OUTBOARDS
INBOARDS

DECEMBER
25c

# BOAT SPORT

ANC

## HOW TO GET PEAK PERFORMANCE FROM OUTBOARD CYLINDERS

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## MODIFYING YOUR BOAT FOR MARATHON RACING


HYDROS, RUNABOUTS, UTILITIES
RACING - HOP-UPS - SERVICE

# SLO-MO TOPS 178 M.P.H.!

STANLEY SAYRES 178.497 m.p.h. average for the mile in "Slo-Mo-Shun IV" has set the entire boating world to wondering who and in what will top the 200 m.p.h. mark. Some figure the single Allison powered "Slo-Mo" itself will be the first to break through the 200 m.p.h. zone. They talk of the phenomenal July 7 downwind run of 185.567 m.p.h. as an indication that "Slo" still has plenty of reserve speed to offer. They substantiate their confidence by pointing out that Sayres' successful assault on his former 160.323 m.p.h. world's record made on the east channel between Mercer Island and the mainland on Lake Washington, was accomplished in spite of an irritating northerly chop prevailing. With perfect water conditions they figure an added 22 m.p.h. is a sure thing.

Others look to the 200 mark to be cracked by a jet or rocket-propelled craft and many bets are on land-mile holder, Britisher John Cobb, to turn the trick in his Ghost engined, jet-powered Crusader, a three ton, 31' long, 13' wide, long-nosed, bug-like boat, supported on two sponsons. (End).

(Below) Motor magician, Mike Welch, checks over "Slo-Mo" IV. He took it over the measured mile course at 145 m.p.h. to qualify as member of 100 Mile An Hour Club.


(Above) "Slo-Mo-Shun IV" streaks downwind at fabulous 185.567 m.p.h. on one leg of her record-breaking run over measured mile. Note adjustable fin extension for added stability, used for speed runs. Not for racing.

(Right, above) Stanley S. Sayres is interviewed by Charles Herring, the special events reporter for Seattle's KING-TV and KING, after his record-breaking average for a mile of 178.497 miles per hour on July 7.

(Below) Daybreak on record-breaking day, July 7, shows final preparations for Stanley S. Sayres' 7:30 a.m. onslaught on his own world's record with his riding mechanic, Elmer Linnenschmidt, sharing the thrilling and historic ride.

## This Month's Cover Story . .

FOR SHEER THRILLS, spectator excitement and pounding action for drivers and riding mechanics, there has never been anything in outboarding to equal the two-man F racing runabouts. That this class has dwindled to near oblivion in the East and Midwest and has reached a lukewarm point in the Far West can be laid partially to the same cause that has seen the passage of the F hydroplanes: restriction of the motors to the original lower unit. This has allowed the PR- 65's with only approximately 50% of the cubic inch piston displacement, to run with and frequently beat the 60 cubic inch, 4-cylinder F's.

This month's cover picture was taken by Bob Ruskauff in November, 1950. The race site is Lake Mead, located six miles from Boulder City, Nevada, on a huge man-made lake formed above Boulder Dam.

Shown on the cover are some of the hottest two-man F jobs in the country. In the foreground in C-282 is Harvey Sampson of Covina, Calif., in his "Tee Vee," leading George Peake of South Gate, Calif., in "Peake's Folly," C-286. At the extreme right is the present National champion and world's record holder for five miles in competition, Ken Jolley in his Rockholt hull, "Bear Cat," No. C-117. Jolley established the world's record for Class F racing outboard runabouts for five miles in competition on November 10, 1951, at Salton Sea, Calif.

The screaming 4-60's, in their pre-World War II heyday, were called the "Thundering Herd." They offered a hornet-whining and rooster-tail spray that put a punch in regattas from Coast to Coast. What can be done with the mighty four-cylinder jobs when the stops are lifted on lower units has been vividly demonstrated in the past few years by J. B. Broaddus, Fredricksburg, Va., in action in his Class X—a 4-60 with a Walker-Bowman lower unit of tractor type. On unofficial straightaway timing, Broaddus has frequently topped 75 m.p.h. Clint R. Ferguson back in the big days of the converted F's, scorched a mile at 78.44 m.p.h. in November of 1939 at Worcester, Mass. Opposed to this, the present record for the two-man F runabouts is 57.935 m.p.h. established in October, 1940, also at Worcester, by J. Kovacevich in his "Muscat Kid V."

Holding promise of increased popularity and nearly comparable action for the fans and drivers are the newer Class D utility runabouts that are putting on better and better competitive events.

For nearly two years no major regatta has been staged on Lake Mead although, all told, four big affairs have been held there in the past under the auspices of the Boulder City Junior Chamber of Commerce. By the time this issue of BOAT SPORT reaches the newsstands, it is hoped that the late November plans for a 1952 regatta on Lake Mead will be definite. At the moment, the affair is set for sometime following the National Desert Regatta, November 8th through the 11th, on Salton Sea. (End)


# BOAT SPORT

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**(Whole number four)**


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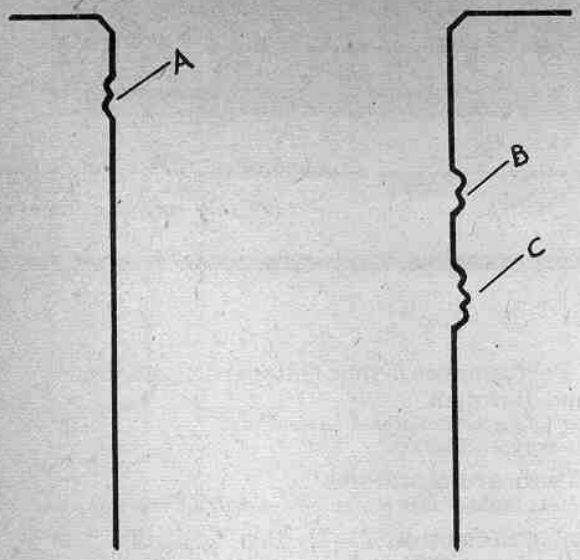
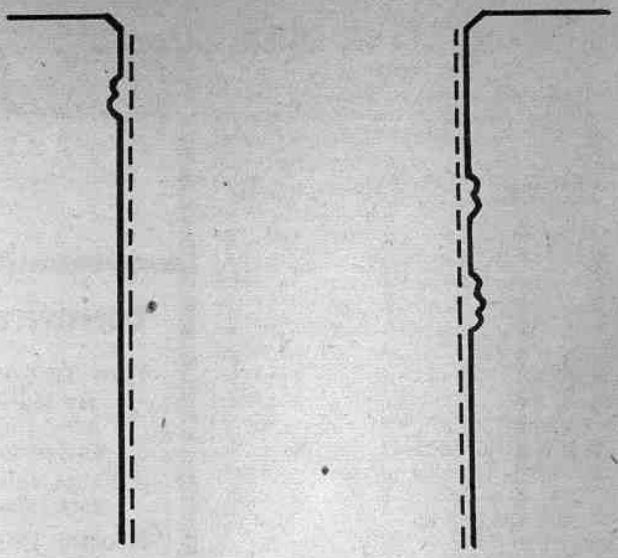
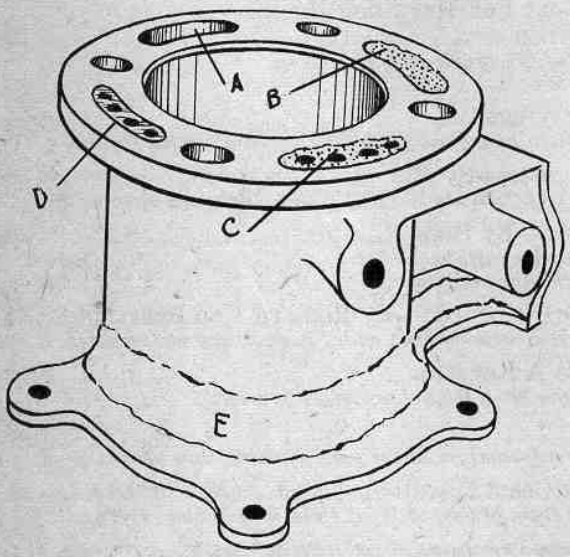


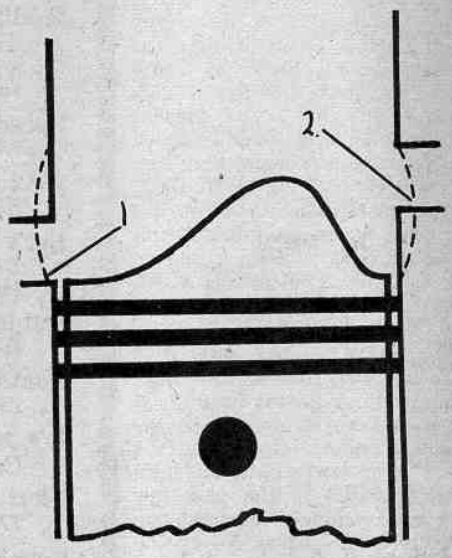

Score at "A" if .002" deep requires skim grind that makes block .004 oversize. Score "B" .010" deep opens block on grinding to .020" oversize limits. Score "C" deep can't legally be ground. (See text)



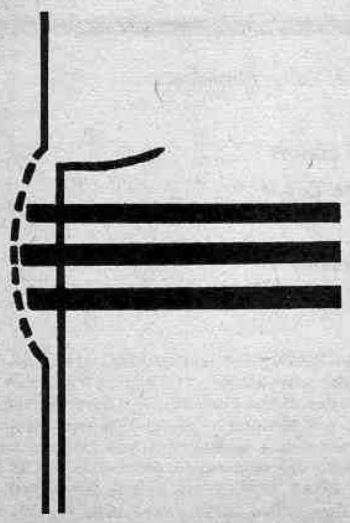
Racing cylinder scored will require .010" grind, then .020" chrome plate with .005" skim grind of chrome will bring block back to legal use at .020 oversize. This is possible under present racing rules.



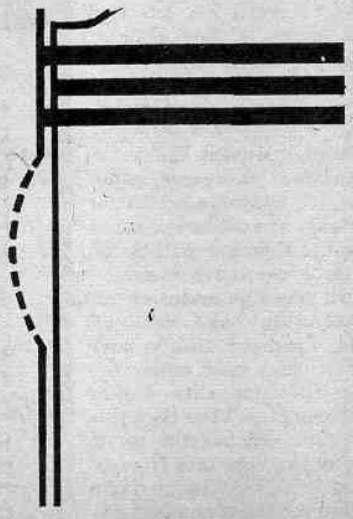

Racing B block. As precaution against warping many drivers strengthen water jacket passages "A" with braze as in "B", then drilling as in "C", with final facing off of surfacing as in "D". Lapped faces vital.



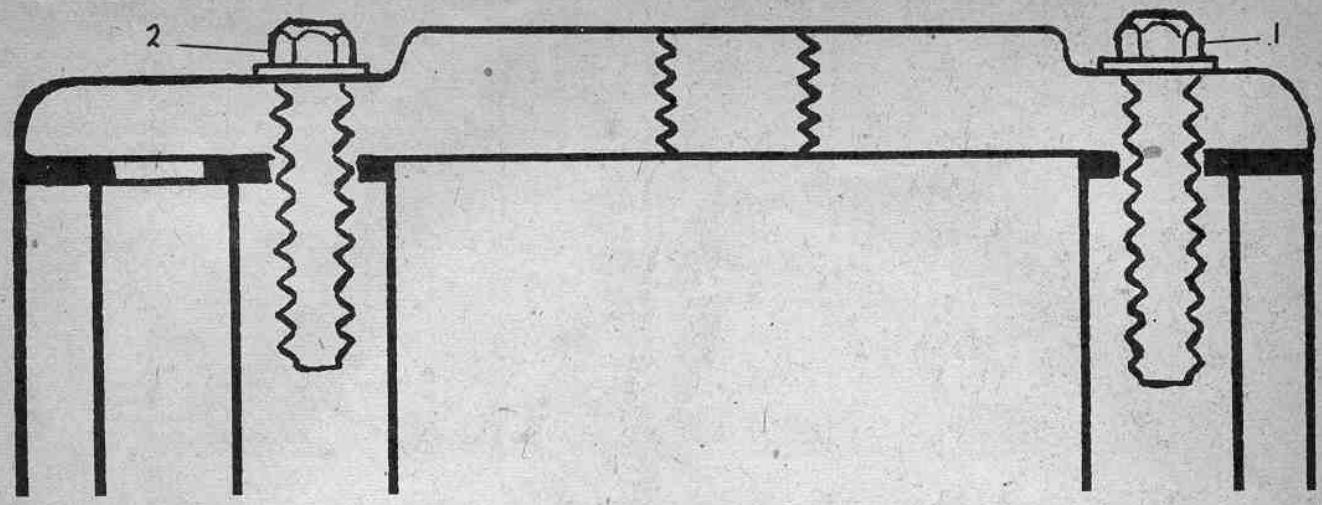

An exaggerated view of belling condition of cylinder walls, at the intake port (1) and the exhaust port (2), with a cut-off view of the piston during the compression stroke of the outboard engine.



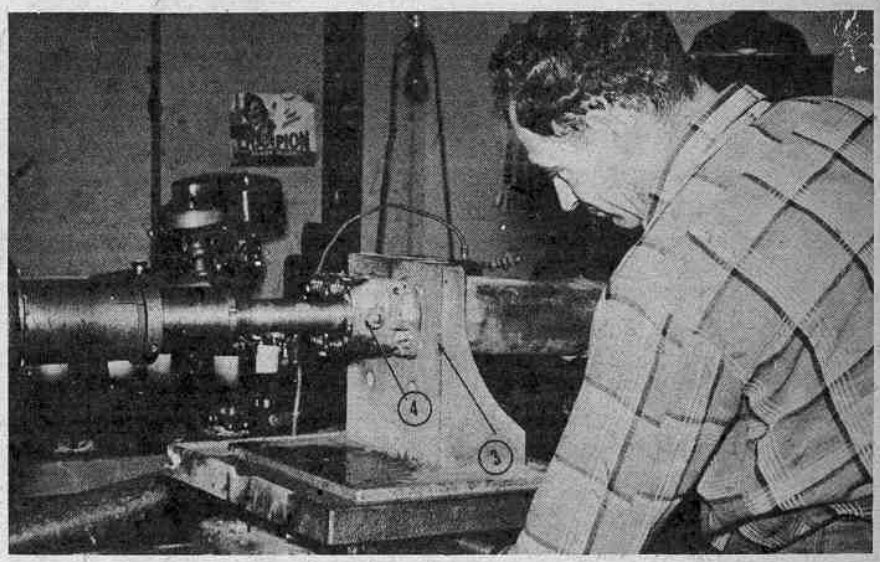
At belled section in cylinder (much exaggerated for purpose of illustration) note how ring tension causes rings to expand and follow out-of-line contouring of the faulty configuration of the bore.



Exaggerated view of the ring dance caused by uneven cylinder wall illustrates how poor wall contouring causes rings to flex and results in blow-by as the rings do not properly seal themselves.




Proper tension on head bolts is of vital importance to prevent distortion and warping. If, for example, stud (1) is given 20 pound tension and stud (2) is given 50 pound tension, tendency arises to draw bore out of line in direction of greater tension and may result in head warping or bad distortion.




(Right) An alternate firing twin block in position on a template with the grinding wheel rotating. A vacuum draws off shavings from cast iron or steel sleeved blocks. Chromium, which is much harder, must be lubricated with a sal soda solution. No. 3 shows how face plate assures alignment. No. 4 shows cylinder bolted to face plate.

# HOW TO GET PEAK PERFORMANCE FROM OUTBOARD CYLINDERS

**By Hank Wieand Bowman**

IT HAS FREQUENTLY been said by top-flight outboard racing drivers that an outboard engine is only as good as its blocks. You'll hear this same group of drivers refer to the blocks as the heart of the engine. I won't argue with the accuracy of such a statement but one thing is true: all of the fine balancing of cranks, rods, flywheels, super case setups, ignition work, fine compression chamber balance and careful fit of pistons won't make an outboard engine run up in the front ranks unless the blocks are perfect and stay perfect.

In the case of opposed firing twins, some of the drivers hold to the theory, too, that if they have one exceptionally good block and one passable block, they can get by. Let's not be defeatist about this thing and just try to *get by*. Rather, let's understand what's important about a set of blocks, why some stay in shape and others don't, how to improve them and what not to do.

If you are starting with a brand new engine, you may be that fortunate one in ten (or you pick the number and sometimes the odds run up to the three figure mark) who happens on the perfect blocks right at the start. Many drivers prefer to start with a used set of blocks. They consider that former running has aged and normalized or neutralized the blocks, that the metal has taken what set it is going to take and once cleaned up properly, the bores stay in proper round.

In this connection racing motors may be a maximum of .025" larger than tolerances shown on engine specification sheets and chrome plating is permissable in order to return racing cylinders to this maximum oversize.

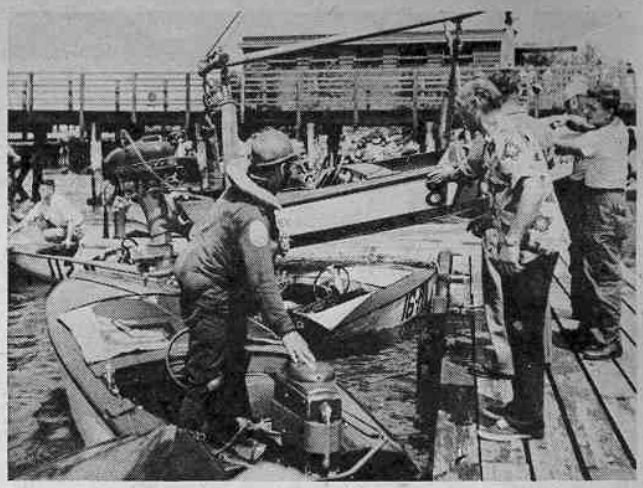
## RULES CHANGES NEEDED

IF YOU check the stock outboard rules, you will note that you are permitted up to .020" oversize on the cylinder bore dimensions (provided that the manufacturer of your motor furnishes oversized or unfinished pistons as stock replacement parts). You will note, too, under stock outboard rules, stock service motors are *not* permitted chrome plate cylinder walls.

Organized modified stock rules give an added .005", i.e., (*Turn to page* 30)

(Above) 14-year-old Robert Schmitt, youngest driver in the race rests just after end of grueling 4½ hour grind. He finished 2nd in Class B, just behind winner James Hoffert. This was first marathon for both drivers—and almost first big race of any kind.

(Below) BOAT SPORT's own cover artist, Harold Kelly, who came in 11th in Class B. Kelly built "Jinx" himself, first making model and later expanding plan into full-scale hull. Note gas tank, larger than carried in most B's, which avoided refueling stops.

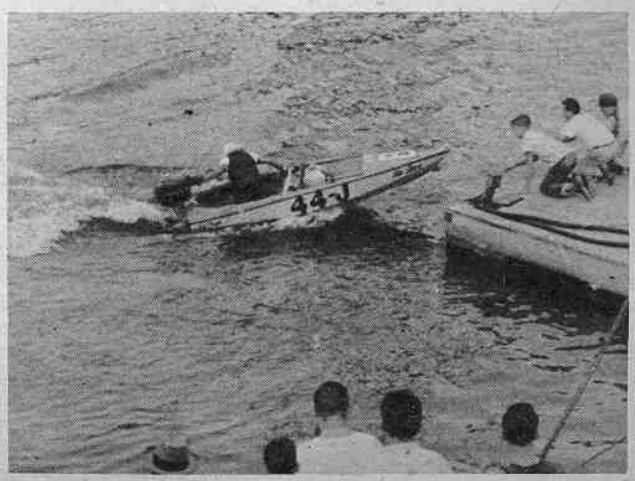


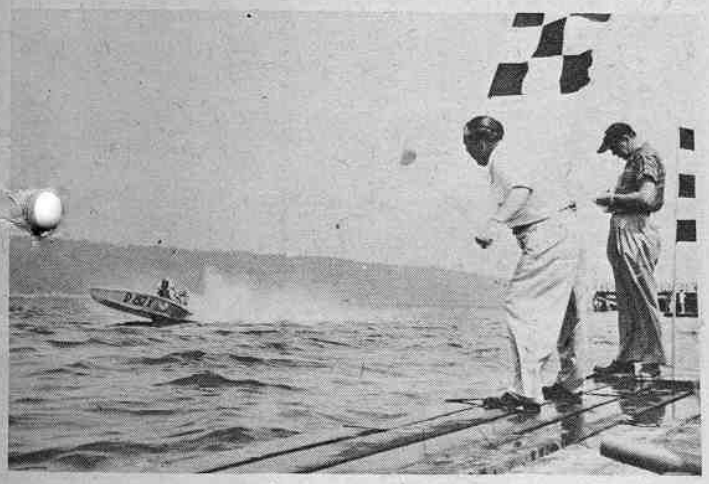
(Above) Schmitt's boat—a Raveau-built Gufista—being taken from water at Dyckman St. for official weighing and measuring. Curtiss Schmitt, identical twin of Robert, served as mechanic. Similar checking later took apparent CM Class win away from Don Jones.

(Below) $25 a second—and no overtime! The closest finish of the day, as August Nigl cops 5th place in Class FM from Richard Yarm by only one second to get extra prize money. Coast Guard's U.S.S. Tamaroa anchored at finish line shows tide is still out.


(Below) Mrs. Evelyn Sarossy, first woman to finish and winner of 5th place in Class B among 73 starters, idles after finish while waiting her turn to be picked up by weighing crane. She was almost home at end of race since she lives in nearby Bronx.

(Below) John Covals, second finisher at New York and the winner of Class B, here swings back to float at Poughkeepsie after he came in too fast, over-running it. His fueling crew wait on knees to catch bow. Usual time spent refueling was about one minute.



(Above) Up with early-bird pit stooges on bright race morning, Joseph J. Hardie, co-publisher of BOAT SPORT, caught excellent shot of feverish activity in the Albany pits. Heavy rains the day before postponed many trials and last-minute adjustments.

(Left) Like a sprinter lunging for the tape, Robert L. Switzer almost jumps his "High-Strung" across finish line to get checkered flag from Charlie Mundorff. First of the 113 boats to finish, and winner of Class D, Switzer also had the lowest elapsed time.

**20th Running of Oldest Distance Test**

**Too much for Over Half of Starters . . .**

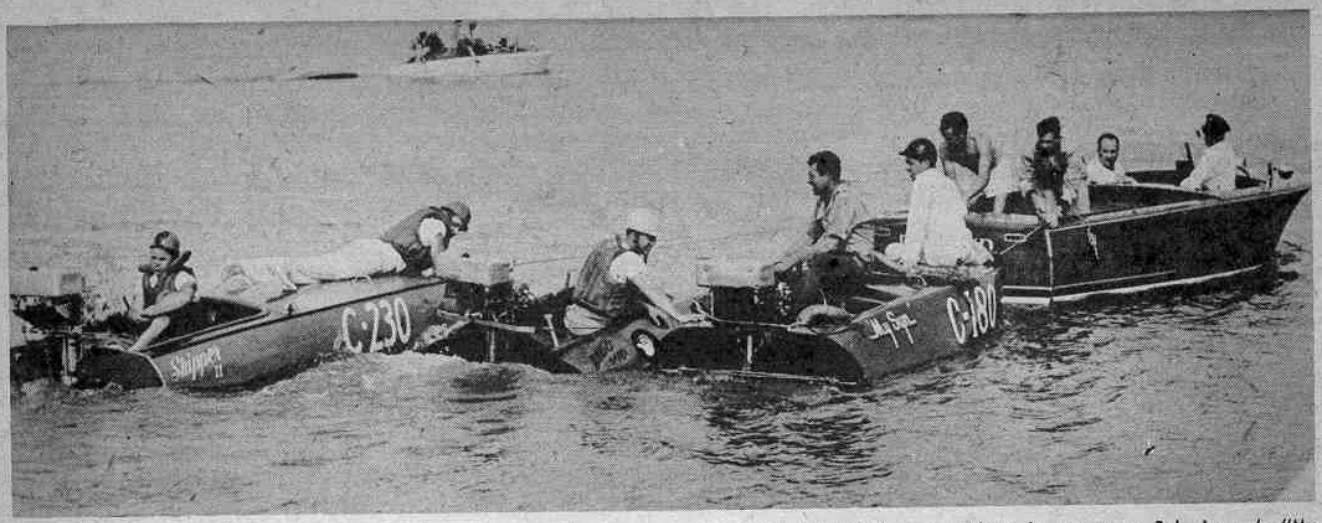
# ALBANY—NEW YORK OUTBOARD MARATHON

A DIFFERENCE OF OPINION may make horse races, as Mark Twain once said, but it takes a lot more than just that to make boat races—especially the marathon kind. This year it took a combination of things to make the Albany-New York outboard event what it was: among them were smooth and rough water, wakes from large ships, snorkel driftwood that seemed to be radar controlled for direct hits, stamina of drivers, and endurance of motors and hulls. All this and differences of opinion, too! In fact there were 234 separate and distinct and differences of opinion, too! In fact, starters (29 more than last year); each one of whom was sure his boat would get the first checkered flag at the finish line, one mile above the George Washington Bridge in New York.

The 20th running of this oldest outboard marathon in the country is now safely in the record books, but fans and drivers alike are still talking about it and will be for many months to come. It's easy to see why so many people call it the "Indianapolis of the Waterways".

The unpredictable Hudson river was calm as a mill stream in front of the Albany Yacht Club at 8:00 A.M. on Sunday morning, August 17th, when the starting gun sent the little Class A's skipping off down the river. Half an hour later the 73 Class B's buzzed off. Then at fifteen minute intervals the other classes were set loose in pursuit, until finally at 9:30 the FM's got away By then the fleet, still led by the little A's, was stretched out over nearly fifty miles of white-feathered water.

Drivers who stopped to refuel at the Poughkeepsie Yacht Club floats reported "flat water all the way from Albany." But already the U. S. Coast Guard communications setup there was reporting a different story farther down river. From Bannerman Island on through Haverstraw Bay and Tappan Zee the waves were kicking up and it would be plenty rough. In 1951 62% of the starters were able to finish. This year only 48% made it, and of the 120 boats that had to drop out it was estimated that 80 of them did so between (*Turn to page* 22)




Going my way? Plus, the flips, there were many other casualties in the 13-boat F-racing runabout field that had to grab hitches back to the pits from Lloyd Jensen's chief patrol boat. Shown here are three that didn't go anywhere in one race: Bob Jepson's "My Syn"; Dave Spies' "Lido Kid" and Elves Capella's "Skipper II." All of these, it so happened, were boats driven by Californians.

Over and under! This is one of eight boats that flipped, putting their owners in the "Hell Divers Club." Shown above at the flag end of their roll are Walter Gillo and his riding mechanic of a Class F racing runabout, "Tenderfoot." One other driver, Jimmy Holder in "The Brat," racked up his first wing-ding in fifteen years of racing. There were no serious injuries during the races.

COME THE AUTUMN and there is one great fixture in the great Southwest which lures 'em all. Now, after much uncertainty, the 12th National Desert Regatta is set for November 8-11. This event is for all those who think there is a record lying dormant in their racing outfits, stock outboards, racing or service outboards, or inboards (up to 266 cubic inches).

At this writing it could not be determined on which shore of the 10 x 40-mile sea, 32 miles southeast of Indio, the four-day speedfest of mile-trial and competition would be held. If swollen sea waters recede enough in the hot summer, it will be held at Desert Beach, 10 miles from Mecca.

For out-of-state drivers who want some added action there will be an inboard meet Oct. 12 at Long Beach and (probably) Oct. 21 at San Diego; outboard and stock outboard Oct. 19 at Parker, Arizona; stock outboard Oct. 26 at Blythe, Calif.

Inboard driver-members of the Southern California Speedboat Club, Inc., which last year went to bat in the underwriting of the 11th annual regatta, voted to race for trophies only in their Labor Day Long Beach racefest. It will be sponsored by the West Long Beach Lions Club. This alone will guarantee over $1,500 toward the Salton Sea record jamboree. So all that remains is to wait for the A.P.B.A.-distributed official notice. Judging from recent turnouts the armada to hit Salton's sandy shores (from the Southwest alone) will far and away beat the 214 boats from some 14 States and Canada that indulged in the 21-record spree of 1951.

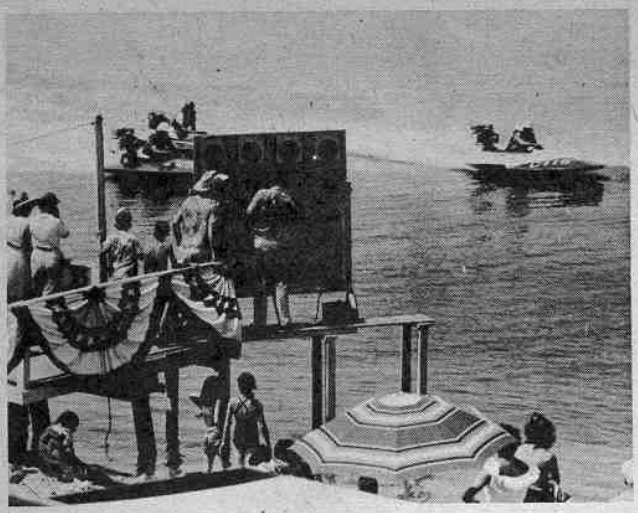
## OUTBOARD DIVISIONALS DRAW 107 BOATS

So many have viewed with alarm the "death" of outboard racing that a complete moral shake-up must have followed the 20th annual (Hearst) Perpetual Gold Trophy Regatta, which was also the 1952 Western Divisional Outboard Championships, July 27 at Long Beach.

You can't ignore 107 boats from three states—the number of *starters* in nine classes which crossed the line in a spill-riddled melee before an estimated 9,500 spectators.

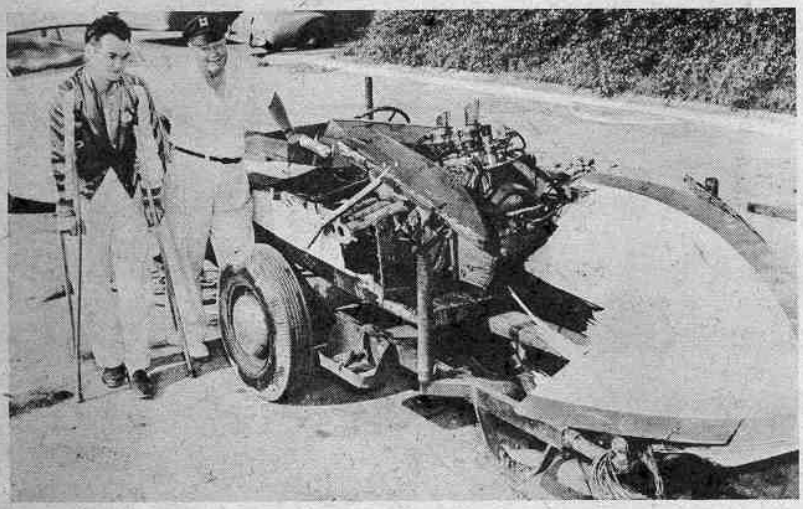
The Los Angeles Speedboat Association conducted the event which is sponsored each year by the *Los Angeles Examiner*. With Marvin (Slim) Boettger, chairman of Region 12 as the able referee (and announcer), and Tommy Thompson of the S.C.S.C. as race chairman, it was an exceptionally well-handled meet, loaded with close racing —and spills. There were eight of these —another record for the Marine Stadium.

Four of the nine titles carried away went to a pair of veterans. Ken Jolley's national champion (*Turn to Page* 30)



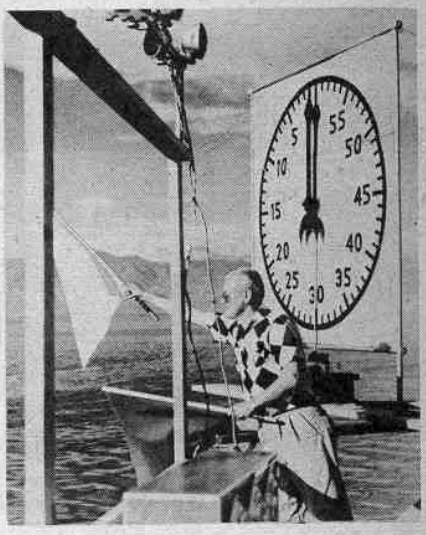
Western Outboard Divisionals drew 107 starters. Ken Jolley's "Beat Cat Too" (C-115) is pictured getting away from starting line. This Burbank, California, driver, won two Western Divisional titles.

Stock outboarders need no introduction to this grand couple: Comm. Ed Craven and wife, Jean, of United Speedboat Ass'n. which conducted Western Divisional Championships at Marine Stadium, August 16 to 17.



In one of the heats, "Honey Bee Too," with a slim lead over Commander Ed Olsen's "Cream Puff III," virtually disintegrated in an inexplicable straightaway spill. Fletchell and owner, Comm. Willis Mitchel, U.S.N., inspect the unrepairable hull.

(Below) In memoriam! Long-known speedboat figure, Don Steans, aged 51, of Los Angeles, passed away this summer. This former outboard champion perfected the sweep-hand clock and the starting light system. Affable Don will be sadly missed by all who knew him during the last 15 years of his inspiring career.




# ROOSTER TAILS FROM GREAT SOUTHWEST

**It's RSVP for Salton Sea . . . Outboards Dying? No, Siree! . . . Eighty-nine "Sun-fishers" at San Diego Stock Section. . . .**

**By Bob Ruskauff**

(Above) Part of the 266 boat-starting field heading south toward Wisconsin Ave. with 92 miles of rough water ahead of them. Only 7 boats of original 273 failed to get off from the pits.

(First, right) Bernard Abrams who drove his Johnson powered hull to a Class C victory. (Second, right) Ken Bauske, first boat to finish, but he had 92 mile ride in vain as he was disqualified. (Third, right) Raymond Lenk, 28-year-old Detroit racer, set new record of 47.6 miles per hour over course to win in the D-2 class.

# WINNEBAGOLAND—'52

## RAYMOND LENK, 28-YEAR-OLD DETROIT DRIVER, SETS NEW RECORD OF 47.6 M.P.H. OVER 92 MILE COURSE.

By Bill Nichol

WHEN 70,000 thrill-seeking enthusiasts assemble over a 92 mile course to witness the Midwest's fourth annual Milwaukee Sentinel-Winnebagoland Outboard Marathon, it means that the event rates among the nation's biggest speedboating events. Moreover, when the participants manage to break all former records with Raymond Lenk slashing 40 minutes from Dick Gallagher's 1951 mark, you may rest assured that the boys and the gals were really squeezing their throttles.

A total of 266 drivers, compared to 228 last year, ranging in age from 12 to over 60, whined past the starting point over what was considered unusually peaceful water for this rugged course, but the Winnebagoland grind is anything but a calm water go even under its most ideal conditions. Tranquil for a short period after the start, the waters from Neenah to Fremont and return quickly knocked any sense of false security from the unwary tyros. The veterans knew what to expect and some of them got more than they planned for, including BOAT SPORT'S correspondent, Jiggs Jagerson, who when running in third place, suddenly had his boat sink out from under him.

To the uninitiated, the outboard racer, in addition to bucking turbulent water for the 92 mile distance, must take his beating on bended knees. This means that many of the most hardened veteran competitors must be lifted from their boats after crossing the finish line.

This year's champion is Raymond Lenk, factory foreman of Highland Park, Mich., who piloted a Class B-2 Speedliner powered by a Mercury motor. He covered the course in a record breaking 1 hour 56 minutes and 20 seconds to average 47.6 miles per hour, nearly 10 m.p.h. faster than the best average speed over the same distance in 1951.

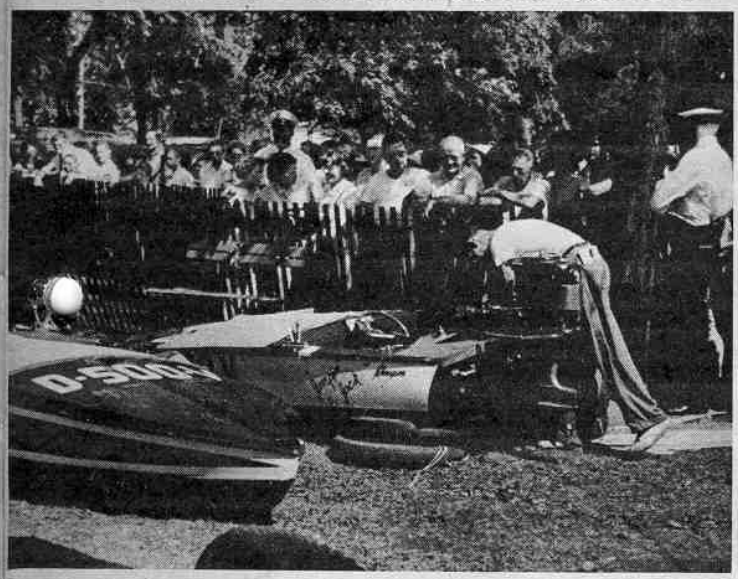
First to the checker in Class D-1 was Art Seibold, 31, of Oshkosh, Wis., in an Evinrude powered Speedliner, who was clocked at 37 m.p.h. Bernard Abrams, 30, Wilmington, N. C., drove a Rockholt hull with a Johnson power plant at 35.6 m.p.h. to take top honors for Class C. Dave G. Smith, 20, Wisconsin Rapids, Wis., in a Mercury motored Switzer bounced to a 38 m.p.h. win in Class B and surprisingly beat home a field of 19 finishers in the more powerful Class C outfits. Lloyd Stanley, 35, Petoskey, Mich., in a homemade Merc powered boat, topped the Class A's with an average of 32.4 m.p.h. to win the Merrill Jensen Memorial Award presented by the Kiekhaefer Corp. to the first-place finisher in Class A.

Trophies for the first three finishers in each class and the two D divisions were awarded by the Milwaukee Sentinel. Additional prizes included $5,000 worth of merchandise. All finishers received 92-mile Club medallions from Carlton Foster of the Dunphy Boat Corp. The race was co-sponsored by the Milwaukee Sentinel and the Neenah-Menasha Chamber of Commerce and was sanctioned by the American Power Boat Association with the Wisconsin Stock Utility Outboard Association cooperating. Dick McFadyen, former Class M hydroplane title holder, was the official referee.

In addition to the waves and driftwood which were (*Turn to Page* 23)

Practically out of the water! The Winnebagoland course was much smoother than in 1951 but it gave no feather-bed ride as this Class A driver demonstrates. 70,000 thrill-seeking spectators assembled over 92 mile course to witness fourth running of the big Midwest event.

Drivers from eleven States, with California and New Jersey marking the extremes, flocked to Wisconsin for the fourth running of the Winnebagoland Outboard Marathon. Contestants are shown here as local and A.P.B.A. officials give them their final instructions.

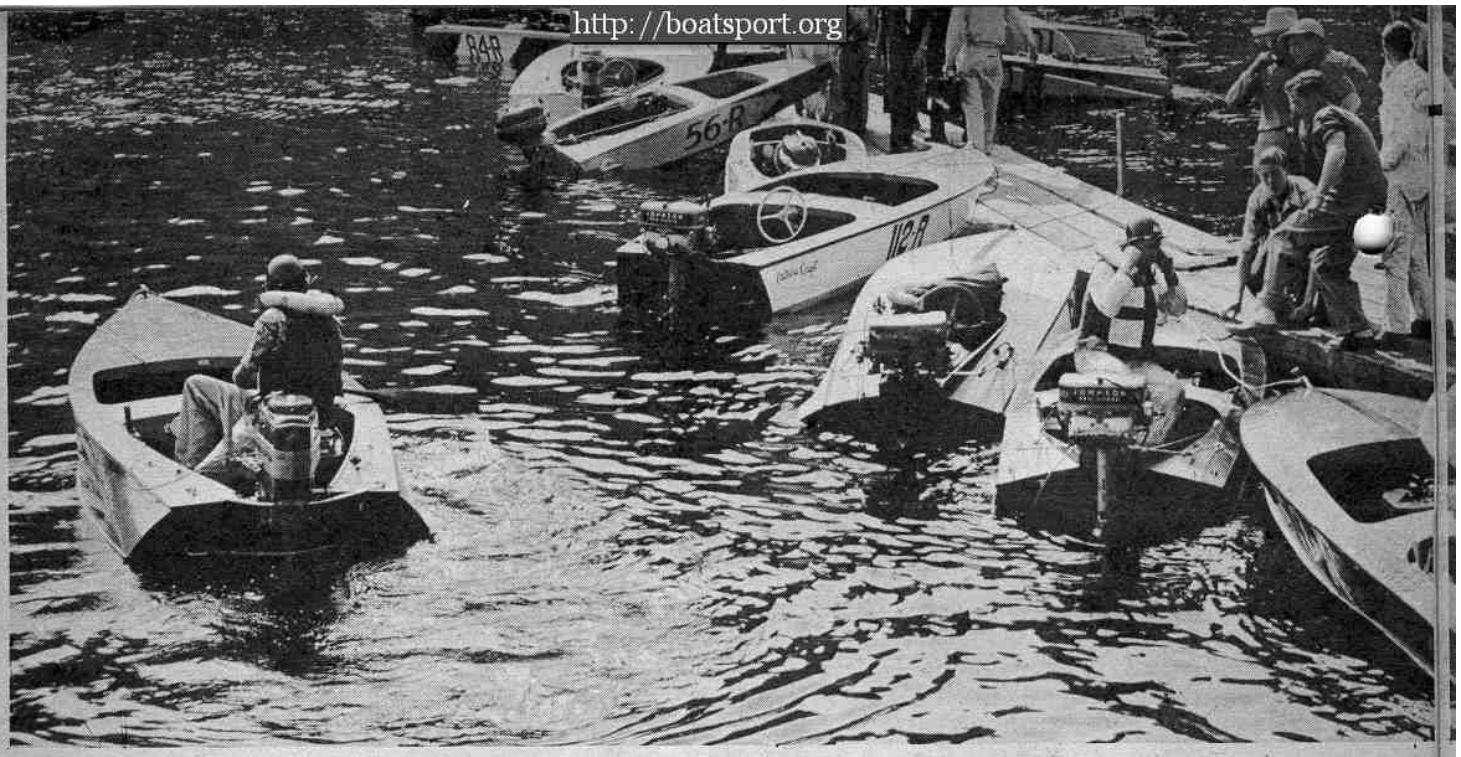


(Above) All the winning boats were impounded at the end of the race and given a complete inspection. In foreground is third place D-2 finisher, Laur Gonio's Mercury powered Barbour boat which had made difficult Winnebagoland Outboard Marathon run in 1.58:38.

(Below) 273 outfits were ranged along the banks of Lake Winnebago at Riverside Park, north of Neenah, Wisconsin, an hour after the starting gun sounded. The Milwaukee Sentinel-Winnebagoland Outboard Marathon was a bigger success than ever this year. Here's to 1953!

(Above) The last official finisher crossed line 5 hours, 11 minutes and 33 seconds after the start, but he finished! Hours of constant pounding make for rough deal. Driver here in smoked glasses has to be lifted from his boat at end of the event and be given first aid.

(Below) Three girl participants, left to right: Lorraine Werner of Horicon, Wis.; Vera Hankewich of Milwaukee, Wis., and last year's Class A winner, Marilyn Donaldson of Dayton, Ohio. The first competed in Class B; 14-year-old Marilyn came in 6th in Class A.


Pit scene at the finish of the 100-mile Seattle Marathon in 1951 is visual evidence of the survival of the fittest. Note auxilliary tank placement in runabout in foreground. On the marathon boat at left, lower unit tie-down line may be seen most clearly and distinctly.

THE PROBLEMS of marathon racing are by no means new but since the birth of the Winnebagoland Marathon, considered by many to be the roughest race of its kind in the world, nearly all solutions to these problems have been tested and found wanting in one or many respects.

How do we set up a marathon rig?

It's been a big guessing game up to now, but perhaps a broad outline of problems and means used to lick them may help some future long-distance drivers to come in right side up, albeit, perhaps, not in one piece!

The first big worry when one decides to enter a marathon is: has my boat been built to take it, or what kind of boat can I get that will give me the best chance to finish up front?

Pros and cons on design are about equal, with as many supporting the round chine hull as are in favor of the hard chine, or flat-bottomed hull. The boat will of course be obtained with a view toward the type of motor to be used. By and large, most of the boats sold today are of potential marathon ability. The main reason for so many boats failing to finish races are the poor quality internal bracing added by owners. This bracing includes transom braces, extra knees, stringers, tie-downs, and cradles built to accomodate the necessary extra fuel tanks.

I recently talked with Mr. Carlton Foster, the A.P.B.A. Stock Utility Rules Chairman. His advice was given in three big words: *"Keep It Simple."*

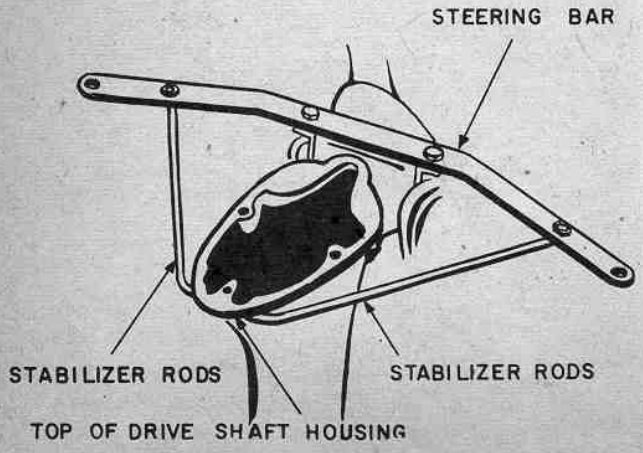
The more screws, bolts, angle iron, super-duper hot-shot twenty gallon bilge pumps, extra tools, padding, oars, and gimmicks in general you pack into your hull, the quicker you can expect to get a fish-eye view of the other boats passing you by. Sure you need extra strength—but don't overdo it.

For clarity I'll start aft and work forward.

A good method to brace the top of the transom is to fasten an angular piece of wood or a strap iron from the top about fourteen inches in to the side of the hull about (*Turn to Page* 32)

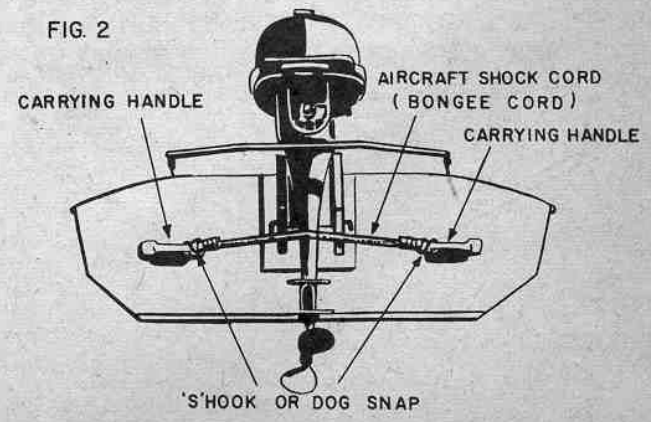
The stabilizer rods illustrated below form rigid ties between the steering bar and the drive shaft housing. These added strengthener rods are designed for Mercury motors KG4, KF7 and KG7—available at about $3.50.

FIG. 1

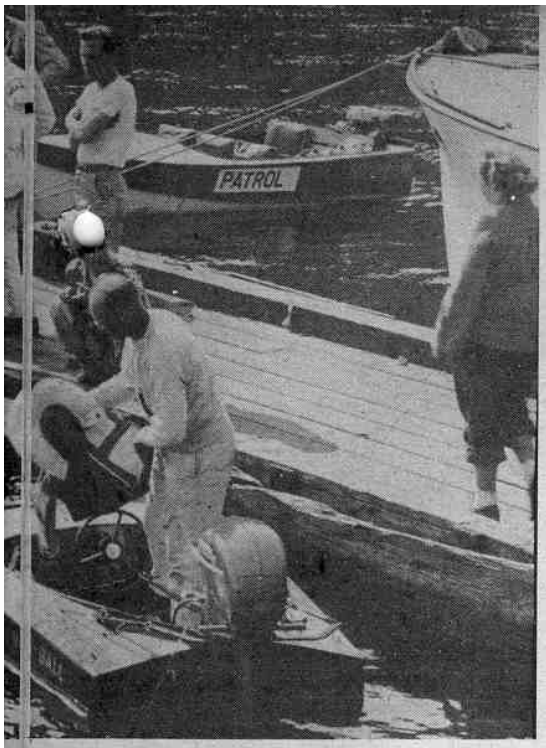



A kicked-up motor caused by contact of the lower unit with driftwood or similar floating debris, can be the cause of a spill. Simply arranged aircraft shock cord tie-down shown below adds to safety; is easy to install.

FIG. 2




SIMPLE TIE DOWN METHOD TO PREVENT ENGINE FROM KICKING UP




**Added Strength Without Excess Weight, Correct Load Placement Without Unbalance, Are Two of the Most Important Problems Confronting Racing Outboard drivers. . . . . .**

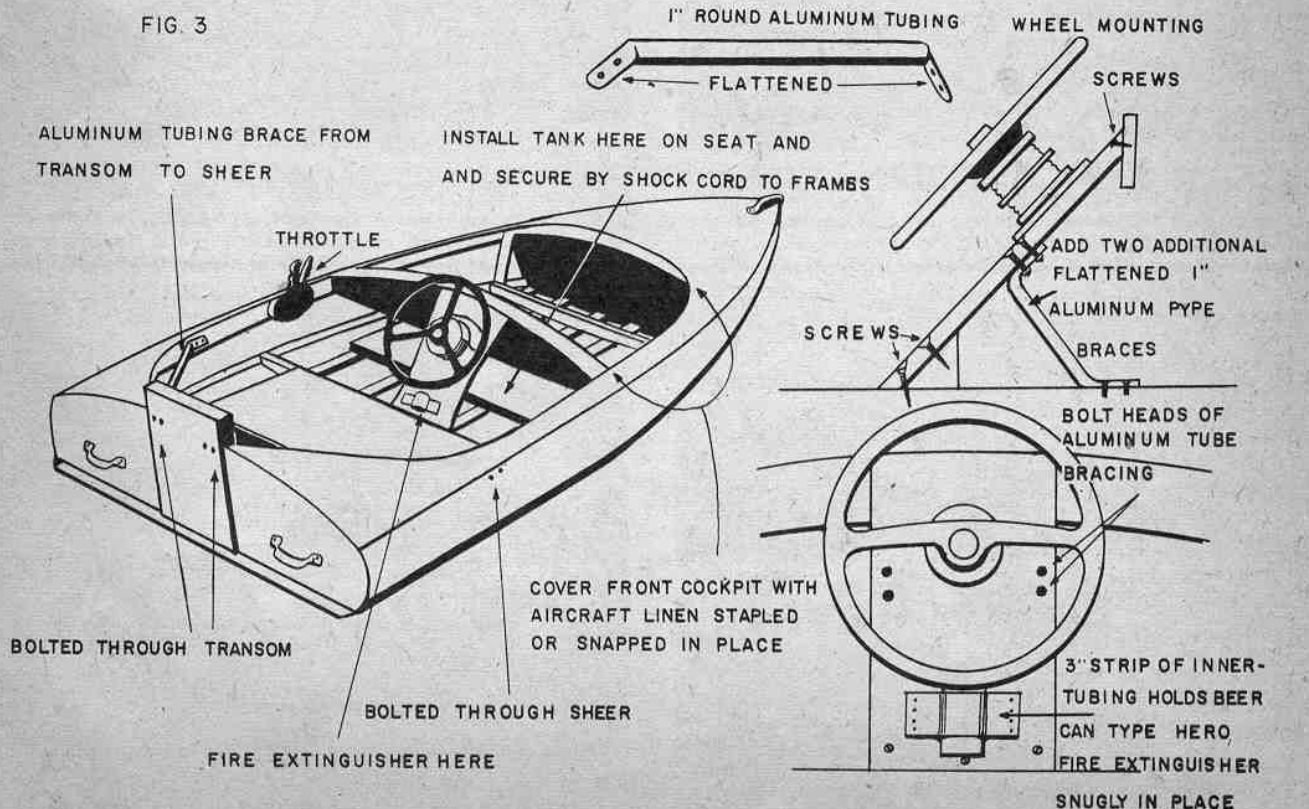

(Left) Careful advance planning wins races, as Pat Cummins, first place finisher of 100-mile Seattle, 1951, marathon, can attest. Pat Cummins drove Johnson-powered hull.

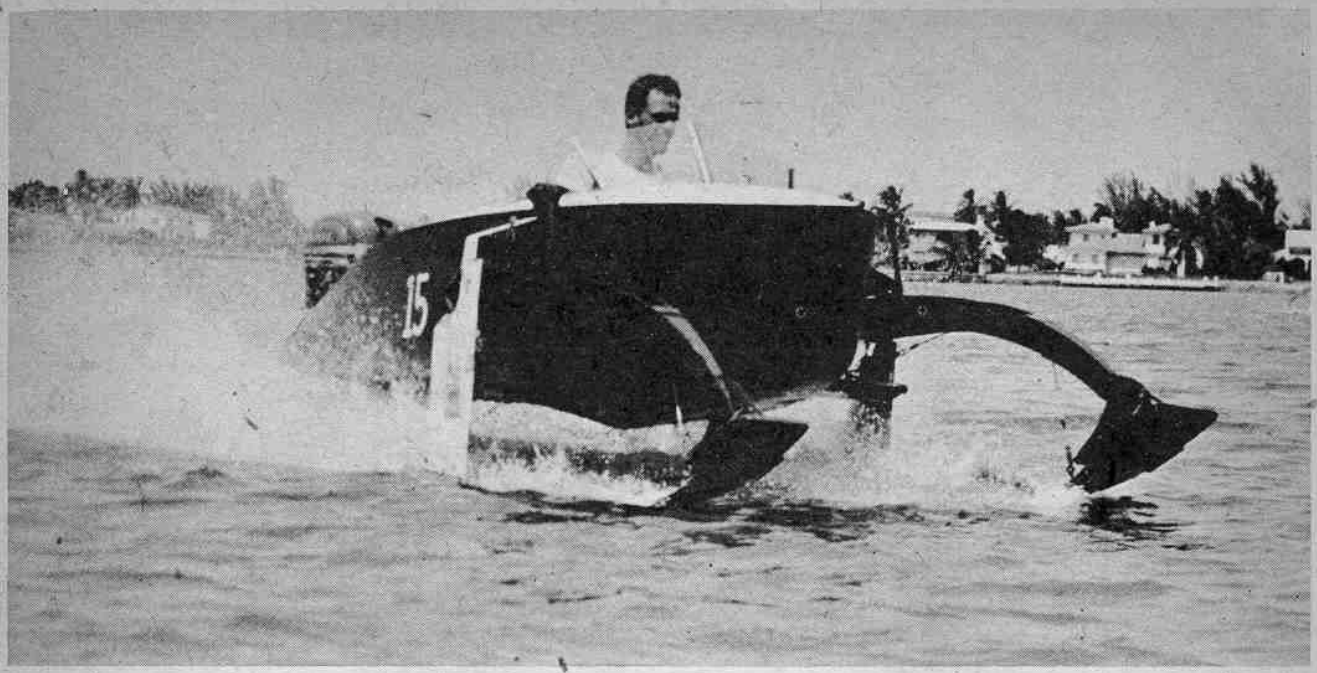
# MODIFYING YOUR BOAT FOR MARATHON RACING

**By G. A. Jagerson**

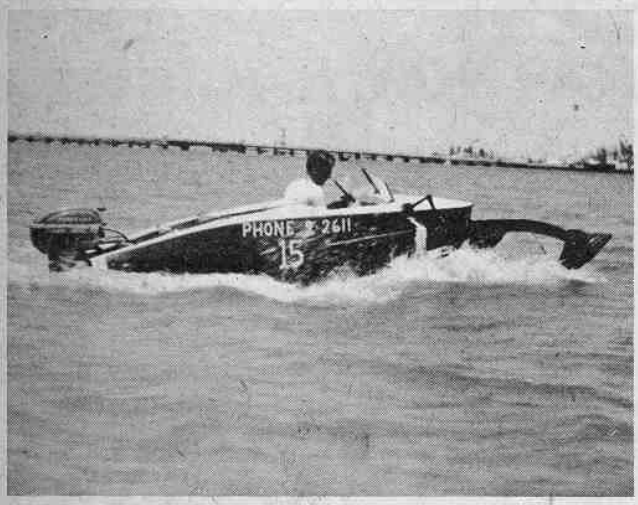
Some of the internal strengthening possible in a marathon runabout is shown below. The transom braces are made from 1" round aluminum tubing, flattened and bent as indicated. These are bolted through the stern and sheer and can take up shock placed on transom by rough water. Front cockpit should be covered by aircraft linen or canvas. If air pressure auxiliary tanks are used, beer-can type extinguisher is handy.

FIG. 3






No wash! An added advantage in the use of Hydrofins for pleasure purposes is absence of a wake created by the conventional type speedboat.

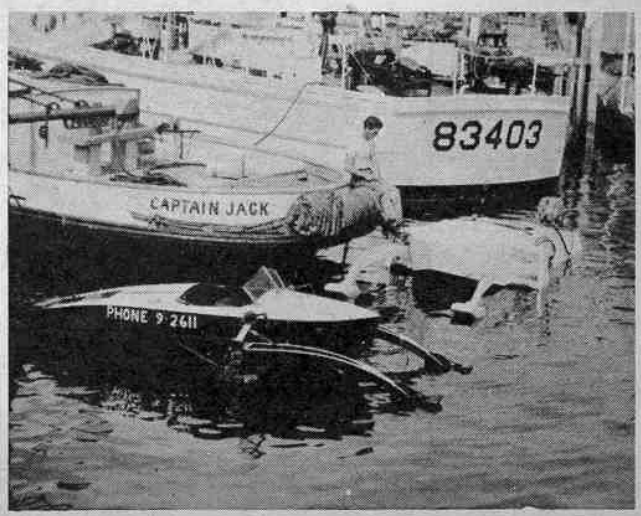


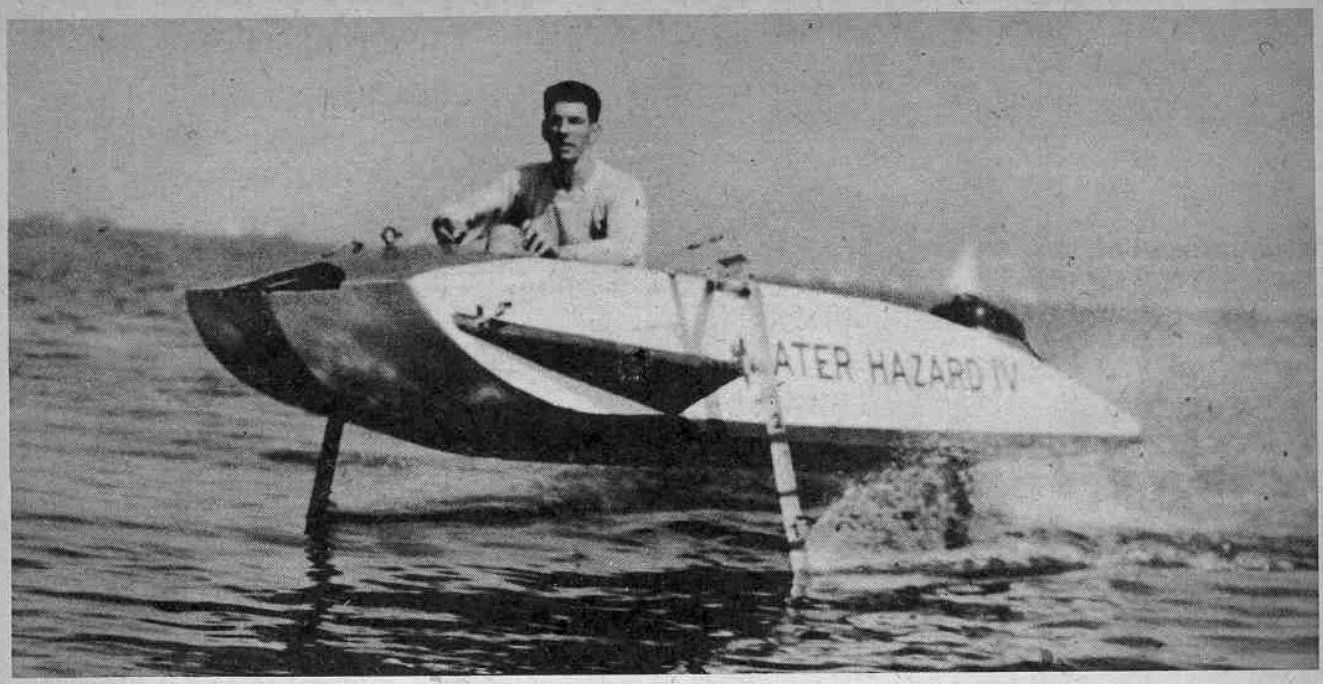

(Above) Hydrofin gets off in conventional manner of all power boats.


(Above) The Hydrofin becomes foil borne and even on choppy seas.

(Below) Hydrofin Junior is shown here. (See text for details).


Two Hook Hydrofin equipped runabouts at rest in the Miami River.






Allyn B. Hazard's Hydrofoil uses a conventional outboard runabout of blunt-nosed, sea-sled construction, powered by a Mercury motor.

# SPEEDBOATS WITH "WINGS"

## New developments in hydrofoil principles available in kit form

BACK IN 1897 the British Admiralty financed early water skimming experiments brain-childed by France's Count de Lambert. Secret trials that year on the Seine near Paris reportedly resulted in de Lambert's skim boat peaking at better than 20 m.p.h.

Shortly after this, Levasseur designed a water skimmer officially named Antoinette but nicknamed Dragonfly. No official record other than "terrific speed" was recorded for this experimental boat. Our own Alexander Graham Bell dabbled with the idea of a boat operated on the hydrofoil principle early in the twentieth century but Bell's craft was unsuccessful largely because the outrigger fins rode at a fixed depth in the water regardless of the height of the waves so that the Bell hull either plowed through waves or unpredictably leaped over them and then dove in a porpoising fashion.

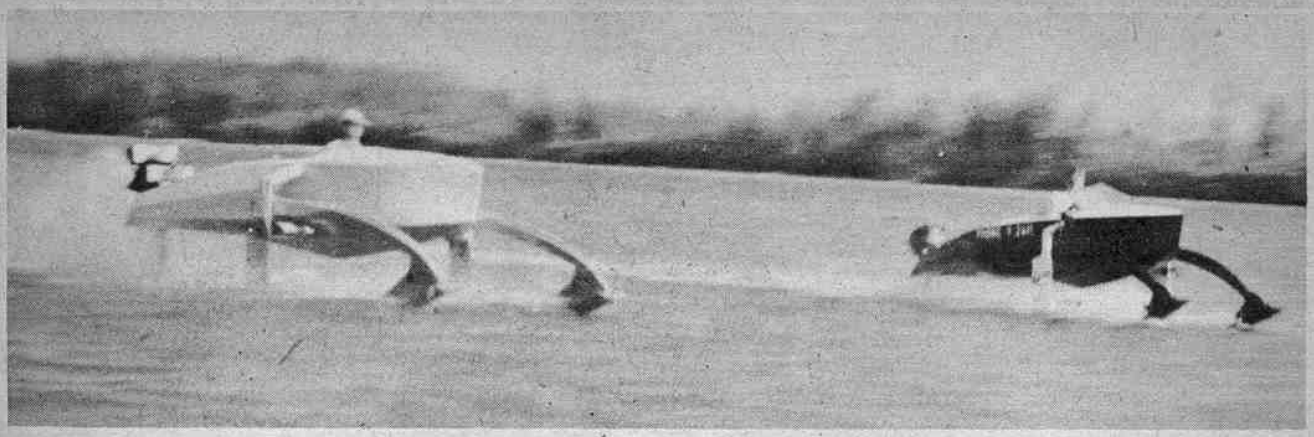
Recently a flurry of new interest in skim boating has occurred and definitely successful ventures are recorded. Allyn B. Hazard of Los Angeles, California, has created the Hazard Hydrofoil using a conventional outboard runabout of blunt nosed sea sled configuration and powered it with a Merc outboard motor. The Hazard Hydrofoil is not yet into production but reports on it indicate that it takes to high speed performance on rough water just as readily as on calm surfaces. Hazard plans to produce kits for small boat owners.

In Florida a tall bearded Englishman of Cowes, Isle of Wight, England, is already in production with his patented Hydrofin which is available in kit form. Britisher Christopher Hook's first demonstrations of his Hydrofin were made in February a year ago when he used a 12′ runabout hull powered by a four-cylinder, two-stroke French aircraft engine with a tractor type single blade airplane propeller mounted in a metal framework at the stern of the boat. At the time of his early demonstrations, Hook visualized his Hydrofin built in a large size scaled to carry 100 to 200 passengers at speeds in excess of 55 m.p.h.

Originally Hook manufactured his boats in England and sold them for about $1000 for a single seater and $1500 for a two-seater, exact prices dependent upon the engine installation. At that time Hook also sold plans for home building of Hydrofins.

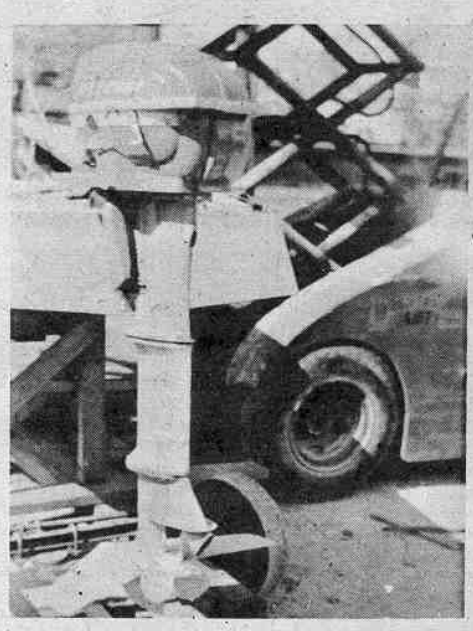
Hook first began work on his version of the dydrofoil principle of water skimming in Kenya, Africa, in 1943, with the help of Italian prisoners of war and native Kenyans. At that time his experiments were designed with a view toward the use of hydrofoil boats as high speed invasion craft.

The basic idea of all hydrofoil type boats is to present less wetted surface and hence a reduction of skin friction and incidentally to offer a smoother ride with potentially higher speeds per horsepower. To date it is questionable whether claims of higher speed per horsepower can be substantiated, but the rush of the forward extending outriggers that give the boat the appearance of a weird water bug does produce lift similar to that encountered with air rushing over aircraft wing surfaces. There is no doubt that Hydrofins offer a terrific (*See Over*)



Two Hook equipped Hydrofin runabouts are pictured at speed. The banking or steering system is so simple to handle that any tyro can take over.

Complete kit for the Hydrofin Junior is pictured with a small runabout to which parts can be rapidly attached. Note that the hydrofoil, because of lift given by the foils, requires about half the thrust of ordinary boat.



25 h.p. Evinrude with the specially-designed-by-Hook lower unit extension casting and hydrofin extensions attached to gear unit of housing.

## SPEEDBOATS WITH "WINGS"

(*Continued from Preceding Page*)

advantage per horsepower over pure displacement boats.

Christopher Hook's Hydrofin design is strictly Hook's own version of the hydrofoil and his invention gives the appearance of two large claws protruding forward of the bow of the hull with two stabilizing legs (hydrofoils) forward of amidships and an additional hydrofoil surface aft which in the case of the outboard propelled Hydrofins consists of a specially designed finned surfaced lower unit. The latest Hook version is the Junior Hydrofin and it is being produced in a simple kit form by the Atlantic Hydrofin Corporation.

The kit will convert any 8' to 12' conventional runabout into a Hydrofin. This version is designed for racing and may well lead to introduction of an accepted hydrofoil class. Two days' work reportedly are all that are required to convert any boat to a racing Hydrofin version that will skim about 6" above the surface of the water.

The hydrofoils are removable and the only major hull alteration are two holes through the sides of the hull as indicated by Arrows No. 2 in Figure No. 1. The conversion kit is available at under $200. Arrow No. 1 in Figure No. 1 indicates the hydrofoils at the stern of the boat which bolt onto the outboard motor anti-cavitation plate.

With the racing type Hydrofin installation, the hydrofoils are kept at a minimum in size to prevent excessive drag and hence they don't offer lift until cruising speed has been reached.

Another variation for the use of hydrofoils is their application to towed aquaplanes which offers a new thrill sensation for aquatic acrobats.

In the overall plan section, Figure No. 2 represents a cross-sectional plan ideally suited for the home boat builder. No. 1 indicates a special over-length lower unit casting with built-in hydrofoils which can be purchased as a simple casting.

No. 2 illustrates the command rod used for raising and lowering the hydrofoils. This, too, can be purchased in kit form. All remaining parts may be home built. No. 3 indicates the spring mounted hinged section of the two forward *hydropeds* which are hinged to serve two purposes: to permit bringing the Hydrofin into shallow water and to allow small waves to be absorbed without any movement of the Jockey arm, No. 4. Steering wheel, No. 5, serves to control the hydrofoils and to steer by means of banking. Controlling a hydrofoil craft is not unlike controlling an aircraft. In fact hydrofoil driving offers all of the thrills of boating plus a sensation of hedge-hopping over water. (End)

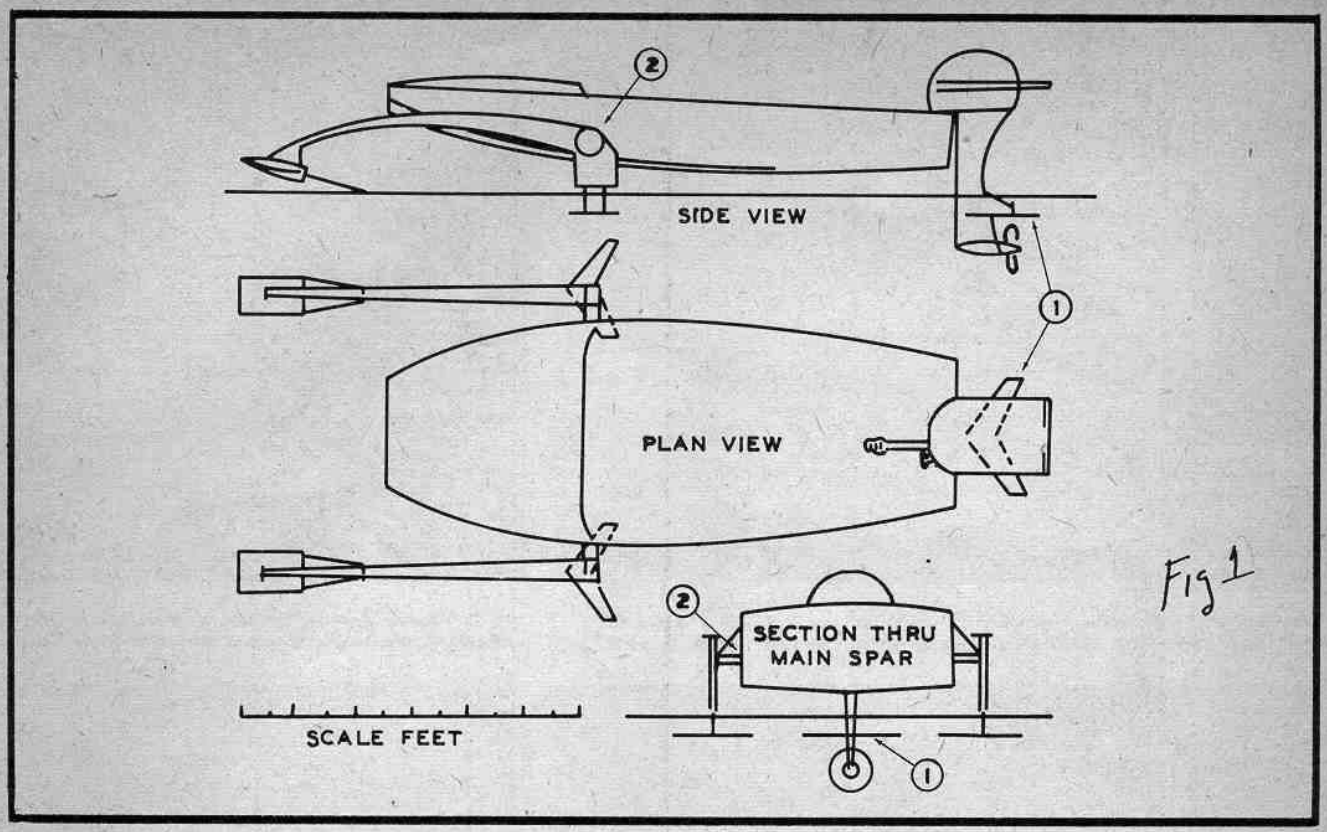
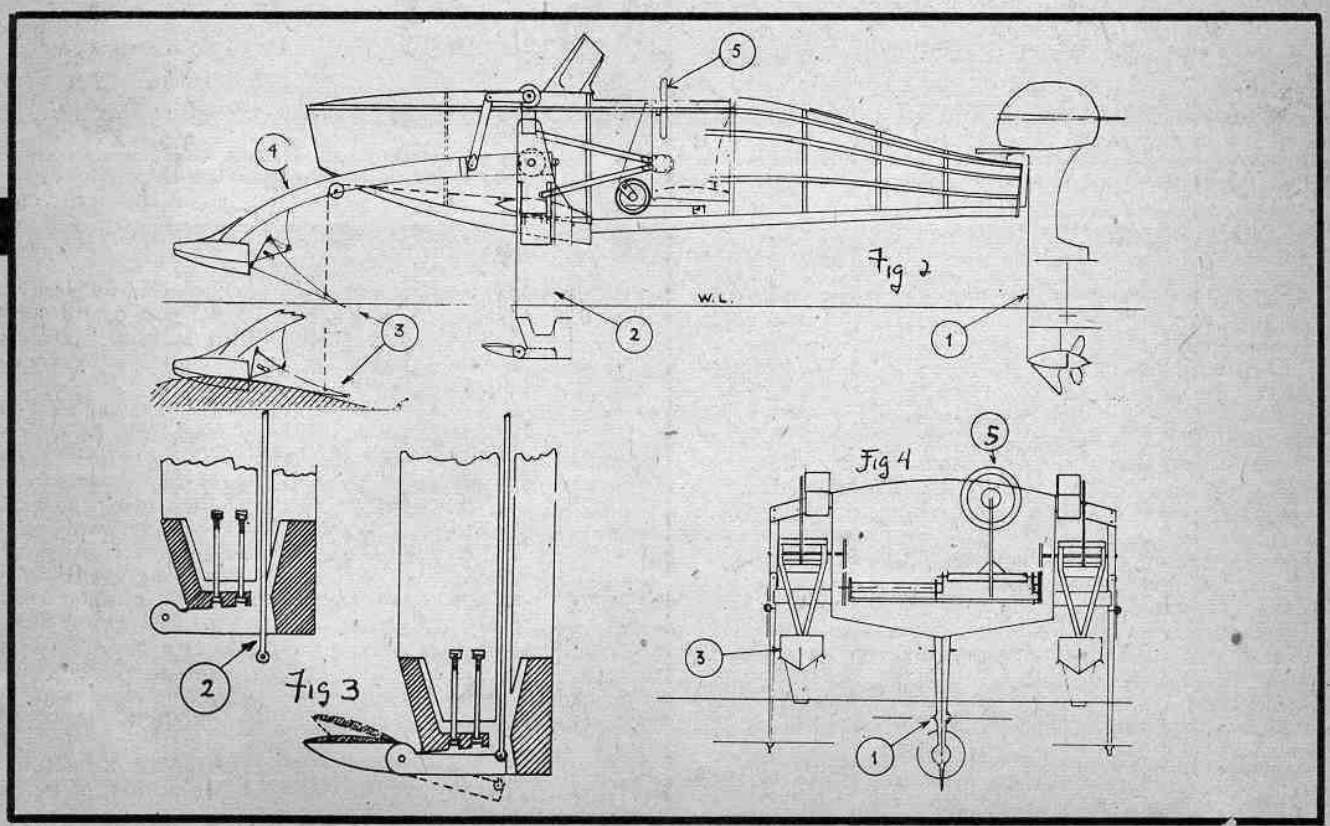
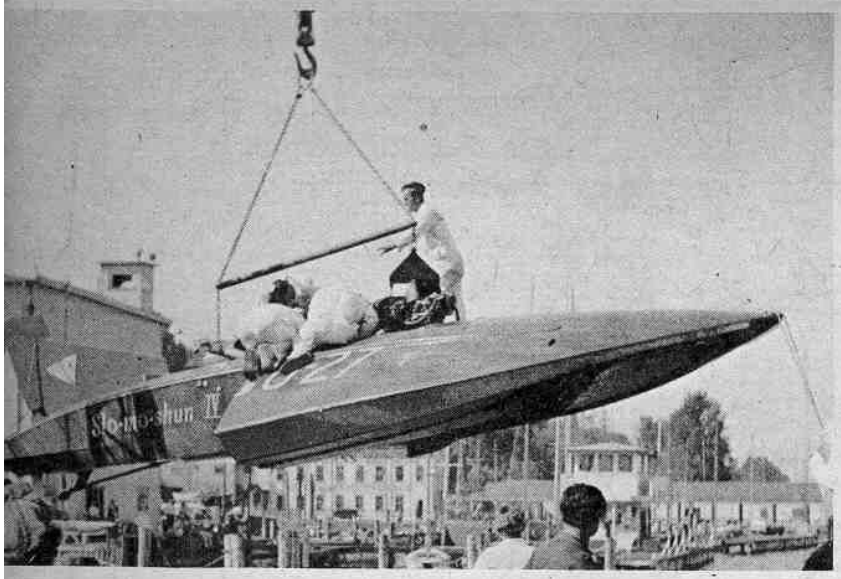


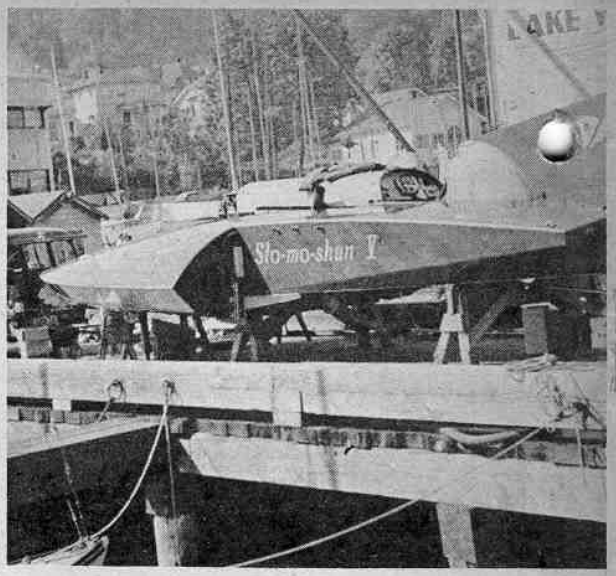

Fig 1

Figure #1: Note that the forward lifting surfaces of the Hook Hydrofin are divided into two halves. The forward extensions or hydropeds are the true lifting surfaces but in normal running position they are not on the water but are carried well above the surface by the action of a spring rod mechanism located at position 2. This means that smaller waves are absorbed by after fins, lift is accomplished with no unnecessary drag. Figure #2: A close-up cross sectional view of a Hook hydrofin installation illustrates how the forward ends of the hydropeds are brought into play only in contact with large waves. Even with extremely choppy water, the trim of a normal Hydrofin is seldom moved out of a horizontal position by more than 7°. The hinged after section of the hydroped prevents the application of lifting forces which create an unwarranted bouncing effect. Figure #3: Hook's command rod, or more clearly the Hydrofin controlling mechanism, is simple in construction as illustrated here and should not be subject to damage even though exposed to considerable pounding. Figure #4: A head-on view illustrates the use of steering wheel as a control mechanism of the Hydrofins so that when the sensation of Hydrofin operation is compared to flying, the steering control is in actuality quite similar to the wheel type control of an airplane which reflects movements to the ailerons at the slightest touch of the aviator's hand.

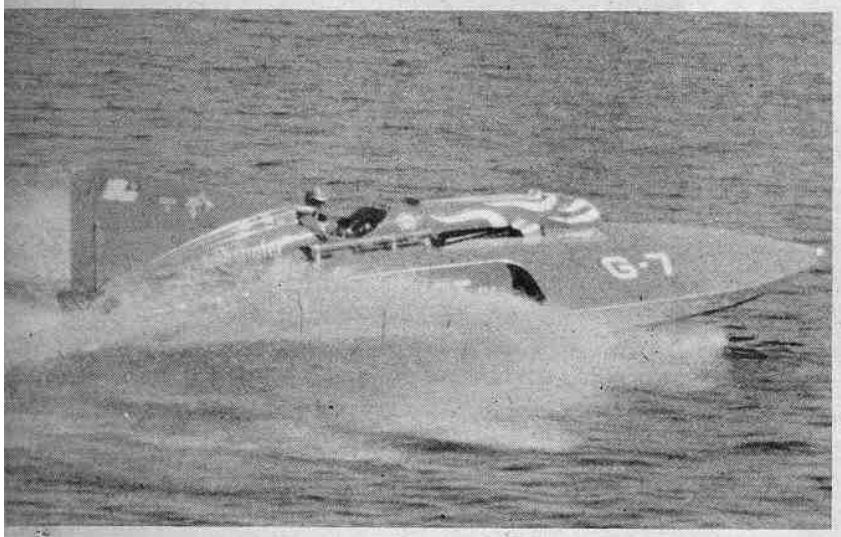





Pit crew was still working on "Slo IV" when she was lowered in water for 2nd heat. Sayres says that he isn't racing either "Slo Mo" again in 1952.

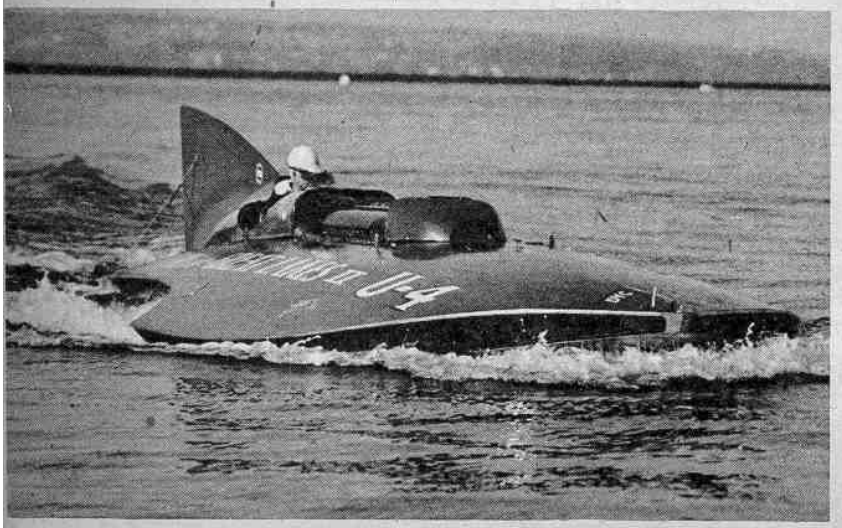



"Slo V" shown hanging up to dry after her engine went hot in first heat and forced her out of big event.

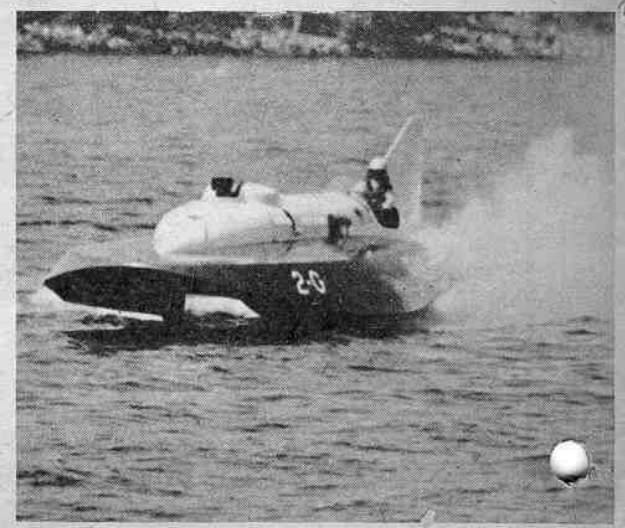



Bill Cantrell eases "Such Crust" around in preparation for 2nd heat. In this heat, on turn, boat exploded and burned. Prior mishap was thrown rod in qualification.

A moment of tragedy as "Such Crust" comes to rest, burning furiously after the explosion that blew off her cowl.



Joe Taggart in "Miss Great Lakes" returning to pits after practice run. Boat conked out due to gear-box breakdown in first heat which kept her out of race for good.




A beautiful example of prop riding is given by Morlan Visel's "Hurricane IV" of Detroit. She placed 2nd in 1st heat.

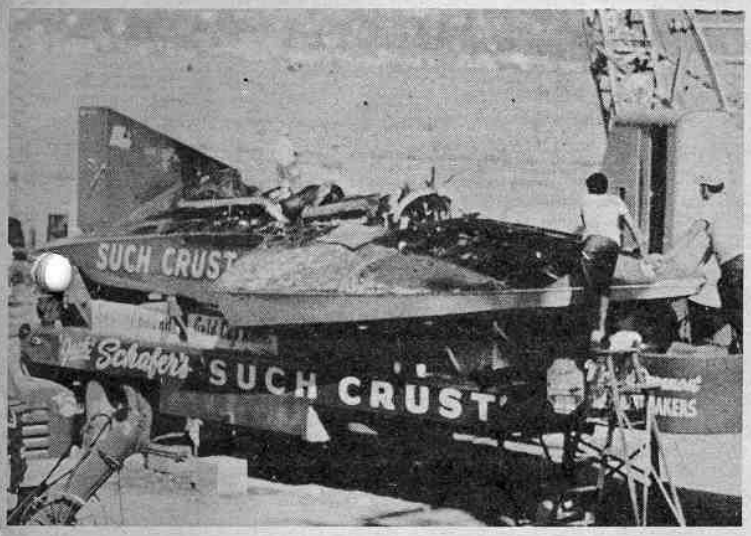

Stanley Dollar waves jubilantly from "Slo Mo Shun IV" after finishing the third heat to win the Gold Cup at Seattle. "Slo IV's" only competitor in final heat, "Hurricane IV", lost its propeller and "Slo IV" coasted home to a well-earned victory after dramatic race.

# 1952 GOLD CUP REGATTA

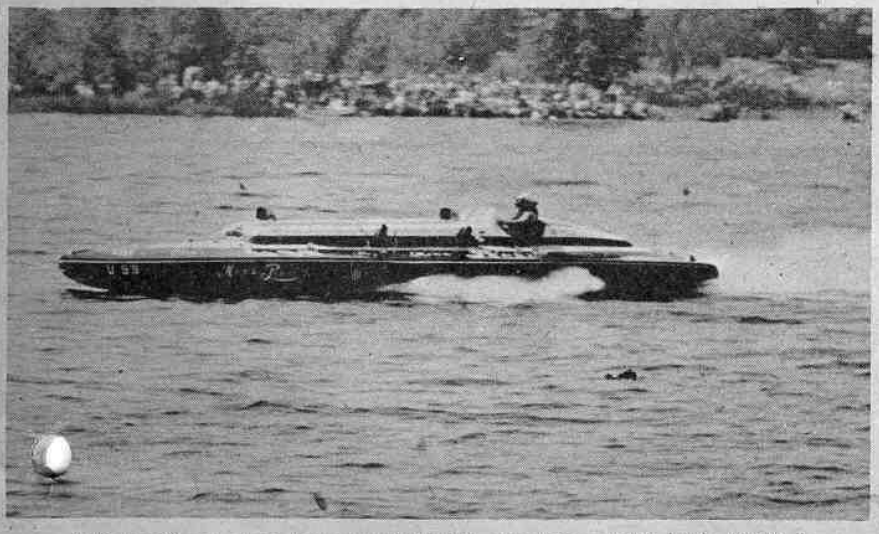
**By Russell G. Swanson**

**Photographs by**

**Robert W. Carver and Russell G. Swanson**




All that remained of "Such Crust" after explosion. The good word is that Cantrell is recovering from burns. "I'll be back", he says from hospital.



"Miss Pepsi" can plane down amazingly tight. Two Allison V-12's hurtle 10,500 lb. boat over the water. She lost out in 2nd heat with split gear box, after winning 1st heat.

THE PLACE IS Lake Washington in Seattle. The day is August 9th. The occasion is the 45th running of the Gold Cup Regatta. Assembled here is the talent and all the resources for speed that represent the world's finest. The weatherman has provided a bright, warm day with only a whisper of wind. The lake looks like a huge, placid pool. Six unlimited boats have been tuned to mechanical perfection and are reverently lowered into the water.

Resting low in the water is "Slo Mo Shun V" the 1951 winner, with her sister, the world speed record holder—"Slo Mo Shun IV." Nearby are "Miss Pepsi," avowed the most dangerous contender; a new Crust boat, "Such Crust IV," Detroit's version of the "Slo Mo" hull; "Miss Great Lakes," which sports some of the most beautiful lines to be seen on a racing hydroplane, and "Hurricane IV," redesigned and revitalized after her 1951 try.

This is the scene. That intangible thing called tension can be felt everywhere. Is Seattle going to repeat, or is Detroit to recapture the coveted Gold Cup? On the basis of qualification runs, the dopesters are in (*Turn to Page* 23)

# LET'S KEEP IT CLEAN!

**By Blake Gilpin**

THE SUBJECT of this article is not a matter of morals and the title is just a teaser to make sure that you read what I have to say. There is a villain in the piece but he has never been behind a winning bet although he has fixed plenty of races . . . in a negative sort of way.

Our scoundrel is just plain old dirt.

Little drops of water and little grains of sand can make a mighty headache and a most unhappy man. Of course, any dope would know better than to sift sand into his carburetor or mix water in his fuel. Yet, illogically, many mechanics, amateur, semi-pro and pro, have been guilty of just such dastardly deeds.

For example, meet our hero, a good driver, a nice guy and the owner of some very fine outboard equipment. He has spent hours reworking, refining and perfecting his motor. He has his iron supertuned, as high keyed as he is himself for the big race day.

The day dawns fair and bright and our hero gets up early to hurry to the race site for a little last minute testing. He carries his motor from his workshop with loving care and deposits it gently in his motor box. He tightens his thumbbolts with precision. He gives his iron one last fond look and shuts the door—shuts the door on his chances at the race. For on the bottom of that motor box, designed to protect his precious motor, is a fine coating of sand brought home from the last regatta. A couple of drafts and the sand deposits itself neatly over the engine.

Sure, he remembered to plug his carburetor and ports with paper toweling. But that won't bother old debbil sand. You can't run with the paper toweling still in place, and as soon as it's discarded, the sand is waiting to edge into the engine. And how many grains of sand does it take to clog a jet or fuse the gap on a plug? A few minutes work on the motor box by our hero would have eliminated this hazard.

But our hero proceeds to the race unaware of the calamity about to befall him. He gets his hull quickly into the water. His crew piles his fuel cans on the ground ready to be hauled to the pits. Now the fuel cans, too, have a nice coating of dirt on their bottoms, ready to run down the sides of the can and defy any strainer at fueling time.

And then, believe it or not, the crew places the funnel on the edge of the dock. An inquisitive spectator kicks it overboard, but, helpfully, retrieves it and puts it back just as he finds it. In the haste of fueling, it is stuck into the tank, water and all. Not the best combustion mixture. We might as well leave our hero here.

He will never leave the pits.

If you're saying to yourself that I'm making a mountain out of a grain of sand, I'll be the first to argue with you. I know, the hard way. I, along with some friends, pulled the dumbest trick of the year a while back. In a moment of whimsy and reluctance to see the racing season end, one night in October we belatedly decided to enter a race a 1000 cold miles away.

After almost thirty-six straight hours of frantic driving—through snow and broken trailer axles and detours—we arrived at the race site on the Ohio River. With our four boats and five engines we were definitely in the majority as all the other drivers with any sense in that section of the country already had their rigs in mothballs.

It was miserably cold on the river, but the purse was fat and the field was thin. I looked forward hopefully to gathering in a good chunk of the loot

(Below) Reading from left to right: Blake Gilpin, author of this article; Les Buckman of Baldwin, L. I., N. Y., class B racing hydro driver and Charlie Petermann, brother and able, affable mechanical assistant of the famed Gil Petermann.

(Below, right) J. B. Broaddus of Fredericksburg, Va., Class C and F outboard racing driver, and also pilot of a 266 cubic inch inboard, takes a great deal of pride in keeping his fabulous stock of racing equipment in beautiful condition.

to pay my expenses for the mad jaunt.

Our trailer, though large, was not complete. There was no motor box, so we had carefully wrapped each engine to keep out the dirt. But evidently grit is a match for hunks of canvas. As I spluttered in from the first heat it was obvious that I had something in my carburetor that Mr. Johnson never intended.

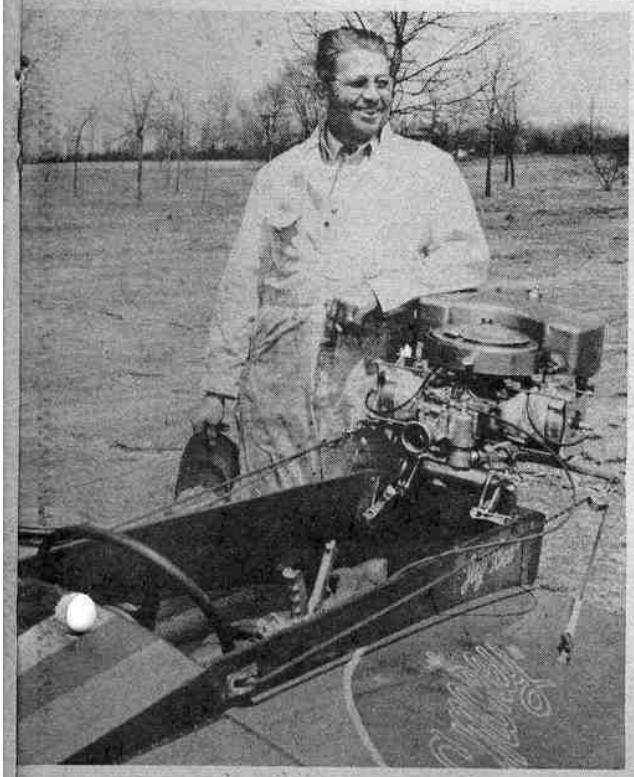
In haste we removed the bottom of the float bowl. Cold fingers dropped the bottom of the float bowl overboard. A bolt was jury-rigged in its place. As I came up to the starting line for the second heat, the bolt gave up and I donated a lot of precious racing fuel to the Ohio River before I could get my thumb in the dike.

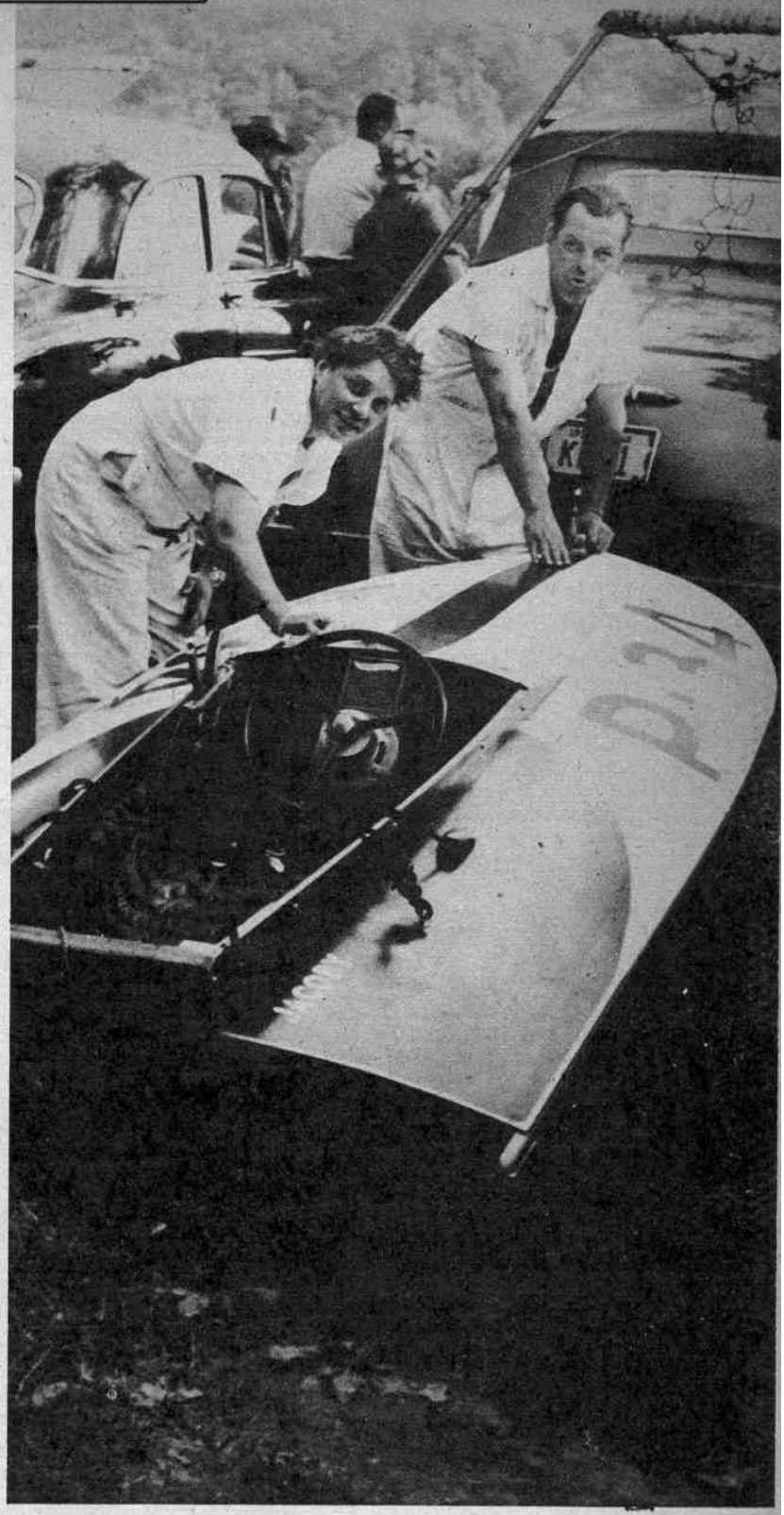
To add insult to injury, Class A boats (my class) were even invited to step up to Class C because of the severe boat shortage. But nobody had a spare carburetor so I had to sit out the heats knowing I should have stayed at home in Pennsylvania.

Incidentally, you could hardly see the little bit of grit that robbed me of the fun and finances of competing in the regatta.

Because we (*See Over*)

**Dirty Work In The Pits Costs More Races Than Anyone Would Care to Count. . . . . .**





(Above) That happy speedboating couple, Helen and Ray Shilling of Philadelphia, team up to keep Ray's neat, speedy, Jacoby-build Class C hydro in perfect form for every race.


WHEN Harold Kelly's wife, Ethel, came in from her first ride in a BU designed and built by her husband, she readily admitted that driving a utility isn't as easy as it looks. She found herself hanging onto the throttle for all she was worth—just to stay in the boat—before she remembered that it had something to do with the speed at which she was traveling. She feels sure that her knees will never be the same again. However, by the time she'd ridden the "Jinx" for the second trial, she began to get the hang of it. Now she thinks maybe she'll give it another fling. The boat that Harold Kelly designed and built is 10' 9", weighs 150 lbs. with hardware and is powered with a 10 hp Mercury with quicksilver unit. He has raced it quite a bit this season, here and there in the East, including the Albany-New York 130 Mile Marathon in which he finished 11th.

## LET'S KEEP IT CLEAN

(*Continued from Preceding Page*)

belong to the same club, I have had many opportunities to observe the winning ways of former Class C outboard hydro record holder, Vic Scott (also two-time winner of the Albany-New York Marathon), and present Class A outboard hydro champ, Gil Petermann. Both of these drivers, as examples, are outstanding in their performances on the courses, but their techniques of success are also uniform in the pits.

On arriving at the race site, their first move is to scrub down their hulls with detergent solutions to remove road scum. They do not wax the hull bottoms, because wax tends to hold scum and also makes future varnishings an impossibility. Maybe you think your hull isn't dirty; the road film isn't always apparent and the varnish will gleam through. But that precaution of removing any possible film may add a fraction of an m.p.h. and those fractions of m.p.h.s often spell the difference in who gets to the finish line first.

The Petermann and Scott winning motors are removed from immaculate trailer boxes and wiped with clean cloths. Fuel cans and funnels are carefully wiped before use, so that no dust or dirt or splashed water has a chance to hide on them. Naturally, no fuel cans, funnels, wiping cloths or plugs are permitted to rest on the dirt or sand—because just such hasty carelessness can undo hours of painstaking shop work.

The neatness of their equipment includes careful marking of all cans and supplies. To point up the importance of this, I once watched a driver who was suffering starting trouble, snatch up a squirt can of benzol, he thought, and give his motor a nice snort of castor. That ended his starting trouble for the day.

And most important, too, after the race, the whole cleaning process should be repeated.

The motor should be thoroughly cleaned to remove dirt and oil scum picked up during a day's operation. Gibby Petermann carries a clean can and clean paint brush in his trailer box. He brushes down his motor with gas and wipes it spotless *before* he puts it away.

These champs think that good cleaning is about as important as good cornering. And considering all the points they've stacked up for first place wins, I'm inclined to agree with them. (End)

## ALBANY — NEW YORK OUTBOARD MARATHON

(*Continued from page 7*)

Poughkeepsie and New York. The close-to-40 patrol craft of the Coast Guard were kept busy until late in the afternoon dragging out swamped and spilled boats.

The first boat into Poughkeepsie (roughly the half-way point) was Don Riedel's Class A outfit, at 9:55—an exceptionally good time considering that James A. Hoffert in his home-made Mercury, who went on to win this class, checked in sixteen minutes later, in 17th place. Riedel was thrown from his boat sometime later when it hit the wake of a cabin cruiser.

All boats had to check in at Poughkeepsie, where the officials got their numbers and gave them the green flag. John S. White, Chairman of the Poughkeepsie area for this event and a well-known racer himself, said that drivers could save themselves precious time by making sure their numbers were large enough and freshly painted. One contestant lost several minutes because the numbers on his port side were so faded they could not be made out; so he was given the red flag. As soon as he turned to circle by again the starboard numbers were clearly legible and the green flag was waved, but he did not notice it until he was almost through his wide swing.

By 10:09 the first Class B's were beginning to overtake some of their smaller rivals at the half-way point, with Mrs. Evelyn Sarossy, who went on to place 5th in her class and be the first woman and 7th driver across the finish line, then running in 13th place. John Covals, who won Class B and came in second overall, pulled into the float to refuel his Sid-Craft Mercury just as Mrs. Sarossy was leaving.

At 10:30, lacking a few seconds, the D-day assault began as Robert Leigh Switzer flashed by the mid-way line without stopping his own Switzer-Craft, powered with a 25 h.p. Mercury. The way he drove his Class D rig to overtake the 58 boats that were then in front of him—and the others, including six of his own class, that later passed him while he was taking an unscheduled swim over the side on an inner tube to repair a snapped shear pin damaged by driftwood—someone suggested that he be called Robert "D" Leigh Switzer. Anyway he seemed to be in a hurry to get on down south across that Mason-Dyckman line—and he made it in the lowest elapsed time of all: 3:03:35. Covals came in just behind him, in winning his Class B victory, and one minute later Robert H. Wahl placed 2nd in Class D and 3rd overall.

The first two CM's poured through Poughkeepsie at 10:34, with Carl Ring leading Don Jones by a bow-length, and they kept that up all the way down to the finish, where Jones was across first and Ring riding his prop. Twenty seconds later Antonio Stroscio, Jr., followed them. However, the officials disqualified Jones because of illegal timing ports and the victory went to Ring. But for a close two-man duel all the way from start to finish this one can't be beaten.

Wilfred L. Roger, who won easily in Class EM with the largest margin—12 minutes, 10 seconds—and who was the only 1951 winner to repeat, led his class past the half-way mark in his Evinrude-powered Raveau at 11:00 with a good lead.

The closest finish of the day was in Class FM, where Joseph E. Stager in a Flashkamp with Evinrude motor beat John E. Scardefield by only 5 seconds, and Al Zolko, 1951 winner, by 1 minute and 5 seconds. Fourth place was taken by Robert Jordan, 35 seconds behind Zolko. Vic Scott was in this class, driving a boat owned by Charles J. Wilkinson of Waverly, N. Y., due to the fact his own Class D wouldn't start. Also Frank Sweeney, Jackson Heights, N. Y., who was entered but withdrew, rode along with his wife, Mrs. Helen Sweeney. We don't know whether he tried to do any stern-seat driving or not, but at last report all seemed to be happy aboard.

The saddest story we heard was of one optimistic mechanic who raced his trailer all the way down to Dyckman St. without checking at Poughkeepsie, only to find his boat had flipped a few miles outside of Albany. He was last heard muttering, "Why, that throttle-happy bum!"

(R. V. B.)

## 1952 GOLD CUP REGATTA

(*Continued from page* 19)

a dither. Barring mechanical mishap, it can be one of the closest contests in many a year.

Overhead are six angels. Five of them are the Navy's Blue Angels—jet pilots, masters of speed and precision flying. 300,000 spectators with upturned faces momentarily forget the water speed show that is slowly organizing. No one sees the sixth angel—the guardian angel of Stanley Sayres.

The five minute gun suddenly returns everyone's attention to the six boats circling the course. The starting clock closes and "Slo Mo IV" and "V," "Miss Pepsi," and "Miss Great Lakes II" are across the line in a mountain of spray. "Hurricane IV" and "Such Crust IV" are trailing close behind. Bill Cantrell in the Crust boat is purposely soft pedalling it—her engine threw a rod in qualification and he is breaking in a complete new mechanical installation.

The first to drop out is "Miss Great Lakes" with gear-box trouble. It is a duel for first place between Chuck Thompson in "Miss Pepsi" and Lou Fageol in "Slo Mo Shun V." What "Miss Pepsi" loses on the straightway, she digs right in on the turns and makes right back.

So it went for six laps when disaster struck the "Slo Mo Shun V." Her left bank of cylinders went hot and a cracked block forced her to quit. It was "Miss Pepsi" from then on in. Meanwhile "Slo Mo Shun IV" had dropped her propeller and Seattle's hopes for retaining the Gold Cup took a dive. Winner of the first heat was "Miss Pepsi" with a new heat record of 101.0242 mph. Morlan Visel's "Hurricane IV" was second, and "Such Crust IV" was third.

Stanley Sayres' pit crew swarmed over the two boats and removed the propeller from the shelved V and put it on IV. Seattle's hopes were again raised when "Slo Mo Shun IV" returned for the second heat. Four boats started. "Miss Great Lakes" was out for good. "Hurricane IV" was late in starting when Visel admittedly flooded his engine for the first time in his experience. He was disqualified for failing to be on the course within five minutes of the starting gun.

Going into the first turn "Such Crust" suddenly exploded. The engine cowl went flying, and Cantrell did his best to follow it in an effort to escape the searing flash burn. The careening hydroplane burst into flame and coasted dangerously close to the line of spectator craft. Within forty seconds a Coast Guardsman was in the water with assistance to Cantrell although he signalled he was all right. He may have thought he was all right, but he was hospitalized with first, second, and third degree burns about the face, arms and legs. Quick action by the patrol boats extinguished the blaze and prevented any further tragedy. The carburetor and superchargers were intact. The explosion was attributed to gas in the bilge.

Meanwhile, it was nip and tuck with "Slo Mo Shun IV" and "Miss Pepsi." The heat was still young when hope died for the Dossin brothers as "Miss Pepsi" coasted dead in the water with a split gear-box. All that remained now was Stanley Dollar in "Slo Mo Shun IV." He circled the course in a leisurely fashion to complete his ten laps.

The third heat was boiled down to "Slo Mo Shun IV" and "Hurricane IV," who still had a chance. Visel, who is owner, driver and chief mechanic, ran a commendable race until he too was plagued with gear-box trouble and was forced to quit. Once again Stanley Dollar had the course to himself and had only to circle the course to cinch the Cup.

The riddle of "Miss Pepsi" versus "Slo Mo Shun" is still unanswered. Two years in a row she has broken down while providing a very interesting race. In those two years they have not finished a heat together.

In qualifying time trials, a new record was set by "Slo Mo Shun V" the first day with a speed of 102.564 mph. "Miss Pepsi" let that stand for two days, then topped it with 103.746 mph. To illustrate the equal potential of the six-boat field the qualifying runs were as follows:

| | |
|---|---|
| "Miss Pepsi" | 103.746 mph |
| "Slo Mo Shun V" | 102.564 mph |
| "Slo Mo Shun IV" | 93.023 mph |
| "Such Crust IV" | 91.371 mph |
| "Hurricane IV" | 89.776 mph |
| "Miss Great Lakes II" | 88.888 mph |

The burned-out "Such Crust" is to be abandoned according to Jack Shafer. A truly unfortunate end for the up-to-date three pointer. Shafer says he will enter a new boat in the 1953 Gold Cup Race. At the same time, Morlan Visel of Los Angeles, announced he will have a new "Hurricane" for next year. Stanley Sayres also made public his plans for shelving "Slo Mo Shun IV" in favor of the projected "Slo Mo Shun VI" which he hopes to have ready for 1953. "Slo-Mofo'," the old work horse, will finally be turned out to pasture. Gold cup winner in 1950 and 1952, it shattered the world's speed record with 160 mph and later 178 mph.

Will Cantrell be back next year? If "Wild Bill" has anything to say about it he will. That was his declaration from his hospital bed. From beneath the bandages that hid his painful burns, the game Kentuckian said "I'll be back—with another 'Such Crust'."

Such was the 45th Gold Cup Regatta. A string of unfortunate mechanical failures by all boats. An interesting recapitulation of events reveals that every one of the six contending boats at one time went dead in the water and was unable to finish the heat. A contest of speed? Most certainly, but also a trial of mechanical endurance—plus the blessing of Stanley Sayres' sixth unseen guardian angel. (End).

## WINNEBAGOLAND — '52

(*Continued from page* 10)

to be expected, a mess of weeds added to the drivers' headaches, making it necessary for many racers to stop their rigs in order to clear fins and lower units from the tangling growth.

Fate dealt Bob Switzer, McHenry, Ill., a devastating blow as he was out in front, having led the entire fleet up the Fox River, through Lake Butte des Mort. At Winneconne he ran into fuel trouble and was forced out. Veteran racing hydro and utility campaigner, Jack Maypole, took over the lead.

Maypole proceeded to build up his lead through Lake Winneconne, Lake Poygan, Boom Bay and up the Wolfe River to Fremont, the turning point. Although Lenk was riding up among the leaders, at Oshkosh where the turn is made at the Lighthouse through Buckstaff Harbor and out into Lake Winnebago, Maypole was riding 2½ minutes ahead of his nearest competitor. It looked to the spectators at that point as though Maypole had the race in the bag. And he did as he passed Garlic Island, Blackbird Island, Wheeler Point and finally Davis Point, nearly to the finish. With victory a seeming certainty, Maypole headed right past the entrance to Neenah Harbor and continued on north—off the course. That Maypole is still kicking himself for his blunder is apparent for by the time he realized his error and swung back onto the course, Lenk and four other Class D-2 boats had gone on to victory.

Little fourteen-year-old Marilyn Donaldson, who proved that a young gal teen ager can push a Class A just as fast, in fact a little faster, than her older male competitors last year, had to overcome plenty of tough luck to finish a very respectable 6th among 36 starters in her class. She was thrown from her boat no less than three times.

Communications and rescue work deserve plenty of praise for the system set up operated to perfection. Eight planes piloted by C.A.P. pilots cruised constantly over the course and radioed when they spotted drivers in trouble. The Neenah-Menasha Amateur Radio Operators Club established a check-point network and gave constant running reports on progress of the race and breakdowns to a centrally located headquarters near the starting point. An indication of the efficiency of this system is the report that no driver was in difficulty for more than 2 minutes before his pit crew, race headquarters and the public had the information. (End)

## KNOW YOUR BOAT

Every boat has its limitations. Learn what you can expect from *this* boat.

## DON'T OVERLOAD

Seats do not indicate capacity. Two or three adults may be a full load under many conditions.

## BALANCE YOUR LOAD

Distribute weight *evenly* in the boat—from side to side and from bow to stern.

## KEEP LOW

And step in the center when boarding the boat or changing seats.

## WATCH THE WEATHER

Head for shore *before* a storm breaks. If caught out, seat passengers on floor.

## HEAD INTO THE WAVES

If waves are high, head your boat at an angle *towards* the waves at slow speed.

## AVOID SHARP TURNS

Fast, sharp turns are hard on equipment—and sometimes on people. Take it easy.

## USE THE RIGHT MOTOR

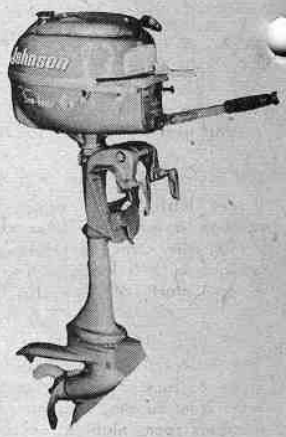
Too much power can damage your boat—may even swamp it. Look for OBC recommended horsepower plate.

# OUTDOORS WITH THE OUTBOARDS

By Richard Van Benschoten

**How To Organize Your Own Outboard Boating Club . . .**

**Boat and Motor Notes . . . Booklets . . . Reader Roundup**




Improved '52 motors—like this Johnson Sea-Horse 3 shown above—will save duck hunters this coming season a lot of tiresome paddling across mud flats and through weed-choked waters to reach their blinds. This new Johnson motor (replacing their 2.5 horsepower model) has Angle-Matic Drive, which allows propeller and lower shaft to tilt 30 degrees to avoid fouling and dragging while running over shallows.

THE NUMBER of outboard boating clubs in the country has been increasing steadily, which is only natural in view of the great growth in outboarding itself since the War. But there are still many areas where no organized activities are carried on, and some of our readers in various parts of the country would like to know how to go about organizing a club of their own. We are going to give them some information here and tell them where they can get a lot more.

Any group, no matter how small, can form a boating club, but to insure its continuance the founders must be certain of the need and desire to have a good club and to keep it going. Anything that is done halfway only goes about that far, too. So be sure of your group, and especially of the key persons in it who will have to carry the load at first. Get such key people together informally and discuss the subject.

Then take a count of boat owners in your neighborhood who would be potential members (your outboard boat and motor dealers will be helpful in this). Plan and hold an organization meeting to which all potential members have been invited well ahead of time and followed up by card or phone just before meeting time. The planning is important so that the meeting goes along without delay. There is nothing that harms a cause more than a draggy meeting in which nobody knows what's supposed to be going on.

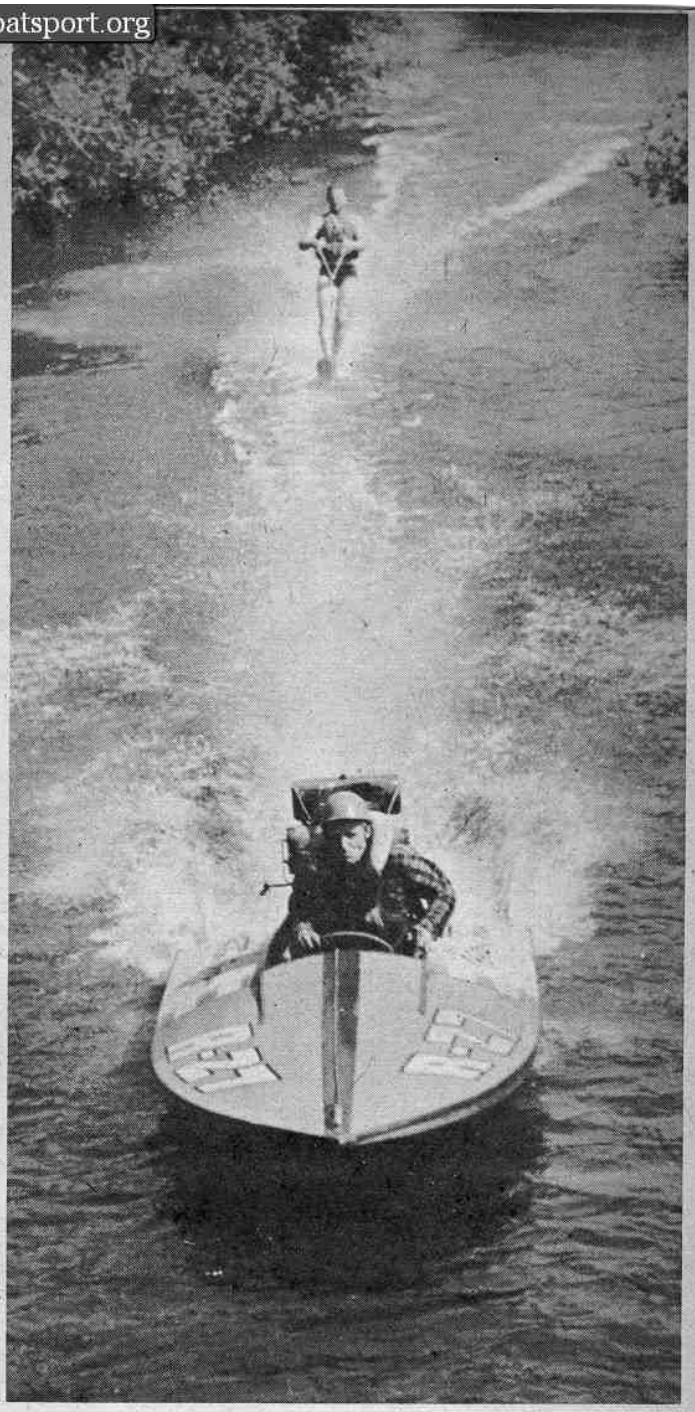
By-laws should be all drawn up for presentation at this meeting and either a temporary or permanent slate of officers nominated for election. The size of the group will determine whether one or two meetings will be needed to set up the permanent organization.

This is merely an outline, which for reasons of limited space has to be brief. For a detailed, step-by-step procedure we recommend a book called "Plans For the Organization of Local Outboard Boating Clubs," which contains suggested by-laws, schedule of meetings, forms of notices and publicity, etc. This book is prepared and distributed by the Outboard Boating Club of America.

The Outboard Boating Club of Amercia, or O.B.C., as it is commonly called, is a national organization with which local clubs may affiliate. It offers various services, including monthly bulletins to the club's officers. (*Turn to Page* 33)

# USE COMMON SENSE AFLOAT

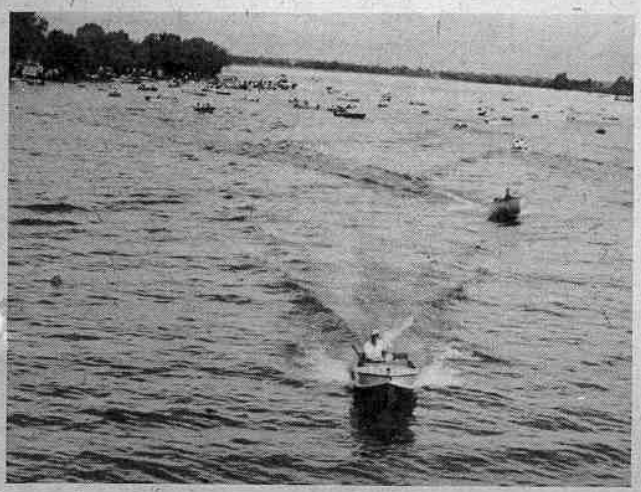
Follow the simple rules shown at left for more safety and fun afloat. Boating is the safest of outdoor sports—if you'll use common sense and courtesy. Watch out for others—slow down near other boats and swimmers. And remember—always carry a life preserver or buoyant cushion for each passenger. (These rules printed by courtesy of Outboard Boating Club of America.)



(Right) A tense moment in the Sammamish Slough Water Ski Race held April 27th by Inglewood Country Club of Seattle. Lin Ivey, the driver of R-27, exemplifies look of grim determination as he contemplates how is he going to get his rig and his tow around next turn in the Sammamish event without hitting shore.

(Lower left) On a one-day cruise up the Wolf River and through a series of Wisconsin's famed lakes to Fremont and return, the Oshkosh Outboard Club had a turn-out of 630 persons in 210 boats. Here are a few of them warming up before start of this increasingly popular family cruise.

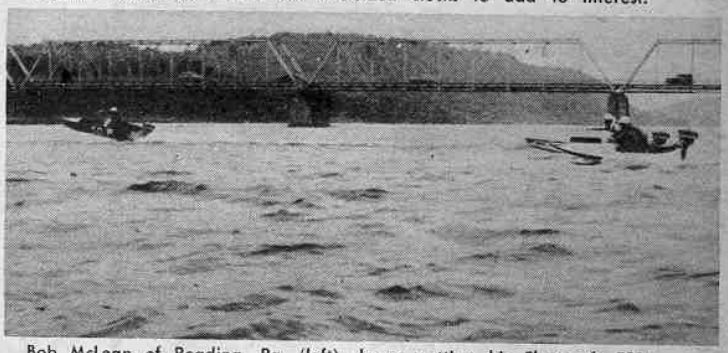
(Lower right) Two of the 118 boats that participated in this year's cruise of Jacksonville Outboard Club. Winding down Oklawaha River from Eureka, Fla., and through a chain of lakes, the 312 members spent night at Leesburg, returning the next day after visit to Silver Springs. (Both cruise photos furnished by O. B. C.)



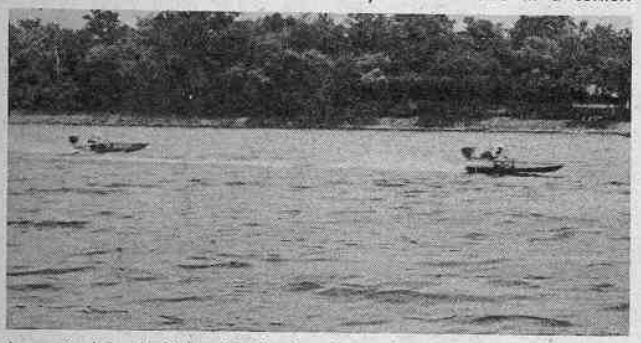
Steep banks of Delaware River were handled by trailer launchings directly into the water. A four-wheel drive jeep served as middleman from street level down to the river. Bridge in background crosses the Delaware from New Hope, Pa., to Lambertville, New Jersey.

An audible P. A. system with good announcer added to spectator enthusiasm, but tenseness of waiting for second hand to creep up to starting mark was lost because of conventional one-sided clock. Regatta committees should use two-sided clocks to add to interest.

Star of the meet was 18-year-old Dick O'Dea of Paterson, N. J. with his Class A Mercury powered Sid-Craft, "Mis Wov." Though beaten in first event by Larry Teal in his Rich Craft, O'Dea came up in second heat to take Teal the hard way on the inside in a corner.



Bob McLean of Reading, Pa. (left) shown putting his Fleetcraft 50P through some high jinks as he is tailed closely by Melvin Scheidt of Pottstown, Pa. in a home-made hull with a top-side design like a hydro, and Fred Snyder of Lancaster, Pa. in a Speedliner.



Larry Teal leads O'Dea in the first heat of Class AU which brought out ten eager contestants in what is always an exciting event. Teal finished second in points in his class for the day. He was beaten by Dick O'Dea, with Roy Artz of Lancaster, Pa., finishing third.

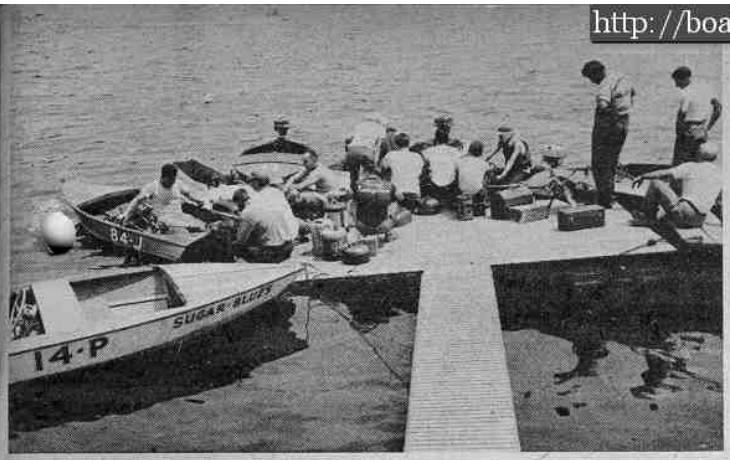
Class DU had only five entries. Keith Wassmuth is shown here in his Mercury powered Sid-Craft, leading Duke Macconi. Keith Wassmuth finished second to Bud McNally in two heats of closely contested action, with Wassmuth winning 1st and McNally, 2nd, with lower elapsed time.

# BOAT SPORT GOES TO A REGATTA

THE DELAWARE RIVER between New Hope, Pennsylvania, and Lambertsville, N. J., has been the setting for a considerable number of outboard regattas, the past two under the auspices of the Delaware Valley Yacht Club of New Hope.

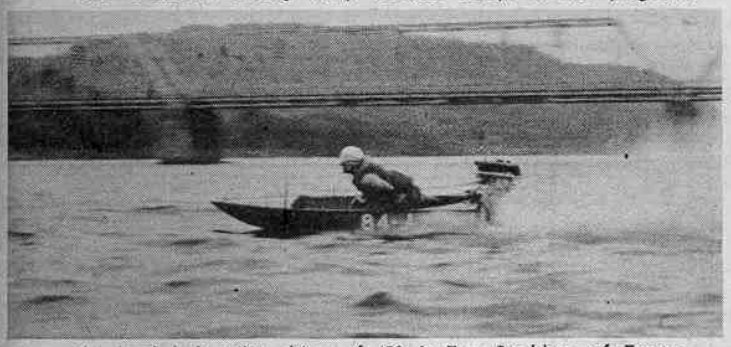
This year there were two heats each for stock outboard utilities in classes A, B and D. In addition, two heats of stock Class B hydros were scheduled plus a consolation event which was open to any boat not placing third or better. Fifty-three entries, four half kegs of beer, hundreds of sandwiches, fifteen handsome trophies and a torrential rain added zip to the action on the Delaware River.

Jim Magill, regatta chairman, of Washington's Crossing, Pa., and his committee members put on a smoothly functioning affair with only a minimum of the usual to-be-expected gripes by the contestants. (End)



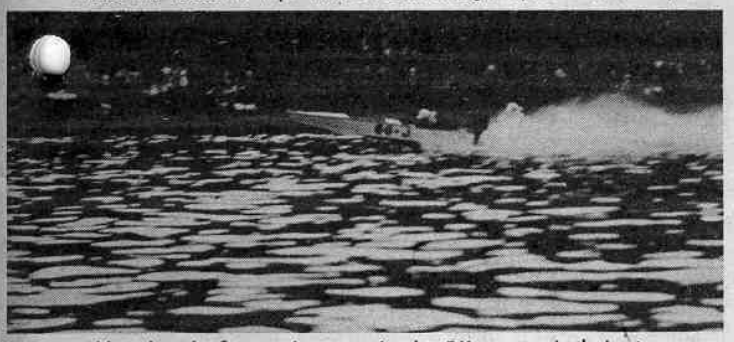

Pit facilities for the 53 contestants were provided by a series of finger piers. In foreground is Bud McNally's Class DU-winning "Sugar Blues." Although finger piers were excellent, no spare buoys were available, causing many needless delays in the programs.

Three B stock hydros being readied before the DU hydro events in which 13 entries competed. At left, Jack Stetser is with his Swift three-pointer. Center is Champion designed kit boat piloted by Tony Rudisill. At right is Swift boat, "Let's Buz," owned by Ed Shields II.



The hard luck utility driver of '52 is Tom Bradshaw of Trenton, N. J. He has a fast BU outfit, but in his first 3 races this year he flipped three times and blew his motor each time. Bradshaw continued his record of flips with a fourth straight upset at New Hope.

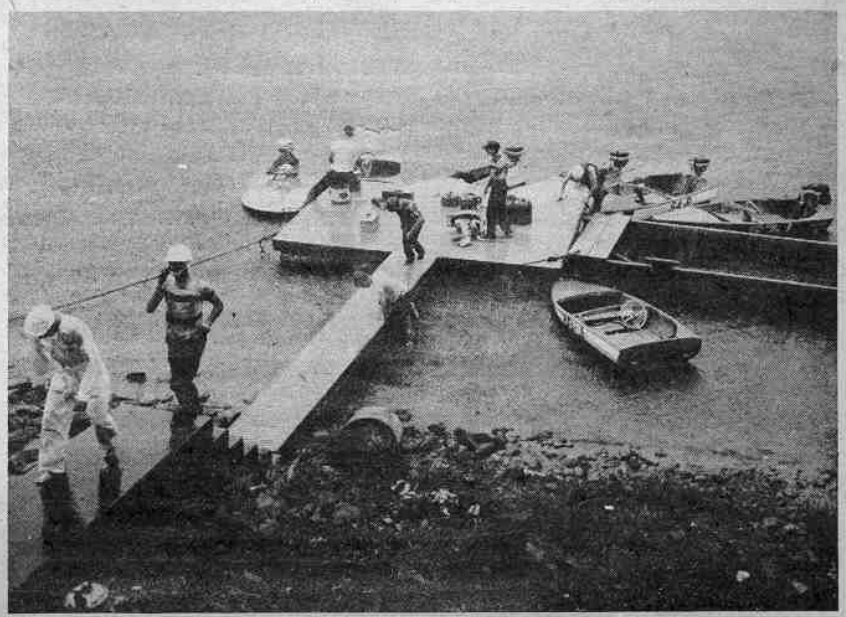
Bill Newman shown hooking his BU Sid-Craft through the third turn. In 1st heat of Class BU, Paul Rothenberger, while riding in solid third, tangled with second corner buoy, wrapped his prop through inner tube float and performed a beautiful sling shot style stop.



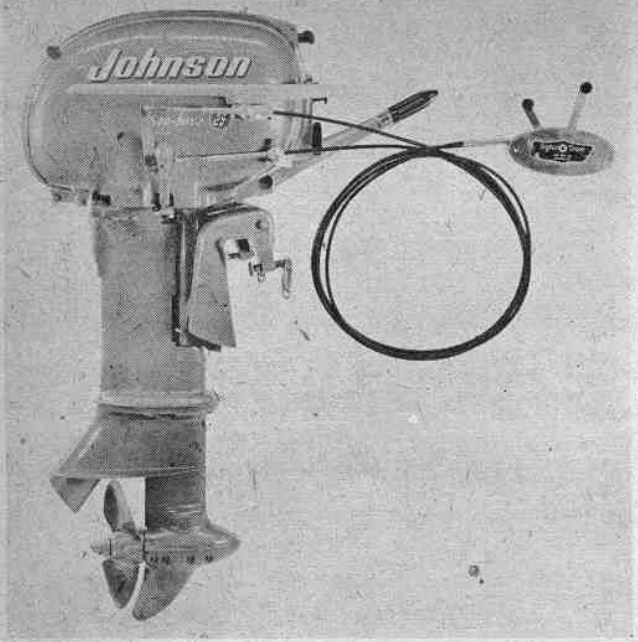
Although only five entries were in the DU events, both heats were thrillingly contested. Bud McNally of Philadelphia, is pictured here moving up on outside of Duke Macconi of Penns Grove, N. J., with Keith Wassmuth of Souderton, Pa., following in the lead boats' wake.


Consistent winner in Eastern BU competition is Bob Stout of Lambertville, N. J. in his "So-Slo," a Sid-Craft. Stout topped a field of sixteen entries to take two straight heats. Runner-up was Bob Sutton. In third spot was Pennsylvania State Champion, Richard Rees.

## Stock Utilities Turn Out En Masse for the Delaware Valley Yacht Club's Second Annual Regatta . . . .



Like all preceding New Hope regattas, torrential rain marked the final events. Pit stooges and drivers sought cover, with spectators and many officials deserting the course in the heavy downpour.




# It's NEWS

Synchro-drive Remote Control. The Ace Boat Co. is now marketing this smoothly operating, combination remote throttle and gear shift control. It is easy to install and is presently designed for Evinrude Big Twin and Johnson "10" and "25" outboard motor adaption at a price of $39.50.

## FIRE FOE

For the stock marathon racer, Berna Corp. produces the Little Giant, a fire extinguisher smaller than the normal two cell flashlight, which offers a strong, even, full spray of chlorobromenethane. With the Little Giant, which is light in weight and easy to stow, any gasoline fire can be handled with ease. Priced at $3.75; refillable for $1.75 plus postage.

## WATERPROOF YOUR SPARK PLUGS

Sealtight Corp. has designed a spark plug insulator which, if claims can be believed, will actually make spark plugs fire completely submerged in water, give perfect ignition under any type of foul weather conditions.

## CLASS A RACING PARTS

Many Class A racing drivers who were dependent on Johnny Maddox for spares and were disappointed when Johnny went out of business, will be happy to learn that Red Jones of San Diego, Calif., has purchased Johnny's complete stock of racing propellers and many of the original parts and will continue this worthwhile racing service.

## PLASTIC REPAIR KIT

Utility racers and 48 c.i. runabout racers with plastic bottomed hulls will be pleased to learn that Pioneer Chemical and Manufacturing Company now puts out a phenolic plastic all-purpose repair kit. This same outfit makes a phenolic plastic metal which creates a perfectly permanent metallic surface over bolt heads and fastenings. It is ideal for surfacing and flushing dents and cracks to a feather edge to take a smooth enamel or paint finish. It is guaranteed not to check, peel or shrink.

## TROUBLE SHOOTING FOR YOUR OUTBOARD

The Marine Market of the Gulf Oil Corporation has recently issued an informative brochure in the form of a check-off list for outboard trouble shooting problems. This is designed strictly for the tyro and will not make an expert repairman of the reader. It will at least "help you get back to the dock."

## STRAIGHT EXHAUST STACKS FOR MERCS.

The Grosse Point Marine Supply Company is manufacturing Piper exhausts, straight stacks for alternate firing twin Mercs or Class D jobs. In addition to the bark of mufflerless action, Piper stacks are claimed to relieve back pressure, can be closed when not desired and will not effect water cooling. Complete kit for Twins, $10. For the Merc Quad, $20.

## UNIMITE FOUR

The Universal Motor Company, Oshkosh, Wis. has introduced what they call America's most powerful marine motor for its size, the Unimite Four, which develops 65 horsepower at 3400 r.p.m. and is less than 32" overall. This motor was designed particularly for installation in small boats, with the many kit boat builders in the country in mind. The motor weighs 450 lbs., and has a bore of 3¼" bore and a 4¼" stroke.

## CORRECTION

The Weems System of Navigation calls our attention to an error in description of their Nautical Slide Rule in October issue of BOAT SPORT. The last sentence says "Speed is given in knots so that 15% should be added to translate nautical miles into m.p.h.." This conversion is entirely unnecessary. If distance is measured in statute miles, the instrument automatically gives speed in statute miles per hour. If the distance is nautical miles, the speed given will be in knots. The only place there can be any confusion between statute and nautical miles is when the black distance scale in yards is used. Scarcely anyone would ever want to use this distance scale in yards. If it should be used, the resultant speed would be knots.

(Below) Steve Brown of Needles, California, with this tiny midget boat, No. C-51, appropriately enough being hauled to a race on the roof top of a Crosely pick-up truck—just a little bigger.


(Above) The winner of Florida's 4th Annual Gold Coast Marathon. Sam Griffith—well ahead of the pack—streaks by the Hollywood Beach Hotel in "The Fox." (Left) Gar Wood, famed Gold Cup winner of yesteryear, was the official starter. He is shown here with Miss Rhoda Wetz, Queen of the '52 Gold Coast Marathon, as he prepares to fire the cannon that started the 4th Annual 135-mile classic.

# FLORIDA'S 1952 GOLD COAST MARATHON

**By J. J. McCarthy** **Photos by Jack Anderson and J. J. McCarthy**

YES, everybody races in Florida's Gold Coast Marathon. Big boats, little boats, inboards and outboards, all gather for this annual grind from Miami to West Palm Beach and return.

This year 130 drivers answered the call to make this gruelling 135 mile round-trip race. Among them were Sam Griffith, driver of "The Fox," world record holder for Class E racing runabouts; Lou Nuta, Jr. with "Little Stinker" this year's leader in points in Class E racing runabouts; Al. Kirwan of Ft. Lauderdale, Fla. with his 135 c. i. hydro "Half Fast"; J. D. Lamon crack outboard driver from Ft. Lauderdale; Sammy Crooks of St. Petersburg, veteran race driver; Gar Wood, Jr. son of "the grand old man of racing", and many others well-known in racing, plus many that had never raced before.

Early Saturday morning July 19, the boats started to gather at Pelican Harbor Yacht Club and by noon space was at a premium, boats were everywhere.

The start was set at 1:30 P.M. and what a start it was. The LeMans Start was used for the first time in boat racing in this country. At the sound of the first gun everybody raced for their boats, but could not turn an engine until the next gun, the starting gun, was fired.

When Gar Wood, the official starter, set this one off, he set off a roar of sound ranging from the deep throaty roar of high powered engines to the high whine of outboards, as 130 boats turned peaceful Biscayne Bay into a sea of foaming wake.

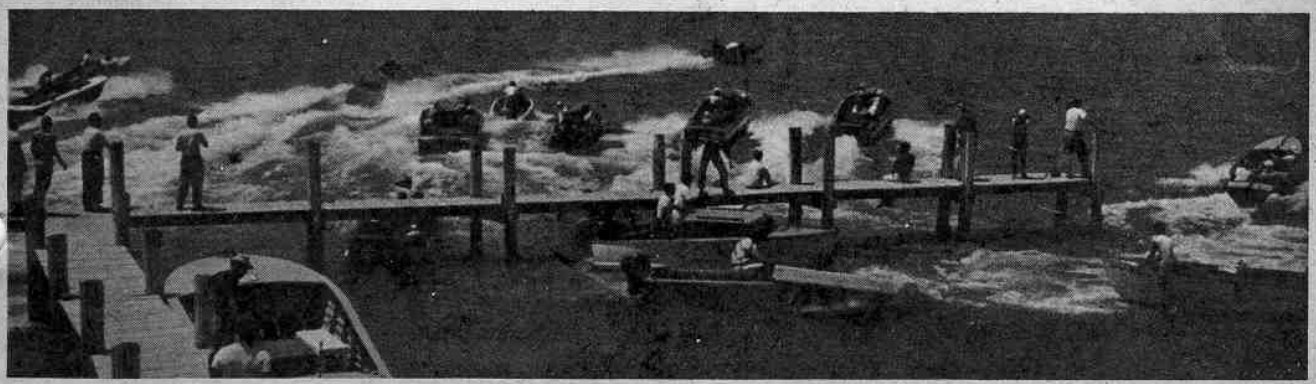
I was riding as mechanic with Ed Marksberry of Ft. Lauderdale, in a 16-foot runabout. I was busy the first few seconds but when I looked up what a sight it was! Boats as far as the eye could see, everything from sleek racing hulls to homemade runabouts, including two Hydro Fins and two Everglades Air Boats. Looking forward I could see "The Fox", leading the pack to West Palm Beach and the Flotilla Club Finish Line 67½ long miles away.

The bridges and the banks of the inland waterway were lined with spectators. The Marathon is popular because of the many thrills it provides and each city and town along the way has its own champion which they turn out to cheer.

We passed many boats that had conked out, some drivers frantically working on their engines, while others calmly sat and waited to be picked up.

At last West Palm Beach and the finish line and the flag bedecked Flotilla Club Dock crowded with spectators, officials, boats and drivers that had arrived before us. Arriving at the dock we learn that "The Fox," driven by Sam Griffith was the first to cross the finish line in the remark- (*See over*)

The start of Florida's 4th Annual Gold Coast Marathon at Pelican Harbor, Miami. 130 drivers participated in the gruelling 135-mile round-trip race. In center of photo is "The Fox," eventual winner driven by Sam Griffith, the world record holder for Class E racing runabouts.



# ROOSTER TAILS FROM GREAT SOUTHWEST

(*Continued from Page* 9)

F-Racing runabout "Bearcat" of Burbank and his F-hydro "Bearcat Too," both won. Elgin Gates of Huntington Beach (one of the daddies of that 115-mile Colorado River Stock Marathon—fifth edition Oct. 5), won both A- and C-Service hydroplane titles with "Pearly Gates." With total entries, winners of two top places were:

F-Racing runabout (13 entries)—Ken Jolley, Burbank, "Bearcat" (C-117); second, Ellis Estabrook, San Bernardino, "Double Cross" (C-146).

C-Racing runabout (17)—Rocky Stone, Willamina, Ore., "My Girl" (R-26); Warren Painter, Tumunga, "Nix" (C-24).

C-Service runabout (14)—Glenn Burke, Chico, "Soup Bone" (C-244); Manuel Carnakis, Bakersfield, "Woisme VII" (C-43).

M-Hydroplane (8)—Boots Morphy, Hollywood, "Miss Shooting Star" (C-92); Gene Mavis, Alhambra, no name (C-129).

A-Hydroplane (12)—Elgin Gates, Huntington Beach, "Pearly Gates" (C-666); Jerry Osborne, Fresno, no name (C-361).

B-Hydroplane (10)—Bill Bauman, Long Beach, "Risky" (C-346); Eddie Maroney, Phoenix, Ariz., "Little Valentine" (C-278).

C-Hydroplane (13)—George Mueller, La Mesa, "Miss Fire" (C-191); Art Pierre, Stockton (R-92).

F-Hydroplane (8)—Kenneth Jolley, Burbank, "Bearcat Too" (C-115); Bert Ball, Los Angeles, "Dibs" (C-84).

C-Service hydroplane (12)—Elgin Gates, Huntington Beach, "Pearly Gates" (666-C); Glenn Burke, Chico, "Hey Wait!" (C-316).

## REGION 12 CHAMPIONSHIPS

STOCK outboarders don't seek rough action but when it's there they can take it. Some 89 drivers proved this in the Region 12 Championships, July 13, on an unusually nasty Harbor Drive course on San Diego Bay. They slugged it out with innumerable flips, some hull damage but no serious injuries. Floating debris—bad business anywhere—added to complications.

The B Stock hydros and runabouts each brought out such large fields that elimination heats were mandatory, with the top 16 boats competing in the fields. And when it was over these were the winners:

A-Runabout—first, Charles Harter, "Flapjack" (18-C, N. Hollywood; second, Wendall Keith (222-C), Whittier.

B-Runabout—first, Mike Meehan, "Flipper" (184-C), Venice; second, Bob Check, "Lil Check" (132-C), Newport Beach.

C-Runabout—Cag Graham, "Beetle Bomb" 167-C), Ventura; Johnny Maddox, "Sashcord" (98-C), Imperial Beach.

D-Runabout—Joe Proctor, "Green Diamond" (14-C), Ventura; Homer Smith, "Sacred Calf" (13-C), Williams (Arizona).

A-Hydroplane—Doug Stubblefield, "Stubby" (556-C), Blythe; Butch Reed, "Stinger" (520-C), Blythe.

B-Hydro—Hub Reed, "Stinger" (520-C), Blythe; Dr. E. W. George (578-C), Arcadia.

D-Hydro—Dr. E. W. George (558-C); Lee Richards, "Hades" (380-C), Blythe.

## HERE AND THERE

YOU can't beat channel swimmers (feminine, anyhow) and this the S.C.S.C. discovered in the annual July 4 Regatta at Long Beach. At about the time of the start of the races, Florence Chadwick was just quitting her first Catalina Channel swim attempt. Result: despite better than fair advance publicity and some excellent racing, the gate was the second poorest the inboarders have known at Long Beach Marine Stadium. Winners, and interesting comparable best-heat times on the single-turn course, follow:

46-Cubic Inch Hydro—"Snuffy," Gillette Smith, 51.253 mph; "Cracker Box Top," Dan Campbell, 50.676.

135-Cubic Inch Hydro—"Keeno," Chuck Powell, 59.684.

225-Cubic Inch Hydro—"Wee Too," Rich Hallett, 61.686.

266-Cubic Inch Hydro—"Pee Wee," Bill Dale 60.893.

PODH—"Little Beaver," Marion Beaver, 43.394.

E-Racing runabout—Ed Olsen, "Cream Puff III," 51.282.

Of note, the first three 225's had faster heats than the first three 266's, in their respective divisions.

What's in a name? The Bombs had it July 20 as three California inboard fleets raced on Sacramento River—Lloyd Morgenson's "E-Bomb" of Modesto took E-racing runabout honors; Bob Wacker's "Beetle Bomb" of Avenal was first in B-Racing runabout. Dr. Louis Novotny's "Cherub II," scored her 20th win of 1952 in this class. (End)

# FLORIDA'S 1952 GOLD COAST MARATHON

(*Continued from preceding page*)

able time of 1 hour 9 minutes 59 seconds. That folks, is traveling. His average speed was close to 60 miles per hour. The question was, could he repeat it the following day?

Second boat in was Al. Kirwan's "Half Fast," a 135 Hydro. Then the main body of the fleet in groups of fours and sixes.

Then came the hard work for the official scorer and his crew, totaling the points in the highly complicated handicap system used to equalize the ten speed classes entered, ranging from 25 miles per hour to 60 miles per hour and over. So, while they toiled we enjoyed ourselves at a fine party held at the Flotilla Club for the Marathoners and their guests.

Sunday dawned bright and clear, the dock was a beehive of activity as everyone prepared for the return trip. Before we realized it, noon had rolled around, time for the drivers meeting, then the start again at 1:30 P.M.

The start here wasn't as spectacular as the one at Miami. Because of shallow water we had to go out to the channel in Lake Worth to start. We proceeded under power and at the first gun cut our engines. Then, two minutes later, the starting gun. Again the roar of engines and we were off on the last leg of this great race.

For my driver and me the race ended about 25 miles short of the finish line. We burned out a main bearing. We kept it running, but just pushed water from there to Miami.

Pelican Harbor was a bustle of activity as we arrived; everyone waited anxiously for the official results to see who would get the major share of the more than $4,000 worth of trophies and prizes.

Sam Griffith, driver of "The Fox," speedy Class E racer, was the winner. Al Kirwan, with his 135 hydro "Half Fast" was second. J. D. Lamon driving his 9 ft. outboard hydro, was third.

Well, we all went home tired but happy, looking forward to next July when it will again be Marathon time here in South Florida. (End)

# HOW TO GET PEAK PERFORMANCE FROM OUTBOARD CYLINDERS

(*Continued from Page* 5)

permit .025" oversize, but also prohibit chrome plating.

On the subject of chrome plating, let's make it clear that the purpose of plating is to provide a hard surface that resists wear, offers a low coefficient of friction and permits illegally oversized bores to be returned to the limits. Let's clear up one frequent misunderstanding right here—chrome plating will not make cylinders any faster. In fact, if anything, chrome can cause a slight loss of efficiency and it may call for more frequent ring changes. But chroming will, because of its considerably greater hardness, make a grinding last much longer.

Another rule which has hamstrung the stock drivers is the rule which prohibits the addition of any material other than for balancing purposes. Stock drivers who have upset and blown blocks have, under a strict interpretation of this rule, no alternative but to buy new blocks. For years racing motor drivers have been permitted to add material

provided the dimensions of the modified parts are kept within the limits as specified in the rule book and/or the motor specification sheets. This means that blown blocks have been successfully cast-on, aluminum-welded or bronze-brazed, and for a moderate price, have been put back into operation as good and frequently better than the originals.

For this reason alone the erroneous thought by a lot of drivers that stock racing is cheaper than strictly-designed-for-racing-motor competition is for the birds. I have known some stock drivers to go through four sets of cylinder blocks at roughly a cost of 200-250 bucks in a single season. Assuming the same number of blown blocks and welding permitted the cost to the racing outboard competitor would have been just about half as great. Unified action on the part of stock utility drivers might lead to changing two rules mentioned above.

## NEUTRALIZING OR NORMALIZING BLOCKS

THE ULTIMATE secret of a good running set of racing cylinders is to have those cylinders in perfect round to begin with and to possess a set of cylinders that have been neutralized so that they stay in round. Normalizing can be achieved naturally or artificial neutralizing or normalizing can be achieved. The former is the best way, meaning, having a set of blocks which through age and normal running have been heated and cooled so that unnatural warping and distortions do not occur every time the cylinders run at high speed and become hot. To do the same job unnaturally—and this is not advised until such a time as you are ready to have your first grind on a new set of cylinders—the casting is slowly heated over a period of three to six hours until the metal is brought up to about 800° F. The blocks are then placed in preheated lime of the same temperature, completely covered and permitted gradually to cool over twenty-four hours or longer, allowing them to return slowly and steadily to room temperature. This heat processing isn't a cure-all for a poor set of blocks that tend to go out of round every time you try to peak your engine and find to your disappointment that it starts to get up to the hoped-for r.p.m.s and then quite suddenly drops off. However, this heat processing, which costs under $5 a casting, may salvage an otherwise worthless set of blocks.

## PREVENTION OF WARPING

IF YOUR BLOCKS are racing motor cylinders and you are having broken ears welded or brazed back on, unless the welding or brazing (and bronze brazing has proved quite satisfactory for this purpose) is being done by an experienced hand, insist that the brazing be accomplished only after the blocks have been gradually preheated over a long period of time. Otherwise cracks may be caused at the port webs or undetectable weaknesses created.

Almost invariably an expert in grinding is also equipped to heat process.

For the racing motor only, it is standard practice among Class A competitors to cut through the head end of the blocks between the two bores in order to remove any residual rust which can cause cylinder bulging and then braze this area closed. Also many A and B racing drivers have considered that the water jacket as designed in some original outboard engines wasn't sufficiently well supported at the head end. (see Figure 3) To counteract the possibility of distortion, they have usually filled the water jacket passages with a bronze inlay to the depth of about ¼" and then redrilled the passages with a series of round holes. This creates a group of bronze support webs or bridges across the water packet circulation slots.

Stock racers should carefully flush motors after salt water operation, for in addition to the corrosive action, salt deposits may build up in the cooling system and cause hot spots and resultant cylinder distortions.

The six-stud B's were designed with sufficient strength in this area but were usually found lacking in cooling efficiency which caused hot running and distortion. Six-stud racing B owners have overcome this by drilling a series of additional water relief holes to accomplish more effective cooling.

Many racing motor owners add a bronze inlay to the outer surface of the case end of their blocks to strengthen the ears. This practice is recommended, but should, however, only be done when you are planning to have blocks ground for the necessary heat applied, for the braze is almost certain to result in warping which will have to be corrected during the grinding process.

## GRINDING

A QUESTION frequently asked by outboard racing drivers is why must we have our cylinders ground; why can't they be honed or bored? Is a bore job as good as a grind? The answer to that is definitely no. Boring is normally done by use of a revolving fly cutter tool which is tipped with a diamond or tungsten carbide cutting surface. A boring tool is set automatically to the required size, usually by means of a spring actuated ball that slips into a hardened groove in the micrometer spindle and locks the micrometer into position. This is presumed to eliminate any human inconsistencies in using boring tool.

However, cast-iron or steel-sleeved outboard cylinder blocks lack uniform hardness. The best of the boring tools will tend to ride over hard spots and undercut soft areas resulting in waves and ridges. Almost all boring jobs show evidence of belling effects at either end of the cylinder and chatter reflected in the ridges on the wall of the cylinder near the port areas.

A good grinding job can be within .005" of accuracy and most grinders guarantee their job to be within .001" of perfect. It is seldom that a bore job is accurate within .003" and frequently it is out considerably greater. The grinding job is accomplished by a rapidly moving grinding stone of varying grit. Even

(*Continued on page* 34)

# MODIFYING YOUR BOAT FOR MARATHON RACING

(*Continued from page* 13)

two feet forward of the stern. If there is coaming on the hull, as there is on most hard-chine boats, this bracing won't be needed.

Many owners build extra knees, or a brace from the transom to the bottom of the hull, only to find their boat developing a running hook and consequently pulling the battens, planks, or plys apart. This can be overcome by running the knees from the top to the bottom of the transom and on the bottom of the boat from the transom to as far as four or five feet forward.

Extra stringers may be added, and a good idea is to incorporate tank placement with the added stringers. Don't worry about latitudinal or transverse supports—the stringers running from bow to stern, whether original or added, will give the hull the strength necessary. The decking, transom and mid-deck are all that are necessary to give athwartships (side-to-side) stability.

Tanks for extra fuel are a major problem. Where to place them, how to fasten them down, how big, how many and what shape are some of the usual questions. In general, any tank designed for marine (i.e. with baffles) is suitable. The size will depend on the power plant and an estimate of fuel needs for the distance to be raced. Shape is of little importance just so the tank is properly cradled and tied down.

Placement of the tanks in the boat is up to the driver's discretion, with a view to stability and balance of his particular hull. Fuel weighs approximately seven pounds per gallon. You will carry from ten to twenty gallons of extra fuel, depending on the size of your "iron."

It's safe to assume that the builders of your boat put the largest seat where the hull will take the largest load. This generally means the seat amidships or directly in front of the wheel. If you plan to put your tank on the seat as many do, make sure that you have provided additional bracing for the seat risers. It is also advisable to add a vertical brace under the middle of the seat running down to the keel or center stringer. Remember, in a rough marathon race, all the stress and weight isn't going to be directed downward. Seventy to one hundred and forty pounds of fuel sloshing around behaves badly where it wallows in all directions at once. The bracing must be prepared to withstand abuse.

Many of the boats that were towed in this summer all over the country, had their interiors virtually demolished by loose tanks banging around. Eventually steering gear, seat and in some instances the driver, went overboard.

If the tank is to be placed on the bottom of the boat, provide a cradle on or integral with the longitudinal stringers. Place the tank on some type of padding and strap it down tight. Where the strap hits sharp corners, pad it. Steel packing case banding was found to work best last year. Not one of the boats so equipped had their tank bracing fail. Another excellent tie-down is elastic aircraft shock cord or "Bungee Cord."

About the only other reasonable spot for the extra fuel is on one or both sides of the driver. Some use a tank on either side for better balance; some only one. But wherever you put it, pay particular attention to the supports for the tanks and keep it simple.

Now that the boat is fairly well set up, let's take a look at the power. The more rigidly the motor is fastened to the transom, the less vibration and consequent eventual loosening will take place. Don't rely on brute strength and those bracket clamp screws to do the job alone; they have been known to break or threads can strip.

A positive screw clamp has yet to be designed for outboards. Determine the correct angle and height for your motor and bolt it to the transom from the outside in. If the nuts loosen—and use wing nuts preferably—you will be able to tighten them from inside the boat.

Another factor is the lower unit. It should be prevented from tilting up by a simple tie-down across the unit and onto the carrying handles or eye bolts on either end of the transom. This may save you the embarrassment of a motor jumping on your back.

Refueling is another important point. Many failures in a marathon are caused by faulty fuel lines, pumps and connections breaking down, all directly traceable to the person who put the setup in the boat. Remember "Cully" Foster's words, "*Keep it simple.*" If you have more than one extra tank, run the fuel lines from each to a simple Y-connection, and then to the fuel pump. Why fool around with a bunch of valves when they do more harm than good in the unbalance they effect as the fuel is consumed? The tanks will maintain equal fuel levels all by themselves and will do it much better than mechanical means.

If you're racing in the larger classes, chances are you won't have to worry about a fuel pump. Most motors are now designed to operate from an inside-the-boat tank. The main concern here is to keep the fuel clean and lines protected. Any connection or clamp for the fuel line should be securely fastened to the boat and out of the way.

Many types of pumps have been tried out in the past for those motors that have an integral tank. The best, perhaps, is the old air force "wobble-pump." This is double action, sturdily built pump has the simplest (remember?) construction. It, too, must be fastened securely within each reach of the driver or his mechanic, if he has one. Air pressure, electrically-operated pumps and stopping to refuel from a gas can are not to be recommended. Air pressure is too likely to blow the fuel connections and batteries are too apt to get wet and short out. Attempting to refuel an outboard in six-foot waves is obviously impractical as everyone knows.

Take the word of some of the country's outstanding marathon racers: Merlyn Culver of Dayton, Jack Maypole of Chicago, Bob Meyer of Milwaukee (and two-time winner of the Winnebagoland Marathon) and many others. They all say, preparation for a marathon race is the biggest part of winning. (END)

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**LIST OF WINNERS, 1952 ALBANY-NEW YORK OUTBOARD MARATHON**

CLASS A

| | Finish Time | Elapsed Time |
|---|---|---|
| 1. James A. Hoffert, Reading, Pa. (29.3 m.p.h.) | 12:25:50 | 4:25:50 |
| 2. Robert Schmitt, Massapequa, N. Y. | 12:26:45 | 4:26:45 |
| 3. C. Edgar Jenkins, New Brunswick, N. J. | 12:27:55 | 4:27:55 |
| 4. Martin O'Neill, East Rockaway, N. Y. | 12:28:45 | 4:28:45 |
| 5. Jan Ringer, Noblesville, Ind. | 12:28:55 | 4:28:55 |
| 6. William Berry, Jr., Grand Rapids, Mich. | 12:59:40 | 4:59:40 |
| 7. Edward B. Kattel, Great Neck, L. I., N. Y. | 1:04:45 | 5:04:45 |

CLASS B

| | | |
|---|---|---|
| 1. John Covals, Hasbrouck Heights, N. J. (36.5 m.p.h.) | 12:05:55 | 3:33:55 |
| 2. Dennis Grenier, Howard Beach, N. Y. | 12:11:05 | 3:41:05 |
| 3. James P. Hummel, Fleetwood, Pa. | 12:13:20 | 3:43:20 |
| 4. Thomas C. Bradshaw, Trenton, N. J. | 12:14:35 | 3:44:35 |
| 5. Mrs. Evelyn Sarossy, Bronx, N. Y. | 12:21:18 | 3:51:18 |
| 6. Robert Fix, Hudson, N. Y. | 12:24:00 | 3:54:00 |
| 7. Joseph Engleman, Jr. Piermont, N. Y. | 12:31:20 | 4:01:20 |

CLASS CM

| | | |
|---|---|---|
| 1. Carl J. Ring, Amityville, L. I., N. Y. (33.3 m.p.h.) | 12:37:30 | 3:52:30 |
| 2. Antonio Stroscio, Jr., North Bergen, N J. | 12:37:50 | 3:52: |
| 3. Vincent Sundquist, Oceanside, N. Y. | 12:40:00 | 3:55: |
| 4. Walter H. Johnson, Elmhurst, L. I., N. Y. | 12:56:30 | 4:11:30 |
| 5. Howard B. Edwards, Rockville Centre, L. I., N. Y. | 1:01:50 | 4:16:50 |
| 6. Robert E. Tuttle, Northport, N. Y. | 1:03:50 | 4:18:50 |
| 7. Andrew Zoekow 3rd, Bethlehem, N. Y. | 1:11:35 | 4:26:35 |

CLASS D

| | Finish Time | Elapsed Time |
|---|---|---|
| 1. Robert L. Switzer, McHenry, Ill. (42.4 m.p.h.) | 12:03:35 | 3:03:35 |
| 2. Robert H. Wahl, Rochester, N. Y. | 12:04:35 | 3:04:35 |
| 3. James H. Tower, Clarks Green, Pa. | 12:12:18 | 3:12:18 |
| 4. John T. Henry, Falls Church, Va. | 12:33:20 | 3:33:20 |
| 5. James E. Wilson, Buffalo, N. Y. | 12:37:00 | 3:37:00 |
| 6. Robert S. Gerard, Jr., Setauket, L. I., N. Y. | 12:43:10 | 3:43:10 |
| 7. William E. Hilton, Newton, N. C. | 12:43:15 | 3:43:15 |

CLASS EM

| | | |
|---|---|---|
| 1. Wilfred L. Roger, Pelham Manor, N. Y. (38.3 m.p.h.) | 12:39:00 | 3:24:00 |
| 2. Edward Poplees, Franklin Square, L. I., N. Y. | 12:51:10 | 3:36:10 |
| 3. Woody Onus, Bergenfield, N. J. | 12:55:40 | 3:40:40 |
| 4. George M. Winter, South Euclid, Ohio | 12:58:15 | 3:43:15 |
| 5. Thomas O'Mara, New York, N. Y. | 12:58:50 | 3:43:50 |
| 6. Robert Veiga, Troy, N. Y. | 1:04:20 | 3:49:20 |
| 7. Ray Bressner, New York, N. Y. | 1:11:00 | 3:56:00 |

CLASS FM

| | | |
|---|---|---|
| 1. Joseph E. Stager, Flushing, L. I., N. Y. (41.2 m.p.h.) | 12:39:05 | 3:09:05 |
| 2. John E. Scardefield, New Hamburg, N. Y. | 12:39:10 | 3:09:10 |
| 3. Al Zolko, Pleasant Valley, N. Y. | 12:40:10 | 3:10: |
| 4. Robert Jordan, Pittsfield, Mass. | 12:40:45 | 3:10:45 |
| 5. August Nigl, Oceanside, N. Y. | 12:47:29 | 3:17:29 |
| 6. Richard J. Yarm, Brooklyn, N. Y. | 12:47:30 | 3:17:30 |
| 7. Perry L. Relyea, Highland, N. Y. | 12:50:25 | 3:20:25 |

## OUTDOORS WITH THE OUTBOARDS

(*Continued from page 24*)

The book also furnishes many meeting and program ideas, information on any object pertaining to club work, and insurance coverage under a group policy to all members of local clubs who want to take it out on their boats, motors or equipment. The question of national affiliation is one which every new club member should consider and must decide for itself. The cost is reasonable. In the case of O.B.C., it is $25 per year for 100 members or less, and 25¢ per year for each member over 100.

One of the most important things for a club to do is decide upon the purpose for its organization. The possibilities are many, and any club can have as many as it wants, provided each one is followed up and effectively handled. Here are a few: to promote greater interest in boating; to protect local boat owners against discriminatory legislation and unjust taxation; to improve the dock and storage facilities for small boats; to conduct regattas or water carnivals; to develop a more friendly feeling among boat owners; to prevent the pollution of neighboring recreation waters; to help in conservation work and keep waterways beautiful; to engage in family cruises or aquatouring; to become a trained auxiliary for emergency rescue work in areas where floods occur; to patrol public water areas in the interests of safety; as a fishing club, to help your State authorities in stocking inaccessible streams, etc.; to plan and provide for group vacations of members, with special voluntary assessments collected regularly toward that end throughout the year; to build a boat house or club house; to foster a campaign for beautification of water-front areas. Such purposes will interest many civic minded persons who otherwise might have no interest in boat club activities, and will make for a strong and respected organization of which your community will be proud.

### BOAT AND MOTOR NOTES

Chris-Craft has added a 10' Pram to its Boat Kit fleet. With the addition of trunk deck, steering wheel and throttle it is sanctioned for A.P.B.A. racing in classes JU, AU and BU. In tests with a Chris-Craft 10 hp. motor it has been clocked at over 40 m.p,h.

*Of interest to plywood boat owners*: a new elastic-type fungicidal waterproof sealer for joints, edges, lapping and adjoining parts and landing surfaces of small plywood boats, is now on the market. Dolfinite No. 3975-TX Fungicidal Marine Plywood Sealer is the name, and literature and prices may be obtained by writing The Dolphin Paint and Varnish Co., 924 Locust St., Toledo 3, Ohio.

The Inland Seas Boat Company of Cleveland, Ohio, has acquired the assets of the Pizmar Products Co. for the purpose of making molded laminated plastic sections for various parts in the superstructure of their Steel-Clipper Boats, outboard cruisers included, which have had Vinyl plastic-coated hulls for many years.

"Winner Makes All," a 12-page booklet describing the facilities of the Winner Manufacturing Co., Trenton 3, N. J., makers of plastic glass-fibre boats among many other products, is available to all desiring copies by writing the company.

### READER ROUNDUP

Just time and space to say thanks to Jack Horn, Jr. of Portland, Ore., for his fine letter which was the first of many asking for information on forming a local boat club. It sure got the ball rolling!







**BACK ISSUES OF BOAT SPORT**

Because of the continuing demand for the May, August and October issues of BOAT SPORT, we made arrangements to secure a few extra copies of each issue. Send 25c for one issue or 75c for all three, to BOAT SPORT, 215 4th Ave., New York 3, N. Y.

# HOW TO GET PEAK PERFORMANCE FROM OUTBOARD CYLINDERS

(*Continued from page* 31)

a mediocre grind job should be better than the best re-bore and since there is only a small difference in the cost between the two, a selection of grinding over boring should be obvious.

## HONING

THE QUESTION, "can't a hone be used to remove imperfection?", is easily answerable. A hone used by an expert at the proper time and for the proper purpose and assuming the hone to be in perfect condition, can be used to the advantage of the stock or racing outboard competitor. But before letting anyone put a hone on your good cylinders, remember this: no hone devised can be used to straighten crooked or warped cylinders. Used for this purpose, a hone will merely accentuate already existing flaws. The purpose of a hone for the racing driver is to detect high spots which may have developed during use of properly ground cylinders and to remove these high spots only. In this event the hone is actually being used as a gauge, and should be used only as follows:

Check first to see that the stones of the hone are in good condition and that they are long enough to extend through the entire cylinder bore to be honed. The hone is then placed loosely into the hole and revolved for not more than one minute. High spots will be revealed by a shiny surface appearance at high points. If too many high points show up, then it is suggested that the blocks be ground. If the high spots are not too apparent, the hone may be used for a brief period of time in an effort to work these down.

A substitute for a hone may be made of a standard untapered piston. If blocks are oversized by .003" or more, use a standard sized perfect piston and an old cylinder rod which at the crank throw end has been reformed for holding in a lathe chuck. Make a paste of very fine grinding compound or powdered Bon Ami and light machine oil. Place this mixture in your cylinders, then with the piston in place, the cylinder hand-held, let the lathe rotate and at the same time constantly draw the cylinder in and out and rotate it through at least 90° in a steady motion so that the cylinder bore will be completely lapped.

## SPECIFY TYPE OF GRIND

WHEN YOU are having your blocks reground don't leave the selection of the grinding up to the grinding machinist, unless he's a known expert, but specify in advance exactly what you want done. If your blocks have suddenly gone sour, a skim grind of about .003" (.0015" off the walls) may bring them back into perfect round. For the racing driver with chrome blocks, since the chrome is usually .010" or thicker it is possible to get at least three skim grinds out of a chrome job. And for the service driver, you may expect to get five or perhaps even six skim grinds before your present standard sized steel-sleeved blocks pass beyond the legal limits.

A frequent fallacy among racing drivers is the pride in the shiny block school. If you examine your blocks under a microscope you will find that they are quite rough. And this very roughness you detect which is caused by the abrasive materials in the grinding stone, aids in permitting lubrication. In specifying to your grinder, remember that he may have wheels of varying coarseness from a V1, which is very fine in micro inches, to a V20 type wheel, which is quite coarse. I personally would recommend the coarser grinds and suggest a grind with a wheel of from V15 to V20 in range on cast iron, and the V15 on steel sleeves. In running, minute distortions reflected to the inner surface of the stock cylinder wall will be worn off by the rings and the rings themselves will also wear. This results in the phenomena which anyone racing cast iron blocks has experienced, that of a relatively mediocre engine suddenly, after a proper break-in period, developing considerably more punch.

For chrome blocks, I suggest a wheel of about V5 coarseness since the crome in itself is too hard to permit the rings to wear down the high spots and hence a coarser grind will result in a very undesirable short life period for the rings.

Finally, after you have had your blocks returned from the grinder, check them carefully and mike the job regardless of how nice it appears superficially. The most likely spot for inferior work to appear will be at the ports where belling may occur. And since this is the exact spot where you require a good seal, with holes that are out at the ports, you are not going to be up in the winning brackets. (See Figures 4 & 5 on page 4).

If you are fortunate and can find an expert grinder, you may be able to have your blocks ground as cheaply as $5 a hole. The expert will charge $8 to $10 a hole and unless your cheaper grinder is really proficient, it is recommended that you send your blocks to the expert.

## NEW BLOCKS

NEW BLOCKS should check with an inside mike within .001" to a maximum of .002" error. If after using an inside micrometer your blocks are more than .004" out of round, you will probably need to have them ground before you can actually tell whether they are any good. However, a half dozen hours or so of running on them regardless of how they mike is a good idea to give them at least a sampling of heat normalizing.

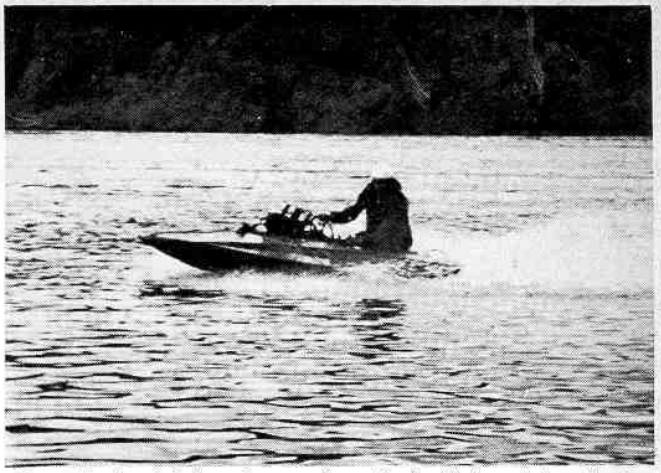
For the racing driver buying a new set of blocks, I strongly recommend running them in cast iron condition without investing in a crome plating job until you are sure whether the blocks stay in round. Chroming will not prevent walking, i.e., warping of blocks when subjected to the heat of high speed running.

Some drivers of Class B and C racing motors, as an insurance against blown cylinders, attach catcher plates and bars over the ends of opposed twins. In fact, the practice has become almost universal and the newcomer to the game naturally imitates the oldtimer. I have seen plenty of cylinders blow with catch bars in place. Since water is non-compressible, it is highly doubtful that the catch bars can do any real good. But they can do plenty of harm. Improperly designed catch bars or bars tightened unevenly can distort and pull out of alignment an engine which otherwise has been beautifully set up. The highly questionable protection the bars offer certainly doesn't warrant the chance of mis-aligning a good engine. Forget about catch rods or use them only for what they are meant to be—a catch bar for blown ears to keep cylinders from flopping off into the drink. But if you think they'll save cracked cylinders you better forget them and eliminate the extra pound or two of weight they dump on your stern.

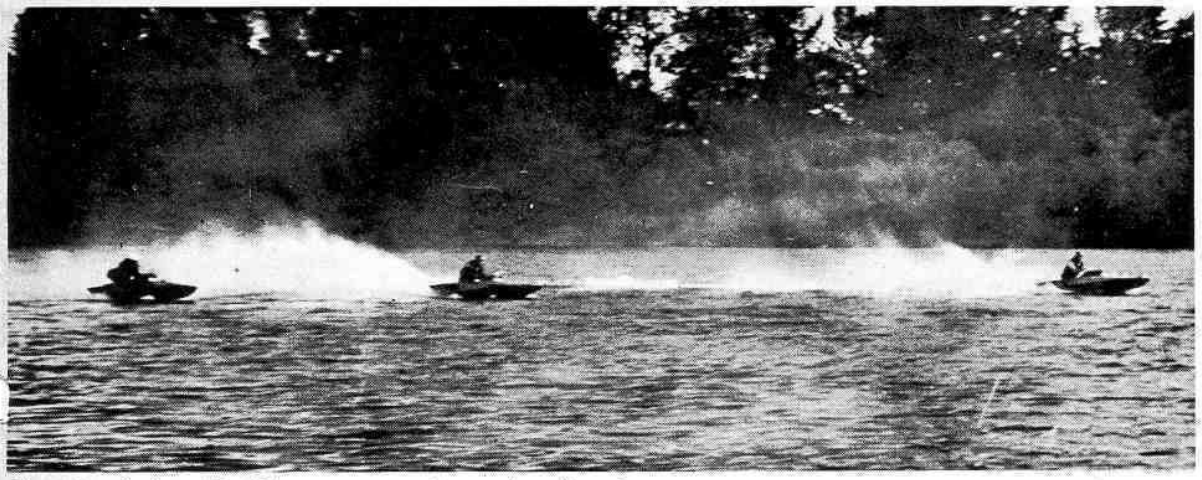
Don't ever tighten your head bolts without using a torque wrench. The cylinder cannot be expected to stay round if uneven tension is used. With a properly lapped cylinder and head, 30 foot pounds is adequate pressure. In any case, use only enough pressure to create a perfect seal.

Blocks that are straight and true and stay true are the only things that spell the difference in properly set-up racing engines. Get good cylinder holes and assuming the rest of the motor is up to snuff, with driving and a properly set-up boat, you'll win races. (End)

"Mid" Barbour, Regatta Chairman of the Oregon Outboard Association, and the only woman 48 hydro driver, is shown here on Devils Lake.



Harry Eyerly of Salem, Oregon, is credited with introducing the increasingly popular 48 cubic inch class to the Pacific Northwest.



Three fast-clipping 48's kick up rooster tails as they skim the surface of the water full bore at better than 70 miles per hour.

# CROSLEY COBRAS

## Crosley Powered 48 C.I.'s Win Fans In Pacific Northwest . . . . .

By Alan Herns

IN OREGON where outboard hydro and utility racing have developed a huge following, the rooster tailing three-point 48 c.i. hydros are the only inboard racing class witnessed in competition. But within three years of their introduction, the tiny Crosley Cobra powered hulls have really won over the fans.

The first Oregon 48 c.i. was introduced by Harry Eyerly of Salem who modified his 44.6 c.i. Cobra and installed it in a McDonald designed three-pointer. Eyerly is credited with introducing the first prop rider to the Northwest racing circles.

At present four of the screaming 10' 6" long three-pointers made by Wilbur McDonald of Willamina are competing with such success with the fans that drivers Bud Yeaple of Portland, Mildred and Matt Barbour, Eyerly and McDonald have been invited to compete at every major Oregon event of the past season.

The Oregon 48's hit straightaway speeds above 70 and the combination of high tossed white water from their Hi-Johnson props and the hornet buzz of the screaming Cobras has created so much interest that seven additional 48's are already known to be under construction in Oregon. In very near future, the midget inboards should be represented by many more entries at each event. (End)

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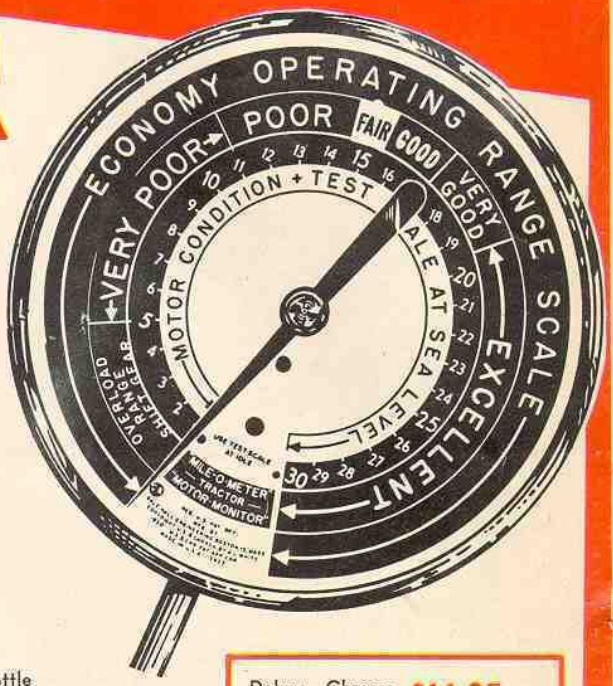


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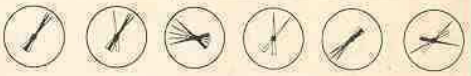

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