

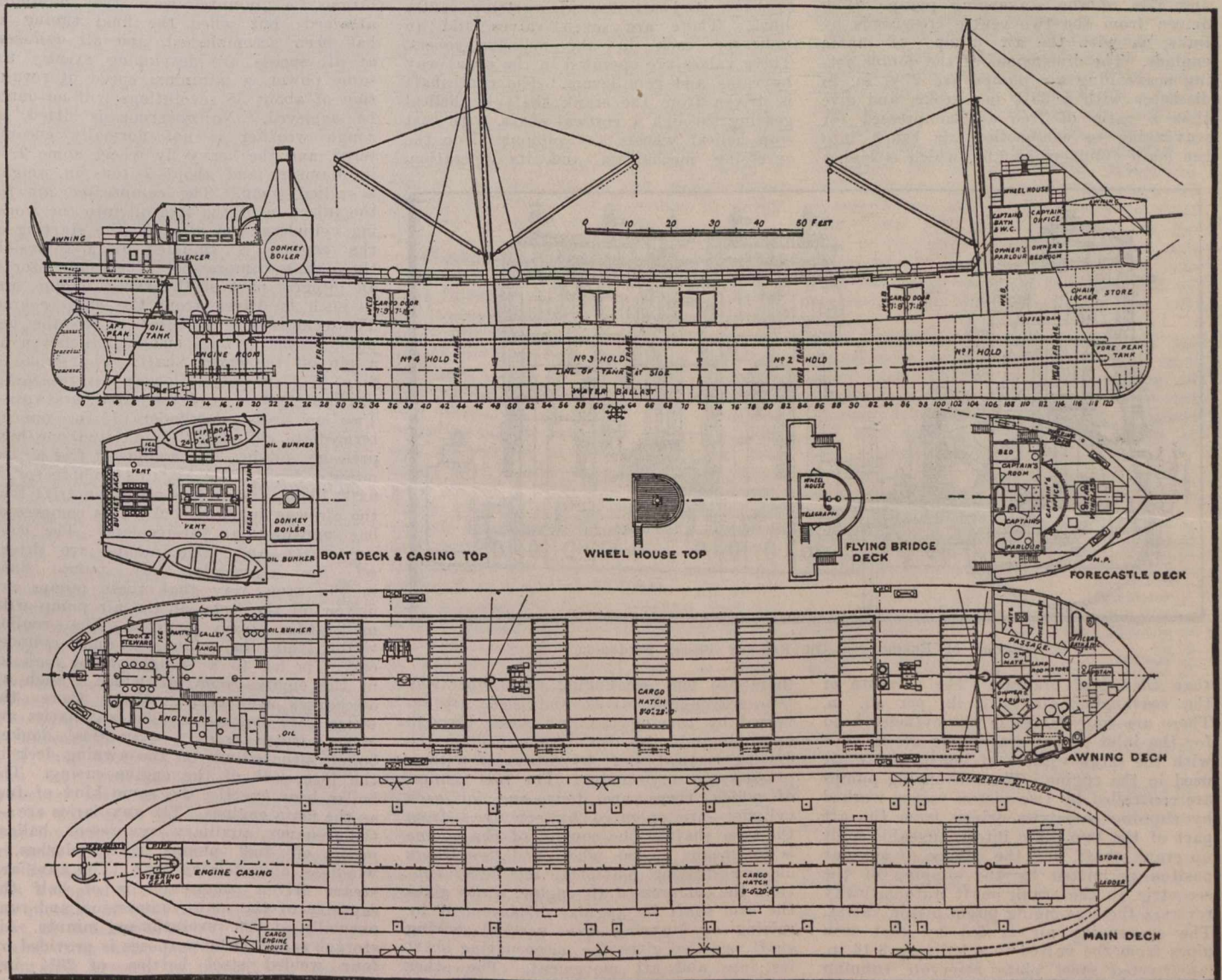
Marine Department.

The Oil Engined Vessel Fordonian.

The trials of the Canadian lake type ship Fordonian, which was built at Port Glasgow, Scotland, for the Canada Interlake Line Ltd., of Toronto, have been described in a previous issue. Drawings of this ship and her Diesel machinery are given herewith. The Fordonian has the following leading dimensions:—250 ft. long, 42½ ft. beam, 16 ft. 10. in. moulded depth to the main deck, and 26½ ft. to the awning deck. She has a 2 ft. frame pitch, and a deadweight cargo

the forward end of the fore hold is unusual in such vessels, and is intended to preserve the cargo from damage should the ship spring a leak as a result of coming in contact with any one of the many locks through which she passes in her regular trading. There are two independent controls from the bridge to the engine room telegraph, and the steam steering engine is operated by rods from the bridge. As with the sister ships, D. A. Gordon and A. E. McKinstry, there are two masts

stroke, and the engine runs normally at about 100 revolutions per minute. In the main features of the structure steam engine marine practice has been closely followed. The columns of the engine are of the box section, bolted rigidly together at the top, and are very thick, to withstand the tension stresses consequent upon the high pressures of the Diesel cycle. The cylinders have separate liners pressed in, and the liners have exhaust ports round the whole of their periphery, and communicate



Profile and Deck Plans of Oil Engined Vessel Fordonian, for the Canadian Lake Trade.

carrying capacity of 3,300 tons on 16½ ft. draught. The draught on service is restricted to 14 ft., and the deadweight capacity is thus reduced to 2,200 tons. She is built to Lloyd's highest class for grain carrying on the Great Lakes, and conforms to the standards of Canadian lake practice in that she has a steering pole out forward to make quite handy the control from the forward bridge, a large number of hatches, and inward opening cargo doors on the port and starboard sides to facilitate the rapid removal of cargo. The cofferdam at

with derricks on each, and the chart house and navigating bridge are situated right forward. The rudder is balanced and is of large area. In the trials the vessel turned almost in her own length, and when the helm was put hard over she almost came to a dead stop.

The propeller is 11 ft. 9 in. in diameter by 9 ft. pitch.

The main propelling engine is a four-cylinder two-stroke cycle single acting Carls type of Diesel oil engine. The cylinders are 18.1 in. diameter by 32.25 in.

with an exhaust belt of large cross sectional area, running round the cylinder. The water spaces are large and ribs are cast on the inside of the cylinder to aid water circulation and to give to the cylinder wall strength to resist the direct pull passing through it. On each cylinder there are six bolted doors, of about 9 in. diameter, permitting of ready inspection and cleaning of the water cooling space. At the bottom of the cylinder there is a lantern ring, which serves to keep the joint between the cylinder and liner water tight, and,