

Co-operative Engineering Education

A Detail Description of the Co-operative Courses in Mechanical, Electrical and Chemical Engineering, Inaugurated by the University of Cincinnati, Whereby Theoretical Training is Given in the University and Practical Training in the Manufacturing Shops of the City.

In a preceding issue of THE CANADIAN MANUFACTURER in an article entitled "Why Not Co-operative Education in Canada?" it was suggested that the University of Toronto and McGill University in Montreal should co-operate with the Canadian Manufacturers' Association in establishing systems of co-operative education in Toronto and Montreal whereby students would receive a thorough technical training in the University and a thorough shop training in the manufacturing shops of these cities and districts.

The reasons advanced for such a suggestion were:

First: Canadian manufacturers need now and will continue to need in greater numbers technically trained men who will be able to take important positions in their shops. Men for the shops are needed as much as men for the engineering department.

Second: The system of training in vogue at these Universities is not such as to give men that practical training which will enable them to take such responsible positions in the shops as to pay salaries which will attract men of their age and education.

It was stated that in a future issue of the paper a detail account of the co-operative engineering courses which have been worked out at Cincinnati would be given. In order that readers of THE CANADIAN MANUFACTURER will get as close an idea of the scheme as possible the account of which will be given to a great extent in the words of those who are most interested and who have now had more than two years' experience with the scheme.

ORIGIN OF CO-OPERATIVE EDUCATIONAL SCHEME.

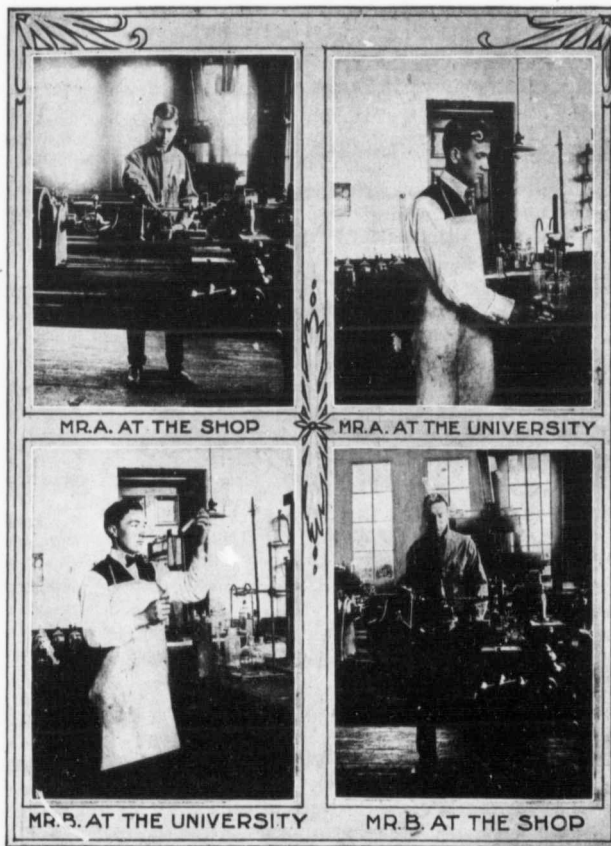
This system of co-operative education originated with Herman Schneider, Dean of the College of Engineering, University of Cincinnati. The idea was the result of six years' investigation of the problem of engineering education which included visits to the largest manufacturing concerns in the eastern and middle States, in order to obtain the views of employers of engineers; and in very many cases the men consulted were graduates of the best engineering institutions in the United States.

Before making public his conclusions after these years of investigation it was decided to thoroughly try out the scheme in Cincinnati. It was tried out and has now been in successful operation for more than two years.

WHAT THE COURSE INCLUDES.

The scope of these engineering courses can be outlined as follows, which is taken from the University of Cincinnati Record or 1908-9:

These courses are so planned that students taking them work alternate weeks in the Engineering College of the University and at the manufacturing shops of the city. The classes are divided into two sections which alternate with each other so that when one section is at the University the other is at the shop. The length of the course is six years. During the summer students work full time at the shops, but are given several weeks' vacation; there is a week's vacation also at Christmas. The practical work at the shops is as carefully planned as the theoretical work at the University and in all cases the students follow as nearly as possible the path of the machines manufactured from the raw material to the finished product sold. For instance a student in electrical engineering spends his first year in the foundry; the next year and a half in the machine shop; the next two years in the commutator, controller, winding, erecting, and testing departments; and the subsequent time in the



A Pair of Co-operative Students.

Courtesy of Iron Trade Review.