

are plenty of problems that South Australian engineers would like to have solved, many of them, like that of our brown coals, being local problems that we can scarcely expect outsiders to solve for us.

Let me illustrate the value to the nation of scientific research, combined with engineering invention, by a story from our own recent history. In 1905 Mr. A. G. M. Michell, a graduate in engineering of Melbourne University, published the results of an elaborate mathematical investigation into the flow of lubricating oils under certain conditions. As the result of his mathematical work, which was of a very high-class character, he made certain remarkable deductions, which he verified by ingenious experiment. He deduced that it should be possible to construct a thrust bearing, such as that required on the main propeller shaft of a ship, in which metallic contact of moving surfaces would be entirely eliminated and the only frictional resistance would be that due to the viscosity of the oil used. He proceeded to apply his ideas to the practical construction of thrust bearings, but, so revolutionary were his proposals, that it was not till the beginning of the war in 1914 that marine engineers could be persuaded to use them. Then they made rapid headway. The Admiralty adopted them, and now all new British warships, as well as most other new vessels, are

fitted with Michell thrust bearings. In 1919 an application was made before the Chancery Court in England for renewal of the patent rights, and was supported by the Admiralty. In granting the application, the judge stated that it was no exaggeration to describe the invention as an epoch-making one. The use of the gear-driven turbine, as it was practised in the navy throughout the war, including its use in submarines and as it is now being used in fast commercial vessels, was rendered possible only by the use of this type of bearing. It was given in evidence that its application to a battle-cruiser resulted in a saving in initial cost of £38,000, and a further saving of 3 per cent. in the amount of coal used, as well as a reduction in the quantity of oil. The annual saving to the navy alone in coal and oil was given as at least £800,000. It was a notable Australian contribution to the Allied cause in the great war. (Applause.)

It is no exaggeration to say that this invention has not only enabled us to do something that we could not do before, but to the British nation it has resulted in the saving altogether of millions of pounds worth of coal and oil. The direct monetary gain to the nation from this one invention has certainly been a great deal more than the whole of the money spent upon Melbourne University from its inception. Of course, the invention might still have been made had the Melbourne University not been in existence. But it is safe to say that the invention would not have been possible unless somebody or other Mr. Michell had had the opportunity to obtain a thorough training in mathematical science. (Applause.)

Facilities for Research.

That the provision of proper facilities for research may be an exceedingly profitable investment from a commercial point of view has been amply demonstrated by events. That it will be profitable to a young nation in a better sense I firmly believe. We have taken pride in the remarkable powers of self-reliance and initiative that were shown by our Australian soldiers in the great war. We perhaps flatter ourselves that these are qualities that are bred in the clear skies and broad expanses of our Australian continent. As a nation in the making, we have reason to be proud and hopeful of the future when we see these qualities united with dauntless courage in tens of thousands of our youth. But we cannot develop the best spirit of self-reliance in the nation if we are forever to depend upon other peoples to show us the way to progress and be content to simply follow them. We have our own problems that require their own solutions, and it should be our ambition to lead the way and not follow in the wake. The war is over, but the competition between nations continues. It cannot be diminished by Peace Conferences, or evaded by philanthropic projects. It is the law of Nature, and if we would survive we must prove ourselves to be fit. We cannot do that if we neglect the development of the highest qualities of the human mind, the qualities upon which human progress has chiefly depended. (Applause.)

DEATH OF MR. M. M. MAUGHAN

General regret will be caused by the death on Saturday evening of Mr. Midton Moss Maughan, B.A., who for six years prior to August, 1919, was Director of Education in South Australia. He was 65 years of age at the time of his death, and had been in the Education Department for 41 years, and had risen to the top of the service. He was widely known and highly respected, and it was generally recognised that he possessed the qualities essential for the high office he held until he was obliged, owing to his health breaking down under the strain of work, to tender his resignation as Director. It was thought that when he was relieved of the responsibilities of office Mr. Maughan's health would improve, but that was not so, and for the past 12 months he had been seriously ill, having been confined to his bed at his residence, Montrose, Wilkinson-road, Parkside South, for the last four months. Mr. Maughan was chief inspector of schools in February, 1913, when he was appointed Acting Director upon the death of Mr. Alfred Williams, and his appointment as Director followed a few months later. Mr. Maughan showed that he was a man of conspicuous ability, a hard worker, and an enthusiastic educationist, and his appointment by the Government was thoroughly justified. He had a most courteous manner, was tactful in dealing



The late Mr. M. M. Maughan.

with difficult situations, and popular with the teachers who came under his control. In announcing Mr. Maughan's resignation the Premier of the day (the late Hon. A. H. Peake) remarked that the Government regretted that illness had made it necessary for Mr. Maughan to resign, but appreciated the splendid work that had been done by him during the time he had been Director. The then Minister of Education (Hon. W. H. Harvey) said Mr. Maughan's departure would be a distinct loss to the service, and a blow to the colleagues with whom he had been working in harmony for so many years.

At the time of his appointment as Director there was probably no one in the service so familiar with the inner workings of the department as Mr. Maughan, because he had a great deal to do with the administrative work during the illness of Mr. Williams, his predecessor. For long periods he had at different times occupied the position of Acting-Director. Mr. Maughan was a son of the Rev. J. Maughan, who founded the Franklin-street New Connexion Methodist Church. He was born in England on November 2, 1856, and arrived in this State in 1892, and was educated at Prince Alfred College, at which institution he was a teacher for three years. He entered the service of the Education Department in 1878, working for a time in the Lefevre Peninsula and Grote-street schools, and afterwards as an assistant master of the Training College, under Colonel Madley. In 1880 he was appointed headmaster of the Wallaroo school, and from there he was transferred to the Moonta school, which he managed successfully for four years. In 1891 Mr. Neale, of the Sturt-street school, was appointed an inspector, and Mr. Maughan was chosen to succeed him as headmaster at Sturt-street. He held that position until 1900, when he was selected to act for a term as superintendent of the University Training College. In 1906, when the Education Department was reorganised by the late Mr. Price, Mr. Maughan was made Chief Inspector of Schools. In 1911, after a very

strenuous period of work, during part of which he was Acting Director, his health broke down, but a voyage to England and a rest for some months in one of the southern counties enabled him to return to South Australia much benefited. In appointing him to the office of Director of Education in 1913 the Government recognised that, besides his natural ability, broad grasp of educational principles, academic acquirements, and long pedagogic experience, he possessed all the other essential qualifications. A trait of Mr. Maughan's character which must have contributed largely to his successful career in the Education Department was his unbounded love for children, particularly the infant pupils. In him all the institutions found a warm supporter and an earnest worker. He was for many years the treasurer of the Public Schools Floral and Industrial Society and the Decoration Society. As president of the Teachers' Union in 1898 he displayed ability and tact, and gained and held the confidence of the teachers and the officers controlling the department. He always took great interest in military matters, and years ago served in the volunteer forces. Soon after his removal to Yorke Peninsula he took charge of the company there, and raised its strength to 100. On his appointment to Sturt-street he was transferred to the 1st Battalion of Infantry, and when the military forces were reorganised in 1898 Captain Maughan was one of the officers chosen for active service.

Mr. Maughan leaves a widow (a daughter of the late Mr. John Torr of Barra) and three sons—Lieutenant Harold M. Maughan, of Keswick; Mr. Frederick M. Maughan, of the Maughan-Thiem Motor Company, Adelaide; and Mr. James M. Maughan, of the Survey Department, Adelaide.

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DEATH OF MR. PETER WOOD.

A Leader in Commerce and Philanthropy.

Mr. Peter Wood, one of South Australia's best-known commercial men, and chairman of directors of G. Wood, Son, and Co., Limited, died at his residence, Linden Park, Burnside, on Wednesday morning, at the age of 66 years. Several months ago Mr. Wood was seriously ill, but he subsequently recovered, to some extent. About six weeks ago, however, he had a relapse, and gradually sank. The deceased gentleman was prominent in philanthropic movements, and many sections of the community will mourn his decease. He practised the true Christian ideal of doing good to others. He was the eldest son of the late Mr. Gilbert Wood, formerly a leading merchant in this city, and was born in Adelaide on June 22, 1855. As soon as he had completed his education Mr. Wood entered his father's establishment, which was then located in Rundle street. The business expanded rapidly, and in 1876 he became a partner in the firm. At the same time Mr. James Gartrell, who had been chief clerk for many years, was also admitted into the partnership. Upon the death of his father, in 1888, Mr. Peter Wood, who had displayed remarkable shrewdness and general capacity, took over the management



THE LATE MR. PETER WOOD.

of the business with his partner. In 1920 the private partnership was formed into a limited company. Many years ago the firm erected a large and imposing warehouse on North terrace, the old premises having become too small for the rapidly expanding business, which has a high reputation throughout the Commonwealth. Settlers on the River Murray will have a grateful recollection of the late Mr. Wood's great efforts to develop the fruit industry. The firm were the first agents at Renmark for the fruitgrowers, and Mr. Wood fostered the trade from its inception, and thereby helped to give men confidence to settle there.

—Thought for Others.—

Mr. Wood took a keen interest in religious and philanthropic movements of all kinds. It was as a philanthropist, however, that he was best known. In spite of the exacting demands which were made upon his time and strength by his business, he was always ready to exert himself in a practical way in any movement which had for its object the alleviation of suffering or distress. He was an active member of the relief fund committee connected with the wreck of the ill-fated Loch Sloy on Kangaroo Island, and also of the Citizens' Relief Committee which was at one time formed for the purpose of raising funds for charitable objects in connection with the visit of the Duke and Duchess of Cornwall and York (now King George V. and Queen Mary). His kindly and sympathetic nature won for him the respect of all classes of the community. He was President of the Boys' Brigade, the City Mission, and Our Boys' Institute for many years, and was connected with the controlling bodies of the Boy Scouts' Association, the Y.M.C.A., Y.W.C.A., Minda Home, Deaf and Dumb Institution, the Zoological Gardens, the Adelaide Workmen's Homes, Incorporated (of which he was a trustee), the townplanning movement, and the Commonwealth Club (of which he was a Vice-President). He was also a member of the Caledonian Society. For 24 years he was a member of the Burnside District Council, and for the last five of them was Chairman. When he retired the council recorded its appreciation of his services, and cordial references were made to his tact, courtesy, and business acumen. The resolution continued:—"We feel that the district owes a debt of gratitude to him for the concern he has shown in its development and for the wholehearted support he has given to public and philanthropic movements." Mr. Wood was also closely connected with the Liberal Union and was invited to stand for Parliament, but preferred commerce to politics. He was a director of the Victorian Insurance Company, Silver & Co., and Walton's Limited. The Congregational Church in this State has lost a great worker, for he had had a lifelong association with Clayton Church, of which he was senior deacon for many years. He also held the office of superintendent of the Sunday school for a long time. His father laid the top-most stone on the spire of the Clayton Church. A prominent fellow-worker with Mr. Peter Wood in that church was his near neighbour, the late Sir Edwin Smith, who died in 1919, also in Christmas week.

—Fond of Animals.—

Mr. Wood was a lover of the horse and gun, and until two or three years ago frequently rode on horseback to his office. He possessed one of the best herds of Jersey cattle in the southern hemisphere, and his name was famous in the showing, where he did remarkably well, frequently gaining champion awards. One of his cows, Maid of Tarraganda, recently broke the State record for milk production. At his beautiful home at Burnside he had—with marsupial and other Australian fauna—a fine herd of deer, which originated from animals acquired from Mr. William Gilbert, of Pewsey Vale. Mr. Wood sent deer to Western Australia and Victoria.

—The Family.—

There survive a widow, four sons:—Messrs. Gilbert (Sydney), Robert (Adelaide), Linden (Two Wells), and Colin (Geelong Grammar School), and three daughters—Mrs. G. S. Tyler, and Misses Annie and Alison Wood. Mrs. Tyler and Miss Alison Wood are at present visiting England.

Mr. Wood worshipped at Clayton Congregational Church, Kensington, as did his father before him. He will be buried in the Clayton Church graveyard. The funeral will leave the residence at 3 o'clock to-day, and there will be a service at the church at 3.30. A close, personal friend of the deceased gentleman, Mr. Fred Johns, has written this elegiac verse:—

—The Late Mr. Peter Wood.—

The white flower of a blameless life he wore,
And was in truth a Christian gentleman;
The limelight he ne'er sought; and what is more—
He proved in life he loved his fellow-man.