

but the ample resources at Birmingham enabled him to begin the large-scale experiments on structural members which were perhaps his most important contribution to engineering science. This method of investigation was first applied to reinforced concrete beams, slabs and arches, and afterwards, at the Imperial College, to mine supports—steel and concrete arches for roadway lining, and cogs, chocks and packs for face support.

At Birmingham, Dixon carried out investigations on wire ropes and on supports for the coal mining industry, and this work was resumed when he was appointed to the Safety in Mines Research Board in 1923. He acted as chairman of the Wire Ropes Research Committee, and organized international co-operation in these investigations. Dixon was also a member and sometime secretary of the Institution of Civil Engineers Committee on the Deterioration of Structures in Sea Water, and carried out a long series of investigations on the preservation of Empire timbers from attack by *Teredo*. He served on the British Standards Committees dealing with wire ropes and steel arches for mines, and also on the testing of timber and the rating of rivers. In the large hydraulic laboratory at the Imperial College various investigations on current meters, syphons, and river models were carried out under his direction. For his work describing the measurements of the flow of the River Severn in 1921–36 he was awarded a Telford Premium of the Institution of Civil Engineers.

No record of Dixon's life would be complete without a reference to his outstanding services during 1914–18. In the very early days of the Ministry of Munitions he became personal assistant to Sir Henry Fowler, director of production, and was actively engaged in the organization of the great department until relatively stable conditions were reached in 1917, when he resigned to join the Royal Engineers. After ten days training he went to France on railway construction, and was demobilized as a captain in 1919. Dixon retired from his chair at the Imperial College in 1933. M. A. HOGAN.

Prof. Jan Włodek and Adam Różański

PROF. JAN WŁODEK was one of the seventeen Cracow professors who recently died as a result of ill-treatment by the Germans in the concentration camp at Sachsenhausen, near Berlin. This was a disused brewery, had no accommodation for human beings and, although not quite as bad as the notorious Dachau and Buchenwald camps, was utterly unfit for human habitation. Along with 149 of his colleagues, he was arrested by the Gestapo, the accusation being, to quote the official Polish report:

“(1) vu que les professeurs ont essayé de reprendre les cours de l'Université sans que les autorités allemandes eu aient connaissance ;

“(2) vue qu'ils ont continué leurs travaux dans les institutions et séminaires dont ils étaient à la tête et

faisaient passer des examens sans en demander l'autorisation ;

“(3) vue que, pendant 5 siècles, l'Université de Cracovie a été un bastion de l'esprit polonais. . . .”

He was by no means a robust man and as soon as his friends heard that he had been arrested it was feared he could not survive the cruelties to which he would be exposed, nor did he.

Prof. Włodek belonged to the old Polish nobility, had studied in Poland and in Switzerland, working especially on plant nutrition and soil problems and also on plant breeding. When the new Polish State was set up he, as one of the followers of Pilsudski, was appointed to consular work in Holland, but soon returned to the University of Cracow as professor of agriculture. Here he set up a large laboratory and was put in charge of the University Experimental Farm of Mydlniki. He was an excellent teacher and attracted many pupils, two of whom had already become professors at other Polish universities. Almost from the outset he was attracted to Willstätter's investigations on chlorophyll and was especially interested in the ratio of chlorophyll *A* to chlorophyll *B*, which he considered played an important part in the development of plants. He studied the relation between this ratio and the environmental conditions, particularly variations in the amount of nitrogen and of potassium supply. The other branch of his work was ecological and dealt with the distribution of plants in the Tatra Mountains in relation to the humus and calcium conditions of the soils and their *pH* values.

He had travelled widely in Europe and was a remarkably good linguist, speaking and writing English perfectly. He was a delightful host and those who have been privileged to visit him in his attractive ancestral home at Dabrowica will not easily forget his wide culture, good taste and charming personality.

Another victim has been Prof. A. Różański who, before the War of 1914–18 had held an important post in the Government in connexion with land surveying and improvement. After the War he was appointed professor of agricultural engineering and surveying in the University of Cracow and did a good deal of work on land drainage, particularly important for the development of agriculture in many parts of Poland. He showed considerable ingenuity in designing inexpensive and efficient methods of draining. He rendered great service to Poland in a quiet and unobtrusive way and was much liked by his students. E. J. RUSSELL.

We regret to announce the following deaths:

Dr. Carl Bosch, president of the I. G. Farbenindustrie, the German dye trust, on April 27, aged sixty-six years.

Dr. Charles Davison, the authority on earthquakes, on April 28, aged eighty-one years.

Sir William Meade-King, the well-known civil engineer, on April 10, aged eighty-one years.