

Rushdons

DURAND MANUFACTURING Co.,

BUILDERS OF

HIGH GRADE BOATS.

FOOT-POWER LAUNCHES,
ST. LAWRENCE SKIFFS,
CANADIAN CANOES,
GASOLINE AND STEAM LAUNCHES.

ROCHESTER, N. Y.

TERMS:

OUR TERMS ARE STRICTLY CASH. When a boat is ordered built we require a deposit of 25 per cent. of cost, and balance when boat is ready for shipment. When a boat in stock is ordered a remittance of full price must accompany order. Prices named in this catalogue take precedence over all others.

INTRODUCTORY.

It is with great pleasure that we call the attention of sportsmen and all lovers of aquatic sports to our new Catalogue for 1902, which contains descriptions and illustrations of the Durand Foot-Power Launch, St. Lawrence skiffs and Canadian Canoes which we build. We have attempted in this Catalogue to describe fully our different boats, and also to give an accurate description of the Foot-Power Motor, which, in connection with our Launch, is our specialty.

The Durand Foot-Power Launch is an ideal boat for sportsmen. The operator sits low and faces the direction in which he is going. Both hands are free for use of gun or trolling line. The driving mechanism can readily be reversed by "back pedaling." There is little disturbance of the water, an advantage when approaching game. One, two or three persons can operate it.

As a pleasure boat it affords exercise preferable to rowing. There is no disagreeable odor of gasoline or naphtha. It can be operated by any member of the family, man, woman or child. No waiting for power. No continual after cost, the motor is always ready. It gives a combination of moderate exercise and pleasure. One man can attain a speed of five miles per hour or better and two men can readily maintain a speed of six miles per hour and can reach seven.

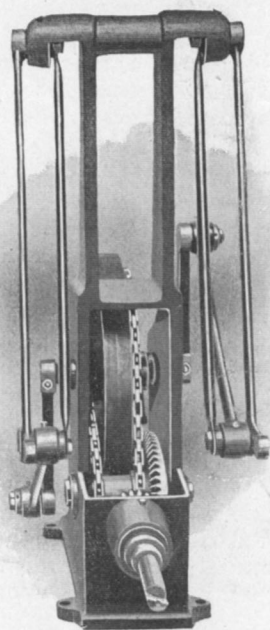
Proprietors of summer hotels and pleasure resorts cannot fail to find it a profitable investment for rental purposes.

Our St. Lawrence Skiffs and Canadian Canoes are described fully in the following pages. The St. Lawrence model has gained world wide renown and we assure the public we shall endeavor to keep them at the present high standard. Our Canadian Canoes are built upon a mold constructed by a Canadian boat builder of twenty years experience, and we believe them to compare favorably with any canoe upon the market.

We guarantee the BEST of workmanship. Our boat builders are from the St. Lawrence region and are men of large experience.

DURAND MANUFACTURING CO.

Rochester, N. Y.



View of Motor.

Cases and Pedals removed,
Showing Sprockets, Chains, Balance Wheel
and Gears.

DURAND FOOT-POWER MOTOR

Height of machine, 25 inches. Weight, 75 pounds.

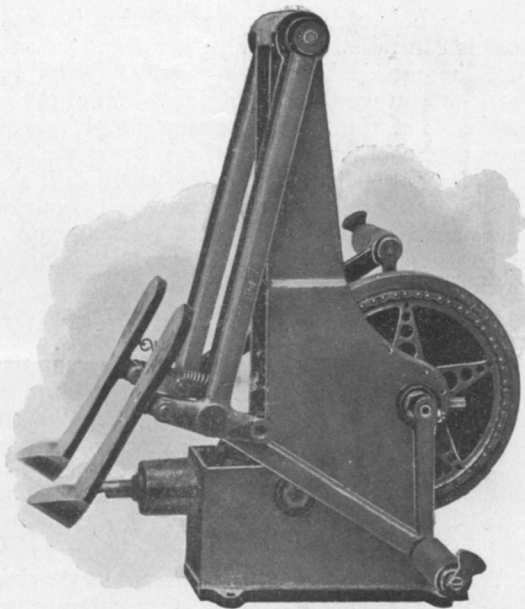
The frame is made of cast iron in a single piece, there being no bolts or screws to rattle loose or get out of alignment. It is accurately machined in especially designed jigs, as are also the cranks and connecting links, hence every corresponding part is interchangeable. The motor is fitted with ball bearings throughout, which are made of the best steel carefully hardened and ground. The sprockets are of the best steel cut to one inch pitch. The gears are made on special machinery assuring accuracy and perfect adjustment.

The cut showing motor with cases and pedals removed is the view looking toward the bow when in a boat. It will be observed that there are three shafts in the machine. The forward one is the crank-shaft, the one with the large gear wheel we call the intermediate shaft, and the one projecting from the end is part of the propeller shaft at which point is our thrust bearing. Every revolution of the crank-shaft causes the propeller to revolve ten times. This is accomplished in the following manner: On and near the right end of the crank-shaft is a large sprocket which is keyed to it. Every revolution of this sprocket turns the small sprocket on the intermediate shaft, with which it is connected by the right hand chain, four times. The large beveled gear on the same shaft turns the small pinion on the propeller shaft two and one-half times at each revolution, thus we get a motion of 10 to 1 as above stated.

The balance, or fly wheel, while on the crank shaft is not keyed to it, but runs on a ball bearing on a sleeve which is fastened to the shaft.

The chain on the left connects the sprocket on the left hand end of the intermediate shaft with the sprocket on the balance wheel. The relation in size of these two sprockets is 2 to 1, that is, the balance wheel is made to revolve twice with each revolution of the intermediate shaft, and as the latter is made to revolve four times at each revolution of the crank-shaft, the balance wheel turns eight times to one of the cranks. As the weight of the balance wheel is fifteen pounds and over, when the motor is under headway it gives steadiness to the motion.

The cranks are driven by the connecting rods which pass from the lower ends of the radius beams, which swing from the top of the machine. The pedals used by the operator in the after seat of the boat are attached to these beams and are worked by a forward-and-back movement of the feet. The pedals used by the person in the forward operator's seat are attached to the ends of the cranks and are worked by a rotary motion, the same as a bicycle. The hips of the operator should be braced against the back of the seat, thus giving the most advantageous position. IT IS IMPORTANT TO HAVE SEATS ADJUSTED ACCORDING TO THIS POSITION.



Side View.

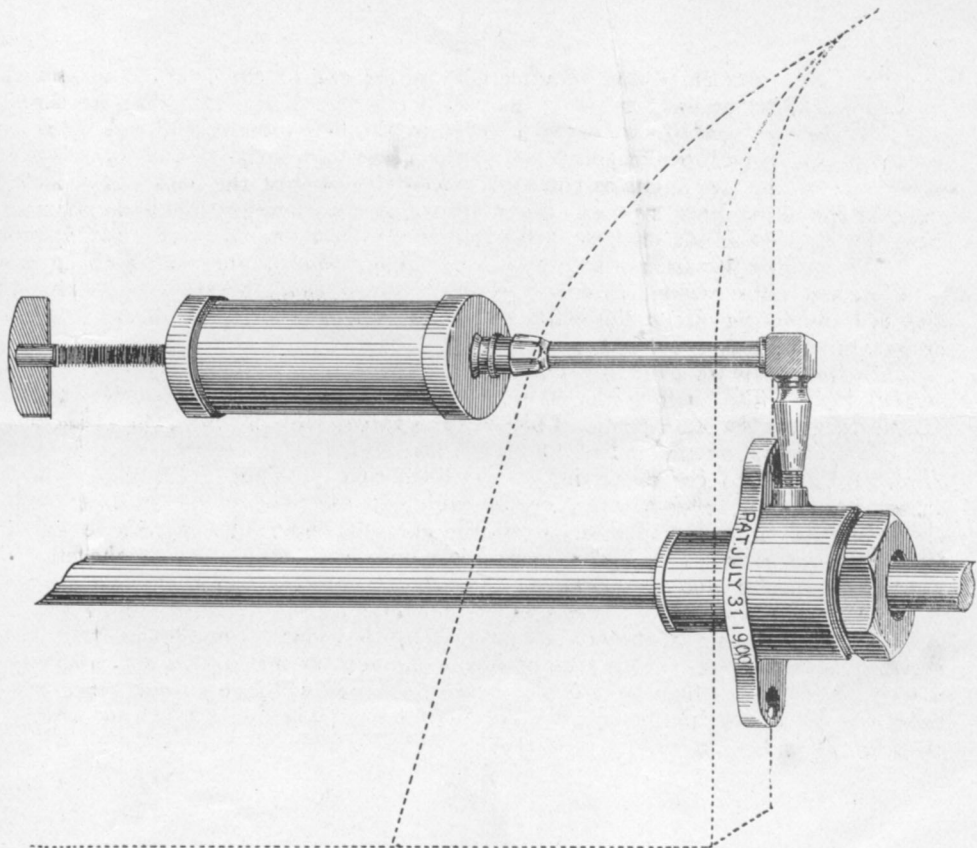
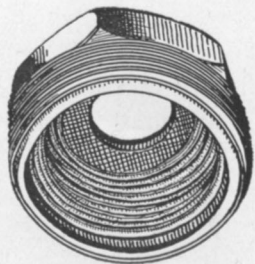
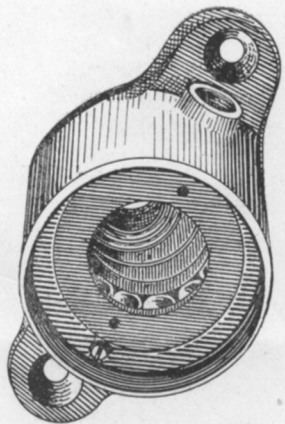
Cases Removed, Pedals Attached.

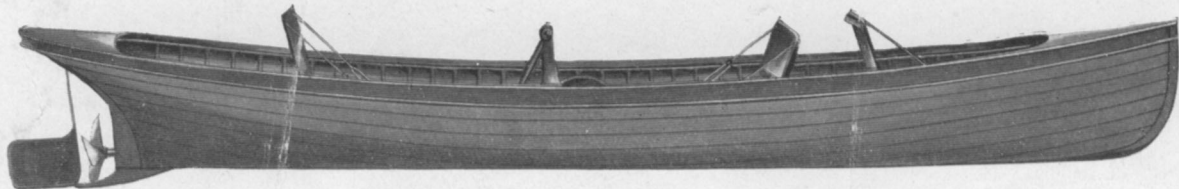
The only care the motor requires is to adjust and oil the bearings occasionally. Any skillful bicycle repairer can take the machine apart and put it together again, should an accident happen.

The outside bearings are easily adjusted by simply loosening the lock nuts and tightening the cones a little as you would on a bicycle. All of the cones have a right hand thread except the two on the right hand ends of the two shafts as you look toward the bow of the boat; these have left hand threads. The cones at the other ends of these shafts are stationary, therefore need no adjusting. Whenever there is a little play noticed in any of these bearings it should be taken up in the way described.

The stuffing-box in the stern-post is our own invention and one of the principal features of the boat. It is packed with heavy grease and so constructed that the propeller shaft cannot bind, even if for any reason it should get out of line with the machine. The shaft revolves in the stuffing box with almost no friction whatever.

On the following page are illustrations showing the mechanism. The stern-post is represented by dotted lines. The stuffing-box is supplied with grease (which should be thick and heavy) by the pipe passing through the stern-post. This grease is forced through from the cylinder above the shaft, by turning the thumb-screw, on the end of which is a piston. This drives the piston forward. Three or four turns should be given just before starting out with the boat. When the grease cylinder is empty it should be replenished by unscrewing from pipe and taking off the head which connects with the pipe. If the boat be used every day it will be necessary to fill the grease-cylinder once in two weeks. If it be used but little one filling will last for months. The bearing is shown in the upper cut on the left. The shaft revolves in this bearing on a collar which is fastened to the shaft. In each end of the box are washers of babbit metal held in place by spiral springs. These washers fit closely to the shaft preventing the escape of the grease, while the holes in the heads of the box are larger than the shaft. Should the shaft get out of line the washers move to or fro with it. This stuffing-box is the best on the market and is adapted to all boats propelled by power. We make them in any size desired. They will save a large percentage of power which would otherwise be lost by friction. They are durable and will not get out of order. Price, including grease-cylinder, \$8 to \$25, according to size.





18 foot Launch, Complete, with Foot-Motor and Adjustable Seats.

SPECIFICATIONS.

Keel, stem, stern post and gunwales, best white oak. Frames, steam-bent oak. Planking, 3-8 inch clear white cedar, ship-lap or smooth-skin construction, copper riveted and burred. Top-streak, decks and trimmings, butternut. Three adjustable and reversable seats, with lazy backs. One stern seat. One pair brass oar locks and one pair best spruce oars. Corduroy cushions for all four seats and lazy backs. Finished in natural color throughout with best spar varnish or painted outside. All trimmings brass. Fitted with our Foot-Motor. Each motor is arranged for one, two or three persons. When three operate it two sit on forward seat and each uses one foot.

LENGTH	BEAM	DEPTH AMIDSHIPS	PRICE
16 feet	45 inches	17 inches	\$225.00
18 feet	45 inches	19 inches	250.00
20 feet	50 inches	22 inches	300.00

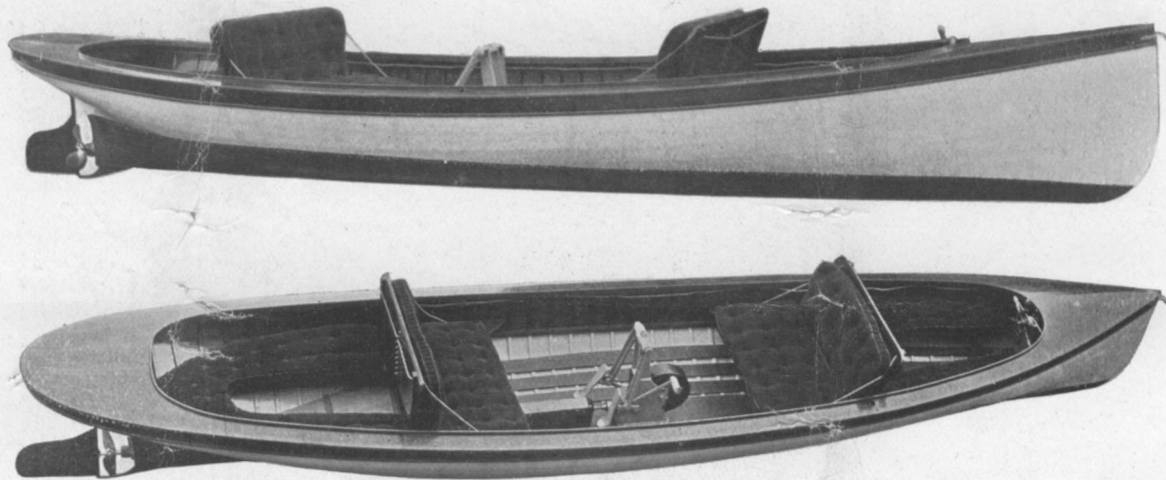
~~Motor and accessories \$100.00~~
Above prices subject to discount.



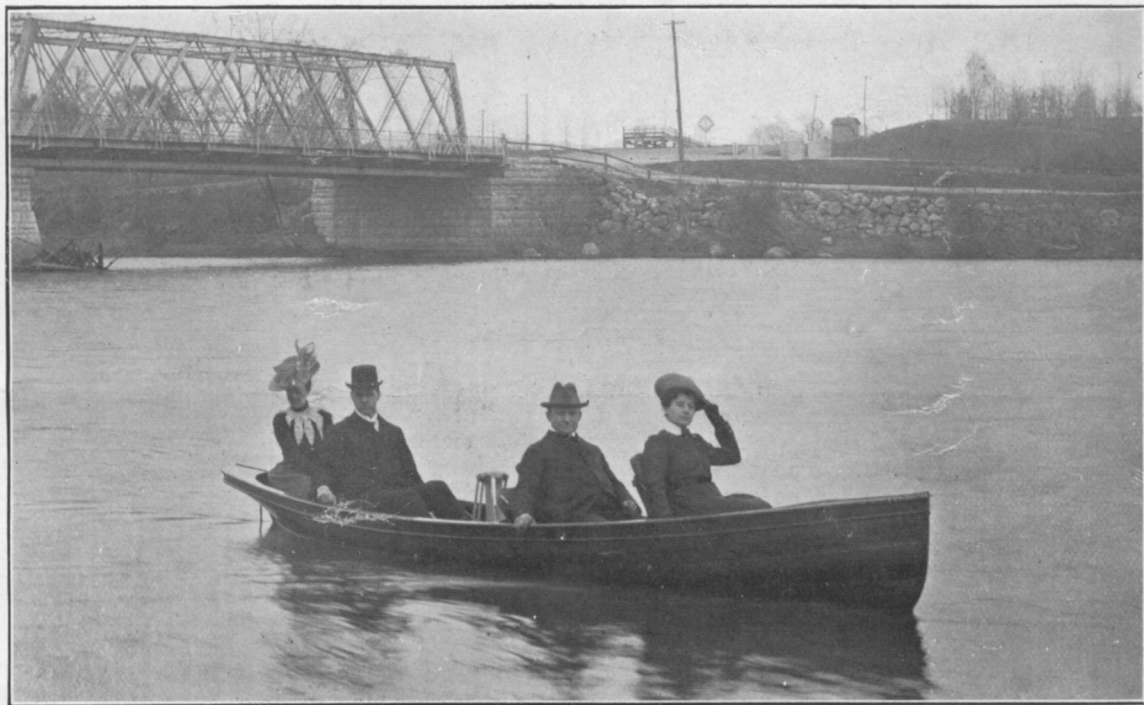
18 Foot Launch, Operated by two Persons.

Sometimes, when a man tries to start a gasoline launch he says something. Our boats go without saying.

SIDE AND INTERIOR VIEWS OF 20 FOOT LAUNCH.



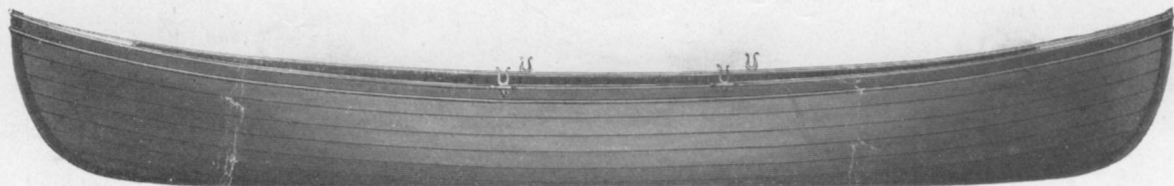
The specifications of our 20 foot launch are the same as the 18 foot launch except that with the former we furnish a brass steering wheel and the seats are different; there being a circular seat in the stern capable of accommodating three or four persons, and in the bow there are two side seats of the same capacity. The two operator's seats are double.



18 Foot Launch, Operated by One Person.

Showing forward seats facing bow.

ST. LAWRENCE SKIFFS.

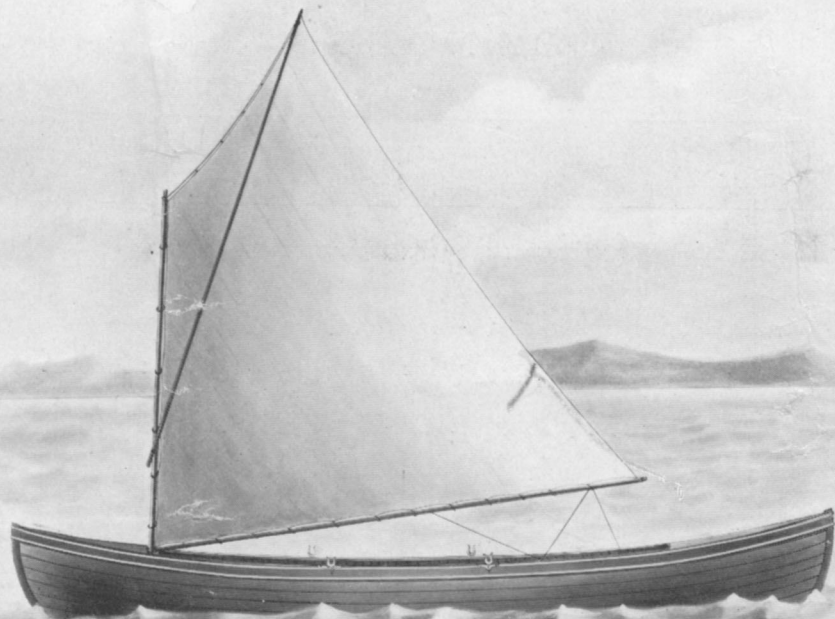


Specifications.

Keel, stems, gunwales and frames, best quality white oak. Planking, 3-8 inch white cedar, beveled lap-streak construction, copper riveted and burred. Top-streak and decks, butternut. Two rowing-thwarts, cedar, butternut trimmed. Bow and stern seats, cedar and butternut. Two pairs first grade spruce oars, copper tipped. Two pairs polished brass row-locks. Two adjustable foot braces. Polished brass fittings throughout, wood-work varnished natural color, with best spar varnish.

LENGTH	BEAM	DEPTH AMIDSHIPS	WEIGHT APPROXIMATE	PRICE
16 feet	42 or 44 in.	15 inches	105 pounds	\$55.00
17 feet	42 or 44 in.	15 inches	115 pounds	57.50
18 feet	42 or 44 in.	15 inches	125 pounds	60.00

get → Ship lap construction, (planking, smooth inside and out,) \$10.00 extra. Rudder, \$2.00 extra. We carry these skiffs in stock ready for immediate shipment. Other sizes built to order.



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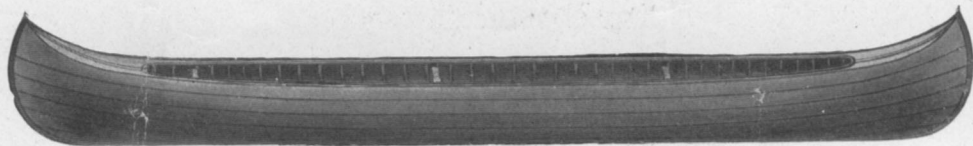
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Sprit Sail for St. Lawrence Skiff.

Seventy feet area, complete with mast, boom and sprit, polished brass fittings, mast-brace, cleats, etc., \$25. Victor Folding Centerboard, 24 inches, \$8 ; 26 inches, \$9.

CANOE S.



Celebrated Canadian Model.

No. 1, Basswood Canoe.

LENGTH	BEAM	DEPTH AMIDSHIPS
16 feet	30 or 31 inches	12 inches

No. 2, White Cedar Canoe.

LENGTH	BEAM	DEPTH AMIDSHIPS
16 feet	30 or 31 inches	12 inches

No. 3, White Cedar Canoe.

LENGTH	BEAM	DEPTH AMIDSHIPS
16 feet	30 or 31 inches	12 inches

We build only one model, but in three grades. If desired we can build these canoes 32 or 33 inches beam.

SPECIFICATIONS.

The following is a complete description of the three grades of canoes we build :

No. 1—Keel, stems and gunwales, best quality white oak. Planking clear 1-4 inch basswood. Ribbed with tough elm. Decks and thwarts of either spruce, butternut, or white cedar. All fastenings of copper and brass. Varnished in natural color or painted outside. Price \$40 to \$45, according to selection of timber and finish.

No. 2—Keel, stems and gunwales, best quality of white oak. Planking 1-4 inch clear white cedar. Ribbed with tough elm. Thwarts of either spruce or butternut. Decks of spruce, butternut, sycamore or cherry. All fastenings of copper and brass. Varnished in natural color with best of spar varnish. Price, \$50.

No. 3—Specifications the same as those of No. 2. The planking, however, is more carefully selected, there being no cross joints in same, each plank running from stem to stern. On the interior each seam of planking is covered by a thin strip of brass about 3-8 of an inch in width, the edges of which are turned down 1-16 of an inch and forced into the planking on each side of the joint. Each strip runs full length of the planking. They give a very neat appearance to the inside of the canoe and make a very tight boat. Price, \$60.

Canoes, of all grades, are furnished with one pair of best quality paddles.

We build hulls up to 26 feet in length, and equip them with steam or gasoline engines. We build them to any model that may be specified, but the launches which we carry in stock are the most suitable for our foot-motor.

We sell the foot-motors separately to any of our patrons who wish to build their own boats. They include the following accessories: propeller wheel and shaft, stuffing box, grease cylinder for replenishing stuffing box with grease, and an intermediate bearing for propeller shaft, which is located in boat about half way between the motor and stuffing box under the after operator's seat.

We would advise patrons when building their own hulls to follow our model as far as possible, for it is the result of much study and many experiments. The motor should be placed nearly amidships.

Great care should be used to have the seats constructed exactly as ours are. They should be adjustable to the length of the leg and should lock firmly when at the right position. The back of the seat should incline but little back of the perpendicular. The leg should be almost straight when the pedal is at the furthest position from the operator with the hips firmly against the back of the seat, (refer to cut on page 7.) We will furnish complete designs.

It is necessary to have the boat properly balanced, and not to start out, especially in a wind, with the bow projecting above the water-line, or with the propeller above the water-line. The boat should be on an even keel as nearly as possible. If required, a sand bag may be used for ballast.

DURAND MANUFACTURING CO.,

Rochester, N. Y.

GUARANTEE.

WE GUARANTEE the Durand Motor to be perfect in material and workmanship, and we agree to replace within one year from date of purchase any part that can be shown to have been defective. All such parts must be sent to the factory for examination with express or freight prepaid.

DURAND MANUFACTURING CO.