

## Letter to the Editor

### STEEL FOR PARAVANES

Sir,—I am sure that you and your readers will be interested in the following item appearing in a recent issue of the Engineering Supplement of the London "Times":—

"One of the navy's secrets that has been disclosed since the cessation of hostilities is the use made of otters or paravanes (called P.V.'s for short) in enabling ships to pass through mine-fields with almost complete immunity. These devices were towed in pairs, one on either side, from a point as low down as possible on the ship's bows, in such a way that they were not in the ship's wake but stood out obliquely away from the hull. When a mine-mooring cable was encountered it was forcibly deflected from the ship and along the whole length of the towing rope until it came to the paravane itself. Here it encountered scissors or shear blades which, although it was made of steel 1½ ins. in diameter, cut it as easily as a pair of scissors cuts a piece of string. These blades, which were only 10½ ins. long, with a section about 1½ ins. wide by ½ in. thick, had to be made of exceedingly fine and strong steel, and after long and extensive tests by the Admiralty, the 'Triumph Superb' high-speed steel, manufactured by Messrs. J. J. Saville and Company (Limited), of Sheffield, was exclusively adopted for them. The whole efficacy of the paravanes, so far as mines were concerned, depended on these cutter-blades, for if through becoming blunt or breaking they failed to cut the cable the mine would remain submerged and dangerous, whereas if it was released and rose to the surface it could be immediately detected and destroyed."

When one realizes that the size of cable anchoring the German mines was 1½ ins. diameter, the efficiency of the paravanes was most astonishing.

Messrs. J. J. Saville and Co. were placed on a special list by the authorities in England due to this and other special tool steels which they were able to invent, which very largely enabled England to really become supreme in many engineering features.

Stainless tool steel, for valves and aeroplane parts; "S.V.L.," high tensile, air-hardening steel, for extremely high stress, shocks, abrasion under heavy pressures, parts exposed to extreme heat, etc.; and "W.P.S.," a non-abrasive die steel for punching and stamping without hardening, doing from six to ten times as much work as formerly hardened cast steel.

As the secret of these steels is released, commerce will be immensely benefited in their application.

C. R. PECKOVER,  
of Baines & Peckover.

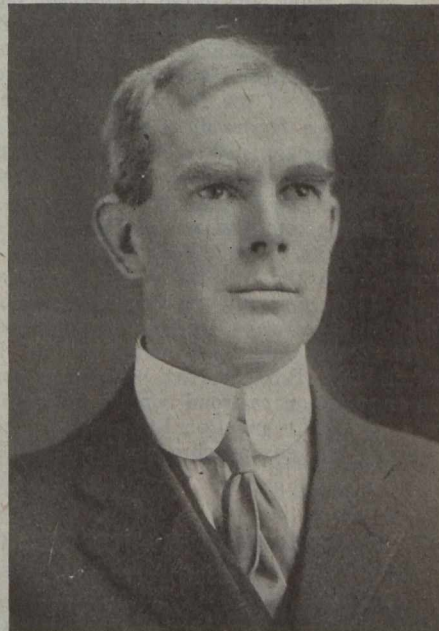
Toronto, Ont., April 1st, 1919.

The Pittsburgh Chapter of the American Association of Engineers now has a paid secretary. This is the first chapter outside of national headquarters at Chicago to have a secretary giving all of his time to the work. F. E. N. Thatcher has been selected for the position.

Hon. J. D. Reid, Minister of Railways and Canals, has presented a resolution to the railway committee of the House of Commons, which, if passed, will compel companies obtaining railway charters to construct their lines within reasonable time. He proposes that during the first year every company should grade and provide ties for 25 miles, and that at the end of the second year, 25 miles should be in operation, and an additional 25 miles each succeeding year until the charter rights are exhausted. The Minister of Railways asks that a clause of this nature be inserted in the charter of every railway company hereafter incorporated by the Federal government.

### PERSONALS

WILLIAM GREGORY CHACE, chief engineer of the Greater Winnipeg Water District, is now finishing the work on which he has been engaged since October, 1913, in connection with the new water supply for Winnipeg and nearby municipalities. The conduit and distributing systems are complete, and unless it should be decided to filter the water before supplying it to the citizens, the new Shoal Lake supply will probably be turned on within the coming week. Mr. Chace was born May 16th, 1875, in Grantham Township, Ont., and was educated at the St. Catharines Collegiate Institute and the School of Practical Science, Toronto, graduating with honors in mechanical and electrical engineering, class of 1901. Before attending college, Mr. Chace worked for five years in shops and as a school teacher. For two years after graduation he was employed in the electrical engineering laboratories of the University, and in 1903 became field draftsman in the office of the late Cecil B. Smith on the construction of the hydro-electric plant of the Canadian Niagara Power Co., at Niagara Falls, Ont., later becoming resident engineer in charge of improvements



to the hydro-electric works of the International Railway Co. In 1905, Mr. Chace became electrical engineer for the T. & N.O. Railway, and the same year prepared estimates on the cost of hydro-electric development on the Winnipeg River by the city of Winnipeg. In June, 1906, Mr. Chace was appointed assistant engineer of the Hydro-Electric Power Commission of Ontario, for the purpose of reporting on the Upper Ottawa River and its tributaries, and in October of the same year he went to Winnipeg to prepare specifications for the Point du Bois power plant. In April, 1907, Mr. Chace became a partner in the firm of Smith, Kerry & Chace, consulting engineers, Toronto. During the following eighteen months he prepared various engineering reports, assisted in the arbitration of the division between the cities of Port Arthur and Fort William of the assets of the electric railway serving both cities, and prepared the tender submitted by the McGuigan Construction Co. to the Hydro-Electric Power Commission of Ontario for the construction of the first 110,000-volt transmission line, this tender being the successful one. From October, 1908, to the end of 1911, Mr. Chace resided in Winnipeg and served as chief engineer of the Municipal Power Construction Department, in charge of the design and construction of the municipal power plant. From January to May, 1912, Mr. Chace was assistant general manager of the Mount Hood Railway and Power Co., of Portland, Ore., and from July, 1912, to June, 1913, he was president and chief engineer of the Crane Falls Power and Irrigation Co., Boise, Idaho, engaged in building irrigation canals and pumping stations. In October, 1913, Mr. Chace was appointed chief engineer for the Greater Winnipeg Water District, engaging in the construction of a 97-mile conduit for the purpose of carrying 100,000,000 Imperial gallons of water daily from Shoal Lake to Winnipeg, at a capital cost of over \$13,000,000. Mr. Chace is a director of the Peace River Oil Co., and of the Assiniboine Club. He is a fellow of the American In-