

MOTOR BOATS: CONSTRUCTION AND OPERATION

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Motor Boats: Construction and Operation by Thomas H. Russell

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THOMAS H. RUSSELL

**MOTOR BOATS:
CONSTRUCTION
AND OPERATION**

MOTOR BOATS: CONSTRUCTION and OPERATION



An Illustrated Manual for Motor Boat, Launch
and Yacht Owners, Operators of
Marine Gasolene Engines,
and Amateur Boat-
Builders.

By

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PREFACE.

The purpose of this work is to provide a compendious guide to the design, construction, installation and operation of marine motors and to the design and construction of motor boats. It will be found useful and often invaluable, alike by the man who wishes to install a small motor in his rowboat or yacht, and his more ambitious or more fortunate brother who aspires to own a seagoing power craft. It is intended primarily for the man who is not a practical mechanic—and yet mechanics may study its pages with profit.

Boat-building has ever been a favorite avocation among the people of maritime nations. In the United States and Canada, blessed as they are with countless navigable lakes and rivers as well as a splendid seaboard, the building and operation of pleasure boats is a national pastime, which has been stimulated by the development of the marine gasoline engine, so that today, while thousands of small craft are turned out annually by the professional boat-builders, amateur boat-building has vastly increased. To those who are building or who wish to build their own craft, the present work offers a valuable guide.

As far as the installation and operation of marine engines are concerned, it is estimated by manufacturers of world-wide renown that fully eighty per cent of their engines are used by people who have little or no "motor knowledge." Few persons have an opportunity to operate a motor before they own one, hence the great majority of boat engines are sold to the inexperienced.

In the confident belief that most of these purchasers and users of marine engines would prefer to have at least a working knowledge of motor construction and opera-

tion, this book covers the subject thoroughly. It exploits no unproved theories, but embodies only facts and principles of construction which are recognized and accepted by the foremost builders of motor boats and marine engines. It does not profess to describe every good engine on the market, but does describe to the last detail those which are typical of the best and most advanced construction. It appeals, therefore, to all present and prospective owners of motor boats who wish to learn how to operate their craft to the best advantage.

Considerable space is devoted to the troubles that are likely to arise in running marine engines, and this will be found one of the most useful features of the book. The causes and symptoms of engine trouble are described at length and, as the proper remedies for all such cases are clearly indicated, this handy volume may often prove as indispensable as the fuel supply. If it thus adds to the pleasure and comfort of the motor boating fraternity it will not have been written in vain.

T. H. R.

Chicago, December, 1909.

The author acknowledges his indebtedness to the following authorities on boatbuilding and marine engines, for valuable aid in the preparation and illustration of this work:

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CONTENTS

Chapter		Page
I.	The Modern Motor Boat..... Ideal Power for Small Self-Propelled Craft—Development of the Gasolene Motor—Amateur Boatbuilding—Choos- ing an Engine, etc.	7
II.	Marine Gasolene Engines—1. The Four- Cycle Type	13
III.	Marine Gasolene Engines—2. The Two- Cycle Type	20
	Actual Working of a Typical Engine— The Three-Port Type—Kerosene Fuel Devices—Naphtha Engines.	
IV.	Carburation and Carbureters.....	30
	The Float-feed Principle—The Mixing Valve or Vaporizer—Spray Carbureters —The Puddle Type, etc.	
V.	Ignition	37
	Various Methods Employed—Dry Cells —Wet Batteries—Magneto Ignition— Make-and-Break and Jump Spark Sys- tems—The Timer or Commutator—In- stallation of Ignition, etc.	
VI.	Lubrication and Cooling Systems.....	49
	The Best Lubricants—The Splash Sys- tem—Mechanical Oilers, etc.—Air and Water Cooling Methods—Pumps.	
VII.	Reversing Gear and Propeller Wheels....	59
	Reversible Propellers vs. Reverse Gear— “Pitch” of the Propeller—Right-hand and Left-hand Wheels—Thrust Bearings, etc.	

CONTENTS—Continued.

Chapter	Page
VIII. Exhaust Devices	70
Air and Water Mufflers—The Under- water Exhaust—Choice of Methods.	
IX. Installation of Motor-Boat Engines.....	75
X. Operation and Care of Engine.....	91
XI. Multicylinder Engines	103
XII. Choice of a Boat Model.....	107
XIII. Practical Boatbuilding — 1. Boat Patterns and Knock-down Frames.....	125
XIV. Practical Boatbuilding— 2. Form and Strength of Hull.....	137
XV. Practical Boatbuilding—3. Structural Mem- bers and Materials.....	143
XVI. Practical Boatbuilding — 4. Laying Down and Assembling—Finishing.....	151
XVII. Practical Boatbuilding — 5. How to Build a Boat from Patterns.....	165
XVIII. Steel Boats and Launches.....	193
XIX. Motor-Boat Accessories	204
XX. Gasolene—Its Properties and Use.....	216
XXI. Engine Troubles—How to Locate and Remedy Them	225
XXII. Miscellaneous Hints and Tips.....	243
XXIII. Rules of Navigation.....	249
XXIV. Typical Four-Cycle Engines.....	255
XXV. Typical Two-Cycle Engines.....	270
XXVI. Don'ts for Motor-Boatmen.....	283

CHAPTER I.

THE MODERN MOTOR BOAT.

The modern era in power boating dates from the development for marine purposes of the internal combustion engine, usually employing gasoline as fuel.

For small self-propelled craft the gasoline engine furnishes ideal power. Within the brief span of the last few years its utility, reliability and endurance have been developed to a point nearing perfection as far as pleasure craft are concerned, while its use for passenger transport and other business purposes is steadily increasing, as, for example, in the towing and fishing industries of the United States and Canada. In fact, it has already measurably lessened the burdens of many of those who go down to the sea in ships, besides adding immeasurably to the delights of the amateur boatman and the yachtsman.

Among the advantages accruing from the use of the gasoline engine are the absence of smoke, soot and heat, and the minimizing of the work required in the operation of a power boat. The boat-owner can be his own engineer—and therein lies the secret of the gasoline motor's success.

There is no delay in starting a boat with a gasoline motor—no tiresome waiting to get up steam; no waste of fuel when the engine is standing idle; no need to don overalls for protection against grime and grease; no stoking or coaling; no absolute dependence on electric charging stations. The main essential is a continuous gasoline supply—and that can be replenished almost anywhere at comparatively insignificant cost.