

VALUE OF SCIENTIFIC RESEARCH.

When the Wright brothers were experimenting with their gliders, observes C. J. Barton in "Metallurgical and Chemical Engineering," they were considered as "eccentric nuts" with a mania for flying. Nobody doubts now the future commercial value or possibilities of the aeroplane.

Henry Ford was the target for ridicule in Detroit when he was "monkeying" with his first model. A few years later when cars were pretty reliable, although considered an expensive luxury, a very prominent business man was heard to remark that they might be a toy for the rich but they would never be used for trucking or other commercial purposes.

The above well-known examples are typical of many other cases which have and will open fields of untold wealth to society. Many manufacturing institutions produce more wealth than gold mines for an equal amount of capital invested. This great earning power was made possible by the plodding research of some pioneer who single-handed had courage enough to venture out a little and match his starving along against his possible success. Then the miserly pittance that some of these same large firms give to further research work should shame their narrow grasping methods.

A prominent railroad after having been plundered time and again by financial pirates was in the receiver's hands. Then, and not till then, was an attempt made to improve the efficiency of the road. Now real road tests of the locomotives are being made by test cars placed between the locomotives and the train. The advice of the efficiency engineers will no doubt be followed and the earning power of the road will increase, the large as well as the small leaks will be stopped, and the road will get back on its feet again. Why should it be necessary for a railroad to get into a receiver's hands before steps are taken to increase the general efficiency and earning capacity of the road by employing efficiency engineers and experts to do research work?

A few of the larger concerns are spending many thousands to build and equip experimental laboratories to carry on experimental work along their particular line and find that it pays extremely well. Many others have contributed to The Mellon Institute of Industrial Research for scholarships. This manner of promoting investigation along new lines has proven very satisfactory to all concerned. For this method of providing means to carry on research work we are indebted to the foresight of the late Robert K. Duncan.

People are hunting to the farthest corners of the earth for radium-bearing ore, especially since prominent authorities claim its value in the treatment of cancer. Thousands of dollars are being spent in this search and justly so. Money carefully spent in developing new industries or in improving old ones is likewise well spent and yields a wealth to society which cannot be estimated.

A new jetty in the Bassin de l'Arsenal, in the western harbor of Alexandria, is being constructed with five reinforced concrete caissons each 20 metres (65.62 feet) long, 9 metres (29.53 feet) wide over all, two being 5.40 metres (17.72 feet) high and the other three 7 metres (22.97 feet) high. The caissons were constructed on shore, run into the water on launching ways and towed into position.

COAST TO COAST

St. Polycarpe, Que.—The Glengarry and Stormont branch of the C.P.R. will be open for traffic on May 31st.

Toronto, Ont.—Work has commenced on the construction of the new trunk sewer system for the northern section of Ward 7.

Fredericton, N.B.—A preliminary survey is now being made for the construction of a connecting link of the St. John Valley Railway from Victoria Mills to Queen's Park.

Hamilton, Ont.—The Board of Trade will hold a town-planning conference on June 4th. Mr. Thomas Adams of the Commission of Conservation will be one of the speakers.

Esquimalt, B.C.—Work commenced two weeks ago on the installation of the large sewerage system in section A of the municipality, comprising over five square miles of district. It will take several months to complete this portion.

Mimico, Ont.—The council proposes to purchase its water supply from New Toronto, to construct water mains under the local improvement plan, and to instal meters. It is estimated that the village will require about 50,000 gallons per day.

Peterborough, Ont.—Walter J. Francis, C.E., of Montreal, was in town at the request of the Board of Works last week to report upon a suitable site for the location of a pumping station in connection with the sewage disposal plant.

Montreal, Que.—The city engineer of railways, Mr. G. R. MacLeod, has submitted to the Board of Control an estimate of \$4,860,000 for elevating the track of the Grand Trunk Railway west of Bonaventure Station. This is \$3,140,000 below the estimate of the Grand Trunk Railway Co. Some thirty streets will be affected by the track elevation.

Edmonton, Alta.—Last year an appropriation of \$5,000 was made for a temporary sewage pumping station on the South Side. This station, which was partly built last year, and likely to be completed this year, is of the usual type, being equipped with vertical centrifugal pumps in duplicate, automatically started by a float operated by the rising sewage.

Brooks, Alta.—The C.P.R. aqueduct, 2 miles in length and with a working capacity of 900 cu. ft. per second, has recently been completed. It has been built to supply water to 135,000 acres of irrigable land beyond the watershed dividing the Bow and Red Deer Rivers. It has been under construction for two and a half years and cost about \$650,000. In one place the aqueduct crosses a railway line and as there is not sufficient clearance for an overhead structure, the water is carried underneath the track by means of an inverted siphon.

Ottawa, Ont.—Recognizing the importance of the movement in favor of good roads throughout Canada, the Geological Survey will have several parties in the field this summer engaged in mapping deposits of materials suitable for the surfacing of roads. One party will operate in the district adjoining the Rideau River and lakes, between Ottawa and the St. Lawrence River. The party will be under the direction of Dr. L. Reinecke of the Geological Survey staff, who will have as assistants F. H. McCullough and K. A. Clarke, of Toronto. The