmary too small—indeed, according to the statement of the managers, are dwindling down to nothing. Now, I have every sympathy with the Royal Infirmary, and regret that its students are falling off; but, if it can be shown that the clinical teaching in the Western Infirmary is as good as that at any other hospital in the kingdom, there is no valid reason why it should be interfered with. So long as the interests of the patients are not injured, the managers of these institutions are mainly concerned with finance. If any legislative enactment could induce students to go to the Royal Infirmary instead of the Western, the result would be to enrich the old-established charity, with its large accumulated capital, at the expense of the newer and poorer.

"But it is said the classes of the Western Infirmary are so large that clinical teaching cannot be efficiently conducted. This has been so often reiterated that I here protest against it; and I demand that if anyone chooses to discuss the subject, he will make himself personally conversant with facts and figures before he makes an assertion. Some two years ago this was first mooted, and since then some of the managers of the Western Infirmary have made it their business to visit the hospital at the teaching hours, and even to be present at some of the clinical classes, with the view of ascertaining on what grounds such insinuations were made; and I have the authority of the Chairman of the House Committee for stating that the interests of the patients were in no way unfavourably affected, and, so far as he could judge, the clinical teaching was just such as he should think useful. I go further, and assert that it will bear comparison with that in any university or school, and I challenge denial. Some time ago Mr. Caldwell, M.P. for the St. Rollox Division of Glasgow, asked me if there was any way he could become personally acquainted with the mode of clinical teaching, about which so much had appeared in the newspapers. I asked him to come to the Western Infirmary any day he chose at 9 A.M. Accordingly one day he came, and I asked him to follow me with the students and take his seat at a *clinique*. I can with confidence appeal to his experience on that occasion; but on leaving he said to me, 'If the students are not well acquainted with the subject of this morning's practical lesson, I don't think they are capable of being taught,' or words to that effect. I declare that before anyone ventures to make a statement on this subject in public, it is his duty to do what the Chairman of the Western Infirmary has done. No one is entitled to make any statement till he has for himself visited and compared the teaching in the Royal Infirmary, and in Edinburgh, in Aberdeen, and in some of the hospitals in London, with that in the Western Infirmary; and as for me and my colleagues, we would abide the result of a *bona-fide* investigation and report, with great equanimity. It is true that in some sessions, some of the eight classes in the Western Infirmary contain more students than even the teacher himself would choose if he had the selection, while others contain fewer than the teacher would desire. But it is difficult to see how this could be avoided so long as the students have the free choice of their teachers. This, however, is in the hands of the students themselves; and, as a matter of fact, if a student is a member of a very large class one session, he is sure to be a member of a smaller class in one or more of the six courses of clinical teaching he attends. I do not say that our clinical system is perfect, and I would hail, and would be one of the first to acquiesce in, any well-devised scheme for its improvement. And in this the senior students, or, better still, the young graduates, who are emancipated from the dread of the final examination, might give valuable hints. But, comparing the present system with that in other schools which I have visited, according to my experience it is as good as any and better than many. I maintain again that if anyone will dispassionately compare the clinical teaching in the Western Infirmary with that in the Royal Infirmary or any other clinical hospital in Scotland,

he will unhesitatingly declare that the charge of defective clinical study in the Western Infirmary is unjustifiable and wholly without foundation. In corroboration of the above, reference may be made to the official report in 1886 by Drs. Bristowe, Barnes, and Macnamara, on the visitation of Glasgow University, for the General Medical Council. In these remarks no reference is made to the teachers or their clinical assistants and tutors, but some consideration is due to them in estimating the value of clinical instruction.

"Gentlemen, I have attempted no eloquence in this address; but I may tell you in confidence that I have prepared a most eloquent peroration or epilogue, which I have purposely left at home. They say that 'good wine needs no bush'; and bad wine deserves no bush; so, whether the wine has been good or bad, you shall have no bush. I conclude by commending you to your studies and wishing you a prosperous session."

TOPICAL REMEDIES FOR DISORDERS OF THE ANUS AND RECTUM, AND IMPROVED INSTRUMENTS FOR THEIR APPLICATION.

By JOHN WARD COUSINS, M.D. Lond., F.R.C.S.,

Senior Surgeon to the Royal Portsmouth Hospital and to the Portsmouth and South Hants Eye and Ear Infirmary,

THE common disorders of the anus and rectum exhibit very varying degrees of severity. Sometimes local distress, pain, and frequent bleeding necessitate surgical interference without delay; at other times any operation appears undesirable in consequence of age or extensive visceral disease. The judicious surgeon will always select those cases which are favourable for radical cure, and in this way avoid the complications and disastrous results of bygone practice.

Now every day we meet with mild forms of these diseases, for which our patients refuse altogether to undergo surgical treatment, but they are very anxious to adopt palliative measures. Fortunately, in a large number of cases, the assiduous application of topical remedies is followed by great temporary relief, and sometimes even by permanent cure.

Of course anal and rectal affections are not always mere local disorders. In many cases they are excited by general diseases and visceral obstructions, and the removal of the primary cause always demands the first attention. Respecting general treatment, great relief can often be obtained by regulating the secretions, by attention to the diet, and especially by avoiding all excesses in eating, drinking, and tobacco. Aperient and laxative remedies are frequently serviceable, but they must always be mild and unirritating in their action.

With these few remarks I shall pass to my special topic—the local treatment—and I shall briefly narrate my experience as to the best applications and the right method of applying them.

During the act of defæcation in the healthy condition of the bowel the blood-vessels around the orifice are distended, and slight protrusion of the mucous membrane takes place; and whenever the muscular tension and vascular turgescence of the part are habitually prolonged and severe, the very conditions are present which promote the development of hæmorrhoidal troubles. In cases of ordinary constipation, and prior to the expulsion of hardened accumulations, some softening or lubricating agent may with great advantage be introduced into the rectum, and for this purpose I strongly recommend a smooth and creamy mixture of boracic ointment, glycerine, and lanolin.

In relaxed conditions of the anus and rectum with a tendency to prolapse, prolonged efforts during evacuation distend the dilated vessels, aggravate the varicose state of the anus, and increase the local distress. Straining at stool must at all times be carefully avoided. It is a good plan to get a regular action of the bowels just before going to bed, instead of early in the morning, for then, during the repose of the night, the intumescence of the organs has time to subside. Immediately after an evacuation the anus should always be washed, and the well-soaped hand is the best instrument for the purpose. Habitual cleanliness is one of the most effectual ways of preventing hæmorrhoidal disorders. The irritating secretions and mucus from the orifice of the gut are removed, and the friction tends to brace up the part and empty the distended vessels. There is no region of the body which really requires so much sanitary attention, but, even in these days of hygienic enthusiasm, it is too often the last part to be cleansed.