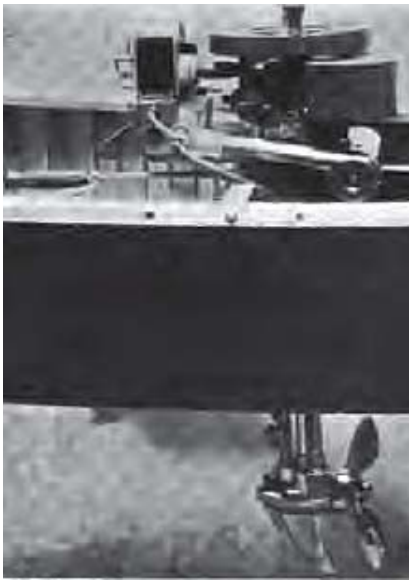
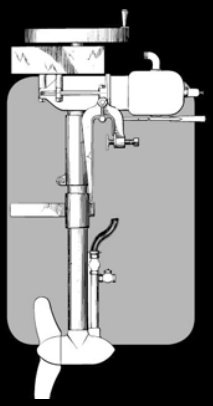


Rowboat Motor Journal

Official Publication Of The Southern Ontario Rowboat Motor Chapter



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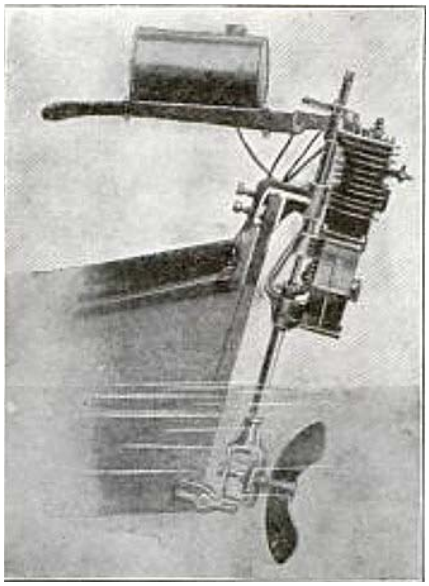

Joe Brincat (at the tiller) takes a young mom and her little one for a ride with a Caille Liberty Single at the joint meet at Ford Lake Park in Ypsilanti, MI. Participation included the Piquette "T" Chapter of the MTFCI & MTFCA, Horseless Carriage Club of America, and members of the Great Lakes & Rowboat Motor Chapters (AOMCI).

The Rowboat Motor Journal

About "The RBM Journal"

The Rowboat Motor Journal was created in order to provide rowboat motor-related information to any and all interested parties, as well as be used as a means of communication between collectors of the early motors that form the foundation of the marine outboard engine industry as well as the original building blocks upon which our hobby is based. Intended for quarterly publication, it is a non-profit enterprise with all information (technical or otherwise) procured, verified within reason for accuracy, and assembled strictly through the work of volunteers.

To that end, participating members are encouraged to share their expertise and understanding so as to assist in the future preservation of not only the motors themselves, but the knowledge there-of. Members may be solicited by the Editor to assist with providing in-sight with respect to restoration techniques, part reproduction, shop practices, motor information and any other pertinent exchange of data, up to and including publication of donated pictures or images, detailed accounts of current restoration projects, recent "new" old motor discoveries or acquisitions, or pictorial demonstration(s) of rowboat motors on display or in actual use.

The Editor of the Rowboat Motor Journal and its contributors assume no responsibility whatsoever for any incident or injury that may arise from any use of information (in whole or in part) presented within the contents of this publication.

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From The Editors Desk....

Here we are at the beginning of November already. It's a good time to reflect on the events of the past summer, and begin planning for next years outboarding activities. I had the pleasure to witness many rowboat motors in action during the few times I did get to a wet meet, especially the Constantine and Tomahawk meets. Personally, I think my goals for next year will be simply to get out on the water more than I did in 2009.

I still did not receive any official permission to post the magneto fundamental information that I had scanned and planned to use as part of a newsletter last winter, so it's time to move on to plan B; instead of posting the data on our website, we should be free to distribute those pages in PDF format via email to chapter members without risk of penalty, so that is what I'll do. Members can save or delete them as they choose, as I'm sure a lot of the scanned material is old hat to more than a few of you, but the information might be of some use to the newer guys who might be looking for ignition system pointers to help them along in reviving old motors.

I have had some response from members who contributed data relative to trying to assign given motor characteristics to specific years for Evinrude Detachables. Some of that information is included in the pages of this newsletter. I'll attempt to create a spreadsheet that would allow some freedom with respect to updating the information as time goes on. Harry Nicholson has done quite a bit of work in this area, and provided his personal hand-written notes to share with other rowboat motor fans. Please keep in mind that this is a starting point only, and the published document is not held out to be the very last word in defining the many different features and characteristics of Evinrude motors, but it should be viewed as a foundation to build on that can be edited and updated on an as-needed basis. The font was downsized in order to compress it so that it would fit into two pages for publication, but if anybody wants my Excel file to inflate the lettering so its easier to see, just drop me a line and I can email you the original file, which you can edit to your heart's content.

On the rear cover page of the previous journal, the pictures were correctly identified by Bill McIsaac and Deane Rogers, and are described as follows;

a) the gas tank casting belongs to a pre-1916 Caille
b) the exhaust is the lower elbow from an underwater exhaust used on a 1913-ish Evinrude

In this issue, we're presenting another patent drawing that y'all can have fun with, as the back page shows an illustration that I found in the patent office archives, but could not find in anywhere Orlin Johnson's book of Small Marine Propulsion Devices 1866-1950, so you may not be able to use Orlin's book as a search weapon. Even so, I'm pretty sure most everybody has one of these motors buried in their collection anyway, so it shouldn't be that hard to figure out.

Last issue we received a technical contribution from Dick Alcock, which gave some insight into rebuilding a Lockwood-Ash rowboat motor lower unit. For this issue, the reader contributions continue, as Bob Grubb has shared some of the details of reviving his early square-tanked Caille Liberty Single, and we have some photos available for publication giving members a look at that project.

For those who were able to attend the Piquette "T" Club function held at Ford Lake Park in Ypsilanti MI back in August, it was quite an enjoyable afternoon. The weather was not 100%, but a few of us still got on the water, and when we weren't running outboards, folks still had fun visiting and chatting with the antique car people. Thanks again to RBM chapter member Randy Mason for doing so much of the work to make this event happen.

This is the third newsletter of 2009, so there should be one more issue coming out before the end of December. Hopefully the editor can do a better job of maintaining the proper schedule for the 2010 newspapers. ☺

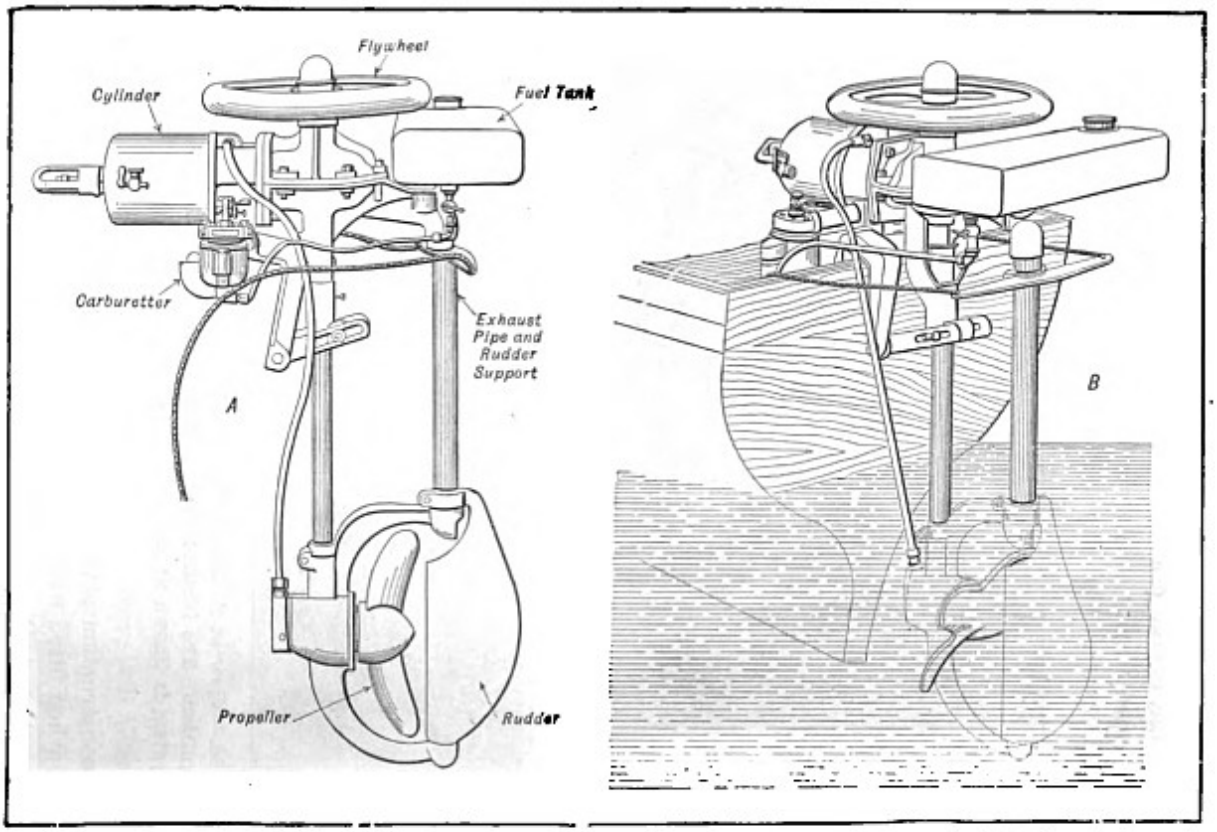


Fig. 189.—View of the Waterman Outboard Power Plant, Complete and Ready for Installation at A, and Method of Application to Rowboat Stern at B

OUTBOARD MOTORS

Originally designed for rowboat use, its scope has been so broadened, that to-day you will find outboard motors used on canoes, sharp-pointed skiffs, duck-boats, house-boats, sail-boats, yachts, tenders, dingies, scows, work-boats, rafts, catamarans—in fact, every kind of craft within the range of power. So varied are the uses that these compact power plants have sometimes been called the "universal motor."

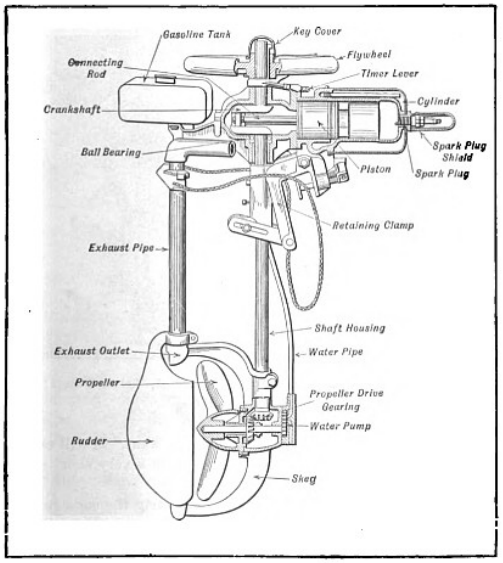


Fig. 190.—Sectional View Detailing Internal Construction of the Waterman Outboard Motor

Waterman PORTO Motor

Makes a Motorboat of Any Boat in Five Minutes

1914 MODEL THE RESULT OF 9 YEARS' EXPERIENCE

THIS illustration shows something of the beauty of the "Waterman"—but don't you buy **any** motor by the looks alone. The all-important thing to get is certainty that the motor will give lasting satisfaction, and the only way to be sure of this is to bank on the experience of others, and the reputation and standing of the factory behind the motor. Let "the other fellow" experiment with the untried imitations. Keep your money until you know what you are buying.

3 H. P.
Weight 59 Lbs.

Most Power for the Price.
Most Power for the Weight.

The Waterman "Porto" is the original outboard motor. It is guaranteed for life. Nine years successful use—25,000 delighted "Waterman" owners and every one a "Waterman" booster. The "Waterman" fits any shaped stern (attached or removed in a jiffy) and drives a rowboat, dinghy, tender or other small boat right to ten miles an hour, thirty miles on a gallon of fuel.

Don't buy an outboard motor of any make until you get our free engine book and learn the "Waterman" terms and price, and find out about the superior features of the "Waterman." You will be sorry if you fail to insist upon these features in the motor you buy:

Carburetor, not "mixing valve"; 3 Piston Rings instead of 1; Removable Bronze Bearings; 10½ x 16" Propeller; Independent Rudder; 25 feet of tiller line, steers from any part of the boat; Noiseless Under-Water Exhaust; Bronze Gear Pump, forming Valveless Water Circulation System; Spun Copper Water Jacket, highly polished; Ignition: Bosch, or any other strictly high grade high tension magneto; or by battery. DEMAND THESE FEATURES IN ANY OUTBOARD MOTOR YOU BUY—OR YOU ARE NOT GETTING THE WORTH OF YOUR MONEY.

Immediate delivery assured, either direct from Factory or from nearest distributor's stock.

Postal brings free engine book and full information.

WATERMAN MARINE MOTOR COMPANY
212 Mt. Elliott Ave.
DETROIT, MICH.

Read what "Waterman" owners say on next page

Evinrude Ad from 1919 edition of "Outing Magazine"


156
POPULAR MECHANICS ADVERTISING SECTION
Be a CAILLE 5 Speed Motor
DETROIT
OWNER AGENT
Hundreds of Caille Owners have asked to become our agents,— they have seen how easy it is to sell Caille 5 Speed Master Motors. They wanted to represent us in their vicinity because everyone who saw the Caille perform wanted one. We are going to give everyone a chance to be an owner agent and sell the Caille 5 Speed outboard motor. No previous selling experience is necessary. No office or shop is needed. Anyone can easily understand and operate a Caille 5 Speed Outboard Motor. Be first in your neighborhood.
For Fishing Hunting Pleasure Business
Steers And Controls With Same Lever
Special Owner Agent Offer
We will give a special "Owner Agents" discount to one in each community. Our best advertisement is the Caille in operation. Owner Agents sell from 1 to 12 Caille Motors a year easily among friends and acquaintances. Buy yours at discount and sell all you can. We want a Caille Owner Agent in your vicinity.
2 Speeds Forward — Standstill — 2 Speeds Reverse
Without Stopping Motor
The Caille 5 Speed Motor Starter operates with a quick, easy pull,— women and children operate it easily. There are two speeds forward—two reverse or standstill without stopping the motor. This makes the Caille so flexible that anyone can use it for hunting, fishing, pleasure in fresh or salt water. The Caille is simple in construction, made of best materials and is fully Guaranteed.
FREE Catalog, Special Owner Agents Discount, Booklet "Installation-Operation and Care of 2 Cycle Motors and Equipment," all absolutely FREE. Here's a chance to earn while you play.
Caille Perfection Motor Co., 27 Caille Bldg., Detroit, Mich., U. S. A.
We make a complete line of Inboard Marine Engines from 2½ to 30 h.p.
If interested ask for catalog, giving dimensions of boat.

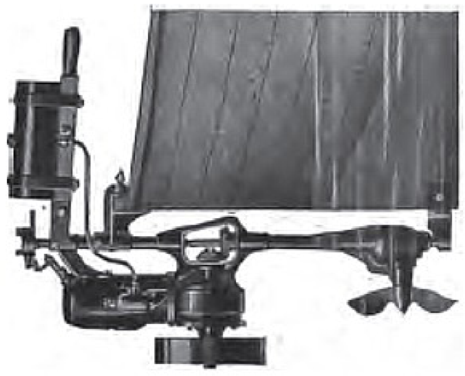
Do you recognize the carburetor on the motor? A photo of it has appeared on the RBM Journal cover

262 CYCLE AND AUTOMOBILE TRADE JOURNAL.

Waterman Out-Board Motive Outfit

Waterman Out-Board Motor Co., 23 Griswold St., Detroit, Mich., have placed on the market a unique marine power outfit comprising an engine with its accessories and a suitable bracket for instantly attaching the outfit to the stern of the boat. The operation of attaching is accomplished without any fitting of parts, the engine being removed without disconnecting anything but one bolt and a clamp which fasten to the stern top and bottom. Besides being a useful power outfit to quickly install in plain hulls it also serves as an auxiliary power for sailing vessels in case of a calm.

The motor is of the 2-cycle type with a 2¾x3 in. cylinder. At 700 revolutions per minute it develops a little over 2 H. P. At



Waterman Out-Board Motor attached to stern of boat.

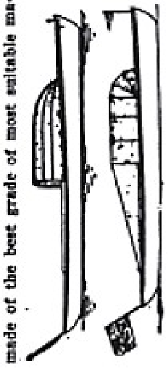
this engine speed the 10-in. propeller wheel turns 500 revolutions per minute, driving the boat at a speed of 7 miles per hour. The motor is water-cooled, a centrifugal pump being used to circulate the water. This pump is located in the propeller gear. The motor weighs 24 lbs. without batteries, spark coil and tank, which are packed in the box in which the motor is carried and weigh altogether about 11 lbs. The thrust of the propeller is directly against the sternpost and keel and the weight of the outfit is so distributed between sternpost and transom that there is no undue strain on either. The gasoline tank, of 1 gallon capacity, is placed on the tiller arm. One tank full runs the engine about 10 hours.

The electrical equipment consists of five dry cells and vibrator coil carried in box in which motor is stored when not in use. The commutator is carried on top of a vertical shaft. The wiring from commutator, spark plug and ground is carried to a switch on the vertical shaft. Wiring from spark coil and batteries is carried to the same point. By an ingenious arrangement of a split switch the connections are instantly connected or broken at this point so that the wiring is always right and cannot be connected up wrong, even by one who does not understand the electrical connections of a gasoline motor.

The entire outfit comes packed in a nice dovetail box with hinged lid and clasp for lock. As it only weighs 35 lbs. it can be taken on an outing and shipped as baggage, providing one's own power boat whenever a skiff can be obtained. It will accommodate itself to varying heights of stern or transom from 16 to 26 inches.

"Standard" Spray Hoods

Robert E. Morton, of New York City, manufactures a line of spray hoods under the trade name "Standard." These hoods are made of the best grade of most suitable ma-



"Standard" Spray Hoods on a boat.

terials and are designed to fit properly and give good service. The appearance of these hoods on a boat is illustrated by the accompanying cut.

Launch Fittings and Motor Boat Supplies

A. S. Morss Co., 210 Commercial St., Boston, Mass., job a complete line of marine supplies, making a specialty of launch fittings. One of their specialties is the Boss awning fastener, described in our June, 1905, issue, page 152, for which they are selling agents. They issue a very comprehensive catalogue, in which all articles are conveniently indexed.

Marine Motor Catalogue

The Miama Motor Works have just issued a new illustrated catalogue, describing their improved marine gasoline engine for 1906. It also contains a full list of fittings and supplies for gasoline engines. In the back of the catalogue is a complete illustrated list of repair parts. Every article is fully described and clearly illustrated by half tone engraving or line drawing. Weight, sizes, net prices, and catalogue number are given in the descriptive matter.

The British Motor Boat Club will have racing fixtures for the coming season at Oulton Broad on June 5, Liverpool on June 8 and 9, Cowes during the August week, and at Burnham in September.

A tournament for almost every type of automobile will be held Easter week on the Atlantic City beach under the auspices of the Atlantic City Automobile Club. Special opportunity will be given 1906 models for a speed test, driven by professional drivers or others.

Ad for 1906 Waterman Porto with exposed flywheel

1917 Caille Liberty Single

Contributed by Bob Grubb

Here is something for the newsletter as you requested. I am sending pictures of the original rod, the replacement rod, the tilt lock area, and the finished project.

I purchased this motor some years ago from another collector who had started to restore it and had the tank, battery box, and probably exhaust and steering parts reproduced. I found an excessive amount of lost motion in the connecting rod, so I pulled the powerhead apart to tighten things up. I found pieces of metal that I could not explain in the bottom of the crankcase, but no scores in the cylinder. When I removed the rod cap, I found a strange design that, at the time, I couldn't understand. What I would consider to be the load bearing area of the rod and cap consisted of a large area of hollowed out rough casting. (Refer to Figure 1).

Figure 1 - Original Connecting Rod

I started to question this by making a couple of phone calls, but couldn't come up with anyone who had any immediate answers. It then dawned on me that I had another similar motor in a basket. I looked at this rod and came up with the answer. See Figure 2 for a look at the replacement rod. This area had babbitt poured into it originally. In hindsight, I believe that was called to my attention many years ago when I got the basket case. This seems to be the explanation of the metal found in the crankcase as well. I have to assume the rod developed enough play over time that the hammering broke up the babbitt and it worked out into the crankcase. In order to keep the project moving, I swapped the rod and crankshaft from the basket case to the motor in progress.

Figure 2 - replacement rod with babbitt material in place

Another mystery was a hexagon housing that was screwed into the side of the engine support cradle. This is shown in Figure 3. It was obvious it had contained some sort of push-pin that engaged a hole in a curved plate bolted to the crankcase to hold the motor in an elevated prop position. The parts motor again helped. It had a rusty but complete unit except for the "knob". With input from Jack Craib, I found that the knob was a disc that had a pin extending toward the motor. This spring loaded unit needed to have the knob turned so the pin lined up with a hole in the hex housing to allow the push pin to engage the hole in the curved plate. Pulling out the knob and turning it would keep it out to allow the prop to drop to its driving angle.

I took on this project during a visit to my place by member Walt Leniart. In 2 days of on and off tinkering, we had everything assembled, and adding gas and spark from my buzz box, it fired right up on the stand. I packed it in my trailer and 2 days later I took it to a meet. It again fired right up but it took a really long time for an anemic amount of water to start coming out which came slowly enough to start getting some steam as well. I let it cool and then started it again with the same results.

Upon my return home, I disassembled the lower end to get the pump apart (the only part I didn't have apart). I found a rusty steel check ball that I sure couldn't have been moving at all. I replaced

it with one that I found that is non magnetic and I think it should work just fine.

If anyone has a spare rod that would save me trying to get mine rebabbited, I'd be very interested.

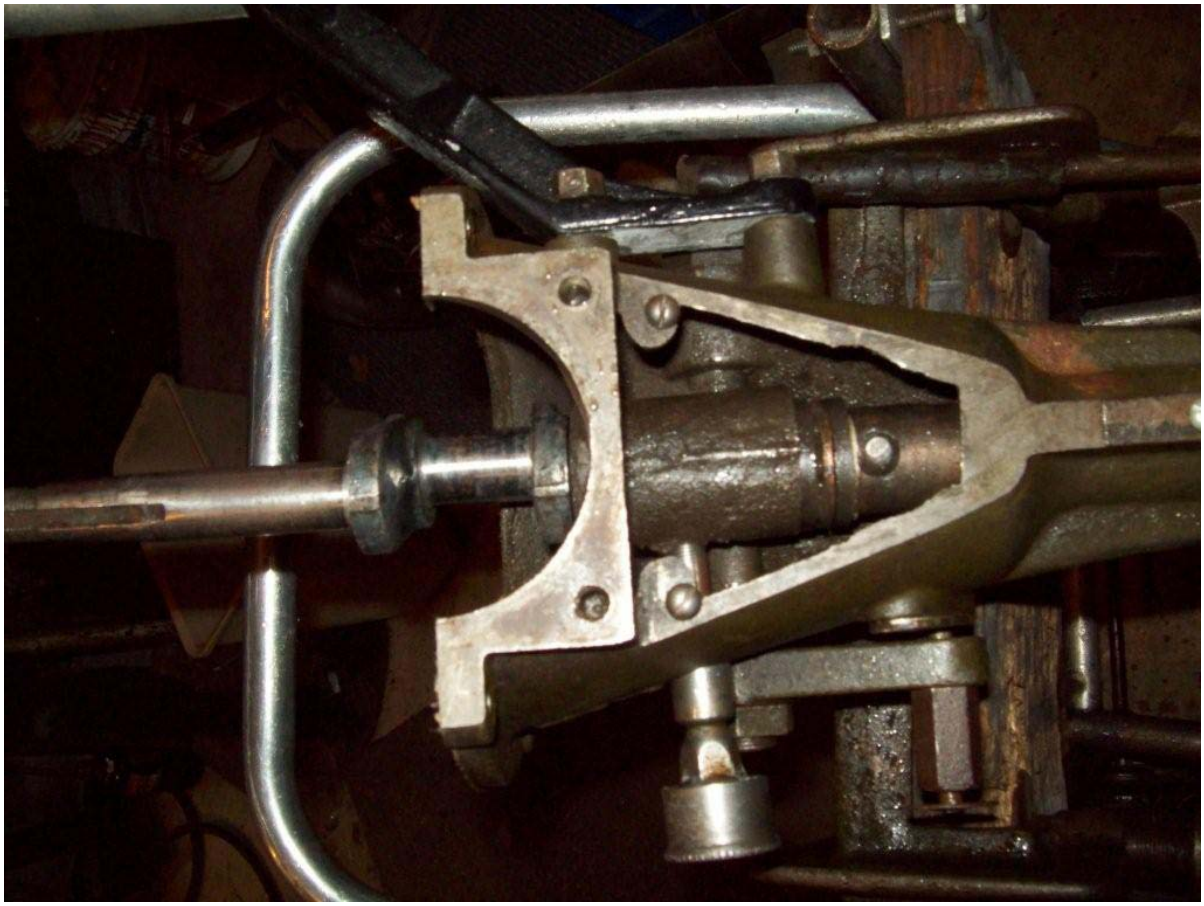


Figure 3 - Crankcase view. Rusty-looking hex shaped object in lower right corner is the tilt lock

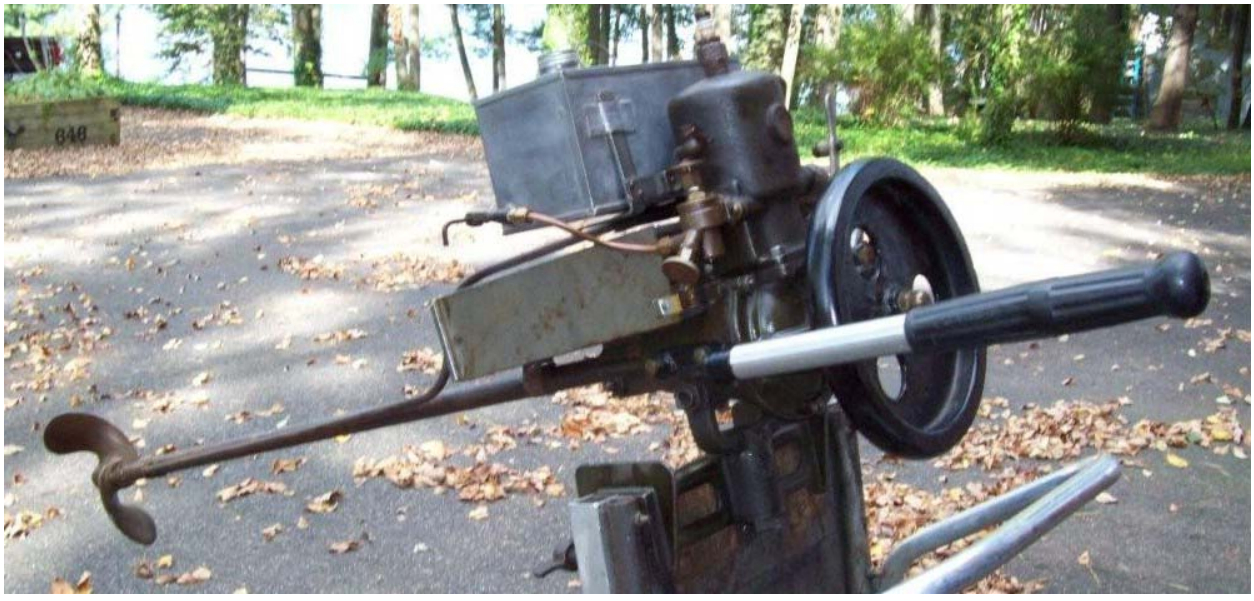


Figure 4 - Bob Grubb's 1917 Liberty Single RBM

Evinrude Detachable Rowboat Motor Identification Guide and Checklist

Data Compiled by Harry Nicholson

Characteristic or Feature	1910-11	1912	1913	1914	1915	1916	1917	1918-20	1922	1923-24	1927-28
Gas tank capacity 3 quarts	X	X									
Gas tank capacity 1 gallon			X	X		X		X		X	X
Gas tank capacity 7 pints					X						
Small gas cap, no oiling cup	X	X	X								
Large gas cap with oiling cup				X	X	X	X	X	X	X	X
Flywheel Diameter 9 inches	X	X									
Flywheel Diameter 9 1/4 inches			X		X	X				X	X
Flywheel Diameter 9 1/2 inches			X	X							
Spark Plug threads 1/2"-14 NPT	X	X									
Spark Plug threads 7/8"-18 SAE											
Tilt Quadrant Arms are smooth	X	X	X	X	Model D only						
Tilt Quadrant Arms have detents					X	X	X	X	X	X	X
No skeg on gear foot, 2 screws in rear cover	X	X									
Skeg on gearfoot, three screws in rear cover			X	X	X	X	X	X	X	X	X
Gearcase has lash adjustment (screw type) on nose		X	X	X	X	X	X	X	X	X	X
Uses RH rotation propeller	X	X	X	X	X	X	X	X			
Uses LH rotation propeller									X	X	X
Prop Diameter (and Pitch if known)	9 Inch	9 inch	9 1/4	9 1/4	9 1/8 X 13	9 1/8 X 12				9 1/8 X 12	9 1/8 X 12
Gas tank lacks a shut-off valve	X	X	X								
Gas tank has shut-off valve				X	X	X	X	X	X	X	X
Gas tank has "FORWARD" only embossed on top										X	
Gas tank has "FORWARD" and "REVERSE" embossed on top											
Gas tank lacks "beading" on side panels	X	X	X								
Gas tank has beading present				X	X	X	X	X	X	X	X
Gas tank has decals			X	X	X	X	X	X	X	X	X
Mixer valve cap has square nut cast in	X	X	X								
Mixer Valve cap has stop pin for adjuster		X	X	X							
Cylinder bore is 2.500 inches (2 1/2")	X	X									
Cylinder bore is 2.625 Inches (2 5/8")			X	X	X	X	X	X	X	X	X
Piston ring is a single 1/2" wide ring	X	X									
Piston uses two wide rings (pinned)			X	X	X						
Piston uses three narrow rings						X	X	X	X	X	X
Connecting Rod has babbitt on big end	X	X	X	X							
Connecting Rod has no babbitt on big end					X	X	X	X	X	X	X
Two-piece crankcase	X	X	X	X							

Three-piece crankcase (removable top and bottom)						X	X	X	X	X	X
No grease cups or oil cups	X	X	X	X							
Grease cup on top bearing					X	X	X			Kipp Oiler	Kipp Oiler
No stop/ground button on timer lever	X	X	X								
Stop/ground button on timer lever				X	X	X	X	X	X	X	X
Brass or cast iron tiller bar (3 slots)	X	X	X	X	X (D & H models)						
Exhaust manifold runner has no lettering or design	X								Model K only		
Exhaust manifold runner has block type lettering only		X									
Exhaust manifold embossing includes boat illustration			X	X	X	X	X	X	X	X	X
Dry exhaust (no water jacket in manifold)	X	X	X	X							
Wet exhaust (water cooled manifold)					X	X	X	X	All except Model K	X	X
Muffler is 2.750 inch and has single triangle hole pattern	X										
Muffler is 2.750 inch and has double triangle hole pattern		X									
Muffler is 3.00 inch diameter and has double triangle hole pattern			X	X							
Muffler is 3.00 inch diameter and has raised ring embossed around circular hole pattern						X	X	X	X	X	X

Additional Notations, Oddities, One-off's, Etc. (Compiled by Harry Nicholson As Well As Various Other Contributors)

Early 1914 motors used large brass flywheel - Later 1914 motors changed to smaller flywheels wrapped in brass and were nickel plated (most common Evinrude flywheel

Flywheel Magneto available on all 1914-28 models

Maxim Silencer muffler was standard in 1915 only - other years, it was an accessory

The 1914-15 magneto coils are directly opposite each other - 1917 magneto coils are connected to each other

Timer lever cast in as part of the magneto plate in 1915

A compensator assembly is incorporated into the tower of the 1915 non-reversing models

Transom bracket cross-bar has been rounded off for better carrying in 1915

Reversing lower unit available in 1915-1928. Standard in 1915

Reversing lower unit motors usually designated as model "A" - Battery Ignition Motors usually designated as model "B"

Three-point transom bracket design came in 1915, except for Model "D" commercial motors

The carburetor air valve adjustment wheel (on top) had an indicator tab starting in 1915 (except for the Model "D")

Connecting Rod had oil deflector wings rivetted on from 1916 and up.

1922 Model K uses plain hot-type exhaust manifold

1923-28 motors used aluminum rope sheave for starting only - no starter knob hole in flywheel

1922-28 models with LH rotation propeller used a new style of gearcase with position of driveshaft changed and position of propshaft gear reversed

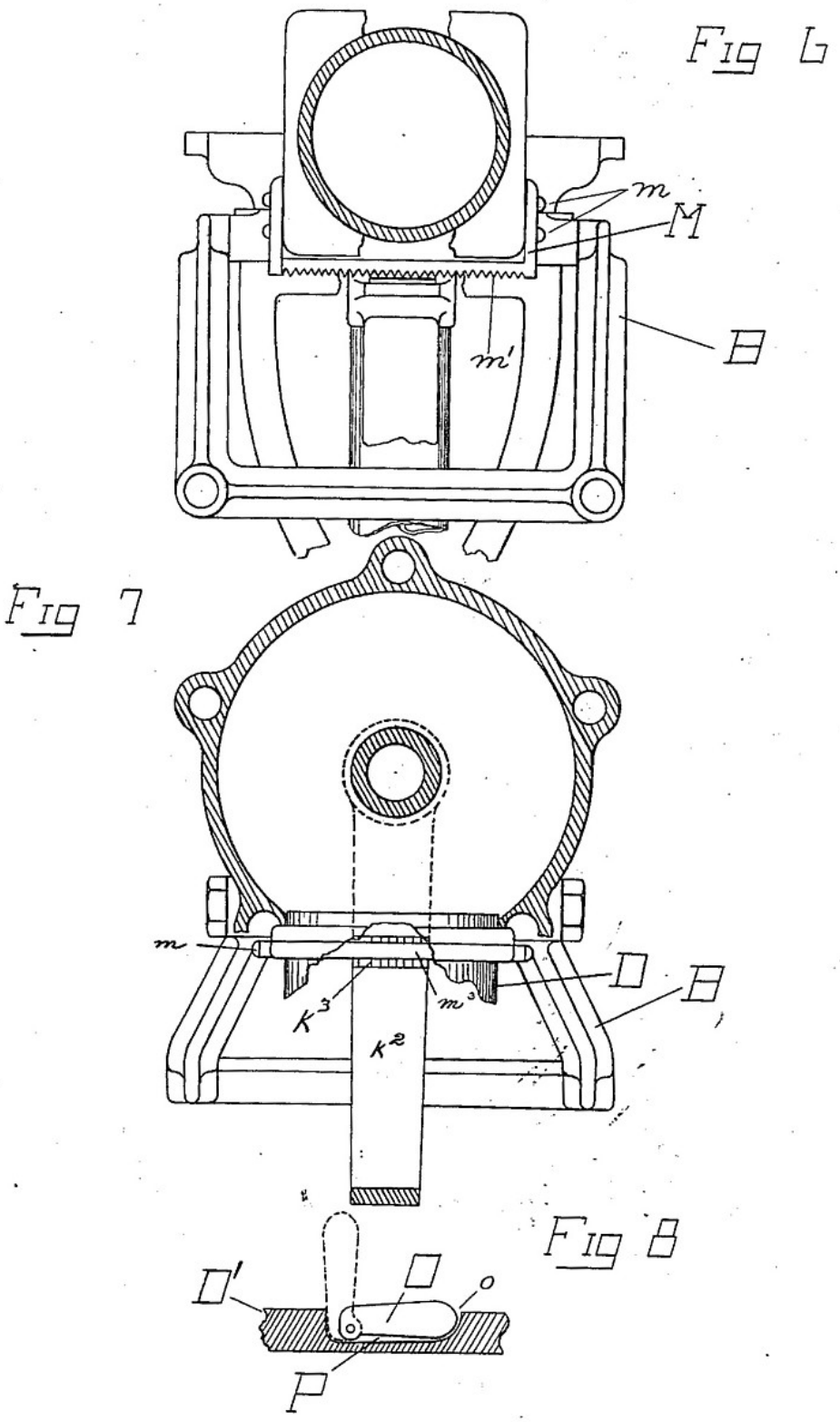
1926-28 magneto coil is removable

1927-28 use stepped flywheels - 1927 has aluminum rope sheave with dark-blue centre background

1928 Muffler has a double-tube baffle design

The Back Page

Featuring rowboat Motor ITEMS of interest



Here's another patent drawing to figure out. Who was the inventor, what was his patent application for, and what company was he associated with? Hint – his patent was for two (2) row boat motor improvements.