

# CANTA

## EXTRA

VOL. XIII. Extra

CHRISTCHURCH, N.Z.

Thursday, November 5, 1942

## Answer to Criticism of Engineering School

The recent attack in CANTA on the School of Engineering is in many ways based on a misconception of the functions of a University so far as the training of professional men is concerned. The writer of the recent criticism is himself subconsciously aware of the aims of a University education when he states that "it is generally agreed with in the engineering profession in the Dominion that the C.U.C. School of Engineering produces a graduate with a substantial background of technical fundamentals in the main categories, Electrical, Mechanical and Civil. Admittedly the average graduate finds it possible to deal with practically every sphere of engineering after finding his feet." This is indeed, high praise, and shows that in spite of any shortcomings the School and its Staff has delivered the goods. A professional school which imparts to all who pass through its portals a solid fundamental knowledge of the main aspects of the subjects prescribed is giving to its graduates the wherewithal to build truly in whatever walk of life he may be called upon to serve in his profession.

As one who has been charged with the responsibility of organising the Department of Chemistry for the past twenty years, I frankly admit that I have never attempted to turn out gas-works chemists, dairy chemists, fertiliser chemists, etc., but merely to give that basic instruction in chemistry which will enable the graduate to find his feet in any chemical job within a few months, a position which the non-University trained man attains only after a prolonged grind spread over many years. The Medical School in Dunedin, one of the outstanding Schools of Medicine within the British Empire, turns out a graduate who is not ready to assume full medical responsibility till he has served at least one further year as house surgeon in a properly supervised hospital. In support of the views expressed above I may say that not many years ago I was privileged to meet in England one of our B.E. graduates whose period of training at Canterbury College comes well within that span of twenty years during which the critic maintains the school has markedly retrogressed and I was impressed by the enthusiasm with which he referred to his College training. As he put it, "Any man who takes advantage of all the aspects of training offered at Canterbury College has the ball at his feet and if he cares to risk coming to England, his success is assured." It is not very many weeks since I heard the Professor of Engineering of Auckland University College frankly admit that the B.E. graduate of the University of New Zealand compared very well indeed with those trained in Sydney. Admittedly the method of training is very different, but I seem to remember that there are many routes leading to London—some prefer to travel by one route, others by another, but the final goal is the same.

The absence of research on the part of the Staff has been rather adversely criticised, but I would sug-

gest that the underlying cause of this is lack of finance, attributable above all else to the spreading of inadequate resources over two institutions where one of them is fully capable of satisfying the demands of the Dominion. So far as students are concerned, there is no place for research except in a post-graduate or fifth year, and steps have already been officially taken to give effect to this proposal. The whole weight of opinion of those engaged in teaching science subjects is in the direction of pushing the thesis further back in the course, so that nearly the whole of the fundamental training of the M.Sc. year is digested before the student embarks on his thesis, and in my opinion any attempt to introduce research in a B.E. course before the present Third Professional is completed will lead to an unbalanced and unsatisfactory product.

Considerable publicity has been thrown upon the so-called "obsolete nature of the machines in some of the laboratories," as well as of the diagrams and slides. From the point of view of teaching fundamental principles I question very much whether it is necessary to make repeated changes in machines, etc., so long as these machines discharge their functions, and the same may be said of diagrams. A graph may well represent certain scientific facts which have never had their truth challenged, and whether the graph bears the caption 1901 or 1941 may after all be rather beside the point. The question is whether the facts exemplified in

### APOLOGY

With regard to the article in the last "Canta" on the Engineering School, I wish to apologise for the words used in reference to the members of the staff of the School and to express my regret that they have offended many people.

ENGINEERING GRADUATE.

the diagram are correct, and, if so, whether the student should have his attention called to these facts.

A great deal of stress has been laid upon the relative absence of war work in the Engineering School. A considerable amount of testing has been carried out since the outbreak of war, as well as some rather important problems, but the most important contribution made by the School has been the handing over of its well-equipped workshop to the Department of Scientific and Industrial Research under whose direction key work of a highly important character has been accomplished, in fact when the final assessment of the contributions of the Auckland School inundated as it may be with war work, and of the Canterbury School has been made, the balance may well tip towards the latter. There is no question that the workshop of the School, under the direction of a member of the Staff made available by the Council has done work of the greatest national importance.

Finally, whilst it may be freely admitted that certain equipment of modern design may have to be added to the laboratories at the earliest opportunity, and that considerable changes in orientation of the courses may be necessary, it should not be assumed that, because the Council has not advertised its plans and projects nothing is being, or has been done. Numerous conferences have been held, a good deal of spade work accomplished, and when the vexed question has been settled as to whether the resources of New Zealand are sufficiently large to justify running two fully equipped schools of Engineering when one of them is capable of turning out nearly three times the average output of the past twelve years, the worth-while changes so forcefully advocated by "Engineering Graduate" will automatically fall into line.

H. G. DENHAM,  
Rector.