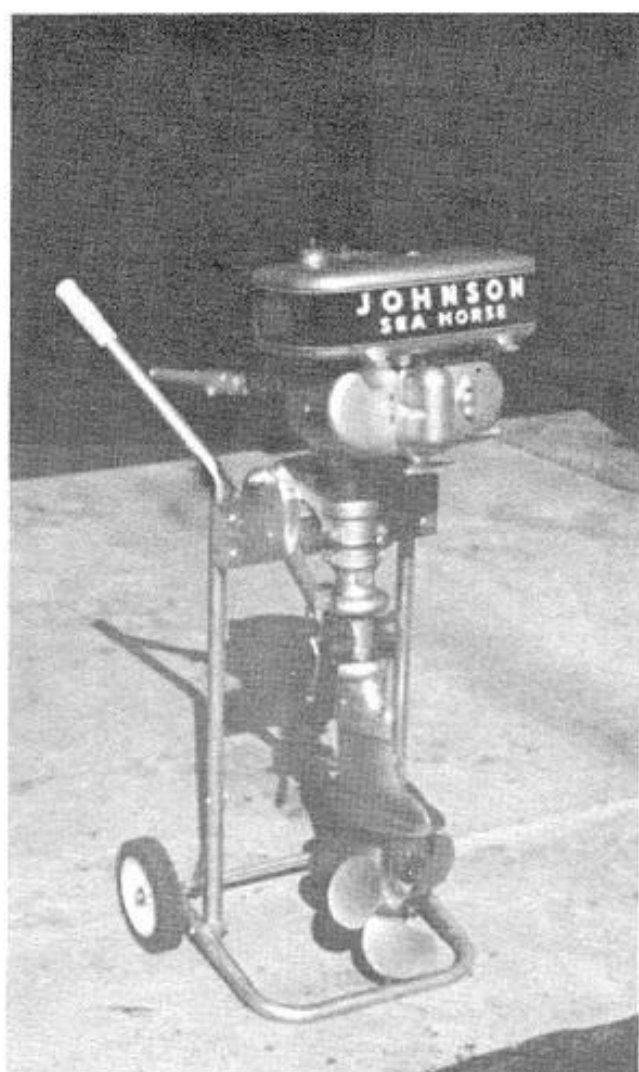
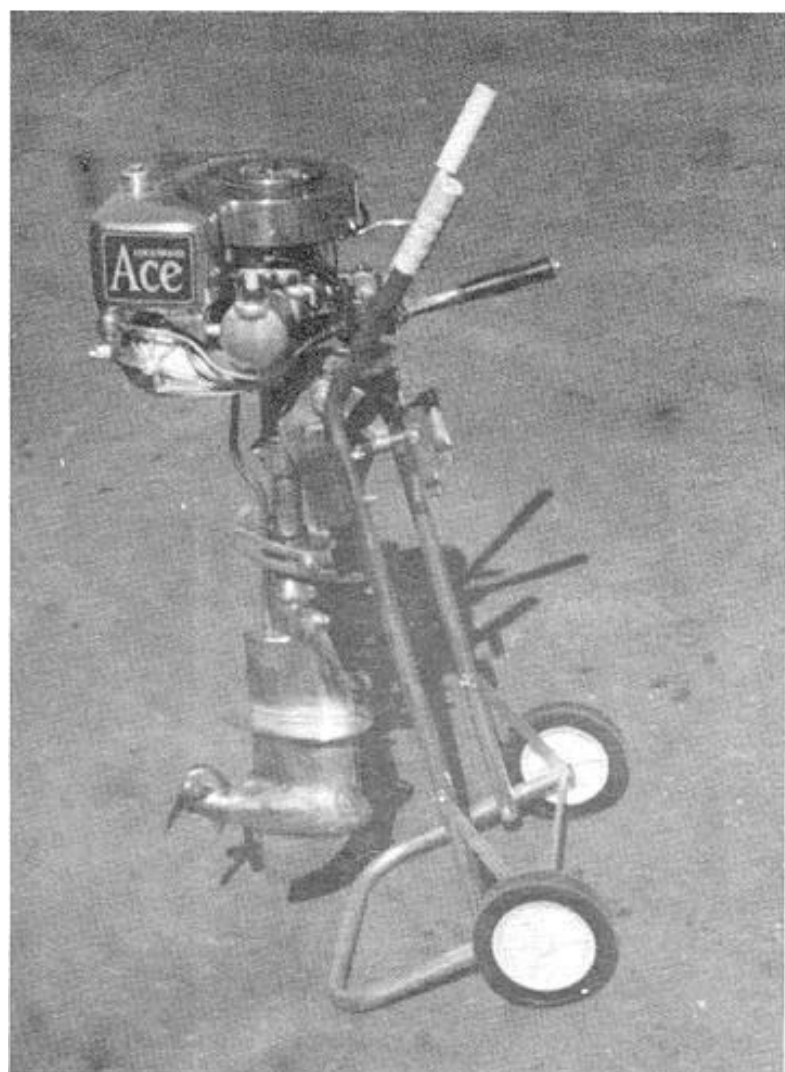


# *The* **ANTIQUÉ OUTBOARDER**

The Pioneering Authority



**January**

**1975**

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The Antique Outboard Motor Club, Inc. is incorporated in the State of Texas as an Educational Institution. The Club is devoted to people all over the world who are interested in the search for, restoration and preservation of old time outboard motors. Regular membership dues are \$9.00 per year. Other membership information is available on request from Jim Nixon, 4781 Fifth Avenue, Youngstown, Ohio 44505, U.S.A.



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**Johnson**  
*Outboard Motors*

JOHNSON MOTOR COMPANY, 2234 Sample Street, South Bend, Ind. 46601  
 Export Division: 75 West Street, New York, New York, U.S.A. Canadian Distributor: Peterborough Canoe Co., Peterborough, Ontario, Canada  
 World's Largest Manufacturer of Outboard Boat Motors

National Geographic, May, 1927

**Front Cover:** Two beautifully restored motors. On left is a 1928 Lockwood Ace owned by Bob Davis. At right is a K-75 Johnson owned by Perry Stanley.

**Back cover:** Sanford, Florida, 1958: Doug Creech's KR (foreground) and SR in rear. Photo submitted by Charles Hansen.

*The Antique Outboarder*

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# LETTERS TO THE EDITOR

WE THOUGHT YOU SHOULD KNOW . . .

Mr. James E. Nixon  
Membership Chairman  
The Antique Outboard Motor Club, Inc.  
4781 Fifth Avenue  
Youngstown, Ohio 44505

Dear Mr. Nixon:

This will acknowledge receipt of the statement indicating my Honorary membership in your club for one more year.

My letter is being sent to express my appreciation and thanks for this kind consideration.

Sincerely,



E. C. Kiekhaefer  
President

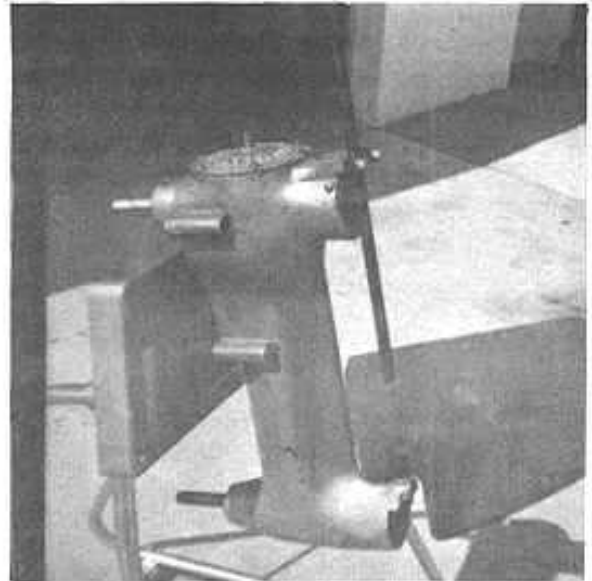
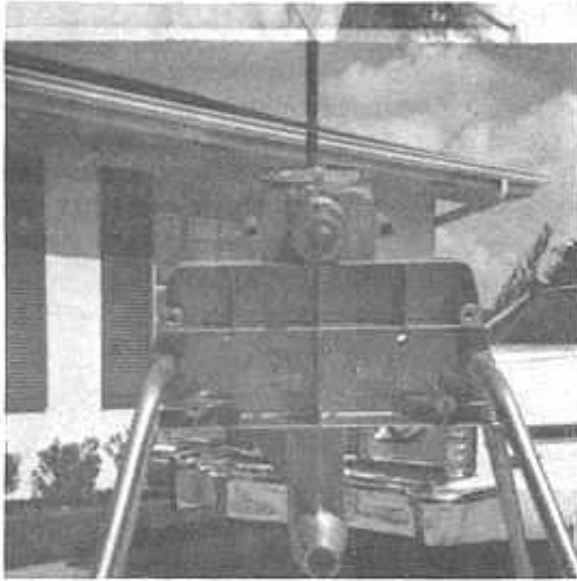
Editor's note: Mr. Kiekhaefer's letter was accompanied by a most generous check. We are indeed grateful.

NEW TRADE MATERIAL FROM JOHN . . .

Dear Bob: I've located something very interesting, but can't really identify it or find out anything about it. It's called a Herbst Propeller Unit. I've enclosed a front view and side view -- note the tractor gear case.

Would you know anything about it or who in our association would? Actually, it really doesn't fit into my antique collection, so what I'd like to do is find someone who may be interested in it and trade for an old race engine or parts or whatever. - Thanks, John E. Schubert, 209 Lagoon Road, Winter Haven, Florida 33880, (813) 299-4173





#### A LITTLE DIFFERENT SLANT ON OUTBOARDING, AS SEEN IN COLOMBIA . . .

Dear Mr. Brautigam, Thank you for your letter with the information about the Newsletter and other comments.

Although I lived in New York for four years some time back, it is sometimes difficult to get a correct focus on some things owing to the enormous size and diversity of your wonderful country. It was impossible to judge even vaguely whether '37 OB's would be rare or not, in view of the tendency to "use and scrap," especially as the old models were a bit cantankerous to fire up, more than one has been dumped into the drink . . . .

Transport would not be much of a problem, as I could get it to Miami by boat, since I live mostly in Cartagena where I have a small motor sailor (ferro-concrete). I will be living there permanently from May on this year.

For your information, outboards are a very important part of the economy here, the road system not being very fully developed; very difficult terrain, so the rivers are the highways. As we have both Pacific and Atlantic coasts, the OB is the thing. OMC rules the roost, although Yamaha is pushing hard. Mercury has poor service and has been found delicate, whereas OMC has better spares and maintenance service perhaps than any other motor business in the country. Speaking of quantities, I understand there are more than 20,000 OB's on the Pacific coast alone, and I would not care to guess how many there are on the rivers and lakes. Owing to abrasive silt, OMC turns out a special chrome-plated pump for use here, and the locals that have Mercurys take a piece of pipe from the watertake and put it in the prop slipstream to blast cooling water into the system. This same trick is used on the twin cylinder Archimedes and Penta motors used on the Eastern plains rivers. When the people there have to go for 15 days at a time, say from Puerto Lopez to Puerto Carreno on the Meta River, they hang a couple of these old 12 HP bangers on a boat called a Falca, like a big dory with a tin roof on strong supports. They hang hammocks from the beams to sleep at night and then load up with trade goods and visit all the farms along the river.

I could go on for quite awhile as this is a theme that fascinates me, and as I have travelled widely the more I see the more I want to see, but will have to call it a day for the moment.  
- Best regards, Eduardo Restrepo C., Calle 44A No. 73-04, Medellin, Colombia

#### JOHN HARRISON, TREASURER, EXPLAINS FOREIGN DUES INCREASE . . .

As of January 1, 1975, the Canadian and other out-of-the-U. S. memberships have been increased to \$12.50 per year. The cost of foreign exchange to us has gone up from about \$1.00 two years ago to \$3.20 today. In addition, overseas postage rates have been raised so that it now costs 84¢ to send a magazine out of the country, compared to 16¢ within the U. S. or Canada. All of this is unacceptable to the Club treasury. Though regrettable, the increase is necessary. - John C. Harrison

#### MEMBERSHIP CHAIRMAN MESSAGE . . .

I have a few thoughts I'd like to have you put into the January Outboarder.

First, special thanks to Marc Wright. His name in a national publication has stirred up a lot of inquiries regarding membership in the Club. Marc has forwarded umpteen (or more) of these and I'm sure many will become Club members. See what a little publicity and effort can do?

Next, when you see a new member's name from your area, call or write him and bid him welcome. Tell him of meets, chapters, etc. in the area. Make him feel welcome as an individual! Friendship is a contagious disease, thank goodness, and is usually returned twofold.

Regarding dues, please pay soon after receipt of your notice, and use the dues notice envelope. Mark the inside cover with any change of address. IF (Heaven forbid!) you do not plan to renew, please help us save time and money by dropping me a card to that effect.

This next has to do with contacting new members soon after they join the Club, to get them off on the right foot and show them we are interested in them as individuals.

At the present time, we publish the new members' names and addresses in "The Antique Outboarder" on a quarterly basis. I'd like you and Ron to consider a switch to publishing them in the Newsletter, thus getting the names in front of the rest of the membership sooner.

This is one complaint I've heard several times in the recent past, that persons join the Club all fired up for action, then nothing happens for a couple of months. By this time some of their enthusiasm may fade and have to be rekindled to bring them into active participation in Club activities.

In conjunction with more frequent publication of new members' names, I'd like to enlist the aid of several active members in various geographical areas to drop new members a line and help them get off to a good start. I feel we have many members who would do this if specifically asked, but who when asked in general probably feel that someone else is taking care of it. I tried in one case to write a new member in Vermont and give him the names of active members in his area to contact, and it took over an hour to pinpoint people on maps. Even this puts the onus on the new member, and I feel that he would be made to feel more welcome with a letter from some local member who could be of service if need be.

In short, I suppose I'm proposing that we form our own sort of "Welcome Wagon" committee to give a personal touch to greeting new members and offer to be of help to get them started.

And lastly, when you receive a membership application in the mail with your new membership card, USE IT TO RECRUIT A NEW MEMBER! That's what it is for, so put it to good use!

- 'Nuff said, Jim Nixon

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NATIONAL FRESH WATER FISHING HALL OF FAME, Inc.  
BOX 99, HAYWARD, WISCONSIN 54843

October 9, 1974

Bob Brautigam  
2316 West 110th Street  
Bloomington, MN. 55431

Dear Bob:

Jim Webb of Wauwatosa, Wisconsin, suggested that I drop you a line and bring you up-to-date on the progress of our Hall of Fame.

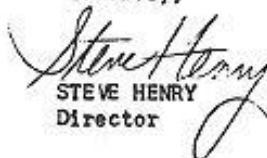
The enclosed information will tell you that construction is underway on our first building. We should be able to move in sometime this December. After that, the planning for the construction of the Museum will be the major subject. We plan to start on that come next summer.

We are definitely on the lookout for any old outboard motors that someone may have and wishes to donate to the Hall of Fame. All such donations received will be properly marked and identified with the donor's name and address.

To date, we have received more than fifteen outboard motors. A Minneapolis salesman dropped off an Evinrude that must be about fifty years old. And last month, a local resorter brought in one of his display pieces that dates back to 1909 or thereabouts. That's when I contacted Jim Webb because Jim had promised to put this motor in mint condition some years ago when he was still with Evinrude.

Any help you can give us will be appreciated. And if there is something you care to suggest that will help our Museum and displays -- please tell us. After all, we need all the ideas we can corner.

Sincerely,

  
STEVE HENRY  
Director

WHAT A FIND !!!

Dear Bob, Seems that there was this fellow (Nick, by name) who lived four blocks from Jim Ross in Oconomowoc. Nick is older, 65, and pretty eccentric -- a junk collector, mechanic, plumber, electrician, and I don't know what all. Nick owns and repairs (kind of) about 200 assorted washers, dryers, stoves, refrigerators, etc., etc. PLUS lawn mowers, water skis, bath tubs, motorcycles, etc. PLUS chain saws, freezers, piping, plumbing supplies, etc. PLUS 150 assorted outboard motors (plus or minus 10) dating from 1909 to 1940, PLUS another 30 or 40 post-1945's.

Don Miller "found" Nick about three years ago, but Nick wasn't interested in selling just an engine or two. He wanted to sell all or nothing. Seems Nick had assembled this collection during the War, to use as parts (some were trade-ins), had disassembled some and tossed the parts in bins, hung some on racks -- the usual stuff. He became an Evinrude-Elto dealer in 1940 -- claims he still is (or was, until about two months ago). Naturally, all the OB stuff was totally confused with 35 years' accumulation of all of the foregoing nonsense, and no one wanted to touch it. Jim told me about it in October, and I went to see it. It was impossible for me to tell what all was there, but Jim claimed there were a bunch of Eltos, Evinrudes, etc., etc., many of which I could see.

I went back two weeks later with my father, two kids, a pickup truck, and a 24-foot U-Haul and cleaned Nick out. As part of the deal, Jim got first pick of 15. As an idea of what there was, Jim got: 4 Speedsters ('28, '29, '30); 2 1/2 Quads ('28 - '29); 1 Big Quad; 1 Senior Quad; Number 12 Ruddertwin, and some others. I got the rest. As a small idea of what the "rest" consists of, for myself I've chosen to keep: Number 10 Evinrude single; a Caille Model 35 Tractor Racer (Class "A" 1930-31, No. TR-230); Model "LA" Evinrude Big Twin, No. 896; Model R-1927 Evinrude Fastwin; Indian Silver Arrow Power Head for which I am short a lower unit (any leads?); and a few other lesser attractions. I've already sold some, like a very nice '28 Speedster, like-new Elto Lightweight, 1914 single. Bob Davis got a pretty nice Lockwood Chief from me. I've got about 125 left, some for parts, some like new. It would take forever to list them -- I'll send photos. Ruddertwins, Singles, Speeditwins, Fastwins, Sportwins, Foldlights, 10 various electric starts, 3 Johnson V's, 1 like-new S-45, PO's, P-40, plus little ones back to 1922. Plus Thors, Champions, Mercs, etc. PLUS coils, decals, pistons, spark plugs, etc. The addition of this new stock gives me a parts capability beginning in 1914 and extending through 1964. All members are urged to contact me regarding their needs. - Jim Cason, Outboards Unlimited, Box 602, Silver Lake, Wisconsin 53170

EVERY SO OFTEN WE GET ONE OF THESE . . .

Dear AOMCI, I've just finished reworking my 1914 Model B Evinrude for more speed. Besides smoothing out the ports, I installed a ram air scoop, exhaust megaphone, and filed the skeg smaller. Could I start a new class? - Les Transom

Dear Les, Man, you're already in a class - by yourself!

JUST SO YOU KNOW WE THINK WE KNOW WHICH IS WHICH . . .

On Page 7 of the October, 1974 issue, the photo captions on the left should be exchanged with those on the right (darn clerical error).



#### OUTBOARD NOTES FROM THE THOUSAND ISLANDS MUSEUM . . .

Dear Bob, You guys did a great job putting together the Parts Sources Manual. I am Chairman of the Thousand Islands Antique Boat Museum's outboard section. I've used the Parts Sources Manual to steer several inquiries for parts and literature to your listings. Although, as you can see, I live in Pennsylvania, I am a summer resident in the Thousand Islands region. Our shipyard museum has over 50 outboard motors, including (to the best of my knowledge) the oldest known outboard in the U. S. A. It is Bob Cox's 1905 Motogodille. I wouldn't be surprised if Bob has it running again next summer. It's in awful good shape.

My project with the museum actually began last spring. The first phase involved cleaning, numbering, and establishing an inventory listing. The next phase was to properly identify the brand, model, year, etc. Luckily, Phil Kranz, who is also a summer resident at the Thousand Islands, was there to help in the identification process. Some motors are not identified yet, but we will hopefully finish that by next spring. The next phase of the project will be to attempt to set up an "educational" display in the museum. I've got to separate the collection of motors that we have from a collection of valuable "junk" into a "display" of motors used to show the evolution of outboarding. This is not as easy as I thought it would be. That's why I've requested certain copies of AOMC magazines earlier in this letter. (We have all of the others at the museum).

We usually have an antique boat show at Clayton, New York on the third weekend of August. The outboard display has usually been quite small, and maybe next year I can help the museum to make it bigger, with more people showing their outboard motors. I think we had five people this year. Phil Kranz won the trophy for Best Outboard with his beautiful and rare 1939 3-cylinder Thor. He also ran the motor for 15 or 20 minutes. It sure sounded like those old Mercurys!

I'm in the process of doing a restoration on one of my own motors. It's a 1929 Elto Twin (Speedster). Thanks to AOMC, I've found Sam Vance. He's been quite helpful. After I get the motor together, I'm going up to Sam's and he's offered to show me how to set up the ignition system. He's about 75 miles north of Montrose, Pennsylvania, where I spend my winters.

As soon as I get this Speedster finished, I'm going to do my 1923 Ruddertwin. I've been collecting these old motors for years but have not found time to work on them until now.

It seems that in the August Newsletter Ron Ellis said to sit down with a 10-page tablet and let him have it. Well, you guys probably have had it by now, so I'm signing off. - Regards, Riggs Smith, Cruiser Street, Montrose, Pennsylvania

#### SAM VANCE TAKES ANTIQUE MOTORS ON VACATION . . .

Hello Bob, Here I am, with three more days of vacation here with my folks in Rapid City, Michigan. We are really having a ball. I brought the 1923 Quad, Elto 462, and the Elto 1933 460. So far all have run great. The 462 pushes me along at 38 - 39 MPH. The 460 does just about as well after I had to open the water intake holes to 1/4". Boy, does she scream. Of course my 16-foot Starcraft holds her back a lot and you can't get top performance out of her.

We have had a "mini meet" up here. Bob and Fritz Thurstone, normally of Huntsville, Alabama and Durham, North Carolina respectively, have summer homes here also. They have a KG7Q on a "B" utility boat they used to race in the early 50's. We have a lot of fun running together.

We in New York State have had quite a battle going on with the water pollution problems. Attached are a couple of articles from local papers about the EPA's stand. Also there is a letter from our State Assemblyman stating the bill has been killed. Peter Dokuchitz happens to be our President of Custom Electronics as well as Assemblyman.

# Outboard Fuss Overboard

By FRANK DOLAN

It begins to look as though much of the anti-outboard motor publicity is either the product of badly informed environmentalists or outboard manufacturers anxious to get the old durable fishermen's outboards out of circulation.

The Environmental Protection Agency, an arm of the federal government which has raised "hob" with automobile manufacturers, was persuaded to investigate the reported evils of outboard motor pollution. The agency has completed its investigations which cost about \$750,000 and included tests run in Florida, New York State and Michigan waters.

Persons interested in a breakdown of the agency findings can get details in an article published in the March issue of Sports Afield. Thanks to Donald Downy of Owego, we have scanned the article. The agency could find no significant change in any of the many waters in which they conducted their tests. These waters included ponds, bays and lakes where conditions might assumed to be bad under any conditions.

They found no deterioration of water quality in any of the tests. In fact, it might seem to be gilding the lily to quote one finding: In some waters where there was little movement, the action of outboard motors was found to improve the water quality.

We believe anyone who doubts the thoroughness of the agency's tests should ask the Ford Motor Company for references — it is the company that found the agency much too tough.

DURING OUR OWN INQUIRIES among experienced outboard men, we found one man who has quietly conducted tests of his own over the years. He is Bob Burt, of Endwell, with whom we discussed several aspects of the alleged pollution. Burt showed us his test tank in which he tries out all motors repaired in his shop. He has used this for years.

Because of the violent agitation of the water in his test tank there is a constant flow of water while the motors are on test. The overflow is connected near the top of the tank where any fuel scum would first appear. This overflow drain is piped to a patch of land at the rear of his shop where Bob maintains a garden for the good of his waistline, and probably his soul.

Bob grows all of the conventional garden vegetables the plot can hold as well as one or two small fruit trees, one of which is a tender, sensitive peach tree. If there is any pollution in the waste water from this tank, it is something all our gardens can use because Bob has been growing good crops there for 25 years.

We believe all state legislators should be informed about the folly of the proposed bills which would outlaw most outboard motors made before 1971.

★ ★ ★

Binghamton PRESS, March 10, 1974

From the PRESS, Binghamton, New York, Tuesday, March 12, 1974:

"The New York State Assembly has voted overwhelmingly to outlaw the discharge of oil or gasoline from outboard motor boats into the state's navigable waters.

"The bill, passed 120 to 17 Monday, and sent to the Senate, would exempt the waters of Long Island Sound and the tidewaters of Nassau and Suffolk County from the prohibition.

"It would, in effect, require many owners of outboard motors to buy devices to prevent the discharge of crankcase drainage into the state's lakes and rivers. The proposed new law would take effect next January 1.

"Several Republican lawmakers objected to the crankcase-drainage bill during debate Monday, saying it would cause a hardship for some boat-owners.

"The sponsor of the legislation, Assemblyman Glenn H. Harris, R-Fulton County, said boat owners with older outboard engines could buy devices costing about \$10 to collect the crankcase drainage in a tank, or another device costing about \$50 which would automatically recycle the discharged fuel through the engine.

"Harris said that most outboard engines manufactured in the past three years have included such a recycling feature."

Also a "helpful hints" item from C. Foss on freeze plugs.

"I have a KF-5 Merc and a WH-6 Wizard, which is a modified KF-5. The cooling system in both these motors is blocked up. Two sizes of freeze plugs are used (1/2" and 3/8").

"I was able to find the 1/2" size, but no luck with the smaller size, which are made of lead.

"After many, many letters and phone calls, I decided to make my own. Using a 1/2 pound lead sinker which I turned to 3/8", I had a piece about 4" long. With a coping saw I cut off pieces about 3/32" thick, facing off each piece before sawing. This gave me more than enough plugs for both motors.

"Hope this will be a help to some member in the same fix."

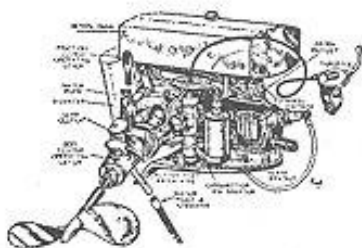
- Claude Foss

My present project is a 1930 #178 0007 Elto 460. It's the same engine as in the picture of Ray Pregenzer in a 1930 Century Hurricane that appeared on the rear cover a few issues ago. You also sent me the original for copying. Will send details and photos later. - Best regards, Sam Vance

#### THE BRAY SIDEBOARD MOTOR . . .

Dear Sir: The Bray motor article is from one of my old magazines from the 30's. I never heard of one myself; maybe someone else has. I enjoy the magazine very much, as I have always loved old outboards. They weren't old at first, but I couldn't buy them back then.  
- Dave Jones

. . . The English firm, Messrs. Arthur Bray, Ltd., London, have a unique small outboard motor which mounts on the side coming. See pictures . . .



The Bray sideboard motor which



goes on a boat like this.

# MIDWEST CHAPTER NEWS

by Rich Choyce



## Midwest Chapter

661 Sixth Avenue  
Des Plaines, Illinois 60016

The Midwest Chapter met for their final meet of the year at Jim Cason's, with a good turn-out as usual.

The Eltos outnumbered the Johnsons and Evinrudes, with Jere Sairs', Jim Ross', and Don Miller's collections of speedsters, and my love, a 1922 Ruddertwin.

Ray Hatton brought a like-new Midget Racer he bought for \$30 with only 20 hours or so of use on it. What a find! Gene Yonker from Taylorville came with his Evinrude A and 1929 Elto Super Quad. Bob Davis brought his fine running 1928 Lockwood Ace, and Chuck Kozelsky brought a Lockwood Chief.

Our next meeting is planned for the winter months, and will be announced.



*Gene Yonker and family fueling up Gene's 1929 Elto Super Quad.*



*Jere Sairs' and Jim Ross' Eltos; Jim's 1927 Speedster at far right.*



Midwest Chapter News, continued



*Two teenagers trying out Ray Hatton's Midget Racer on their hydro. The motor fired up on the first pull.*

---

New Members - continued from back cover

Russell F. Nelson  
465 Elm Place  
Princeton, Illinois 61356

Harold Rastetter  
78-30 83 Street  
Glendale, New York 11227

Hugo Biersach  
1782 Rocky Point Road  
Pewaukee, Wisconsin 53072

John W. Gehrke  
222 North 20 Street  
Allentown, Pennsylvania  
18104

Conrad Trautner  
1636 Roy Drive  
West Palm Beach  
Florida 33406

Jack G. Kinn  
Kinn Motors Marine  
650 East Wisconsin Avenue  
Oconomowoc, Wisconsin 53066

Mark Nixon  
4781 Fifth Avenue  
Youngstown, Ohio 44505  
(Charter Associate Member)

John Sudlow  
Route 4  
Syracuse, New York 46567

William D. Richardson  
640 Park Avenue  
Huntington, New York 11743

Philip L. Steiner  
1225 Everett Road, Route 3  
Eagle River, Wisconsin 54521

J. R. Leger  
600 Walmer Road  
Saskatoon, Sask. S7L OE2  
Canada

Richard G. Hall  
2002 Kiser Drive  
Valrico, Florida 33594

Bernard G. Lanigan  
76 Allison Street  
Concord, New Hampshire 03301

MID-  
AMERICA



PROP



M.A.P.S.

Ron Ellis

The Mid-America Prop Spinners traveled to beautiful Lake Taylorville for their final water meet of 1974. Lake Taylorville is located approximately two miles southeast of Taylorville, Illinois, and was built and is owned by the city of Taylorville (no federal funds).

We of the MAPS Chapter were most fortunate to have as our hosts Gene and Will Yonker, who provided us with, would you believe:

Lake Taylorville with sand beach and a marina. A lake superintendent who thinks old iron is something special and looked on open exhaust as "The Sound of Music."

Two mothers-in-law and their friend who thought I was ten pounds under weight and tried to fatten me up in one day. Talk about good food -- they know how much energy it requires to crank the old "dependables." Say, that soup was something extra special, ladies.

Six boats which Gene obtained from a number of understanding friends. Funny, all the boats had oars, too.

A private travel trailer to change in when one went too far overboard.

Numerous cans of 12 ounce "Huber racing fuel." Please take note, Wawpun, Wisconsin.

Weather consisting of cool, warm, and hot temperatures; sunshine, clouds; and flat, calm water, to four-foot waves. Well, maybe two-foot waves. Okay, they may have had a little help with the weather.

Plenty of room for 40 engines, numerous cars, boats, and outboarders.

Outboarders attending the meet were:

Gene and Will Yonker and family  
Clarence Sitton  
Ron Harrison  
Mr. and Mrs. Glen Allgood  
Phil Graen  
Donna Presleg  
Bob Davis

Walt and Phyllis Ellis  
Ron and Lynda Ellis and family  
Mr. and Mrs. Tom Carpenter  
Mr. and Mrs. Bill Rose and Lucy  
Hank Hahn  
Don Miller



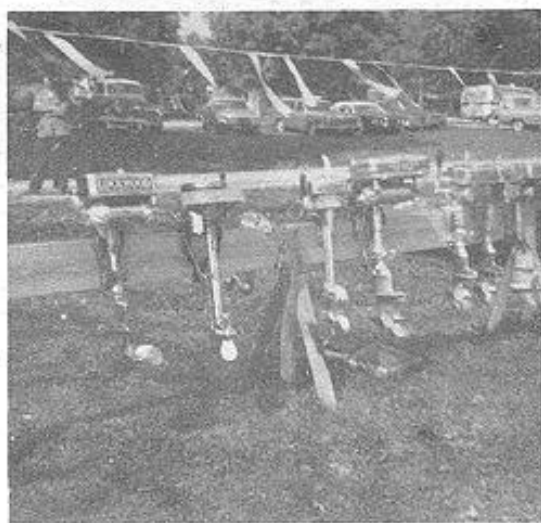
*Time out for fuel!*



*L to R: Walt Ellis, Glen Allgood, Bob Davis, and Gene Yonker.*



*Bill Rose with his 1913 Ferro.*



*Bob Davis' Lockwood Ace and 1916 Caille 5 speed. Phil Graens' Elto Handitwin, Johnson P-35, Johnson A-80, Johnson A-65, and Evinrude Auto Reverse Fastwin.*



*A few of the engines at the meet, with Neal Hydro and 1931 Racing C.*



Gene and Will were first on the water, since they had spent two days getting ready for the onslaught of old iron, which ranged all the way from Bill Rose's 1913 Ferro to Will Yonker's 1950 GMC. Gene's "Green Meanie" PO ran like a jet, but Hank Hahn thinks it needs an electric starter.

Clarence Sitton insisted on disappearing around the point toward the spillway while cranking, but always managed to return under power. Clarence's son-in-law, Ron Harrison, had a contest with a large, belligerent Caille and, much to the Caille's surprise, Ron won.

Walt Ellis and grandson were seen trying acrobatic maneuvers with a PR-65 on a 14-foot John boat. Yes, they had their life vests on.

Ron Ellis was observed talking very earnestly to a Speeditwin which failed to communicate. Ron did manage to win both the Bang and Go Back and a Predicted Log Race, though it was with the help of a wife and a faithful PO-37.

Bill Rose tried to take off with his 1916 Aerothrust, but could not get his gear up.

Phil Graen was up to his usual tricks with a number of engines (just in case), and a beautiful L. C. Smith 10 gauge. Phil has a new self-powered rope stretcher in his future son-in-law, Hank Hahn. Hank received a lot of cranking experience, much advice, and is presently looking for anything with an electric starter.

Don Miller was fortunate enough to observe all the H. P. and not have to crank any of it.

Bob Davis showed what a finely restored Lockwood can do and managed to lighten his trunk by one Evinrude Foldlight during a swap and talk time out.

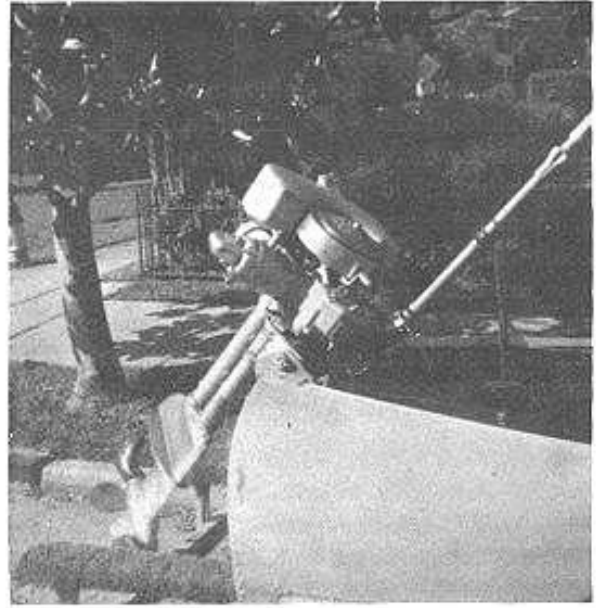
Tom Carpenter arrived in time to hear Gene say that he was going to put the rope sheave back on his '29 Quad! Tom and his wife did get to see Gene run his Model B Evinrude though. What a jewel!

Lynda Ellis proved to be an able ambulance driver by transporting Gene, his daughter Barbara, and her girl friend, who broke her arm doing cart wheels, to the Taylorville Clinic.



Trophy winners (above) were: Ron Harrison, Cranking Endurance; Walt Ellis, Predicted Log; Phil Graen and Hank Hahn, Hard Luck; Clarence Sitton, Sportsmanship; Bob Davis, Best Restored.

*Walter Verner's PO and 10 foot Feathercraft.*



The beautiful PO and 10-foot Feathercraft above belong to Walter D. Verner of New Orleans, a new member of MAPS. Walt just finished the PO and ran it just before Thanksgiving; note the severe weather in his part of the world!

Special thanks to Gene, Will, their families, the boat providers, the Taylorville Lake Superintendent, and all who attended the MAPS meet.

# Johnson "Big Twin" special interest group

by Hank Techentin

I am happy to announce that a new Special Interest Group has been formed. Our group is devoted to the early Johnson P series, focusing on Models P-30 through P-45, including the PR-40.

In 1926 Johnson was on top of the speed race when they brought out the "Big Twin" Model P-30, which developed 6 HP at 2500 RPM. On July 4, 1926, the P-30 set a speed record of 16.38 MPH at White Lake, Michigan. The P-30 was the first regular production model outboard producing more than 4 HP. In 1927 Johnson redesigned the Big Twin and introduced the P-35. This engine had a new streamlined lower unit with a better proportion of parts sizes than the P-30, particularly on the lower unit. The P-35 was 27.5 cubic inches in displacement and produced 8 HP at 2750 RPM. Johnson moved the Big Twin up to 29.78 cubic inches in 1928, resulting in the P-40. This engine produced an unbelievable 13.15 HP, but the demand for speed was greater than ever. This was the first year that Johnson made engines especially for competition. They refined the P-40 even further, upping the RPM from 3700 to 3800, obtaining 16.5 HP. Thus, the PR-40 was born. In 1929 the Big Twin model produced 12 HP at 3000 RPM.

The following is a specification sheet for the "Big Twin" models in our group:

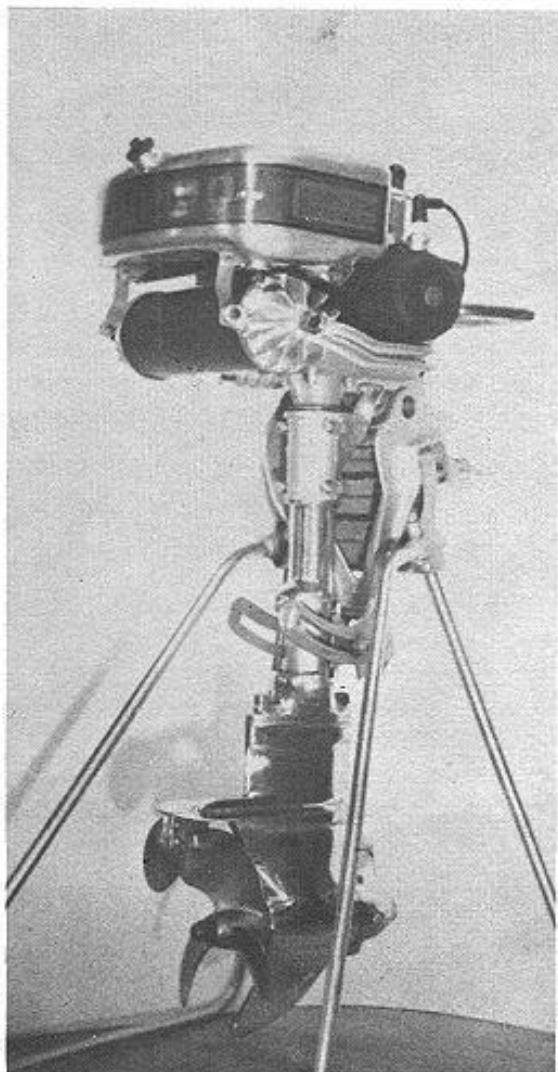
<u>Year</u>	<u>Model</u>	<u>Bore &amp; Stroke</u>	<u>Displacement</u>	<u>RPM</u>	<u>HP</u>
1926	P-30	2 7/8" x 1 3/4"	22.7 cu. in.	2500	6.0
1927	P-35	2 11/16" x 2 7/16"	27.5 cu. in.	2750	8.0
1928	P-40	2 11/16" x 2 5/8"	29.78 cu. in.	3700	13.15
1928	PR-40	2 11/16" x 2 5/8"	29.78 cu. in.	3800	16.5
1929	P-45	2 11/16" x 2 5/8"	29.78 cu. in.	3000	12.0

There are now 12 members in our group, but I'm sure there are more of you with an early P series engine (P-30 - P-45, including PR-40). If you own one or more of these motors, drop me a line. I'll send you a registration sheet, etc.

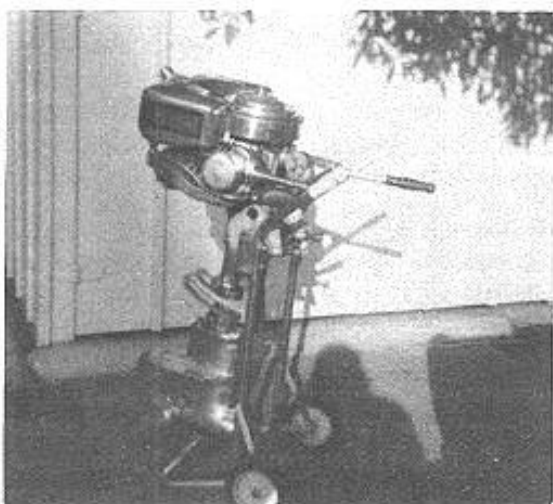
Hank Techentin  
4111 Grand Prairie Road  
Kalamazoo, Michigan 49007

Credits: Some references were used from both "The Johnson Factory Racing PR" by Eric Gunderson and "The Sea Horse Story" by Bob Zipps. Thanks also to Mr. Roy Lampman for supplying the information used in the specification chart.

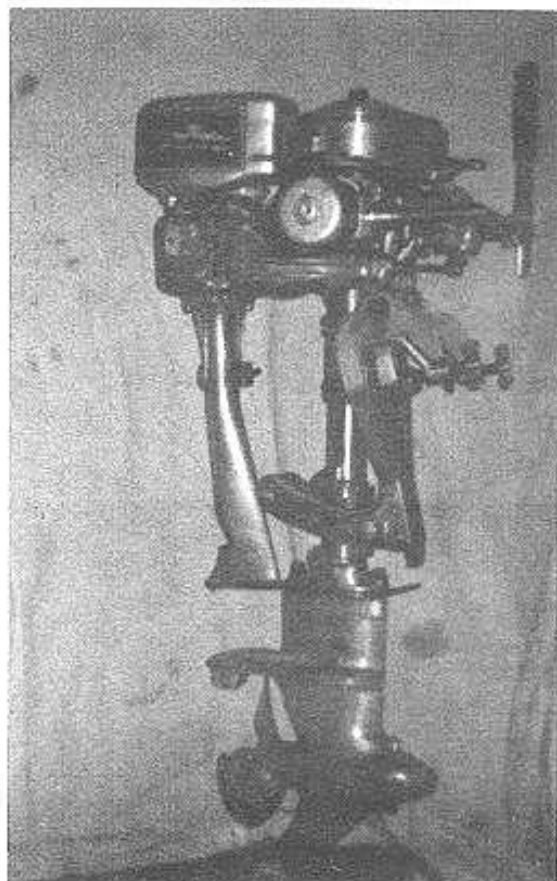
Here's a photographic sampling of our group -- drool over these beautiful engines!



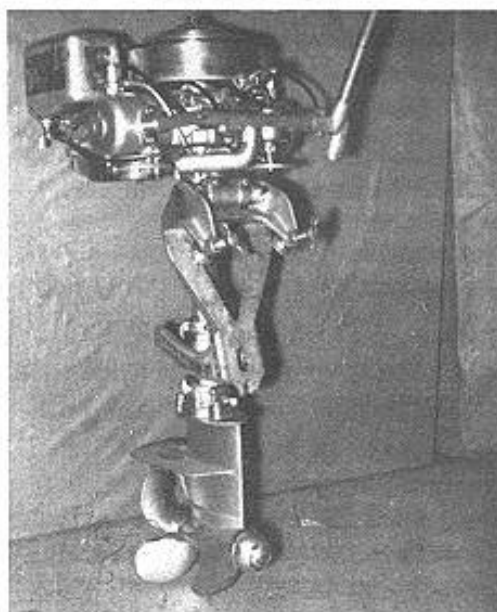
Bill Kelly's super-nice P-35.



Ray Rydell's beautiful P-40.



Gene Yonker's 1928 P-40. Note underwater exhaust.



P-30 belonging to Milt Moos.



## Model U Speeditwin 1928

by James L. Smith

By 1928 the race for power in outboard motors was catching on with a vengeance. Evinrude had seen its arch rival Johnson produce a 6 HP Big Twin, the Model P-30 for 1926, which took the records for speed. It responded in 1927 with the Model R Fastwin and the Model T Speeditwin, the latter developing 8 HP. Johnson had put some muscle in its P-35 for 1927, raising its HP also to 8. Now the gloves were off and Evinrude joined the fray in 1928 with the mighty 30 cubic inch U Speeditwin Model 106. This monster was modestly rated at 16 HP (4500 RPM) and weighted the stern of the boat to the tune of 85 pounds. The opposed massive solid iron cylinders were bored out to 2 3/4 inches, and the pistons travelled a stroke of 2 1/2 inches. Since it had no decompression lever, rope starting of the beast was a sobering experience and soon separated the men from the boys. The decal on the top of the tank giving starting instructions puts it rather mildly: ". . . then pull starter rope forcibly with right hand. A sluggish pull will not start motor." Quite apparently the rugged outboard enthusiasts of the day took all this in their stride, because this motor served as a pattern for a famous line of improved Speeditwins which were to be made up to the year 1950.

The U Speeditwin conveys an impression of weight and brute strength. The 2 1/2 gallon tank has squarish lines. Its rear decal is simple. Within a pair of wings are the small letters "Evinrude Motors" and underneath in large red letters "EVINRUDE". At each side of the tank black Evinrude letters diagonally cross the red symbol of a lightning bolt. One notes the heavy 9 1/2 inch flywheel, and on top the double notched rope plate is secured with four brass screws. Cast within the plate is the inscription "Evinrude Motor Company. Made in Milwaukee, Wis., U.S.A."

Up front the typical feature is the cast aluminum intake manifold, nothing more than a large tube mounting the carburetor and bolted to the front of each cylinder. Fuel in the form of a vapour passes directly to the intake ports. The Tillotson carburetor Model MS 11A has a choke lever and a throttle lever which can be operated with a Bowden cable. A large cast aluminum air horn curves upward and to the rear. Big Champion O Commercial 7/8 inch spark plugs are used, and the magneto is fully adjustable for retard and advance and has spring tension at the hub. A thumb stop button for shorting the condenser is also secured to the magneto lever; but, as the instructions suggest, the motor can be stopped simply by closing the throttle and fully retarding the spark.

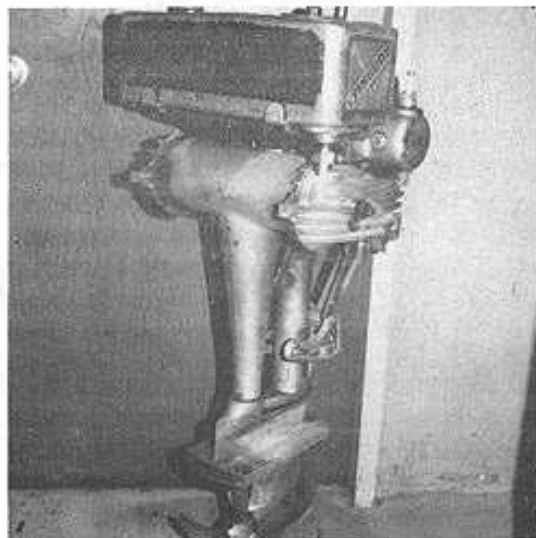
Quite large cast exhaust manifolds are finned for air cooling and bolted to exhaust ports at the base of each cylinder. Between these manifolds is the muffler body, tubular and constructed of sheet iron. Attached to it and similarly made is the exhaust downpipe. It tapers to fit into the lower unit to provide underwater exhaust.

The crankcase consists of two sections, horizontally split, and these halves are bolted together to contain the crankshaft. In turn, the cylinders are bolted to their sides. Although eyelets for rope steering are attached, a long steering handle is also provided. It measures 2 feet forward from the hinge, but overall measurement from the body of the motor is 30 inches.

Another point of interest is the method of cooling, which is in fact a kind of pressure vacuum system. Water inlet holes are located as a series of vertical holes in the leading edge of the lower unit so that forward motion of the boat would tend to force the water through the holes. Water passes partway up through a passage in the driveshaft housing and then is taken off through a tee and by means of tubes conveyed to the base of the cylinders. Other tubes at the top of the cylinders return the water to another tee located just above the other, where it passes down the driveshaft housing through a second passage. Eventually the water exits by way of four holes cast to the rear of the lower unit, with water passing thence from the interior of the propeller hub out holes on the inner surface of the propeller blades. The water at this point would not only be thrown out centrifugally but would be drawn out by negative pressure. The large three-bladed aluminum propeller has a diameter of 10 inches.

In view of the relatively small amount of oil mixed in the gasoline of modern motors, it is interesting to note the recommendations in this respect given on the tank decal: 2 pints to 1 gallon fuel during break-in period, then 1 1/2 pints to a gallon, with 25 to 30 per cent more when engine is used for racing.

Surprisingly, the Speeditwin was advertised in the Boat and Motor section of the newspaper. The owner told me later that he had had four phone calls but that I was the only one who had come to see it. He told me also the story of how he had attended a country auction in the North and how all the possessions of an elderly gentleman had gone out for auction after his death.

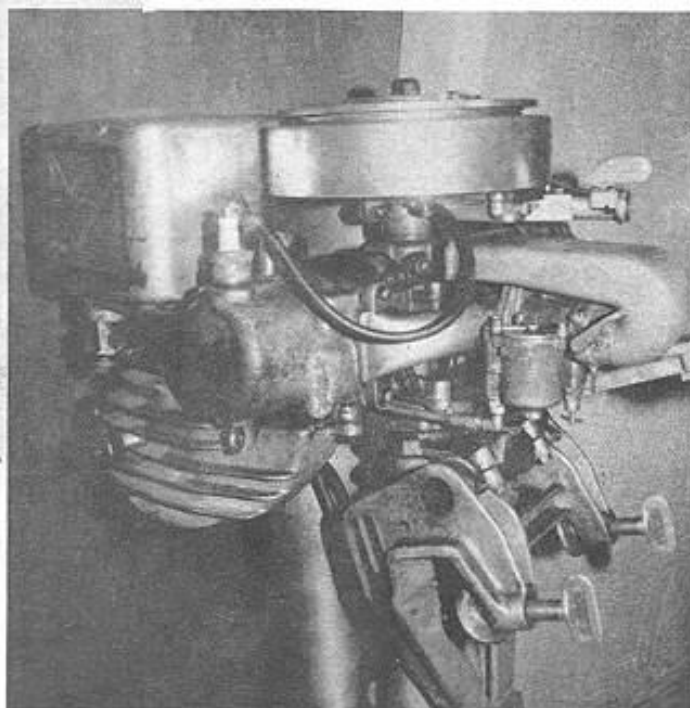
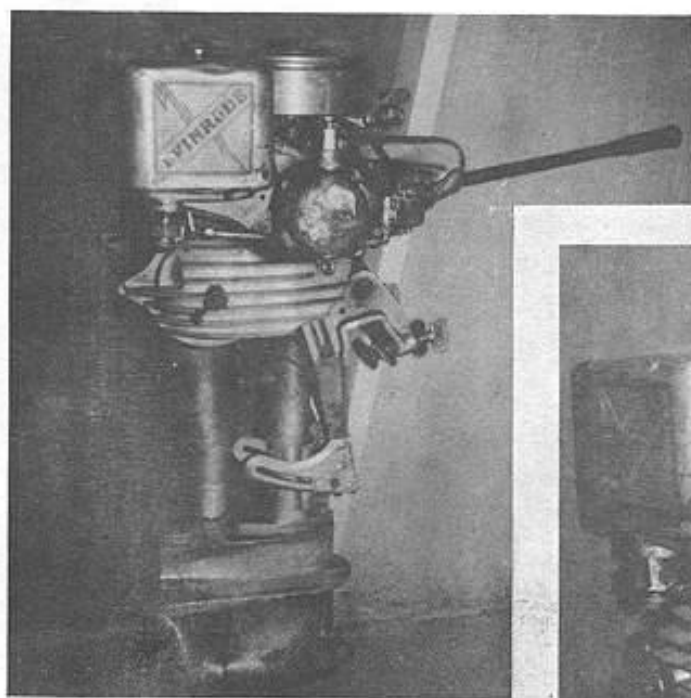


Among other articles was the motor, and he bid successfully for it. The motor had been well cared for. He took it to his cottage and ran it on several occasions. Eventually he found it to be too difficult to handle and awkward to operate, for by autumn he had brought it to the city to advertise and sell.

Now it was evening and I had arranged to meet him at his garage to view the motor. When he flicked the light on, nowhere was a motor to be seen, but on checking again there was a tall squarish leather case at the back. "That's it," he said, "the motor is standing upright inside."

As we moved over we unbuckled the lid, and sure enough the top of the Speeditwin could be seen. I have never seen a motor of this age, 47 years, quite as well preserved. The elderly gentleman had gone to the trouble of having this case fabricated in sturdy solid leather, dyed black and all secured with large domes and straps and lined with a celluloid-like substance. This case stands 3 1/2 feet tall, has a square base measuring 15 inches and a square lid measuring 21 inches and weighs almost 20 pounds.

The U Speeditwins, admittedly heavy and cumbersome, nevertheless provided the power and flashing speed so much desired by racing enthusiasts. The way was paved for a long line of famous Speeditwins both for utility use and in various modified forms in C class competition. Particularly during the 30's and up to the War these Speeditwins gave a good account of themselves on the racing scene. For regular boaters they provided the extra speed on fast family runabouts or the lugging power required for heavier hulls. By 1950 large-size alternate firing engines were making their appearance. The advantages of these engines with their smooth, dependable operation, easy starting, and separate fuel tanks were increasingly obvious, and in this period the manufacture of most opposed twins, including the Speeditwin, ceased. A leader in its class for over 20 years, surely the Speeditwin deserves to take its rightful place in the "Outboard Hall of Fame."



# Retired educator now collects, restores old outboard motors

**AVALON, Catalina Island** — Dr. Ray Rydell, the 60-year-old former number two man in California State Colleges, is into boating in an unusual fashion; he collects and restores antique outboard motors.

"There are not too many of us in the U.S. with this particular hobby," explains the ex-mayor of Avalon on Catalina Island. "In the Antique Outboard Motor Club of the United States, there are only about 400 members, including only six or so in Southern California."

Why so few in the Southern California area?

"Most of the antique motors still in good condition come from fresh water areas in the Midwest and East," says Rydell. "Out here it is difficult to find restorable motors because they have been used in salt water, and popular outboard motorboating got started later here than in the East."

Now that summer is gone, Rydell hopes to have more time to spend on his hobby of restoring 38 antique outboard motors. "Catalina Island really had a busy summer," he says. "And I was quite occupied with a number of activities on the island."

The new Long Beach-to-Catalina boat service makes it much easier to get to the island now, and the number of visitors has gone way up this year. We expect to have a nice fall season, too. It's beautiful over here year-round."

Rydell formerly restored antique sports cars (he has a 1937 Jaguar SS100 in the Harrah's Automobile Collection in Reno, Nev.). He bought his first antique outboard motor three years ago. "The motor had been put away without draining the salt water, and I had to work on that rusty one for a full year."



A Big Four owned by Ray Rydell, Avalon, California.





## Unusual hobby

Ray Rydell, 59-year-old former vice chancellor of California State Colleges and former

mayor of Avalon on Catalina Island, works on one of his 38 antique outboard engines.

"I originally intended only to add a few more. But, once under way, I couldn't stop. I intended to restore only Johnson outboards, but now I have motors from most of the older manufacturers — Johnson, Evinrude, Elto, Caille and others.

"The oldest one I have is a 1923 Elto Service-Twin, which includes a rudder built into the motor, and a knob on the flywheel that you grasp to start the motor. It is simple and reliable, and runs forward or backward, and puts out three horsepower.

"The newest one I have is a 1948 Evinrude Big-Four, a 50-horsepower engine. Any engines manufactured after 1950 are not considered antique by our club. Average age of my motors is about 40 years — 1934."

Almost all of the 38 antique outboard motors in Rydell's collection are in good running condition, and they are housed in a boathouse adjacent to his home on Catalina Island. Rydell has had a long love affair with Catalina — has spent 41 birthdays on the island, including his first birthday (he's a native of Los Angeles).

From 1964 to 1969, he held the position of executive vice chancellor of California State University and Colleges (headquartered in Los Angeles), the number two man under Chancellor Glenn Dumke. "But it has always been my life's desire to retire to Catalina Island, my second home, and I retired in 1969 at the minimum age," Rydell said.

What kind of boats does Rydell have himself?

"I own two boats, a 13-foot 1928 Sea-Sled that I bought from Philip K. Wrigley, and a British dory 13. The latter will take virtually any motor I have. I usually use four or five engines during the year, and try to go out on the water every day between May and October.

"Getting out on the ocean — whether you own your own boat or take one of the cruises from the mainland — is always a great experience," Rydell added. "When people come to our island, I think they enjoy the cruise over almost as much as the stay on the island. But cruising in a small boat powered by an antique outboard motor is always an adventure."

LONG BEACH INDEPENDENT, Riverside, California, Thursday, September 12, 1974

## Finders Keepers?



Last winter Sam Vance called me and asked if he could stop by, as he had a business call to make on Long Island. I told him sure.

The day he was coming, I threw a K-50 Johnson in my trash can out in front of my house as a joke. I had talked to and written to Sam before, but had never met him personally.

When he arrived about 5:00 p. m. that day, he got out of his car and went straight for the trash can. While he was pulling the Johnson out of the can, I ran out and took this picture. Sam blurted out, "Why, you son of \* \* \* \* \*!" I yelled at him, "I thought you only collected ELTOS," and with that we both split our guts.

*John J. Enright, Jr.*



# OF HISTORICAL INTEREST

..... *W J Webb*

HOW WE MADE 'EM IN THE GOOD OLD DAYS vs. HOW WE MAKE 'EM NOW

I don't know how many scores of times I have heard some earnest antiquer say, "They sure built 'em to last in those good old days. I wish they'd build 'em that way now." And the folks who say that are right, to a degree . . . or are they?

Sure, one of those old 1926 Elto Service Twins (the only reason I am using that as an example is that the 1926 Elto was the first outboard of which I had intimate knowledge) could and did run thousands of hours at full throttle with no repairs outside of spark plugs and points.

Full throttle for that old 55-pound workhorse meant 1700 RPM, and at that speed it put out 4 horse power. That meant about 1 horse power for every 5 cubic inches of piston displacement and 13 3/4 pounds of weight. The motor certainly wasn't overworked, and neither were its competitive contemporaries. Some might say they were loafing -- by today's standards. That is not to say that you could take any 1926 powerhead and turn it up to 4500 or 5000 or 5500 RPM, the popular service RPM range of today. The 1926 shafts, pistons, rods, bearings, fits, and finishes wouldn't take those RPM rates very long. Also, the oils available then were far short of what we have today.

I do not disparage what we outboard manufacturers built in those days. We all did the best we knew how. But let us contrast today's performance with 1926. Today the average outboard weighing about 32 - 35 pounds will deliver about 4 horse power out of 4 - 5 cubic inches piston displacement at about 4500 RPM -- about 1 horse power for every 1.3 cubic inches piston displacement and 8 pounds weight. As you go into the larger motors, you find a power delivery of over 1.3 horse power per cubic inch, and to about 2 pounds of weight, and this includes an electric starter. That power development is for service motors, not racers.

The difference in obtained results comes from better materials, advanced engineering, and improved production processes, the improvements in each making possible improvements in the other items. I won't go into engineering, except to say that today's fine engineers stand on the shoulders of the men who stood on the shoulders of those giants of 50 years ago: Ole Evinrude, Lou Johnson, and Finn Irgens. Today's engineers have the advantages of modern materials, research, testing, and production processes that weren't even thought of for the most part in the 20's.

As to materials, I don't believe that outside of copper ignition wire and a few screws and nuts, any of the materials used today bear much resemblance to what was available and used in 1924. Take screws, for example. In 1924 we cut screw threads with dies, which resulted in small cracks or tears that might eventually develop into breaks. Now, besides using better materials, we roll or grind threads on all stressed screws. For another example, the coil winding and testing equipment of today almost totally eliminates the stretching of wire which might break the insulation or increase resistance which can cause coil overheating and breakdown. Practically all other materials have greatly profited by research.

In the 20's, we all had what passed for fine tooling and machines. In fact, the late J. G. Rayniak, who, before he joined Johnson, was head of the Packard tool room which employed some 1,400 men, once told me that what the outboard manufacturers had in the way of production machinery was equivalent to that used in the automobile factories of that day. Then the production of good parts depended in considerable degree on the skill of the operator. A good man with training, desire, and reasonable skill could make a good part held to the tolerances then required most of the time. But come the end of the day, the man might become tired, and he might unintentionally slip a little at times. As we all know, for reasons not necessary to discuss here, the old time journeyman machinist who could satisfactorily run just about any machine in the shop has almost disappeared from the production floor. Also, the machines he used in those days, while adequate for the tolerances then required, simply could not hold the close limits that come from the fine machines, many computer-controlled, that all shops have now. Today's high performance engines require far closer tolerances than those which were fully adequate for the 20's.

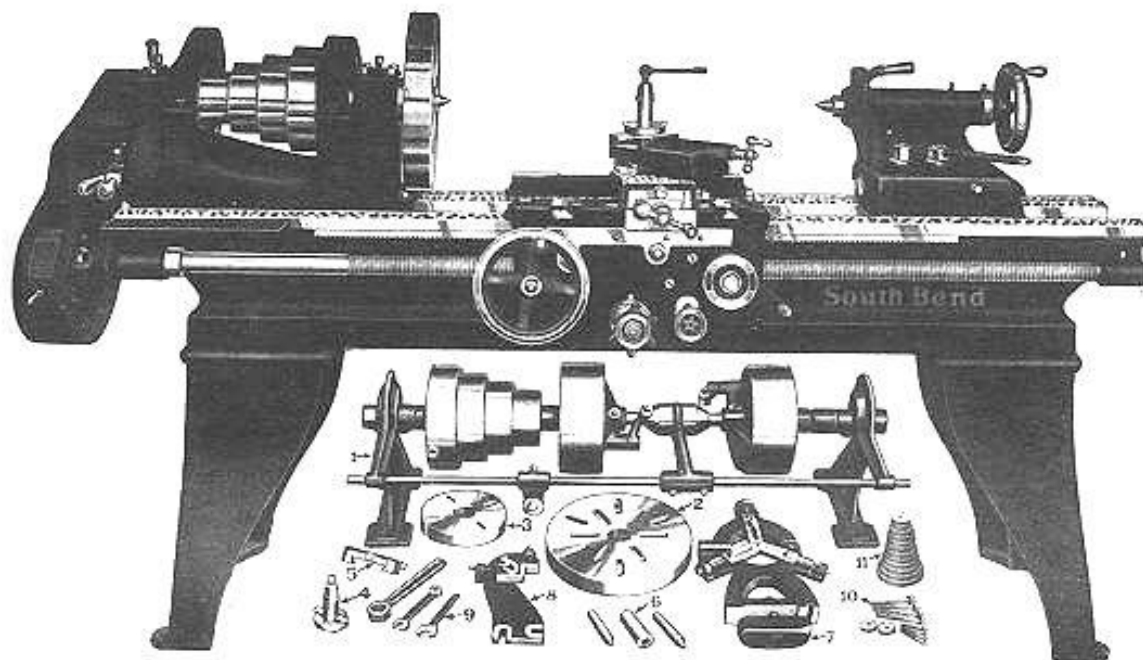
Outside of the screw machines, there were no automatic production machines used by any of the outboard manufacturers in 1926. While we did have a couple of automatic screw machines at Elto and Evinrude, we also had two Brown and Sharpe hand-operated screw machines for the fussier parts.

The exact inventories of the various machines used in the old Evinrude, Elto, and Johnson factories have been lost, but in general, like all other manufacturers of that day, we had a variety of hand-operated machines: 1- to 6-spindle drill presses, Cleveland engine lathes, Kempsmith and Kearney-Trecker milling machines, South Bend and American lathes, multi-spindle turret lathes, heavy-duty Cleveland Standard Screw machines for boring cylinders, Neald grinders, Whitman-Barnes honers, to name some of the "standard" machines found in most shops. Figure 1 shows a 1928 South Bend lathe which sold for \$585 with all equipment as shown. Figure 2 shows a 1923 Kempsmith plain milling machine which sold for \$450. And those guys made a profit on those fine machines, too.

All of those machines were run by belts off line shafts, which extended the length of the shop and were powered by one huge electric motor, or sometimes a steam or gas engine. At Evinrude and Elto, electric motors powered the line shafts. Nowadays, each machine has its own built-in electric motor for power. Line shaft power was not efficient for a number of reasons, as the whole shaft had to be powered even when only one or two machines might be running off it. I well remember that on days following a heavy snow storm, the Evinrude shop roof would sag slightly under the weight of snow; the line shafts, being fastened to the roof, would drop a little and let the belts loosen far enough so that the machines could not be run until the maintenance crew had shovelled all the snow off the saw-tooth roof.



### South Bend Standard Change Gear Lathe



Regular equipment, as illustrated under Lathe, is included in price of Lathe

Figure 1

Sand castings were widely used. Die castings, except for some purchased parts like Schebler and Tillotson carburetors, were looked down upon -- "pot metal" was the popular term for die castings then. Die casting, which produces a fine, strong product today, was still in swaddling clothes, relatively speaking, with much still to be done in the development of suitable die casting alloys, machines, and techniques. In 1958, the late J. G. Rayniak, then OMC President, was named "Man of the Year" by "Modern Metals" magazine for having led the way in production of large die castings and the development of new die casting techniques.

In comparing the production processes of today with those of yesteryear, I will discuss only two parts: the steel connecting rod and the propeller shaft, two everyday parts among the many that have benefitted from present day practices. I can't speak for other outboard makers, but to judge from the high quality of their products, I conclude that they are using equipment and methods just as modern as Evinrude and Johnson.

Forty-odd years ago we started with a piece of SAE 4615 steel drop forged to a connecting rod shape, fairly round on the piston pin end but a little oblong on the crank pin end, about which more later.

There followed a total of some 60 operations involving heat treating, boring, grinding, drilling, tapping, hand work, inspecting, and cleaning, during which the in-process rods were moved some 30 times to machines in different parts of the shop, including a trip to an outside vendor for sand blasting. Since most, if not all, of the machines were used on a number of different parts besides connecting rods, some of the moves were from one side of the shop to the other.

## Kempsmith #1 Milling Machine

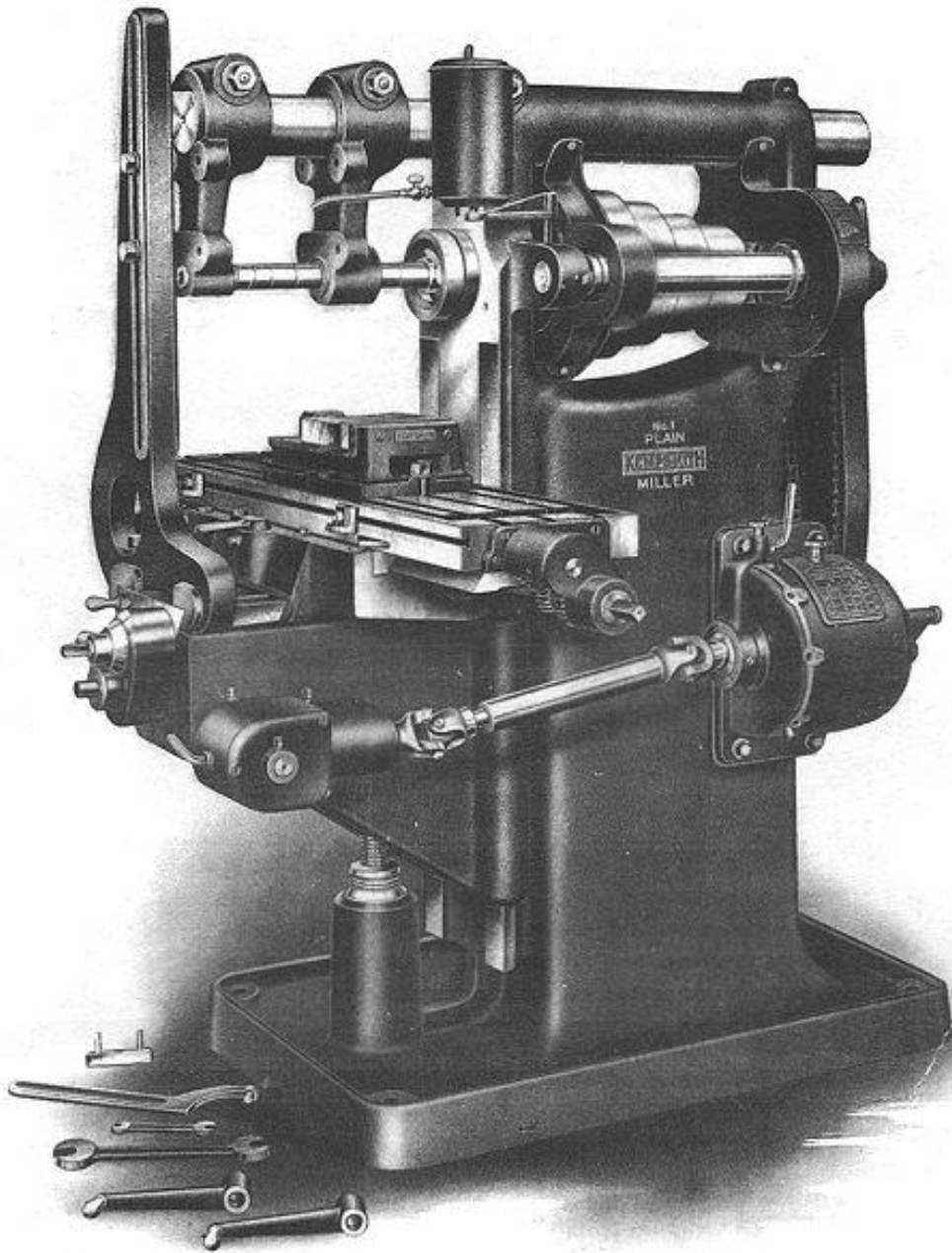


Figure 2

Some of the moves were to multi-spindle drill presses, 2 - 4 - 6 spindles, where each rod was placed in a jig and moved from spindle on the same table where the operator pulled the drill press handle to bore, drill, ream, or tap as occasion demanded. Since the rods required work on all four sides, the jigs were turned upside down or on end, depending upon which end or side of the piece was being worked on. A good operator could be depended upon to pull the drill press handle at the proper speed for drilling or tapping, but sometimes an operator would get in a hurry, and from this came the saying that holes were "punched with a drill press."

Counted as one move, for example, would be a trip to a 6-spindle drill press table where maybe 6, 8, or 10 operations might be performed. Another single move was to heat treat where the rod was carburized at 1600-1650<sup>o</sup> F., cooled, reheated to 1380-1425<sup>o</sup> F., drawn, inspected, and sometimes restruck flat.

Now about that oblong crank pin end. Back in those days, at about the eighth move we sawed the oblong end in two on exact centers. At first the rod was simply cut in two; but since exact fitting of the two sawed halves was a great problem, we later machined matching steps in the rod bore. The two halves of the rod were securely screwed or bolted together and the final boring, sizing, and finishing of the crank pin end was completed with the two halves so fastened. This worked out very well except that some of the boys in the field got the rod caps mixed up when reassembling, with the result that the tiny seam resulting from the misfit halves cut the crankshafts very quickly. We put match marks on the rod halves, but the boys sometimes ignored these and either turned the caps wrong side to or even put them on the wrong rod. The result was an angry customer. Seldom did the servicing mechanic admit his error.

When finished, we had a steel rod that was as good as the best anywhere around. The side faces were parallel, the crank and piston pin bores were as round as we could get 'em and as close to print as the machines of that day could make 'em. Limits were generally plus or minus .003" - .005", good for that day, but wholly unacceptable now. On the crank pin end the slack, if any, was taken up by fitting roller bearings according to the size of the bore. This was done at powerhead assembly where the assembler had ten boxes of rollers varying in size by half a thousandth. There were also three sizes of piston pins.

All told, it took approximately 44 hours to manufacture 100 steel rods.

Now let's talk about an average steel rod that we make today, #385964. We start with an SAE 4615 or 8615 steel drop forging, with both ends roughly round. Some 32 moves and 56 operations later, we have the rod protectively greased and packed. Time for 100 rods: about 34 1/4 hours. Besides that, our 1975 rod is a much better and far more accurately finished piece. For one thing, several of the operations involve silver plating. A silver plated steel surface makes a much better bearing than just steel. All of the way through limits and finishes are much closer than in the 30's. We now work in "tenths" and "half tenths," that is, one-tenth of a thousandth of an inch, or half of one-tenth of a thousandth of an inch. Try that on your mike sometime.

It would be logical to assume that working to such close limits would take a lot more inspection time. Not so. Where "go" and "no go" gages are okay for rough dimensions, when measuring in tenths and half tenths air limit inspection gages must be used. Besides being very accurate, they are fast. To start with, today's tools produce bores so accurate that they couldn't be inspected with the equipment available in "the good old days."

A very important difference between the 1975 rod and those of 40 years ago is that we now break the crank pin end of the rod instead of cutting or sawing it. Early in the game four small holes are drilled, two on either side of the crank pin bore. Next, a fracture mark is broached on all four holes for ease of breaking. The rod is then heat treated and silver plated. After plating, the rod is broken by a hydraulic punch, which forces tapered pins into the drilled holes. The rod cap is reassembled and the rod bore is finish ground and honed to a 5 micro finish. That is 5 millionths of an inch. Such a finish was not possible in volume production in the 20's. The breaking operation assures an absolutely perfect fit of the two cap halves with the gap at the break being so small that it is mighty hard to see. Also, a man has to work hard to incorrectly assemble a cap on a rod that has been broach broken.

To sum it up, we do more and better work on today's steel rod in fewer hours, largely because of the great improvements in production machinery and methods which affect virtually every operation. Where we used to use one machine to make several widely different parts, we now, in most cases, have machines specially designed to make just one type of part. The specialized machine can produce certain parts much more rapidly, accurately, and at less cost than a general purpose machine.

A good example is the connecting rod machine built for us by the Northwest Tool and Engineering Company of Milwaukee (see photo). This machine performs 16 operations on each rod. The only hand work done is by the operator who loads the machine with a rough rod, turns the piece over after 8 operations, removes the finished piece after the 16th operation, and replaces it with another rough piece. The machine indexes (turns) without any action by the operator. If any malfunction occurs, the machine stops at once and cannot be restarted until the cause of malfunction is corrected. This machine was designed and built at the behest of Evinrude production and tool men. It paid for itself in saving of time and scrap in less than six months, besides producing pieces of superior quality.

Now about propeller shafts. In the old days, we used a piece of SAE 1020 steel rod, cut to size, put in holes for shear or drive pin and propeller nut cotter key, a key way, finished it, and that was that. The only trouble was that salt water corrosion set up between the shaft and any dissimilar metal close to it. This was later corrected to some extent by changing to stainless steel.

As motors got more powerful, a propeller fastening problem arose. The propeller drive or shear pin hole was subject to "chucking" action between propeller and shaft. Eventually this would wear and break the pin, an occurrence which did not please the user. In less powerful motors the "chucking" action was not as severe, and, short of hitting some snag, few pin breakages occurred. Rubber propeller mountings and other propeller clutching devices helped protect the propeller but did not stop the "chucking."

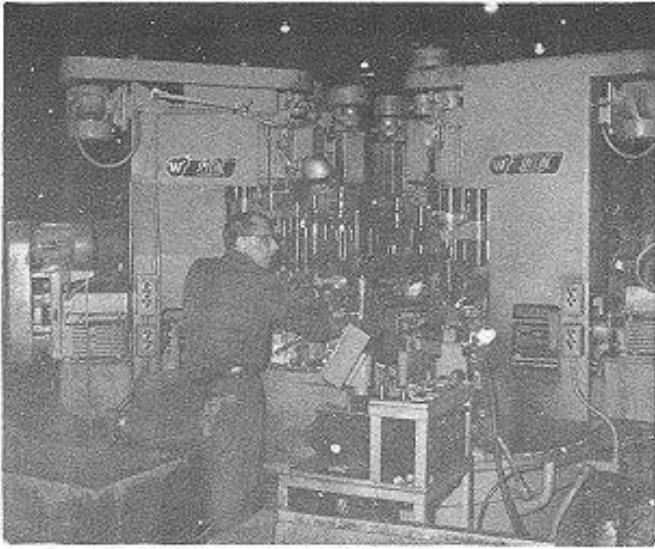
This chucking problem on larger motors was overcome by hobbing splines on the prop shaft which mated with splines in the propeller. Briefly, a hob is a circular cutting tool which cuts a longitudinal groove in the shaft. Average hobbing time for 100 shafts was about 5 3/4 hours.

Back about 1956, Evinrude began to talk to the Michigan Machine Company of Detroit about adapting their successful spline rolling machine to our stainless steel shafts. Briefly, this spline roller consists of two tough, hardened racks into which splining grooves have been cut. The piece to be splined is placed between the racks, and in one quick back and forth motion, the splines are accurately rolled with no cracks or tears which sometimes result from hobbing and can develop into breaks.

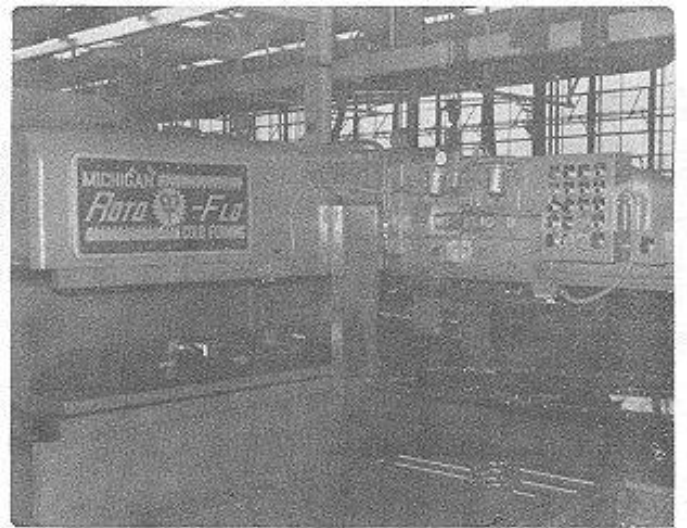
The spline roller had worked beautifully on all kinds of steel and the Michigan folks could see no problem with our stainless. So we bought a spline roller (see photo). This was called a Roto Flow, and cost \$85,000. We found out right away that rolling splines in our stainless steel shafts was a whole new ball game. To skip the gory details, it took better than a year of constant work before the problem was licked. The Michigan folks, being highly reputable, stuck with us and, I am sure, spent better than the \$85,000 they got from us before ironing out the bugs. We spent plenty in time and material too.

But stick we all did, and now we roll 100 splines in less than a quarter of the time it would take to hob them. Besides, we have a better product. The spline roller has paid for itself many times over, and the Michigan folks came out of it plenty okay in other business.

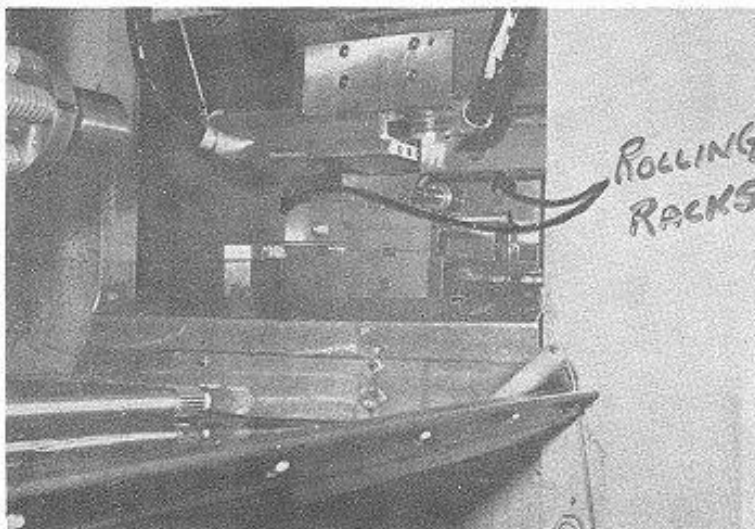




*Northwest connecting rod drilling machine*



*Spline rolling machine*



*Spline showing rolling racks*

If I might utter a bit of capitalistic economic philosophy, the only reason that we could afford to spend the money we did to get a better, and, in the end, a less costly product was that the profits we had made before enabled us to stand the strain. The same was true of Michigan. It is kind of like the thrifty guy who saves something out of each pay check and then when trouble hits, he has some financial strength with which to meet and beat it.

Without the substantial base, which existed only because we had made profits every year since the Depression, we could not have afforded the several financial "gambles" on new machines, plants, research, development -- all of which resulted in better, less costly products which in turn generated more sales and profits which made our company more able and stable. Sort of a vicious upward circle.

I am indebted to two Evinrude old timers for helping out my sagging memory: Bruno Piasecki, who retired in 1971 after 45 years with the company; and Herb Koplein, now Evinrude's Chief Industrial Engineer, but still a young fellow -- by my standards, anyway.

Bruno, the oldest of eight children, had to go to work to help the family after finishing eighth grade. He came to Elto on April 21, 1926 as a drill press operator. From there he became a general machinist, progressing to the tool room in 1931. Besides making tools he acted as a trouble shooter on the floor. Meanwhile, he had completed his apprentice education by going to evening classes at the Milwaukee Vocational School. He was placed in charge of the tool room in 1945. There followed a spell as Assistant Chief Inspector, two years as die cast layout chief. In 1957 he went into tool design, eventually becoming Chief of Tool Design, which post he held until he retired. At one time or another Bruno ran just about every machine in the shop. Not bad for a fellow who didn't get past the eighth grade. Trouble is, no one told Bruno he was "disadvantaged." I don't think the word had been invented then.

As an interesting sidelight, Bruno was hired by the Shop Superintendent the morning of April 20 and told to report next morning. When he reported, he learned that the superintendent who had hired him had been fired the afternoon before. However, Bruno looked good to Joe Shejna, one of the assistant foremen, and was put to work.

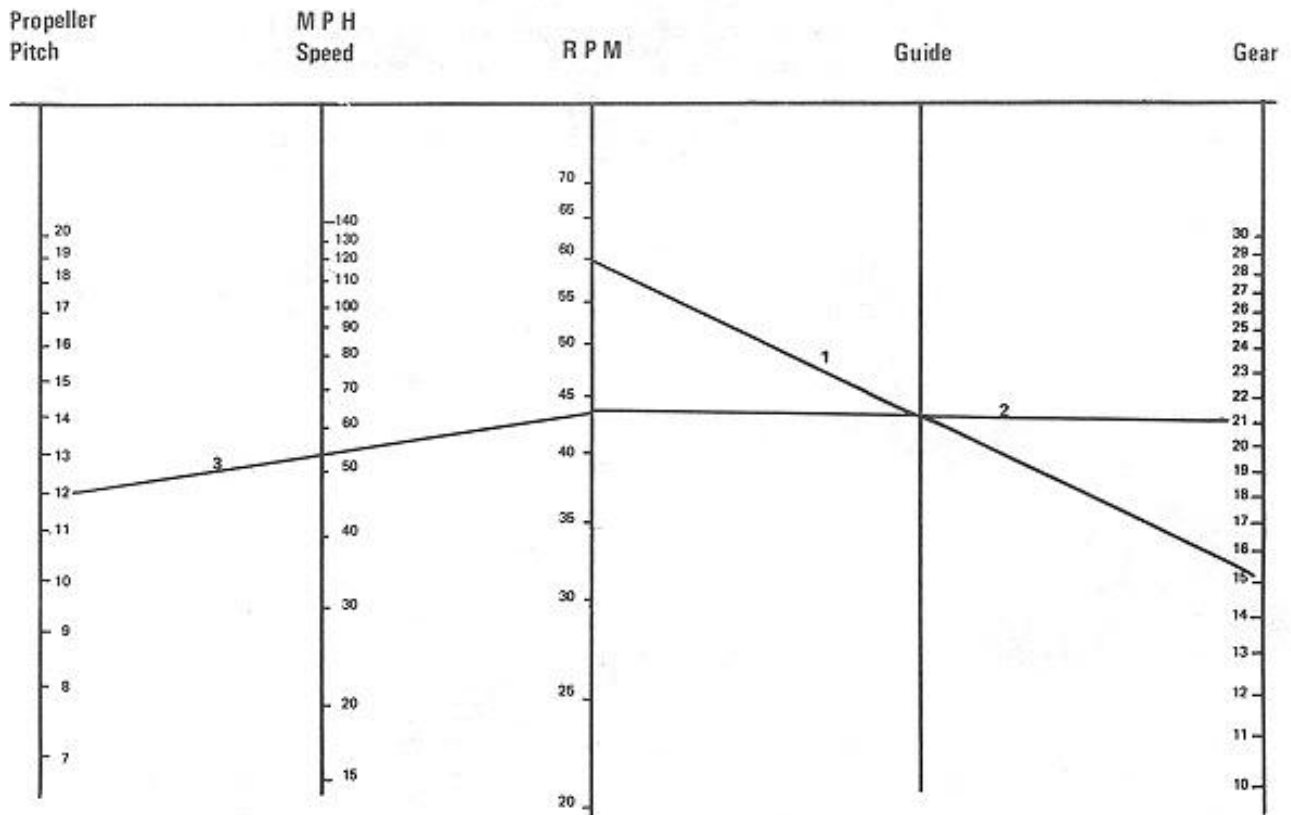
Incidentally, I heard the firing through the wall of Mr. Evinrude's office, and it was a dandy. I think that might have been the only time I ever heard Mr. Evinrude lose his temper or use profanity. Although the superintendent richly deserved firing, Mr. Evinrude characteristically paid the man his full salary until he found a new job.

Herb Koplein came to Evinrude out of Washington High School in Milwaukee in February, 1935, as an indentured apprentice in tool design, tool and die making. Besides going through the regularly prescribed shop training, he completed the required evening classes in the Milwaukee Vocational School, and upon graduation in 1938 was elected President of his apprentice class for the Milwaukee area. As a journeyman tool maker he progressed to various posts of assistant foreman, shop foreman, shop superintendent, and to his present job as Chief Industrial Engineer. Who says you must have an advanced college degree to get places now?

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**Author's note:** Special thanks are due the South Bend Lathe Works of South Bend, Indiana and the Kempsmith Manufacturing Company of Milwaukee, Wisconsin for going back in the archives and digging up old catalogs from which the South Bend and Kempsmith pictures were taken.

# OUTBOARD SPEED NOMOGRAPH



Example: 6,000 RPM, 15:21 gear ratio, 12" pitch propeller. Results: 4,300 propeller shaft RPM, 54 MPH speed.

Use this handy nomograph to determine the theoretical speed of a boat. To use it, you need to know the lower unit gear ratio (15:21 or similar), the engine RPM's, and the pitch of the propeller in inches.

1. Draw a line from the engine speed in RPM's to the number of teeth on the driveshaft gear.
2. Draw another line from the number of teeth on the propeller shaft gear to the intersection of the previous line with the guide line. Extend this to the RPM scale. This is the propeller shaft RPM.
3. Draw another line from the propeller RPM line to the pitch of the propeller. The intersection with the speed line indicates the theoretical speed of the boat, assuming that the motor is of adequate horsepower to support that speed.

- David Reinhartsen

# Antique Motors Alotta EASTERN PENNA Regatta

by Bob Grubb

On August 3, 1974 we held the Second Eastern Pennsylvania Antique Outboard Meet. Despite dreary forecasts of rain, 14 members showed up for a nice day of running motors.

After a period of assembling and getting acquainted, we ran the Oldest Running Motor competition. This was won by Ed Gera from Baltimore, Maryland with his beautiful 1911 Evinrude Rowboat Motor, which has original decals.

After lunch we ran the competition for Mint Condition Brass Motor. We had three very beautiful motors running in this competition: Ed Gera's 1911 Evinrude, Tom Luce's 1916 Motorgo, and Tony Caglione's 1915 Racine. After much deliberation, the judges awarded First to Tom Luce and Honorable Mention to Ed Gera.

Mint Condition Aluminum Motor competition was run next, and was won by Tom Luce with his 1937 2 1/2 HP Waterwitch. Honorable Mention went to Tony Caglione for his 1933 OA 65 Johnson.

The Mint Condition Shrouded Motor trophy went to Phil Kranz for his like-new appearing and running 10 HP Chris-Craft.

In our Predicted Log races, everyone who can get his motor started has a chance to win. First and second place trophies were awarded for three races. First place trophies went to Tony Caglione (1933 OA 65 Johnson), Mark Wright (1928 Elto Speedster), and Bill Andrulitis (Evinrude Speedifour). Second place trophies went to Mark Nixon (son of Jim Nixon) with a 1928 A 35 Johnson, Milt Moos with a 1934-35 11 HP Sea King, and Galloway Morris with a K 35 Johnson.

Hard luck men of the day were Milt Moos, who couldn't get his Clarke Troller to run under water and couldn't get his very nice Caille Liberty Twin to complete the course; and Tom Luce, who couldn't get half of his dual installation of Elto Cubs to run.

The trophies were ceramic plates with Currier and Ives prints, suitably inscribed and made by my wife, Louise.

After trophies were presented, Phil Kranz stepped forward and announced that he had a trophy for me for holding such a successful meet. He then presented me with an original "Elto" metal sign circa 1935. I felt as proud to receive that token of appreciation as any trophy I have received.

My wife and I then invited all members and their families back to my home to see my collection and enjoy a small meal.

I only hope everyone had as much fun as I did.





*Phil Kranz's motors: 10 H.P. Chris Craft, 1928 K40 Johnson, Clarke Troller, Waterman*



*Tony Caglione and his unique Racine*



*Ed Gera with the oldest running motor.*



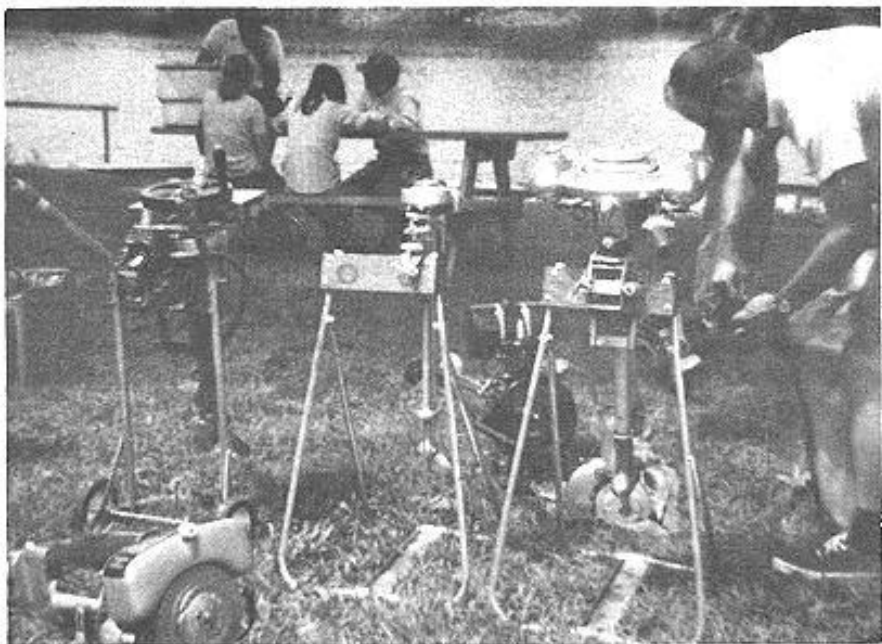
*Milt Moos and Dave Caldwell with their engines.*



*Galloway Morris and Mort Daller talking shop.*



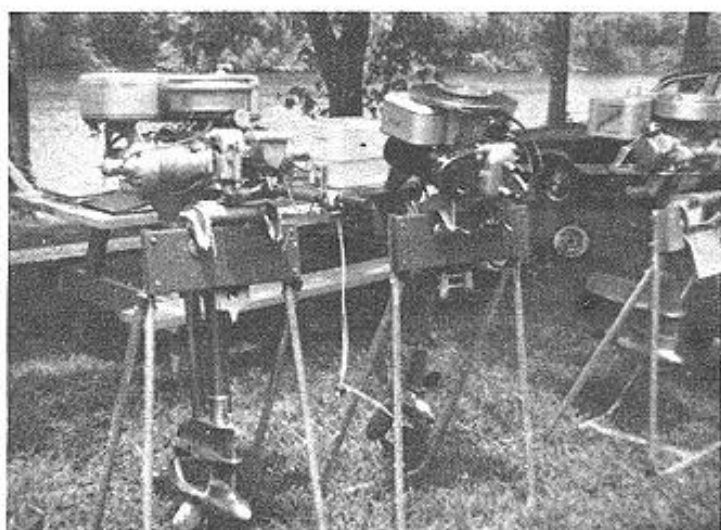
*Tom Luce with Ferro; Galloway Morris navigating.*



*Tom Luce with his engines (1916 2 H.P. Motorgo, Elto Cub, 1937 2½ H.P. Waterwitch, Caille Liberty Single, 1 H.P. Sea King). Motor on grass in foreground is Tony Caglione's OA65 Johnson.*



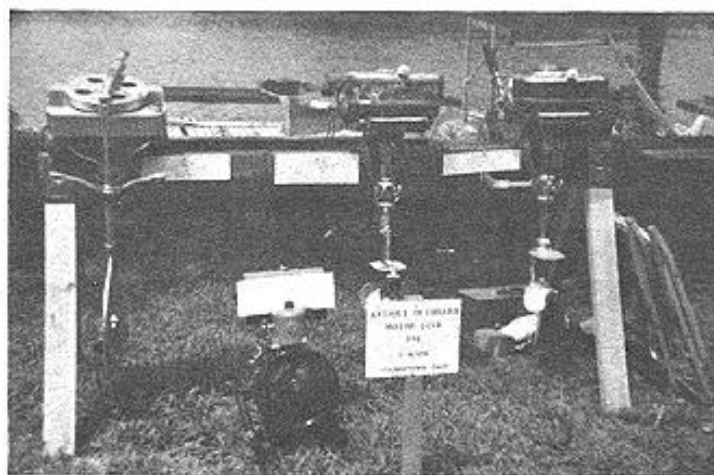
*The victors. Front row: Bill Andrulitis, Milt Moos, Ed Gera, and Galloway Morris. Back row: Mark Nixon, Tom Luce, Mark Wright, Bob Grubb, Tony Caglione, and Phil Kranz.*



*Two very unusual antique Penta engines brought by Norman Anderson.*



*Engines from Mort Daller's collection: 1930 Evinrude Model 177 Speeditwin Racer and Johnson A50.*



*Jim Nixon's display: 1926 Elto Model G, Caille Liberty Single, 1928 A 35 Johnson, 1924 Johnson A.*

## Old Iron, Old Wood

by Warner Turner

The last newsletter had a request for members like me to make some literary contribution. I'm not very much of a penman, so feel free to scrap this bit if so inclined; however, here goes.

I've enjoyed being a member of the AOMC since 1967 when Jere Sairs saw a few old motors I was tinkering with and suggested that I join the club. I did and have never regretted it.

Since 1967 I've acquired about a dozen additional motors and two special interest boats, a 1953 Thompson runabout in excellent condition and a 1935 Rhinelander strip fishing boat, also a 14 footer. The Rhinelander is in fair condition after serving many years as a rental boat at a resort on Big Arbor Vitae Lake in northern Wisconsin.

At the time of purchase the owners of both boats were quite apologetic about the wooden construction, being brain washed to think fiberglass or aluminum.

Probably my cost would be of some interest to members who also like vintage wood. The Thompson was \$75 and the Rhinelander was \$50. Really, if these boats were to be duplicated today, I'm sure the cost would be double that of a comparable aluminum or fiberglass boat.

The Thompson runabout is very rugged and handles the 50 HP Evinrude Big Four 8015 very well. After a brief showing of the speed this motor was capable of at Jim Cason's Silver Lake Resort and its refusal to run again, I found the trouble of hard starting not to be bad plugs or too hot R-7 spark plugs. It was just a plugged up low-speed jet. In fact, most of my trouble has been dirt in the gas lines of my old iron, rather than ignition problems.

Running parallel to an 85 HP Mercury tri-hull with a speedometer, I was clocked at 38 m.p.h. with the Big Four, and a smoother lower unit could possibly add a couple of RPM's.

Both of these "woodies but goodies" were located through the classified ads of the "Milwaukee Journal."

Our midwestern group recently met at Jim Cason's. Being well stocked with lots and lots of goodies, I was fortunate enough to locate a tiller handle for my 1936 Sportsman 1 1/2 HP Evinrude. It's made of solid rubber and screws directly to the cast aluminum gas tanks. After working out a deal with Jim, I now have a complete motor tiller and all.

The photos on the following page show some of my motors and the two boats.

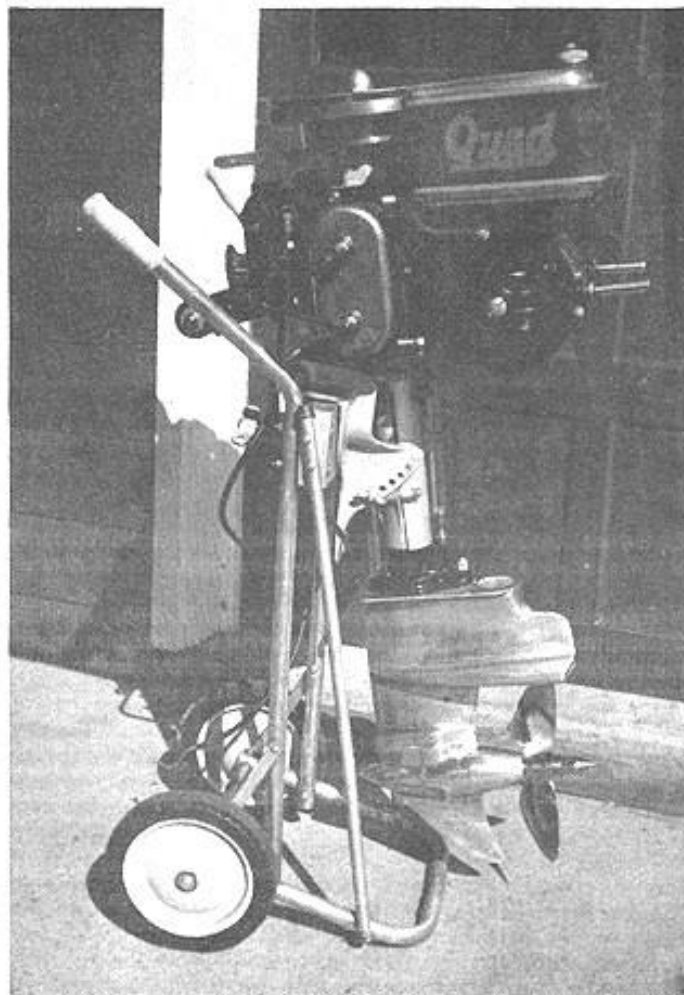


## OLD IRON



## OLD WOOD

## 1930 Elto 460 Racer



No. 1780007, made from many standard Quad parts:

1. Gas tank
2. Lower unit (note plug in exhaust hole)
3. Crankcase
4. Carb
5. Coil and brackets
6. Muffler

Power head is the same as No. 800 Big Quad except that pistons have "460" stamped on top. Note rubber tubing for water intake.

*Ron Ellis*

# CENTRAL OHIO september meet



The Fourth Annual Central Ohio Meet was held at the Delaware, Ohio State Park on September 15, 1974. We enjoyed a beautiful but somewhat cool day, and managed to set a new attendance record with a total of 17 members, many of whom came with their families and friends. This, as usual, was an informal meet, and the day's activities consisted of displaying and running motors, trading parts and motors, talking about our outboarding hobby, and, most of all, enjoying every minute of it!

Jim Nixon and Lee Schierbaum came early to the meet by virtue of having camped overnight at the park. Jim was rightfully proud of his latest acquisition, a nicely restored and running Evinrude Model B, although he was heard to say a few unkind words about his Caille Liberty single, which refused to run past the first "putt." Lee raised a cheer from all of us as he chugged into the dock area with a disabled modern outboard rig in tow behind his 1939 Waterwitch. They just don't build outboards the way they used to!

Ray Fisher brought two teen-aged Evinrude singles, a 1915 Caille, and a brace of Elto Pals. The Diedericks, Ed and Howard, brought a truck full of motors, including a 1915 Lockwood-Ash, a Caille 5-speed twin, and a Clark Troller. Paul Saeger, who came last year wearing a neck brace, arrived this year in good health to run his Evinrude Model F. Little was seen of Bruce Kennedy on shore, as he spent a good part of the day running his latest find, a truly nice Elto Model C.

Bill Thiel made this his first AOMCI meet and brought a trailer loaded with trading motors. His display motors included a Johnson A-80 and a Champion Model D1D. This was also the first meet for Jim Johnson and John Erion. John, a recent transfer member from Illinois, brought an Evinrude Lightfour, about which he made the comment, after having carried it across the parking lot, "I wonder why they called it that?"

Skip Hight and his son Roger came with a trunk containing all sorts of interesting outboard goodies. Most parts were readily identifiable as to the manufacturer, but a pair of cast-iron pistons defied easy classification. Ed Diederick ended up with a box full of Flambeau, which should keep him busy for the winter.

Dave Caldwell's restored Lyman, which was featured on the front of the November Newsletter, was wearing his current favorite motor, an Evinrude Speeditwin. Dave has been long known for his loyalty to the Johnson brand, but this motor has managed to bend his "Johnsons Only" philosophy. That Evinrude really moved the old Lyman!

Our faithful "Southern Ohio" compatriots, Bill Horst and O. B. Coomer, brought between them almost a quarter of the total number of display motors at the meet. Bill brought five different brands of motors, including his mint Elto Model C. O. B. Coomer, who came partially concealed behind a five-inch-long moustache, had a bevy of beauties, including Lockwood-Ash and Caille singles from the early teens. O. B. also brought along a unique one-man, outrigger pram which he declined to try out on the lake! By the way, O. B. says that Chap Stick makes an excellent moustache wax, in case any of you are due to grow a cookie duster.

After giving a disappointing performance at Bob Grubb's meet the previous month, my Caille Liberty twin showed off its better nature to run like a clock, although as my usual luck would have it, my Johnson K-45 gave me a few fits. Charles Pelton made a late appearance at the meet, but got there in time to take a boat ride and to share in some of the gab fests. Lowell Hetzner, intrepid dealer in, and collector of, Evinrude products, brought Elto Model C and Ace motors, along with his Bendix SMD. Many thanks are due Lowell, who makes the yearly arrangements with the Park officials; and marina concessionaire Dock Robinson, for our use of the facilities and free use of Dock's rental boats. We are ever grateful to Dock for his generosity and his interest in our hobby.



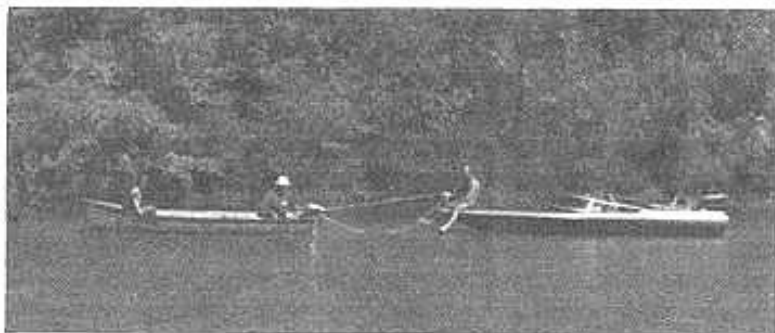
*Bruce Kennedy goes Eltoing with his Model C.*



*O. B. "Cookie Duster" Coomer behind his motors.*

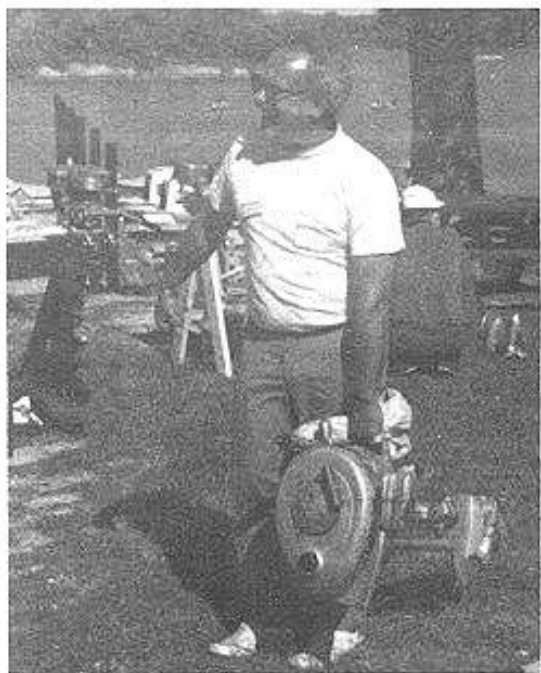
For those readers interested in statistics, we offer the following data: of a total 45 display motors at the meet, there were 12 Evinrudes, 11 Johnsons, 5 Cailles, 4 Eltos, 4 Waterwitches, 2 Lockwood-Ashes, 2 Bendixes, 2 Sea Kings, 2 Clark Trollers, and a Champion. Although it's generally conceded that Johnsons are the majority pre-1942 motor type in the Ohio area, the participants at this meet must have dug out all of their Evinrudes to reverse the high Johnson-to-Evinrude ratio that was experienced at last year's meet!

To obtain first-hand knowledge of what motors are brought to next year's Central Ohio Meet, we invite all of you in and around Ohio who couldn't make it this year to attend on September 21, 1975. See you then!

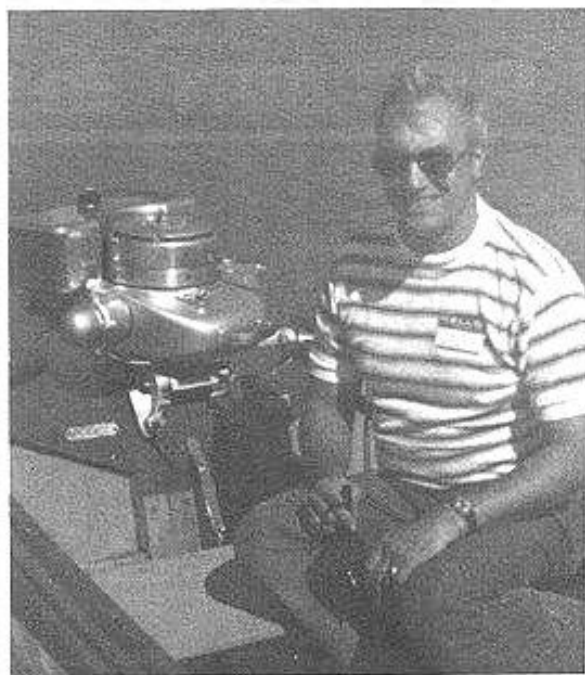


*Lee Schierbaum and his 1939 Waterwitch tow in disabled modern outfit.*





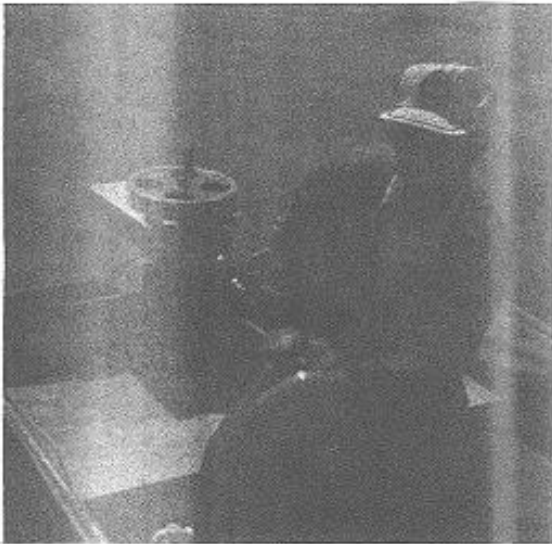
*John Erion wonders why Evinrude named it a "Light" four.*



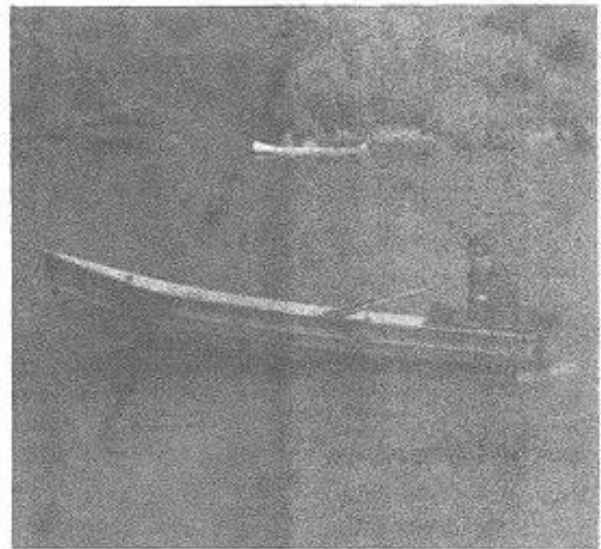
*Dave Caldwell's tinted glasses were necessary to protect his eyes from the glare of his brightly-finished Speeditwin.*



*Milt Moos adjusts Caille Liberty twin as Mark Nixon, Jim Johnson, and Bill Horst look on in fascination.*



*Jim Nixon with his newly-acquired and restored Evinrude single.*



*Ed Diederick cruising along with his Lockwood-Ash single.*

Members Attending the 1974 Meet

Dave Caldwell - Newark, Ohio  
O. B. Coomer - Louisville, Ohio  
Ed Diederick - Elyria, Ohio  
Howard Diederick - Elyria, Ohio  
John Erion - Centreville, Ohio  
Ray Fisher - Galion, Ohio  
Lowell Hetzner - Prospect, Ohio  
Skip Hight - Neapolis, Ohio  
Jim Johnson - Dayton, Ohio

Bill Horst - Fort Thomas, Kentucky  
Bruce Kennedy - Columbus, Ohio  
Milt Moos - Westerville, Ohio  
Jim Nixon - Youngstown, Ohio  
Charles Pelton - Lorain, Ohio  
Paul Saeger - Louisville, Ohio  
Lee Schierbaum - Avon, Ohio  
Bill Thiel - London, Ohio

# AOMCI NEW MEMBERS

Verne Whiting  
East Haven, Vermont 05837

Duane Smith  
535 South Duff  
Ames, Iowa 50010

Richard Temares  
3906 North 22 Street  
St. Louis, Missouri 63107

Robert F. Sandreczki  
189 Glenbrook Road  
Rochester, New York 14616

Homer W. Bartram  
Nine Reed Street  
Lexington, Massachusetts 02173

George J. Daniel  
Route 1  
Oakland, Minnesota 56076

Herbert G. Clopper  
Post Office Box 507  
Boothbay Harbor, Maine 04538

Jim Schoch  
3130 Lewis Drive  
Quincy, Illinois 62301

George E. Bent  
4214 Taft Park  
Metairie, Louisiana 70002

Herbert Riebe  
108 Montecito Crescent  
Walnut Creek  
California 94596

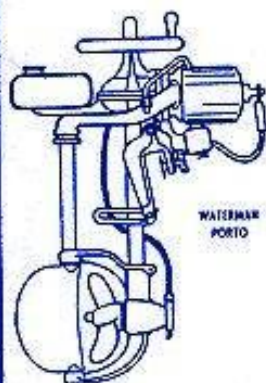
Charles D. Pelton  
3332 Falbo Avenue  
Lorain, Ohio 44052

continued on page 11

<h2>DECALS</h2>		---NEW---
A decal adds that finishing touch to any restoration project. All are made close to original specification, in full color		
For Evinrude Single, 1911 to 1928	\$4.95 set	Order from: Robert Brautigam 2316 W. 110th St. Bloomington, MN 55431
For Elto rear tank, any through 1928	\$3.95 each	
Water applied type		
For Johnson Sea Horse "16" or "24", fits early P and S models	\$7.00 each	Order from: Eric Gunderson 57B Mt. Hamilton Road San Jose, Calif. 95114
For Evinrude 4-50	\$8.00 each	
For Johnson "Sea-Horse 32", fits models V-45, 65, 70; VR's and VE's		Order from: John C. Harrison 1000 N.W. 54th St. Miami, Florida 33127
For Johnson "Sea-Horse 25", fits all Giant Twins		
For Evinrude, fits Speedifour or Big Four (specify)		
Like originals, pressure sensitive vinyl, \$10.00 each		
Metal nameplates for front of gas tank.		Order from: George Loeb 7037 Suburban Avenue Norfolk, VA 23505
Fits all Elto ruddertwins. Authentic!	\$5.95 each	
For Johnson "Light Twin" 1921-1927 plus A-35. Includes "To start" and "Oiling" decals. Exact duplicates of original Light Twin decals. Water applied.	\$5.00 set	Order from: Bob Zipp 182 Brentmoor Road East Hartford, Conn. 06118
For Johnson "K" models, patterned after P/N 27-227. Water applied; complete with starting and oiling instructions. Fits OK-55 & OK-60 too!	\$5.00 each	Order from: Charles W. Hansen 2108 Broward Road Jacksonville, FL 32218
For Johnson alternate firing A models, patterned after P/N 25-244. Vinyl type, self stick. Also fits K-35, K-40, K-45, KR-40, A-35, A-45 and OA-65	\$6.00 each	Order from: Charles W. Hansen 2108 Broward Road Jacksonville, FL 32218
For Evinrude Scout, 1937, and others with similar tear-drop tank. Complete with operating & oiling instructions.	\$6.00 each	Order from: Bob Grubb 1368 Meadowbrook Rd. Pottstown, Pa. 19464



# The Antique Outboard Motor Club Inc.



Publishing Office: 2316 West 110 Street, Bloomington, Minnesota 55431



# AOMCI 10<sup>TH</sup> YEAR