

Government of Madras.

EDUCATIONAL DEPARTMENT.

Recd.

Regd.

} 1909.

Enclosures

Spare copies

G.O., No. 369, 22nd June 1909.

Medical Degrees.

Accepting the recommendations of the Surgeon-General in regard to the teaching of dentistry to Medical students and requesting the Director of Public Instruction to move the Senate of the Madras University to include a course of lectures and demonstrations on the care and extraction of teeth in the subjects prescribed for the L.M. & S. and M.B. & C.M. Examinations.

Government of Madras.

EDUCATIONAL DEPARTMENT.

2

Recd.

Regd.

} 1909.

Enclosures

Spare copies

G.O., No. 369, 22nd June 1909.

Medical Degrees.

Accepting the recommendations of the Surgeon-General in regard to the teaching of dentistry to Medical students and requesting the Director of Public Instruction to move the Senate of the Madras University to include a course of lectures and demonstrations on the care and extraction of teeth in the subjects prescribed for the L.M. & S. and M.B. & C.M. Examinations.

GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

Read—the following papers:—

I

Letter—from the Hon'ble Mr. A. G. BOURNE, D.Sc., F.R.S., C.I.E., Director of Public Instruction.

To—the Secretary to Government, Educational Department.

Dated—the 15th July 1908.

No.—Ref. on Cur. 3369.

With reference to paragraph 3 of G.O., No. 617, Educational, dated 17th September 1907, I have the honour to submit herewith a detailed scheme prepared by the Professor of Dental Surgery for the improvement of the teaching in that subject, together with the opinions of the members of the College Council thereon and a copy of the Acting Principal's letter giving cover to them. The cost of Mr. Badcock's scheme is estimated to range from Rs. 2,000 to Rs. 2,750 a month, besides the capital charges necessary to give it a start, and the Acting Principal of the College hesitates to recommend the adoption of such a scheme without more evidence that it is likely to meet a want with success. The Surgeon-General to whom the papers were referred, remarks that there is no evidence as to the necessity for the expenditure of a considerable sum of money and that if there are any people ready to take out a dental course, arrangements could be made for meeting the demand. He, further, states that Dentistry is a paying profession and that the course should be made self-supporting in time and instruction should not be given away as in medicine. For these reasons, he concurs with Colonel Crawford in his opinion that until it is known what demand there is for a dental qualification there is no use discussing schemes.

These views seem to me to be sound.

ENCLOSURES.

Letter—from Lieut.-Colonel F. J. CRAWFORD, M.D., I.M.S., Acting Principal, Medical College, Madras.

To—the Director of Public Instruction.

Dated—the 20th May 1908.

No.—107.

With reference to G.O., No. 617, Educational, of 17th September 1907, paragraph 3 and your Ref. on Cur. No. 3369, dated 13th May 1908, I have the honour to forward herewith the report of the lecturer on Dental Surgery as well as expressions of opinion from the Professors of the College on the practicability of the scheme. Colonel Browning's remarks are also given, and I am sending them all on in original. My own views are among them and there is no necessity for me to repeat them here. Among the papers will be found a copy of the prospectus of the lectures on Dental Surgery, and it will be seen that they cover a good deal of ground. If it were possible to bring up the practical part of the subject which is carried out at the General Hospital to the same standard, considerable facilities would exist for any one desiring a good practical knowledge of ordinary dentistry.

2. At present the University do not require attendance on this course, and the lectures, and demonstrations are only attended by military pupils and women students. If my suggestion is looked on favourably the class might be thrown open this coming session to (1) graduates in medicine desiring dental instruction and (2) to others such as senior students preparing for their finals who have already failed and who probably have available time, the sanction of the Principal being made necessary in their case.

3. The cost of Mr. Badcock's scheme would be from Rs. 2,000 to Rs. 2,750 a month, besides the capital charges necessary to give it a start. I hesitate to recommend the adoption of such an expensive scheme without more evidence that it is likely to meet a want with success. (Vide my remarks following Mr. Badcock's report in the file).

Preliminary report on the Institution of a College diploma in Dental Surgery to be granted by the Madras Medical College and Extension of the Dental Department of the Madras General Hospital.

In compliance with the wishes of Government and the remarks of the Surgeon-General in the Medical College Report for 1907, I have prepared a preliminary scheme for a College diploma in dental surgery, with notes on the necessary increase in the Teaching staff of the Medical College, and extension of the Dental department of the General Hospital, and beg to submit the same herewith.

Colonel Browning points out that "The original intention under which a Professor of Dental Surgery was appointed was to teach dental surgery to students who would ultimately become subordinate Medical officers of Government, and who could thus be of use in the mufassal. Our upper subordinate service is now recruited entirely from students possessing University qualifications, and these students do not attend the course of lectures on dental surgery."

The medical profession is beginning to recognise what has long been insisted upon by dental surgeons—the great importance to the physician and surgeon of a knowledge of the teeth and their diseases. The subjects of dental anatomy and pathology are at present almost entirely ignored by teachers of general anatomy and pathology. Consequently special teaching is desirable, and attendance on part (or the whole) of the curriculum submitted would be useful to Medical students. In India, owing to the practical non-existence of a dental profession, direct treatment of dental diseases by subordinate Medical officers is largely necessary, and it was probably with a view to the demand for some knowledge of the subject that the chair of dental surgery in the Madras Medical College was instituted.

The lectures given by me since my appointment have been directed chiefly to two objects—to indicate the connection of dental with general disease, and to give a practical knowledge of quite simple operations and treatment of mouth conditions. Syllabus submitted herewith.

In September 1907, on Colonel Browning's suggestion, I drew up a scheme for a diploma in dental surgery, and a course of instruction which I then deemed would confer the minimum qualification for the practice of dental surgery under the authority of Government. This scheme Colonel Browning considered too ambitious for present needs, and the one I now submit is a considerable modification thereof.

Paper "A" is a scheme for a diploma in dental surgery for students who do not also take up a medical diploma, and "A-2" an abbreviation thereof.

Paper "B" is a scheme for two years' course of training in dental surgery for students who should also take up a medical degree. In this year's Medical College Report, Colonel Browning says: "A College diploma with a two years' training would possibly suffice for present needs and would form the nucleus of a proper dental school."

In the report above referred to I wrote: "It is suggested that the course of instruction in dental surgery at the Madras Medical College be extended sufficiently to permit of a diploma in the subject being granted by the College to students who shall have been through the curriculum and have passed an examination. The granting of such a diploma (referring to a draft scheme for a L.D.S. diploma—paper "A") by the College would not be in accordance with the spirit of the "Dentist's Act" (Dentist's Act, 1878, clause 3), which may be held to represent the views of the General Medical Council.

The Dentist's Act, however, recognises the practice of dental surgery by "legally qualified medical practitioners" (clause 3, paragraph 2, and clause 5).

There should then be no ethical objection to the practice of dental surgery by a person holding a diploma in medicine and surgery of the Madras University who has also received a fairly thorough training in the special knowledge and practice of dental surgery.

The scheme proposed is of course more or less in the nature of an experiment, and, it is to be hoped, preparatory to the granting of a license to practice, and the registration of practitioners, by the Government of India in the future.

It would be inadvisable to confer on the holder of a College diploma the style "Licentiate in Dental Surgery", as such a style would be likely to be confused by the public, and possibly by the holders of the diploma, with the licentiateships granted by the Colleges of Surgeons of Great Britain and Ireland, which are registered by the General Medical Council.

In accordance with these views I propose the institution of a diploma, which I have termed provisionally "Licentiate in Oral Surgery", on similar lines to the licentiateship in Sanitary Science of the Madras University. "Oral Surgery" seems to me particularly appropriate to the work of a qualified Surgeon whose attention is chiefly devoted to the mouth. Such a practitioner, who under this curriculum is not trained in the more highly specialised branches of dentistry, should regard the surgery of the mouth as specially included in his province."

Papers submitted.

Papers "A" and "A²" above referred to.

The curriculum for Class B in Paper "B" shows at a glance the special subjects and training considered necessary. The standard is considerably below that of a registrable diploma. The course in Dental Mechanics would, there is no doubt, be accepted for the L.D.S. diplomas.

of England, Edinburgh and Ireland. This is an important point. The general course would also presumably be accepted, so that the curriculum would be of considerable assistance to a student intending to take one of the above diplomas in Great Britain.

Paper "C" submitted herewith considers the questions of Staff and Equipment of the Dental School necessary to carry out the course of instruction suggested in Paper "B".

To provide practical training corresponding to the curriculum of the Dental School, it would be necessary to enlarge very considerably the scope of the present Dental Department of the General Hospital. Paper "D", submitted herewith, indicates the nature of the establishment required and gives the approximate cost of special fixtures and furniture, instruments, appliances, tools and materials. The approximate cost of special instruments, appliances, etc., is here given. For the rest an estimate by the Public Works Department will be necessary.

The establishment, etc., required would be the same if Paper "A" or "A₂" were adopted.

Paper "E" gives the outfit required for each student.

The students of all existing Dental schools have to provide their own outfits. In this case the outfit is reduced to the smallest possible and is of course useful in subsequent practice.

Syllabus of lectures at present given.

Copy of Dentist's Act.

Supply of Students.

As this would, for a time at any rate, be the only Dental school in India, there should be a considerable fairly well-to-do population to draw upon. I have several times been approached on this subject by students of the college, by men in general practice and by outside natives anxious to learn dentistry.

The conditions of practice (climate, etc.) in the country, the small number of large European towns, the absence of Medical and Dental Acts and other circumstances, combine to offer but little inducement to good men to come out from home; but there is no doubt a demand for dental surgeons. If there be no indigenous supply, the country will soon be largely exploited by foreigners whose qualifications do not reach the standard required by the General Medical Council. Under none of the schemes submitted do the qualifications reach anywhere near this standard, but the supply will be indigenous and the idea is to raise the standard progressively.

Supply of Patients.

Natives of this country suffer extremely little comparatively from dental caries, but are excessively liable (except perhaps in the agricultural districts) to pyorrhoea alveolaris and other chronic inflammation of the dental periosteum, the teeth becoming loose and being lost at an early age.

Material for an exhaustive study of these conditions would be more available here than perhaps in any other Dental school.

I think there should be a good supply of patients from the Eurasian population, the families of soldiers, and so on. Natives would supply but few cases of dental caries, but lose their teeth early and are generally anxious to have new teeth put in.

Of course the present class of patients would continue, and would, I think, be increased largely by the department being open every day throughout the year.

As things are at present the Army should be a good source of supply, if suitable arrangements could be made with the Military authorities. At present British soldiers are supplied with artificial teeth by Government in cases where this is considered necessary by the Army Medical officers. The work is done at present by qualified and unqualified practitioners and it could be done on the whole better and at less cost by the hospital. Soldiers' teeth could be saved by filling to a very much greater extent than is now possible and they might attend for examination periodically.

Orphan asylums, similar institutions, schools, etc., if the children's teeth were periodically examined and properly looked after, would also provide a very considerable number of patients, and, besides this, the treatment of such patients would largely assist in the hygienic education of the people.

Altogether, I think there is no doubt that the supply would create the demand.

Other points to be considered.

Salaries—

Senior Professor and Senior Dental Surgeon.	{ Rs. 600—750? Rising. (Pension and furlough. Study Leave.) Allowed to practice.
Junior Professor and Dental Surgeon	{ Rs. 400? Rising. Pension and furlough. Allowed to practice.

Fees payable by students.

Admission of female students?

Charges to patients for filling materials and dentures.

Possibility of recouping large proportion of cost?

I submit papers "A" and "A-2" with reluctance, as being derogatory to the status of the dental profession. Any scheme adopted should, I consider, be in accordance with the views of the profession generally, and should not contravene the principles of the Dentists Act. And it seems to me that the advantages offered are sufficient to induce a student to take up the L. M. & S. together with the two years' dental course.

Col. Browning however holds that, considering the class of patients the diplomates would treat, and the nature of the competition, etc., the principles enunciated by the General Medical Council should be ignored; and at his request I submit these alternative schemes.

29th March 1908.

C. F. BADCOCK.

A—Curriculum for a Diploma in Dental Surgery (Medical College, Madras).

(a) General education—Matriculation of Madras University and F. A. course in English, or equivalent.

(b) Professional education—Extending over four years—

(1) Dental mechanics—

A course of lectures on dental mechanics and metallurgy.
A two-years practical course at the College.

(2) General Surgery and Medicine, and allied subjects.
Dental Anatomy, Surgery and allied subjects.

(c) Examinations—

(1) Preliminary Science—Physics and Chemistry.

(2) First Professional—Dental Mechanics and Metallurgy.

(3) Final—Anatomy, Physiology, Pathology and Surgery, etc.
Dental Anatomy and Physics.
Dental Pathology and Surgery, etc.

Scheme for a diploma on the lines of the L.D.S.R.C.S., Eng., indicating the minimum of knowledge of general and dental subjects considered necessary.

First year—

Autumn—

Anatomy by Assistant.
Dental Anatomy (Elementary).
Elementary Physiology.
Chemistry and Physics.
Dental Mechanics and Metallurgy (Elementary).

Spring—

Practical Chemistry and Physics.
Biology.

Attendance during the year in the Dental Laboratory.

Second year—

Autumn—

Anatomy.
Physiology.
Dissections (Head and neck) and Demonstrations.
Dental Mechanics and Metallurgy.
Dental Anatomy and Physiology.

Spring—

Histology.
Dental Histology.

Attendance during the year in the Dental Laboratory.

Attendance during the spring session in the Dental Out-patient Department Extraction room.

Preliminary Scientific examination to be passed.

Third year—

Autumn—

General Pathology.
Surgery—Medicine.
Elementary Materia Medica.
Dental Pathology and Surgery.

Spring—

Practical Pathology and Bacteriology.
Dental Bacteriology.

Attendance during the year in the Dental Out-patient Department—
Extraction room.
Conservation room.

During the year to do—dentures and crowns.

Attendance during the year in the wards and general Out-patient Department.
First Professional examination to be passed.

Fourth year—

Autumn—

Hygiene.

Minor Surgery.

Anæsthetics.

Practical Dental Surgery.

Dental Materia Medica.

Spring—

Dental Clinical Lectures.

Attendance during the year in the Dental Out-patient Department. (Extraction—Senior, Anæsthetic Administration. Show—denture, and—crown, etc.).

Attendance in the wards.

Final examination to be passed.

A-2—Curriculum on the basis of a three years' course as desired by Col. Browning.

Similar to the foregoing scheme, deleting the first year's studies given therein; taking Practical Chemistry and Physics, and Biology, along with Histology and Dental Histology, in the first spring session (there given as 2nd spring session); requiring attendance during the second year (there given as 3rd year) in the Dental Laboratory; and deleting the subjects "Surgery and Medicine" and "Hygiene".

B.—Diploma of Licentiate in Oral Surgery.

Candidates must hold the degree of M.B. & C.M., or L.M. & S., Madras, or an equivalent; or must pass the examination for one of the above degrees before taking the final for the L.O.S.

The special education required will comprise the following courses of instruction:—

(1) Dental mechanics—

A course of lectures on Dental Mechanics and Metallurgy.

A two-years' practical course at the college.

(2) Lectures on Oral and Dental Anatomy, Surgery and allied subjects.
Hospital practice.

Candidates will be required to pass two examinations—

(1) Preliminary (Dental Mechanics and Metallurgy).

(2) Final { (Oral and Dental Anatomy and Physiology).
Do. Pathology and Surgery, etc.)

Curricula will be provided for two classes of students—

Class I.—Students who intend to study for the L.O.S., concurrently with one of the medical and surgical courses at the college. For this class the course of study will extend over five years.

Class II.—Students who hold a medical and surgical degree. For this class the course will be one of two years.

Curriculum for Class I.—(concurrent with L.M. & S. course).

First year—

Autumn—

Elementary Physics.

„ Oral Anatomy.

Dental Mechanics and Metallurgy. First course.

Spring—

Practical Biology (M.B. & C.M. course).

Daily attendance during the year in the Dental Laboratory, with leave amounting to two months.

Second year.—Concurrent with L.M. & S. First year.

Autumn—

Dental Mechanics and Metallurgy. Second course.

„ Anatomy & Physiology. First course.

Attendance during the year in the Dental laboratory.

Third year.—Concurrent with L.M. & S. Second year.

Autumn—

Dental Anatomy and Physiology. Second course.

Do. Pathology and Surgery.

Spring—

Practical Dental Histology.

Attendance during the year in the Hospital Dental department.

Extraction, scaling, etc. A certain number of prosthetic operations to be carried out.

Preliminary examination to be passed.

Fourth year.—Concurrent with L.M. & S. Third year.

Autumn—

Dental Materia Medica and Therapeutics.

Practical Dental surgery.

Spring—

Oral Bacteriology.

Dental Clinics.

Attendance during the year in the Hospital Dental department.

Extraction, Filling, Crowns, etc.

Regulating cases.

A certain number of crowns and regulating appliances to be made in the laboratory

Fifth year.—Concurrent with L.M. & S. Fourth year.

Autumn—

Anæsthetics, General and Local.

Oral Surgery.*

Dental Clinics.

} By professor on general staff.

Spring—

Dental Clinics.

Attendance during the year in the Hospital Dental department.

Extraction (Senior).

Administration of anæsthetics.

Crowning, Filling, etc.

Supervision of Regulating and Prosthetic cases.

Final Examination to be passed.

Curriculum for Class II.

(Students holding the L.M. & S.)

First year—

Autumn—

Experimental Physics (M.B. & C.M. course).

Dental Mechanics and Metallurgy.

Do. Anatomy and Physiology.

Do. Pathology and Surgery.

Spring—

Practical Biology (M.B. & C.M. course).

Do. Dental Histology.

Do. Clinics.

Daily attendance during the year in the Dental laboratory, with leave amounting to two months.

Attendance during the year in the Hospital Dental department, Extraction Room.

Do. Spring session in the Conservation room.

Second year—

Autumn—

Practical Dental Surgery

Dental Materia Medica and Therapeutics.

Anæsthetics, general and local.

Oral Surgery.†

Dental Clinics.

} By professor on general staff.

* Examination might exempt from this course.

† This course might be excused to students passing an examination on the subject.

Spring—

Oral Bacteriology.

Dental Clinics.

Attendance during the year in the Dental laboratory.

A certain number of crowns, regulating appliances, and dentures to be made and adjusted.

Attendance during the year in the Extraction and Conservation rooms.

Extractions, fillings, crowns, regulating, and administration of anæsthetics.

Preliminary and Final Examinations to be passed.

C.—Dental school—Teaching staff, etc.—

The curriculum for class B shows the necessary special subjects on which lectures have to be delivered.

Of these, Physics and Biology would already have been passed by M.B. and C.M. students and students holding the L.M. and S. could attend the M.B. and C.M. classes in these subjects.

Lectures on Anæsthetics, Oral Surgery, and perhaps Oral Bacteriology, might be given by an I.M.S. professor.

This would leave the following courses to be provided for by the appointment of professors holding a licentiate in Dental Surgery, or a Dental degree recognised by the General Medical Council:—

Dental Anatomy and Physiology.

" Histology.

" Pathology and Surgery.

" Mechanics and Metallurgy.

Practical Dental Surgery.

Dental Materia Medica.

Two professors should be sufficient at the commencement to teach these subjects.

The Senior Professor might take—

Dental Anatomy, Physiology, and Histology, and

" Pathology and Surgery (Theoretical and Practical).

The Junior Professor might take—

Dental Mechanics and Metallurgy, and

" Materia Medica.

The Junior Professor would assist the Senior Professor as Demonstrator in the practical subjects, take his place when necessary, prepare the students for examination, and so on. Both professors should give Clinical lectures.

It would also be necessary to engage the services of a dental mechanic as *Demonstrator of Dental Mechanics*. He should produce articles of apprenticeship, extending over at least three years, to a registered dental practitioner, or a recognised technological school, and have had at least four years' subsequent experience with a registered practitioner or a firm of dental mechanics, preferably the former. He should produce testimonials as to character and efficiency.

His duty would be to carry out the work of the laboratory, train students, and supervise their work. A good man would probably require Rs. 250 per mensem (= 4 guineas a week) to start with.

He should be provided with a native assistant.

Assistant Professors could be appointed as occasion should arise from among students who have taken the present dental course at the College, and later from among students under the new scheme.

Accommodation for the Lectures and Demonstrations could probably be provided in the present Medical College Buildings.

For the Dental Histology Classes two Microscopes would probably be sufficient. One is already provided.

A second microscope and the necessary instruments, etc., would not cost more than Rupees 300.

D.—General hospital dental department.**Staff—**

The Senior Professor of the dental school would act as *Senior Dental Surgeon* in charge of the Dental department.

The Junior Professor would act as *Dental Surgeon*.

Assistant Professors would be *Assistant Dental Surgeons*.

The *Demonstrator of Dental Mechanics* would be *Curator of the Dental Laboratory*.

An I.M.S. officer should be appointed as *Anæsthetist*.

There should be at least one *Assistant Anæsthetist*.

Nurses and Ayahs could be provided as might be necessary.

Peons would, of course, be required.

Premises—

(1) *Extraction room*.—For examination of patients and simple extractions.
A light room with at least 4 windows.

Water-supply—at least 2 faucets—and waste pipes.

Portland cement or tiled floor.

(2) *Anæsthetic room*.—A light room, with cement or tiled floor.

Water-supply, at least 2 faucets. Waste pipes.

(3) *Conservation room*.—A light room, or series of rooms, with about 15 windows.
North or south light.

Water-supply, at least a dozen faucets, for spittoons, etc.

A similar number of waste pipes.

Electrical power supply (for dental engines and lathes) if possible.

Electric fans.

Portland cement or tiled floor.

(4) *Laboratory*.—For mechanical work—

A light room, as compact as possible. North and south lights

Cement floor. At least six windows.

Water-supply, at least three faucets. Waste.

Electric fans.

This room should have three smaller rooms in connection with it —

(a) Plaster room. Cement floor, water-supply, and waste.

(b) Furnace room (for vulcanizers, etc.). Chimney.

(c) Lavatory. Water-supply and waste.

(5) *Waiting room for patients, male and female*.—Lavatory.

(6) *Office*.

Special fixtures and furniture.**Extraction room—**

	Approximate cost.
RS.	
Two lavatory basins and fittings	..
Almirah, three small tables	..
Table and chairs	..
Cabinet for instruments (already provided)	..
Operating chairs, two (" ") at 200	400
Two spittoons, connected with waste	..
Punkah (or electric fan)	..

Anæsthetic room—

Lavatory basin and fittings	..
Table, chair, couch	..
Cabinet for instruments	..
A septic table	50
Operating chair	270
Spittoon, connected with waste	..
Punkah (or electric fan)	..

Conservation room—

Four lavatory basins and fittings	..
Two almirahs for drugs and stores	..
Cabinet for instruments	..
Ten or more lockers, for storage of students' dental engines and instruments. (Smaller lockers would be sufficient if electrical power is obtainable, and electric engines provided)	..
Two tables and chairs	..
Ten small tables or shelves	..
Ten operating chairs, with attachment and bracket-tables (C. Ash, Sons and Co.'s hospital pattern. Rs. 300)	3,000
Four spittoons connected with waste	..
Six fountain spittoons with saliva ejector, supply and waste connections. Each Rs. 90	540

Laboratory—

Work bench for Curator, drawers and fittings	30
Series of six or more benches for students	90
Table, chair, shelves for models, appliances, etc.	40
Two almirahs for stores, appliances, etc.	35
Ten seats or stools for working at bench	45
Side tables, for standing things on, and for various purposes	30
Two lockers, for bellows and apparatus	10
Two lavatory basins and waste	..
Sand casting bench	15

Special fixtures and furniture—cont.

	Approximate cost. Rs.
Plaster room—	
Three plaster benches	30
Two water taps, etc., with sinks	..
Cupboards, for storage of plaster of Paris, etc.	25
Shelves	15
Furnace room—	
Two benches for vulcanizers	10
Rough table. Shelves	15
Lavatory—	
Lavatory basin with fittings	..
Rack for clothes, etc., chair	..
Commode, etc.	..
Waiting-room for patients, with bath-room attached—	
Rack for clothes, etc.	..
Screen	..
Benches, chairs	..
Commode, etc.	..
Office, with bath-room attached—	
Writing table, etc.	..
Two chairs	..
Lavatory basin, etc., looking-glass	..
Hat-rack	..
Commode, etc.	..
<i>Instruments, Tools, Materials, etc., to be provided by Hospital authorities.</i>	
Extraction room—	
(Already provided).	
Anæsthetic room—	
Instruments, materials, drugs, etc.	300
Conservation room—	
Instruments, materials, etc.—	
(Already provided. Dental engine and burs, enamel chisels and excavators, burnishers, etc.).	
Required	850
Laboratory—	
Precious metals	500
Metals and materials	100
Teeth	400
Appliances	750
Tools, etc.	200
Total ..	3,100

E.—Outfit required for each student.

	RS.	A.	P.
Text-books—			
Dental Mechanics and Metallurgy—			
“Dental Metallurgy”, E. A. Smith (J. and A. Churchill).	7	0	0
Dental Anatomy, Physiology and Histology—			
“Dental Anatomy”, C. S. Tomes (J. and A. Churchill) ..	14	0	0
“Aids to Dental Histology”, A. S. Underwood (Balliere, Tindall and Cox)	3	0	0
“Dental Microscopy”, Hopewell-Smith (Dental Manufacturing Company)	6	0	0
Dental Bacteriology, Pathology and Surgery—			
“Diseases and injuries of the teeth”, Smale and Colyer (Longmans, Green & Co.)	15	0	0
“Aids to Dental Surgery”, A. S. Underwood (Balliere, Tindall and Cox)	3	0	0
Dental Materia Medica—			
“Dental Materia Medica”, F. W. Glassington (J. and A. Churchill)	..		
Total, about ..	50	0	0

E.—Outfit required for each student—cont.

	RS.	A.	P.
Instruments, etc.—			
Dental engine, Parsons shaw, with slip-joint attachment and No. 2 right angle attachment	160	0	0
Engine burs. For No. 7 handpiece. 6 doz.	25	0	0
Do. For No. 2 right angle. 4 doz.	15	0	0
Pin size drill	1	0	0
Canal drills, 1 doz.	8	0	0
Herne's bur	0	8	0
Finishing burs, 3	3	8	0
Burnishers, 2	1	8	0
Carborundum points, mounted, 4	4	0	0
Oil can	0	8	0
Wash leather	1	0	0
Student's Cabinet (D.M. Co.'s), with cover	40	0	0
Mouth mirror	1	0	0
Probe, No. 5	0	8	0
Conveying forceps, No. 5	2	8	0
Glass pestle and mortar	1	0	0
Enamel chisels, nickelled, 2	2	8	0
Excavators, nickelled, 6	7	8	0
Chip syringe	1	8	0
Harlan's scalers, 1 pr., nickelled	2	0	0
Scaler, nickelled	1	0	0
Pulp extractors, 1 doz.	1	8	0
Spatulas (D.M. Co.), Nos. 2 and 5, nickelled	3	0	0
Glass mixing block	2	0	0
Medicament palette	1	0	0
Mastic bottle	1	8	0
Medicament bottles, 4	2	0	0
Hunt's syringe	5	8	0
Mercury bottle	1	0	0
Scissors	1	8	0
For gold filling—			
One pr. Woodhouse's pluggers, Nos. 5 and 6	4	8	0
Hospital pattern plugger	2	8	0
Tweezers	3	0	0
Automatic mallet	28	0	0
Six points for same	6	8	0
Rubber-dam clamps, 4	6	0	0
Clamp forceps	7	8	0
Wire retractor	1	0	0
Total ..	357	8	0
Tools, etc., for Mechanical course—			
Files, 3	2	0	0
Riffler	0	8	0
Sculptors, 3	1	4	0
Scraper	0	6	0
Pliers, 2 prs.	1	8	0
Cutting pliers, 1 pr.	1	12	0
Rivetting hammer	0	12	0
Wax knife	1	2	0
Do. spatula	0	12	0
Buff stick	0	3	0
Tweezers	0	10	0
Fret-saw frame	3	3	0
File cleaner	0	6	0
Broach holder	0	10	0
Knife	0	12	0
Packer	0	4	0
Total ..	16	0	0
Cost of Student's outfit—			
Text-books	About	50	0 0
Instruments, etc.	..	360	0 0
Tools, etc.	..	15	0 0
Total ..	425	0	0

Notes regarding the question of creating or enlarging a Dental Department at the Madras Medical College.

Extract from the Annual Report of the Madras Medical College, Session 1906-1907.

7. *Dental Surgery.*—Thirty lectures have been delivered during the session and practical dentistry such as is to be seen in the Out-patient Department of the General Hospital has been available, each student getting about 12 days' tuition.

I have felt for some time that the original intention under which the Professor of Dental Surgery was appointed has been lost sight of and that a properly equipped Dental Laboratory and an increase in the staff is needed.

The original intention under which a Professor of Dental Surgery was appointed was to teach Dental Surgery to students who would ultimately become subordinate Medical officers of Government and who could thus be of use in the mufassal. Our upper subordinate service is now recruited entirely from students possessing University qualifications and these students do not attend the course of lectures on Dental Surgery. I am of opinion that unless the present lectures are supplemented by a more practical training, much of the time now devoted to dental lectures could be better spent on other subjects.

The provisions of paragraph 1 of G.O., No. 509, Educational, dated 30th August 1888, have never been fully carried out either as regards teaching nor has the University established a qualification. I am not sure this latter is immediately required. A College diploma with a two years' training would possibly suffice for present needs and would form the nucleus of a proper Dental school.

We are badly in need of qualified dentists all over the Presidency. I also feel sure that the Military authorities would welcome any scheme which would give Military Assistant Surgeons a practical training, and there is a distinct wish being evinced by people to become dentists. I have been addressed several times on the subject as also has Mr. Badcock.

Mr. Badcock's papers are attached. College report for the year 1906-1907, paragraph 7, will sufficiently explain how this subject arose. Surgeon-General Browne's note thereon (paragraph 4, section c) embodied in G.O., Nos. 617, 618, Educational, dated 17th September 1907, may also be seen.

Keeping in view the Surgeon-General's remarks on the reluctance of Government in taking up new schemes involving recurring expenditure, the point to arrive at is, I think, what is the minimum scheme which, whilst being useful, is cheapest, and it may safely be said that the department once started will expand automatically. If Government, however, were asked to do the proper or bigger thing at first, the matter would probably be shelved.

The present schemes submitted by Mr. Badcock are three.

B—the one he himself favours is, I think, of a less exacting nature than the one he submitted to me originally and which he refers to in his report. Regarding this scheme B, it is to be noted that the candidate for the dental qualification must first take the qualification—L.M. & S. or M.B.—of the Madras University! This is Mr. Badcock's class I. It is needless to say that no student could take a Dental and University course concurrently; the alternative would be to join class II and this would mean that he would have to spend two years more at college after having become qualified as a doctor. It will not be necessary probably to refer to either of these schemes until the year 1909. Mr. Badcock quite mistakes my meaning when he quotes me as supporting this scheme in paragraph 6 of his report. What I meant and what I think is sufficiently clear to any one else is that a College Dental Diploma should be obtainable within two years from date of entry into college. Since making this remark, however, I have decided that a three-year course is necessary.

Mr. Badcock in his report refers to "Ethics," schemes derogatory to the Dental profession, the General Medical Council, the Dental Act, etc. Whilst sympathising with such an enthusiast for perfection, none of these points need trouble us here in India except possibly in one direction, *i.e.*, that we make the dental lectures or courses acceptable to the standard required for British degrees. This, however, is in the future.

Mr. Badcock's scheme for a revised staff is too expensive to start on. His own work would be increased and for this he would require increased emoluments. Of course the backbone of the scheme is the Dental Mechanic, the Laboratory man who will show students how to prepare and fill teeth and make artificial dentures.

The scheme for enlarging the General Hospital Dental Department is needlessly comprehensive at first. The present premises and staff, with probably an Assistant Professor from the college as an Anaesthetist, would suffice and the buildings can be enlarged when necessity arises.

Mr. Badcock says he forwards schemes A and A₂ with reluctance as being insufficient. Scheme A requires the man to be a Matriculate and to undergo a four years' training. Scheme A₂ is much the same, only the course is three years. I am afraid I would reduce this scheme even still further, although it will no doubt harrow Mr. Badcock's feelings. His scheme A is what I hope will one day be a University Diploma. What we are now arriving at is a college qualification. Although I consider Mr. Badcock's advanced scheme utopian, still we are indebted to him for the characteristically thorough manner in which he has dealt with the question. The scheme I would suggest tentatively is as follows:—

I would call this—Scheme A₃.

Standard of Education.—The Matriculation or better still the proposed School Final. Military pupils will of course attend though not necessarily possessing these qualifications.

CURRICULUM.

First Year—

Autumn—

Dental Anatomy and Physiology.
Dental Mechanics and Metallurgy.

Spring—

Elementary Physics.
Dental Histology.

Attendance during all the above period at the Dental Laboratory and Out-patient Dental Department of the General Hospital, where the Professor would give Clinical instruction.

(Test or class examinations.)

Second Year—

Autumn and spring—

Attendance at the general lectures now given by the Professor.
Dental Elementary Materia Medica.

„ Bacteriology.
Laboratory work five days a week for three hours.
Hospital attendance daily.

(Test or class examinations.)

Third Year—

Autumn and spring—

Anæsthetics.
Laboratory work five days a week for three hours.
Professor's lectures in Dental Surgery.
Practical work in the out-patient department, General Hospital.
Clinical teaching.

(Final Examination.)

Of course it will be advisable, if it were practicable, that the student should attend the practice of a Dental Surgeon for the last 12 months and produce a certificate of the same. They would have to pay for this, of course. I think this would be quite feasible. The Military Assistant Surgeon pupils would not attend the whole of this course, unless deputed to do so after they had entered the service. This, I think, would be likely to follow the introduction of the scheme.

As regards staff Mr. Badcock's duties would be enlarged, a mechanical dentist would be had out from England. The Assistant Professors at the college would give the elementary lectures referred to and the Laboratory and student's equipment would be that recommended by Mr. Badcock.

Comments are invited.

MADRAS,
15TH APRIL 1908.

W. B. BROWNING, Lt.-Col.,
Principal, Medical College.

To the Members of the Medical College Council.

I quite agree with the Principal as to the main requirement to be kept in view as a commencement, *viz.*, that a college diploma in dentistry should be obtainable after a two or three years' course in the college. Mr. Badcock's scheme B class i which involves attendance on courses for the medical degree, concurrently with courses for the dental diploma, is quite impracticable—no student could possibly do this. His scheme B class ii which requires a student to take out two years of dental courses after spending five years on his medical courses—making seven years

of study in all at the very least—is not likely to be attractive. Of his schemes A and A₂, which are intended chiefly for non-medical students (for students who wish to take only the dental diploma) scheme A is at present too ambitious, but A₂ has in it the elements of something more practicable, for what we ought at present to aim at, viz., a college diploma only. Even this scheme A₂ is not so suitable in my opinion as the Principal's scheme (which he calls A₃) which I prefer on the whole. The only objection I have to it is that "Elementary Practical Chemistry" and "Elementary Physics" are put down as courses for the first spring session; there is no course of elementary physics or physics of any sort in the spring session; the whole of the M.B. courses of physics, theoretical and practical, are given concurrently (as indeed they should be) in the autumn session. As for requiring "Elementary Practical Chemistry" from dental students, I think this would be sheer waste of time. It is not proposed to give these students any instruction in theoretical chemistry, and the only good they can get from attendance at practical chemistry would be to acquire

Yes perhaps.

W.B.B.

a small amount of manipulative ability (without the ability to benefit by the mental training theoretical instruction as well); but the dental student will not suffer for want of a practical chemistry course, for he will get abundant opportunities of acquiring mere manipulative ability in the various other practical courses of his dental curriculum. I therefore think that *practical chemistry* and *physics* should be omitted from the curriculum.

21st April 1908.

J. L. VAN GEYZEL.

I concur with the Principal's scheme A₃.

I fail to see what benefit could be derived from practical chemistry and practical physics without a knowledge of the theoretical side also; perhaps these two classes might be omitted.

I would suggest that the passed hospital assistant should not be overlooked as an operator who would be very useful in small up-country stations, with his present knowledge of medicine it might be feasible to reduce the period of instruction to two years. I think each Local Board might be inclined to favour the scheme, for at least one course of study before committing themselves further.

21st April 1908.

ROBERT ROBERTSON.

I think the whole subject should be treated more tentatively at first. Whatever desire there may be among our graduates for more knowledge of dental work to enable them to satisfy the requirements of their patients, I doubt very much if there is any eagerness to obtain a regular dental diploma. It would be among graduates in medicine that candidates for this diploma would be found, for the simple reason that medical men have far better prospects than (non-medical) dentists. It is admitted that students could not combine the two courses. As three years is the least time a diploma could be gained in, it follows that a student would be seven or eight years at college under the most favourable circumstances before he became a qualified dentist. Mr. Badcock says that he has been approached by men in practice and natives anxious to learn dentistry, but this is a very different thing from expressing their readiness to undergo a three years' training during which they could not earn their living elsewhere. These considerations ought, I think, to induce us to tackle the matter cautiously at first. Reference has been made to the supply of patients and material, but there is no real analogy to ordinary hospital patients at all. Until human nature is different from what it is I don't believe advanced dental work such as the stopping of teeth and the supply of false ones will ever be satisfactorily carried out in the out-patient department of a hospital.

A point that has not been referred to is that the present set of lectures and out-patient demonstrations must be continued for the Military Assistant Surgeon pupils according to the custom sanctioned for many years by the Government of India, and this too during their *student* course. Apparently it is meant to give them special instruction in dental surgery such as would be sufficient to enable them to cope with ordinary affections of the mouth with particular reference to the teeth. There is no question that this is useful to them in their subsequent duties. The Dental Surgeon lectures to them three times a week and there are besides two hours work three times a week in the out-patient department of the General Hospital. I would suggest that in the coming session, beginning in July, this course be thrown open to qualified practitioners and any others whom the Dental Surgeon thinks would benefit by the course of instruction, such for instance as senior students who, through failure to pass their finals, had some spare time on their hands while preparing for the next examination. In this way we could form a very good estimate of the number and class of men who really desire special instruction in dentistry and if necessary we could extend the course the following year and gradually work up towards the diploma recommended by Mr. Badcock. It would not be

possible to start an elaborate scheme this session and if my suggestion is adopted we shall have evidence within a few months one way or the other as to the success we might expect from the institution of a regular course of study in dentistry.

F. J. CRAWFORD,
Professor of Anatomy.

23rd April 1908.

I have nothing to add to the comments already made, except to say that in my short district experience I found no demand for dental work except extraction of teeth.

24th April 1908.

J. W. ILLIUS.

I know nothing of any demand for native dentists, but if they are to be taught they ought to be taught properly, not made into something lower than an Hospital Assistant.

29th April 1908.

G. G. GIFFARD.

I agree with Colonel Browning. It would be impossible to study for the "L.O.S." concurrently with an M.B. or L.M.S. course as in B class i.

2. B class ii should be quite practical and very useful. M.B. & C.M. students attending this course could be excused attendance on several of the subjects. It is doubtful how many would consider it worth their while to spend this extra two years.

3. Any degree granted should certainly be one which would be recognized by the Medical Council.

4. There is no use in the present system of trying to give a smattering of dentistry to students who are already overlectured to, and any attempt at "improvement" only means more lecturing—either a man must be a dentist pure and simple or he must devote two years to becoming one after he is qualified as a doctor.

5. It might be worth while as a beginning, to give applicants two (or even three) years' training in dentistry, but do not give them any degree which will not be a degree outside Madras.

1st May 1908.

P. C. GABBETT.

I agree with the Principal's scheme if there is a demand for native dentists; at any rate it should supply a real want as a post-graduate course for Military Assistant Surgeons.

2nd May 1908.

H. KIRKPATRICK.

I think the dental diploma and course should be a post-graduate business with special modifications for the Military Assistant Surgeon class.

3rd May 1908.

R. BRYSON.

I am of opinion that if a dentistry class is necessary, it should be something more than a mere outline of the subject.

C. G. WEBSTER.

Syllabus of a course of lectures on Dental Anatomy and Surgery delivered by
C. F. BADCOCK, L.D.S., R.C.S., Eng., in the Madras Medical College, 1908.

PART I.—DENTAL ANATOMY AND PHYSIOLOGY.

LECTURE 1.—Introductory—

Teeth.—Distribution amongst Vertebrates.—Functions, Main and Subsidiary.

Digestion.—Changes undergone by food in the mouth.

Physical. Mastication. Insalivation. Chemical.

Importance of the teeth.

LECTURE 2.—Mechanism of Mastication and Insalivation—

The Jaws—

Anatomy of Maxillæ and Mandible, with special reference to Function.

Temporo-mandibular joint.

Muscles of Mastication.

LECTURE 3.—The Teeth—Form and Arrangement—

Fishes. Reptiles. Mammals. Primates.
Human. The Permanent Dentition.
Macroscopic Anatomy. Arrangement in the Arch. Occlusion.

LECTURE 4.—The Deciduous Dentition—

Necessity for—
Macroscopic Anatomy.

Dental Formulæ.
Homologies of the Teeth.

LECTURE 5.—Nerve and Blood Supply of the Teeth.

Periosteum. The Gum.
The Mouth. Lips and Cheeks, Tongue, Palate, Salivary Glands.

LECTURE 6.—Dental Tissues—

The Dental Pulp—
Structure. Vessels and Nerves. Nerve-endings.
Odontoblasts and Processes. Other Cellular Elements.

Dentine—

Chemical Composition.

Microscopic Structure—

Matrix. Fibrils. Tubules. Sheaths.

LECTURE 7.—Dental Tissues (continued)—

Dentine (continued)—

Fibrils. Division and Branches. Curvatures and Varicosities.
Terminations. Functions.

Lamination. Incremental Lines. Interglobular Spaces. Granular Layer.

Secondary Dentine.

LECTURE 8.—Dental Tissues (continued)—

Enamel—

Chemical Composition.

Microscopic Structure—

Rods, or Prisms. Curvature. Ranges. Supplemental Rods.
Varicosities.

Brown Striæ of Retzius.

Enamel Cuticle.

Cementum—

Chemical Composition of Bone.

Microscopic Structure—

Lamellæ Cells and Processes. Sharpey's Fibres.

Nutrition. Connection of Cemental with Dentinal Cell System.

Dental Periosteum—

Fibres. Cells. Nerve and Blood-supply. Lymphatics.

LECTURE 9.—Development of the Teeth—

Dipping-in of Ectoblast. Dental Lamina.

Buds.

Dentine Papilla and Tooth-sac. Completion of Tooth germ.

Differentiation of Enamel Organ.

" Dentine Papilla.

" Tooth-sac.

LECTURE 10.—Development (continued)—

Appearance of Germ of 1st Permanent Molar.

Atrophy of Lamina.

Appearance of Successional Tooth-germs.

" Germ of 2nd Permanent Molar.

Calcification—

Chemical Process.

Calco-globulin. Semi-calcified Structures.

LECTURE 11.—Development (continued)—

Dentine Formation.

Enamel

Development of Successional and Superadded Teeth—

Mutual Relations of Deciduous and Permanent Dentition.

Loculi.

LECTURE 11.—Development—cont.

Condition at Birth.

" in Infancy.

Growth of the Roots of Teeth.

Formation of Cementum.

LECTURE 12.—Eruption of Deciduous Teeth.

Absorption of

Eruption of Permanent Teeth.

Growth of Jaws.

MICROSCOPICAL DEMONSTRATION.**PART 2.—DENTAL PATHOLOGY AND SURGERY.****LECTURE 13.—Introductory Remarks.**

Difficult Dentition of Deciduous Teeth, or "Teething"—

Definition.

Two stages of Tooth eruption, consequently.

" sets of symptoms—earlier and later.

Symptoms—

Local—

Simple Stomatitis.

Ulcerative

Aphthous Ulcerations.

Increased flow of saliva.

Exudation Cyst.

Constitutional—

Fever.

Diarrhoea.

Irritability.

Laryngeal cough.

Epileptiform convulsions.

Causes—

Immediate.

Predisposing.

Treatment—

Preventive.

Remedial—

Local.

General.

LECTURE 14.—Retarded Dentition of Deciduous Teeth.

Accelerated

Persistence of Deciduous Teeth.

Difficult Dentition of Permanent Teeth—

General.

Impacted Third Lower Molar.

Retarded Dentition of Permanent Teeth.

Zsigmondy's System of Dental Notation—

Modification of — for printing, etc.

LECTURE 15.—Abnormalities of the Teeth—

In Number—

Deficiency—

In aberrant types.

In normal types.

Excess—

Supplemental Teeth.

Supernumerary Teeth.

In Size—

General.

Individual.

In Structure—

Simple.

Involving Abnormality in Form—

Hypoplastic.

Syphilitic.

Rachitic.

LECTURE 15.—*Abnormalities of the Teeth—cont.*

In Form—

Variations in number of cusps or roots.
 Dilaceration.
 Gemination.
 Enamel Nodules.
 Aberrant Forms.

LECTURE 16.—*Abnormalities in Position, or Irregularities—*

General—

Uniform—Occlusional.
 Individual.
 Racial distribution.

Causes—

Hereditary. Developmental. Local.
 Ill-effects.

Treatment—

Preventive.
 Remedial.

LECTURE 17.—*Traumatic Injuries to which teeth are liable—*

Concussion—

Causes.

Symptoms—

Pain.
 Looseness.
 Suffusion.

Treatment.

Dislocation, partial and complete—

Treatment—

Of partial.
 Of complete.

LECTURE 18.—*Traumatic Injuries to which teeth are liable (continued)—*

Fracture—

Varieties—

Cracks or fissures, enamel only.
 Chipping of enamel or enamel and dentine.
 Transverse, involving the pulp-chamber—(a) in the crown, (b) in the root.
 Longitudinal and Oblique.

Symptoms.

Treatment.

LECTURE 19.—*Denudation Injuries—*

Attrition—

Nature of.
 Predisposing Conditions.

Abrasion—

Nature.
 Causes.
 Varieties.

Erosion—

Nature.
 Symptoms.
 Progress.

Differential Diagnosis.

Reaction of pulp.

Results.

Treatment—

Prevention.
 Arrest.
 Relief of Pain.
 Remedial.

LECTURE 20.—*Mycology of the Mouth—*

Environmental Conditions.

Varieties of Micro-organisms present.

Special Mouth Organisms—

Streptococcus Brevis (Miller).
 Bacillus Buccalis Maximus (Miller).
 Spirillum Sputigenum (Miller).
 Bacillus Necrodentalis (Goadby).
 Leptothrix Racemosa (Vicentini).
 Do. Buccalis Maxima (Miller).

Cladothrix Buccalis (Goadby)

Destination of Mouth-organisms.

Harmful Effects of Mouth-organisms.

Means of inhibiting their action.

LECTURE 21.—*Destruction of the Dental Tissues by Micro-organisms, or "Dental Caries"—*

Prevalence.

The term "Dental Caries".

Nature—

Decalcification.
 Liquefaction.

Phenomena in Dentine—

Layers of affected tissue.
 Liquefaction Foci.

Acid-forming Bacteria—

Streptococcus Brevis.
 Staphylococcus Albus.
 Bacillus Necrodentalis.

Enzyme-forming Bacteria.

Food supply of Organisms.

Action of the tissues.

Pigmentation.

Translucent Zone.

Spontaneous arrest of Dental Caries.

Progress of a case of Dental Caries.

LECTURE 22.—*Dental Caries (continued)—*

Rapid and slow Caries.

Reaction of Pulp.

Symptoms of Dental Caries.

Etiology of Dental Caries—

Presence of Micro-organisms.

Supply of Nutrient Material.

Defective Structure of Tissues.

Loss of Enamel.

Vitiated Oral Secretions.

Predisposing Causes affecting Individual Teeth.

Diagnosis.

LECTURE 23.—*Preventive Treatment of Dental Caries—*

1. The Presence of Micro-organisms—

Removal—by thorough mastication, tooth-brush and powder, etc.
 Antiseptic mouthwashes.

2. Supply of Nutrient Material—

Avoidance of starchy foods.

Removal of food-debris—

Tooth brush.

Do. powders.

Do. pick.

Treatment of Overcrowding and Irregularity.

3. Defective Dental Structure—

Attention to Infant Hygiene and Feeding.

Age of tooth eruption as indication of natural dietary.

LECTURE 23.—Preventive Treatment of Dental Caries—cont.—

4. Loss of enamel—
Smoothing and polishing surface, etc.
5. Vitiating Oral Secretions—
Special attention during illness, pregnancy, etc.

LECTURE 24.—Remedial Treatment of Dental Caries—

- Excision.
- Filling—
 - Objects.
 - Means of attaining.
 - What is required of a filling or stopping.
 - Processes to be carried out—
 - Preparation of the cavity.
 - Insertion of the material.
 - Fillings in general use—
 - Gutta percha.
 - Osteo-plastic cements.
 - Amalgams. Gold.
 - Composition of amalgams.
 - Properties of different metals in an alloy.
 - Methods of insertion of the various filling materials.

LECTURE 25.—Extraction—

- Objects of tooth-extraction.
- When necessary.
- Instruments used.
- Antisepsis.
- Stages of Operation.
- Difficulties which may arise—
 - Unusual Resistance of Tooth and Alveolus.
 - Impaction.
 - Buried stumps.
 - Closure of mouth.
- Accidents which may occur—
 - Removal of teeth other than those intended.
 - Fracture of Tooth.
 - Do. of Alveolus
 - Do. of Jaw
 - Dislocation of Jaw.
 - Forcing tooth into Antrum.
 - Injury to soft parts.
- Extraction under Anaesthetics.

LECTURE 26.—Diseases of the Pulp—

- Inflammatory Changes—
 - Hyperæmia.
 - Simple Inflammation.
 - Suppurative Inflammation—
 - Entry of Organisms.
 - Leucocytosis.
 - Infection without exposure.
 - Do. with exposure.
 - Symptoms.
 - Terminations.
 - Treatment.

Proliferative Inflammation—

- Morbid Anatomy.
- Symptoms.
- Terminations.
- Treatment.

Degenerative Changes—

- Fatty Degeneration.
- Fibroid do.
- Calcareous do.

Deposition of Secondary Dentine**LECTURE 27.—Diseases of the Dental Periosteum—**

- Inflammation—
 - Local—
 - Simple.

LECTURE 27.—Diseases of the Dental Periosteum—cont.**Inflammation—cont.****Local—cont.****Septic—****Diffuse.****Alveolar Abscess.****Chronic—****Cold Abscess.****Dental Cyst.****General Infective, or Pyorrhæa Alveolaris—****Causes—****Constitutional—****Uric acid Diathesis, Syphilis, Malaria, etc.****Local—****Infection—if specific. (Goadby's work.)****Treatment.****Salivary Calculus—****Tartar—Composition—Varieties.****Positions, Ill effects, Treatment.****LECTURE 28.—Toothache and Neuralgia—****Toothache, or Odontalgia—****Local—****Due to (a) Morbid Conditions of Pulp.****(b) Do. do. Dental Periosteum****Referred.****Neuralgia. 5th Nerve—****Causes.****Symptoms.****Treatment.****Diseases of the Gums—****Hypertrophy.****Gingivitis—****Acute.****Chronic****Empyema of the Antrum—****Causes.****Symptoms.****Diagnosis.****Treatment—****Acute Empyema.****Chronic—****Surgical.****Mechanical.****LECTURE 29.—Diagnosis of Swellings in connection with the Jaws—****Fluid.—Solid.****Innocent.—Malignant—****Involving the Antrum.****In the Palate.****Involving the Lower jaw.****Odontomes—****Aberrations of Enamel Organ.****Do. of Follicle.****Do. of Dentine Papilla.****Do. of Whole Tooth Germ.****MICROSCOPICAL DEMONSTRATION.****II****Official Memorandum No. 1580-1, Educational, dated 24th February 1909.**

The Surgeon-General is requested to state whether at present students of the Medical College, other than the military students, get no instruction, even of an elementary kind, in dentistry and if so, what objection there would be to putting all

students of the college on the same footing as the military students, and to making attendance at a course of lectures in dentistry compulsory on all students proposing to enter the Civil Medical Department.

(By Order.)

C. A. SOUTER,
Ag. Under Secretary to Government.

To the Surgeon-General.

III

Letter—from Surgeon-General P. H. BENSON, M.B., V.H.S., I.M.S., Surgeon-General with the Government of Madras.
To—the Chief Secretary to Government.
Dated—the 18th March 1909.
No.—92/261.

With reference to Government Memorandum No. 1580-1, Educational, dated 24th February 1909, I have the honour to state that compulsory attendance in the matter of instruction in Dentistry and Dental Practice at the Medical College and General Hospital only applies to students of the Military Assistant Surgeon class and women students of the Apothecary class. The courses of general instruction for civil students in the Medical College are arranged to meet the requirements of the University Regulations and dentistry is not included in them. It will be seen therefore that the students for the L.M. & S. and M.B. and C.M. qualifications from whom the Civil Assistant Surgeons are recruited cannot be forced to undergo a course of dentistry before qualifying unless existing Regulations of the University are added to, so as to include dentistry as a subject of study. To meet the wishes of Government the matter may be brought before the Faculty of Medicine with a view to asking the Senate to consider it. I may state that, though the ordinary civil students are given facilities to attend the dental classes, they do not avail themselves of the opportunity—the compulsory examination work in fact occupies all their attention during tuition.

2. As regards the concluding portion of the Government memorandum, I have the honour to state that it would only be possible at present to place a course of lectures in dentistry on the same footing as the course in Sanitary Engineering. That is, preference could be given to candidates for the Civil Assistant Surgeons' grade who had undergone such a course. The Sanitary Engineering course will presently last for six weeks and I think an elementary course in dentistry may be arranged for to cover the same period and to be gone through at the same time, *i.e.*, after qualification and before entering Government service.

IV

Memorandum No. 637-1, Educational, dated 30th March 1909.

With reference to his letter No. 92/261, dated 18th March 1909, reporting on the question of making attendance at a course of lectures in dentistry compulsory on all students of the Medical College proposing to enter the Civil Medical Department, the Surgeon-General is requested to state—

(1) whether he considers it advisable to move the Senate of the Madras University to include dentistry in the subjects prescribed for the L.M. & S. and M.B. and C.M. examinations; and

(2) whether he considers that the course for hospital assistants should be enlarged so as to include dentistry.

(By Order.)

C. A. SOUTER,
Ag. Under Secretary to Government.

To the Surgeon-General.

V

Letter—from Colonel H. St. C. CARRUTHERS, I.M.S., Officiating Surgeon-General with the Government of Madras.
To—the Secretary to Government, Educational Department.
Dated—Madras, the 4th June 1909.
No.—96/399.

With reference to your Memorandum No. 637-1, Educational, dated 30th March 1909, I have the honour to inform you that I addressed the President of the Faculty of Medicine of the University of Madras, asking him to convene a meeting of the Faculty, to consider the desirability of including dentistry in the subjects prescribed for the L.M. & S. and M.B. & C.M. Degree Examinations. The President informs me that the meeting of the Faculty unanimously resolved "that it would be advisable that a course of lectures and demonstrations on the care and extraction of teeth be prescribed as part of the compulsory training of medical students in this country before being admitted to the final qualifying examinations."

The President, in communicating this resolution, further remarks: "I may state that the Faculty did not approve of the course being called 'Dentistry' for several reasons. The time available in the medical curriculum would not allow of anything elaborate in the way of instruction—mechanical or otherwise—in the filling and stopping of teeth; again medical students could not be expected to have more manipulative skill than would be necessary to deal effectively with all aspects of oral treatment, medical and surgical. Any attempt to introduce the teaching of mechanical dentistry into a medical student's curriculum would certainly prove a failure."

2. I am in entire agreement with the Faculty's resolution, and recommend that the Senate of the Madras University be moved to include such a course as resolved upon by the Faculty. Under these circumstances I do not recommend the suggestions contained in the latter portion of my letter to Government No. 92/261, dated 18th March 1909.

3. With regard to the second enquiry made in the memorandum under reference, I must emphatically state that I do not consider that the course for Hospital Assistants should be enlarged so as to include dentistry.

Order—No. 369, Educational, dated 22nd June 1909.

The Government accept the recommendations of the Surgeon-General in his letter of the 4th June 1909 and the Director of Public Instruction will be requested to move the Senate of the Madras University to include a course of lectures and demonstrations on the care and extraction of teeth in the subjects prescribed for the L.M. & S. & the M.B. and C.M. Examinations.

(True Extract.)

L. M. WYNCH,
Ag. Secretary to Government.

To the Director of Public Instruction.
" Surgeon-General.

EDUCATIONAL DEPARTMENT.

NOTES CONNECTED WITH G.O., No. 369, EDUCATIONAL,
DATED 22ND JUNE 1909.

[SUBJECT.— *Proposals for the improvement of the teaching in Dental Surgery at the Medical College.*]

Previous papers.

G.O., No.	509, Educational, dated 30th August 1888.
" "	975, Public " 19th December 1905.
" "	22 " 11th January 1906.
" Nos. 617, 618, Educational	" 17th September 1907.
" No. 721	" 30th October "

From the Director of Public Instruction, dated 15th July 1908, No. 3369.

In his report on the working of the Medical College during 1906-1907, the Principal of the College, Lieutenant-Colonel W. B. Browning, stated :—

" I have felt for some time that the original intention under which the Professor of Dental Surgery was appointed has been lost sight of and that a properly equipped Dental Laboratory and an increase in the staff is needed.

" The original intention under which a Professor of Dental Surgery was appointed was to teach Dental Surgery to students who would ultimately become subordinate Medical officers of Government and who could thus be of use in the mufassal. Our upper subordinate service is now recruited entirely from students possessing University qualifications and these students do not attend the course of lectures on Dental Surgery. I am of opinion that unless the present lectures are supplemented by a more practical training, much of the time now devoted to dental lectures could be better spent on other subjects.

" The provisions of paragraph 1 of G.O., No. 509, Educational, dated 30th August 1888, have never been fully carried out either as regards teaching nor has the University established a qualification. I am not sure this latter is immediately required. A college diploma with a two years' training would possibly suffice for present needs and would form the nucleus of a proper Dental school.

" We are badly in need of qualified dentists all over the Presidency. I also feel sure that the Military authorities would welcome any scheme which would give Military Assistant Surgeons a practical training, and there is a distinct wish being evinced by people to become dentists. I have been addressed several times on the subject as also has Mr. Badcock."

2. With reference to these observations the Surgeon-General pointed out that the improvements proposed by Lieutenant-Colonel Browning would not necessitate a large outlay of money and he suggested that the Professor of Dental Surgery be

Vide paragraph 4 (c) of his letter on page 9 of G.O., No. 617, Educational, dated 17th September 1907.

asked to submit a detailed report of what was required " to enable modern dentistry " to be practically taught at the hospital and college and thus prevent the destruction of teeth (*i.e.*, extraction) that so often for want of teaching and of the means of preserving them takes the place of the latter " paragraph 4 (c) of the Surgeon-General's letter, dated 26th June 1907, on page 9 of G.O., No. 617, Educational, dated 17th September 1907.

3. The Director of Public Instruction thereupon invited the attention of the Principal of the Medical College to the above remarks of the Surgeon-General and stated that the financial aspect of the question need also to be considered (paragraph 4 of Proceedings, No. 4729, dated 29th July 1907, on page 9 of G.O., No. 617, Educational, dated 17th September 1907); and in paragraph 3 of their order No. 617, Educational, dated 17th September 1907, the Government said that they would await the results of the inquiry suggested by the Surgeon-General.

4. The Director of Public Instruction now submits, for the orders of Government, the proposals made by the Professor of Dental Surgery (Mr. Badcock) for the improvement of the teaching in that subject together with the opinions of the members of the Medical College Council thereon. Mr. Badcock's proposals will be found in the first enclosure to Colonel Crawford's letter.

5. Mr. Badcock submits three schemes :

- (1) Scheme A ;
- (2) Scheme A₂ ; and
- (3) Scheme B.

Scheme A.—This provides for the introduction of a diploma in Dental Surgery to be granted by the Medical College, Madras. Candidates for the diploma should be Matriculates of the Madras University who have completed the course in English prescribed for the First in Arts examination. They must undergo a professional course at the Medical College, extending over four years.

Scheme A₂.—This scheme is much the same as, Scheme A, only the professional course is one of three years.

Scheme B.—This is the scheme which Mr. Badcock desires should be adopted. It provides for a two years' course of training in Dental Surgery for candidates who have already passed the M.B. and C.M. or the L.M. and S. examination or a course of five years for those who are studying for the M.B. and C.M. or the L.M. and S. examination.

6. Dr. Browning's opinion of these three schemes will be found in his memorandum drawn up for the remarks of the College Council, dated 15th April 1908. He thinks that none of Mr. Badcock's schemes can be accepted. He therefore proposes a fourth scheme and calls it A₃. It provides for a college dental diploma. The course for the diploma extends over three years, and candidates therefor must have passed the Matriculation or the School Final examination.

7. The remarks of the College Council on these schemes will be found among the enclosures to Colonel Crawford's letter. Lieutenant-Colonels Van Geyzel and Robertson accept Scheme A₃ of Dr. Browning; but the other members do not seem to think that there is any demand for dental work or native dentists in Madras.

8. Lieutenant-Colonel Crawford, Acting Principal of the Medical College, doubts if there is any eagerness among the medical graduates to obtain a regular dental diploma and thinks that the subject should be treated more tentatively at first. He hesitates therefore to recommend the adoption of Mr. Badcock's scheme, which will cost from Rs. 2,000 to Rs. 2,750 a month, without more evidence that it is likely to meet a want and suggests that the course in Dental Surgery now given at the Medical College be thrown open to qualified practitioners and any others who, the Dental Surgeon thinks, would benefit by the course of instruction, such for instance, as senior students of the college, who, through failure to pass their finals, have some spare time on their hands while preparing for the next examination. In this way, he thinks, a very good estimate may be formed of the number and class of men who really desire special instruction in dentistry, and if there is any considerable demand therefor the course may be extended in the subsequent years and gradually worked up to the diploma recommended by Mr. Badcock.

9. The Surgeon-General, to whom these proposals were referred by the Director of Public Instruction, agrees with Colonel

Vide Director of Public Instruction's letter. Crawford that until it is known what demand there is for a dental qualification, there is no use discussing these schemes. The Director of Public Instruction observes that these views seem to him to be sound.

10. It is for consideration whether the adoption of the course suggested by Lieutenant-Colonel Crawford to find out whether there is any real demand for special instruction in Dentistry in Madras may be approved, or whether the matter may be dropped and the papers merely recorded.

T.K.—5-8-08.

K. RANGASWAMI AYYANGAR—7-8-08.

I have been through these papers and confess that I am left with a very vague notion of what either Mr. Badcock or Col. Browning wants. Mr. Badcock's schemes in particular seem to be indefinite and it is impossible to make even a rough guess at the cost. What Col. Browning's A₃ scheme would cost is not estimated at all.

2. It is obvious that the decision on the question of a dental diploma or special course of instruction depends very largely on the demand that there may be for

Yes. G. S. F[ORBES].

Perhaps. G.S.F.

dentists among the native population. Mr. Badcock speaks of the supply creating a demand, but this sort of speculation is far too indefinite for Government to act upon. All we have to go on is the statement that Mr. Badcock has been approached by some people with the request for more knowledge of dentistry. On the other hand the somewhat superficial remarks of the majority of the doctors would seem to show that there is no real demand for dentists by the people at large. It appears therefore out of the question to embark on a scheme which may cost a couple of thousands a month. Perhaps Col. Crawford's proposal may be accepted. It is on the right lines in that it will be a means of proving whether there is a demand for dental instruction and it ought not to cost very much.

C. A. SOUTER—8-8-08.

Mr. Badcock's schemes are courses of perfection which would cost a large sum with, possibly, no corresponding benefit. There would be expensive courses in dentistry which in the end might be attended by one or two men only, and the classes would be as marked a failure as the present chemist and druggist classes.

If anything is done at all action should, I submit, be taken on the lines suggested by Lieut.-Col. Crawford to ascertain what real demand exists for such special instruction.

2. In order to create a supply of patients Mr. Badcock suggests that the teeth of children in schools should receive systematic attention. In a recent article in "Public Health", I noticed that steps were being taken in this direction in Europe, but such action seems rather advanced for India. I doubt whether local bodies

This is quite a different matter.

G.S.F.

would agree to pay specialists for this purpose, and the parents would certainly not be willing to bear the cost of such attendance.

3. As to whether any real demand for native dentists exists there seems to be considerable doubt—*vide* the remarks of Captain Illius, Major Gifford, Captain Kirkpatrick and Major Webster.

4. Before Government launch out on any expensive scheme involving recurring expenditure, they must have more accurate information as to the probable demand.

H. D. TAYLOR—11-8-08.

Is attendance on the lectures of the Professor of Dental Surgery compulsory on all students attending the Medical College, or only on the Military students?

If the former, are examination papers set on the subject?

G. S. F[ORBES]—7-10-08.

It is submitted that attendance at the lectures of the Professor of Dentistry is compulsory on all pupils of the Assistant Surgeon Department of the Medical College, which comprises the following students:—

Vide paragraph 5 of Surgeon-General's letter on page 9 of G.O., No. 509, Educational, dated 30th August 1888.

Vide page 71 of the Medical College Calendar for 1908-1909.

- (1) Military Assistant Surgeon pupils.
- (2) Colonial apprentices.
- (3) Women students.

Attention is solicited to Appendix E on page 78 of the Medical College Calendar for 1908-1909, from which it is observed that "Dentistry and Dental practice" is one of the subjects of study prescribed for Military medical pupils in the third year of their course in the Medical College. Attendance at these lectures does not appear to be compulsory on all the students of the Medical College—*vide* paragraph 2 of Colonel

This clearly implies that a course in dentistry is not compulsory on all students at the Medical College.

C. A. SOUTER—13-10-08.

Crawford's letter. From page 71 of the Medical College Calendar, it is observed that the military pupils are examined by written papers issued by the Director-General, Indian Medical Service, while

the Colonial apprentices and women students are examined by the Board of Examiners of the Medical College.

K. RANGASWAMI AIYANGAR—12-10-08.

C. A. SOUTER—13-10-08.

H. D. TAYLOR—14-10-08.

Please send to me in Madras. I will try and have a talk with Dr. Crawford.

G. S. F[ORBES]—16-10-08.

If the Secretariat had followed what has been said and written and done in the matter in Europe during the last few years, they would be more sympathetic perhaps with the proposals. A very large proportion of the sickness among troops, as well as the ill-health of school children is put down to bad teeth and consequent malnutrition. These are the two classes that most easily come under inquiry, but of course the people at large are equally affected. In consequence of the attention given to the subject, I believe a large number of dentists were sent out to Africa to look after

I see that even here the Military Department insists on military students taking dentistry as a compulsory subject.

G. S. F[ORBES].

this respect; malnutrition and malassimilation due to bad teeth being the recognized cause of a vast deal of disease and impaired physique of the population.

2. If anything can be done to extend the knowledge and practice of dental medicine and surgery, it will be a very good thing for the public health. The question, however, is how this can be done in the conditions of this country.

There seem to be three lines along which dental practice may be extended—

- (a) courses leading to a degree in dental surgery;
- (b) courses qualifying for a college diploma;
- (c) mere compulsory attendance by the students on the professor's lectures so as to diffuse a general acquaintance.

I have had a talk both with Colonel Crawford and the Surgeon-General and I find that the practical difficulties are great. Dentistry requires expensive machinery and instruments, which ordinarily are beyond the means of those who attend the Medical College; and there are only a few towns in the Presidency at which a paying business could be set up; and there are no signs at present that there is even in these towns a demand for skilled dentistry. The population troubled with dental worries seem generally to prefer the inexpensive process of extraction to costly repair.

3. At present I am forced to agree that a case has not been made out for establishing a dental degree or even instituting a two or three years curriculum in dentistry ending in a college diploma.

But I think the professor's course of lectures might be made compulsory on all students proposing to enter the Civil Medical Department just as it is compulsory upon Military students. I presume that at present students, not of the excepted class, get no instruction in even elementary knowledge of dental diseases. The Surgeon-General might be asked by official memorandum if this is so, and what objection there would be to putting all students on same footing as military students.

G. S. F[ORBES]—20-2-09.

Ask Surgeon-General by official memorandum.

A. BUTTERWORTH—22-2-09.

Draft submitted.

T.K.—23-2-09.

K. RANGASWAMI AIYANGAR—23-2-09.

Issue.

C. A. SOUTER—24-2-09.

[Memorandum No. 1580-1, dated 24th February 1909.]

From the Surgeon-General, dated 18th March 1909, No. 92/261.

The Surgeon-General states that attendance in the matter of instruction in dentistry and dental practice at the Medical College and the General Hospital is compulsory only on the students of the Military Assistant Surgeon class and women students of the Apothecary class. The courses of instruction for the L.M. & S. and the M.B. & C.M. students are arranged to meet the requirements of the University Regulations and they do not include dentistry. These students cannot, the Surgeon-General says, be forced to undergo a course of dentistry unless the Regulations of the University are altered by adding dentistry as a subject of study. The Surgeon-General suggests that in order to meet the wishes of Government, the matter may be brought before the Faculty of Medicine with a view to asking the Senate to consider it.

2. With regard to the question whether attendance at a course of lectures in dentistry could not be made compulsory on all students proposing to enter the Civil Medical Department, the Surgeon-General states that it is only possible at present to place a course of lectures in dentistry on the same footing as the course in sanitary engineering. That is, preference can be given to candidates for the Civil Assistant Surgeon's grade who have undergone such a course. The Surgeon-General adds that a course in dentistry may be arranged for to last for six weeks and to be gone through after passing the University examinations and before entering Government service.

3. Under G.O., No. 975, Public, dated 19th December 1905, and G.O., No. 22, Public, dated 11th January 1906, preference is now given to candidates who have undergone a course in minor sanitary engineering when Civil Assistant Surgeons are selected at an open competitive examination held under paragraph 102 of the Civil Medical Code.

T.K.—25-3-09.

In the last paragraph of his note, dated 20th February 1909, on page 4 *supra* the Honourable Member raised the question whether the professor's course of lectures in dentistry might be made compulsory on all students proposing to enter the Civil Medical Department just as it is compulsory upon Military students. The Surgeon-General observes that, so far as candidates for the Civil Assistant Surgeon's grade are concerned, attendance at a course of lectures in dentistry may be prescribed

as a preferential qualification for the competitive examination—*vide* article 102 of the Civil Medical Code. This proposal, which can be given effect to by Government without consulting the University, may, it is submitted, be approved.

2. The Surgeon-General does not refer to the case of hospital assistants, who also enter the Civil Medical Department. Perhaps he thinks it unnecessary to insist on any training in dentistry in the case of these candidates. If it is considered that these subordinates should also be required to undergo a course of training in dentistry, this can be done by altering the curriculum for the hospital assistant pupils given in rules 83 and 84 of the rules issued under G.O., No. 721, Educational, dated 30th October 1907.

K. RANGASWAMI AIYANGAR—26-3-09.

The above note is correct, but it is for consideration whether a short course of dentistry should not be made compulsory for the degree examination of the University. It seems advisable to address the Syndicate. To give preference in the competitive examination to those who have taken a course in dentistry may do some good, but it cannot ensure that all Assistant Surgeons know dentistry.

2. As regards hospital assistants, a course in dentistry can be prescribed by Government.

C. A. SOUTER—26-3-09.

Please ask Surgeon-General by official memorandum—

(1) whether he considers it advisable to move the Senate to include dentistry in the L.M.S. and M.B. & C.M. examinations.

(2) Whether he considers that the course for hospital assistants should be enlarged so as to include dentistry.

A. BUTTERWORTH—28-3-09

Draft submitted for approval.

T.K.—29-3-09.

K. RANGASWAMI AIYANGAR—29-3-09.

C. A. SOUTER—30-3-09.

[Memorandum No. 637-1, Educational, dated 30th March 1909.]

From the Surgeon-General, No. 96/399, dated 4th June 1909.

In Memorandum No. 637-1, dated 30th March 1909, the Surgeon-General was requested to state—

(1) whether he considered it advisable to move the Senate of the Madras University to include Dentistry in the subjects prescribed for the L. M. & S. and the M.B. and C.M. examinations; and

(2) whether he considered the course for Hospital Assistants should be enlarged so as to include Dentistry.

2. (1) *Inclusion of Dentistry in the courses of the L. M. & S. and the M.B. and C. M. examinations.*—The Surgeon-General states that he addressed the President of the Faculty of Medicine of the University asking him to convene a meeting of the Faculty to consider the desirability of including Dentistry in the subjects prescribed for the L. M. & S. and the M.B. and C.M. examinations and that the President (Lieut. Col. F. J. Crawford) informs him (the Surgeon-General) that the meeting of the Faculty unanimously resolved "that it would be advisable that a course of lectures and demonstrations on the care and extraction of teeth be prescribed as part of the compulsory training of medical students in this country before being admitted to the final qualifying examinations."

3. The Surgeon-General states that in communicating to him the above resolution of the Faculty of Medicine the President further remarks :—

"I may state that the Faculty did not approve of the course being called 'Dentistry' for several reasons. The time available in the medical curriculum would not allow of anything elaborate in the way of instruction—mechanical or otherwise—in the filling and stopping of teeth; again medical students could not be expected to have more manipulative skill than would be necessary to deal effectively with all aspects of oral treatment, medical and surgical. Any attempt to introduce the teaching of mechanical dentistry into a medical student's curriculum would certainly prove a failure."

4. The Surgeon-General is in entire agreement with the resolution of the Faculty of Medicine and recommends that the Senate of the Madras University be moved to include such a course as resolved on by the Faculty in the subjects prescribed for the L. M. & S. and the M.B. and C.M. examinations. In view of this recommendation the Surgeon-General withdraws his previous suggestion in paragraph 2 of his letter, dated 18th March 1909, that a course in Dentistry might be arranged for to last for six weeks and to be gone through by candidates for the Civil Assistant Surgeon's grade, after passing the University Examinations and before entering Government service.

5. (2) *Inclusion of Dentistry in the course of Hospital Assistants.*—With regard to this question the Surgeon-General is emphatically of opinion that the course for Hospital Assistants should not be enlarged so as to include Dentistry.

T. KANAKASUNDARAM PILLAI—12-6-09.

The Senate may be moved as suggested to include a knowledge of the care and extraction of teeth in the subjects prescribed for the L.M. & S. and the M.B. and C.M.

2. As regards Hospital Assistants the Surgeon-General is emphatic but gives no reasons. I don't see what harm it would do to make all Hospital Assistants know something about the teeth. They have sets of forceps, etc., in practically every dispensary and they might as well know how to use them.

C. A. SOUTER—14-6-09.

A reference may now be made to the Senate as suggested by the Surgeon-General.

As regards Hospital Assistants, I think the opinion of the Surgeon-General may be accepted. So far as I am aware disease of the teeth is not at all prevalent amongst the class of patients with whom Hospital Assistants have to deal.

L. M. WYNCH—18-6-09.

Very well.

G. S. F[ORBES]—18-6-09

Draft please.

L. M. WYNCH—18-6-09.

Draft submitted.

T. KANAKASUNDARAM PILLAI—19-6-09.

Issue.

C. A. SOUTER—21-6-09.

[G.O., No. 369, Educational, dated 22nd June 1909.]

READ AGAIN G.O., No. _____ , dated _____ 190

" " " " _____ , " _____ 190

READ ALSO:—

C. No. 1580, From the D.P. 1, No. 3369, dated 15-7- 1908.

memo II-A III-A IV-A

" " 637, " " S. 9., " 92/261, " 18-3- 1909.

memo V

" " 1124, " " S. 9., " 96/399, " 4-6- 1909.

ORDER.
P.S.

No. 369, dated 22-6-1909

Pages 22 & 23 of C.F.

The Govt accept the recom-
mendations of the Surgeon-General in
his letter of the 4th June 1909 and the
D.P.S. will be requested to move the
senate of the Madras University to
include a course of lectures and de-
monstrations on the care and extraction
of teeth in the subjects prescribed for
the L.M. & S. and the M.B. and C.M.
examinations.

7.24.
19.9.09

Col
2169

Cash 7/8
 21-609
 To ✓ 22/7/91
 The D.P.I. } in print
 .. S.C. }

ORDINARY.

PREFERENCE.

URGENT (a).

EDUCATIONAL
LEGISLATIVE DEPARTMENT.

Current No., dated 190 ..

G.O., No. 369, dated 22-6- 1909.

Number of MS. pages sent { Correspondence including order or orders
(b)
(b)
Notes.....

Docket. Medical Organs:-
Requesting the P.D. to move
the Senate of the Madras University to
include a course of lectures & demon-
strations on the Care & extraction of teeth
in the subject reserved for the M.D. and M.B. Exams

Number (c) of copies required when struck off (not including
copies for volumes and editors' table which are retained
in the Press).

Complete
Correspondence
and orders.

Notes

FOR RECORD.*

Madras Records	...	...	...	30	20
Ooty Records	...	...	...	3	3
For filing with original	...	...	...	1	1
Total	...	...	...	34	24

FOR ISSUE.†

	Letter only.	Complete G.O.	Special issue copies of G.O. (b)		Notes.
			No.	Papers.	
Signature copies.....					
India Office.....					
Govt. of India.....Dept.					
Public Department.....					
Judicial Department.....					
Financial Department.....					
Revenue Department.....					
Public Works Department.....					
Local and Municipal Department.....					
.....Dept.					
Total					
Spare copies.					
The Director of Public Instruction.....		40			
The Comr. for Govt. Examinations.....					
The Superintendent, Govt. Museum.....					
The Surgeon-General.....		40			
The Accountant-General.....					
The Collector of.....					
The P. D. B.....					
The.....					
The.....					
The.....					
The.....					
The.....					
The.....					
The.....					
Total		20			

INSTRUCTIONS FOR THE
SECRETARIAT.

(a) If a paper is marked to be printed
urgently, the Superintendent of the section
concerned should sign the Press slip. The
Superintendent should exercise a careful discre-
tion in the matter.

(b) Each letter, memorandum, or order, or set
of orders, in the file of correspondence should be
headed in succession with the Roman numeral I,
II, III, etc., the number being written in red ink
or blue chalk above the item. The particular
papers to be printed in the special issue-copies
should be indicated by the Roman numeral (I,
II, etc.) by which that item has been headed in
the correspondence file. All matter, including
marginal remarks or references, to be printed
should be written in ink and matter which should
not be printed should be encircled. Initials and
signatures that are not quite legible should be
re-written distinctly.

(b) For rules regarding printing of notes,
see the rules in G.O., No. 1220, Public, dated
30th November 1900.

(c) The number of copies and the details of
distribution should be filled in by the Superin-
tendent or Referencer concerned.

(d) In the absence of special instructions to
the Press to keep matter standing for a specified
period, ordinary papers of 8 pages and under
will be kept standing for one week, and larger
papers for two weeks only. The type of notes
and of all confidential papers is distributed
immediately after striking.

(e) This slip, properly and completely
filled in, should accompany every paper sent to
Press; it will be returned by the Press when
proofs are furnished; it should be sent to the
Press when a call is made for revised proofs or
when a corrected proof is sent for striking.
When finally returned by Press it should be
filed with the original order or letter.

INSTRUCTIONS FOR THE PRESS.

(a) If, in the opinion of the Superintendent of
the Press, a paper has been marked urgent
unnecessarily, he should send the Press slip to
the Deputy Registrar with a remark to that
effect.

(b) Unless a note to the contrary is made
against the matter, pencil entries should not
be printed. The Superintendent of the Press
may bring to the notice of the Deputy Registrar
any instance of incomplete or careless editing.

(c) Signature copies of letters to the
Secretary of State or to the Government of
India should be printed on hand-made paper.

(d) This slip should be returned by the Press
to the Secretariat when proofs are furnished; it
will be sent back to the Press when proofs
are returned corrected and should be finally
returned to the Secretariat when struck-off
copies are supplied.

(e) The names of the Secretary and Members
should be printed in full when they occur on
the right hand side, but only the first time when
they appear on the left side, the initials alone
being printed later.

* Copies distributed on.....*(Press Clerk.)

† Copies distributed on.....*(Despatcher.)

* To be initialled and dated.

A	B	C
Please send proof in triplicate. The papers have been carefully edited.	Proof returned corrected. Please strike off and send number of copies as indicated.	As the matter is clear manuscript and has been carefully edited, (b) proof need not be sent. Please print and supply number of copies as indicated.
	Type may be released <u>after usual interval</u> at once.	Type may be released after usual interval.
.....Clerk.	Clerk.	Clerk.
.....Supdt.	Supdt.	Supdt.

(b) Three copies of proof of all notes should be sent for approval, except when instructions are given to the contrary.

SPECIAL INSTRUCTIONS.

TO BE FILLED IN BY THE PRESS.

Diary.	Initials of Press official.
Received in Press on.....	26-6-09 <i>mg</i>
First proof furnished on.....	6-7-09 <i>mg</i>
Call for revised proof received on.....	
Revised proof furnished on.....	
Corrected proof received for striking on.....	12/7/09 <i>mg</i>
Final copies supplied on.....	20/7/09 <i>mg</i>

Account of copies.	Complete copies.	Notes.	Issue copies.
Supplied to Secretariat for Record.....	34	24	
" " " Issue.....	20		
For Volumes.....	16		
For E. T.....			
Total ...	70	24	