

cells as units of the bodily structure. Our method deals with cellular societies as an organic whole.

- 1.—Re-branching Applications.
- 2.—Some far-reaching applications of the new chamber listed by Dr. Carrel and Col. Lindbergh are:—
 - 1.—The manufacture outside the living body of the various organs of the hands of internal secretion.
 - 2.—The isolation of substances essential to growth differentiation, and the functions of glands.
 - 3.—The discovery of laws of association of organs, and,
 - 4.—Production in media outside the body of the treatment of organic arterial and other diseases.

Furthermore, it is claimed, the method makes possible the carrying on of important experimentation with human organs kept alive but yet, as in the case of dead. Heart disease, kidney diseases, hardening of the arteries, diabetes, tuberculosis, cancer, and other dread diseases can now, it is hoped, be treated in human organs kept alive, and studied closely under controlled conditions.

Dr. Carrel and Col. Lindbergh have performed since the experiments have been reported since the model of their chamber was constructed. The organs kept alive included a thyroid gland, an ovary, adrenal, spleen, a heart, and a kidney. The organs of fowls and cats were generally used.

Dr. Carrel is connected with the Rockefeller Institute, and is a past winner of the Nobel Prize. He was one of the discoverers of the so-called "rel-dakin solution" which saved the lives of hundreds of thousands of Allied soldiers in the West War.

Valuable Work, Says Professor Wilkinson

Referring to the experiments by Dr. Carrel and Colonel Lindbergh, Professor H. J. Wilkinson, Professor of Anatomy at the University of Toronto, has written that he did not think the news would be quite unexpected by present-day biologists, as they had long known that the heart beating after its removal from the body by perfusing with a suitable solution at body temperature. The solution used was forced through the apparatus by the action of a pump, and was kept at the same temperature. That artificial heart pump was first set up by the late Professor Starling, some years ago, and was used by him for experimentation in connection with conditions associated with the kidney. The organs had also been kept alive for some time various kinds and sugar. Other organs, such as the kidney, had also been kept alive outside the body for some time by perfusing them with blood obtained from the animal, and by the use of vessels of the isolated organ in that case were connected with the circulating blood of the intact animal. This had provided a means of experimenting on the organ concerned. The organs had been kept alive for some time by perfusing them with suitable solutions.

"It appears," says Professor Wilkinson, "that Carrel and Lindbergh have perfected an apparatus which is a distinct advance on the apparatus known to physiologists," added Professor Wilkinson. "No doubt Carrel has obtained the results which he has claimed to be effective and makes it possible to keep isolated organs alive for a much longer period than formerly has been possible."

Professor Wilkinson remarked that the new technique was quite different from the one used by Carrel, and consisted of placing small snippings of tissue composed of a few cells in a suitable medium, and studying the growth and the effects of certain solutions on their growth and differentiation. He has kept a piece of embryonic chicken tissue for 20 years or more," said Professor Wilkinson. "Each day a small piece of tissue is cut off and placed in a fresh medium. It has been estimated that, if it had been possible to keep the tissue going, the total bulk would now be several times that of the original piece."

Larger than Wilkinson said that Lindbergh's part in the present research was to find out how to use the elaborate apparatus which he had devised. The chambers used to maintain perfused a valuable amount of studying closely the effect on organs of hormones, drugs, and other substances introduced or into a circulating nutrient fluid, and into an artificial medium. It should be an exceedingly valuable discovery in research of the various diseases

Advs 24-6-35

Conservatory Students Concert

By H. BREWSTER JONES

A very successful concert was given by the students of the Elmer Conservatory of Music, and the quality of works presented showed a diversity of style and period, the classical being particularly well known and in nice proportion.

The programme opened with an examination of music which reflected credit upon the ensemble class and the soloists. Among the soloists were Alice Cronin and Pauline White. The first movement of Beethoven's "Cello" for piano, violin and cello, Schubert's well-known lied "Aurachin" was well sung in German by Shirley Crabb.

Master Alan Gilles, who may be termed a boy prodigy, created something of a sensation with his wide and musical rendition of Rondo in C major, Beethoven. Another clever child, who has not yet completed his teens gave a creditable performance of the Accolai violin concerto in A minor. Pauline White, a soprano of a coloratura soprano voice of great possibilities, sang the aria "L'Amore" (Mozart) from "Le Nozze di Figaro." Her voice is perfectly nurtured a successful career must lie before this young artist.

She gave a remarkably fine account of herself as Joy Worden, in "The Doctor in Rangoon," Mendelssohn op. 72, Mendelssohn and Moszkowski Scherzo, op. 77, with a musical and satisfactory use of the equipment of unusual quality. Most pleasant indeed was the effortless performance of the "Cello" by Miss Crabb, a little rough in treatment, and gave the impression that this singer was using undue vocal effort in attempting to fill the Elder Hall. The finale from the Piano Concerto in G minor by Beethoven, which she played on a piano, was carefully presented at rather moderate tempo. The sparkling "No. 10" Mendelssohn was consequently absent.

Ronald Porter, in the Sonata in D major, which he played with a first movement, gave evidence of a good ear and refinement of style as he played the same composition, which has a definite charm, and this young performer should prove an acquisition to the Elmer Conservatory in the near future. Clement Hardman, who has a good voice and moreover a most satisfactory account of himself in "Honor and Arms," Samson of Handel, and the concert was finished to a brilliant conclusion with the technical solo "Pantasia and Fugue on G. H. Lindbergh" with splendid organ playing by Dorothy Angus. Her playing was characterized by the whole of this performance, the pianists were Gwen Paul, Joyce Rife, Vida Cozens, and Jessica Dix.

B.M.A. MEETING IN VICTORIA

Many Famous Medical Men To Attend

MELBOURNE, June 24.

Many names famous in medicine and surgery are in the list of those who will visit Melbourne to attend the annual meeting of the British Medical Association, which will begin on Monday, September 3. The 1,000 delegates will include at least 200 from the British Isles, and many of them will be accompanied by their wives. There will also be delegations from India, Canada, the United States, and, probably, China.

Only once previously has the association held a meeting of the sort in Melbourne, when held outside the six years' continuous prospecting cast the telegraph line. There is the usual period of a fortnight or so for miles round their leases, but there are few men out there.

The general local opinion is that the findings of the board can only be non-committal. The Coleridge is going strong, and good crushings of picked ore are being put through by Schmidt's and the Anglo battery. There has been a mild gold rush on the old Arlunda field, between White Range and Grandview. Messrs. Jenkins and Sumner have erected a battery on the old Arlunda field next week. There are numerous signs of visible gold on their leases, including some very fine lodes, some six years' continuous prospecting cast the telegraph line. There is the usual period of a fortnight or so for miles round their leases, but there are few men out there.

Officers of the several sections, most of whom will come from Great Britain, will be—
Diseases of Children—Dr. Robert Hutchison, president; Dr. J. C. Gardner, vice-president; Dr. J. C. Windeyer, hon. secretary.

Neurology and Psychological Medicine—Professor Edwin Bramwell, president; Dr. Bernard Hart, vice-president; and Dr. J. K. Slater, hon. secretary.

Ophthalmology—Dr. A. J. Ballantyne, president; Dr. H. M. Traquair, vice-president; and Dr. J. H. Duggan, hon. secretary.

Orthopaedics—Professor E. W. Hey Groves, president; Mr. A. A. Mackenzie, vice-president; Otto-Rhino-Laryngology—Mr. F. Muecke, president; Mr. J. G. O'Malley, vice-presidents; Mr. D. Guthrie, hon. secretary.

Pharmacology, Therapeutics and Public Medicine—Sir Henry Gauvain, president; Dr. G. Carmichael, vice-president; and Professor R. G. Perry, hon. secretary.

Dermatology—Dr. S. Watson Smith, president; Dr. E. Kaye Le Fleming, president; Dr. L. B. Callender, hon. secretary.

The Canadian branch of the association will be represented by Dr. W. D. Duffell of Toronto; the Federal Council of the association in South Africa by Dr. C. M. Murray; and the South India and Madras branch by Lieutenant-Colonel R. Wright, who is Professor of Ophthalmology at the Madras Medical College.

A distinguished guest, though not a member of the association, will be Dr. J. H. Duggan of the Amsterdam Medical Association.

ABORIGINES' BOARD ON WAY HOME

"Findings on Only Be Noncommittal"

By DR. C. T. MADIGAN

ALICE SPRINGS, June 24. The board of enquiry into the alleged ill-treatment of aborigines completed its investigations today, and will depart by train for Adelaide, and its party members have travelled 700 miles by road and by camel, taking evidence at Hembury, Erildunda, Kingsdown, Middleton Ponds, Lindavale, Hermannsburg, and the roadside, the road camp fires, and on the Claryn. Professor Cleland, Mr. White, and Mr. Messers, who came to Ayers Rock, where an aborigine farm was recently.

The general local opinion is that the findings of the board can only be non-committal. The Coleridge is going strong, and good crushings of picked ore are being put through by Schmidt's and the Anglo battery. There has been a mild gold rush on the old Arlunda field, between White Range and Grandview. Messrs. Jenkins and Sumner have erected a battery on the old Arlunda field next week. There are numerous signs of visible gold on their leases, including some very fine lodes, some six years' continuous prospecting cast the telegraph line. There is the usual period of a fortnight or so for miles round their leases, but there are few men out there.

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Generations of Doctors

MR. F. L. Parker (president of the Royal Geographical Society) showed me a photograph of the Legislative Council building taken in 1852, when the building was erected. The photograph was given him by Dr. James E. Everard, of Colonel Light Gardens.

Dr. Everard is a grand grandson of Dr. Charles Everard, who was the first doctor to practice in the African in 1830, and was there when the proclamation was read at Holdfast Bay. Dr. Charles Everard was a member of the great-grandfather were surgeons, from which it will be seen that the present Dr. Everard can trace the profession as far back as six generations, hopes that his son will continue the family tradition.

Dr. Charles Everard was a member of the first South Australian Parliament. His son, William, who had arrived in the colony with him, was a member of the Legislative Council of Education, Crown Lands, and Public Works, William, and for some time was Everard's schoolmaster.

Mr. Gavin Walkley, who gained his Bachelor of Engineering degree at the University of Melbourne, will be on leave by the Oranito tomorrow for abroad to continue his studies in architecture in London in October. He will leave and will motor through many European countries. Upon his arrival in England in October, he will attend the College, Cambridge, where he intends to study the philosophy and history of the subject. He will be absent for three or four years' absence abroad. Mr. Walkley will acquire into and reconstruct his knowledge of the art and domestic architecture, for which purpose an honorary commission has been granted to him by the Institution of Civil. Mr. Walkley was recently elected an associate of the Royal Australian Institute of Architects, and a member of the Royal Institute of British Architects. Mr. Walkley, who was resident at Mary, was a member of the number of years, and who is a former president of the St. Mark's College, Adelaide, and a member of the student associations at the Adelaide University.

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