

and the costs in its production were greatly influenced by the price of coal. He submitted a statement on electricity costs in the various capital cities, which had been prepared by Mr. Brookman, of the Electric Supply Co. One table was for the supply of current for a load of 10 horsepower for 200 hours a month. In Adelaide, the cost was £15 15/; Melbourne Electric Supply Co., £15 2/; Melbourne City Council (in a limited area), £10 8/; Brisbane, £14 16/; Perth, £11 5/; Tasmanian Hydro-Electric, £10 8/; Electricity Commissioners of Victoria, £11 11/3; Sydney, £10. Adelaide was at a great disadvantage, in that coal supplies were difficult to obtain, and there were no great manufacturing industries. Adelaide used 12 units of power per £1 of capital invested in industry, but Melbourne used 37 units. He did not think there was any hope of getting water power here, and there was practically no available source of power at present except coal. There were only three known deposits of coal in South Australia—at Moorlands, Clinton, and Leigh Creek—and on account of the poor quality of the produce competition with Newcastle was not economical. A commission of enquiry, on which he served a few years ago, made recommendations regarding the use of Leigh Creek coal by pulverising it and using it on the North-South railway locomotives. If that were done it would keep the mine open and give a source of supply in times of emergency. But if they wanted to test these local coals properly they should construct special furnaces for them. It would cost £6,000 or £7,000 to enable thorough tests to be made with a locomotive, but that had not been made available.

He would like to emphasise the great importance of the use of power in industry. In America they were utilising nearly four horsepower per operative in their factories, whereas in Australia they were using less than two. One man exerted roughly one-eighth of a horsepower, and to obtain one horsepower that way the cost was about £5 12/, compared with a few pence from an electric station. The effect of all this was shown in the increased output per man in America, and that enabled a high rate of wages to be kept up. In the United States they were paying the highest rate of wages in the world, their purchasing power was also the highest, as was their productivity per man. It was the fact that the operative had the extra power at his command that enabled these things to be achieved. But if they looked at the "curves" in Australia, showing the productivity, the national debt, and the wages paid to workmen, it would be seen that wages were rising rapidly, and debt almost proportionately. The money value of products was also increasing, but productivity, measured in quantity of goods produced, was decreasing. One felt that that was not sound. They wanted to do everything in their power to encourage manufacturers to use more power. Australia had a strongly protective tariff, but they did not discriminate very much, and protected almost anything that could be made in Australia. Electricity was a tool to enable them to produce, and they should treat it in the same way as they did tools of trade, many of which were admitted at considerably reduced tariff rates. Electrical machinery, however, was highly taxed, with the result that when a manufacturer wanted to put in a motor he probably had to pay £150 for an article which otherwise might be purchased for £100. This aspect of the matter had been dealt with fully by Mr. Julius in a paper before the Institute of Engineers in Hobart recently. Mr. Julius was by no means a freetrader, but he had realised that Australia had not the market, and could not hope to compete with the manufacturers of electrical machinery in the old world. If they added the duties paid on electrical machinery to the wages paid to workers in the electrical machinery workshops in Australia, it would be found that that industry was costing Australians £550 per man. He endorsed the opinion of Mr. Julius that electrical machinery should be admitted to Australia duty free. If it were necessary for special reasons to encourage the industry it should be done by way of bounties.

Evidence was given by Mr. George Harold During, engineer, of Hackney, who has invented a petrol saver. He said the company controlling it had found difficulty in placing their invention on the market owing to high costs of manufacture. The petrol saved amounted to 20 to 25 per cent. in a series of exhaustive tests. Superheated steam was mixed with petrol as it passed through the carburettor, and that gave a more combustible mixture, which increased the mileage obtained and almost eliminated carbonisation. After a run of 20,000 miles in a car the removal of the cylinder heads disclosed a complete absence of carbon in the cylinders. The principal was applicable to all classes of internal combustion engines, but up to the present the invention had not been brought under the notice of the Government.

Yale University Announces \$50 Increase in Tuition Fee

Advance From \$300 to \$350 to Be Effective in Fall When New Appropriations Will Prevent Additional Burden on Self-Supporting Students

NEW HAVEN, Conn., Jan. 27 (Special)—Yale University announced today an increase in its undergraduate tuition from \$300 to \$350 effective next fall. The announcement stated that additional appropriations would be made to prevent the increase from adding to the financial burdens of the self-supporting students, who now comprise one-third of the undergraduate body, and who are receiving aid from the university to the amount of \$271,303 a year.

"The undergraduates now pay less than half the cost of their instruction," according to the announcement. "The present increase is an attempt to secure in the case of those students who can afford it a more adequate contribution toward the cost of their education than heretofore and in this way to assist the university to balance its budgets. In taking this action as to the undergraduate schools the university is extending the policy already adopted in the schools of law and the fine arts."

Adopted Same Policy

A number of leading universities, it was said, have adopted the same policy because of the greatly increased costs of recent years, and have in some instances raised the charge to the student beyond the new rate at Yale for this reason.

The endowment of the Andrews Memorial Library at Yale University, which has provided textbooks since 1882 for students who could not afford to purchase them, has been increased by gift of \$2000 from Mrs. William Loring Andrews of New York City, according to announcement made today.

"The changes at Yale in the last 40 years are illustrated as strikingly in the memorial library and its use as in other parts of the university," Andrew Keogh, Yale librarian, said today. "The number of students enrolled in Yale College in 1882 was 611, whereas the number now in the college and freshman year is 2322."

Number Much Greater

"The number of textbooks is now much greater, partly because courses are more numerous, partly because textbooks change oftener, but chiefly because the newer methods of instruction require the collateral or comparative use of many books on a

subject. Textbooks are also costlier year by year, so that the books needed during the four years at Yale are now estimated to cost about \$250.

"The number of students who are working their way through college is also greater than ever, with a consequent increased demand upon the memorial library for necessary books. With these and similar facts in mind, and with a generous desire to make the Andrews Memorial of sufficient size to meet the increasing demands, Mrs. Andrews has from time to time added to the endowment."

There are now about 10,000 volumes in the Andrews Library, and the records show that during the last academic year there were 362 student borrowers, the number of volumes taken for home use amounting to more than 2500. No charge is made for the use of the books, which may be kept for a year if desired.

N. 14. 4. 26

Educationist and Author

One of the most prominent of the younger South Australian educationists is Mr. Archibald Grenfell Price, M.A., F.R.G.S. As Master of St. Mark's College, he is the pioneer of the residential university movement in this State. His interest in matters educational has a wide scope and embraces practically every phase of the work in South Australia.

Mr. Price was born in Adelaide and educated at St. Peter's College and Magdalen College, Oxford. In 1915 he was appointed assistant master and house master at St. Peter's College. He is a lecturer at the Workers' Educational Association in economic history and economic geography, and teaches economics and economic history at St. Mark's.

An enthusiastic sportsman, Mr. Price plays cricket and tennis. While at Oxford he was cox of one of the winning Magdalen boats. For nine years he trained the St. Peter's athletic team. He is chairman of the Adelaide University Athletic Club, and a member of the University Council.



Mr. A. Grenfell Price

Mr. Price has been associated with St. Mark's since its inauguration, and was appointed master in December, 1924. He is keenly interested in historical research. Several publications stand to his credit, including "Foundation and Settlement of Australia," "A Casual Geography of the World," and "South Australians and their Environment."

One of his pet projects is the foundation of the Students' Union at Adelaide University, which it is hoped will eventuate at the Jubilee celebrations this year. According to Mr. Price this, next to a residential university, is the greatest educational need of South Australia.

Under his guidance St. Mark's College is thriving. The accommodation has already been increased since its foundation, and plans are on foot to extend the college until it can accommodate many times the number now in residence.

NEWS. 18.4.26

University Debaters from Britain

A team of debaters from English universities will hold their first inter-university debate in Sydney on Wednesday, April 23. On the following Saturday the team will leave for Brisbane, where the first debate will be held on the following Monday. A week later the team will travel to Melbourne. On May 10 a debate will be held in the public lecture theatre at the Melbourne University, and next day the British debaters will take the boat for Tasmania. Debates at the Melbourne University will continue on May 18 and 19 if sufficient support is available, and a fixed debate is scheduled for May 20. Next day the team will leave for Adelaide, and later for Perth, whence it will return to England.

ADV. 12.4.26

Among the passengers for Sydney by the R.M.S. Orama is Dr. Henry H. L. A. Brose, M.A., B.Sc., D. Phil., who in 1922, was appointed Lecturer at the Electrical Laboratory, Oxford. He will make a lecturing tour of Australia, for the purpose of which he was granted twelve months' leave of absence from Oxford. A native of South Australia, Dr. Brose, who is a nephew of Mrs. Henry Gepp, received his education at Prince Alfred College, and later studied at the Adelaide University. He was selected as Rhodes Scholar for South Australia in 1913, and went to Oxford. He was in Germany at the declaration of war, and was interned for five years in company with a number of other Australians. After the war he returned to Oxford, and resumed his reading for the degree of Doctor of Philosophy.

AGRICULTURAL RESEARCH.

Visit of Professor R. J. Stapledon.

With the object of enquiring into agricultural research in Australia and New Zealand, particularly in the southern portions of the latter Dominion, Professor R. J. Stapledon (Director of the Welsh Plant-breeding Institution in Aberystwyth, Wales), is a passenger by the Blue Funnel liner Aeneas, which arrived at the anchorage on Saturday.

This is the first visit to Australia of Professor Stapledon, who, accompanied by his wife, reached Adelaide on Monday morning. In the afternoon, in company with Professor J. A. Prescott, of the Adelaide University, Professor and Mrs. Stapledon visited the Waite Research College at Urrbrae, and in the evening they were the guests of Professor Prescott. On Tuesday the visitors motored up to Roseworthy Agricultural College, in the work of which they evinced keen interest. Professor Stapledon devoted especial attention to the activities of Mr. R. C. Scott, the official wheatbreeder there.

When questioned on Tuesday morning Professor Stapledon stated that there were at present six or seven agricultural research institutions in England and Wales. Three such centres had been established in Wales—one at Bangor, in north; one at Aberystwyth, in central Wales; and one at Cardiff, in the south. As with Urrbrae, the college at Aberystwyth, which was founded in 1919, is conducted in conjunction with a university, the one in this instance being the University College of Wales. In both England and Wales agricultural research is developed on similar lines, each institute being connected with a university.

The problems in which Professor Stapledon are interested are those connected with grassland, and his research work consists mainly of cultivating improved strains of grasses and clovers. South Australia's small average rainfall is a matter almost of wonderment to the Professor. In that connection conditions in Wales, he said, were almost the exact opposite to those in South Australia. Although Professor Stapledon will take every opportunity to observe methods of agricultural research throughout Australia, the main object of his visit is to make a close and diligent study of those adopted in New Zealand, particularly in the South Island, the climatic and other conditions of which are practically similar to those of his home country. In the South Island of New Zealand the grasses and clovers are the same as those cultivated in England and Wales. Much cocksfoot grass is imported by Great Britain from New Zealand, although the import figures have decreased during the last few years.

The Waite Research College at Urrbrae offers great possibilities, in the opinion of Professor Stapledon, who was much interested in what he saw during his brief visit there. It afforded great pleasure to him, he said, to see a South Australian college being conducted on such lines, which were the best for agricultural development. The visitors will rejoin the Aeneas to-day on their way to the eastern States. They expect to complete their return journey to Wales by December.

REG. 13.4.26

TROPICAL DISEASES.

AN INTERNATIONAL CONFERENCE.

MELBOURNE, Monday. It is proposed to hold a conference on tropical medicine in Melbourne next year.

The Minister for Health (Sir Neville Howse) said to-day that the Federal Ministry had for some time been giving consideration to the medical and health problems connected with the island groups of the Pacific. The examination of these problems in connection with the Commonwealth's own responsibility in Papua, New Guinea, and Nauru had indicated the probability that a conference between representatives of the Governments of the different countries having interests in the Pacific would certainly give indications of directions in which action could be taken for improvement in the standard of health, not only of the native inhabitants, but also of all persons resident in the islands. The dangers of the introduction of diseases now non-existent in the islands might be anticipated by international action and co-operation. The Commonwealth Government accordingly had requested the British Government to issue invitations to the various countries having possessions in the Pacific to send representatives to such a conference, to be held in Melbourne in 1927.