given the opportunity to aggrandize itself and ever again place national interests in danger.

Fortunately for Canada, the chief capital investments in this country were made by the United Kingdom and the United States. From the Motherland and the Republic, capital will come in the years succeeding the war according to the Dominion's necessary requirements; and, needless to say, such investments will be welcomed. It is only natural, however, to expect that the Dominion will set its face against any policy of economic penetration that Germany may attempt on this side of the water. Whether the brutality and arrogance of the Central Powers will compel the Allies to create an economic combine against them, in self-defence, has yet to be determined; but it is evident that world-wide competition, in any event, will be keener after the war than has ever been experienced before.

Canadian and American manufacturers have yet a great deal to learn from Germany with regard to the efficient marketing of their products. And still in another particular, hardly less important, Germany has surpassed the world in the sphere of industry and commerce; attention to detail lifted German industry to its important position; and it is that same attention to detail that has permitted the enemy to survive, unfortunately, so long as he has done.

It may be admitted that in the great standardized industries of Canada and the United States, the main economies have been effected; but certain details in achieving economies have been overlooked—economies that may make all the difference between success and failure in the fierce competition that will ensue at the close of hostilities. It is wise to increase one's economic knowledge, even if the lesson be taught by the vilest enemy.

It is patent that many small economies can be effected, both in shop and office-by the keeping of fewer and better records in the office, by the avoidance of duplication, and by so organizing the work that computations need not be undertaken again and again for the same kind of job. And in the shop, chemical analyses of metals will perform wonders in reducing the costs of manufacture; castings in the foundry may be made smaller and so require less finishing; designs and costs may be worked out with greater detail and care. The truth is that, in many Canadian and American plants priding themselves on their output, only the rudimentary work of organization has been carried on. Filing systems have become obsolete; there is unnecessary and wasteful shifting of men on jobs, the natural breaks in the work, at noon and morning, not being regarded; and, much more, there is no full utilization of machinery.

In many industries there is a "slack" season for both workers and machines, a slowing down in the process that makes for the waste of both capital and labor. By efficient planning it is often possible to carry over jobs for such slack periods, just as the progressive farmer makes work for rainy days. Some managers, in factories turning out standard products, install machinery with a view to its utilization in dull time on other types of work. This is important when markets are narrow for the main output. Moreover, by the use of high-speed tools, by reducing time wasted between jobs, by the full utilization of the equipment, important economies in labor may often be achieved.

Hon. J. A. Tessier, Minister of Roads, recently made a tour of inspection of the highway between Sorel and Montreal to investigate the claim for proposed changes made by residents of that district.

PERSONALS

- C. J. Brittain, manager of the Winnipeg branch of Canadian Fairbanks-Morse Company, Limited, has been elected to the directorate of that company.
- F. P. Knopp has resigned as shop superintendent of the bridge department of Canadian Allis-Chalmers, Ltd., Toronto, to take charge of two ways for the Submarine Boat Co. at Newark, N.J.

HERBERT J. S. DENNISON, the well-known patent attorney, of Toronto, has moved his offices from 18 King Street West to the Kent Building, corner Yonge and Richmond Streets, Toronto.

LLEWELLYN N. EDWARDS has resigned from the works department of the city of Toronto and has reported for service at Camp Lee, Petersburgh, Virginia, having received a commission as captain in the engineering reserve corps.

JAMES C. JOHNSTONE, former city engineer of Port Alberni, who is now with the 1st Canadian Pioneers, and who has on several occasions been promoted, has recently received appointment as major.

JOHN J. SCALLON, for many years general superintendent of the Davenport Works of Canadian Allis-Chalmers, Limited, Toronto, and previously of the Canada Foundry Co., has been appointed manager of hull construction for the Submarine Boat Co., of Newark, N.J. This new plant will have fifty ways, of which about thirty are completed and have keels laid.

F. J. Brule, assistant general manager of the British American Nickel Corporation, has transferred his office from Sudbury, Ont., to Deschenes, P.Q., where the new plant of the corporation is being erected. With Mr. Brule there have been transferred the following engineering staff: D. Van Doren, chief engineer; Louis Whitman, office engineer; C. D. Norton, field engineer; and R. Guy, draftsman.

A. W. Haddow, who has filled the position of acting city engineer for Edmonton, Alta., since the retirement of the late A. J. Latornell, has been appointed by the city commissioners to the post of city engineer. Mr. Haddow's home is in Simcoe, Ont. He went to Edmonton in 1909, having previously been connected with an engineering firm in Northern Ontario. In 1911 he was appointed assistant city engineer, and in July, 1915, was given the position of acting engineer.

Lieut. H. N. Darling, of Toronto, Ont., who went to France with the first Canadian Pacific Railway Battalion of Railway Construction, has been awarded the Military Cross in recognition of his bravery and devotion to duty in saving a large amount of valuable railway equipment during the operations around St. Quentin in the early spring. Lieut. Darling was the first of his battalion to be promoted to a commission and the first of his unit to be awarded the Military Cross.

OBITUARY

MICHAEL CHAPMAN, formerly of Chapman & Walker, of Toronto, died in France recently. Mr. Chapman took the officer's training course in 1915 with the Royal Grenadiers and later obtained a commission with the Grenadier Guards in England. He leaves a widow and two young children.