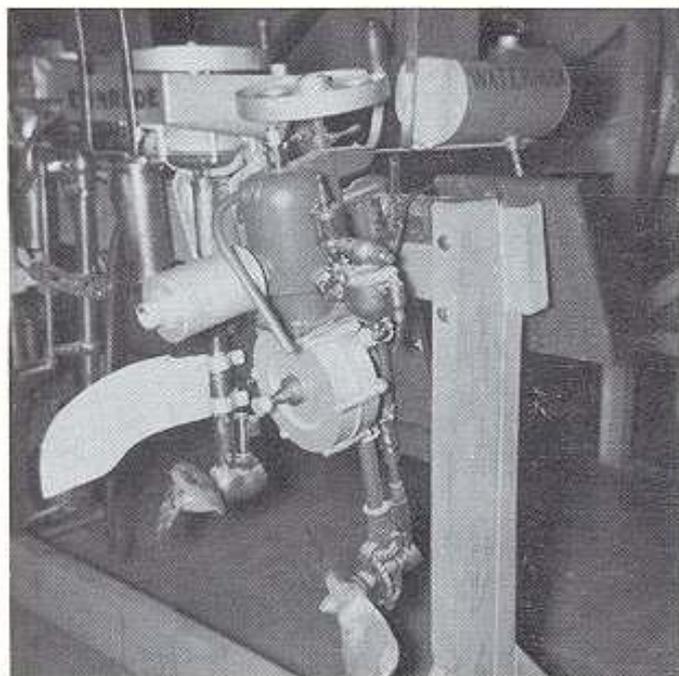
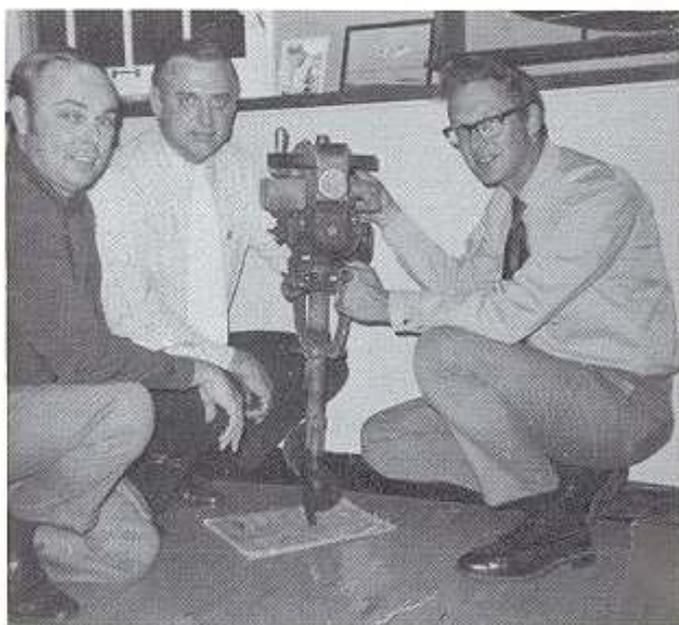
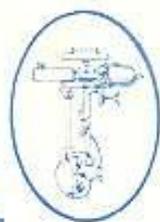


The **ANTIQUÉ OUTBOARDER**

The Pioneering Authority



January

1973

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 available on request % John D. Gould, Jr., 4707 Massachusetts Avenue Indianapolis, Indiana 46218, USA

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Front Cover: What is this thing called
Antique Outboarding? It's restoring,
running and showing engines and best of
all, it's getting together with friends.



The Antique Outboard Motor Club Inc



CLUB BRIEFS

WITH THIS ISSUE OF THE OUTBOARDER, THE CLUB EMBLEM HAS BEEN revised (as shown, right) to reflect 84 years of outboarding within the Antique Outboard Designation. Since 1950 is the new cut-off date, many new types of engines now officially qualify for the various club events. In particular, the PO-15's, 6039 Speeditwins, late Speedifours, Big Fours, many models of Mercury and Scott have joined the ranks of antiques recognized by the Club. Membership Chairman, John Gould, has taken on the job of having new, self-stick emblems made and will soon have them available.

EFFECTIVE DECEMBER 8, 1972, MR. P. S. BROOKE, JR. ASSUMED THE office and title of Club Secretary. Mr. Brooke is a corporate attorney. His basic responsibilities include maintenance of all Club corporate papers and official awards roster.

THE CLUB IS STILL RECEIVING PUBLICITY FROM THE 1ST NATIONAL Meet held in Antioch, Illinois, this past July. The August, 1972 BOAT AND MOTOR DEALER, the November, 1972 WATERSPORT and the December, 1972 POPULAR MECHANICS all gave the Meet a good write up. The Club has received over 100 letters from these articles, resulting in many motors-for-sale ads, and several new members.

PLEASE NOTE A NEW DECAL IS AVAILABLE FOR JOHNSON K MODELS, PATTERNED AFTER JOHNSON PART No. 27-227, complete with starting and oiling instructions. Price is \$5.00 ea., post-paid. Order from Charles W. Hansen, 2108 Broward Rd., Jacksonville, FL 32218.

WATCH FOR THE EXACT DATE IN APRIL, 1973 (TO BE ANNOUNCED LATER) FOR THE "SIXTH ANNUAL Connecticut Indoor Meet, the oldest, continuous Club function" to be held at the home of Bob Zippe, 184 Brentmoor Rd., East Hartford, Conn. There'll be lots of horse trading, etc., so plan to attend!

FOR YOUR INFORMATION AND FILE - ON APRIL 12, 1972, ALL MANUFACTURING RIGHTS, INVENTORIES, tooling, etc., of the Neptune "Mighty Mite" Outboard Motor were purchased by Mr. E. R. Abrams, Jr., President, TerMar, Inc., 2300 8th St. S.W., Lehigh Acres, FL 33936. This transaction writes finis to the 42 year production of outboard motors by the Muncie Gear Works, Inc., a major outboard manufacturer during the '30's, '40's and early '50's. Mighty Mites, only, were made from about 1954 until the sale date. Future of the Mighty Mites is unknown.

JOHN GOULD, MEMBERSHIP CHAIRMAN, WILL BE SENDING OUT RENEWAL STATEMENTS AS MEMBERSHIPS expire. John has designed and produced the new statements at his own expense. They're very professional and in John's able hands, will eliminate any possible confusion about the dues situation.

THE DECEMBER, 1972 NEWSLETTER WAS PRESENTED IN NEW FORMAT BY MR. BILL MOTLEY. IT IS hoped the emphasis on ads, member news and meet dates has your approval. Let's all help keep Bill supplied with plenty of information to insure the continued success of the Newsletter.

MEMBERS ARE REMINDED THAT JANUARY, 1973 IS "MOTOR REGISTRATION MONTH" AND ARE ASKED TO update their registration files by sending the make, model, serial number and horsepower (as known) of your motors to Mr. Don Peterson, 2884 S.E. Francis, Portland, Ore. 97202.

WITHIN THE NEXT FEW WEEKS, THE AOMCI MANUAL OF PARTS SOURCES WILL BE UPDATED AND RE-printed. Any member who wants to submit new parts-availability information should send same to Mr. Sam Vance, RD 2, Unadilla, NY 13849.



From The President

January, 1973

Just one year ago, AOMCI stood in a passageway leading to a position of maturity, not only as an organization, but as a recognized member of the boating world. We faced a good many internal challenges, to include the smooth transition from one slate of officers, to another; the strengthening of the Club's Chapters and Special Interest Groups; and the seemingly simple, routine tasks of keeping member interest and the Club growing.

These internal challenges were met and, in the yearly retrospect, no longer offer the anxiety they once held. But perhaps the most important challenge we faced was not internal at all, but one that involved our open relationship with the public. I refer, of course, to the broad exposure gained by the Club during the First National Meet and the journalistic coverage thereafter. In all these avenues, we achieved praiseworthy success as an organization.

You may ask, where do we go from here? Let me share these thoughts with you -

I believe we can say with pride, that in the past year, the Club really "grew up" and now possesses a stature very solid in terms of reputation, direction and organizational health. However, I suggest we cannot rely on our past accomplishments to maintain this stature and that we must all look for new ways to strengthen the position of the organization. We can do this by strengthening our own interest and participation in Club activities. Let us not hesitate to forward new ideas, for the judging of our total performance must be based on the broadest outlook possible.

Let us not forget either that this is an organization of people with a very generous, human side. To those who offer their personal time on behalf of Club business, and to those who offer added financial aid - all just to help the Club's progress - we give our deepest thanks.

I ask each one of you to examine his own capabilities to determine in what way, no matter what magnitude, you can help build a stronger, more enthusiastic organization, improve our image everywhere, and increase the personal enjoyment of antique outboarding for all of us.

My best wishes for the New Year,



ENGINES FOR SALE ?

Parts Too? Use the Classified Ads Section of the AOMCI Newsletter.

LETTERS TO THE EDITOR

1973 MEET SCHEDULES - PLAN TO PARTICIPATE!!

The following is a list of events scheduled for the 1973 outboard season. Some of it is a bit sketchy at this date, but firm dates should be forthcoming.

San Francisco Chapter - Eric Gunderson

Spring Meet-April 29th at 9:00 a.m. at Anderson Reservoir. This is going to be a high speed event with C service races, C Racing races (PR's, Evinrude C's, or any other old C you might have). Of course, A's, B's, D's, and F's are also invited as well as all other antiques and owners who want to attend! Eric says there may be a cash prize for the fastest combination.

Regular Meet-September 29th, place and time to be announced. The usual formal events will be held at this one.

Parts Swapping Meet-February 17th at Dave Reinhartsen's from 10 a.m. - 5 p.m. Lunch will be served and a Victory Dinner will be held after at a nearby restaurant.

Knuckle Busters Chapter - Tom Luce

Informal Cruise-No firm date. Location - Lake Hopatcong. This will be a family picnic with cruise on the lake. There will be a cruise for non-planing boats and one for planing boats. These two sections are planned to start and end together with the planing boat cruise to be longer in distance, but the same in time. Contact Tom Luce.

Formal Meet-The Charles Loshes (Sr. and Jr.) will hold this one in Pennsylvania. No date firmed yet.

Yankee Chapter - Peter Hunn

The Sixth Annual Connecticut Indoor Meet-April 8th or 15th, not firmed yet. To be held at the home of Bob Zipps, 182 Brentmoor, East Hartford, Conn. This is the oldest continuous activity in the history of the Club!

The Fourth Annual Connecticut Regional Regatta-September 8, 1973. The Fourth Conn. Regatta will be held at the East Hartford Launching ramp, East Hartford, Connecticut. There will be limited organized events, but will be mostly informal which everyone seems to really enjoy! Bob Zipps will be running this event too.

Bob Thornton Race Day-Set up tentatively for the 2nd or 3rd Saturday in May, to be held at Denton, Maryland, on the premises of the Chop Tank River Boat Club (fresh water). Bob would like to see at least 5 boats including PR and SR Power. Get your gear ready! Plan to make a 2 day event out of this meet, and attend the Sunday APBA Race. After the race, the Boat Club throws its Annual Chicken Bar-B-Q - terrific!

I would personally like to thank all of the chapter presidents who have responded to my request for their schedule of events for 1973. It is only through their concerted efforts that we will have a good outline of events for the new year. Our members who attend these planned meets are the final requirement for a successful meet and they need to know in advance the dates of these events. For those who have not yet responded, please do so as soon as possible. Here is hoping for the very best year yet!

Bill Salisbury

HEY MAN! WE GOT A MINORITY GROUP!

Dear Editor: After participation in the recent Missouri meet, and also the National Meet at Antioch, I am convinced that the name of our society should be changed to better reflect the interests and activities of its members.

Approximately 1500 man-hours were expended at the meets. Of this effort, approximately:

- 5% Involved swapping or selling parts and motors
- 15% Involved talking about motors

3% Involved taking pictures of motors
 10% Involved looking at motors
 12% Involved watching other peoples' motors run
 15% Involved starting motors
 30% Involved watching others start their motors
 10% Involved running motors

At the Missouri Meet, members showed great interest in watching Casey West start engines, and contributed large amounts of advice and muscle power. They didn't show any interest once the engines started. Clarence Sitton attracted great attention when he spent the entire morning trying to start several motors. No one cared when they finally started. Ron Ellis pulled and pulled, got lots of advice, but didn't attract much attention once the engines started. If Walter Ellis hadn't contributed a lot of advice to those who were starting engines, we wouldn't have known that he was there - his engines started!

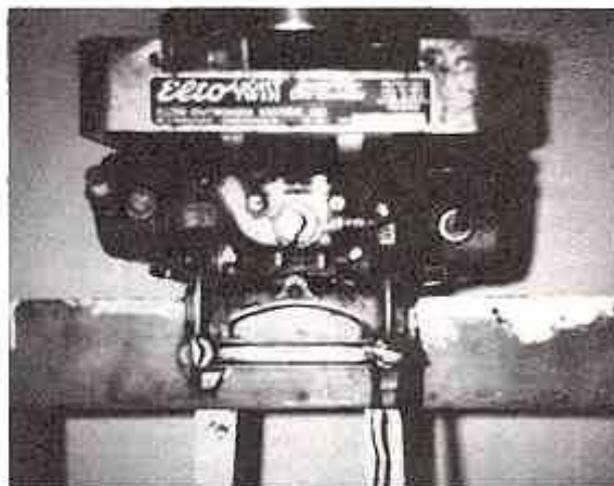
In summary - I hereby propose that the name of our organization be changed to reflect its central interest. We should call it THE ANTIQUE OUTBOARD MOTOR STARTING CLUB INC. Respectfully, David R. Reinhartsen

HERE'S A YOUNG FELLOW AND HIS DAD, OFF TO A GOOD START!

Dear Mr. Brautigam: In your letter you asked me to tell you about our motors, so I'll try.

We have only 3 motors at present, however, my dad is coming back from Delaware tonight and he might have a motor with him.

We have two Elto's and an early Evinrude single, the ser. no. is 598. The first motor we received was an Elto rudder twin; I'm not sure of the year, but it's a Model C (15616). The second Elto Dad bought from someone who's name escaped me for \$50. I believe this is an opposed twin - it is a Super G. Jim Webb said this was a 1926. The serial no. on this one is Super G 38324. The motors are registered.



As for how I enjoy the hobby, I am trying desperately to find a motor that I can afford. Last week I wrote to a Mr. George Anderson in Bloomington, Minn. inquiring about a Waterwitch. I also enjoy running old outboards. Hank Techintin

NEW OWNERS ASSOCIATION

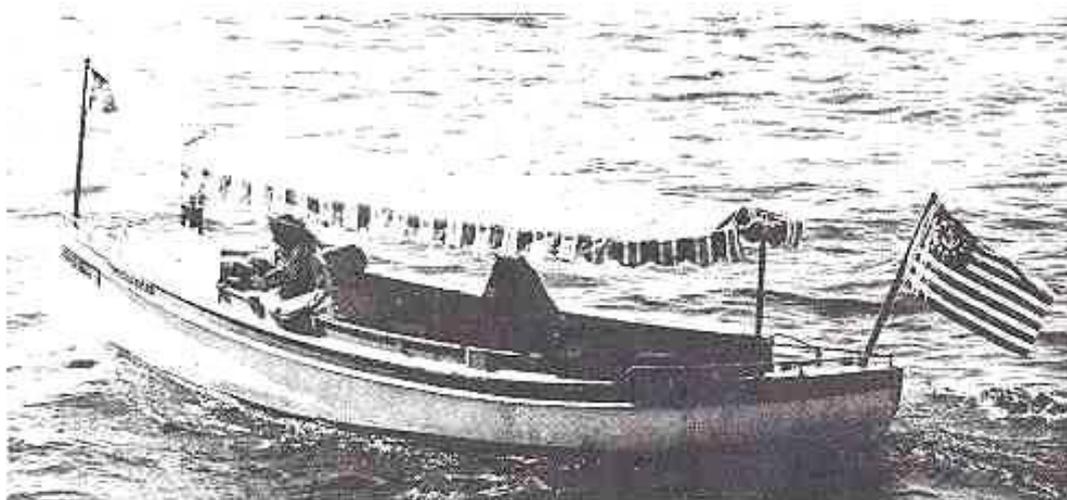
Dear Bob: Letters were recently sent to all known owners of Class F, 60-cubic inch engines. These were all made by Evinrude, and known as the Big Four, Storm Boat Motor, 4-60, and Pumpers.

I am starting an owners association, the purpose being to collect information, exchange parts and promote competition among owners. As I may have missed some Class F owners, I'd like to ask them to contact me at:

Dave Reinhartsen, 7417 Whispering Pines, Dallas, Texas 75240 (214) 233-8330

ANTIQUA OUTBOARDERS TAKE A HOLIDAY

On the next page is the story of the recent 1000 Islands Antique Boat Show, reprinted in part from the November, 1972, NATIONAL FISHERMAN. Member Robert O. Cox was the Boat Show Chairman. Member H. Tom Luce took honors with his 1915 Ferro restoration. (Ed. note: It's not clear whether Tom listed his Ferro as an auxiliary for one of the inboards, or what.)



THE ULIAETTA, an 1896 canopied launch, won the Turgeon Cup as Antique Boat of the Year at this year's 1000 Islands Antique Boat Show. She is owned by W. H. Richardson Jr. of Sheboygan Falls, Wis. whose other entry, the Ripple, a 1920 dispro, was judged best in its class.

— Photo by Bill Lingard

1000 Islands Antique Boat Show Biggest, Best In 8-Year History

By John Gardner
Technical Editor

Antique boats are fun. Ask any of the several thousands, some from as far away as New England and Florida, who showed up as spectators and contestants at the 8th Annual 1000 Islands Antique Boat Show held at Clayton, N.Y. on Aug. 19 and 20.

But in particular, ask any of the estimated several hundred who brought, or came with, the 116 boats registered in the 13 different classes, considering that more often than not these boats were brought by family groups. Incidentally, antique boating, and the restoration part, especially, is very definitely a family affair.

The weather was fine — in fact, gorgeous — but had it rained, there was enough enthusiasm in that crowd to have carried the meet through to success. The

whole town participated in the festivities, which constituted the high point of the summer.

For someone attending for the first time, it must have been hard to picture the small beginnings eight years ago when the initial show was comprised of a mere 15 boats. Each year since, as it has grown bigger it has also got better, or at least so it has seemed to one who has attended as a judge for the last four summers.

Undoubtedly there are a number of contributing reasons for this remarkable and wholly unforeseen growth, among them modern highways giving easy access to the 1000 Islands from both the United States and Canada, the increasing development of the region as a summer vacationing area, the support of the local townspeople, and the dedicated zeal of the Antique Boat Auxiliary, the group which put the show together and made it work. All

these have played their part, no doubt, but without the current interest in heritage watercraft, all the rest would have been for nothing.

The older types are not only coming back, but more and more people are finding a satisfaction not experienced before in bringing them back. To rescue some ancient, dilapidated wreck and, with patient, loving craftsmanship, to restore it to a condition of lustrous varnish and gleaming brass, is for some both an adventure and a mission, with the culmination an opportunity to share their delight with other "boat nuts" like themselves. The true "boat nut" not only admits his obsession, but glories in it.

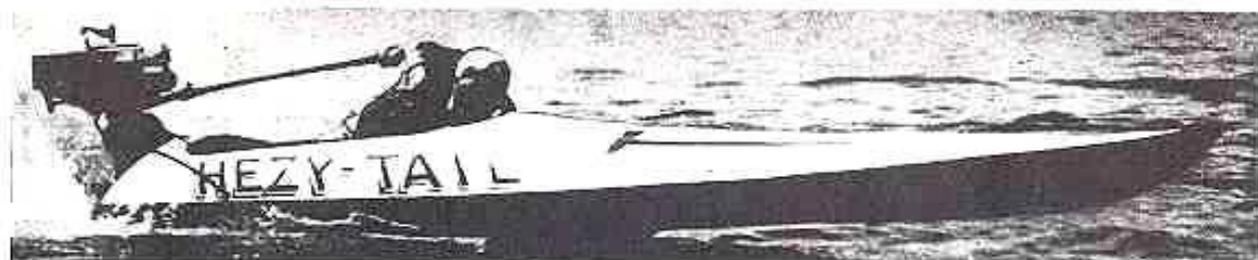
Award winners on Saturday, Aug. 19 — other than Blitzen which took top honors for the day, as already mentioned — were the B. and B., a St. Lawrence rowing skiff owned by Billing and Burton Haxall of Club Island; the

Hewitt, an 1890 St. Lawrence sailing skiff belonging to Mrs. Billing Haxall of Club Island and Riverdale, N.Y.; a rowing skiff owned by Lloyd and Roland Peacock Jr.; and an Adirondack guide-boat entered by H. Follett Hodgkins Jr. Winner in the canoe class was a Wilbur and Wheelock wooden canoe belonging to Mrs. Michael Cross. For the best restoration of an antique outboard motor, the winner was Thomas Luce of Westfield, N.J., with a 1915 Ferro.

Awards in the power boat classes exhibited on Sunday, besides those received by the Ullaetta and the Ripple, were: Cruisers, the Ann-B, a 1940 Chris-Craft owned by Robert Fitch of Syracuse; Class 2 Launch, Tom Boy, a 1937 Hutchinson owned by Richard Eckart of Groton, Mass.; Class 3 Launch, Pooh Bear, a 1926 Chris-Craft owned by Edward Larter of Dunstable, Mass.; Power Skiff, the Ann, a 1937 Bassel-built boat belonging to John Machold of Watertown, N.Y.

For the best home-built boat, William J. Morgan of Silver Bay, N.Y., received a special award, with another special award going to John W. Porter of Odessa, Ont., for his antique engine restoration.

The silver bowls presented annually by the Chris-Craft Corp. went to Pooh-Bear, 1926 Chris-Craft launch-runabout owned by Edward Larter Jr. of Dunstable, Mass., and to the 1931 Chris-Craft cruiser, Leif-the-Lucky belonging to Liz Ruth, Rochester, N.Y.



Hezy Tail, a fast plane which competed at San Diego under the guidance of R. B. Turnbull and at Lake Umbagog, was in charge of Loretta Turnbull

1928

MODERNS RECOGNIZE ATTENTION VALUE OF ANTIQUE OUTBOARD

The very newest of everything in the whole Marine field was shown at the Marine Trades Exhibit and Conference held at the giant McCormack Place in Chicago, Illinois October 5 - 9, 1972. Only Marine dealers and exhibitors could attend this great show.

Now Tom Rooney and Matt Kaufman know as much about successfully promoting a Marine Show as anyone, maybe more.

So what did these two main movers in the Show use to attract attention from dealers in every part of North America and in many foreign countries? Why, a reproduction of a Koban Ad which appeared in one of the 1915 issues of the American Boy, one of the great boy's magazines of all time. Here is what they used.

Koban rowboat motors are NOT exhibiting at MTEC in Chicago!

**Unmatched Speed
No Vibration**

Speed that runs away from all other rowboat motors. Double the power-- no vibration. DOES not SHAKE the BOAT

The Great 2-Cylinder

**KOBAN
ROWBOAT MOTOR**

Battery Ignition or built in Magneto

Last season's record proved its mettle. Absolutely dependable - easy to start - reverses by pressing button.

Trophy Winning Racer Type

The Koban has 2 opposed cylinders-- that's what removes vibration-- 3 H. P. -nearly double that of other motors-- speed propeller. Best constructed rowboat motor on market. Write for 1915 catalog. Active Agents Wanted.

Koban Mfg. Co., 222 So. Water St., Milwaukee, Wis.

1915 advertisement from the American Boy

Come with me to the marine trade show in Chicago

Not if Koban isn't exhibiting!

But every other manufacturer in the marine industry is!

And the funny part of it was a couple of the old time dealers stopped in at the Evinrude Booth, maybe others also, asking hopefully if somewhere in the show an old Koban might be exhibited. Besides this novel promotional idea drew a lot of chuckles. Jim Webb and Bob Zippes

FOR SERVICE ABOVE AND BEYOND THE CALL OF DUTY

Just a short note to describe our last operating weekend for this season.

Friends of ours have a cottage on Cooperstown Lake (Otsego Lake). They have asked us over the past few years to help them open up in the Spring and close up in the Fall. This year I took the Blto Big Quad. Saturday we put the boat in the water, after picking up a Sea King 3 hp that one of the local residents had given me. Cold!! Boy, it was only 38°, dark and heavy clouds hanging over us. The Big Quad started in its usual good fashion and we just about froze getting 3½ miles back up the lake to their dock. The rest of Sat. the wind blew and it rained a few times. We enjoyed the fire in the fireplace and a little bridge with some liquid "fuel". The boat and Big Quad sat and bobbed all day in the waves.

Sunday morning the sun was up and melting the ice that had frozen from the rain the night before. We went for a ride about noon. I now think I know what Halph Evinrude, Rob Cary and Jim Webb went through while they were testing Eltos late in the Fall. You recall reading in recent Outboarders that those three were dodging chunks of ice testing Eltos. While we were on our ride, a big black cloud blew over and we were in the middle of a snow shower. What an experience! The Big Quad just sat there and ran and ran, but the tears were really running down our faces from the cold.

We finished closing the cottage and came home and put the Big Quad to rest on the motor stand in the basement. If it could smile, I know it would, as it really performed yeoman service this year. Happy Boating, Sam Vance

THE OLD TIMERS! MAXIMUM PERFORMANCE IS STILL PRETTY GOOD

Dear Bob: Well, the boating season is over here and I suppose it is in your area too. Had some fun and gave one of John T's PR-65 hell. My son isn't quite as sure about his 20H and 55H as he used to be. I twisted his tail a couple of times with both my thundering 4-60 as well as the -65. Both truly are some engines. Must admit I'd feel better if the flywheel nuts wouldn't hand turn so easy after each run. Bud Ridings

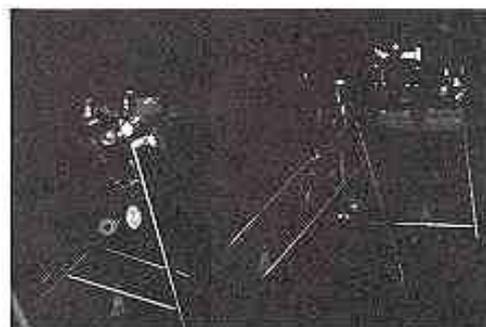


Ed. Note: Here's a couple photos submitted by Bud. One shows him about to take off in a 2 step Penn Yan runabout powered by a 1935 Quad. Speed seemed like 60 mph, but was more like 40, says Bud. The other photo is a 1934 Step-plane race boat. Note the open transom extensions.

A FINE DISPLAY ON FINE DISPLAY STANDS

Dear Bob: I am sending you a slide of the display I had at our antique car show here recently. I thought you may be able to use it in the Antique Outboarder, although it is under exposed.

These motors are displayed on stands drawn by Ron Duckworth of Burlington, Wash. You recall he had an article in the July '72 issue of the Antique Outboarder to see if there was enough interest to put the drawings in the magazine. I wrote him and got a copy of the plan, and they are terrific stands, and being folding, are great for taking to shows. I am sorry I didn't get any black and white pictures for you.



The two on the left stand are a 1930 Foldlight, a 1922 Evin. single, the middle stand has my 1927 Elto ruddertwin and my 1927 A 35 Johnson, the right side stand has my 1928 Quad and 1935 Champion single. On the left stand are my three club "Badges". The top is our Antique Outboard Club decal on a piece of stainless steel, the middle badge is my Manitoba Classic and Antique Auto Club one, and the bottom one is my Antique Auto-

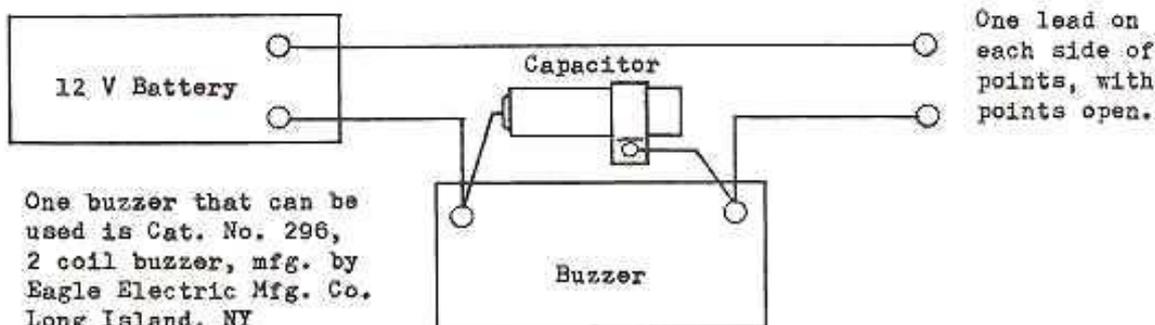
mobile Club of America badge. We have a local region here. Yours truly, Geo. Harness
COIL TESTER FROM OLD BUZZER

Please pass the following on to the readers:

An inexpensive ignition coil tester can be made from an old buzzer, a 12 volt battery, and an old ignition capacitor, connected as shown in the sketch. The buzzer is connected in series with the battery, and the capacitor in parallel with the buzzer. To use, one buzzer lead, and one battery lead are connected across the points (with the points open). If the coil is good, a nice spark should be obtained at the spark plug.

Warning: This rig will not determine whether a motor capacitor is bad. As they are inexpensive, however, they should be replaced during the restoration.

D. Reinhartsen



LET'S TRY THIS

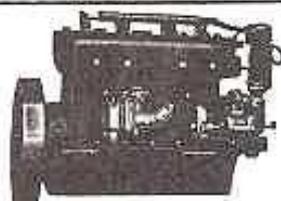
I would like to make a suggestion - why not in the back, where we have the names of the new members, run a total each issue of the total number of members we have in the Club and everyone could watch our growth. Oh well - Happy Boating and Collecting.
Bob Hackl, 15709 Dermody Ave., San Lorenzo, Calif.

A SERIOUS PROBLEM - AND A REMEDY

An analysis of the 155 members who dropped out of the Club between September, 1966 and January, 1969 shows that 111 dropped after one year of membership. Of these, 61 had 0 or an unknown number of motors, 27 had 1 motor, 19 had 2 to 10 motors and 4 had over 10 motors.

Thirty-nine dropped out after two years. Of these, 19 had 0 or an unknown number of motors, 5 had 1 motor, 9 had 2 to 10 motors and 6 had over 10 motors. One member dropped out at 3 years. He had 0 or an unknown number of motors. It is not difficult to see that 103 of 155 members who left the club and 1 or 0 motors. Obviously, they joined because they had an interest in our organization, but just as obviously we didn't keep that interest alive. The remedy is quite simple - get chapters organized and get these new members to the chapter meetings. We have a strong midwest chapter. We have a strong Twin Cities chapter, a strong East Coast chapter, a strong San Francisco chapter and others. That number of chapters is not enough. Please, get in contact with Bill Salisbury if there is not a chapter in your area and if you would like to start one.

There's still another way to reduce the dropout problem - that is, calling and otherwise contacting new members as their names are published in the magazine. Just think a new friend, a possible source of parts, and someone who has a similar interest, all for one phone call!
Dave Reinhartsen



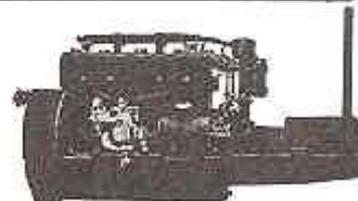
Model "J" 18 H.P. Bore 3 1/4". Stroke 4". The lowest priced engine in America. Complete as shown, \$225.00.

Interchangeable with Ford parts.

1928

Model "RS" 35 H.P. Price complete without reverse gear or starter, \$328.00.

A motor for fast run-outs.



ROBERTS MOTORS
SANDUSKY, OHIO



OF HISTORICAL INTEREST

..... *W J Webb*

About Edwin R. Hodge, Jr.

Every once in a while some ask: "Did you ever hear of an Ed Hodge? Who was Ed Hodge? What did he do? How long ago was he in Outboard Motors?" and so on. Now Dr. Edwin R. Hodge was not a pioneer in outboard motor design, building or operating; but Ed Hodge was still a genuine outboard pioneer, in that between 1947 and 1951 he researched and wrote the first complete history of outboard motors.

Ed did not set out to write a history of outboard development per se. What he started out to do and what he successfully achieved was a wonderfully well done research job on the Marketing Aspects of the Outboard Industry. The fact that it was a good history was somewhat incidental since Ed's main thoughts were on marketing developments. I am especially proud of the fact that Ed asked me to proof read the final draft and make any corrections I might find necessary. I used a lot of Ed's material in writing "The Pictorial History of Outboard Motors". This was all consolidated in a 207 page typed Doctoral Thesis titled, and here I quote the title page:

A STUDY OF THE OUTBOARD MOTOR INDUSTRY
BY
EDWIN R. HODGE, JR.

A Dissertation Submitted in Partial Fulfillment of
the Requirements for the Degree of Doctor of
Commercial Science in the School of
Business of Indiana University

INDIANA UNIVERSITY
1951

In the preface to this Dissertation, Ed had this to say:

"For forty-five years outboard motors have been used and respected by millions of people throughout the world, yet only meager information was available on how this multi-million dollar industry developed. Books have been written on the care and operation of an outboard motor, but no previous study was found that presented the marketing problems confronting the industry. The need for research in a practically unexplored field, coupled with a personal interest in outboard motors, led to the writing of this study.

The task was not to be easy. Since little secondary information was available, the main sources of information were personal interviews and unpublished company and association records. What is presented here is based on these sources.

The study would not have been possible if the industry and particular people in the industry had not taken an active interest. Special acknowledgements must be made to W. J. Webb, Hugo Biersach and Robert Rosenau of Evinrude Motors; P. A. Tanner, former Vice President of Johnson Motor Company; George Kuehn and Harold Norman of Metal Products Company; Henry Smith and D. C. Chandler of Scott-Atwater; Guy W. Hughes and Robert Greene of the Outboard Boating Club of America; the manufacturers who cooperated in the old manufacturer's questionnaire; and the 54 dealers in Milwaukee County who so generously gave of their time during the dealer study. . . . "

Since Ed was an Assistant Professor of Business Administration at what is now the University of Wisconsin-Milwaukee when he began work on his Doctoral thesis, it was natural that he come to Evinrude for whatever information we could give him. That turned out to be a very fortunate contact for both of us. At Evinrude we made every scrap of information that we had fully available to him and loaded him with enough advice, good and bad, as to various sources of information to utterly confuse a lesser man. We gave Ed pretty much the run of the place, a privilege which he fully used but did not abuse.

After working with Ed for a while, it became clear to us that this man had plenty of something that we could use - namely, a fine ability for organizing sound market research. So from about 1950 on for several years Ed went on our payroll and worked with Marv Wichert, now Evinrude's Director of Accounting and Administrative Assistant to Evinrude's General Manager, Bob Scott, in organizing Evinrude's statistical market Research Department. All the while he continued to teach at UW-M, eventually achieving a full Professorship, as well as becoming Director of the School of Commerce.

While working on the research project, Ed and his family couldn't help becoming boating fans. They began to take weekend trips with boats and motors borrowed from the pool of motors which Evinrude maintained for its employees.

Finally Ed and his wife, Marie, bought themselves an outboard cruiser and had themselves a glorious family cruise vacation in 1952. Marie Hodge had some camera skills which she used to good advantage in filming interesting items on this cruise. Her camera work was developed into two films for public showing - "Outboard Cruising - Family Style" for Evinrude and "Holiday Afloat" for the National Association of Boat and Engine Manufacturers. These films had wide circulation in the '50s, but are no longer available.

One unforgettable scene, that drew gales of nostalgic sighs and chuckles everywhere, showed Mary Lou Hodge, aged 3, rapt in 101% full enjoyment of a ketchup and mustard smeared hot dog. Mary Lou, now married and living in Toledo, Ohio has a little girl of her own. I hope that some day that little girl will get a look at 3 year old Mary Lou and her hot dog.

Ed Hodge was born in Wolcottville, Indiana, graduated from Rockville, Indiana High School in 1934 and from Indiana University in 1938. He worked his way through, but found time for student activities, among them band. He was elected to the honorary Commerce fraternity, Beta Gamma Sigma and the Professional Commerce fraternity Alpha Kappa Psi.

Marie Hodge (nee, Ranstead) lived her early years in Chicago, was graduated from Los Angeles High School (now of Room 222 fame) in 1934. She attended UCLA but returned to Chicago and was graduated from Northwestern University in 1938.

Ed and Marie both received their Masters degrees in Business Administration from Northwestern in 1939. They met at Northwestern and were married at Evanston, Ill. in June 1940. They had four children - Charles, Helen, Mary Lou and Art.

In 1958 the Hodges moved to Toledo, Ohio, where Ed took over as Dean of the College of Business Administration. After eight very successful years at Toledo in which he greatly increased the scope of his department, Ed was suddenly claimed by a heart attack on April 19, 1965.

As was normal, once they had been bitten by the Boating Bug, the Hodges were hooked for good. They finally built the "Hodge Podge", an outboard cruiser that fulfilled all the requirements brought to light in their years of outboard cruising. In it, they and

Resolution:

The untimely passing of Dr. Edwin R. Hodge, Jr., Dean of the College of Business Administration, and professor of Marketing at The University of Toledo, has brought grief to his legion of friends and acquaintances within the University community, as well as a sense of deep gratitude for the magnificent legacy which he leaves behind in which so many of us share.

Dr. Hodge came to the University as a seasoned and mature business educator. He received a Bachelor of Science degree in Marketing from Indiana University, a Master's degree in Business Administration and Retailing from Northwestern University, and was awarded his Doctor of Business Administration degree from Indiana University in 1951. His membership in scholarly and professional organizations included Beta Gamma Sigma, Alpha Kappa Psi, Phi Eta Sigma, and the American Marketing Association. However, his background in Business Administration was not limited solely to academic and educational training. Prior to returning to university work Dr. Hodge had engaged in a successful business career including significant positions in sales and marketing administration with Sears Roebuck & Company, Pate Oil Co., Firestone Home and Auto Stores, and the Texas Company, as well as consulting and research relationships for Allis-Chalmers Mfg. Co. and the Evinrude Motor Company. He was, further, an authority on recreational boating; his services were sought by the government as an expert witness in drafting boating regulations, by boating manufacturers and by consumer groups in the boating industry. Terminating this career path, Dr. Hodge joined the faculty of the University of Wisconsin, where he served as professor of Marketing and director of the university's Milwaukee Division of the School of Commerce. In 1958 he was chosen to head the College of Business Administration at The University of Toledo, a decision which was rich in benefits for our University.

His first legacy to us is, of course, a vigorous and dynamic College of Business Administration reflecting the excellence of his academic leadership. Dean Hodge was a visionary whose imagination, ebullience, and love of excellence sparked many new developments within the College. Witness his consistent effort toward establishing a research arm of the College, which is beginning to show fruitful results; his continuous effort to increase effective inter-relationships between the local business community and government agencies and the College; and the establishment of an active business alumni association. At the same time, Dean Hodge

insisted that all such developments and growth be based on solid foundations. Thus he worked diligently to recruit promising scholars for addition to his faculty. He raised standards of the College in admissions and for graduation, and achieved accreditation status second to none in Ohio, which was the envy of many wealthier and larger universities outside the state. He began an internship program to provide outstanding students with practical business experience, and under his direction an honors program within the College was established. He fully recognized the implications of new mathematical, statistical and behavioral science approaches for the study of Business Administration and incorporated these new areas into the curriculum, constantly being revised to include the new frontiers of knowledge.

He was also the able administrator, careful that appropriate administrative systems kept the College operating efficiently. Dean Hodge, who knew where he was going and what was needed, wanted all to share this clarity of goals. He, consequently, developed a system of course work cycling so that students and faculty had a clear picture of their academic programs and schedules; organized a two-division college; and developed an effective system of student records. Each of these administrative systems was the practical manifestation of his penchant for providing appropriate direction.

Confident of a pattern of solid development and growth, Dean Hodge traveled tirelessly informing educators and businessmen across the nation of the achievements and promise of his beloved College and University. Knowledge and recognition of both in the cosmopolitan educational community owes much to this enthusiastic emissary.

In terms of administrative style, Dean Hodge was the charismatic leader able to obtain maximum ego-involvement from his faculty. Few administrators could match his openness to ideas, ability to incorporate the faculty's special skills and insights into the decision-making structure, and humility in acceptance of critical evaluation. At the same time, he was fully capable in providing under his own initiative a full gamut of services to his faculty so that teaching and research activities received maximum support and minimum interference from the administrative system. Indeed, he was that unique leader who knew when to exercise authority, and when to share it, in order to provide maximum stimulation for growth and innovation within his College. But all this having been said, both

within his College and when working with his fellow deans from other colleges of the University, it was often his good Hoosier common sense which saved the day - he got right to the heart of a problem, evidencing his unique ability to synthesize and to put matters into effective perspective.

That his ideas were well received reflected a common realization of all who worked with him that: behind these multi-faceted administrative skills stood a man who was totally dedicated to the College of Business Administration, to The University of Toledo and to the City of Toledo.

Thus it is not just to the College and to the University that Dean Hodge bequeathed his legacy of service. The city of Toledo found in Dean Hodge one of her greatest champions. No life-long resident spoke more eloquently of the merits of the city of Toledo, with greater pride in the city's accomplishments, or with greater enthusiasm for her future. He was truly one of the city's most articulate ambassadors. However, his pride in and concern with the community was not merely representative. With characteristic energy, Dr. Hodge contributed generously to many of her institutions including service as a member of the Board of the Toledo Area Boy Scout Council, as member of the Advisory Board and Chairman of the Development and Finance Committee of St. Charles Hospital, as a Board member of the Monroe St. Methodist Church, and as a member of the Board of Trustees of the Lucas County Improvement Corporation.

No matter how outstanding and enduring these contributions may be, however, his greatest legacy is the memory of the warmth and goodness of his personal relations with so many of us.

All, however briefly acquainted with Dean Hodge, remember the breadth of his smile, the heartiness of his handshake, and the wholesome warmth of his folksy humor. Beyond these pleasing personal mannerisms, to those students, faculty and community members, fortunate enough to have known him on more intimate terms, the impeccability of his integrity, the depth of his goodness, and the perspicuity of his personal wisdom made him even more of a giant than his 6'2" stature.

Dean Hodge devoted himself to students and faculty without reserve. Despite vexing administrative duties and crowded schedules, Dean Hodge always found time to talk with students and colleagues, sharing hopes and fears, joys and sorrows. He was, in every real sense, academic "father" to them all; proud of their achievements, understanding of their difficulties,

patient with failings, although firm in redirecting them toward wiser courses of action, and perhaps above all, a friend available to the unsure and the troubled. While many will remember his pride in their accomplishments and successes, and his sponsorship in bringing the attention of the academic and business communities to their achievements, many will also know that his understanding and counsel saw them through their difficulties and brought them back from the brink of personal and academic failure. In an age of complex social inter-relationships which, without love, can leave the individual with a sense of impersonality, Dean Hodge towered as an example of an integral person concerned with each of us, student and faculty, as individual persons. In return for his spontaneous friendship, and the lack of duplicity which marked his very being, one needed only to return to him sincerity.

In memory of an esteemed leader in business education, a great contributor and friend of our University, a champion of our community, and a beloved colleague, the faculty expresses its deep sense of loss and gratitude for this legacy of service and friendship given so selflessly by Dean Edwin R. Hodge, Jr.

- - - - -

This resolution adopted unanimously by the Faculty of The University of Toledo at its meeting on May 7, 1965.

Ada R. Skelding, Secretary

their family of four cruised all the Great Lakes, Mississippi, St. Croix, Wisconsin and Hudson Rivers, Erie Canal, Kentucky Lake and points between.

After Ed's death, the Faculty of the University of Toledo passed a four page resolution which is quoted herein. This gives a true assessment of this remarkable man.

Over the several years of our association at Evinrude, I became very well acquainted with Ed and Marie. Ordinary adjectives of praise are not adequate. I can only say that the Hodges were truly the salt of the earth.

Marie Hodge is now Assistant to the Dean of the College of Business Administration at Bowling Green University (Ohio). She writes in part -

"I doubt if another Doctoral Dissertation ever paid such rewards as Ed's. I am still reaping. The sailing we do at every opportunity continues the boating tradition that Evinrude enabled Ed to start. Art (the Hodge's youngest) starts Engineering at Toledo University this Fall and wants to be a Naval Architect. I hope he can make it. His father would be so proud."

And to all of this, I can only add what every Antiquer knows - the boating virus never releases a victim. Should any reader be interested in further study of Dr. Ed Hodge's dissertation, please request it by title (see beginning of this story), through the Interlibrary Loan Section of your nearest public library. Or should anyone visit Indiana University at Bloomington, Indiana, he may examine a copy at either the Business Library or the Main Library.



THE EDWIN HODGE FAMILY IN 1954, ABOUT WHEN THE HODGES BOUGHT THEIR FIRST OUTBOARD CRUISER. ED IS HOLDING MARY LOU; CHARLES AND HELEN NEXT, & MARIE IS HOLDING ART.

ANTIQUA OUTBOARD TACHOMETER

David R. Reinhartsen

One item which should be in every Antique Outboarder's gadget box is a tachometer. Unfortunately most tachometers which are intended for use on outboards must be attached to the outboard permanently, require a battery or are mechanical and difficult to operate (especially when your hand keeps touching the spark plug). The accompanying photographs and sketches show a tachometer which I built several years ago. The cost was around \$20, using parts from my junk box. As many members of the Antique Outboard Motor Club have electronic experience, or access to someone who does, I thought I'd publish the circuit diagram and describe the method of operation.

The device is unique, for it requires no electrical connection to the outboard except to the outside of any spark plug wire and the block of the engine. It is also unique in that it is perfectly accurate when the batteries are almost dead. The total circuit is divided into four parts:

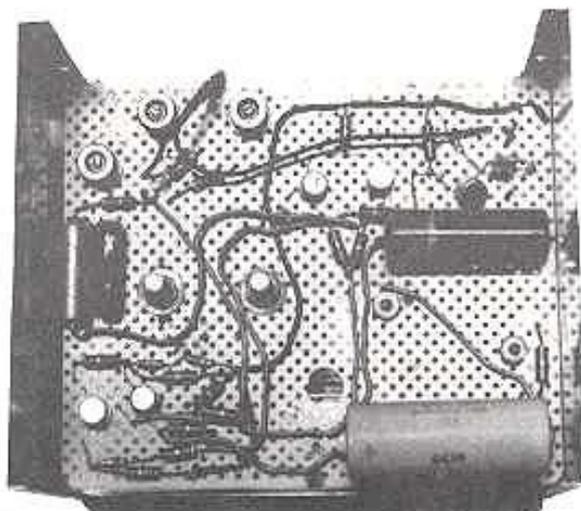
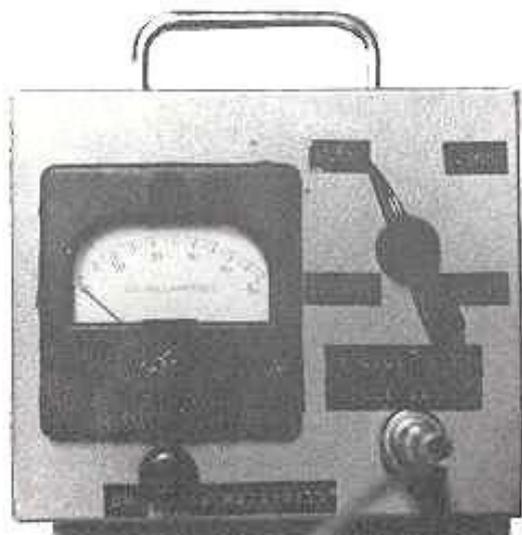
The input section consists of sensitivity control and 2 diodes, one for thresholding of the signal and one for temperature compensation of the input transistor. The transistor in the input section also serves to make the unit more sensitive. The sensitivity control adjusts the circuit to the strength of the magneto.

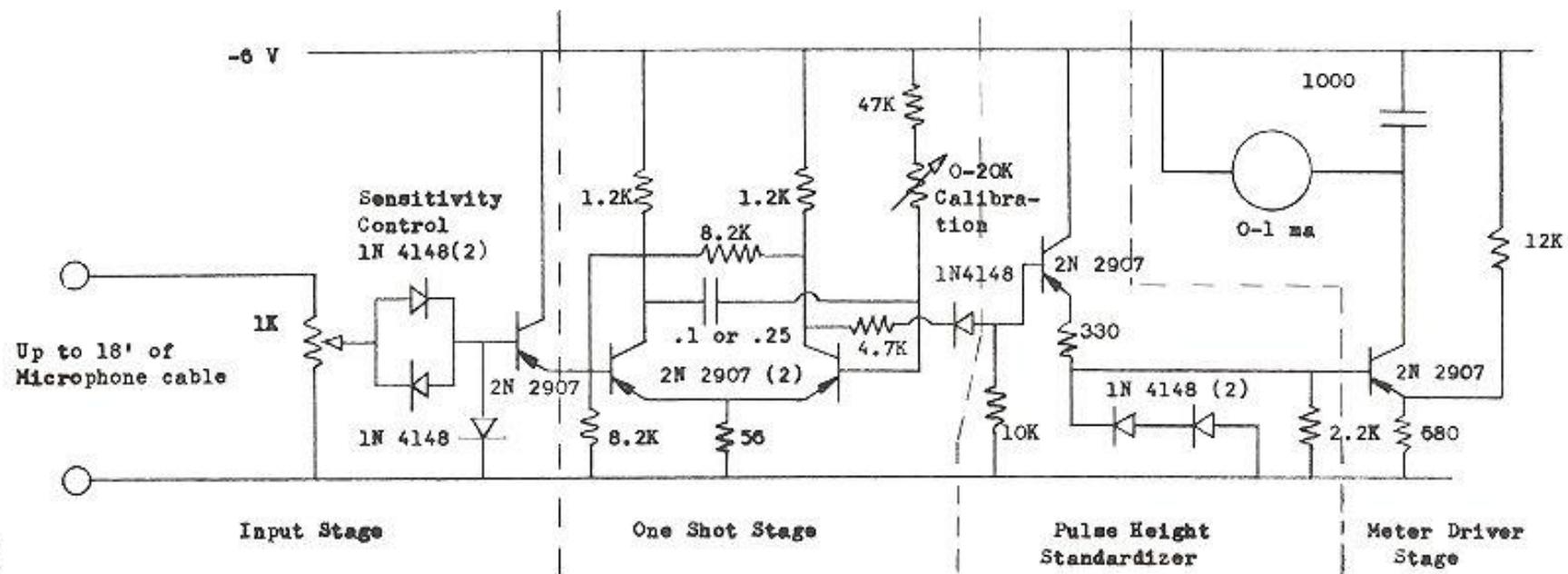
The second part of the circuit is a simple, one shot multivibrator which, in effect, makes each spark appear the same to the circuit.

The third part of the circuit makes the circuit almost insensitive to battery condition by clipping the output of the one shot to a uniform voltage.

The final portion of the circuit is the meter driver which controls the meter and smooths the needle movement. The 12K resistor from the emitter to the battery provides final compensation so that the battery voltage can vary from 6 volts all the way down to 2 volts and still give perfectly accurate RPM readings. The thousand microfarad capacitor provides damping for the meter so that at low engine speeds, the needle doesn't chatter too much.

The tachometer is extremely simple to use. You clip the shield of the input lead to any point on the engine block and the other lead to the outside of any spark plug wire. Decide on the scale, start the engine and increase the sensitivity control setting until a steady reading is obtained on the face of the meter. The scale can be set at zero to twenty-five hundred RPM, zero to five thousand RPM and zero to ten thousand RPM depending on the capability of your engine.





18

Super Tachometer Model DAR

I've used the tach on practically all of my motors, on my car and on my lawn mower. It has survived some rugged use in race boats even. I've been pleased with it - I know you will be too!



RICHARD A. HAWIE

NOTES FROM THE CURATOR

This will be a series of short notes and trivia since several long research projects have occupied my time. I note one misidentification on page 37 of the October issue. The Johnson VR should be a VR-50 not a VR-55. The dual carburetor rotary valve was supposed to have been used on the early VR-50's only. The VR-50 had a sleeve bearing crankcase while the VR-55 had a roller bearing crankcase. The difference in the two models is more than just a digit change.

Bendix mounted their outboard power heads on a reverse gear to produce a small air-cooled inboard in 1940. Both the Single and Twin were offered. The power head was "demountable for easy servicing and theft protection". The 1941 specifications for the inboard and outboard versions were:

Inboard Single, Model SR: 2.5 HP @ 3300 RPM, 2-1/16" bore, 1-1/2" stroke, 5.01 C.I., 50 lbs.

Inboard Twin, Model TR: 5 HP @ 4000 RPM, 2-1/16" bore, 1-1/2" stroke, 10.02 C.I., 56 lbs.

Outboard Single, Model SMD: 2.5 HP @ 3300 RPM, 2-1/16" bore, 1-1/2" stroke, 5.01 C.I., 27 lbs.

Outboard Twin, Model TMD: 5 HP @ 4000 RPM, 2-1/16" bore, 1-1/2" stroke, 10.02 C.I., 41 lbs.

The gear box on the inboard versions added some weight to the outfit so that the Twin was not much heavier than the Single. The only picture I have found so far of the set-up does not clearly show what happened to the exhaust!

Bendix did not resume production of outboards after World War II so these outboard-powered inboards were only produced for two years and should be rare. If you could find one, it would be an interesting variation of an outboard motor.

"Mel" Crook in his column More R.P.M. in Rudder, March, 1939, wrote that Bendix had a "private exhibit of a 4-cylinder outboard of 14 or 15 cubic inches piston displacement which pulls one horsepower per cubic inch at moderate revolution speed. Each cylinder has its own supercharger of the positive displacement type". This is the only mention I've found of this motor. It is not clear whether it was 2 cycle or 4 cycle motor.

Richard McFadyen in his column With the Outboarders in Motor Boating, January, 1938, writes that Paul Wearly "collaborated on the design of a six cylinder outboard motor for the Army storm boats. This motor, made by Gar Wood, is supercharged and of the four cycle type. The valves are operated by single overhead cam and the motor is equipped with a fuel synchronizing clutch". Paul Wearly won national outboard championships in classes A, B and C, Division II, before World War II.



The neatest, smartest, surest dinghy, tender and auxiliary power



ECLIPSE
Air-Cooled
INBOARDS!

E.A.P. (Eclipse Air-Cooled) Inboard motor with its own exhaust, 2-1/16" bore, 1-1/2" stroke, 5.01 C.I., 50 lbs. \$159
 E.A.P. (Eclipse Air-Cooled) Inboard motor with its own exhaust, 2-1/16" bore, 1-1/2" stroke, 10.02 C.I., 56 lbs. \$119

BENDIX AVIATION CORP
MARINE DIVISION
754 Lexington Avenue, Brooklyn

If we include the mysterious Lockwood "Flying 4" 4 cylinder, 4 cycle motor, there are three rare, unusual, mysterious motors to search for -- enough to wet the appetite of the most jaded of collectors.

The following is a list of the estimated outboard motor sales as given by Mr. Pat Tanner, then a vice-president of Johnson Motors, to a meeting of the Outboard Boating Club of America in September, 1949, as reported in the November, 1949, issue of Rudder Magazine:

1919	12,100		
1920	17,000		
1921	12,100		
1922	15,500		
1923	21,000		
1924	21,100		
1925	26,600		
1926	33,400		
1927	41,500		
1928	53,900		
1929	59,200		
1930	<u>44,000</u>	357,400	12 years
1931	14,000		
1932	<u>12,000</u>	26,000	2 years
1933	15,000		
1934	23,000		
1935	41,000		
1936	50,000		
1937	100,000		
1938	100,000		
1939	120,000		
1940	130,000		
1941	<u>170,000</u>	749,000	9 years
World War II			4 years
1946	250,000		
1947	625,000		
1948	500,000		
1949	<u>350,000</u>	1,725,000	4 years
Total (30 years)		2,858,400	

Picture Page 313, January, 1940 Motor Boating

AOMCI New Members (CONTINUED FROM BACK COVER)

Today's
Membership
Count

402

A cordial welcome is extended to all newcomers. Other members are encouraged to make contact either by writing or visiting. Show these new members how to join chapters and special interest groups. Make them feel like they really belong!

Thomas B. Roberts, Jr.
5190 Scenic Drive
Whitehall, MI 49461

Earl E. Biermann
7830 Alden Way N.E.
Minneapolis, MN 55432

D. S. McGarry
92 Price Ave.
Welland, Ont., Canada

Charles M. Green
115 Mitchell St.
Boise, ID 83702

Eugene S. Fenelon
76 Walker Rd.
Swampscott, MA 01907

Gordon T. Christopher
454 Woodland Ave.
Moberly, MO 65270

R. E. Pfitzenreuter
4425 Jay Dr.
Madison, WI 53704

James M. Cason
P.O. Box 455
Silver Lake, WI 53170

J. C. Ellis
107 W. 64 Terr. No.
Kansas City, MO 64118

THE SCRAPBOOK of ANTIQUE ADS

By Don Peterson

JEWEL DETACHABLE ELECTRIC ROWBOAT MOTOR

Attaches to any rowboat; runs on 2 six-volt batteries. No odor, noise or dangerous gasoline. Complete without batteries, \$75. With batteries, \$100.

JEWEL OPEN WINDOW STORAGE BATTERY

Look inside your battery through the patented open window. See condition of plates and height of acid. Jewel Special 6-60, \$8. 6-80, \$12. 6-100, \$15. 6-150 Starting Battery, \$18. We make house lighting plants. Good Reliable Agents Wanted. Write for catalog.

JEWEL ELECTRIC CO., 1015 Jewell Chicago

Joymotor For Rowboats and Canoes



Marine Engine Dealers Write for Agency Proposition

Joy Motor will fit any boat ever made—square stern, pointed stern or decked stern—without additional attachments. Just hook it on or off in a jiffy. Joy motor's unusual bracket takes care of everything. No matter where you take Joymotor you know it will fit the boat you have to use. For Canoes Joymotor's special bracket sets motor low down—safety first.

Reversing Propeller

The exclusive patented feature of Joy Motor that makes it the safest, most convenient, easiest to handle motor in the world. No more danger of accidents. No drifting or paddling to dock or shore. No more awkward, hazardous riding to reverse the motor. Just move the steering tiller to right or left and Joy Motor almost instantly—

Stops your boat and backs it up without reversing the engine

"Joymotor is rightly named!"

"A joy to own!"—evidently built to enjoy!—that's what owners tell us. Easily portable. Weighs 22 lbs. Runs your boat 7 to 8 miles per hour—carries 10 to 25. Has real high tension magnets and real spark, perfect timing system and does not have slightest tendency to overheat. Write postal card for catalog and life size picture of Joymotor, giving full details of the boat, your preferred portable motor or boat. Write postal card to:

Joy Engineering Company
223 Tribune Bldg., CHICAGO

1915 Joymotor

1913 Good-bye to Oars

Agents wanted to handle the "Caille Portable Motors" for British Columbia. We handle all sizes of "Caille" engines from 2 H. P. to 30 H. P., one cylinder to four cylinder.

"Time Tried and Storm Tested"

Send for catalogues to

A. W. LePage Casoline Engine & Supply Co.

1178 Georgia Street, Vancouver, B. C.

Also Agents for "Balaco" and "Froyer-Fox"

1913 Caille

The Miller Row Boat Motor

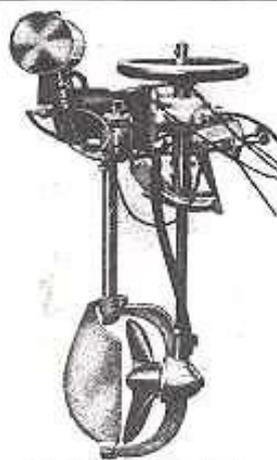
WITH REVERSIBLE PROPELLER

is the only Outboard Motor fitted with a propeller equal to a clutch control. It has three different positions, namely a forward, reverse, and neutral position, the latter causing the boat to stand still while motor is running. All changes are instantly made by the steering lever without changing the speed or the direction of the motor in the least. This device as well as many other exclusive features are absolutely covered by basic patent. Miller Motors are furnished with Battery, Ignition, or Switch. Waterproof Reversible Magneto, and other attachments. MILLER MARINE ENGINES are built with one, two and four cylinders, ranging in size from 4 to 40 H. P. They are of the four-cycle type, strictly high grade, of ample power and good efficiency.

MILLER GAS & VACUUM ENGINE COMPANY
2320-2331 N. Yelken Ave. Chicago, Ill., U. S. A.
BRANCH OFFICES: 12 Marion St., Seattle; 47 First St., Portland; 61 Market St., San Francisco; 305 S. 2nd St., Los Angeles.



Write us for literature

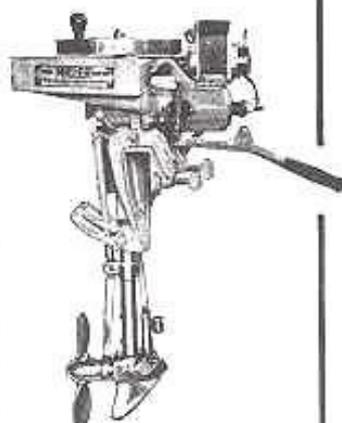


The "PORTO" Motor

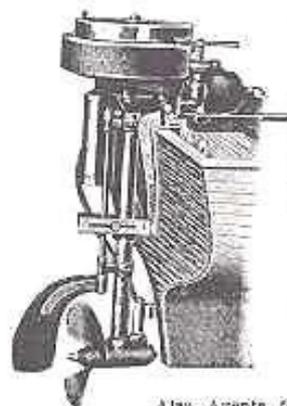
Makes a Motor Boat of any boat in five minutes.

2-H. P. complete outfit \$65

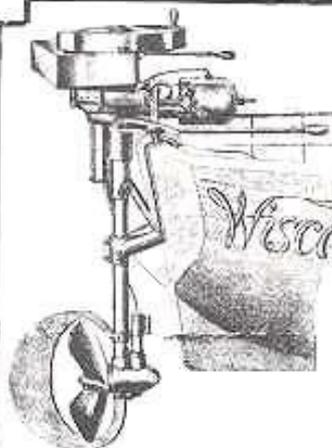
1912 Waterman



1915 Miller



1913 Caille



1912 Wisconsin



1914 Wilcox

Special Interest Group News

Here's a list of the different Interest Groups intended to help focus on your needs for literature, information, parts and fellowship regarding your favorite motor or subject. Notice that not all of the Groups have leaders - volunteers are needed! Write to the V.P. Technical Services, Sam Vance, RD 2, Unadilla, NY 13849.

Giant Twin - Don Peterson	Mercury - Bill Kelly	Clarke - Phil Kranz
Class "F" Owners - D. Reinhartsen	Unusual and rare motors	History - W. J. Webb
Johnson PO - Bill Salisbury	Inboards - P.S. Brooke Jr.	Elton - Sam Vance
Johnson V Series - J. Harrison	Racing - Eric Gunderson	Cailles - W. Weidmann
Johnson A Series -	Watermans - Dick A. Hawie	Lockwood - R. Anderson
Antique Boats and equipment	Research - Dick A. Hawie	Martin - Glen Ollila

SMALL INBOARDS REVISITED

By P. S. Brooke, Jr.

A contributor to "Yachting" for 1910, commenting on the New York Boat Show, allowed as how there "were no freaks to be seen in boats or engines from a 75 horsepower example to a one cylinder one horsepower Brownie Canoe Motor." At this show, power-operated bilge pumps were much in evidence--no doubt a big help to the boater with a leaky hull or stuffing box.

The Detroit Boat Company of Detroit, Michigan, advertised their 1910 Speed Canoe, twenty feet in length and equipped with a 2 horsepower engine for \$110. Other advertisers in the "Yachting" issues for 1910 were the Progressive Manufacturing Company of Torrington, Conn., claiming their engines in sizes from 1 to 4 cylinders and horsepowers of 1½ to 25 marketed under the brand name of "Eagle" had been made for ten years at competitive prices; Bay State Motor Works claimed to have invested fifteen years in development work on their line of 2 and 4 cycle engines. Fairbanks-Morse was touting the qualities of their 3½ horsepower 2 cycle engine as was the Mianus firm of Mianus, Conn., who offered a line of marine engines ranging in power from three to fifteen horsepower.

An article in the December 1910 issue of "Yachting" which may or may not have caused much of a stir at the time, described the Evinrude detachable motor stating that this device converted a rowboat into a launch. The address of the factory was very fitting for it was 245 Lake Street, Milwaukee, Wisc.

Other articles afield from the subject of inboard marine engines appeared in the February 1910 issue of "Rudder." One was entitled "How to Build an Airplane." Another described a 30-foot boat owned and operated by John Wilkinson, one of the principal designers of the Franklin automobile. You guessed it--the boat was powered with a Franklin automobile engine and managed to produce speeds of 18 to 20 miles per hour--the predecessor of the examples we see today of boats powered with VW engines. A third article in this issue was concerned with the construction of a ten-foot power dinghy equipped with a 2 to 3 horsepower engine weighing 75 to 130 lbs.

The Cady Company boasted that the United States Navy had equipped their life-saving and lighthouse boats with their brand and that, naturally, the engines were performing beautifully. In later years Cady employed Ford components and produced a line of marine engines called "Cady Ford." Another automobile engine gone to sea in these times was the single-cylinder Brush designed by Alanson Brush who designed the engine for the early model Cadillac. The Wilpen Company of Detroit, Mich., offered the "Brushmarine" rated at three to five horsepower. This was a good utilization of this one cylinder auto engine design as soon the four-cylinder Model T Ford was to sweep the one-cylinder automobile concept from the motoring scene.

Up in Traverse City, Mich., we find the Eclipse marine engine being offered in ratings of one to four and one half horsepower for the one cylinder model and five to ten horsepower in the two cylinder model. These engines were claimed to be as "reliable as an eight day clock."

Issues of "Motor Boating" for 1910 carried advertising for the Lisk Marine engine manufactured by George A. Lisk in Detroit, Mich.; the Hall Opposed

Marine Engine in sizes from three horsepower to fifty produced in Byesville, Ohio; the Thelma Engine made by the Thelma Motor Works in Detroit; the Lacha of Newburgh, N.Y., in sizes from two to forty-five horsepower, claimed to be the "world's simplest."

The Ferro Machine and Foundry Co. of Cleveland, Ohio, advertised that they were the largest marine engine builders in the world at this time, and claimed that they had been awarded three gold medals at the Alaska-Yukon Pacific Exposition. They asserted that their line of 1910 engines represented the highest development in marine construction and that 1,100 men were employed in the factory turning out engines. Ferro further boasted "leading automobile manufacturers recognize the high standard of Ferro materials and workmanship and secure their cylinders and castings from the Ferro foundry. Ferro engines are made from the same high-grade materials, with the same modern equipment and skilled workmanship as automobile engines." This statement might cause a marine engine purist to wince a bit!

An article in the publication Motor Boat describes the Scripps Marine engine enterprises in glowing terms, stating in part, "Scripps marine motors occupy a distinct department of their own in the motorboat field. The Scripps Motor Company has from the very beginning of its operations ignored cheapness but has instead built only for the discriminating boat owner who realizes the superiority of a marine motor built with all the care that is put on the engine used in the highest type of automobiles. All Scripps motors are the four-cycle type and can be compared in finish, refinement and design and quality of materials to the motors seen in such automobiles as the Packard Peerless and other motor cars of the very highest grade."

In the same city of Detroit, the Caille Perfection Motor Company was turning out its line of marine engines finished with three coats of blue enamel baked on and striped with gold paint. The finish was claimed to be durable enough to last as long as the engine. One, two, three and four cylinder models in horsepower ratings of two to twenty were offered. Scheduled output for 1910 was to be 3,000 units.

On the banks of Lake Minnetonka at Wayzata, Minn., was the location of the Campbell Motor Company, manufacturers of four-cycle marine engines distributed in New York by the well-known firm of Bruns, Kimball Co. The most distinct feature of these engines was the open base feature. Sizes ranged from five to sixty horsepower, one to six cylinders.

A concern that built both marine and aviation engines was the Elbridge Engine Company of Rochester, New York. Production of all engines was under 1,000 units per year. The company stated that practically all engines were built to order for the purchaser. Sizes offered were one to six cylinder in both water cooled and air cooled. A nine horsepower Elbridge engine in a light hull of 18 feet was stated to have propelled the same at a speed of 17.6 mph turning the screw at 1350 revolutions per minute.

One of the oldest firms making gasoline marine engines at this time was the Pennsylvania Iron Works Company located at Eddystone, Penn. This company put the first models of the Globe gasoline engines on the market in 1891. Originally located in Philadelphia, this manufacturer moved to Eddystone in 1907 and occupied a new plant on a fourteen acre site on the banks of the Delaware River. While originally the Globe engines were all four cycle, the company introduced a two cycle line called the Eddystone Globe which differed from the usual type in that the fuel mixture was compressed in the lower end of the cylinder itself instead of in the crankcase. Thus the crankcase was entirely open so that the connecting rod could be readily inspected and adjusted. The sizes offered commenced with a 5 horsepower, single cylinder, two-cycle type.

Buffalo marine engines, named after the city in which they were manufactured, were offered in sizes from two horsepower on up. The Buffalo Gasolene Motor Company (note spelling of "Gasolene") were getting a lot of mileage advertising-wise out of the records being set by the racing boat, "Hoosier Boy," equipped with a Buffalo six-cylinder speed engine. This boat was declared champion of the Great Lakes and Central West at the close of the 1909 racing season. The Buffalo people announced for 1910 an improved "V" type eight cylinder high speed engine.

The Gray Motor Company of Detroit, which was destined to become a dominant factor in the marine engine field in later years, announced that in anticipation of shortages of raw materials, they had made up several thousand completed engines of all sizes and had warehoused them for future delivery. Gray also stressed the fact that they maintained a huge stock of parts and that parts would be shipped the same day the order was received--an early attempt to keep the customer in the field happy.

AOMCI

SPECIAL

Feature

the CURREY BULMER Collection

PART II

by: KEN KIRK

Part I of the "Currey Bulmer Collection", by Special Features Editor, Jim Smith, appeared in the April 1971 issue of the 'Antique Outboarder'. It dealt with twelve (12) of the twenty-six (26) engines housed in this permanent display at Toronto's Marine Museum. Part II will discuss the remaining fourteen (14) outboards.

The most interesting and unique engine in the entire collection is the "British" Watermota. Watermota outboards were manufactured by Walter D. Fair and Company, Pembroke Engineering Works, Hampton Wick, Middlesex, from 1913 to 1964. The Fair Company manufactured different outboard and inboard engines over the years; however, the sample in the Bulmer collection has a single, forward pointing cylinder and develops "3 - 4 h.p.", according to the identification plate. The model and serial number are given as A - 2746 and I estimate the date of manufacture as about 1920.

This engine is of large proportions, considering its horsepower, being about 50" from skeg to flywheel and weighing in at 95 pounds. The Watermota looks a great deal like a 1916-17 Waterman with its large brass rudder steering arrangement and prominent 12" diameter flywheel. The Watermota has a high tension, gear driven magneto mounted on top of the forward pointing cast iron cylinder. The cylinder is fitted with a copper water jacket. Inside there is an aluminum alloy piston. The water pump is gear driven and is located in the underwater gear case. The carburetor is of the float feed variety. A large, calibrated copper cup fits over the flywheel nut and is designed to measure oil for mixture with petrol.

My estimate of the Watermota's vintage is based on an article in The Motor Boat Marine Manual, published in London, England in 1926. This book has an article, complete with pictures, on a Watermota, virtually identical to the one in the Bulmer collection. The Watermota discussed in 1926, however, has the additional feature of a variable pitch propeller operated by a lever on the port side, again very similar to the arrangement on a 1916-17 Waterman. The Bulmer engine does not have this feature, which leaves me to believe that the motor is a pre-1926 model.



AOMCI Special Features Editor
James L. Smith

The collection includes another British built engine, the Britannia Lightwin. This engine was manufactured by the British Motor Boat Company, commonly referred to as B.M.B. B.M.B. manufactured outboards from 1932 through 1950. The engine in the Bulmer collection is a pre-war vintage and is a model 178 opposed twin. It utilizes lightweight aluminum extensively and weighs 55 pounds. The exhaust system is below water; however, the deeply finned muffler mounted under the gas tank has an extremely large cutout on the port side. An unusual feature of the Britannia Lightwin is that the lower unit is entirely chrome plated as is the rather long steering handle. The throttle control is by means of a simple mechanism that allows the outer steering arm sleeve to rotate, thus controlling the carburetor throttle. The mechanism is spring loaded so that when the steering handle is released, the throttle returns to a stop position.

The Bulmer collection also includes four Cailles. These motors were manufactured in Detroit, Mich. between 1913 and 1935. The motors in the Bulmer collection are a Model A single cylinder rowboat motor, circa 1915, a Liberty Twin circa 1923, a Liberty Single with battery ignition, and a model B-32 Commodore.

The Model A. Caille is in unfortunate condition with various parts and pieces missing. The most critical omission is the rewind starter unit. The Caille Model A rewind system was a first in the outboard industry. A flat leather thong, rather than a rope was used as the starter cord. This engine was made primarily of cast iron and brass and was a heavy 60 pounds. It had the characteristic Caille, 5 speed variable pitch propeller, developed approximately 2 hp at 700 rpm and retailed in 1915 for about \$100. The Model A was made from 1913-1925. The ready pull versions, however, appeared first in 1915.

The Liberty Twin appears to be in excellent shape. This engine develops about 2.75 hp at 1600 rpm, weighs 45 pounds, and retailed for about \$145. The Liberty Single was manufactured from about 1917-1931 and developed 2 hp @ 700 rpm. The Liberty Single could be ordered with magneto or battery ignition. This particular engine has the battery ignition.

The Caille model B32 bears the characteristic priming cups on each of the opposed cylinders and is identified as a 1929 Commodore, developing 12 hp @ 5000 rpm. The B32 has a stationary powerhead with an independent turning lower unit.

The collection also includes a 1931 Ropeller manufactured in Huntersville, Ind. This is a hand operated device, which weighed approximately 15 pounds. The Ropeller is not all that common being manufactured for one year only, 1931.

The only Elto in the collection is a 1924 model C, 3 hp, Ruddertwin which is in exceptionally good condition.

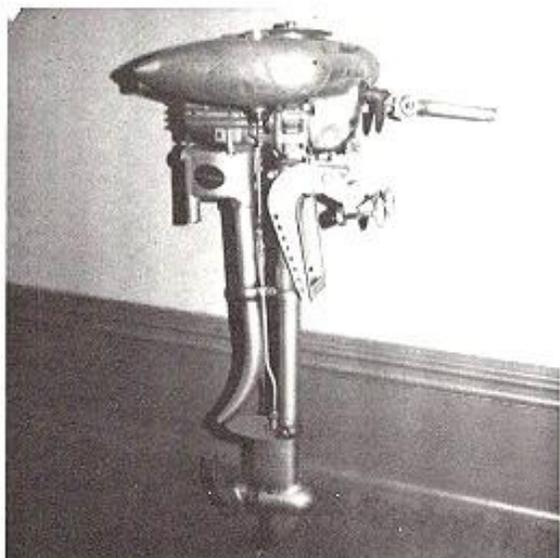
Jim Smith mentioned the Johnson, TR40 Giant Twin in Part I of this article. The only other Johnson is a 1928 K-40. This engine developed 7.15 hp at 3500 rpm. It retailed in 1928 for \$165 and weighed about 61 pounds.

Evinrude is represented in the Bulmer Collection by two Detachable Row Boat Motors.

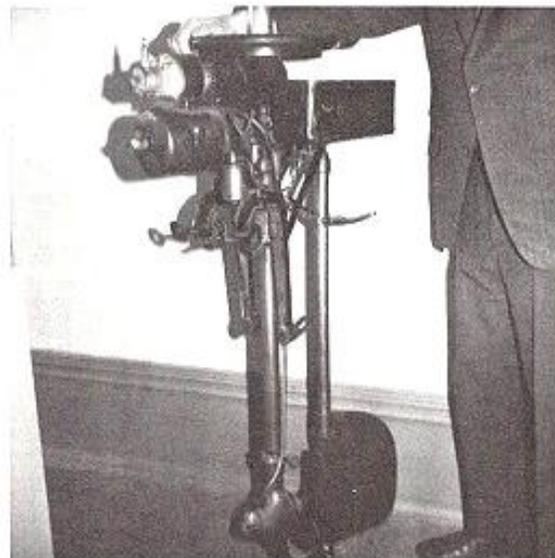
One of these cast iron and brass contraptions is a standard model "A" type, with reversing lower unit and flywheel magneto. The other Row Boat Motor, however, is number 6237. This number is stamped vertically on the back of the crankhousing and identifies this motor as being one of the very first that Evinrude manufactured between the years 1909-1912. This engine has a battery ignition system; however, the coil usually mounted vertically at the rear is missing on this particular motor. These early Evinrudes developed about 1.5 hp.

A special interest motor is the 1930 model 162 OMC Foldlight. First manufactured in 1930 they weighed about 29 pounds. Their main claim to fame was that they folded to measure 17 x 11½ x 11½. These motors developed about 2.75 hp and retailed in 1930 for \$145. The highly unusual factor about this particular foldlight is its serial number, 0003, identifying it as the third OMC Foldlight manufactured.

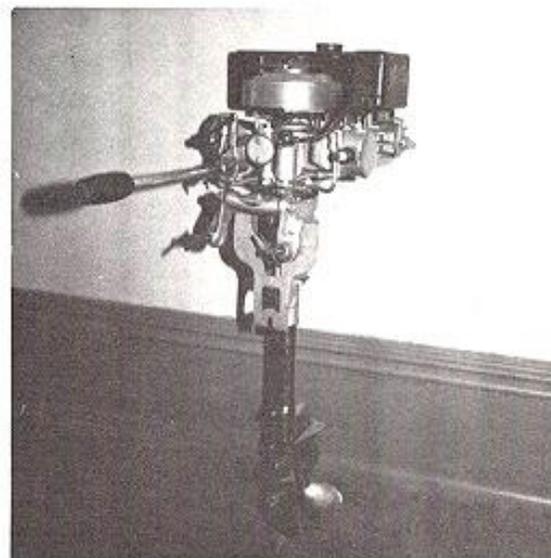
From time to time, people writing in the Antique Outboarder or the Newsletter mention that Waterwitch outboards should be regarded as potential material for any well rounded



Waterwitch



Watermota



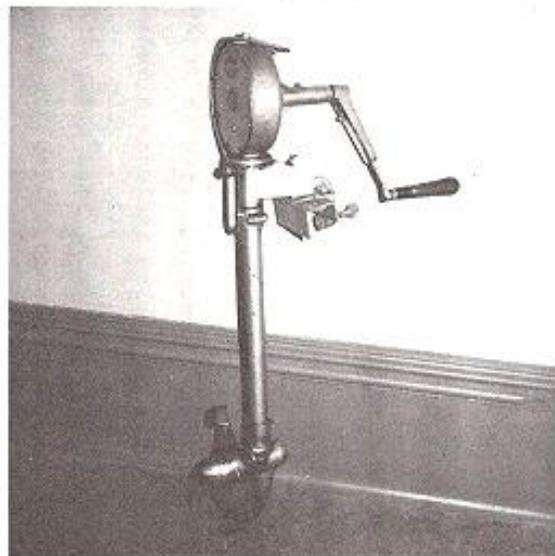
B.M.B.

26

Motorow



Ropeller



Caille



collection. There is one Waterwitch in this particular collection and it is a single cylinder model with twin, torpedo shaped gasoline tanks. There also appears to be a great deal of confusion with Waterwitch model and serial numbers. I have noted that many people quote Waterwitch serial number 571, which in fact, is a model number. However, in many instances the confusion is caused because the number 571 is stamped in a space identified as "serial number" on the Waterwitch flywheel. In the case of this particular engine, in the model number space is stamped MB, and the serial number space is stamped 571-10. This confusing number system makes it extremely tough to identify these particular engines.

The final engine in the Bulmer collection is a Motorow, serial number 1560. This engine is typical of the Detachable Row Boat Motors of the day and follows the general pattern of Evinrude, Caille and others. Construction is primarily of cast iron and brass. The Motorow weighs approximately 55 pounds.

Motorow outboards were made by the Motorow Engine Company of Chicago, Illinois from 1913 to 1918. The identification on top of the flywheel indicates that this apparatus was patented in November of 1913.

The exhaust manifold and cannister system is identical to the Evinrude detachable Row Boat Motor. There is no reversing lower unit or propeller; however, the power head remains stationary and steering is facilitated by an independent turning lower unit. This system is somewhat complicated by a gear arrangement. This gear arrangement turns the boat in the direction towards which the steering handle is pointed. In order to turn the boat to the right you would move the tiller handle so that it is pointed to the right, a completely reverse procedure to virtually every other outboard on the market with the exception of some early Lockwood-Ash models which used this same gear arrangement.

It is most difficult to discuss each of the motors in the Bulmer collection in the depth that they deserve. I hope, however, that Jim and I have given you some idea of the extremely interesting and varied collection on public display at Toronto's Marine Museum.

The Marine Museum is located in Exhibition Park, adjacent to Ontario Place, one of Toronto's largest and most spectacular attractions. If you have an opportunity to visit Toronto, I am sure that you will find it most rewarding to spend some time looking over this collection at the Marine Museum.

It is not often that one can stand in a single room and peruse at his leisure such motors as Motorow, Caille, Watermota, Britannia, Kinuta, Johnson TR-40, Wisconsin, Lockwood-Ash, Clarke, Gray Gearless, and Ferro. (End)

The below engines are all from 1915 advertisements. Reproduction was made from photos of the ads made by Ron Duckworth's 15 year old girl.

\$44.95 Buys This \$70
AMERICAN
Outboard Motor



This motor is positively the equal of any \$70 motor of its kind on the market. It embodies the same high grade materials, workmanship and design. Due to our tremendous production facilities and the fact that:

We Sell Direct Saving You Dealers' Profits

We are enabled to sell you over \$25.00 per motor. The American can be instantly attached to any row boat. Runs 10 to 11 miles an hour. Adjustable for any angle or depth of water. Reversible. Weighs about 30 lbs. Runs on either fresh water. Strongest propeller. We also build a rubber covered model. Magneto ignition if desired at small extra cost. Every motor fully guaranteed. **Send for details. 2 H. P. '38**

Larger Motors at Rock-Bottom Prices

Extensive line of available high grade and light weight motors ranging in H.P. from 1/2 to 10. Price range from \$10 to \$100. Reasonable and prompt delivery. We are also in line with the latest developments in rowing and can be converted to row or gasoline, motor or other fuels. **Write for details.**

Guaranteed For Life

Open order system. A detailed and color illustrated catalogue is being prepared. Send for yours today.

American Motor Co., 425 South H. Street, Waukegan, Ill.



Rowboat motors.

The Great
2-CYLINDER
KOBAN
ROWBOAT MOTOR.
DOES NOT SHAKE THE BOAT



The smoothest little rowboat motor that ever plowed water. Two cylinders drive 10-inch propeller with 16-inch pitch at speed of 900 r.p.m. Starts easily—pressure by simply pushing a button—mechanical fuel consumption—special sliding valve swings motor away from horns over shallow spots and for landing.

From Toronto, Ontario, a Koban user writes: "My Koban proved a big, two-stroke beauty! consuming 1/2 lb. of fuel. The magic to have seen the suggested fuel tank being looked on."

DOES NOT SHAKE THE BOAT

Attention is attracted by simultaneous rotation of the 2 opposed cylinders, lower one rotating counter to the other—forming the base from which the motor runs.

Postal brings latest catalog.

Agents wanted near every water port. Write for details.

KOBAN MANUFACTURING CO., 127 South Water Street, MILWAUKEE, WIS.

Our 1 1/2 H.P. Vibrationless Inboard Motor Engine is ideal for small launches, canoes, etc. Write for Circular No. 26.

The Only Push-Button Controlled Outboard Motor Made



This is positively the motor nearest most of its kind on the market. Simply push a button at the end of the steering handle and instantly the:

5 Speed
CAILLE
Motor

will shoot you fast forward at 5 to 10 miles an hour—or it will run at stalling speed—or it will stand still while the motor remains running—or it will back slowly—or it will back fast. All in the matter of four clicks. It has a high tension magneto.

Magneto Enclosed in Fly-Wheel

Glances good but speak slowly to practically the last revolution. We can also furnish this motor with dual ignition, like a motor car, if desired.

Other Caille Features

Cable steering with control. Water-tight gas housing. Double internal fuel tank. Reversible 100-200. Non-rattling water tube. Heavy water steering handle. Good for racing. No. 10 giving 1000 ft. lift.

We Also Build

motor systems from 1/2 to 10 H.P. These are fully certified in Canada, U.S.A. and U.K.

THE CAILLE PERFECTION MOTOR CO., 142 Caillet St., Montreal

WATER SKIS AND ANTIQUE OUTBOARDS

BY

DAVE REINHARTSEN

Water ski behind an Antique Outboard? Of course, there's no reason why it can't be done, and in fact -- I've done it many times. It may surprise you, but horsepower for horsepower, the slower turning antiques are better for pulling skiers because of their greater low speed torque--which translates into ability to pull the skier out of the water. The only real problem is that your motor doesn't have neutral which means that getting the skier started is a little more difficult. This article provides some tips and pointers to help you get ready for a summer of skiing pleasure.

THE MOTOR

You've got to start with a motor which is capable of pulling a skier. It is possible to ski behind 18 horsepower--I've done it, but it's a rough go. Not quite enough speed, and not quite enough pull to get the skier up in a hurry. Let's say then that you need 20 horsepower or above. Suggested engines are Johnson models P, PO, T, and V, Evinrude Speeditwin, Speedifour, Big Four, Caille Model 46, and Mercury KG-9. Engines set up for racing are not recommended for several reasons: They are loud and exhaust a thin mist of oil, which makes skiing a bit less pleasurable. They generally do not idle well, they require high speeds to cool properly, and the lower units are set up so that the two-blade propeller is just barely in the water, which then slips quite a bit on acceleration. Service motors are best. That service motor has to be in top condition--at wide open throttle it must deliver its full, rated power or more, and it must idle very slowly (remember there is no neutral). On opening the throttle rapidly, the motor must accelerate smoothly, without missing. All of the restoration techniques, described in various Antique Outboarder articles should be used so that you are sure that your Antique is back to its original condition. Articles by March Wright on carburetion, balance, piston rings, etc., are especially recommended.

The boat, too, must be in good condition and remember that it must not only pull the skier, but hold you and a passenger who watches the skier. A 12' or 14' boat works out very well -- 16' is a bit large, unless it is light, or powered by a 33 or 50 horsepower engine.* By way of a guideline, with you and a passenger, the boat should make at least 25 mph.

- * A word of caution about light boats powered by relatively small (20 horsepower or less) outboards. They're tough to ski behind because each wave slows the boat down a little bit. The skier doesn't have a steady pull on the rope, rather he is pulled along by a series of tugs. Staying upright is a real chore.

With the engine broken in and the boat selected, you're ready to select a propeller. I strongly encourage use of a 3-blade propeller, for you don't want speed ---- you want a propeller with a good bite on the water for pulling the skier out. Fortunately the stock 3-blade Evinrude and Johnson propellers are excellent for this purpose, but they may have to be repitched so that the motor develops its rated RPM's while pulling the skier. Note now that when the skier falls the motor will overspeed unless you close the throttle slightly. I use a rule of thumb that each inch reduction in pitch increases motor RPM by 200 at full load. In your case, you will probably need to reduce the pitch from 12" to 10".

Got the motor and boat ready? ... Let's go water skiing ! Don't forget the skis, and someone to pull. As you don't have neutral, some special skier skills are required, so arrange to pull someone who is fairly experienced.

I've found three techniques which circumvent the no-neutral problem:

THE JERK: The skier sits on the edge of a dock or raft with the skis in the water, ready to go. The boat idles by, and the rope is tossed to the skier, who holds the bar in a ready position till the rope comes taut. At that instant the throttle is opened, and the skier is pulled off the dock for a session of skiing. For added ease of takeoff the boat can be going faster, but it does put a strain on the rope (not to mention the skier's arms).

THE DRAG: A variation of the above, with the skier in the water. The boat circles behind the skier who catches the rope as it goes by. When the rope comes taut, the throttle is opened and skiing commences.

THE SUPER START: If the engine is particularly easy to start, and accelerates well, the rope can be brought taut by paddling the boat away from the skier. The motor is started (at wide open throttle) when the skier is ready.

I've tried all of these techniques and find that I like the drag best, because it assures a running engine, and that cooling water is flowing. It does require some skiing skill, for the skier must be ready when the rope becomes taut---or the boat must circle again.

Skiing behind an Antique is a real pleasure as they have a lot of lugging ability. They pull you out of the water quickly for their horsepower, and are great in turns, for they hardly slow down at all.

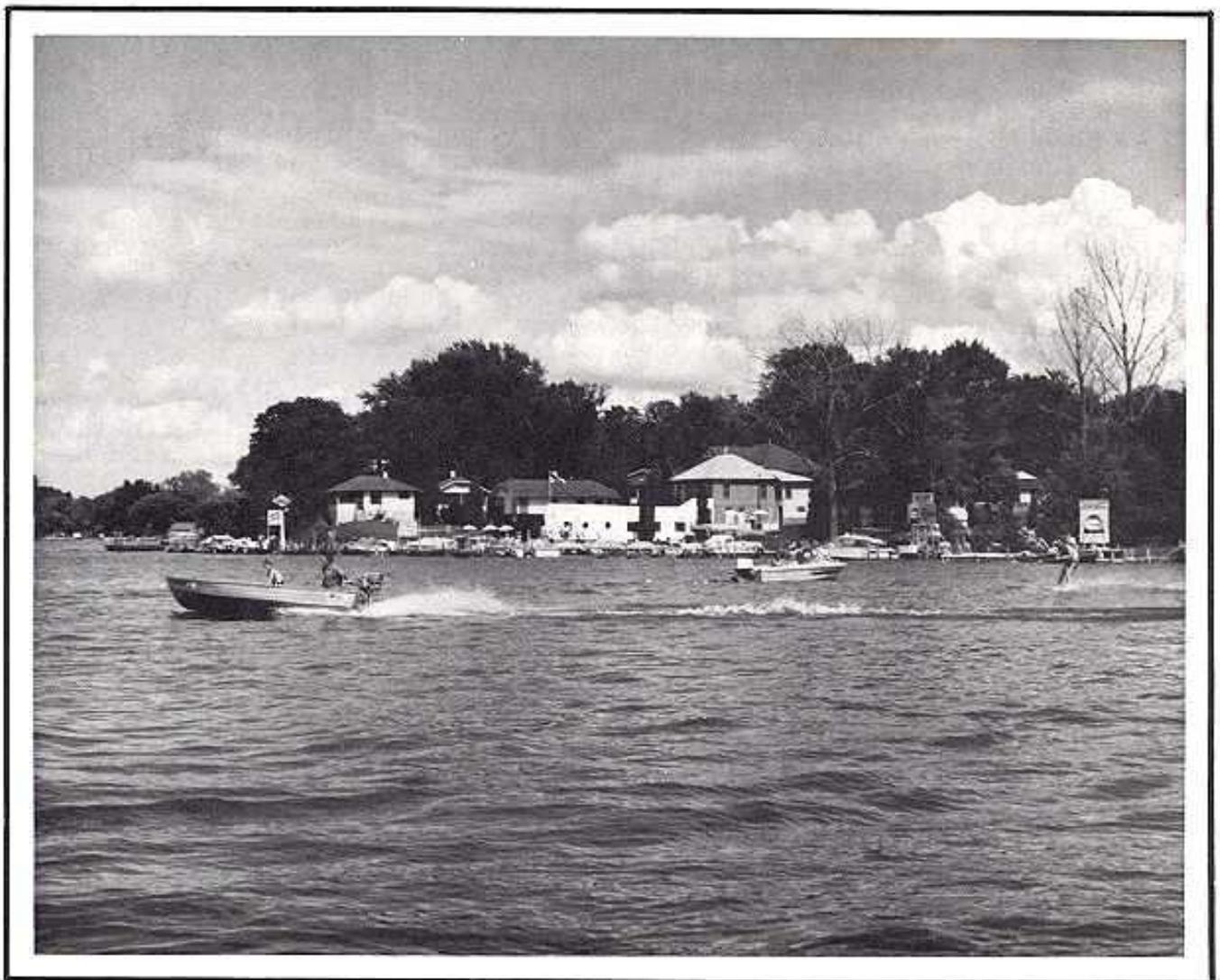
SOME PERSONAL EXPERIENCES

Skiing behind John Harrison's PO-15 was as easy as could be -- he uses a 10 x 12 3-blade Johnson prop. Skiing behind Bill Salisbury's V-45 at the recent National Meet was not easy -- the water was rough, the boat was too light (only 200 pounds), and Bill only had speed propellers with him. We used the Drag to insure flow of cooling water, but the speed prop made it difficult to get me out of the water. Once underway, Bill added to my collection of grey hairs by going a bit fast. When I finally fell, I thought I'd never come to the surface. The power was certainly there !!

John Harrison points out that with a 80' ski line you never have to stop to pick up a skier. You can circle around the skier, put the handle in his hand that way; and then if you like you could do figure 8's in the length of the ski line all day without putting any tension on the skier. Another method of pulling up a single slalom skier is to run around him in circles of about 80' radius so that you develop boat speed, then slowly increase the radius until you have pulled the skier up. Sometimes this is not possible if the side pull of the ski line brings about a cavitating situation. This depends on the boat-motor combination and how deep the propeller is set below the bottom of the boat.

Skiing behind a Speedifour requires a 10 x 10 3-blade prop, and is quite easy. Lots of pull, and plenty of speed. Careful not to over-rev when the skier falls. I've never skied behind a Big Four, it should be magnificent due to the tremendous lugging ability of that monster engine. I'll bet you could pull slalom skiers, or two skiers with a Big Four. John Harrison has done extensive skiing with Big Fours -- if you plan it, you might want to get in touch with him.

These old engines are just as good as the new ones -- try water skiing to prove it ! !



CENTRAL MISSOURI SMOKE

by Ron Ellis

An outboard meet was held here in Missouri at the Lake of the Ozarks on October 7 and 8, 1972. We had a great turnout, 27 people including Dave Reinhartsen, his family and in-laws from Chicago. A total of 20 engines were shown along with a brand new A-hydro built by Casey West of Springfield.

Mr. West is a retired Lieutenant Colonel, United States Army, who in his "spare time" restores and collects outboards, builds cherry and walnut furniture, builds boats (latest is the new hydro), tinkers with everything, and is now working on a flying machine! In between these activities, he takes his charming wife fishing.

Dave Reinhartsen won the Bang-and-go-Back trophy with his father-in-law and Lockwood Chief. Dave was happy to say the least.

A rather informal Big Iron race between myself (Speeditwin) and Clarence Sitton's son-in-law, Ron Harrison (PO 15), convinced me that I should retire the Speeditwin and get to work on restoring a PO. A slide show was held Saturday night with slides from the Antioch Meet.

Sunday was another beautiful day although Dave and family had to leave early to begin the 11 hr. trip home.

My uncle's motor ran out of gas 2 miles from the dock and, of course, he had no paddle. Wayburn Niemeyer and his wife arrived in time to see my Clarke Troller run like a top, but fail to move my boy's "Junior 'M' midget innertube hydro". My father managed to run 3 gal. of gas through a Speeditwin Sunday morning, and not to be outdone, Clarence Sitton ran 2 Johnson Ks on his boat.

Needless to say we are all anxious to be back on the water in the near future.

Photo Descriptions, top to bottom....

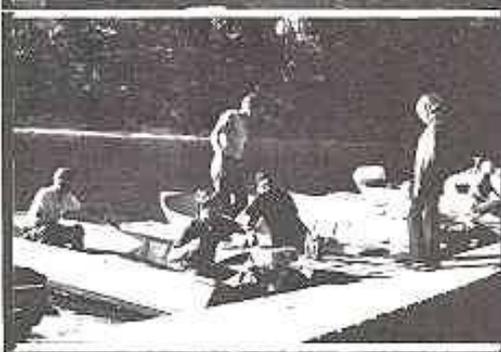
Casey West and new hydro, his wife Catherine, center, Phyllis Ellis at left.

Engine Display - The 2 long shaft Cailles are the pride and joy of Clarence Sitton.

Dave Reinhartsen and his trophy rig Lockwood Chief and father-in-law; Walter Ellis sitting by gas can.

Casey West in boat and Ron Ellis. ("Wrong way West" maybe?)

Myself and son, Ron, with Junior M midget innertube hydro.



KNUCKLE BUSTERS NEWS

By Bill Salisbury

There was a very large, successful meet held at the home of Tom and Jean Luce on November 11, 1972. It was a typical fall cold, rainy day and was, of course, held indoors. Inside it was anything but rainy, as there was a great turnout of enthusiastic members and their families. Tom and Jean graciously provided all the food, consisting of sandwiches, desserts, and coffee. Some of the other members brought some desserts and sweets, too. There were 55 cups of coffee consumed! (That Tom Luce is a great one for statistics!!) How many miles per gallon is that?

The meet was to start at 10 a.m. but was already well under way by that time. Before the meeting assembled in the house, many members congregated in the garage to look at Tom's collection of motors awaiting restoration or trade as well as to look at Tom's junk/parts pile, which is one of the largest I've yet seen. Last but not least, Tom has a new inboard. Yes, inboard. But, it is in keeping with the theme of old outboards. It is powered with a 3 hp single and has a retractable propeller. As yet, it is un-restored, but I doubt that much would be needed to make it run right now. Of course, Tom will give it the usual outstanding restoration from stem to stern before using it.

After the meet relocated to the house and some coffee was poured, the talk of outboards swelled to an even greater level. Many members had brought photos, slides and movies. These were very interesting and the program was well received by all the members. We saw such interesting things as pictures of the 1000 Islands Boat Show in Clayton, New York. Later we saw some movies of the Loshe's Speedliner/Big Four combination in action. This machine was at one time used for F runabout competition and during that time had recorded speeds up to 60 mph! Needless to say the engine is not "showroom stock". Pictures of the National Meet were also seen during the show.

The meet continued into late afternoon. During that time, plans were discussed for our 1973 meet schedule.

Members in attendance were as follows: Tom Luce and family, Stan DuBois, Vinny Loss, Frank Shimer, Bill Andrulitis, Michael Schmidt and friend, Mr. Snow, Ralph Yust, Bob Grubb, Charles Loshe Sr., Charles Loshe Jr., Bob Tate, Phil Kranz and family, Mort Daller and wife, Mary, Tony Caglione, Marcus Wright and Bill Salisbury and son, David. Please forgive me if I've omitted anyone or misspelled anyone's name.



Above: One of John Toprahanian's 1972 race boats leaves the pit area.

Right: John's engine, fully modified with Yamaha cylinders, also has some Evinrude parts. Unit has been nicknamed "Yamarude".



FLORIDA CHAPTER NEWS



By Dick Jones

Big Four Tames Wild West

By John C. Harrison

I am enclosing some pictures of boating on our western trip which was really great. My boat was a 16' fiberglass Challenger which was designed in 1954 and built here in Miami at that time. It was the boat of those years and quite expensive at that time. The engine is a Big Four, short rod pumper powerhead on which I cheated a bit, using CD ignition designed by John Toprahanian. Lashed down with bungee up in the bow I carried a Dick Jones restored 1931 2-3/4 horsepower Evinrude Foldlite engine which is a real work of art and which starts first crank just any old time. I had a heavy canvas cover made to lash onto the boat and motor and this is a real necessity for long, long hauls to keep the equipment clean and safe.

Our total trip was some 7,500 miles. Our group consisted of my wife Ellie, 22 year old engineering student son John, 20 year old daughter Helen and 18 year old Niki Lohmeyer, German exchange student who had been with us for a year. We took the nine day rubber raft trip on the Colorado River and after that started our boating on the various big lakes in the west which I had vowed to do six years ago when the Glen Canyon Dam was being finished.

Our first stop lake-wise was Lake Mead. We stayed at Echo Bay Resort at the north end of the lake for three days and I had a great time water skiing and exploring there. The temperature was 105° but not offensive at all with the low humidity. Then we moved on to Wahweap Marina Lodge near the Glen Canyon Dam and ran the boat on Lake Powell for four days. We had the unique experience that we were running a rig that was six times as old as this huge lake. Our longest trip here was 52 miles up to Rainbow Arch Marina to see the magnificent stone arch some 300' high, the largest natural arch in the world. We averaged 25 miles an hour for the 52 miles and that was not at full throttle. I was amazed at how rough this lake gets in some of the narrow spots when you are between the vertical stone walls. You just wouldn't believe the number of boats involved in this new resort area. Absolutely incredible! If it did it again, I would go to one of the other marinas which are not quite so heavily populated.

From there we moved on up to Blue Mesa Lake in the Canyon of the Gunnison River, also a beautiful area and up to the 8,500' altitude Grand Lake in Colorado. That 8,500' really kills the engine. You have only about 75% or less power. It is also very tough on Old Dad's water skiing, both that and the 55° water temperature and no wet suit. Brings about a lot of huffing and puffing. We spent four days here which was really the most restful part of our trip. Beautiful country, that. We needed a 9" pitch propeller at that altitude but didn't have one. Even so the rig would still pull up a slalom skier but it was a struggle.

Needless to say I was glad to get the rig home after all that running with no mechanical difficulty whatsoever. For this kind of boating I thoroughly recommend the CD ignition as it really gives you modern engine reliability. Really a great trip! and I recommend it highly to any club member.



John Harrison and his trusty Big Four above. Note ignition package. Below, is the Rainbow Arch which is not accessible by land.



Son John checks the map. We were lost in Lake Powell!



Dick Jones' Fold Light in action when gas for the Big Four ran low.

Below: The Lake Powell Wahweap Marina.



RACING

THE JOHNSON FACTORY RACING PR

by

Eric R. Gunderson

Johnson took the racing lead in 1926 when they introduced the Big Twin which developed an advertised 6 hp at 2500 rpm from 22.7 cubic inches. In its first competitive appearance at White Lake, Michigan, on July 4th, 1926, the Big Twin easily walked away with its events, setting a peak speed record of 15.38 mph. Before the end of the season this mark had been boosted to 23.37 mph.

The racing classes for 1926 were: Class A---under 12 cu. in., Class B---12 to 17 cu. in., Class C---17 to 30 cu. in., and Class D---30 cu. in. and over. The only restriction on boats was that they had to be at least 14 feet long.

In 1927 the P-35 was a new and larger engine, with a new streamlined lower unit, and 27.5 cu. in., and producing 8 hp at 2750 rpm. The powerhead was basically the same as the P-30, but with a shorter stroke and larger bore.

By 1928 the racing competition had become very keen. Evinrude introduced the 16 hp Model U Speeditwin. Johnson had now increased the size of the Big Twin to 29.78 cu. in. with a hp output of 13.15 at 3700 rpm, and for the race drivers there was a new version; the PR-40. The PR-40 put out 18.5 hp and wound to a screaming 3800 rpm. The PR featured the usual 4 port construction of the day, but differed from the standard model in several ways. The crankshaft and rods were forged steel, with bronze inserts on the crankpins and bronze bushing mains. The ports were enlarged for high rpm efficiency, exhaust cutouts were installed, and the carburetor had a cold air intake rather than the usual hot air tube. Also in the interest of weight savings, and the elimination of troubles during a race, the release charger mechanism was deleted. Late in 1928, on engines with serial numbers higher than 81600, roller bearings were installed on the crankpins. The speeds turned by the PR's in 1928-29 were in the neighborhood of 38 to 43 mph. The 1928 class C record was 38.46 and by November 1929, the class C record was 43.192 mph held by Evinrude.

The motor builders were not entirely responsible for those sudden speed increases. Boat bottom designs changed quickly from the long, narrow-beamed displacement boat of the WW I period. The design transition changed first to the broad beam round and V-ed bottom planing boat and the scow-type sea sled. This was followed by the step plane hull construction which was at first simply a V-bottom planing hydroplane with a transverse step located about midway between the bow and stern. The three point hydroplane now in common use was not to receive general acceptance until after WW II.

By 1930 it was obvious that racing had become a big sport and cash prizes were being offered to winners. New and more powerful engines were available and records kept climbing. The current rules system wasn't working well so the manufacturers got together and formed the NOA. One of the big problems that caused the rules change, was the factory involvement in racing.

All of the factories had racing teams and in order to remain competitive there had to be constant changes made in the engines, meaning expensive retooling, and more hand machining and balancing. The racing motors weren't suitable for service use and the factories often sold them at a loss in order for the drivers to be able to afford them. The NOA manufacturers pact limited the manufacturers' participation in racing to giving advice, and providing racing engines and parts for sale, and eliminated the expensive factory racing staffs and the giving of expensive race engines and parts to winning drivers for its advertising value.

Here is a photo taken by Bill Salisbury of me driving my PO Hotrod rig. This was the first time out for both hydro and engine. It did only 42 mph then, and nearly scared me to death.



The new rules of 1930 also established new classes and driver classifications. The engine classifications included the 7½ cu. in. Midget, which was to provide low cost racing opportunities, and the rest of the engine classes were changed to the A, B, C, D, E, F and X used today. Drivers were classed as to experience.

- Div. I drivers who have not started 15 races.
- Div. II drivers with more than 15 races
- Div. III drivers not connected with industry racing for cash with stock motors
- Div. IV drivers connected with the trade racing for cash with non-stock motors

This system turned out to be too cumbersome, and in 1931 was changed to amateur and professional classes, which was the rule until after WW II when amateurs and professionals began to race together.

1930 was the beginning of the PR's dominance in Class C racing until the mid-fifties when the alternate firing four cylinder Mercurys took over. The PR-50 was a modified version of the new P-50. It was basically the same, except all parts were perfectly balanced, the port timing was altered slightly, and high compression heads were used. Many PR-50's came from the factory with the 2-42" carburetor from the Giant Twin using a small adapter between the carb and rotary valve. A muffler was used with a short water cooled exhaust pipe, the clamp bracket was shortened to allow a lower transom on the boat, and a new streamlined lower unit without underwater exhaust completed the package, with a gear ratio of 12:21, and a wide selection of props. The huge success of the new PR's was due mainly to the external rotary valve induction system, the high rpm potential of the short stroke lightweight and very strong crankshaft assembly, and the beautiful lower unit. This engine developed 24 hp at 5000 rpm. It was thought by many that the rotary valve had a supercharging effect, but its main advantage was the direct route that the fuel mixture took, and the fact that the rotary could be timed exactly to the engine's rpm range very easily.

1931 brought a new and better PR-55. This engine was much the same as the PR-50, except that roller bearings were installed on the main bearings of the crankshaft, which allowed it to be safely run to 5500 rpm and beyond, and brought the horsepower to 27. The SR, VR, and XR, now shared the very successful lower unit of the PR. The PR-55 used open exhaust with a deflector plate rather than the muffler. Also the Vacturi "sewer pipe" AC-500 carb was in general use by this time.

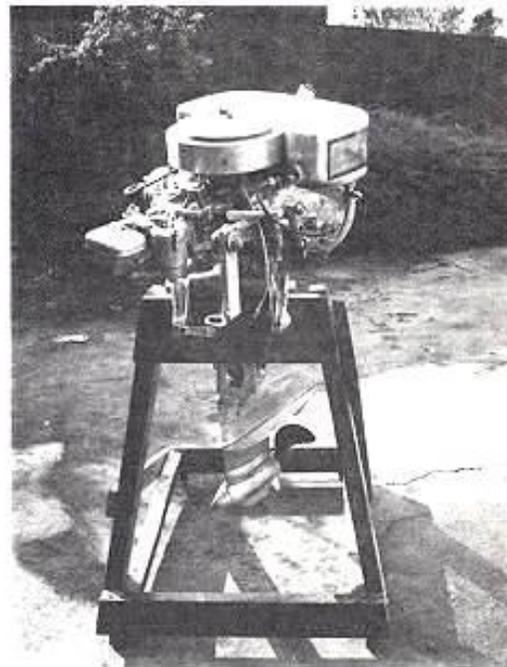
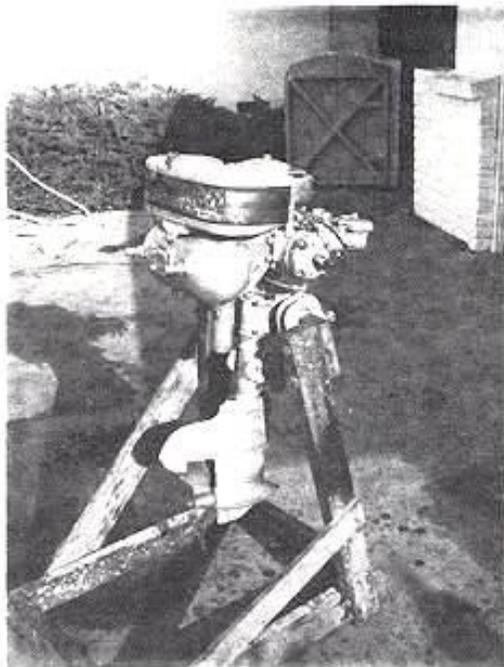
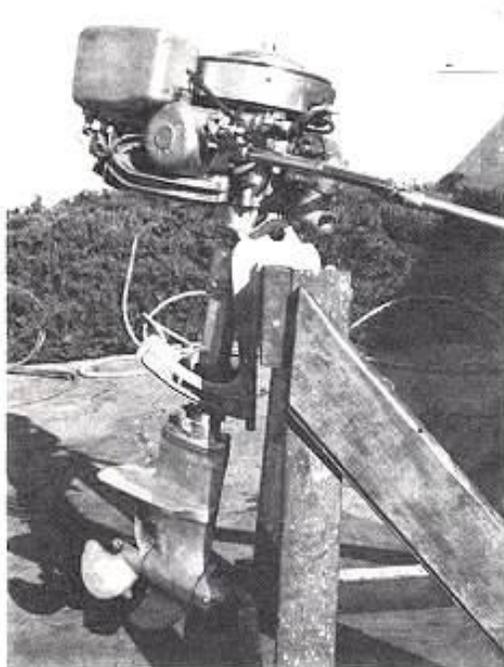
1932 was the beginning of the best PR's. The engine was again redesigned, having a new crankshaft with a 1½" top main bearing, and 1" crankpins. The flywheel now had a steel hub to prevent troubles in this area, new cylinders were engineered with huge open exhaust ports, and huge bypass areas, compression was again increased, open stacks installed, and a new lower unit developed with all roller, ball, or needle bearings; and a 13:19 gear ratio.

The only bushing bearing in the entire engine was at the wrist pin end of the rod and the pin was full floating in the piston with aluminum buttons to locate the pin. This was to be the class C race engine for the next 20 years with very few changes. Another exciting development of 1932 was the introduction of "Dynax". Dynax was a new racing fuel put out by DuPont. It contained two kinds of alcohol, benzol and castor oil. It was non corrosive, the lubricant remained in suspension, and it produced 10% more horsepower with no other modifications. Immediately new cylinder heads were made to take advantage of the new fuel and soon most engines were using alcohol. Soon other companies made special racing fuels and racing speeds really began to climb. The advertised hp of the PR-60 was 27, and after this no hp figures were given on racing engines by any of the factories.

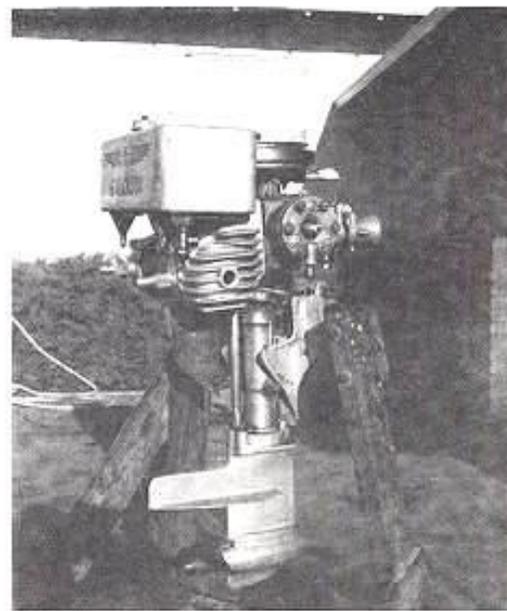
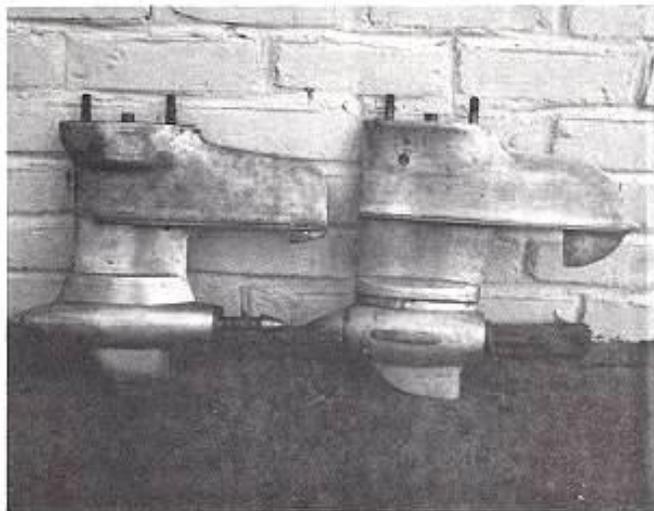
The PR-65 was to be the last of the Johnson class C race engines. It was basically the same as the PR-60 except for a few minor changes in the ports. Apparently the PR-65 was sold for several years, or a large number were sold in 1933.

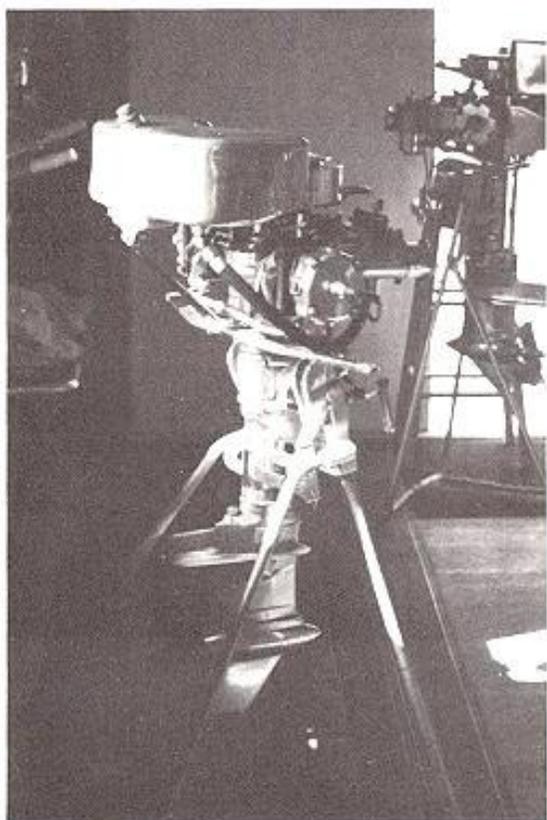
In 1933, the C professional record had climbed to 54.05; by Oct. '34 it was 54.342; by Dec. '35 it was 55.853, and in 1936 it was 58.169. By 1948 the C professional record

* Page 13, April 1972 Outboarder shows this.



Photos: Upper left, PR-40; Up center and right are two views of the Johnson PR-50, Note nice decal (\$7 each); Lower left, PR-60 and 65 lower unit (left) and earlier, PR, XR and VR unit; Center, PR-60,65 cylinder, note steering boss; rt., model 5038.

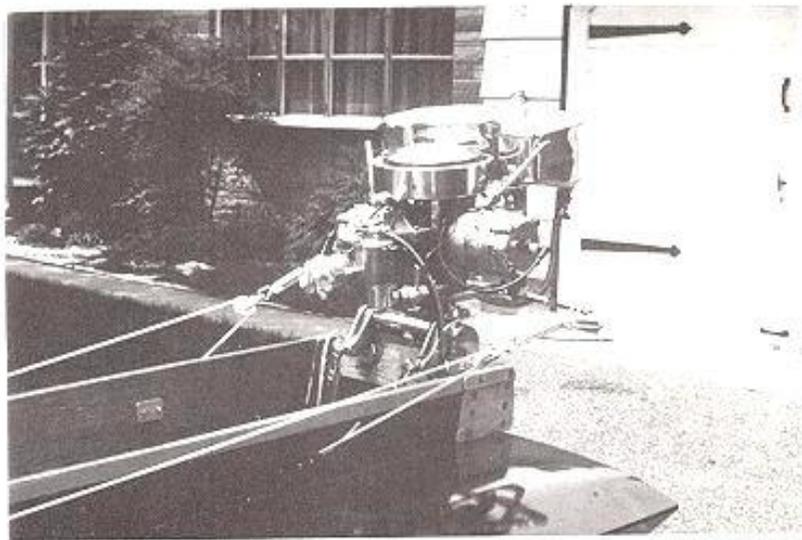




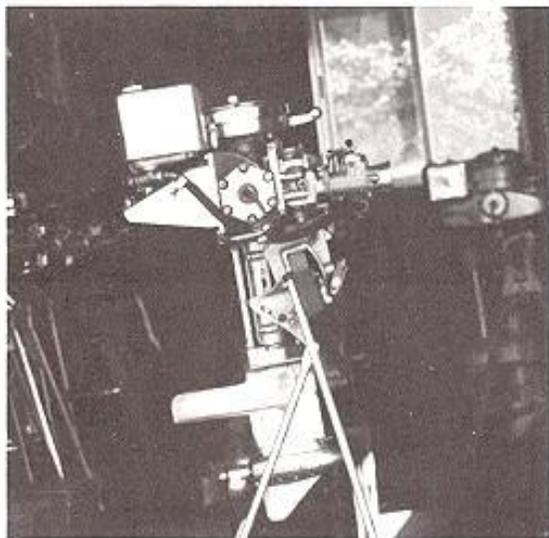
Above: Most powerful PR, crossflow, belongs to Ray Rydell. 50 hp!

Ray Rydell's Evinrude
Model 6042 Hex Head Racer

Most beautiful
PR restoration,
belongs to Bill
Salisbury.



Right: Eric Gunderson's Super C with
Hubbell shaft, rods and rotary.



was 63.549, and today the record is over 100 mph, not set by a PR though. Bill Tenney held the record for a C Hydro of 68.441 in 1954.

When OMC took over the Johnson Company in 1935, the corporation got rights to the patents Johnson held on the external rotary valve that made Johnson the top dog of class C. Racing was still a big money sport in 1936 so Evinrude began to adapt the Johnson PR to their own line. The result was the 6038 Speeditwin Racer. This is a very interesting engine because it was a combination of the best of both the Johnson PR and the Evinrude Speeditwin. The engine came out in 1938, and used the PR style rotary valve/crankcase/shaft/rods, with the battery ignition, and Speeditwin bracket, unit, and tank set-up. The cylinders were in some cases cast of semi steel, which was very good for chrome plating. They used heads like the 460 that extended into the top of the cylinder to form the combustion chamber, with 6 head bolts. Some used the offset plug much like the later PO's; others used the plugs centered. Unfortunately the engine still didn't quite measure up to the old Johnsons, and many drivers had the ends of the cylinders cut off and adapted the PR style heads. This made the 6038 identical to the old PR's and increased the speed just enough.

The last year for the Factory Racing opposed outboard was 1942. Evinrude changed the PR for the final time and made what is commonly known as the "Hex Head". This engine was identical in specifications to the PR but it had a new head setup. The head was hexagonal shaped and had 6 head bolts. The chamber was about the same as the PR, but the 6 head bolts gave a greater degree of rigidity and helped keep the cylinder round while the engine was running.

The 6042 used battery ignition, open exhaust deflectors, the same lower unit style that the Speeditwin had been using for many years, and was an absolutely beautiful engine.

According to the Evinrude Models list there was a 6043 Evinrude Speeditwin racer, but apparently the war closed the doors on the racing department before any were produced.

After the War the demand for service outboards was so strong that OMC discontinued making racing outboards. The expense was very great and the profit low, and the hand machine work required was better applied to more profitable stock outboards. There was a demand for parts and racing engines from the drivers who had raced before the war and when parts supplies ran out, many racers did a lively business supplying replacement parts and in some cases complete engines. After the war, stock outboard racing became popular, and in the late fifties the foreign engine finally finished the job on the PR's.

There are still diehards that just love PR's and will continue to run them. The APBA opened the door to the PR's in 1972 by allowing them to run against the Class B looper engines. After 45 years of competition the PR still has a chance. Perhaps not for a B record, but on a short course and a few sick B's----

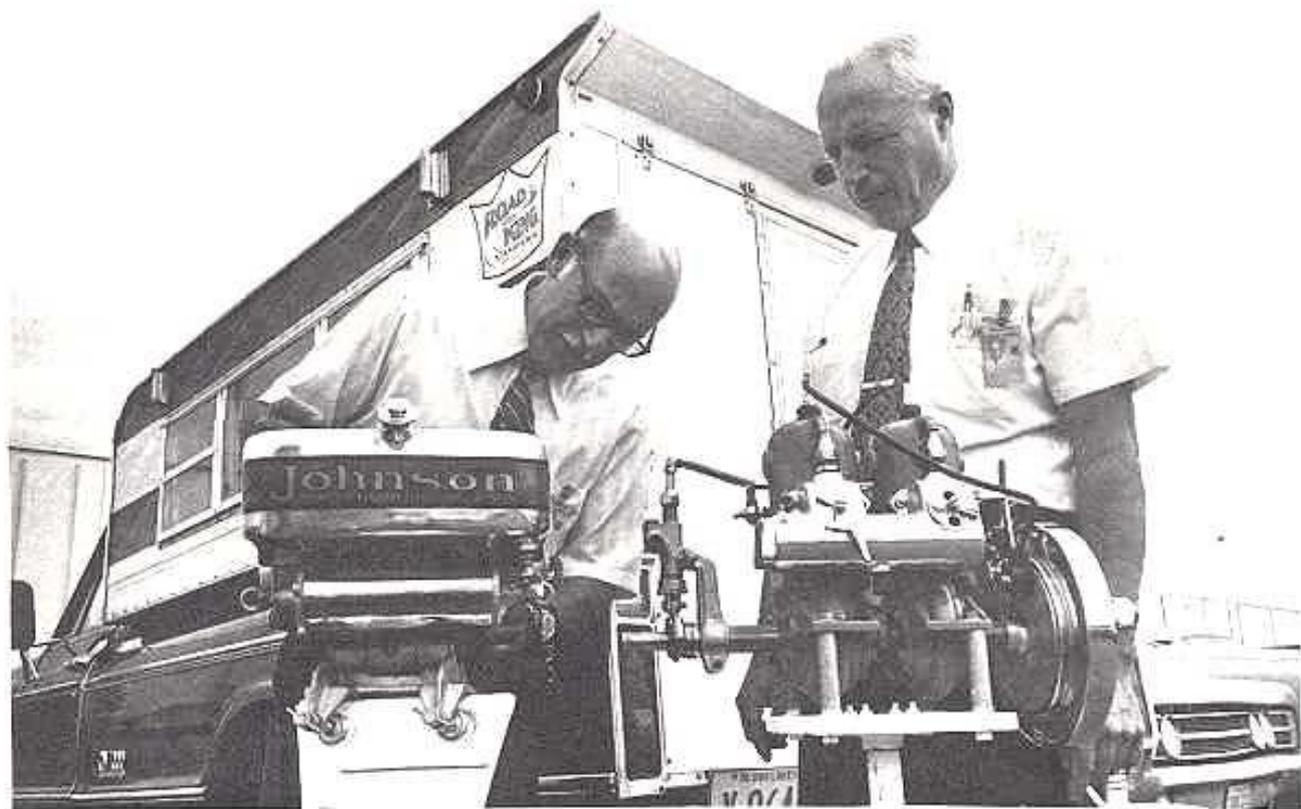
Next time; The Aftermarket PR parts.

P.S. Thanks to Dick Hawie, John Toprahanian and Mr. Hubbell, for help and data. Some references from The Encyclopedia of Outboard Motorboating, Bowman, 1955, were also used.



Bob Thornton flying a Jacoby Hydro powered by a PR. Photo taken in 1955

YOUR FELLOW AOMCI MEMBER.....



LEN PANGBURN, right; shows motors from his outboard collection

He Goes Overboard for Outboards

You're all set for a big day on the lake when - drat the luck - that trusty old outboard motor you've been nurturing for years finally seems to have had it.

But before you consign it to the junkyard or an obscure spot in the garage, hear the call of Len Pangburn. Because he and his colleagues in the six-year-old Antique Outboard Motor Club, Inc. have developed a thriving new hobby - collecting old motors.

Pangburn, a 42-year Honeywell veteran who is a staff engineer in punch press, Golden Valley, joined the club two years ago. Assisted by his 14-year-old grandson, Gil, who lives in Spring Lake Park as does Pangburn, they've rounded up and restored 10 motors.

You'll probably recognize the current brand names such as Johnson and Evinrude (he has 1928, '29 and '34 Johnsons and his oldest is a 1916 Evinrude) but the names Caille and Lockwood Ash are not exactly household words, though they used to be.

An outboard, to qualify as an antique, must pre-date World War II. You may be surprised to learn that outboards have been manufactured for 80 years.

The oldest motor reported by a club member goes back to 1905, Pangburn noted, while the most old motors any member has gathered is 125 ("He's got a double garage racked and packed with motors.")

There are specialties within the genre of outboard motor collecting, Pangburn continued. "Some collect 'em just to restore to operating condition," he said. "Some restore and race them. Some specialize in certain brands."

One thing all outboard collectors share is a never-ending search for old outboards. Those motors that can't be restored can at least be used for parts. Old outboards, Pangburn knows from experience, can often be found in junkyards, farm auctions, basements, garages and attics. Pangburn, for example, recently obtained a motor on a tip from a

relative at Hinckley. "It's in the truck of an old car in a junkyard here," his brother-in-law advised. Pangburn journeyed to Hinckley, checked it out and discovered a 1928 Johnson which, due to several unusual features, dazzled his fellow outboard collectors at their first annual convention which was held at Waukegan, Ill. a few weeks ago.

Outboard motor collectors are to be found all over the U.S. and Canada, Pangburn said, using the editorial roster of the club's semi-monthly magazine, "The Antique Outboarder," to support that statement.

He invites any Honeyweller who may wish to learn more about the club, or who may have an old outboard he wishes to donate or sell to contact him at home: 784-3301 or 8485 Cottagewood Terrace, Spring Lake Park, Minn., 55432.

"It's a good hobby," says Pangburn, "especially for young people and we do have a lot of them in the club. We all have a lot of fun with it."

Reprinted in part from the September, 1972 Honeywell "Circulator".

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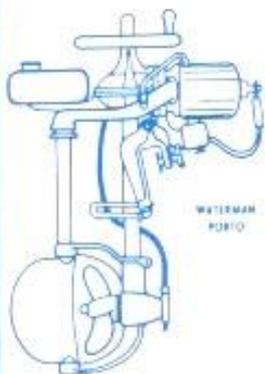
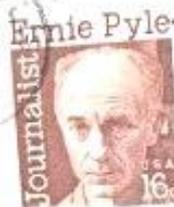
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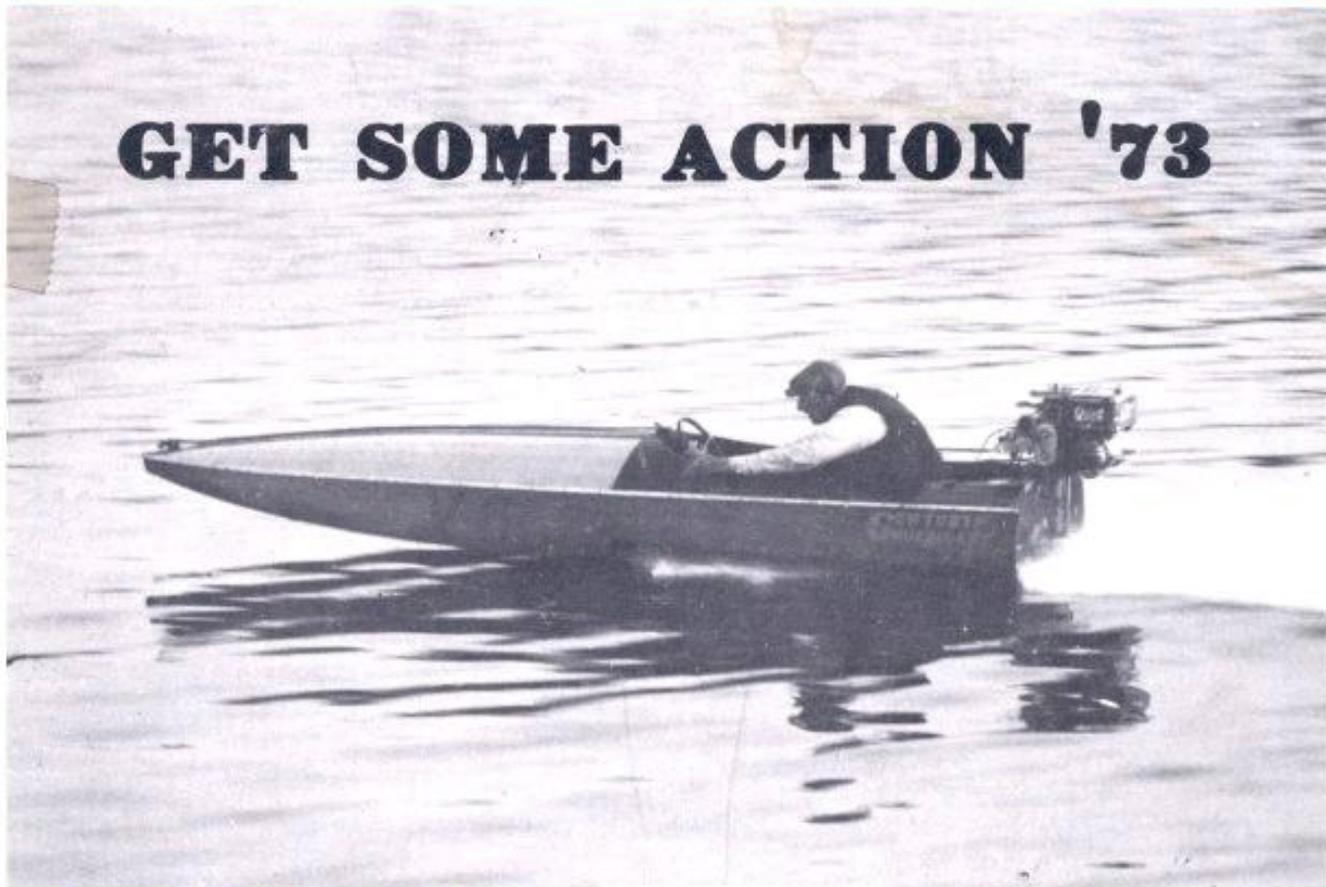
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