

This undoubtedly contributed to the trouble by allowing one slab to ride on top of the other.

It is a debatable point as to whether a wider and more expensive expansion joint would have remedied the trouble.

Undoubtedly it would have provided more room for expansion. Also the use of a thicker and stiffer pre-moulded joint might have assisted the workmen in keeping the joints vertical. On the other hand, some engineers maintain that a wider joint merely forms better lubrication for the ends of the slabs and allows them to ride over each other more easily if the ends are in the slightest out of the vertical. Of course, the wider the joint, the more expensive the maintenance, other things being equal.

Some engineers are now laying concrete pavements with only tar-paper expansion joints (at approximately every 35 feet), depending upon the shrinkage to open up the joints sufficiently to allow for subsequent expansion. And on account of the trouble that has been experienced in getting the joints truly vertical and in keeping the slabs from rising, numerous highway engineers in the United States have even reached the point where they are beginning to recommend the construction of concrete pavements without any joints, feeling that the trouble which may result from transverse cracks can be more readily taken care of than the trouble which may result from raised slabs. Of course, the jointless pavement must be well reinforced. But the modern tendency in the construction of concrete pavements, anyway, is to use sufficient reinforcing of good quality.

Whatever may be the future of the Toronto-Hamilton highway, it is certainly a splendid road at the present time, and the bad joints having been chipped, chiseled and repaired, an automobile can travel with safety and comfort—so far as the road itself is concerned—at a speed of even sixty miles an hour. It is, of course, difficult to predict just how the road will withstand the abrasive action of steel wheels and horse shoes, but the surface is well finished and should not be soon affected. However, exclusive of bridges but including all other costs, the highway will have cost in the neighborhood of \$30,000 a mile, so that the municipalities involved are naturally entitled to expect a good surface for some years to come, assuming that the repair work is properly done each year.

By the end of this season the entire road, with the exception of bridges, will be finished from Hamilton to Etobicoke. The remaining five miles of the road will not be built until next summer, owing to sewer construction that is going on at New Toronto along the line of the highway. By the time the completed road is open to through traffic, the sections laid this year should demonstrate whether or not the unusual weather of 1915 really was the cause of the joint troubles now being experienced.

PERSONAL.

J. C. RESTON, municipal electrician for South Vancouver, has resigned, having secured another appointment in Northern, B.C.

C. H. DANCER, formerly deputy minister of public works for Manitoba, has been appointed Winnipeg district engineer for the Federal Department of Public Works.

GEORGE A. GUESS, professor of metallurgy at the University of Toronto, has been engaged to start the

copper smelter of the Vermont Copper Co., at South Trafford, Vermont.

A. E. PICKERING, manager of the Water and Light Commission of Sault Ste. Marie, Ont., has resigned in order to accept an important position with the Great Lakes Power Company.

S. BINGHAM HOOD, for many years distribution engineer for the Toronto Electric Light Company, has resigned to accept a similar position with the Northern States Power Company, Minneapolis.

DAVID W. JOHNSTON, engineer for the South Saanich municipality, B.C., informed the council that it is his intention to volunteer for service in the Canadian Expeditionary Force, and that he would like to be released from his civil duties in November.

A. HASTINGS, who for eight years has been foreman of the Terra Cotta Pressed Brick Company, of Brampton, Ont., has now severed his connections with that concern and accepted a position as superintendent of the Meaford Brick Company, Meaford, Ont.

W. S. GUEST, of the university staff in applied science, University of Toronto, is attending the special course of lectures in Illuminating Engineering at the University of Pennsylvania, including also a tour of inspection of the illumination in the principal American cities.

G. R. G. CONWAY, M.I.C.E., of Toronto, formerly chief engineer and assistant general manager, and now consulting engineer to the British Columbia Electric Railway Company, is leaving for Mexico City immediately to represent the Bondholders' Committee of the Mexican Light and Power Company, Limited, and the Mexico Tramways Company.

A. P. BROADHEAD has been appointed superintendent of the Drummondville, P.Q., section of the Southern Canada Power Company, with headquarters at Drummondville. Mr. Broadhead was formerly electrical engineer of the St. Lawrence Brick Company, Laprairie, Que., and prior to that assistant superintendent of the Montreal Light, Heat and Power Company.

GEORGE R. ARCHDEACON has been appointed general manager of the Canadian Hart Accumulator Company, the head office of which is situated at St. Johns, Que. Mr. Archdeacon is an associate member of the Institution of Electrical Engineers. He has had over fifteen years' engineering experience, and was formerly upon the staff of Messrs. Ferranti, Limited, and the Chloride Electrical Storage Company, Limited, England.

OBITUARY.

WILLIAM M. MANIGAULT, of Strathroy, Ont., a well-known drainage engineer and a county surveyor for many years, died recently.

JAMES BRADY, pioneer mining and civil engineer, and one of the best-known residents of the Columbia Valley, passed away recently at Wilmer, B.C.

JAMES IRONSIDES, 50 years of age, a member of the contracting firm of Ironsides, Rennie & Campbell, Vancouver, B.C., died recently after a brief illness.

J. J. FRANCIS, P.L.S., died at Sarnia, Ont., on September 13th. Mr. Francis went to Sarnia in 1861, and had been resident there continuously since then. He was 82 years old, and was widely known as an expert land surveyor.