

## PERSONALS

LEWIE DEWAR WALKER, who was recently appointed water works engineer and inspector for the Canadian Fire Underwriters' Association, Toronto, was born May 9th, 1879, in Stirling, Scotland. He was educated at the Stirling High School and the Royal Technical College, Glasgow. In 1900 he was apprenticed to Crouch & Hogg, civil engineers,

Glasgow, and was employed on the construction of railways, water works, bridges, etc. He joined the Clyde Navigation Trust, Glasgow, early in 1905 as assistant engineer on dock and harbor construction, mainly in connection with the improvements to the channel. Coming to Canada in 1907, Mr. Walker was on the staff of the C.P.R. at Montreal for a few months, in the maintenance-of-way department, but resigned in order to go with the G.T.R. at Fort William, on the construction of the Fort William terminals and the



Lake Superior branch. From the spring of 1909 to the summer of 1911, he was in the chief engineer's office of the G.T.P. Ry., at Winnipeg, and for the following two years he was an assistant engineer on structural design in the chief engineer's office of the Algoma Central Ry., at Sault Ste. Marie. From the end of 1913 to the beginning of 1916, when he received a commission as lieutenant in the Canadian Engineers, he was in the Sault Ste. Marie office of the Department of Public Works of Canada. He went overseas in 1916 with a draft, but was detained in England for some months by the War Office, and was attached to the staff of the Administrator of Works and Buildings. Among other constructional work, he supervised the erection of the armament school for the R.A.F., at Uxbridge, Middlesex. Mr. Walker joined the 8th Canadian Engineers in France in 1918 and returned to England in February, 1919, and received his discharge in Canada towards the end of the following month. He joined the British American Nickel Corporation at Deschenes, near Ottawa, in June, assisting in designing the new nickel refining plant, and resigned that position only a few weeks ago upon receiving an offer from the fire underwriters. Mr. Walker is an associate member of the Institution of Civil Engineers of Great Britain.

JOHN G. G. KERRY, of Kerry & Chace, Ltd., consulting engineers, Toronto, has sailed for England on a six weeks' business trip.

C. P. DISNEY has been appointed acting bridge engineer, eastern lines, Canadian National Railways, with headquarters at Toronto.

A. H. HARKNESS, consulting structural engineer, Toronto, and T. R. LOUDON and C. S. L. HERTZBERG, both of the firm of Loudon & Hertzberg, consulting engineers, Toronto, have entered into partnership, the agreement to take effect toward the end of this month. The firm name will be Harkness, Loudon & Hertzberg.

J. G. MINGLE, who has been associated with the Rust Engineering Co., of Cleveland, Ohio, has been appointed Detroit representative of R. Winthrop Pratt, consulting engineer, specializing in sewage disposal and water supply. Mr. Mingle is a graduate of Purdue University, class of 1913. His territory will include all of Michigan and Ontario.

## MINERAL AGGREGATES FOR PAVEMENTS

(Continued from page 112)

The grading of sand is, of course, one of its most important properties. In fact, experience and theory have demonstrated most clearly that the grading must be within certain narrow limits if satisfactory results are to be secured. Sand is used in several types of pavement, both by itself and combined in various percentages with several kinds of coarse aggregate, but in every class of pavement the grading of the sand is an important factor. From the standpoint of the practical asphalt man, sands are often classified as fine, medium and coarse.

The fine sand contains a high percentage of 100 and 80-mesh grains, the medium a high percentage of 50 and 40-mesh material, and the coarse a preponderance of 30, 20, and 10-mesh grains. In most localities, medium and coarse sands of proper quality are more readily secured than the fine. Sands containing a sufficient percentage of the fine 100 and 80-mesh grains must be found, since without these fine grains a satisfactory pavement will not be produced, regardless of the type of pavement. An engineer is fortunate, indeed, who can find one sand which will fill all requirements as to grading. Such sands are found but they are rare. Ordinarily mixtures of two, three and even four sands must be made in order to produce a properly graded aggregate.

Specifications customarily fix the percentage of 200-mesh sand at a maximum of 5%. This limitation is based upon sound reasons and should be invariably followed, in fact, it has been the writer's practice to limit the 200-mesh sand to 3% whenever possible. The 200-mesh material in a bituminous mixture should be composed of filler, and not sand. Sand grains, even though they pass the 200-mesh sieve, are much coarser than the greater portion of a properly ground dust, and do not function as a filler in any respect. Sands containing up to 10 or 12% of 200-mesh grains have been used with little or no filler, it being assumed that since the percentage of the 200-mesh material was within the required limits, no other material of this size was needed. Such mixtures are unstable and invariably result in failure.

Too frequently, the sands most readily available, even though not entirely satisfactory, are used. Usually a brief investigation and a sand survey will locate other supplies within reasonable shipping distance. Quite commonly the new supplies will be better than those previously available, particularly in those regions where suitable sands have not been developed owing to lack of demand. Before deciding upon the sands to be used on any job the writer has invariably investigated all possible sources of supply, both developed and undeveloped. The results obtained have usually justified these investigations.

(Concluded in next week's issue)

It is stated that 50,000 acres in Southern Alberta will be placed under irrigation next spring and thrown open for farm settlement by the Canadian Land & Irrigation Co.

The Dominion Public Works' Association, Toronto, has elected the following officers for the ensuing year: M. McCarthy, president; E. Hewitt, vice-president; C. Crowe, treasurer; and Robert M. Patterson, secretary.

Work has commenced in the erection of a power transmission line to carry 4,000 h.p. from Winnipeg to Portage la Prairie, Man. The line will be 60 miles long and the estimated cost is about \$350,000.

At a meeting of the Hamilton Town Planning Commission held last month, the legislative committee was instructed to prepare a draft bill along the lines advised by Thomas Adams, of Ottawa, enabling the city to deal with its own development problems in a modern way. The bill will be submitted to the city council this month, and will be introduced into the Ontario legislature at the coming session. The commission will also support the Southwestern Ontario Town Planning Association in its endeavors to have the Town Planning and Development Act amended.