

the swing to such an extent that his vessel struck the swing span of the bridge, knocking it off its pivot.

Had the Port Colborne, on sighting the Dundurn and answering her one blast signal, made the signal of three blasts which the court is informed is customary in such cases in the canal, and to be a request to the other vessel to check her speed, the accident might possibly have been prevented. The court is also of opinion that if the regular bridge signal lights had been exhibited, the Dundurn would never have attempted to pass the other ship in the draw. The captain of the Dundurn committed an error of judgment in still reversing his engines after the collision with the Port Colborne, as that order when carried out tending to increase the swing of the ship's head towards the bridge. The ordinary lights at St. Dominique bridge are a red and green light on the bridge itself and a white arc light on a pole at the south approach. On the night in question these lights were out of repair and in place of them the bridge tender had placed one ordinary oil lantern, showing a white light on the east side of the bridge and another similar lantern on the bank at the south approach to the bridge. The court therefore finds that the Dundurn was to blame for the accident and censures her master, and is of opinion that the lights used on the bridge to replace the regular lights which were out of order also contributed to the accident, and suggests that this matter be drawn to the attention of the Department of Railways and Canals.

C.P.R. Transfer Barge for Pacific Coast Service.

The C.P.R. has let a contract for building a car ferry barge, to be known as Transfer Barge no. 4, to handle traffic between Vancouver and Ladysmith, the company's point of connection with the Esquimalt and Nanaimo Ry., on Vancouver Island. She has been designed to carry 15 loaded 40 ft. freight cars.

The length overall will be 260 ft.; beam, 42 ft.; depth, 12 ft. She will be built similar in design to other barges already in the Pacific coast service, that is to say, she will have a moulded shipshape bow with a scow stern. The cars will be loaded and unloaded over the stern. The forward end will be divided off for the accommodation of the crew. She will be fitted with a steam boiler and windlass for the handling of anchors and the necessary pumps, etc. She is to be built by the British Columbia Marine Ry. Co., at Esquimalt, B.C., will be of steel throughout, and will be delivered in about eight months.

A araverse web frame will be placed in the way of longitudinal floors. There will be transverse watertight bulkheads, dividing the hull into six compartments. There will be two watertight bulkheads, to form fresh water tanks. The forepeak and two wing spaces in the after compartments will be fitted for water ballast. Instead of the usual bulwarks there will be trusses extending from aft to break of house. There will be three railway tracks. There will be heavy bumpers placed aft of break of house. There will be all deck fittings for securing apron, cars and barge, and all the necessary machinery for handling—such as boiler, windlass, capstan and pumps. There will be a short forecastle deck, arranged for housing machinery, coal bunkers, galley and crew's quarters, etc. The housework and pilot house will be constructed on the forecastle deck.

Investigation Into the Loss of the s.s. Keystorm.

Following is the finding of Commander H. St. G. Lindsay, Dominion Wreck Commissioner, who was assisted by Captains F. Nash, F. J. Thomson and J. McGrath, acting as assessors:—

The Keystorm, a vessel of 1,037 tons register, belonging to the Keystorm Transportation Co., of Montreal, engaged regularly in the coal trade between various coal ports in the United States and Montreal, left Charlotte, N.Y., on Oct. 25, about 3 p.m., for Montreal with a cargo of 2,273 tons of coal, and arrived off Tibbett point in the St. Lawrence about midnight. At 12.15 a.m., on Oct. 26, the master gave over the charge of the navigation to his first mate, with orders of a very indefinite nature as to what he should do, but, for some reason or other did not go below to his quarters, but remained on the forward deck, evidently not being quite satisfied of the first mate's ability to run the vessel in the intricate channel in that locality, and also being doubtful as to the state of the weather, which was at that time unsettled. At 3 a.m., the ship being off Alexandria bay, the master retired to his bed, the weather conditions, according to his evidence, being the same, but he did not take off his clothes, evidently expecting a call. From that point the vessel proceeded safely up to Sister's island light, which was a perfectly straight course from Sunken Rock light. When passing the Sister's she ran into a bank of fog, which obscured all lights and land marks. The first mate then showed a total disregard of prudence, or common sense, and not knowing what course the vessel should steer by compass, never having, as he said, paid any attention to such a method of navigation, he tried to take the customary course by using what he supposed was the glimmer of the light on Sister's island over the stern, but without being able to see the gas buoy on Chippewa point shoal, which under ordinary circumstances would have shown on the starboard bow, and then being doubtful of the ship's position, and without any reduction of speed, sent down to call the master, but before this could be done the ship struck on the Outer Scow shoal and became a total loss.

The court finds that the master, Louis Daigneault, showed a lack of judgment in allowing the mate to take charge of the navigation of this valuable vessel in this particular locality, where the greatest amount of care is necessary for navigation even during the day time, knowing as he did the limited experience the mate had in this work, and his going below at 3 a.m. was an act of culpable negligence, as there were still dangers to avoid, and in less than two hours' time it would have been daylight. The court therefore suspends his certificate from Nov. 1, 1912, to Nov. 1, 1913. With respect to the conduct of John Leboeuf, the mate, the court is of opinion that his neglect to call the master when the weather became thick, his lack of initiative in not stopping the engines when he lost his bearing, and his utter disregard of the compass course to be steered was gross and culpable negligence, and suspends his certificate from Nov. 1, 1912, to Nov. 1, 1914.

The court severely reprobates the very loose method of navigation which seems to be customary on vessels of this class, and particularly the want of compass courses, and suggests a printed card of all courses and distances on the various runs, the card to be hung up in the pilot house, ready for instant reference in case the leading

lights or marks become obscured, as happened in this case.

The court is of opinion that everything was done in the engine room with regard to this the water gradually gained and ultimately caused the vessel to slip off the shoal into deep water and founder about five hours after stranding. No attempt seems to have been made to try and get the vessel off the shoal, and it is the court's opinion that under the circumstances it was just as well that such was the case.

Running Down of Fishing Boat by s.s. Canada.

Commander H. St. G. Lindsay, Dominion Wreck Commissioner, assisted by Capt. F. Nash, of Montreal, and Capt. C. Powell, of Campbellton, N.B., held an investigation at Campbellton recently into the collision between the s.s. Canada, belonging to the Campbellton and Gaspé Steamship Co., and a fishing boat of Grand River, Que., on Aug. 9, whereby the fishing boat sank and one man was drowned.

The court on considering the evidence of the master and crew of the Canada (that of F. Thibaudeau, the other member of the crew of the fishing boat who was saved not being obtained owing to his refusal to attend the court at Campbellton) finds that the Canada was navigated with proper and seamanlike care after leaving Grand River, and that the cause of the accident was due to the fact that no lights, fog signal or lookout were in evidence on the fishing boat at the time, although the weather was dark and hazy; therefore, the court does not consider that any blame for the accident should be attributed to A. Belanger, master of the Canada. The court is of opinion that for the greater safety of both coasting steamboats and fishing boats on the coast, that more attention should be given by fishermen to article 9 of the International Rules of the Road regarding lights and fog horn signals for fishing boats, and that a proper lookout should be kept while lying at anchor, or at their nets, for had such been the case on the morning of Aug. 9 this un-

Dominion Expenditures on Canals, Harbors Etc.

The public accounts for the year ended Mar. 31 show that in addition to the consolidated fund expenditures there was expended on Canadian canal systems on capital account \$2,560,938.11, of which \$1,746,095.48 was on account of the Trent valley canal. There was also expended on capital account the following sums on harbor and river works:—

Port Arthur and Fort William harbors	\$996,120.02
Quebec harbor	510,818.45
River St. Lawrence ship channel	1,167,462.56
Red river improvements, Man.	50,939.49
St. John, N.B., harbor improvements	579,059.21
Tiffin, Ont., harbor	105,525.65
Victoria, Ont., harbor	149,983.76
Bare Point breakwater	19,335.70

Total \$3,579,244.84

Advances of \$3,050,000 have been made to the Montreal Harbor Commissioners under statutory powers.

The total revenues from the canal systems were \$263,716.75 against \$221,138.49 in 1910-11.

W. P. ANDERSON, Chief Engineer of the Marine Department, Ottawa, has been appointed to represent Canada at the River and Harbor Congress to be held in Washington, D.C., in December.