the writer's, but are substantially correct. Yet in the face of them it has been claimed that the extra lockage on the Ottawa-Georgian Bay route, and some alleged construction of channel calling for reduction of speed, would offset the difference of 282 miles in distance, or 24 hours' steaming at 12 miles per hour. No one who has taken the slightest pains to study the alternative routes, or even the published reports, could possibly hold such an opinion.

J. S. Armstrong, B.A., M.Can.Soc.C.E., Fredericton, N.B., wrote suggesting that, in view of the subject's importance, the preliminary discussion be printed and discussed the second and third time at intervals of a month or so apart, the discussions to be published from time to time.

Grounding of the s.s. Frankier.

An investigation into the grounding off the Cranberry light, N.S., Dec. 10, 1915, of the s.s. Frankier, owned by Bryce and Galvin, London, Eng., was held at Halifax, N.S., Mar. 2, before Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Capts. John Fleming and D. C. Stuart as nautical assessors. The Frankier, 3,336 tons gross, 2,443 register, sailed from Portland, Me., Dec. 7, with 215,000 bush. of grain. The weather from the time of sailing to the casualty was squally with snow and heavy seas, and no observations for compass adjustment were possible, but the standard compass had no more than 3 deg. deviation, and the vessel was well supplied with all necessary instruments. Yet it transpired that the vessel was navigated with a blue-black chart published in 1906, and without sailing directions. The master stated that he was unable to obtain a 1912 edition in Portland. He is a stranger on the coast, and his log, a cherub, was incorrect, but he did not know to what extent.

The court found that the evidence adduced was of such an extremely contradictory nature as to awaken suspicion, and that the master, John Trattles, in his evidence, made many statements not in accordance with entries in the logs or statements made by other members of the crew. The court wondered at his statement that he failed to secure an up to date chart or sailing directions in Portland, in view of the fact that so many Canadian vessels, and others, sail from that port. He admitted that his log could not be depended on. After steering a number of courses on the morning of the casualty, without keeping count of them as regards time and distance, he laid a course which would bring him about 6 miles from Cranberry light, in a neighborhood full of hidden dangers, and after obtaining a bearing, he deliberately left the bridge, leaving the second officer in charge until he was relieved by the mate, T. George at 4 p.m. He also signed the log, which did not include all the facts, thus showing additional indifference in the navigation of his vessel, and it is noted that certain entries were made and then erased, apparently with some purpose, by some person, whom the court was unable to ascertain. The court stated that while there was nothing to show that the grounding was premeditated, no better methods could have been adopted had it been the intention to lose the vessel. The court noted with interest the master's statement respecting his lack of confidence in the mate, whom he declared to be inefficient, and in view of this the lack of care the master showed

in not remaining on the bridge until the change of watches, and warning the mate to be very careful, and if in doubt, to call him, did not strike the court favorably.

The Frankier was carrying a precious cargo, which, though consigned would eventually private firm. have been forwarded to the allies, and being entrusted with this great responsibility, it behoved the master to adopt every precautionary measure to bring his vessel safely to its destination. For these reasons the court considers it a duty to prevent him from having any further responsibility with respect to this vessel on this mission and therefore suspends his certificate for three months from Mar. 3. Respecting the mate's share in the responsibility for the casualty, the court held that the moment he entertained a doubt as to the vessel's position, he should have given the danger he apprehended a wider berth, and communicated his doubts to the master, which would have relieved him from any responsibility. In view of his failing to call the master and meanwhile to adopt means of safety, the court suspended his master's certificate, for two months from The court decided to retain the scrap log so that it may be forwarded to the British Board of Trade for its information.

Signalling Requirements for British Vessels.

The British Board of Trade's Marine Department has published the following regulations relating to signalling and signalling lamps, Under Regulation 37 of the regulations made under the Defence of the Realm Act, British vessels are required to comply with any orders given, whether by signal or otherwise, by any officer in command of any of His Majesty's ships, or by any naval or military officer engaged in the defence of the coast. Under regulation 37a, which came into effect, Mar. 1, British vessels of 500 tons and upward, must be provided, before going to sea, with suitable hand flags for signalling by the semaphore code, and with an efficient flash lamp for signalling by the Morse code. The lamp shall be of such power and size that the signals made with it may be distinctly visible at a distance of three miles on a dark night in clear weather. In view of these requirements and the penalties for noncompliance, all such vessels should be provided with the necessary lamp and flags, and there should be an officer or seaman on board competent to receive and transmit signals both in the Morse and semaphore codes.

Ice Patrol Service in the North Atlantic.

For the purpose of carrying on the ice observations and ice patrol service provided for by the International Convention for the Safety of Life at Sea, the s.s. Seneca left New York about Feb. 15 and proceeded to the Grand Banks of Newfoundland, to locate ice fields and icebergs, and to make such observations as might be practicable on the quantity of ice, its kind, extent and drift, and to obtain other information. The object is primarily to ascertain the location and progressive movement of the limiting lines of the regions in which icebergs and field ice exists in the vicinity of

Grand Banks, and to disseminate such information for the guidance and warning of navigators. Co-ordinately with these duties, the s.s. Seneca will make such oceanographical and metorological observations as will contribute toward a knowledge of the causes why the limiting lines assume their observed locations. During the period of ice observations, the Seneca will be the only vessel employed on this duty, but when ice has moved southward so as to make a constant patrol necessary, an additional vessel will be detailed. The experience of previous years has shown that a continuous ice patrol should be established about Apr. 1, and continued throughout the season of dangerous ice conditions. Upon getting in touch with ice, the Seneca will report daily to New York, and endeavors will be made to communicate direct with coast radio stations, but should the Seneca be unable to communicate with any of these stations, the messages will be relayed through any vessel within reach. Endeavors will also be made to keep all vessels at sea advised by daily radio messages of the limits of the ice fields, etc.

Among the Express Companies.

The Canadian Ex. Co. has opened offices at Dugald, Man., and Coleville and Ferintosh, Sask.

The Dominion Ex. Co. has opened offices at Daaquam and English Lake, Que., and Speedwell, Ont.

The Dominion Ex. Co's office at Three Rivers, Que., was destroyed by fire, Mar. 20, together with other offices in the Page Block.

W. C. Webb has been appointed chief clerk to Superintendent, Canadian Northern Ex. Co., Winnipeg, vice Z. M. Middleton, whose appointment as agent, C.N.B. Co. at Vancouver, B.C., was announced in a previous issue.

J. R. Stone, who died at St. John, N.B., recently, aged 73, entered express service over 50 years ago as agent for the Eastern Express Co., there. He was later appointed agent for the American and Canadian Ex. Cos. there, and continued in that capacity until 1906, when he retired owing to ill health.

Mrs. V. G. R. Vickers, wife of the Manager Foreign Department, and Superintendent Atlantic Division, Dominion Ex. Co., Montreal, was attacked by a former maidservant, Mar. 17, a revolver shot being fired, but going wide of the mark, the bullet grazing Mrs. Vickers thumb and burying itself in her clothing.

The Board of Railway Commissioners reserved judgment, Mar. 21, on the application of the Canadian Fisheries Association and the W. J. Guest Fish Co. of Winnipeg, to compel express companies to deliver shipments of fish to dealers places of business without extra charge. Heretofore the companies have been carrying from coast points at \$3 per 100 lbs., and they desire to add 15c. per 100 lbs. for delivery.

The Canadian Ex. Co's receipts and expenditures for Oct. 1915 compared with those for Oct. 1914, were as follows:

those for Oct. 1914, were as follow	WS:	
1915.	1914. 1914.	
Mileage of lines covered 10,238	9,551	
Transportation charges \$351,416	\$280,551 140,379	
Express privileges, Dr 165,433	140,01	
Operation other than transportation	5,565 145,737	
Total operating revenue 191,595	145,584	
Operating expenses 138,964	131,152	
Net operating revenue 52,630	4,000	
Express taxes 4,200	10,152	
Operating income 48,411	10,10	