

## Letter to the Editor

### "MACADAM-VICTORY ROADS"

Sir,—I was much interested in reading the article headed "Macadam Roads," by A. E. Sandles, and noted that "Macadam roads are 'Victory Roads,'" and that they "Sent Wilhelm into Holland," etc.

While I would be the last to wish to detract from any praise given to John Loudon Macadam, the father and founder of the macadam roads, my three years' experience at the front, building and maintaining war roads, first for a period of nine months with the Canadian corps and later for 2½ years as A. D. Roads for the British Fifth Army, has taught me that while we were able to "carry on" and keep the traffic moving with macadam, in many cases it would have been true economy if a more permanent wearing surface could have been put on the main thoroughfares early in the war.

I have in mind now the main road forward to Ypres through Popperinghe. That road for 2½ years had a big gang, sometimes three of them, resurfacing it all the time, because the traffic was so great that a macadam surface would not stand for more than a few weeks and the road was therefore continually blocked by these resurfacing gangs occupying half of the road in sections all the time.

It would have paid the armies ten times over to have put on a permanent surface that would have lasted for the duration of the war, using the macadam for a foundation. Of course we were not always able to get the best materials for resurfacing macadam, because the largest quarry which was left in the hands of the British was at Marquise and the quality of the stone ran from marble to a medium quality of limestone.

I have known traffic on the Dickebush-Ypres Road to wear out a 4-in. resurfacing of this material in a few months, as it was carrying possibly heavier traffic than the world has ever seen on roads before. The army at that time occupying that area consisted of 764,000 troops and 129,000 horses.

We also found in building new roads that the Telford method of building them was not suitable for Belgian soil, but by laying the Telford stone on its flattest side instead of up on edge, and then putting broken stone on top, we were able with a total thickness of 9 ins. to carry all the lorries guns and traffic that the army found it necessary to put on them.

We also found that the flat stone in spring and fall gave a bearing where the ordinary broken stone would mush up and become impassible when the frost was coming out of the ground.

The chief lesson I learned at the front was that for motor traffic in spring and fall, when the Belgian and French ground was water-soaked, it was necessary to use flat stone under the crushed stone to carry the traffic.

Going over some Massachusetts and Ontario roads this spring, I found exactly the same need there that we had found in France.

I hope these few remarks will not make any reader think that I do not appreciate what John Loudon Macadam has done for the good roads question throughout the world, because my experience leads me to believe that we can now improve on what Macadam did, and were he here he would be the first to see that we took advantage of more modern methods by placing a more permanent wearing surface on top of the macadam where traffic conditions are heavy enough to make it the economical method, as it was on many of the main roads in France and Flanders.

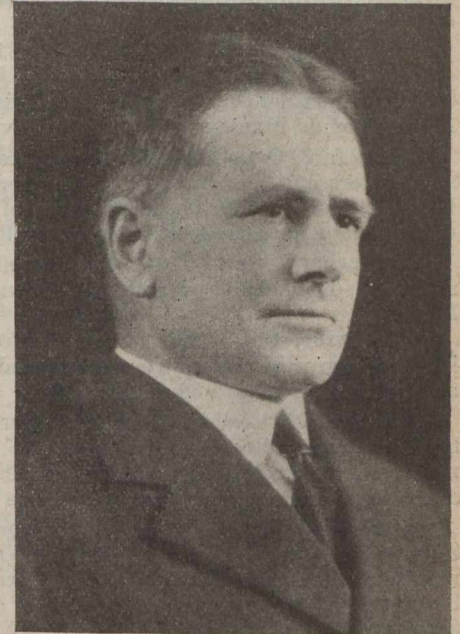
LT.-COL. W. G. MACKENDRICK,  
President, The Warren Bituminous  
Paving Co. of Ontario, Ltd.

Toronto, Ont., June 14th, 1919.

### PERSONALS

CARLETON E. DAVIS, the new president of the American Water Works Association, is chief of the Bureau of Water, Philadelphia. He graduated from Massachusetts Institute of Technology in 1893. Following his graduation, Mr. Davis was assistant town engineer of Manchester, N.H.

Then followed four years as assistant engineer on the construction of the new Bedford water works under the well-known engineer, R. C. P. Coggeshall. Subsequently he was in charge of water works and sewers for the Isthmian Canal Commission. Prior to assuming his present position with the Philadelphia Bureau of Water in 1912, Mr. Davis was associated with J. Waldo Smith on the Catskill aqueduct for seven years. Mr. Davis



possesses an attractive personality, is diplomatic and has excellent judgment. A review of the experience which Mr. Davis has had in the realm of water works engineering, indicates the caliber of the man under whom the destinies of the American Water Works Association will rest for the next twelve months. He will preside next year at the convention in Montreal.

R. J. SANDOVER-SLY, has resigned his position as town engineer of Campbellton, N.B.

LIEUT. J. E. PRINGLE, of Hamilton, Ont., a graduate in civil engineering of the University of Toronto, has returned from Palestine, where he served with No. 10 Field Company, Queen Victoria's Own Sappers and Miners, of the Indian Army.

ROBERT G. WEDDELL and R. S. SAUNDERS have formed a partnership as Weddell & Saunders, with offices in the McKinnon Bldg., Toronto. Mr. Weddell is head of the Weddell Bridge & Iron Works, Trenton, Ont., and of the Weddell Dredging & Constructing Co. He was previously connected with R. Weddell & Co., who carried on a considerable amount of harbor, railway and bridge work. Mr. Saunders recently returned from overseas, where he was staff captain, 2nd Brigade, Canadian Engineers. He was previously a member of the firm of Wilson, Townsend & Saunders, contractors, Toronto.

CAPTAIN R. H. MURRAY, engineer to the Bureau of Public Health, Government of Saskatchewan, has returned to Regina after an absence of four years with the overseas military forces. Captain Murray was gazetted with the Canadian Forces early in 1915. At the request of the Imperial authorities he was transferred to the 2nd London Sanitary Company for special duty. He served for two years as sanitary officer with the Egyptian Expeditionary Force, proceeding later to France as sanitary officer to the 52nd Division. Captain Murray subsequently commanded the 1st and 2nd London Sanitary Companies. Following the armistice, he was appointed technical adviser to the war office on water supply, sewage disposal, incineration and other engineering questions affecting the health of the troops.

The town of Melville, Sask., is inviting applications for the position of superintendent of the electric light and power department.