

cerns in the United States to convert their plants into munition works and experiment as regards filling the contracts.

It is generally supposed also that the United States Government was willing to do something to help Canada maintain the equilibrium of her exchange market. Ordinarily, assistance in regard to this detail is rendered through the agency of loans or credits. While the American Government has made direct loans to allied countries aggregating over \$7,000,000,000 (Belgium, Cuba, France, Great Britain, Greece, Italy, Russia and Serbia participating in these loans), none has been made direct to Canada. So, by giving Canada war orders, it was possible to benefit her exchange position in the same way as if a direct loan had been made. Then, again, the United States authorities have permitted Britain to expend in Canada a part of the proceeds of loans secured at Washington. The total amount loaned to Great Britain since the United States entered the war is over \$3,700,000,000; and apparently of the proceeds of these British loans granted during the year ended June 30th, 1918, \$400,000,000 were expended in Canada. This, also, has helped Canada to surmount the exchange difficulties connected with her large trade balance due to the United States. As regards the American army contracts, it is likely that we shall continue to get a substantial share. With five or six million men under arms, it will assuredly be necessary to call upon Canada for some of the supplies.

PERSONALS

J. J. CARMENT has been appointed city manager of Kamloops, B.C.

G. J. MACKAY, B.A., assistant inspector of Industrial and Technical Education in Ontario, has resigned to accept the chair of Metallurgy at Queen's University, Kingston.

COLONEL J. S. DENNIS has been appointed Canadian Red Cross Commissioner for Siberia. Col. Dennis is familiar with conditions from residence in Russia. In civil life he is assistant to the president of the Canadian Pacific Railway. He is a past president of the Engineering Institute of Canada.

JOHN LESSARD, C.E., of the Department of Highways for the province of Quebec has been engaged in the survey of alternative routes for the Gouin Highway. It has been suggested that this road, instead of following the Gatineau River towards Wakefield, should pass through Ironside and Meach's Lake. It would thus pass through a beautiful lake country and avoid all railroad crossings.

BRIG.-GEN. JACK STEWART, the Canadian railway contractor, who has directed the building of so many strategic lines at the front, has been made Director-General of Construction for the British Army, and will have supreme direction over all railways, docks, etc. Brig.-Gen. Stewart's authority is thus greatly enlarged, as the supervision of docks in France will entail much extra labor.

C. A. JENNINGS, manager of the Chicago office of Wallace & Tiernan Co., has been commissioned a captain in the Quartermaster Corps, Maintenance and Repair Branch, Construction Division, with headquarters at Washington. Mr. Jennings was superintendent of the Bubbly Creek Filtration Plant from its inception in 1908 until two years ago. His work at Washington will be under Maj. George A. Johnson, and he will look after water supplies and sewage systems at the various cantonments.

LORD SHAUGHNESSY has resigned as president of the Canadian Pacific Railway and is succeeded by E. W. Beatty, vice-president. Lord Shaughnessy will retain the position of chairman of the board of directors. Sir George Bury retires from his office of vice-president on account of ill-health, and is succeeded by Grant Hall, who has been vice-president in charge of western lines. Lord Shaughnessy has been president of the Canadian Pacific Railway since June 12th, 1898, and is one of the best-known men in the British Empire. He joined the railroad in 1882 as general purchasing agent.

LANCE-CORPORAL HERBERT KEYS, after serving in France since the beginning of the war as an n.c.o. with the Canadian Engineers, is now in England qualifying for a commission, and has already successfully completed a large part of his work as a cadet at the C.E. Training Depot, Seaford. He is a son of Prof. D. R. Keys, of Avenue Road, and graduated from the University of Toronto with class '06. Since that time he followed his profession as an engineer in South America, British Columbia, and Northern Ontario, until going overseas with the 1st Contingent. He has been in France four years, and was reported wounded, but returned to duty last fall. Lieut. Norman Keys, M.C., of the P.P.C.L.I., and Mr. David Keys, who is working under the British Admiralty, are brothers.

OBITUARY

WM. MAHLON DAVIS, a well-known civil engineer, died in Ottawa last week. Mr. Davis was a graduate of Kingston Military College. He was, prior to going to the Pacific Coast a few years ago, city engineer of Woodstock, Ont.

METHOD OF WATER WASTE ELIMINATION IN A 100 PER CENT. METERED CITY

(Continued from page 346)

rate of consumption to the assumed standard of 20 per cent. of the average daily consumption.

It has been the Oak Park experience that in order to be most efficient, a water department must be under one head. That is, not only should the manager take care of the mechanical end of the water works system, but also the financial part. He should also inaugurate the policies. It is very difficult to handle complaints regarding high bills and to give satisfaction if the money is collected in one department, "shut-offs" for non-payment of bills are handled in another, and the bills are rendered in either of the foregoing or yet in a third one.

To a large extent water for the allied forces on the continent is obtained from wells. The British territory is underlain with chalk, and it is necessary to sink driven wells from 150 ft. to 250 ft. to reach the level of saturation. With two shifts the drilling progress on a 6-in. hole varies from 20 ft. to 60 ft. a day, and the yield per well may range from 50 to 150 gallons per minute. In the Somme valley, British troops used river water, which was passed through purification plants mounted on barges. About four-fifths of the French army water supply in the region of Verdun was obtained from wells. Wells dug by hand, in addition to drilled wells, are also employed to some extent—one of them was put down to a depth of 65 ft. If time permits, these dug wells are lined for the upper 10 ft. or 12 ft., and a curb 2 ft. high is built around the top to prevent débris or waste water falling back into the well. For dug wells a round section about 4 ft. in diameter is common.