

lock gate safety appliance. It is sketched diagrammatically in fig. 5, where its action when a boat strikes one leaf of the gate is represented; fig. 6 shows it applied to a lock gate. The device consists of two large horn castings, one on each gate-leaf, each having the face abutting against the other leaf, shaped to the arc of motion of that leaf. When one leaf is pushed back, the other leaf would, without this device, be forced down stream by the water pressure, and lack-

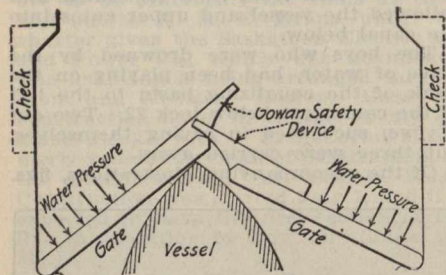


Fig. 5. Gowan Lock Gate Safety Appliance as fitted to a pair of Lock Gates.

ing the abutting pressure of the miter the leaf would be wrecked. The safety device prevents such action in case of small motions, and guides the leaves back to proper miter. It also helps to secure true mitring whenever the gates are closed.—Engineering News.

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New Plant Line Steamship for Halifax and Boston Service.

The Canada Atlantic and Plant Steamship Co.'s s.s. *Evangeline* was launched at Govan, Scotland, July 4, the christening being performed by Mrs. H. L. Chipman, wife of the Eastern Manager of the company, Halifax, N.S.

The vessel has 260 state rooms in addition to other cabins, and altogether has accommodation for 700 passengers, and crew of 95. There is also capacity for 1,500 tons of cargo. On the navigating bridge are situated the chart and wheel house, captain's and officers' quarters, wireless telegraph office, etc. The boat, or promenade deck extends practically the length of the vessel, and is occupied by the smoke room, entrance hall, 50 staterooms opening direct on deck, etc. The awning deck is devoted entirely to passenger accommodation, music room and state rooms de luxe. The dining saloon is on the main deck forward of the grand stairway, and is 60 by 45 ft., and aft of the dining saloon are 80 staterooms de luxe. On the lower deck are 20 family staterooms, and a ladies' cabin with 50 berths, and forward are the men's second class cabins and crew's quarters, while the kitchen, etc., are located amidships.

Special attention has been paid to ventilation, and also to heating; each stateroom is equipped with separate radiator under the control of the occupant, and the principal rooms are fitted with telephones connecting with the stewards' department. All the latest improvements in boats, life belts and other life saving appliances are supplied, also complete fire extinguishing plant, Kelvin's sounding machine, and Marconi wireless telegraph.

Her dimensions are, length over all, 364 ft., breadth 46 ft., depth moulded to main deck 33 ft. She is built entirely of steel to Lloyds 100 A1, with double bottom and six water tight compartments, and with ballast tanks carrying 450 tons of water, with specially built bilge keels 200 ft. long to give stability and

steadiness. The machinery consists of twin engines and six boilers, 6,000 h.p., capable of developing a speed of 18 knots. The engines are of the reciprocating four crank cylinder triple expansion type, and the boilers are equipped with forced draught.

The vessel should have been launched in April, but considerable delay occurred owing to strike troubles.

Completion of the Richelieu and Ontario Navigation Co.'s Absorptions.

The absorption of lake lines, which the Richelieu and Ontario Navigation Co. had in view, was completed July 18, when the capital stock of the Inland Lines was transferred to the R. and O. N. Co., payment therefor being made, it is said, in R. and O.N. stock.

The Inland Lines Ltd., has headquarters at Hamilton, Ont., the officers being Jas. Playfair, President; J. P. Steedman, Vice President, and J. I. Hobson, Treasurer. It operates the following vessels on the Great Lakes: Donnacona, Dunelm, Dundee, Dundurn, Emperor, Empress of Fort William, Empress of Midland, Glenellah, Neepawah, Rosedale, Stadacona, Strathcona, Midland King, Midland Prince, Midland Queen, Wahcondah, Winona. Of these, all but the Dundurn are freight vessels.

The absorption of the Inland Lines gives the R. and O.N. Co. a combined fleet of 71 vessels, as follows:—R. and O.N. Co., 13 steamboats and 18 market line steamboats; Niagara Navigation Co., (including acquired from Hamilton Steamboat Co., and Turbine Steamship Co.), 8 steamboats; St. Lawrence Steamboat Co., 3 steamboats; Thousand Islands Steamboat Co., 3 steamboats; Inland Lines, Ltd., 17 steamboats.

Atlantic and Pacific Ocean Marine.

The Cunard Steamship Co. has arranged that its vessels on the Canadian route shall make Plymouth one of the English ports of call. The s.s. *Ascania*, which arrived at Plymouth from Montreal and Quebec, early in July, was the first vessel on the new schedule.

The Allan Line steamships at present under construction in Great Britain, and

The Dominion Government has called for tenders for the construction of a powerful iron cruiser for the Customs service in the St. Lawrence Gulf. She is to be 185 ft. long, 32 ft. beam, with a draught of 10½ ft. and is to be fitted with 2,000 h.p. engines, and armed with two 26 lb. quick firing guns, in addition to the ram at the bow. She will carry 32 officers and men. She will be constructed with water tight bulkheads.

The C.P.R. s.s. *Empress of China*, which was wrecked on the Shirahama reef, off Japan, July 26, 1911, is reported to have been sold to a copper and iron dealer in Yokohama for \$65,500, for breaking up. After the vessel was floated and touched up, at Nagasaki, it was expected that she might have been repaired sufficiently to enable her to be taken to England for complete repairs, but this project had to be abandoned.

Sir Montagu Allan, who was visiting in Winnipeg, early in July, is reported to have stated in an interview, that navigation on Hudson Bay, was no less practical than it was at one time on the St. Lawrence. The one drawback he saw in the inauguration of such traffic on Hudson Bay, was that no insurance company would take the risk without rates that would be practically prohibitive, but he considered that it was a place for government enterprise.

It is reported in New Westminster that the British Columbia Transport Co. is being organized to operate a freight steamship service between New Westminster and Great Britain, via Panama, on the opening of the canal. E. J. Fader, New Westminster, is interested in the scheme, which is connected with the proposal to form a British company with a capital of £250,000 and a British Columbia charter, for the operation of a steamship service between New Westminster and Victoria, and elsewhere, as mentioned in our last issue.

The Dominion Minister of Marine, in discussing the question of insurance rates on Canadian shipping, in London, Eng., recently, is reported to have said that undoubtedly a very strong sentiment exists in Canada for the establishment of either a Canadian Lloyds, or a Government system of insurance, and that in his opinion, there was unjust discrimination against Canada on the part of Lloyds, which is entirely unwarranted either by the topography of the Atlantic coast or

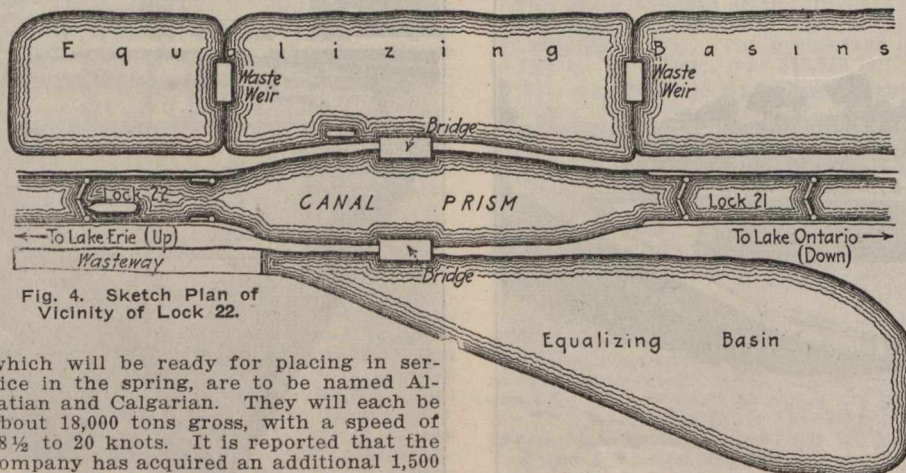


Fig. 4. Sketch Plan of Vicinity of Lock 22.

which will be ready for placing in service in the spring, are to be named *Alsatian* and *Calgarian*. They will each be about 18,000 tons gross, with a speed of 18½ to 20 knots. It is reported that the company has acquired an additional 1,500 ft. of water front at Quebec, to provide extra accommodation for its vessels.

Lord Strathcona, who presided at the Dominion Day dinner in London, Eng., July 1, said that there were three or four questions of paramount importance to the different parts of the Empire, the first was that of communications. He said that there were not yet, steamships of from 22 to 25 knots capacity passing between Canada and British ports, but he still hoped to see the trip done in four and a half days.

by the statistics of wrecks. He believed that it would not be long before one or the other of these policies would be adopted.

Maritime Provinces and Newfoundland.

The Department of Public Works has received tenders for the construction of a sea wall at Windsor, N.S., and a wharf at Boisdale, N.S.